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PARENTAL IDEOLOGIES IN THE HOME SAFETY MANAGEMENT OF ONE TO FOUR-YEAR-OLD CHILDREN

by

SEVKET SELIM ILTUS

Volume 1

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

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Abstract

PARENTAL IDEOLOGIES IN THE HOME SAFETY MANAGEMENT OF ONE TO FOUR-YEAR-OLD CHILDREN

by

Sevket Selim Iltus

Adviser: Professor Roger Hart

The primary aim of this research is to construct and test a comprehensive model of parental child rearing and safety ideologies and to investigate the relationship of these ideologies to the Safety Management Systems (SMS) of families. The concept of SMS is used to describe the entire set of factors existing at any one time within a family which help maintain the child's safety in the home. The research is designed to yield a detailed description of the functioning of the SMS within a heterogeneous sample of 27 families with one, two and three-year-old children. Interviews and videotaped systematic room-by-room tours of the home are the primary methods. The primary means of recording, comparing and synthesizing data is mapping in the form of annotated floor plans and conceptual diagrams. For child rearing ideologies, seven types of families are identified on the basis of six ideological dimensions; *Lax*, *Dictating*, *Irresolute*, *Differentiating*, *Undifferentiating* and *Impartial* . Similarly, research revealed five key dimensions that help identify the safety ideologies of the families. These were; Child ascribing, Multi-agent ascribing, Enforcing, Reasoning and Verbal. Findings indicate that parental ideologies are

one of the multiple factors that shape the overall SMS of families. Other key factors include the resources of the family, behavioral characteristics of the child, the effectiveness and appropriateness of the safety strategies used by the family and the degree of forces competing with safety within the SMS. For families whose SMS's are guided by a strong ideological focus, "active" safety strategies which are Child rules and Supervision were more dominant than "passive" safety strategies which are Safety devices and Physical precautions. Families who have the ability to discuss child development and child safety within themselves and who use a balanced combination of active and passive strategies seemed to have more opportunities to prevent childhood injuries compared to single parents who depend on a single strategy. Research demonstrated the importance of developing safety intervention strategies that can reveal the gaps in each family's SMS and focus more on the "active" safety management strategies used by the parents.

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INTRODUCTION

For children from one to four years of age, injuries are responsible for nearly half of all deaths and cause three times more deaths than the next leading cause congenital anomalies. According to the US National Health Survey, every year more than four million children under six years of age require medical attention due to accidents in the home. However this problem rarely gets the attention that it requires, from the media and the professionals in the field.

The common practice in injury research is to "blame" single factors rather than study the interactive and complex nature of children's home safety. Lack of substantial ecological research limits effective interpretation of existing large body of epidemiological data.

When compared to other causes of childhood mortality, the relative significance of accidents has continuously increased over the last sixty years. In 1930, death from accidents and violence accounted for 10% of all deaths for ages 1 to 4, while in 1980 children's injuries accounted for 40% of all childhood deaths for this age range (Roberts & Brooks, 1987). This relative increase in the role of injuries in childhood mortality can be attributed to improvements in health services for young children, and the dramatic reduction in deaths from childhood diseases. Nevertheless, unlike other causes of childhood mortality, the advances in reducing childhood deaths due to injuries remained very limited. As some researchers also point out, new dangers introduced to the environment with the advance of the technology may be contributing to the slow pace of advances in this area (Valsiner, 1987).

All families with children need to develop strategies for the prevention of injury to their children, however the threat is not equal for each family. Socially and economically disadvantaged populations such as low income single teenage mothers are at a higher risk

than others, and it is appropriate and critical that the studies of childhood injury should primarily focus on these high-risk groups.

All childhood injuries are the outcome of the child's interaction with some aspect of the physical environment. In that sense, child safety should be considered an environmental issue. Yet, current child injury research within the home is completely ignored by environmental social sciences. It is also an issue which has social, economic and political implications that are significant not just because childhood injuries cause enormous sorrow to families but also because it has a significant impact on the economy through increased health care costs. Finally, child injury prevention is related to some key political issues as well, because some interventions for injury prevention need to be reinforced by legislative action that may be seen as an infringement upon rights of the individual, and raise issues related to personal freedom.

Parental perceptions about the significance of childhood injuries are not proportional to the level of threat they pose for children. In a telephone survey of 404 parents, Eichelberger, Gotschall, Feely, Harstad, & Bowman (1990) found that parents are worried more about kidnapping and drug abuse by their children, than about injury. This can be attributed to the overwhelming belief by the parents that most of the injury causing events are "accidents" and therefore, "inevitable." For this reason there has been a dramatic growth in recent years in injury intervention programs channeled to educate parents that injury causing events are preventable. To reinforce this attitude, child injury researchers were encouraged by the Surgeon General's Office of the Federal Government to avoid the term *accident* and to substitute the term *injury causing events* .

In The United States there are a diversity of materials intended to educate parents about children's injuries like the series of pamphlets published by organizations such as National Safety Council and National Safe Kids Campaign, and safety guidebooks and videos that are published for profit; as well as magazine and newspaper articles for parents.

All of these sources fall short of being effective tools for two reasons. First, they completely overlook the fact that all parents use different strategies to deal with safety issues in the home. And by making the assumption that all families are alike, they limit themselves to encouraging parents to use a series of "passive methodologies". For example, they suggest that every home should be "childproofed" by installing a number of safety devices at key locations. While encouraging this type of "quick fix" to the injury problem, they usually fail to inform the parents where to purchase these hard-to-find items. Nor do they mention the fact that most of these devices do not work as they are supposed to. Actually many devices that are in the market today can be hazards themselves, and may cause accidents by creating a false sense of security in parents' minds (Hart & Iltus, 1985).

Moreover, almost all of the existing literature seems to be written for a select group of white middle class parents, where the authors assume certain standards of living. In a few instances where they mention supervision, they take it for granted that the mother is always at home, supervising children. The conditions and issues facing working mothers with many children and single teenage parents are completely ignored by this type of literature.

In addition, most of the pamphlets and expensive parents' guides, do not reach low income households where parents have little or no education. An alternative approach for these high-risk groups should include, quick risk-assessment tools that can be administered by social workers, to help them define intervention strategies designed for each family's unique problems (Hart & Iltus, 1986). Again, in order to design such assessment tools, practitioners must learn more about the functioning of families with regard to safety, in order to help them define the most appropriate and relevant questions to ask such families.

While large scale statistical studies of the correlates of children's accidents have been valuable in identifying types of high risk families and causes of common injuries in order to develop strategies for injury prevention. It is necessary however, to begin with research on

the entire set of factors existing within the home, including the physical layout and environmental qualities of the home, the changing physical and psychological characteristics of the developing child and the belief systems and management strategies of the caretakers of children. The totality of these factors were conceptualized as the Safety Management System (SMS) and pilot research showed great variation in the SMS of different families (Hart and Iltus, 1986). One fundamental reason for this differentiation is the varying approaches that parents take during child-rearing. In spite of the recent improvements in theory and research on child-rearing beliefs and ideologies, that body of knowledge has not yet been applied to the problem of children's injury prevention.

The main goal of this study is to begin to look at the relationship of parental ideologies to children's injury prevention. To do this, it investigates the child-rearing ideologies and belief systems of parents with children aged one to four years and will look at how families with different approaches to parenting in general, are perceiving and dealing with their home environment in terms of safety and injuries in the home. As a hypothesis-generating study, it will look simultaneously at all of the components of parental Safety Management Systems (SMS) of individual families and try to reveal and explain the key relationships among these components. It will give specific attention to the role of parental ideologies and the physical characteristics of the home environment.

This research was built upon a bigger developmental study of families' injury prevention for their children in the home. This original study was funded by NICHD and Co-directed by the author of this study. The proposal for the original study did not include parents' child-rearing or safety ideology component. The dissertation proposal was designed and approved after the proposal for the original study was approved but before the start of the study. This enabled specific dissertation questions to be built onto the original study by the author, for separate analysis by him. One key difference is while the original study is longitudinal in nature, this dissertation does not focus on the development

of the child over the one-year study period. For that reason, almost all the data used in this dissertation comes from the first three interviews with the families. However, it was not always possible to separate the two studies very clearly. Undoubtedly there are some overlaps, especially in the area of safety management strategies. The direct involvement of the author in the larger study as the co-director of the project resulted in some of the theoretical models and methods of analysis to be shared by two studies. Finally, at the time of the completion of this study, the final report for the original study was not complete, and therefore it was not possible to compare the results of the two.

LITERATURE REVIEW

Any study that attempts to look at home safety and parental beliefs and behavior has to consider two main bodies of literature. First, there is the "safety research" that has been done by "safety researchers". The goal of these studies is to identify all of the individual variables related to childhood accidents. In that sense, safety research is practical and policy oriented, with the ultimate goal of reducing childhood accidents. Unfortunately, very few of these are in-depth qualitative studies and they rarely relate to each other in a systemic way.

The second large body of research consists of studies on parental beliefs, parenting styles and child-rearing. This group includes a relatively large number of qualitative studies that adopt open-ended questionnaires as their main methodological tool. However none of these studies are specifically focused on the issue of safety. Their primary research question is the relationship between parental beliefs and the socialization of children and their cognitive development.

In its attempt to relate children's home safety and parental child-rearing ideologies, this study has borrowed from both of these two large bodies of research. This integration generated the term "Parental Safety Ideologies" that is used in this study to identify the beliefs and ideologies of parents as they relate to the safety of children.

Various approaches to child injury research

Studies of "accident proneness"

In terms of accident proneness, literature has been both confusing and controversial. A large number of studies focusing on this concept managed to find some children who are "accident repeaters," however these studies failed to identify a consistent "high rate" group. Rivera & Mueller (1987) explain this outcome by pointing out that environmental aspects of injury occurrence being more dynamic and readily modified than the slow changing behavioral traits of the target children. In other words, attempts to link personality characteristics to the number of injuries are useless if the variables related to parental safety strategies and the physical environment are ignored.

It is also possible to argue that the parents of "hyperactive" children, who are commonly thought to be accident prone, will be more strict in setting limits and in supervising the child, thus perhaps reducing the possibility of an accident from occurring. Since the injury-prone children usually come from injury-prone and psychologically stressed families, researchers should really be looking at the family system as a whole and consider the stress-inducing factors within the family system (Husband, 1973).

Another disadvantage for researchers who attempt to identify accident-prone children, is the discrepancy between the number of serious accidents and near misses. Generally the term "accident repeater" is used to identify a child who has had at least three or more accidents that required medical attention every year. But no relationship was established between high number of trivial injuries and severe ones. In other words, a child can be labeled as an "accident repeater" if he had three relatively important accidents during a year, while another child that had 40 potentially serious near-misses is not considered an accident

repeater. This lack of statistical continuity between accidents and near-misses may also explain why no relationship can be demonstrated between risk-taking behavior and accidents (Dershewitz, 1977).

After debating for a long time, injury researchers decided to drop the concept of "accident proneness" as a meaningful term to explain childhood accidents (Haddon & Baker, 1981; Sass & Cook, 1981). The outcomes of the decision to turn away from "accident proneness" as a useful concept were both positive and negative. On the negative, it reinforced the belief that less emphasis should be given to human factors in injury research. On the other hand, this decision helped the researchers to realize that behavioral characteristics of the child are only one element in the complex formula of child safety systems, and convinced them that a more ecological approach in this area is necessary.

Epidemiological studies: Factors related to accidents

The largest area of studies in child injury prevention research is epidemiological studies. For a long time injury researchers have considered injuries as another form of "illness". Therefore the most rational way for them to study this phenomenon was through a series of epidemiological studies. This resulted in a large body of research that attempted to link injuries to a significant number of individual social and environmental factors.

Child factors related to home injuries.

Major developmental milestones occur in children between the ages of one and four. Matheny & Fisher (1984) argued that as children develop new skills, they are encouraged to venture farther by their parents, who without assessing the risks involved, encourage

children to encounter hazards that they cannot physically and cognitively avoid at these early ages.

Studies that have looked at gender and accidents consistently found that starting in the first year of life, boys have more injuries than girls (Matheny, 1988). This difference between boys and girls increases with age, so that by the age of five boys have twice as many accidents as girls (Matheny, 1986). Matheny's finding suggests that gender differences are in large part the outcome of the social environment that the children grow into.

The literature on accidents and gender still has not clearly explained why accidents among boys are generally two to three times more frequent than among girls (Douglas & Blomfield, 1956). A common explanation is that boys are more active and hence get into more trouble. It is unlikely that the answer is so simple. In his research with young children, Hart (1979) discovered that parents are not only much more liberal with boys' spatial freedom when compared to girls, but they allow boys to break more rules than girls. One can hypothesize that similar findings can be expected in terms of differences between boys' and girls' autonomy within the home.

The type of the accident is a critical factor while judging the effect of gender differences. While few gender differences have been found in the types of accidents where a child is a passive recipient (e.g.: motor vehicle accidents where the child gets injured while inside the car), there was a significant difference in the accidents where the child has been an active participant (Rivera & Mueller, 1987). This can perhaps be accounted for by the greater activity level of boys than girls. Most of the home accidents are of the second type where gender is an important variable.

A significant number of single factor studies tried to explain injuries by tying them to the child's level of activity (Manheimer & Mellinger, 1967). For example, in his

longitudinal study of twins, Matheny (1987) showed that individual differences among children play an important role in children's injuries. He also effectively illustrated that multiple factors including parental and home characteristics all contribute to the assessment of risk and prediction of injuries, especially for younger children aged between one to three. Individual differences become much more significant for older children six to nine (Matheny, 1987). However overall findings from these types of studies were inconclusive, contradictory and confusing. It is likely that failure to look at the families' injury prevention as a "system" led to this outcome, which reinforces the need to carry on research that is ecological and considers the multiple factors involved in child safety.

Family factors

Studies that related socio-economic, educational and cultural factors to accidents have very conflicting results (Klein, 1977, 1980; Wicklund, 1984; Beautrais, 1982; Wicklund, 1984). Most of the contradiction is due to the use of single factors, such as housing, education, occupation and income, collected through archives and by survey methods without any direct contact with the family. For example when researched as a single factor, no significant relationships between parental drug and alcohol use and childhood injuries were found for families with children under four years of age. However one consistent outcome of past research is that accident risks are much higher in less educated, low income families and especially in households with single teenage mothers (Brown, 1978; Husband & Hinton, 1972; Plionis, 1977; Sobel, 1970; Wadsworth et al., 1983; Wicklund, Moss, & Frost, 1984).

In addition to single teenage mothers, other populations who have been demonstrated to be high-risk are single-parent families and families that are in crisis (Beautrais, Fergussen, & Shannon, 1982; Jones, 1980). Socio Economic Status (SES) and maternal

education also found to be related to child injuries (Beautrais, Fergussen, & Shannon, 1982; Kimati, 1977; Klein, 1980; Wicklund, Moss, & Frost, 1984). In many studies SES emerged as a major factor in determining childhood injuries. For example children of low-income parents are 2.58 times more likely to die as a result of an injury, compared to children of middle and high income parents (Rivera & Mueller, 1987).

Most injury statistics fail to consider the type of injury suffered by the children. Simply by looking at the statistics, it might be possible to conclude that safety management strategies of parents with low SES are inferior to that of higher SES parents. However many accidents suffered by low-income families are likely to be related to the inferior environmental conditions and to lack of support and services provided for these families. For example, childhood deaths due to fire are five times higher among low-income children, compared to children from middle and high income families.

Moen (1982) argued that children in families where both parents work are at a higher risk than children in families where one caretaker is at home all the time. The assumption has been that the "overload" on the working mother can cause stress and increase the risk of injuries by causing a breakdown of the safety strategy that is being used by the parent. However it is inappropriate to conclude that all two-provider families are high-risk families in terms of children's accidents, without considering other family factors. The level of family stress, for example, can be considerably lower in some middle and upper middle income families, where both parents are trying to develop their "careers", compared to low-income families where both parents have to work to sustain a minimum level of family income where caring for the children in the home becomes a major problem (Lamb, 1977).

Environmental factors

Home injuries are the most significant injury category for children under four years old. This is not surprising since home is the environment where children in this age group spend most of their time. There is very little data available describing the role that physical environment plays in the occurrence of the accidents. Available statistical data from The National Electronic Injury Supervision System (NEISS) relates children's injuries to physical elements of the home (windows, doors, stairs etc.), furniture (tables, chairs, beds, etc.) and products (poisons, knives, appliances, etc.) but fail to explain their role in the occurrence of the injury . This information needs to be improved since it is essential for the researchers to understand "how" the accidents are happening in order to develop effective intervention strategies.

Ecological research

The first and the most comprehensive attempt to create a model for the analysis of an injury event has been developed by Haddon (1972), who broke down the history of the injury event into three categories: pre-event, event, and post-event. For each of these stages, he proposed an analysis with respect to human factors, agent or vehicle of the injury, physical environment and the socio-cultural environment. Haddon's model was a great improvement over the previous epidemiological data which neglected all of these factors. However his approach should be considered an improved form of injury classification methodology and not be confused with truly ecological approaches. Although comprehensive, Haddon's approach treats each injury as a separate disconnected "event" and by failing to stress the relationships among different components of the safety model, does not treat injury prevention as a "system."

Hart and Iltus (1986a) argued for the need for an ecological approach in order to interpret the available epidemiological data. In order to achieve this, it is necessary to outline the complete set of factors related to each particular injury. Peterson (1987) calls this approach "Process Analysis" which "...examines injury as a series of person-by-environment interactions, rather than as a discrete event." (Peterson, 1987, p.34). In a way Peterson's approach seems to be derived from Haddon (1970, 1981) and is focused on getting information regarding before, during and after the injury event. Putting the actual "injurious event" at the center of any analysis forces the researcher to look at everything in relation to that event, rather than allowing her to look at the total system where the injury took place. In contrast, the Safety Management System (SMS) for families, as proposed by Hart & Iltus (1986a) presents a larger picture, because it allows for the consideration of many different forces related to injuries. According to this conceptualization, individual injury events represent points in time where the SMS breaks down. Consequently, focusing only on the injury events means focusing only to those times where the system had broken down for a number of reasons. It is almost impossible to construct from this data, how the system has been operating during the non-injury situations. In order to reveal a complete SMS, the researcher has to investigate not only injury events, but also how those events are prevented from happening by the parents.

There is another practical problem at looking only at injury events for understanding home safety. The number of injuries and near misses experienced per year by an average family is too low to be considered as significant research data. To overcome this, very extensive longitudinal research designs that track large populations for a long time would be necessary.

Relying on self-reports on home injuries is also inadequate. The "guilt factor" may prevent most parents from reporting many of the significant injuries and near misses.

Methods like asking parents to keep logs, or calling them frequently to ask about injuries proved to be less than effective in many studies (Peterson, 1987).

Finally, for young children who are not always under direct supervision, it may be impossible for the parents to reconstruct a reliable picture of the events leading to an injury, or the occurrence of it.

Valsiner & Lightfoot (1987) stressed the importance of looking at the changing systems of child safety management strategies, rather than the static approaches that look at families at one specific time. The concept of change is critical for not only understanding what is happening through time, but also for understanding why the change is happening. Caretakers continuously modify their safety management systems by adopting them to the changing conditions or by learning from their own failures. Changing conditions and reasons for failure can range from moving to a new house to a family crisis, and result in anything from a minor accident to a serious injury. In any case, the most consistent and significant change is the development of the child with her improving physical and cognitive skills.

In addition to all these variables, Valsiner & Lightfoot (1987) also included the environment as a changing system and argued that modifications in the environment for safety's sake would have unpredictable impact on the overall system, by sometimes resulting in even more serious injury potentials. Even though this aspect of safety interventions by parents has not been thoroughly researched, Hart & Iltus (1985) encountered a large number of improperly installed and dangerous safety devices (such as loose safety gates at the top of the stairs), during their interviews with families.

Parental Injury prevention strategies

Active versus passive strategies

Accepted definitions of "active" and "passive" by safety researchers

Parental injury prevention strategies lie at the heart of any SMS. Child injury researchers divide safety strategies into two major categories; "*active*" and "*passive*". *Active* and *passive* strategies are defined as follows: "*Active* prevention strategies generally require repeated action by individuals in order to achieve any protective benefit" while "*...passive* prevention requires minimal or no individual action while providing protection to large numbers of people" (Roberts & Brooks, 1987, p.7).

These descriptions portray a very inflexible definition of "*passive*" and "*active*" strategies. A popular example for a device that requires an active strategy is the car seat. On the other hand, childproof medicine bottle caps are given as an example for a device requiring a passive strategy. In reality, the differences between active and passive strategies are not so clear cut. While repeated action is necessary for car seats to be effective, they are still "devices" and much different from some truly active strategies including supervision, rule systems, training and various other child management strategies that require a large degree of parent/child interaction. Whereas the so-called "passive" medicine caps need a certain amount of "active" intervention, since they need to be closed properly after each use and some parents may not choose to do so since these caps are usually very hard to open, especially by the elderly.

Effectiveness of "passive" versus "active" strategies

A significant number of behavioral intervention studies have been conducted to evaluate the effectiveness of various educational approaches. The goal of these interventions was to reduce risk and actual injury (Schlesinger, et. al., 1966; Dershewitz & Williamson, 1977; Colver, Hutchinson & Judson, 1982; MacKay & Rothman, 1982). The results of these interventions were very disappointing and showed no significant difference between the target group and the control groups. Although there have been some studies that resulted in the reduction of risk and injury, like the studies by Bass, Metha, Ostrovsky, and Halperin (1985) and Gallagher, Hunter, and Guyer (1985) overall, the results were puzzling and disturbing for many injury researchers. These and similar results obtained from large scale studies lead to the conclusion that active intervention strategies are ineffective.

A possible explanation for the failure of these interventions lies in their overlooking individual family differences. When all families are treated as similar and randomly assigned to target and control groups, and experience the same intervention, the actual effectiveness of the particular intervention is reduced to a minimum.

Large scale, education-based interventions should not be the only ones used to judge the effectiveness of "active" strategies. Successful results were achieved when behavioral interventions were administered to smaller and selective populations. These studies were limited in scope, they were intensive and used well established behavioral techniques such as modeling, role playing and feedback (Tertinger, Greene & Lutzker, 1984; Roberts, Fanurik, & Layfield, 1987; Barone, Greene, & Lutzker, 1986).

These results argue for the necessity of devising research tools that are sensitive enough to evaluate the unique characteristics of each family and for customizing the intervention strategies according to the needs of each family.

Nevertheless an influential group of researchers and policy makers do insist that all the efforts should be concentrated in the passive approaches where the goal is to modify the child's environment (Wilson & Baker, 1987). Supporters of passive strategies also encourage interventions to be done through legislative means similar to "The Poison Prevention Packaging Act", "The Flammable Fabrics Act", and "The Child Passenger Restraint Legislation". The only active interventions that are encouraged by this group are the behavior modification strategies that need to take place only once or very infrequently such as, installing smoke detectors, lowering water heater temperatures or banning guns in the home.

While all these interventions can be very effective, they constitute a prevention for only a small percentage of all the possible accidents in the home (Children's Safety Network, 1991). For example "falls" which is a major injury category for young children can hardly be prevented only through passive means. For this reason, it is clear that active strategies by caretakers inevitably constitute a major segment of home safety strategies. This is also partly due to the fact that each home is a unique and dynamic environment which requires continuous monitoring and change. Furthermore even the so-called passive devices go through continuous modification. The need for modification may stem from a) the design of the device, e.g.: safety gates need to be opened or removed each time an adult needs to get through, b) cognitive and physical development of the child, e.g.: as the child develops, outlet plugs become "toys" that are removed and installed by the children, (Hart and Iltus, 1985), and c) changing needs of the parents, e.g.: windows that can be closed during winter need to be open and electric fans need to be used in non air conditioned homes during the summer months (Hart & Iltus, 1986a).

Studies indicate that parents move from passive strategies to active ones as the children grow up. Garling, Garling & Mauritzson-Sandberg (1989a) found that the most common strategy for the parents of 2-year-olds was the modification of the environment,

while the most frequent strategy for the parents of 3-year-olds was teaching the child about the dangers.

Supervision

Of all the safety strategies, supervision is usually perceived by parents as the most effective one since it allows the parent's immediate intervention during an injury threatening situation (Garling, Garling, & Mauritzson-Sandberg, 1989b). This perception can be challenged on several grounds. As Garling & Garling (1988) pointed out, (a) there may be other competing cognitive activities during the supervision. (b) following an extended no-event period, parents may stop supervising with the belief that it is no longer necessary, and (c) if failure to supervise in one particular setting does not result in an increase in injury causing events, parents may extend this to other settings. In view of these factors, research has to address the differences between effective and ineffective supervision in different family systems.

In their study of parents with one to three-year-old children, Garling, Garling & Mauritzson-sandberg (1989a), showed that when the child is present and involved in the event, most accident risks were perceived by the mothers. This indicates that mothers mostly decide on what the dangers are by watching the events that their young children get involved in. This conclusion conflicts with the findings of another study by Garling & Garling (1988) where they showed that parents' assessment of accident risks are not based on their recall of previous experiences of accidents and near misses. It is possible to explain this phenomenon by the relative infrequency of real accidents and near misses compared to all the other injury threatening scenarios. In other words, even though accidents and near misses are emotionally more significant events, it is not these but the "intent" of the child in everyday life, that the mothers are learning from.

The behavior of a young child may be unpredictable to inexperienced parents. Garling, Garling, and Mauritzson-Sandberg (1989a) found that unlike the mothers of two-year-old and three-year-old children, mothers of one-year-olds did not anticipate the occurrence of many accidents before they happened, even while supervising their children.

Parental rule systems

Parental rule systems together with supervision, are the most frequently used active strategy since they encompass the rules set for children and for adults. Especially for young children the rules are used as the main vehicle of training and education (Goodnow, 1988) but in order for the rule systems to work, they must be *internalized* by the child. *Internalization* is defined as "...the process whereby children take over the values and attitudes of society as their own and behave in accord with them, even in the absence of surveillance by society's agents" (Grusec & Goodnow, 1992, p. 63). Furthermore, family size was also found to be a significant factor in the number of rules adopted by families. Large families tend to be more rule ridden (Wagner, Schubert, & Schubert, 1985).

Child rule systems set up by the parents for children's safety is the most complex component of SMS. In addition to the number of rules that are set up, it is necessary to look at the infringement of the rules by the children and variations in parents' reinforcement of the rules. The number of child rules set up by the parents is not an indication of parental assessment of risk. Todd and Alfich (1988) found that parents of latchkey children, - children who are perceived to be at a higher risk, since they are left alone in the home - use fewer rules than parents who never leave their children alone in the home. Parents of latchkey children indicated that since their children internalized most rules, overt rules were no longer needed, a claim supported by interviews which proved that latchkey children recalled rules more accurately than other children in the study. This finding suggests that

some parents believe that a smaller set of clearly defined rules are easier for the children to remember and adhere to than a larger set of loosely defined and hard to follow rules. Finally, while looking at the parental dependence on rules, it is necessary to remember that rules work hand in hand with other safety strategies and therefore should be evaluated within the context of the complete SMS.

Factors contributing to the success of selected strategy.

Garling & Garling (1988) found that in addition to child and environment factors, the success of parental strategies is dependent on (a) the experience of the parents and, (b) the persistence of parents in reinforcing each strategy.

It has been shown that parents are likely to overestimate their child's ability to behave safely under dangerous situations. Yarmey & Rosenstein (1988) found that this overestimation is more frequent in the case of boys than girls.

Kinderman & Skinner (1988) proved the importance of *developmental tasks* for different stages of childhood. The *developmental tasks* such as walking, eating and dressing became central organizers of caretaker-child interaction patterns for certain periods in the life of the children. They also hypothesized that "...the construction of developmental tasks for children does not proceed independently of context, but is deeply rooted in historical and culture-specific expectations of caretakers for their children." (Kindermann & Skinner, 1988, p.100). In that sense, definition and management of the *developmental tasks* are closely related to the belief systems of the caretakers and should not be overlooked in research.

Parental disciplining techniques

Parental discipline is highly relevant to the prevention of injuries inside the home. Disciplining techniques are used to enforce parental rule systems and they are critical for the successful implementation of safety management systems. The benefits of different disciplining techniques adopted by parents have been widely discussed by psychologists. Earlier discussions focused on the relative advantages of withdrawal of affection as opposed to material disciplining techniques such as withholding privileges and rewards or physical punishment (Grusec & Goodnow, 1992).

Age is an important variable in the selection of disciplining techniques. Research has shown that, as the children grow, disciplining practices involve less punishment and more explanation coupled with the withdrawal of privileges, practices possible with the increased maturity of the children (Lytton-Hugh, Watts, & Dunn, 1988).

There is a big danger in assuming however, that parents also use their primary child-rearing strategies and disciplining techniques also in the case of safety. Grusec & Goodnow (1992) have argued that the type of strategy adopted by the parents is context sensitive and parents behave differently depending on the type of the social standard violated by the child. In the case of safety, it might be expected, since the risks are so high, that the parents will react with the most extreme and power assertive strategies of discipline, when their rules are challenged by the children. However research has indicated that the opposite is true. In the case of serious misbehaviors, mothers are more likely to react with *matter of fact* (description of rules and consequences of behavior) and *other-oriented induction* (description of physical and emotional consequences to others) as well as *reasoning* (Grusec & Kuczynski, 1980; Zahn-Waxler & Chapman, 1982). Instead of power assertive strategies it is likely that mothers select these techniques in the case of serious and life-threatening misbehaviors with the intention of speeding up the rule internalization process of the child.

Another critical issue is related to the child's perception of adopted disciplining strategy and his acceptance of punishment. In the case of young children, safety issues are usually dealt with extreme seriousness and emotional involvement by the parent, so that even if the child is unable to understand the actual physical threat, he or she will be more likely to accept the designated disciplining strategy.

Parenting ideology/Parental belief systems and child-rearing strategies

General issues

Contrary to the view that models of child development and child socialization beliefs for parents are not systematic and logical (Sutherland, 1983), it is possible to identify the main dimensions of these parental belief systems. Existing research clearly indicates that models of parental belief systems do exist and can be elicited.

It has been demonstrated that significant differences do exist among the child-rearing beliefs and techniques of different families. Differences between child-rearing beliefs are found to be related to SES, ethnicity and to being a native or a non-native (Ogbu 1981; Lambert 1979). Differences were also detected between parents who label themselves as "experts" versus "just housewives", indicating the importance of education and the quality and quantity of child-rearing advice and information that the parents previously had. Historically, the issue was not that parents did not have elaborate child rearing ideologies, but that their ideas were never really considered important, because they represented a very different account of reality than that of pedagogical experts such as Dr. Spock (1945).

In reality, these differences in child-rearing practices go beyond ethnicity, culture and class. Rather, it has been shown that there are big contrasts even among families of similar backgrounds. Laybourn (1986) for example, found that there were great differences of opinion on child-rearing ideas in a working-class community in England. He also demonstrated that parental expectations were significant in determining these differences.

Different classifications have been used to identify child-rearing strategies adopted by parents. Many of the earlier definitions included categorizations that at best can be

described as extremely subjective. For example in earlier studies one of the terms most frequently used to evaluate child-rearing strategies was *parental warmth* .

Studies that attempted to find a relationship between parental values, parental control and child behavior have failed to do so. On the contrary, they insisted that *parental warmth* was the variable that appeared important (DeMan, McKelvey, & Van Der Riet, 1987; Weisner, Bausano, & Kornfien, 1983). This is not surprising, since historically parental emotion has always been seen as a significant variable. In their study of 54 child-rearing manuals published between 1915 and 1980, Shields & Koster (1989) found strong patterns of emotional stereotyping.

In an attempt to classify families, Baldwin, Kalhorn and Breese (1945), proposed three classifications for child-rearing. These were: (a) warm - cold, (b) democratic - autocratic, and (c) emotionally involved - uninvolved. They pointed out that democratic parents were not necessarily the ones who achieved great compliance from their children. Similarly Becker (1964) proposed two major dimensions: (a) warm-hostile, and (b) restrictive-permissive, with the suggestion that the most successful parents would be warm-restrictive ones. Both these models encouraged parents to be restrictive on children and ignored the need for spontaneity and originality. In other words in exchange for conformity to parental demands, they were willing to sacrifice the potential for intellectual curiosity and social outgoingness in their children (Grusec & Goodnow, 1992).

The solution to this problem was formulated by Baumrind (1971, 1975, 1980) where she defined three distinct child-rearing styles; authoritative, authoritarian, and permissive. Permissive parents were described as parents who allow their children to regulate their own activities. They avoid the exercise of control and make few demands for household responsibilities and orderly behavior. Authoritarian parents were described as those who value obedience as a virtue and favor punitive and forceful measures. They regard order and preservation of values as an end in itself, and they believe and exercise the practice of

keeping the child in one space by limiting the child's autonomy. Authoritative parents on the other hand, are those who encourage verbal give and take and they share the reasoning behind their policies with the child. They enforce their own perspectives while recognizing the child's own interests.

Of these three models Baumrind strongly favors the "authoritative" style over the others. Her conceptualization has been largely criticized for its simplistic approach to the very complex issue of parental belief systems. Her sample of parents was also limited to white, middle-class parents and her methodology consisted of rating scales and checklists rather than rich descriptions of real life experiences.

A critical question here is how and why do parents choose and adopt one child-rearing technique over another? Baumrind assumes that this is a direct outcome of parental belief and ideology. However it is clear that there are competing forces that effect the selection. For example one of the basic criticisms of Baumrind centers on the importance of child characteristics. It can be argued that parents are sometimes forced to select certain child-rearing strategies over others, because of the behavioral characteristics of their child. A very reactive and high-tempered child may force the parents to adopt an authoritative strategy.

The question of why parents choose one type of socialization practice over others and how they decide what type of child behavior is appropriate or not appropriate is the subject of attribution theory. Attribution theorists argue that, parents continuously assess the behavior of their children and particularly their inferences about what is causing the events around them. This also suggests that parents' approach to child-rearing and safety may depend on their continuous assessment of the causes of their child's behavior and their inferences about the developmental limitations and motives operative at particular ages (Dix & Grusec, 1985;Jones & Davis, 1965). The different conclusions that parents arrive at the end of these investigative process is one of the fundamental differences between different

types of parents. While some parents may conclude that young children do not have any understanding of their physical environment, others may believe that the child has a much higher level of understanding. The most challenging part of the child's fast growth - especially during the early years- as seen in this data, is that it forces parents to re-negotiate their position in terms of safety over and over, as they assess the changing competency of the child.

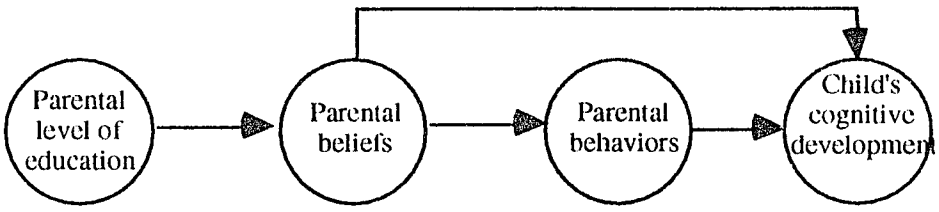
Researchers who believe that children construct their own reality on the basis of their own experience hypothesize that the child's cognitive development is related to the parental "distancing behaviors" or "distancing styles" (Sigel, 1979). The concept of "distancing behavior" is derived from the theories of Piaget (1950), Kelly (1955) and Wiener (1967) which show great similarity to Vygotsky's concept of parent's behavior within the "zone of proximal development" (Wertsch, 1985; Valsiner, 1987). This concept indicates the parents' level of contribution to the cognitive development of the child within the limits of the child's potential competence.

In terms of parental beliefs on safety, an important criterion is the parents' ideas on the inevitability of "accidents". Research has showed that there is an increase in the number of parents who believe that most accidents can be prevented (Eichelberger, Gotschall, Feely, Harstad, & Bowman, 1990). While parents who believed in fate, stressed the importance of good nutrition and the use of educational materials in ideal parenting, parents who believed they have control over events stressed affection and verbal interaction, indicating that they were more likely to adopt more dynamic and interactive approaches toward child safety (Galejs, & Pease, 1986).

A structured review of existing literature on child rearing beliefs and practices

Research focusing on parents' distancing strategies and its implications on the child's cognitive development favors a linear model of affects and outcomes. This model is represented in Figure 1.

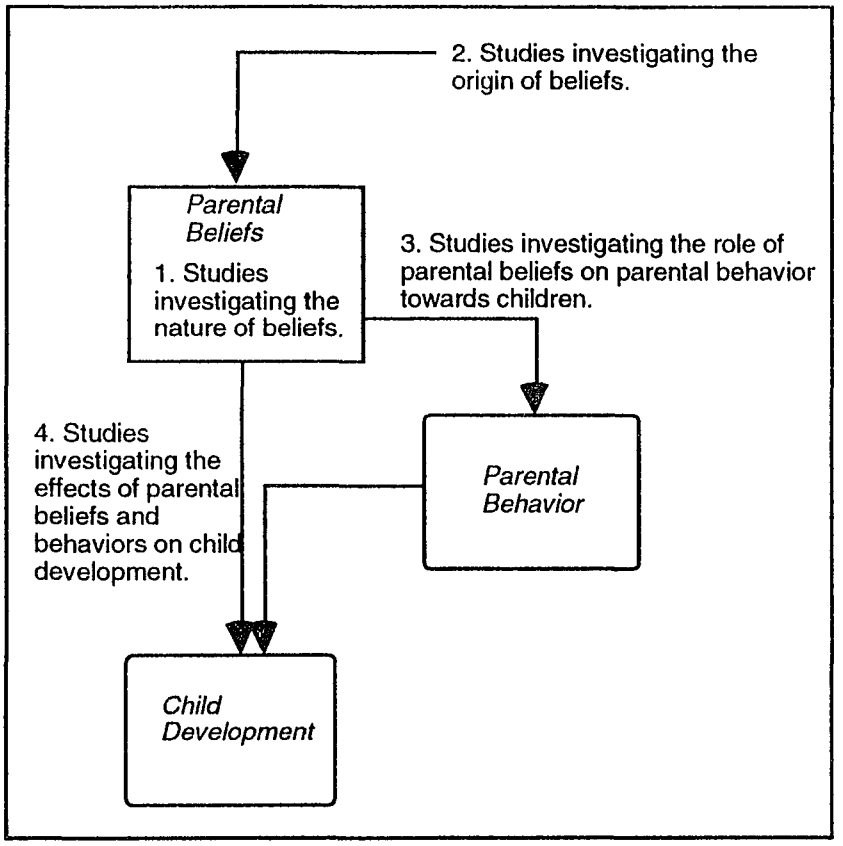
Figure 1. Linear conception of belief-behavior-development continuum



Not surprisingly, research attempting to prove this linear relationship has encountered a number of problems (Sigel, 1985; McGillicuddy-De Lisi, 1985). One clear misconception is the assumption that parental education is the only factor that affects parental beliefs. However there are many indications that belief systems are affected by a large number of sources which include the economic and social resources of a family, as well as the characteristics of the child. Additionally the relationship between beliefs, behaviors and child's cognitive level is not direct. Sigel (1985) and McGillicuddy-De Lisi (1985) found a relationship between parental beliefs and a child's cognitive level but, no direct relationship has been found between beliefs and parental behaviors, or between parental behaviors and the child's cognitive level.

Unlike Sigel and McGillicuddy-De Lisi almost all the other researchers in this area prefer to focus on only one of the multiple relationships of the continuum presented in Figure 1. Therefore a modified version of the model in Figure 1 can be used to analyze the literature on parental child rearing ideologies according to their focus. Figure 2 shows a diagrammatic description of research domains in this area.

Figure 2. Research domains in parental child-rearing belief and behaviors.



Any review of literature has to look at these studies at two levels. The first and the obvious one is to outline the specific outcomes. However, any attempt to do so will reveal an inconsistent and confusing picture. Therefore, in addition to the findings, it is necessary to evaluate these studies on various theoretical grounds, by examining their assumptions, design limitations and methodologies.

1. Studies investigating the nature of beliefs:

Studies which are in this first category are those which have investigated the nature of parental beliefs. They try to discover parents' answers to the questions related to child

development. These questions include, but are not limited to the following: (a) to what extent are children's abilities determined at birth, rather than developed through environmental interactions, (b) what is the role of the parent in child development, (c) how and why do children's abilities change, (d) how do children learn, (e) what is the true nature of this learning, (f) what are the critical stages of development and when do they happen.

Findings indicate that although most parents have well structured views on these issues, they differ drastically in the formulation of these beliefs (McGillicuddy-De-Lisi, 1982a). In terms of the nature versus nurture issue, research has found that most parents acknowledge the role of both of these factors, but stress the importance of environmental factors more frequently (Kochanska & Radke-Yarrow, 1985; Johnson & Martin, 1983). Another finding is that hereditary factors play a more important role in the early years of life (Miller et al., 1980).

As research has become more comprehensive, measures of parental beliefs have also became more detailed and wide ranging. Unfortunately, many studies have concentrated on only one or only a few dimensions at a time. For example most researched parental belief dimensions are labeled *child agency* and *parent agency*. These refer to parents who believe that the child is "...an active, autonomous constructor, or co-constructor of his or her own development (*child agency*) or that parents themselves are effective in influencing developmental outcomes (*parent agency*)" (Murphey & Alexander, 1991, p.4).

Another popular arena of investigation on parental belief has focused on the parents' ability to judge the physical and cognitive abilities of children at different developmental stages. By using a range of scales, these studies have assessed parents' judgments of developmental milestones (Frankel & Roer-Bornstein, 1982; Miller, 1986; Pharis & Manosevitz, 1980). In them, parents were expected to answer questions "correctly" and

judge the relationship between biological age and such developmental phases, as the ability to feel heat and cold, to see color, to grasp objects, or to read a picture book, aloud.

The findings of these studies indicated that the percentage of accuracy for mothers of infants was an impressive 72.2%. When compared to the scores of developmental psychologists (86.3% correct) and pediatricians (87.3% correct) the mothers proved that they were good estimators of developmental milestones (Miller, 1988). The findings also suggested that mothers' rate of accuracy was higher for gross-motor and linguistic development compared to sensory/perceptual development. The studies also indicated that while mothers underestimated the abilities of infants, this tendency was reversed as the age of children increased. As to older children, parents consistently overestimated their abilities, sometimes by a margin of two years in the case of the first-graders (Miller, 1986).

These findings have critical implications for child safety researchers. The parental underestimation of the abilities of younger children can result in major gaps in mothers' safety management strategies. Future safety research should concentrate on this aspect of parental perceptions and its implications for childhood injuries.

One of the basic problems with this type of research is the apparent confusion between *beliefs* and *knowledge*. The sole purpose of the questions asked to parents seems to have been to judge their knowledge of child development as outlined by mainstream developmental psychology. Furthermore by limiting the answers to true or false, this research imposed value judgments related to some of the most controversial issues in developmental psychology.

2. Studies investigating the origin of beliefs:

A second category of research has investigated the origin of beliefs about child development. These studies have looked at mother-father differences, age of the child, number of children in the household, ethnic differences, and parents' own upbringing. The findings of these studies revealed conflicting results. For example while McGillicuddy-DeLisi (1985) found no differences between mothers and fathers in terms of their child rearing beliefs, Knight (1985) reported significant differences. Similarly while few studies have indicated that the age of the child and the number of children in the home are significant predictors of parental beliefs (Knight, 1981; McGillicuddy-DeLisi, 1982b), most researchers have been unable to find these variables as significant (Johnson & Martin, 1985; Ninio, 1979).

The few studies which have attempted to find differences among child-rearing beliefs and ethnic origin failed to succeed even when they found differences between different groups (Frankel & Roer-Bornstein, 1982; Sameroff & Feil, 1985). These studies were unable to describe the meaning of these differences and how they were related to the culture itself.

The only consistent variable related to child rearing beliefs seems to be the Socio Economic Status (SES) of families (Johnson & Martin, 1983; Knight, 1985; McGillicuddy-DeLisi, 1982a, 1982b; Ninio, 1979; Sameroff & Feil, 1985). Overall, research indicates that parents with high SES tend to see the child as an active participant, and are more knowledgeable about child development. Even though this finding is not surprising, as Miller (1988) points out, it is important to notice the significant overlap with what high SES parents, and research define as *positive and correct thinking and behavior.* This ideological bias of existing research may largely be responsible for the findings in this category of research.

The overall weakness of research in clarifying the effects of the origin of ideas on the beliefs themselves can be attributed to the single-factor designs of many of these studies. Instead of looking at families as complex systems, they have attempted to relate only a few variables such as child's age and family composition, to standardized scales of parental beliefs. It is likely that the origin of parental beliefs may change from family to family, depending on the existing micro and macro level forces operating on each family. These forces include not only the child characteristics, family structure and the background of the family but also complex environmental and situational factors such as motivation and affect (Miller, 1988). Furthermore, these factors in some cases may be totally out of the domain of child-rearing realm and reflect some practical everyday considerations.

Research that has ignored the relationships between family resources and child-rearing ideology has also overlooked the possibility that parents modify their belief systems in order to make it more congruent with their limited resources. For example, a parent can argue that there are few benefits for the child to play with toys, if she cannot afford to buy toys for her child.

3. Studies investigating the relationship of beliefs and child-rearing practices:

The third category of research has investigated the relationship of parental beliefs and parental behavior towards children. Unfortunately research in this area is very limited. As one of the most important findings in this area Mounsey, T. V. C., Bond, L. A., Belenky, M. F., Weinstock, J. S., & Burgmeier, P. T. (1991) showed "...parents with most complex epistemological positions were more likely to use strategies that placed significant cognitive demands upon the children" (p.1), while parents with simple epistemological positions were the ones who used the most power-oriented strategies.

In other significant examples of this type of research, McGillicuddy-DeLisi (1982b), Sigel (1986), and Stevens (1984) found that there is a relationship between parental beliefs and parental behavior. However, recording actual parental child-rearing behaviors proved to be difficult. Since direct observations within the home were not feasible, researchers relied on parental reporting, and most frequently on laboratory observations of parent-child interactions. Typical methodologies involved assigning some problem-solving task to the parent-child dyad and observing their performance and interaction. This type of data inevitably lacked the naturalistic spontaneity of everyday interactions of parent and child within the home.

4. Studies investigating the relationship of beliefs and behavior on child development:

The fourth and possibly the most problematic category of research is the one that has investigated the relationship of parental beliefs and behaviors on the development of the child. The fundamental assumption that needs to be challenged is the one-directional effect of the parenting ideology and child-rearing styles over the child's future development (White, 1979; Bronfenbrenner, 1974). Almost all data that attempted to find a link between child-rearing and performance in later life is very controversial (Ogbu, 1981, Peet & Melson, 1991). While some weak relationships are reported in this area (McGillicuddy-DeLisi, 1985; Johnson & Martin, 1983, Weisner & Eiduson, 1986), the evidence is inconclusive since the conclusion is that "...demonstrated relationships hold only for mothers and not for fathers, for middle class but not for lower class families, and relationships are often differentially affected as a function of age and sex of child" (Grusec & Goodnow, 1992, p. 17). Further assumptions behind this approach are so plausible that the results should not be considered as indicative of any substantial relationship. The problem largely lies in the way child development and performance is evaluated. Due to the nature of the problem, researchers have no choice but to categorize certain aspects of

developmental outcomes as "successful" or "positive". In longitudinal research, success in schooling, IQ of the child, social adaptation are used as predictors of "good" development. The problem with this approach is twofold. First, since it is impossible to control for all the variables influencing the development of a child within his/her life space, it is meaningless to assume that parental beliefs are more significant than all other existing variables. Second, successful development may mean different things for different cultures and subcultures. To evaluate it through the standards of the most influential subculture in this society -mainly the white middle class- by using only this group's definitions for "success" is misleading.

On the contrary, some interesting research and theory, strongly suggests that effects may be reciprocal. That is, the characteristics of the child's personality may have an important influence on the way parents conduct themselves as mothers and fathers. (Lambert, 1979 ; Bell, 1968). Similarly in the pilot studies of their research, Hart & Iltus, 1986a) found many examples of child's character influencing the parents' safety strategy. A typical example was the mothers' response "my child never does that" when a potential danger was pointed out to them. This response is a strong indicator of the parent's interpretation of the child's character regarding safety issues. It is also related to how parents label their children by using adjectives such as "opportunistic child", "adventurous child" or "trustworthy child" according to the salient aspects of their child's character. Therefore it is possible to argue that, a family's child-rearing ideology can function more to justify the practiced child-rearing strategy, rather than influence it. However, one still has to answer the question why one type of practice is preferred over others by a specific family. To answer this question, it is necessary to investigate child development beliefs and child-rearing ideology together with the child safety practices of parents.

Critique of existing research

The body of research that is outlined above can be criticized at several levels. Primary criticism should address the limited focus of these studies. Almost every existing study focused only on one of the four components outlined in Figure 2, and very rarely attempted to look at the system as a whole. By doing that, these studies searched only for direct links between sources of beliefs, beliefs themselves, actions and developmental outcomes. The results overlooked the indirect and reciprocal relationships that are imbedded among the components of the model that they proposed. For example, while focusing on a one-dimensional relationship between parental behavior and child's developmental outcomes, research ignored the possibility that most of the parental behavior might be influenced and determined by the character and activity level of the child itself. Similarly the research did not consider the possibility that parents' beliefs about child development could have been influenced by the character and behavior of their own children.

Existing research ignored many of the so-called "everyday life" factors that have a major impact on the beliefs and behavior of parents. Variables that the research assumed to influence beliefs were limited to the obvious demographic ones such as age, gender, SES, and number of children. However the everyday reality of child rearing involves many other variables that are critical in influencing the beliefs and behavior of parents. These affective and motivational factors are more likely to have a transitional quality, and in that sense are hard for researchers to pinpoint. These factors range from major family crises such as health and financial troubles, to seemingly insignificant everyday events such as being late to work. A permissive mother who rarely punishes her child can employ an extreme disciplining technique when her child breaks a valued object such as the television set. In such a case, the valued object (TV set) rather than the parenting strategy is the determining factor that is behind the selected disciplining strategy. These mediating

variables were almost always missing from existing research and can only be revealed through in-depth qualitative research techniques.

An even more critical issue is the parents' lack of behavioral consistency in raising a child. In other words, the parent's child-rearing strategies are very frequently not a reflection of the parents' belief systems. Research done by Hart and Iltus (1986a) indicated that because of the hectic nature of everyday life with children, many parents behave in a manner that conflicts with their beliefs and ideas. Actually child rearing beliefs are not the only variables when parents' relationship with their children are considered. There are many other competing factors such as mood, comfort, social pressures etc. that lead parents to act in different and seemingly unpredictable ways.

Another critical issue resulting in inconsistencies in the findings of the existing research is related to the *context* of this type of research. Almost all existing research is focused on parental beliefs and ideology and its relationship to the child's socialization. When the context of research is defined in such a broad manner, it is inevitable that the findings are not focused on more identifiable categories of parent-child interactions. For example, while there are many studies which investigate the relationships between parents' beliefs on child development and child behavior, there are no studies that focus on parents' beliefs on the value of play and child's play behavior, parents' beliefs on education and child's learning, or parents' beliefs on safety and child's injury prevention behavior. Instead of global concepts of parental beliefs, research should focus on more manageable aspects of child development that can be successfully and meaningfully rooted in the families' daily life.

Probably as a result of these shortcomings, after a long history of inconsistent findings, some recent studies are realizing the importance of the context sensitive aspect of parental beliefs and child behavior as well as the role of the child's personality

characteristics and the socio-cultural setting (Goodnow, 1988; McGillicudy-DeLisi, 1985; Murphey & Alexander, 1991; Sigel, 1985).

Finally, criticism of existing research should focus on the methodological issues raised by them. Most of the research geared towards parental beliefs adopted a number of standardized scales and questionnaires to elicit these beliefs. The most frequent methodology involved giving parents a set of statements and ideas which asked if they agree. Such an approach eliminated the possibility of eliciting ideas not considered critical by the disciplines of developmental and social psychology. On the other hand, the few studies which adopted the open-ended questionnaire approach encountered a different set of problems. These studies rarely considered how much the response of the parent reflected their own thinking versus the parents' desire to answer the question according to culturally accepted norms.

While it is inevitable that there will be some contradictions between how parents indicate they behave and how they actually behave, the issue becomes a critical one in an area like injuries, where the child's health, wellbeing and in some cases, life is at stake. For that reason it is very hard for parents to accept that they can make mistakes. In addition, ststistics indicate that a significant amount of harm to the child is attribuded to intentional injuries by the parent. Pilot data from Hart and Iltus (1986a) strongly indicates that there are major differences in parents' stated safety behaviors and their actual practices, especially in the area of installation and use of such physical safety devices as electrical outlet plugs and safety gates, and future research must find ways to deal with this problem.

Ecology of the home environment

Very few studies have focused on the effects of physical and social home environment on child-rearing. Research which investigated the quality of stimulation in the home environment found strong relationships among home environment, parenting knowledge, and infant developmental performance (Parks, & Smeriglio, 1986).

Important factors that emerged from this research include the level of social stimulation (Elardo, Bradley, & Caldwell, 1977), the organization of the home for child's stimulation (White, Kaban, Shapiro, & Attonucci, 1976), and the amount, type and variety of inanimate stimulation available to the child in the form of decorations, the color scheme of the child's room, toys, and books (Rheingold & Cook, 1975). It should be noted that the impact of the physical environment should not be considered as a direct effect but one that is mediated through the attitudes and behavior of the parents/adults in the home, as well as the prevailing social environment. In other words, even very young children live in complex physical and social settings comprised of home, neighborhood, parents, siblings and other adults.

Careless research may jump to the conclusion that the relationship between *stimulants* in the home and *child development* can be used to identify successful and unsuccessful parenting. This distinction can only be made if families are sensitively evaluated according to their material and economic resources so that *inadequate or overly abundant material resources* is not confused with *ideological states of parenting*.

Characteristic of the home environment is an important factor effecting the implementation of safety strategies. Matheny (1986) found that noise, confusion and clutter in the home is related to injury liability for children aged one to three.

Another critical factor in the functioning of families is crowding or family density. Newson & Newson (1963) found a relationship between crowding and punitive disciplining techniques. They reported that parents from more crowded homes are more likely to use aggression and physically punitive disciplining techniques. On the other hand it is also possible to argue that conditions of crowding are the cause of unacceptable behaviors of children, which in turn result in hard discipline techniques by parents. In any case, social stress created due to crowding can cause the parental safety system to break down and increase the chances for unintentional injury.

Altman & Nelson (1972) demonstrated that families differ widely in their styles of using the interior of the home. In addition to the patterns of use of different rooms, families can also be categorized according to privatization, physical and visual access, and their practice of keeping certain doors open or closed.

Studies investigating the social organization of home environments found that access and privacy rules have changed drastically as children grow up. While young children have a relatively free reign of the home limited by conditions of supervision, as they grow older, children started to use closed doors, to knock before entering, and were subject to limitations of access to spaces due to privacy reasons (Parke, 1978). Major cross-cultural effects were detected in families' use of the home environment. For example while Puerto Rican families concentrated their activities,in living areas, like the living room, and used the bedrooms only for sleeping, black families tended to distribute themselves across all the available rooms (Scheflen, 1971). These use patterns may have a major impact on the child safety strategies of the families. It is likely that the room accessibility rules for young children will be different for black and Puerto Rican families, if they are relying on supervision as their primary safety strategy.

It is surprising that no research was ever conducted to investigate the relationship of use patterns in the home and child safety. Implications of such research are very clear.

Children's access to spaces and visual and physical access to rooms are directly related to exposure to dangers and supervision. Research in this area will be very valuable in identifying the relationships among parental strategies, design of the physical environment, and child safety in the home. Different types of housing design not only affect parent-child interaction patterns, but size and location of critical rooms like kitchens and bathrooms are also relevant for the study of home safety. Similarly, location and design of stairs, existence and absence of doors, visibility into spaces, access to balconies and yards are all critical issues in terms of the safety management of young children.

How important is it for parents to know that they have a safe house? There is a very significant relationship between parents' perceptions of safety and their satisfaction with residential conditions (Garling, 1988). Findings like this from social and environmental research have lead some architects to be more sensitive to issues related to the social and psychological needs of the family. However, almost none of them consider issues related to child safety and child-rearing, nor do they try to develop designs sensitive to the real needs of parents regarding these issues. As a matter of fact, very few housing environments are designed from the point of view of single parents who have to deal with issues of child safety and child rearing and also do housework at the same time. It is clear that in most contemporary homes, space is a scarce resource, and the allocation of this resource is manipulated by the individuals or the groups who hold the "power" within the family structure (Lipman and Harris, 1982). This control over the space is usually exercised by setting up physical and symbolic barriers within the living space. Boys (1984), asks a series of critical questions including, "why most of the kitchens are being designed as one-person-at-a-time environments?" and "why there are no spaces in most homes that belong to the mother, where she can be alone, have her privacy and still supervise children?" (Boys, 1984). A systematic and in-depth study of the design characteristics of homes with respect to child safety is long overdue.

THEORETICAL FRAMEWORK

Terminology

In accordance with the preference of the injury prevention research community, this study will use the terms "non intentional injury" or "injury causing event" in place of the term "accident" except in places where the term is used as a part of the data collection instruments to enhance the communication with the parents. The goal of the decision to drop the term "accident" is to increase the awareness of the public to the preventability of so-called "accidents". The term "accident" has connotations that imply "inevitability", "god's will" and "fate." It is critical to give the public the message that most injury causing events to children can be prevented by modifying the physical environment and behavior of adults.

A majority of the studies on child-rearing use the term *beliefs* to identify the parents' understanding of children and child development. Miller (1988) states that: "...the scope for 'beliefs' is intended to be maximally broad, encompassing any sort of cognition that parents might form concerning children's cognitive development. Thus the term includes the phenomena that have been variously labeled in the literature as 'schema's', 'attributions', 'ideas', 'judgments', 'conceptions', or 'cognitions' " (p. 260). Goodnow (1988) proposes to use the term *ideas* instead of *beliefs* because it is the most general and most neutral term available. However, the term *ideas* implies a loose concept that is open to change, and therefore not appropriate for the purposes of this study. In order to communicate such a broad concept, and to reinforce the relatively permanent nature of these "ideas" or "beliefs", more comprehensive terms *ideology*, *parental ideology* or *child-rearing ideology* are used throughout this study. This terminology is selected with the

understanding that these ideas form a part of the *modern consciousness* of the individuals and are supported by the way most daily life is structured (Berger & Luckmann, 1966).

Another set of terms which frequently cause confusion are related to the definition of safety strategies. Existing literature is not consistent in its use of the terms "active" strategies and "passive" strategies. This inconsistency is discussed in the literature review section. However, this study identifies four distinct safety strategies that parents use. These are: 1) supervision, 2) child rules 3) safety devices and 4) physical precautions. For the purposes of this study, the term "active strategy" will be used to refer to either supervision or child rules, because these strategies require continuous and active day-to-day involvement of the parents in order to work, and they do not necessitate any long-term modifications to the physical environment. Likewise, the term "passive strategy" will be used to refer to safety devices or physical precautions, because these strategies do not require continuous and active day-to-day involvement of the parent and they work by the modification of the physical environment.

The term "risk" is used in a specific way to denote "injury risk" rather than "risk-taking" by the child or parents. The higher-risk families are the ones where the study suggests that there is a larger possibility of an injury causing event happening to the child. In that sense, "risk" as used in this study has negative connotations. It should not be confused with risk-taking which in some cases may be an intentional strategy by the parent and therefore should not be seen as a negative force for the safety management of the child.

Finally, the term *Safety Management Strategies* (SMS) is used to describe the "...entire set of factors existing at any one time within the child, in the physical environment of the home and from the child's caretakers, which help maintain the child's safety in the home" (Hart & Iltus, 1986, p. 20).

Relevant existing theory

Garling & Garling identified four basic categories of child care. These are: (a) feeding, (b) providing comfort, (c) transfer of knowledge, and (d) protection from dangers. Of these four, developmental psychology has concentrated a very large proportion of studies on the transfer of knowledge, which includes all forms of learning and socialization behaviors. On the other hand, protection from dangers was mostly ignored by psychologists even though it is as important as all the other three categories, especially during the early years of life.

Until recent years, research on childhood accidents was not generated from coherent theories. Rather, it concentrated on the effects of isolated independent variables on children's injuries. Garling and Valsiner were the first to look at the problem of children's safety within the framework of a comprehensive theory. Building on the ideas of Lewin and Vygotsky, Valsiner tried to explain the ecology of accidents by using three concepts, *the zone of free movement* (ZFM), *the zone of promoted action* (ZPA) and *the zone of proximal development* (ZPD).

ZFM characterizes the set of environmental variables which are within the realm of a child's free acting. ZPA indicates the direct effort of the people around the child to guide the child's actions in one direction rather than others. And the third concept ZPD - which is borrowed from Vygotsky- indicates the set of actions that the child can perform when helped by another person, but which are not available to the child in its individual acting (Valsiner, 1987).

When considered within the realm of accident prevention at home, the model operates like this: The caretaker evaluates and decides the limits of the child's ZFM. Any potential hazards beyond that zone are not given particular attention. Dangerous items that caretakers believe that the child cannot be taught about - or that lie beyond the range of ZPD

- are simply put out of the estimated range of ZFM. As the child grows and as caretakers start to believe that certain hazards can be internalized by the child - so that they fall within the range of ZPD - caretakers attempt to teach the child about these dangers and how to avoid them. This action illustrates an example of ZPA operating within the ZPD.

During this process two critical assumptions are made by the caretaker. The first is the estimation of the ZFM, or what the child can do and where she or he can reach. The second assumption is about the limits of ZPD, or the child's ability to understand and internalize certain dangers, and its ability to follow the rules related to these dangers. Any miscalculation on the parent's part about the limits of these two zones can cause a range of non intentional injuries within the home.

How do parents learn to identify the risks within the home? In his research that focused specifically on parents' perceptions of danger and risk, Garling (1988) did not find any significant differences between parents and non-parents in terms of identification of risks and dangers and assumed that the perceptions of risk are mostly effected by indirect experience. In the light of the pilot research conducted by Hart & Iltus (1986), it is hard to agree with this analysis. It is clear that parents' perceptions of danger are configured in the process of parenting while the child grows up. Assessment of risks in the home is mostly a direct outcome of the parents' everyday experiences with their children. For example, one form of parents' mental construction of new dangers is explained in this study by the concept "the critical incident." This refers to the first time the caregiver witnesses the child in a potentially dangerous situation that the caregiver had no idea existed before. More sophisticated parents sometimes set-up controlled situations where they observe "critical incidents" before they occur, and modify their safety strategies accordingly (Hart & Iltus 1986). Safety is not the only area where parents adopt a passive "watch-and-see" approach. Parents act in a similar manner when the socialization of the child is the issue. Dix & Grusec found that as long as a child behaves in a way that parents perceive is in no

conflict with their socialization goals they do not act (Dix & Grusec, 1985). Similarly, parents are not expected to act as long as the child is behaving within the boundaries of what they perceive as safe behavior.

On the other hand, it is clear that increased knowledge of parents about the causes and prevention of childhood injuries puts them at an advantage against parents who lack this knowledge. The consistent relationship between low SES and high injury rates for children points to the importance of parental knowledge in reducing injury risk.

For parents, the assessment of risk involves a synthesis of their knowledge of dangers for children and their assessment of their own child's potential behavior. As Valsiner & Lightfoot (1987) argue, during the reasoning of the caretakers about the safety aspects of child-environment relationships, a unique process takes place, where parents integrate their "general knowledge" with their "personal knowledge" of their child and its physical environment. These two forms of knowledge may or may not be compatible with each other. This incompatibility explains the occasionally puzzling and contradictory behavior of some parents towards home safety. For example, a parent who knows and identifies electrical outlets as a potential danger may not choose to take the precautionary action of putting covers on them after observing that their child has never shown any interest in the outlets.

Another explanation for inconsistencies between what parents say and do can be traced to the limitations of family resources which prevent parents to exercising strategies that are coherent with their child-rearing beliefs and ideologies. Following the same example above, the parent may not have the financial or technical "know-how" to buy and install outlet plugs.

The second step for parents, following the identification of dangers, involves the selection of an appropriate safety strategy in order to prevent injury causing events to

occur. What are the factors involved in caretakers' decisions to choose one strategy over others? While there are many indirect factors within the family system affecting this decision, Garling & Garling (1988) argue that at a psychological level, this decision is based on beliefs concerning the chances of success and failure of selected actions and on one's motivation to comply with what one believes that *important others* think. Similarly Dix & Grusec (1985) point out the importance of the socialization goals of parents on their assessment and behavior towards their children.

Another critical issue raised by Garling & Garling (1988) is the relationship of different strategies to each other and the ways that they are used together in order to reinforce each other. They stated that, "... structuring an environmental setting may not lead to protection but may facilitate supervision which leads to protection." (Garling & Garling, 1988, p. 64).

Research focused on the relationships of *parenting beliefs*, *child-rearing ideology* and *safety strategies* is not only necessary to reveal answers about the complex nature of parental safety systems but also to enrich the existing theory and to raise new hypotheses.

The methodological approach which should be adapted by future research is an integral part of the discussion on theory. The selected methodologies of future studies will have serious implications for the future of environmental social science. A review of past research illustrates that almost all the observational research in mother-child relationships is conducted by observing the mother/child dyad in carefully set up standardized experimental situations (Block, 1965). Even research that attempted to reduce the strength of a foreign setting and be more naturalistic merely replicated laboratory experiments in the families' own living room. The artificiality of a situation where a researcher instructed the parent and the child to "play" or "solve a puzzle" as if they were doing it spontaneously, limited the usefulness of this type of research (Paterson, 1979; Lamb, 1978; Salomon, 1977).

In terms of research tools, the most common methodology in identifying child-rearing ideologies was the administration of *Q-sort*, *Semantic Differential* or *Repertory Grid* scales to parents. These scales were loaded with statements that related to child-rearing, and parents were asked to mark them as agree/disagree, true/false or any other way that the methodology required. The resulting matrix was then factor analyzed in order to identify the salient constructs that guided that parent's child-rearing beliefs. This approach, which had generated interesting results in the analysis of much simpler cognitive processes, failed to be satisfactory with the complexities of parent/child interactions since it reduced the problem to a few manageable constructs. Block, for example admitted that the factor analysis of his extensive Q-sort data, where parents rated their child-rearing practices, resulted in extremely large 28 to 33 factors, with the highest loaded factor accounting for only 11% of the variance (Block 1965). Factor analysis was thus unable to meaningfully simplify all dimensions the of information gathered by his study.

The methodological limitations of past research are another reason why future studies in child safety - and studies in many other environmental domains - need to be ecological in their approach: that is, they must look at the family as a changing system. Furthermore, in addition to being ecological, future research must also be longitudinal in order to reveal the reasons and the nature of the change within the safety management system.

While the SMS and the behavior of the developing child rapidly change, the child-rearing ideologies of parents evolve at a much slower pace. The stability of child-rearing beliefs over time is demonstrated by a number of studies. Block (1965) found that correlations between the parents responses to a *Q-Sort* methodology was extremely high, over one and three years. This indicates that studies which track families through certain developmental stages of their children are on safe ground in assuming that the family's child-rearing ideology will stay the same throughout the duration of the study.

An ecological research design must incorporate the following components:

1. Multiple methodologies, especially open ended interviews and observational components.

2. Involvement with families over a long period of time to achieve a better understanding of family dynamics and environmental and social variables.

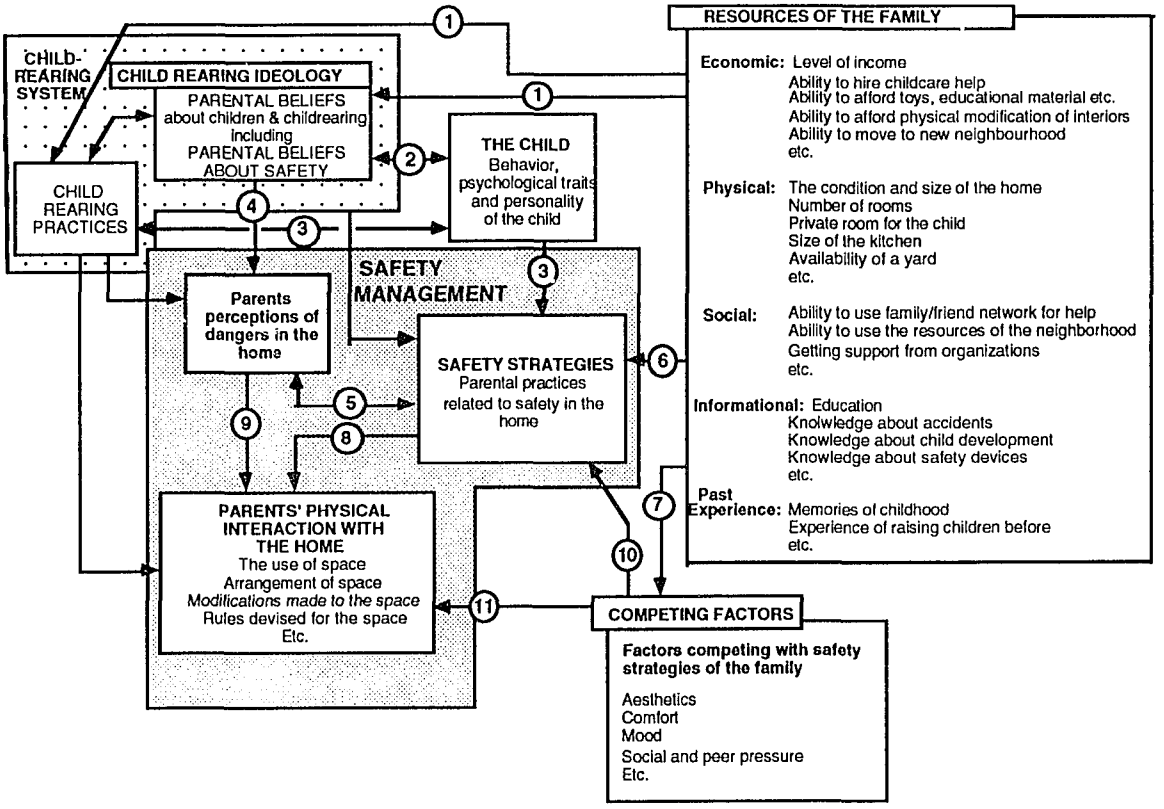
3. In-depth analysis of the family's physical, informational, social and economic resources.

4. Familiarity with the actual behavior patterns of the parents within and outside the home to confirm their stated behaviors.

Theoretical approach of this study

The parental safety management system of a family consists of a large number of factors that interact with each other. The components of this system include: parental ideologies; child-rearing strategies; material, social and cultural resources of the family; the child; and various competing factors. Figure 3 illustrates the components of such a system and their relationship to each other.

Figure 3. A model of a family safety system.



In Figure 3, the relationships between the selected components of the model are numbered and examples illustrating those relationships are presented in the following section titled Basic components of the model.

Basic components of the model

The basic components of the family Safety Management System are as follows:

Family Resources are the economic, physical, social and informational resources available to the family as well as the knowledge and experiences acquired by the past experiences of the parents. A review of literature reveals that social and economic variables correlate highly with children's home injuries. The impact of the availability and quality of these resources on the SMS are very great.

Of these resources, financial resources and income are the most critical. A family which can afford to hire help, educate itself and modify its physical environment has great advantages over families who lack these resources. Increased resources give a family added flexibility in their decisions about child-rearing. If for example, a mother can hire a baby-sitter when she feels overwhelmed, she can reduce the possibility of child injuries which may result from the lack of supervision.

The quality and condition of the physical environment is another factor. Raising a child in a small apartment with large windows, a balcony and a crowded kitchen requires a much different safety strategy than it could in a large single family home with stairs, basement, attic and a yard. Furthermore, the physical size and layout of the home environment influences the perceptions of hazards and strategies of safety in the home. Physical environment is much more than a resource for the family. It is the medium where the child conducts his safe and unsafe behavior. This resource is closely related to the economic resources of a family. Low income families have less choice in modifying or controlling their environments, especially when they do not own them.

Social resources indicate the level of social support available to a family. Research has demonstrated a consistent link between reports of perceived deficiencies in maternal care and the availability of close supportive relationships during parenthood (Parker &

Barnett, 1989). For couples, the child-care support that the primary caretaker - usually the mother - gets from her partner is a social resource that has important safety implications. Also and especially in single parent households, sharing some child-care tasks with friends and neighbors and belonging to an ethnic or cultural network, all increase the quality of child care. The degree to which the extended family and friends inform the immediate family about child-rearing, or assist in child-rearing, is very important for the child-rearing strategy of a family. Ogbu (1981) argued that ethnic groups and minorities in this country have a superior ability to mobilize family and social networks for rearing a child. The majority of white middle class Americans however, remain isolated in their child-rearing practices. Ethnicity thus plays a role in evaluating this resource.

Informational resources of the family are its level of education and its access to relevant child-rearing and safety information. Since information on child safety and safety devices is not readily accessible to most mothers, this is a very critical resource. Of all the studies that compared family characteristics and parental beliefs, the highest correlation was found between the educational level of the parent and the belief system (Sigel, 1983,1985). Knowledge of potential hazards and the sources of this knowledge, are critical for understanding the safety ideology of a family.

Finally, past experiences of parents are also a valuable resource and there is no doubt that raising a first child is a much different experience than raising a second or a third child. Parents learn from their mistakes and experienced mothers usually have an advantage over young teenage mothers in terms of safety.

A child-rearing system is the combination of parental child rearing ideology and child rearing practice. Child rearing ideologies of parents address such issues as: who children are, how they develop and how they should be raised. Safety related questions like parental beliefs about the causes of injuries, and their preventability are also a part of these

ideologies. According to their ideological orientations, parents develop various child-rearing practices. These practices can range from authoritative to permissive models.

The child is another critical component of the model. We may expect parental ideologies and practices to be modified according to the actual and perceived behavior of the child that the safety system targets.

The safety system of the model incorporates parental perceptions of hazards within the home. These perceptions shape the strategies and practices that parents exercise. These strategies include supervision, rule systems and safety devices and physical precautions. Physical modifications to space and regulation of the behavior of the child within the home produce an identifiable pattern which is labeled as the "parents physical interaction with the home". An analysis of these interactions of the family with the physical environment will have design implications for creating a safe home environment.

Finally *Other factors* are all the remaining forces that inevitably clash and compete with the safety system. These can range from practical necessities to esthetic concerns.

While every component of the model affects and affected by every other component in a direct or indirect fashion, the direct relationships which are more critical for understanding the SMS are numbered in Figure 3. The critical interrelationships among the components of the model are as follows:

1. *Child rearing ideology* and *practices* are directly affected by the *resources of the family*. The education of the parents, their cultural background, their income and the way they themselves were raised are all important factors. Sometimes economic and environmental limitations force parents to adjust their beliefs in order to make them more congruent with the realities of the family. For example as seen in this study, a mother who cannot afford to buy and install safety cabinet latches may say that the objects in her cabinet do not pose a threat to her child's safety.

2. The character and the behavior of the child is another critical factor that may be expected to determine parents' child-rearing preferences. Parents continuously modify their ideas about child-rearing according to their experiences with their own children.

3. Safety strategies selected by parents are also likely to be dependent on the character and behavior of the child. Parents of hyperactive children may be forced to select more aggressive supervision strategies than parents of calm children even if they share similar beliefs regarding child safety.

4. We may anticipate that what is dangerous and what is not, partly stems from the parents' beliefs about how children develop. This in turn is likely to be dependent on a variety of factors especially past experiences.

5. Safety strategies and perceptions of dangers are expected to be interactive. Sometimes strategies are logical extensions of real perceptions of dangers, but in some situations decisions regarding dangers are modified to justify previously selected strategies. A parent, for example, may justify not allowing the child near sensitive electronic equipment like the stereo or TV, by stating that it may be dangerous.

6. Selected strategies have to be applicable within the limitations of family resources. For example parents rarely select a strategy which forbids the child's entry to the kitchen because they recognize that they have no chance of enforcing this rule successfully. Instead they prefer less rigid strategies by setting rules about when and how the child should go in there.

7. Factors competing with safety are also expected to be related to available resources. In a small living room, for example, may be off limits to a child while it is being used by a parent for reading or study.

8. It is likely that the type of physical intervention to space is determined by the safety practice selected. For example a family may choose to fill the home with safety devices.

9. Perceptions of danger may affect the arrangement and use of space. For example parents may choose to arrange furniture according to safety goals. If they think that a window poses a threat, they may choose to limit child's access to it with a piece of furniture.

10. A majority of the inconsistencies that exist within a safety strategy are possibly the result of a conflict between the strategy and other factors. For example the rule "never run an electric fan without an adult in the room" can be ignored accidentally or deliberately by the parents, if the apartment is hot.

11. Safety is not likely to be the only reason why people at home behave in certain ways. Here a large variety of factors come into play., usually overshadowing safety concerns. A safety model that minimizes the conflicts among the safety goals and other factors has a better chance of succeeding.

Innovative aspects of the model

The proposed family model reflects the belief that the important issue is not how individuals differ from each other, but how different levels of context are related to the target phenomena selected for study. Kindermann & Skinner (1991) identified four recent improvements in the conceptions of contexts in the research on child development. These are: (1) a focus on multiple dimensions and levels of contextual influences on individuals, (2) a move from descriptive to explanatory models, (3) a focus on the psychological structure of physical environments and their role in behavioral phenomena, (4) the

reciprocal relationship of the individual to his/her environment. While the items (3) and (4), the importance of physical environment and the reciprocity of person-environment relationships are familiar to environmental psychologists, items (1) and (2) are more recent and worth stressing.

The complexity and the number of factors involved in any model is defined by how wide an ecological setting is targeted in the model. The model should also have one or more components that do not include the target person (or persons) specifically, but define the social and the physical setting in which these persons operate. Such an approach will inevitably complicate the research design and create problems in methodology.

> The recognition of multiple levels of contextual influences has led psychologists to reach out to disciplines like sociology and history for help in conceptualizing institutions and social systems. According to such models, a full consideration of contextual influences requires teams of multi-disciplinary researchers. One remaining issue...is how the multiple levels of contextual influences can be focused and coordinated, in order to produce manageable programs of research. (Kindermann & Skinner, 1991, p.4)

The tendency to include explanatory hypotheses and additional descriptive factors in the models is probably the most important recent development towards a deeper understanding of the phenomena. Using this approach, researchers can discuss not only *what* influences the target phenomena, but *how* it is influenced. For example, in a model which includes child's activity level and its relationship to the parents' selection of safety strategies, it is not enough to conclude that the child's activity level is a factor in parents adoption of one type of safety strategy over others. The relationship can only be fully described if the consequences of the child's high activity level on the parents' selection of a strategy can be explained in the research. Such an approach inevitably calls for a qualitative

analysis of the existing data. A closer study of the proposed family model should reveal a sensitivity to all four elements mentioned by Kindermann & Skinner (1991).

While the characteristic of the child, child rearing ideology and safety strategies have all been discussed in existing literature, the effect of family resources on the SMS has not been treated with equal importance. Consequently, one of the innovations of the model used here is the significance it gives to the existence and nature or lack of existence of these resources.

Another of its innovations is its acknowledgment of competing factors as influential in the SMS. Many studies fail to consider the role of factors outside their domain. In the case of this model, safety is considered a "subsystem" operating under a much larger and complex "family system". Inevitably there are times and places where these systems "clash" and it is important to understand how and why the disagreements occur between these systems.

The effect of conflicting factors is something that is usually overlooked and is a significant research weakness. Garling & Garling (1988) and Valsiner (1987), assume that the thinking and actions of parents on safety always follows a "logical" path. In reality events that take place during everyday life occasionally conflict with safety strategies and prevent such a logical relationship. Burdened by the chores of raising children and managing the home and business, parents are usually forced to make sacrifices which cause them to diverge from their intended safety strategies. This is especially true for families with limited economic, physical and informational resources. The well educated and relatively affluent Swedish population studied by Garling & Garling and Valsiner may be partially responsible for overshadowing this conflict, which is more strikingly visible in research done among lower SES populations.

The model presented above, however, is conceived in every sense as a totally dynamic one. In other words, the components of the model interact with and change each other. For understanding the family, these interactions are usually more critical than an explanation of the basic components of the model. For example, the key issue in a model with a very active and defiant child is not the analysis of the behavior of this child but the analysis of how this form of behavior is affecting the other components of the model. The critical questions are: how does the high activity of the child relate to parental ideology on child-rearing and safety; how does it force the parents to prefer one safety strategy over others, and how does it influence them in making certain modifications to the physical environment?

Researchers studying development should not treat these descriptive models as uniform over time. The model presented above is helpful in conceptualizing the family system at one given time. A common misconception is the assumption that as the time passes, everything in this model will be static except the development of the child. Such an approach may lead to the misconception that a child's future development can be explained with other components of this model. One can falsely assume, for example, that the specific characteristics of physical and social environmental factors, as well as the beliefs and strategies of parents of a one-year-old child can determine that child's future development. In reality, in order to correctly represent the real life situations of a family, the proposed modeling technique requires the model to be redrawn for every critical stage of the child's development.

Finally it is important to stress that the presented family model is designed to study a particular subject. It should not be considered a universal model that can be applied to the study of every family and child development phenomenon. It was specifically developed to study child safety in families, and is helpful to conceptualize that domain alone. Past

research has shown that the development of global models applicable to the study of multiple phenomena are rarely useful and should therefore be discouraged.

Exposure to risk: A model of the safety management strategies of families

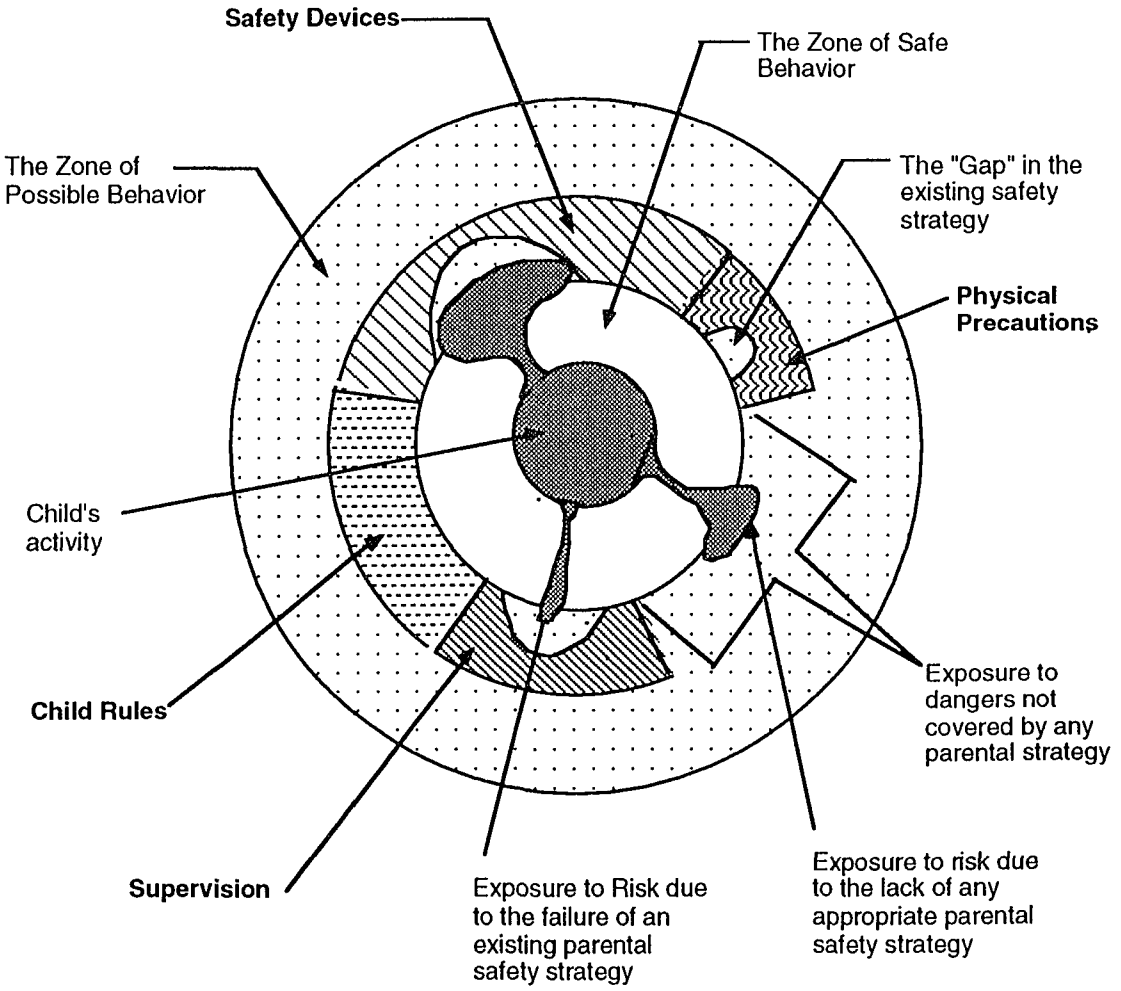
The conceptual model developed here was inspired by Lewin (1936) and originated from Valsiner's (1985) concept of *zones of development*. Valsiner & Lightfoot (1987) evaluated child-parent-environment interactions through three components: (a) child's possible actions, (b) proactive or reactive action strategies adopted by the parent, (c) the parents' process of reasoning about child-environment relationships. From these components it is possible to develop a model that incorporates the child's actions and parent's safety strategies towards these actions.

According to Garling & Garling (1988), safety strategies adopted by caretakers fall into three categories. These are: (a) supervision, (b) structuring of the environment, and (c) teaching children about dangers. Even though these three general categories cover all the strategies adopted by caretakers, they have to be divided into still finer categories to become useful tools in research. The proposed model attempts to do that by looking at adult and child rules, safety devices, physical precautions among other things, as more specific elements of parents' safety strategies.

The terminology used in the conceptualization of strategies by researchers is not necessarily the same used by the caretakers. In the phone survey conducted by Eichelberger, Gotschall, Feely, Harstad, & Bowman (1990), many parents answered that "being careful" is enough to reduce injury risk. This type of answer illustrates the importance of correct interpretation in survey and interview results by researchers.

Although the topological model shown in Figure 4 was influenced by Lewin's topological psychology, it is important to note that even if Lewin was serious about the use of topological diagrams, "...he was also careful to insist that premature formalization might preclude attention to important problems" (Back, 1992, p. 52). Please note that while these diagrams attempt to illustrate family safety management strategies as a whole, they are not intended as a mathematical representation of these systems. In other words, they should be perceived as "...a geometry without metric distances, without angles, without any meaning to particular shapes" (Back, 1992, p. 56).

Figure 4. Model of Child's Exposure to Risk



Description of the model

The model shown in Figure 4 is intended to help in the conceptualization of a child's exposure to risk of home injury. It evolved through long discussions among the members of the safety research team. The four basic elements of the model are: (1) the zone of possible behavior, (2) the zone of safe behavior, (3) child's actual behavior, and (4) parental safety strategies.

The big circle with the dotted pattern represents the zone of possible behavior. It encompasses all possible actions of the child, both safe and unsafe (given the child's physical competence).

Within the *zone of possible behavior* there exists the *zone of safe behavior* which is represented as the white circle. This zone represents the totality of actions that can be taken by the child which are safe. As long as the child's behavior is limited to the boundaries of this zone, there are no possibilities of injury. However the zone outside the white circle represents the actions or parts of the home where a child can injure itself.

The dark shape in the center of the figure represents the *actual behavior of the child.* It is composed of a circular "body" and extended "arms" towards the danger areas. The size of the circle and the arms indicate the level of activity of the child. An active child will fill up most of the safe zone and may also extend his behavior into the dangerous zones.

Surrounding the *zone of safe behavior* is a band of *parental safety strategies* each represented by a different pattern. These are strategies, designed and applied by the caretakers, to prevent the child to cross from the safe zone into the danger zone. For young children there are four basic strategies. These are supervision, child rules, safety devices, and physical precautions.

Supervision is one of the basic strategies and can take the form of direct (visual), indirect (auditory), supervision. *Child rules* are taught to children to help them regulate their own behavior. At early ages rules are used not only to regulate the child's behavior but also as a vehicle to teach the child about the dangers in the environment. *Child rules* remain part of the strategies surrounding the zone of safe behavior as long as the parents feel they must still educate, remind, or remain vigilant about a rule. Once a parent is confident that a child has internalized the rule, it is no longer expressed as a rule on this diagram. *Safety devices* are the physical devices, usually store bought, which are installed in appropriate locations in the home. Cabinet latches and electrical outlet plugs are examples of safety devices. *Physical precautions* are the modifications to the physical environment which will help to insure the child's safety. Moving poisonous substances to higher shelves and keeping some doors closed or locked are examples of physical precautions.

In the diagram, these four strategies are indicated as arcs with different patterns. The length of the arc for each strategy indicates the relative importance of that strategy in that family's safety management system. In other words, a strategy represented as a longer band around the safety zone indicates a greater reliance on the part of the caretakers on that particular strategy. For example in the hypothetical family presented in Figure 4, the most important strategy for that family is safety devices and their second strategy is child rules. The figure also indicates that, this family is using supervision and physical precautions to a much lesser degree.

It should be repeated that these diagrams are not meant to suggest any metric equivalence in the different variables expressed. They are simply qualitative topological models designed to help in the understanding of the relationship and relative importance of variables to each other. Thus if one strategy is represented as twice as long as the other, it does not indicate that the long one is twice as important, it only means that as the result of

qualitative analysis, the strategy represented as a long one is found to be more significant than the other.

The ultimate "goal" of any safety management system is to completely surround the zone of safe behavior, and not to let the child gain access to any part of the zone of possible dangers. However, since it is impossible for any safety management system to be totally failure proof, there is an opening (represented as a single line) between the zone of safe behavior and the zone of possible injury. The size of this opening indicates how "complete" or "incomplete" the safety management system is. A system that considers most of the potential dangers in the home and encounters them with at least one form of strategy will have a smaller opening where the child can pass from the safe zone into the danger zone. On the other hand, a system that ignores most of the existing dangers and employs few strategies will have a much larger opening for the child to pass into the danger zone.

In many cases parents indicate that they are employing a strategy against certain dangers but the data indicates that the strategy is not entirely effective for preventing injuries. In this model, each safety strategy is represented as a "band" that does not perfectly "fit" around the safety zone by leaving a "gap" and thereby exposing the child to some dangerous territory. This "lack of fit" represents an ineffective use of a strategy. For example, in the case of safety devices, the devices may be broken, improperly installed, or improperly and inconsistently used by the family members. Such a situation is represented in the form of a "gap" within the strategy band. In most cases, children will take advantage of such ineffective strategy by entering this gap of dangerous territory while the parent is under the impression that she has dealt with that particular danger.

In Figure 4, which is the "model" applied to a particular situation, three of the four strategies have such "gaps". Only the child rules is represented without a "gap" which indicates that all the safety rules for this child are consistently and strongly reinforced and

the child is not breaking any of these rules. Even though in the diagram, safety devices, supervision and physical precautions are drawn as strategies which are not totally effective, only two of them, supervision and devices have the child extending towards them. This indicates that the child in this family is taking advantage of these ineffective strategies, by exposing herself to dangers while she is supposed to be under supervision, and by getting into areas which are supposed to be protected by safety devices. On the other hand, there is no extension of the child towards the "gap" created by the ineffective use of the physical precaution strategy. This does not indicate the lack of any dangers due to the ineffective strategy, but only that the child does not take any advantage of the "gap". For example, a family which frequently leaves the basement door open, by forgetting that they agreed to keep it closed at all times, is exposing their child to potential injury even if the child has not shown interest in that part of the environment.

The degree and the frequency of the child's exposure to risk due to an ineffective strategy is represented by the size of the extension inside the "gap" If the expansion is filling up most of the gap as in the case of the safety devices in the above diagram, that indicates a higher level of risk. On the other hand, the infringement of the gap in supervision is represented by a much smaller arm which indicates that even though the family's supervision strategy is not effective, the child is not taking advantage of it by exposing himself to dangers as frequently as in the case of safety devices.

Another way an active child can be exposed to danger by weaknesses in the safety strategies is when he engages in behaviors not covered by any part of the existing strategies. This may include dangers never conceived by the caretakers or increases in a child's cognitive and physical capabilities, due to development, which have not been compensated by the parent. The child's exposure to risk is illustrated in Figure 4 as an arm extended through the wide mouth with no safety strategies, into the zone of possible dangers.

In summary, Figure 4 illustrates the following points regarding a family's safety management system:

1. The level of activity of the child.

2. The types of the safety strategies and their relative significance within the safety management system.

3. The child's exposure to risk due to ineffective or incomplete safety strategies.

4. The completeness of the overall system in terms of its ability to cover all possible dangers.

5. The level of effectiveness of each selected strategy.

RESEARCH AIMS

The primary aim of this research is to construct and test a model of parents' child rearing and safety ideologies and the relationship of these ideologies to the Safety Management Systems (SMS) of families.

More specific goals of the research are as follows:

I. To evaluate the interactions among the different components of the model presented in Figure 3, in order to generate new hypotheses that can help understand the functioning of the safety management systems of families.

1. To discover how caretakers' perception, interactions, control and modifications of the physical environment of the home is related to their Safety Management Strategies and ideologies.

a. What are the salient factors that effect the decision-making process related to the internal organization, layout, physical modification and use of space in the home.

i. How are considerations about child safety part of this process and how are these considerations related to the overall child-rearing ideology of the family?

ii. To discover the relative influences of safety related and non safety related factors on the decision making process for the organization of space within the home and how this varies according to the different resources available to families and the different child-rearing ideologies held by them.

2. To uncover caretakers' conceptions of safe and unsafe aspects of the home environment and the relationship of these concepts to their child-rearing ideology, and the safety strategies they consciously or unconsciously select.

3. To answer the following questions; what are the basic factors competing with child safety that are important in parents' decision making process about the physical organization of their interior space, and how do these factors influence perceptions of safety and safety strategies of the family?

II. To find out in what ways parent's beliefs regarding household hazards to children deviate from the views of experts on this subject and help explain the existing data on children's accidents? What factors in the family structure, family resources and daily life influence these discrepancies?

METHODS

Research design:

Introduction:

In order to be able to do a comprehensive in-depth analysis of each family, the research looked at the SMS of a heterogeneous sample of 27 families with one, two and three-year-old children over one year. This longitudinal case study design was necessary for an ecological approach. Because of the small sample size, it was possible to construct a model of the SMS of each family and to look at their child rearing ideologies, safety systems and physical environments for similarities and differences. As an hypothesis generating study, it was critical to use the results to (a) interpret existing epidemiological data; (b) design new interventions for families to use and; (c) design research in order to evaluate the success of the interventions.

The research team

Data collection was a team effort. The safety research team was composed of a faculty member and doctoral students from The Environmental Psychology and The Developmental Psychology Programs at the Graduate School and University Center of the City University of New York. Four students (including the author) were responsible for data collection and initial coding. The team met regularly throughout the research and exchanged ideas, discussed problems and made necessary methodological modifications. Many valuable concepts and hypotheses were originated during these meetings.

The population

27 families with very specific family profiles were selected with target children of nine 1-year-olds, nine 2-year-olds and nine 3-year-olds. The nine specific family profiles were matched with the three age groups so that for each family profile there was one family with one-year-old, one family with two-year-old and one family with three-year-old target children. 26 of the families were equally distributed among the boros of Manhattan, Queens and Brooklyn in New York City. One family was from New Jersey within close proximity to New York.

Family profiles were constructed from the following demographic characteristics: Age, socio economic status (SES), single parent versus couple, number of children and home size. The rationale for these criteria is as follows:

Age: This research focuses on children's home safety. Between the ages of one and four, home is the primary environment for children. It is also where most injuries happen. Major developmental breakthroughs occur during this period. Children's physical and cognitive skills develop at a surprising pace and force parents to modify their safety strategies continuously. After four years of age children develop sufficient skills to understand many of the physical dangers in the home and spend more time outside of the home. Consequently, children who were in their second, third and fourth years of life were selected for this study.

SES.: This is one variable that is consistently found significant in the prediction of childhood injuries. The theoretical approach behind this study also hypothesizes that low SES and therefore lack of resources, will have a destructive effect on the SMS of families. Fifteen low SES and twelve middle SES families were selected in the study.

Single parent versus couple: Literature indicates that low income teenage mothers are the highest risk category in terms of children's injuries. They lack the necessary economic

and social support for a well operating SMS. Six single parents and 21 couples were selected for the study.

Number of children: It is hypothesized that there can be differences between first time mothers and experienced mothers in terms of their child rearing ideologies and safety strategies. Nine families with a single child and 18 families with more than one child were selected for the study.

Home size: Physical environment is thought to be a significant factor in the selection of safety strategies. 15 families living in small apartments and 12 families living in houses or large apartments were selected for the study.

The complete profile of nine family types are:

1. Two parent family, middle SES., single child, house or large apartment.

2. Single mother, low SES., large family, small apartment.

3. Single mother, low SES., large family, house or large apartment.

4. Two parent family, low SES., single child, small apartment.

5. Two parent family, low SES. large family, small apartment.

6. Two parent family, low SES. large family, house or large apartment.

7. Two parent family, middle SES., single child, small apartment.

8. Two parent family, middle SES., large family, small apartment.

9. Two parent family, middle SES., large family, house or large apartment.

Population characteristics:

A more detailed demographic breakdown of the selected population is as follows:

Gender of the target child:	Female		11 families (40.7%)
	Male		14 families (51.9%)
	Male/female twins		2 families (7.4%)
Total number of people living in the home:		Less than 3	12 families (44.3%)
		4 to 5	15 families (55.0%)
		Mean	3.7
Total number of children in family:		Single child	10 families (37.0%)
		2 children	12 families (44.4%)
		3 or 4 children	5 families (18.5%)
		Mean	1.9
Birth order of target child:		First child	13 families (48.1%)
		Second child	11 families (40.7%)
		3rd or 4th child	3 families (11.1%)
Education:	Primary caretaker without high school diploma		1 parent (3.7%)
	Primary caretaker with high school diploma		14 parents (51.8%)
	Primary caretaker with college experience or degree		12 parents (44.4%)
Age of the mother:		20 to <30	5 parents (18.5%)
		30 to <40	20 parents (74.1%)
		40 to <50	1 parent (3.7%)
		60+	1 grandmother (3.7%)

Number of years in the current home:		Minimum	1 year
		Maximum	14 years
		Mean	4.8 years
Number of rooms in the home:	3 or 4 rooms	14 families (51.8%)	
	5 or 6 rooms	11 families (40.7%)	
	More than 6 rooms	2 families (7.4%)	

In the case of the two families with twins for target children, the questions are repeared individually for each of the twins, however for statistical purposes, the twins are treated as a single child. This was logical since in both cases, parents indicated that the safety management of each member of the pair was identical.

Case-by-case description of the 27 families

Table 1 shows the demographic, ideological and child profile of each family in the study. This will allow the reader to link each quotation to a specific family and learn about the characteristics of that family by referring to this table.

Table 1. Demographic and SMS profiles of all 27 families

Family Name	Morrison	Bassinger	Admer
SES	MIDDLE	MIDDLE	MIDDLE
Age of the child	One yr old	Two year old	Three yr old
Gender of child	F	M	M
Total # in home	3	3	3
Total # of children	1	1	1
2-parent household	YES	YES	YES
Mother has college diploma	NO	YES	YES
# of rooms	7	4	6
Child Rearing Ideology	Lax-undifferentiating	Lax-undifferentiating	Dictating-differentiating
Safety Ideology	Multi-verbal	Child-reasoning	Child-enforcing
# of information resources	8	5	5
Personality of the child	helps safety	helps safety	hinders safety
Obedience of the child	obeys sometimes	obeys quickly	stubborn
Primary Strategy	Supervision	Physical Precautions	Child Rules

Table 1. (Cont.)

Family Name	Gomez	Blank	Ivanoff
SES	LOW	LOW	LOW
Age of the child	One yr old	Two year old	Three yr old
Gender of child	M	F	M
Total # in home	4	4	5
Total # of children	3	2	4
2-parent household	NO	NO	NO
Mother has college diploma	NO	NO	NO
# of rooms	4	4	3
Child Rearing Ideology	Lax-differentiating	Dictating-differentiating	Irresolute-undifferentiating
Safety Ideology	Multi-enforcing	Child-enforce/reason	Child-enforce/reason
# of information resources	1	2	3
Personality of the child	helps safety	helps safety	average
Obedience of the child	obeys quickly	obeys quickly	stubborn
Primary Strategy	Supervision	Supervision	Supervision

Table 1. (Cont.)

Family Name	Tillman	Christopher	Vanderpelt
SES	LOW	LOW	LOW
Age of the child	One yr old	Two year old	Three yr old
Gender of child	F	F	M/F (Twins)
Total # in home	3	2	3
Total # of children	2	1	2
2-parent household	NO	NO	NO
Mother has college diploma	NO	NO	NO
# of rooms	4	5	4
Child Rearing Ideology	Lax-differentiating	Lax-differentiating	Dictating-impartial
Safety Ideology	Multi-reasoning	Child-reasoning	Multi-enforcing
# of information resources	4	6	1
Personality of the child	helps safety	helps safety	hinders safety
Obedience of the child	obeys sometimes	obeys sometimes	obeys quickly
Primary Strategy	Supervision	Child Rules	Child Rules

Table 1. (Cont.)

Family Name	Frattini	Wright	Brasswell
SES	LOW	LOW	LOW
Age of the child	One yr old	Two year old	Three yr old
Gender of child	M	M	M
Total # in home	3	3	3
Total # of children	1	1	1
2-parent household	YES	YES	YES
Mother has college diploma	YES	NO	NO
# of rooms	5	3	4
Child Rearing Ideology	Lax-impartial	Lax-impartial	Dictating-differentiating
Safety Ideology	Multi-reasoning	Child-enforcing	Child-reasoning
# of information resources	5	6	6
Personality of the child	hinders safety	hinders safety	helps safety
Obedience of the child	stubborn	stubborn	stubborn
Primary Strategy	Supervision	Supervision	Supervision

Table 1. (Cont.)

Family Name	Kunik	Abbott	Goodwin
SES	LOW	LOW	LOW
Age of the child	One yr old	Two year old	Three yr old
Gender of child	M	M	F
Total # in home	4	5	4
Total # of children	2	3	2
2-parent household	YES	YES	YES
Mother has college diploma	NO	NO	YES
# of rooms	4	5	4
Child Rearing Ideology	Lax-undifferentiating	Dictating-impartial	Irresolute-undifferentiating
Safety Ideology	Multi-enforcing	Multi-enforcing	Multi-reasoning
# of information resources	6	6	10
Personality of the child	helps safety	hinders safety	hinders safety
Obedience of the child	stubborn	obeys quickly	stubborn
Primary Strategy	Physical Precautions	Child Rules	Child Rules

Table 1. (Cont.)

Family Name	Summer	Joan	Friedberg
SES	LOW	LOW	LOW
Age of the child	One yr old	Two year old	Three yr old
Gender of child	F	M	M/F (Twins)
Total # in home	4	5	5
Total # of children	2	3	3
2-parent household	YES	YES	YES
Mother has college diploma	YES	NO	NO
# of rooms	6	6	6
Child Rearing Ideology	Lax-impartial	Irresolute-impartial	Lax-differentiating
Safety Ideology	Multi-verbal	Multi-verbal	Multi-enforcing
# of information resources	3	7	7
Personality of the child	helps safety	helps safety	average
Obedience of the child	obeys sometimes	obeys sometimes	obeys sometimes
Primary Strategy	Physical Precautions	Physical Precautions	Child Rules

Table 1. (Cont.)

Family Name	Andreas	Nicotra	Hallman
SES	MIDDLE	MIDDLE	MIDDLE
Age of the child	One yr old	Two year old	Three yr old
Gender of child	F	F	M
Total # in home	3	3	3
Total # of children	1	1	1
2-parent household	YES	YES	YES
Mother has college diploma	NO	YES	YES
# of rooms	4	3	5
Child Rearing Ideology	Lax-impartial	Lax-impartial	Lax-differentiating
Safety Ideology	Multi-reasoning	Child-enforce/reason	Multi-verbal
# of information resources	8	7	4
Personality of the child	helps safety	helps safety	helps safety
Obedience of the child	obeys quickly	obeys quickly	obeys sometimes
Primary Strategy	Physical Precautions	Child Rules	Supervision

Table 1. (Cont.)

Family Name	Falcon	Fish	Kaplan
SES	MIDDLE	MIDDLE	MIDDLE
Age of the child	One yr old	Two year old	Three yr old
Gender of child	F	M	M
Total # in home	4	4	4
Total # of children	2	2	2
2-parent household	YES	YES	YES
Mother has college diploma	YES	YES	YES
# of rooms	5	4	4
Child Rearing Ideology	Lax-differentiating	Lax-undifferentiating	Irresolute-undifferentiating
Safety Ideology	Multi-verbal	Multi-reasoning	Multi-reasoning
# of information resources	9	6	8
Personality of the child	helps safety	helps safety	helps safety
Obedience of the child	obeys sometimes	stubborn	obeys quickly
Primary Strategy	Safety Devices	Child Rules	Child Rules

Table 1. (Cont.)

Family Name	Burger	Nixon	Bosch
SES	MIDDLE	MIDDLE	MIDDLE
Age of the child	One yr old	Two year old	Three yr old
Gender of child	F	M	F
Total # in home	4	4	5
Total # of children	2	2	2
2-parent household	YES	YES	YES
Mother has college diploma	YES	YES	NO
# of rooms	6	6	12
Child Rearing Ideology	Lax-differentiating	Irresolute-undifferentiating	Lax-impartial
Safety Ideology	Multi-enforcing	Multi-enforce/reason	Multi-reasoning
# of information resources	3	7	7
Personality of the child	average	average	helps safety
Obedience of the child	obeys sometimes	obeys sometimes	stubborn
Primary Strategy	Supervision	Safety Devices	Child Rules

Selecting the families:

In order to obtain a sample of twenty seven families which satisfy the given profile, a large number of simple demographic questionnaires were administered to families with

children under three (See Appendix 1: Family Volunteer Forms). These forms were handed out or mailed to families through pediatric departments of a hospital (St. Lukes Roosevelt Hospital), community help centers (Family Resource Center, Association to Benefit Children) , various day care centers and - for middle income families- by private physicians. This approach proved to be ineffective for finding the complete sample population. Even though large numbers of parents volunteered, many of them were not qualified because they did not match the family profile exactly. Furthermore, it was required that the first interview to be scheduled within a month before or after the birthday of the target child. In order to be able to reach a wider group of parents, fliers in English and Spanish were put up in the supermarkets and Laundromats in low and middle class neighborhoods in Manhattan, Queens and Brooklyn (See Appendix 2: Family recruitment flier). Newspaper ads announcing the study were given to no-cost neighborhood newspapers (See Appendix 3: Newspaper advertisement). Participants were not informed about the goal of the study - safety- until the end of the first interview. For that reason, in the ads and initial invitations the research is presented as "Children's Home Environment Study" which was about "the layout of the home and how parents raise their children." Incoming calls from all volunteers were screened and evaluated by the research team.

A phone interview was administered to the families that fit the required profiles. (See Appendix 4: Phone interview form). This was necessary to insure that all selected families satisfied three requirements. The first was that the primary caretaker had to be at home taking care of the target child at least five days of the seven day week. The phone call sought to ascertain that the person interviewed was the primary caretaker for the target child. The second was that the child be without disabilities. This was done because having children with and without disabilities in such a small population would have made the cross family analysis impossible. As a final criteria, the selected families had to be living in their current home for at least six months to ensure that they have fully adopted to their environment.

Throughout the research, all team members were instructed to be alert for any signs of possible child abuse or neglect that they might detect in target families. This is a critical issue for any child injury study. Even though there is no reliable data on this, it is suspected that many of the reported and unreported injury cases are due to abuse and neglect. No suspicions for any of the families were reported by any member of the research team. On the contrary, they were all impressed by the amount of affection and care shown by the parents towards the child. It is likely that since all the parents in the study are volunteers, they must bee feeling confident about their parenting strategies.

Pilot testing of the research protocol:

Five different pilot interviews were conducted to evaluate the effectiveness of interview questions. It was particularly important to develop an interview that would be equally comprehensible by people of different backgrounds, ethnicities and social classes. A second reason for piloting was to test the video/audio technology used in the research in different physical setups. Piloting was conducted in low income families as well as middle income homes. Many questions were modified or replaced as a result of this pilot phase.

Data collection:

A research team of four interviewers, each assisted by a video cameraperson was established to conduct the interviews. Researchers visited the families in teams of two -an interviewer and a cameraperson- every two months, for a full year, for a total of seven visits per family. All the interviews were videotaped on 1/2 inch VHS camcorders. Since all the caretakers interviewed were females, at least one member of every interview pair was a female. Interviewer pairs worked with the same families over the entire research

period in order to establish a rapport and an in-depth understanding of family structure and operations. The week before each interview, researchers called the family and made an appointment for the upcoming visit. Each family was paid $20 for the first interview, and $15 for each subsequent interview for a total of $110.- over the full year.

The first home visit

During the first visit, the parents were simply asked if they were willing to assist in a general study about the problems of child-rearing in the home (See Appendix 5: First home interview). Primary caretakers -who all turned out to be mothers except for one grandmother- were interviewed while the target child was with them. In a few cases where the fathers were present, they were asked to wait until the end of the interview to explain their own ideas about the issues being discussed. Safety was not mentioned until the end of this interview. This was done to see whether how much and in what ways parents spontaneously mentioned issues related to safety and also to evaluate the safety related interventions of the home in advance. At the end of this visit parents were told that the goal of the study concerned children's safety, and were asked if they wished to continue. All the parents participating in the initial interview indicated that they wanted to continue.

After introducing themselves as graduate students -coincidentally none of the interviewers was a parent-, interviewers made clear that they were not there to evaluate the parents in any way, but rather that their main goal was to learn from parents about their strategies. As their first task, the interview team, -an interviewer and a cameraperson- familiarized themselves with the layout of the home. The cameraperson took a slow 360° shot of each room in the house so that floor plans of each home could be generated from these videos. At all other times the camcorder was focused on the parent and the child as much as possible.

The interviews were conducted in two stages. The first stage took place in the living room or the kitchen. Parents were interviewed about the everyday life of their child. They were asked to describe a typical weekday and a typical weekend day in the child's life. Then the questions focused on the family's basic child-care practices, parent's beliefs and ideas about children's development and socialization. Finally, the interviewee's views about herself as a parent were solicited.

The second stage of the interview involved a room-by-room survey of the entire home. Parents were asked about the use types, use times, family rules, and child-care related issues for each space in the home. At the conclusion of the room-by-room survey, parents were told that in the following visits they would be asked questions about home safety and their safety strategies.

The second home visit: First safety interview

The second interview was similar to the first one in terms of its structure, but this time safety was the main focus of the interview (See Appendix 6: Second Home Visit - Safety Interview). In the first segment of the interview, parents were asked questions about their ideas on child safety in the home. In addition to these, they were presented with two pictorial vignettes depicting situations where injury causing events were about to happen. They were asked to respond to these vignettes in order to reveal their assessment of dangerous situations. The second segment of the interview was again a room-by-room survey of the home. In each room, parents were asked to identify hazards for their child, safety devices, physical precautions, safety rules, violations of safety rules and past accidents and near misses. Parents were also asked to identify the other rooms to which the child was permitted access while she was in the particular room in discussion.

The third and subsequent two-monthly safety visits

Families were interviewed five more times, -once every two months- for the rest of the year. During the last visit, some additional questions regarding the impact of the study were included in the questionnaire (See Appendix 7: Seventh -last- Safety Visit Interview). At the beginning of each visit, parents were asked about the major developmental changes they recognized since the last visit. They were also questioned about new developments that affected their family. The rest of the interview was identical to the room-by-room survey conducted during the second home visit. Parents were again asked to identify hazards, devices, physical precautions, rules and accidents and near misses. In each room, at the end of each question, they were reminded of the issues that they had mentioned during the previous interview, but ignored at the current one. Issues no longer considered valid or relevant were noted. Finally they were asked to predict the changes that might take place in their strategies or physical environment during the next two months.

In order to be able to draw accurate floor plans of each home, a handheld sonic measuring device is used to record the width and depth of each room. The ultrasonic distance meter was preferred because it was much less obtrusive than using a steel measuring tape. This information is marked on the sketches prepared by watching the previous interview tapes. Plans were then corrected according to the actual dimensions and total square footage of each home is entered in the database.

Inevitably, some families dropped out of the study, for reasons not related to the study. Two families dropped out in the middle of the study and one towards the end. Since almost all the data used in this study is from the first three visits, this attrition did no have any effect on the results. However the future logitudinal analyis would have to consider the impact of this missing data.

Interventional effects

In order to reveal any interventional effects of the visits of the research team, nine control families that matched the nine family profiles were selected. These families were to be interviewed only twice, once at the beginning and again one year later at the end of the research. However due to the strong attrition of these families, only four could be reached for the second interview. These four families acted as a control group, and the change in their strategies are compared to the other families who got visited seven times over the year. The analysis revealed that in all four variables, there was no large increase in the numbers of the study group. The only increase was in the case of the child rules and that was for the increase of one rule over the year. Similarly, the differences for the number of devices and physical precautions was negligible. The biggest difference was in the case of number of dangers that are identified in the home. While there was no reduction in the number of dangers for the study group, the number of dangers for the control group was reduced by 4.5. This may be due to an intervention effect, since every two months, the study systematically reminded the parents in the study group of all the dangers in the home. However, it seems that the difference in the awareness of dangers did not reflect on the safety strategies of the parents in the study group. Table 2. compares the study and control groups.

Table 2. Comparison of the Study group and the Control group in terms of the changes in the number of perceived dangers, child rules, devices and physical precautions over the 10 month period.

	Mean difference between the last visit and first safety visit (Total from the last visit - Total from the second visit)	Std. Dev.	Std. Error	Count	Minimum	Maximum
Dangers, Study	-.4	7.4	1.5	24	-17.0	15.0
Dangers, Control	-4.5	5.7	2.8	4	-11.0	2.0
Child rules, Study	2.0	5.8	1.2	24	-8.0	17.0
Child rules, Control	1.0	5.7	2.9	4	-7.0	6.0
Devices, Study	.2	2.2	.4	24	-7.0	4.0
Devices, Control	-1.0	3.4	1.7	4	-6.0	1.0
Physical prec., Study	-.7	1.8	.4	24	-5.0	2.0
Physical prec., Control	-2.0	3.4	1.7	4	-7.0	0.0

In addition to the impact of the visits on families' safety strategies, the issue of parents "setting up" their homes before the interviews was also considered. This was discussed in the meetings of the safety group, and despite awareness to the possibility none of the interviewers ever indicated that they suspected such a "set up." Even though parents were expecting the visit of the interviewers, no signs of advance preparation in terms of cleaning, organizing the home, etc. was detected by any member of the research team. All the homes visited looked very much in their "natural" state. As a matter of fact, it was very common to see homes in extreme disorder and chaos during these visits.

Effects of the video

Another issue was parents' reaction to being videotaped during the interviews. None of the parents in the study objected to the use of the video camera in any visit, even though it was made clear to them that they could ask the camera to be turned off at any time. It can be hypothesized that with the extensive use of home camcorders these days, many parents were used to being on the camera and did not feel uncomfortable.

Self interviews of the author

On December 24, 1990 my wife Ahu and I had a baby girl (Misra). In the middle of this research, I was watching her grow and observing her behavior in the home with respect to safety, a very revealing experience to me. It helped me to formulate some of the hypotheses that are raised in this research. It also allowed me to reflect on the safety and child-rearing strategies of my own family. Since this research is mostly qualitative, I thought that it would be valuable for the readers to understand where I stand in terms of my own ideology and safety management system with respect to the rest of the population in this study. To achieve this I administered two interviews on myself when my child was one and two years old. This way, I was able to compare that data with the data gathered from parents who had one and two-year-old target children.

Data analysis

The most exciting aspect of the data analysis for this research was the "interplay" of the quantitative data against qualitative data. The open-ended interview data obtained from the families are cross-analyzed with the observational data and the quantified data coded from the videotapes and the maps. With this approach, it was possible to play the quantitative and qualitative against one another. In the instances where qualitative and quantitative data conflicted, the analysis had to venture into discovering the reasons for the discrepancy. Sometimes the findings generated from these investigations were as useful and interesting as the ones generated by the "planned" analysis of the data.

Fielding (1986) used the term *triangulation* to describe multiple levels of cross checking of data. One form of "between-method triangulation" was achieved by comparing the parent's descriptions of her child's activity, allowed range within the home and attachment with the time-sampled data coded from the videotapes taken during the interview. "Investigator Triangulation" was achieved by more than one researcher looking at each family. For that, a group process was used where all members of the research team had the chance to be presented the data collected from each family and negotiate the final "family profile" from their own perspectives. Finally, "data triangulation" was achieved by visiting each family seven times throughout the year which minimized the chance for misunderstandings. This way interviewers had ample opportunity to clarify the vague points in the data with their interviewees.

Data analysis was done in three stages. The goals for these stages were (a) understanding the families, (b) grouping the families, and (c) comparing the families.

Understanding the families

In order to fully understand the families, the following coding and analysis methods were used.

Preparation of the annotated floor plans:

The first thing that was done right after the data collection was to generate extensive annotated floor plans for each visit of each family. After the drawing of the furnished floor plans for each family, they were annotated by putting all the information from the videotapes on these plans in the form of simple annotations. Separate plans were prepared for safety devices, use patterns, access to rooms, perceptions of dangers etc. Total of 9 maps were created from the first interview (See Appendix 8: Sample family maps from first interview), and 12 maps were created from each subsequent interview (See Appendix 9: Sample family maps from the second interview). All the maps were created on Apple Macintosh computers using Pagemaker page layout software. These maps were used to understand families' safety strategies and how these strategies relate to the physical environment of the home.

Family SMS analysis diagram:

This diagram is a simplified version of the family SMS chart shown in Figure 3. It allows one to present the salient points of the families' SMS at a quick glance (See Appendix 10: Sample family SMS analysis diagram).

Quantitative analysis of the family data:

All the demographic data and the quantifiable safety data from the families are entered into the computer and analyzed using the Statview statistical package for the Apple Macintosh computers. Quantifiable safety data was coded by counting them from the maps such as the number of devices or rules. Bar charts were generated from this data and used as a reference resource together with the qualitative analysis of the videotaped interviews to categorize the family types. For example, before categorizing a family's major safety strategy as a "device-oriented" one, based on the answers to the open ended questions, it was necessary to consider the total number of devices in that family and the relationship of that number to the population mean.

Analysis of safety strategies

Analysis of all the safety strategies of families is done by plotting all the dangers mentioned by the parents during the first safety visit as well as all the devices, physical precautions and rules that the parents were using to cover these dangers. For each family, the results are plotted in the form of a Boolean diagram that illustrates which dangers are covered with which strategies (See Appendix 11: Overlap of safety strategies for one family during the first safety visit) The most dominant strategy as well as the secondary and third-ranking strategies were then identified for each family. Qualitative results are cross checked with the quantitative data about each strategy such as number of child rules, devices and physical precautions in order to triangulate with the results of the qualitative data analysis.

Analysis of child rearing ideology and safety ideology:

The parents' answers to the open-ended questions on their child rearing and safety ideologies were analyzed. In order to be systematic in terms of the coding, a quantification of data was necessary in addition to the qualitative analysis. Child rearing ideology data (See Appendix 12: Child rearing ideology coding sheet) were coded by 4 coders and the safety ideology data (See Appendix 13: Safety ideology coding sheet) were coded by 3 coders. All the coders were expected to mark the forms exactly the same way. An identical match was considered a 100% reliability. Each item that was marked differently reduced the reliability by one point. Overall reliabilities of 91% and 93% were achieved respectively for the two coding forms.

The physical proximity of the child to the parent during the interview:

A systematic coding of the video tapes was developed to provide an account of the location of the child relative to the parent during the interview, the videotapes were coded according the relative location of the child (See Appendix 14: Space analysis coding sheet). This data was used as an additional indicator of the supervision strategy. Coding sheet shown in Appendix 14 is used to test the inter-coder reliability. A perfect match is considered 100% and one point is reduced for each mismatch. An overall reliability of 94% was achieved among coders.

Zones of accessibility by the child

During the room by room tour of the home, parents were asked what other rooms their child is allowed to go in the home while the mother is in that particular room. The question was repeated for each room of the home. The results were compiled and mapped

for each visit. Appendix 9 shows the complete set of maps for a family during visit two - the first safety visit. (See Appendix 9 : maps related to the zones of accessibility). An overall score calculated from the accessibility of the child to the different rooms of the home. This is represented as a percentage of all the rooms. A score of 100% indicates that all of the home is accessible to the child without direct visual supervision. A score of 50% indicates that the child is only allowed to go into one-half of the rooms in the home. For example in a home with eight rooms, including the bathroom and kitchen, a score of 50% means that the child is allowed to go into only four rooms without any supervision. The same analysis also conducted by using the actual square footage of each room, instead of counting the number of rooms that were accessible. In this form the results indicated what percentage of the overall floor space was being made accessible to the child. During the findings phase, it was discovered that for this population, the two scores were very close to each other, and therefore only the former and not the latter of these two scores used. There were two reasons for this. The first one was, in terms of child's gaining access to spaces, room counts were more meaningful compared to square footage. Once the child is allowed in a room, regardless of its size the whole room is transferred to a domain that is accessible to the child. In this sense it is more telling to say that "the child has access to half (50%) of the rooms in the house" than "the child has access to 50% of the floor space in the house" since 50% of the floor space may be composed of any number of rooms.

Physical characteristics of the home:

Various physical characteristics of the home are coded separately. In addition to the number of rooms total square footage, and number of levels, rooms were also evaluated in terms of their visual accessibility.

In order to evaluate the quality of the physical environment in terms of safety and child development, a modified version of ABODE (Appraisals of Basic Opportunities for Developmental Experiences)was used, (Matheny, Thoben, & Wilson, 1982). The following 14 aspects of the home is evaluated during this coding:

1. Number of objects (excluding furniture) lying on the floor (in the child's room and in other rooms)

2. Number of objects or articles that functionally do not belong to the space (E.g., a washing machine in the bedroom).

3. Number of books and toys that belong to the child (in the child's room and in other rooms)

4. Number of artifacts on display (E.g., souvenirs, cups, vases, decorative items, etc.)

5. Number of plants.

6. If the television is left on during the interview?

7. Total number of televisions in the home.

8. Does the child have a defined domain in which to play?

9. Number of child-related decorations in child's room or domain.

10. Amount of noise and confusion in the home.

11. Amount of clutter in the home.

12. Number of books that are visible in the home.

13. If the bathroom door was left open or closed during the interview.

14. Evaluation of the overall quality of interior of the home by a judge who was not part of the study.

A composite Home Quality Score is obtained by adding a selected subset of these variables. These were: #1)Number of objects lying on the floor (excluding the child's room and counting the ones only in other rooms), #2) Number of objects or articles that functionally do not belong to the space, #3) Number of books and toys that belong to the child (in the child's room and in other rooms), #5) Number of plants, #9) Number of child-related decorations in child's room or domain, #10) Amount of noise and confusion in the home, #11) Amount of clutter in the home, #12) Number of books that are visible in the home. All of these variables are broken into a 3-level scale such as 1= Little, 2=Some, 3= A lot or 1= 5-10, 2= 11-20, 3= 21+. It is accepted that a higher number in variables 3, 5, 9,12 and a lower number in 1, 2, 10, 11 contributed for a better Home Quality Score.

Visual accessibility score of the home

A Visual Accessibility Score is developed for each home by analyzing the floor plans. Each room of the house is given a total score according the number of all the other rooms in which it has full or partial visibility (1 for full and .5 for partial visibility). An overall score is then calculated for the whole of the house or apartment. The score is then adjusted to a percentage figure according to the total number of rooms. A high score indicates a good visibility into a large number of different rooms whereas a low score means that the overall visibility of the home is poor.

Grouping the families

The families were grouped according to their ideologies, safety strategies and the "driving force" of their safety management systems.

Families were grouped and labeled by searching for "patterns" in their child rearing ideologies and safety ideologies. Patterns were identified by the qualitative analysis of the interview data as well as the statistical analysis of the quantified ideology data. To complete this task, an index card is prepared for each family with the key ideology information printed on them. With the help of printouts of quantitative data from ideology interviews and also watching and re-watching the relevant segments of the interview videotapes, these index cards were grouped into piles representing different ideological patterns.

To group the families according to their child rearing ideologies, first the answers to the child rearing ideology questions are coded with the coding frame shown in Appendix 12. These coded answers are then summarized on an index card for each family. These cards are then sorted and re-sorted into groups, until patterns between answers emerge. Once the grouping of the families became clear, the segments of the videotapes for all the families in each group are watched consecutively to make sure that the pattern holds true. The grouping of the families according to their safety ideologies are done exactly in the same manner, except that the coding frame shown in Appendix 13 is used for parental safety ideologies.

Dominant safety strategies for each family were identified by looking at the SMS diagram of each family (See Appendix 9: Sample Family SMS Analysis Diagram). The most dominant three strategies were identified and rank ordered from these diagrams. The results were cross referenced with the quantitative data on strategies, and the families were grouped accordingly into four groups for each of the dominant primary, secondary and

third strategies. As in other analyses, the four strategies were *Safety devices*, *Physical precautions*, *Child rules* and *Supervision*.

Again, by closely looking at the SMS diagrams of each family, the "driving force," which is the most dominant aspect of the SMS for that family was identified. In order to identify the "driving force" the following question had to be answered; What is the most important element in this family that prevents the child from having repeated injuries? The driving force may be a very active child or an extreme lack of resources or a combination of factors which was the primary force influencing the SMS.

This ecological micro analysis of each family generated "themes" as described in Strauss (1987). Each "theme" then had to be cross-checked with the rest of the population, in order to discover whether new groupings of families were necessary.

The data from the videotapes were not used in any other way than the ways described above. During the filming of the visits, many "incidents" between the child and the parent did occur. An analysis of these incidents could have been useful in revealing the ideology or the strategy of the parents. However, these "incidents" did not always happen for all of the families in the sample and each was unique in itself. Therefore it was not possible to use them comparatively. Furthermore, it is possible to argue that their occurance and the way parents were behaving was closely related to the research team being in the home at the time of the incident. An attempt was made to code this "social interaction" between the child and the parent but it was not possible to achieve an intercoder reliability among the coders. Therefore, this type of data was not included in grouping of the families, even if it contradicts the self reported data by the parents.

Comparing the families

Even though the population is small and heterogeneous, it allowed some meaningful comparisons among the different groups. Families with different ideologies were compared with respect to their strategies, physical environment, and demographic characteristics. New hypotheses were then generated from these comparisons. Some of these could be pursued through a re-sifting of the data from this research. Other hypotheses will need to be tested through future research.

Statistical analyses was only done between pairs of variables. $\underline{X}^2$ test is used when the two variables were both categorical. Analysis of variance is used to look at one categorical and one interval variable. When both variables were interval, simple regression is used to analyze the relationship.

Critique of the methods

Overall, method of collecting data in the homes and the videotaping of the interviews proved to be a viable and effective approach. Almost in all cases, parents had very strong opinions on issues that came across very clearly. This was related to the importance of the issues raised by the questions and simplified the analysis of the data. For most parents, child rearing was one of the most important aspects of their life and it was easy to sense the pride that was reflected their answers. On the other hand, finding the families was a long and painful process. The parents who were screened and who were willing to participate were frequently rejected because the birthday of their child was not within the two-month period required by the study, in order to assign the children into three age categories.

The study included children ranging from their first birthday to their fourth birthday. This allowed a "clean" design by comparing children in their second, third and fourth years of life. Unfortunately, the critical transition period from six months to one year where children crawl, climb and start to walk was excluded. Additionally, the fourth year of life is a period where few changes do happen in terms of the management of the child's safety and datea from those families were not as interesting. It would have been more appropriate if the study covered the period from six months to three and a half years.

No objective assessment of the homes in terms of safety were conducted by the researchers. For example, the research team did not attempt to identify the dangers such as child accessible poisonous material, exposed electrical outlets and windows without guards in a systematic manner. As a result, homes were not given any hazard score that is consistent across the families. Because this is a hypothesis generating study, this was not a drawback at this stage. However, in a larger follow-up study, a systematic evaluation will be required in order to compare the homes in terms of risk. An attempt to develop these measures at this stage would have been a valuable exercise.

All quantitative analysis in the study is limited to single factor analyses. This is a direct result of the small number of families included in the study (27). If the total n was larger, it would have been possible to look at more than two variables simultaneously.

Interventional effects of the visits by the research team did not pose a major problem. In spite of the video, none of the team members felt that the parents had done any preparation such as cleaning or tidying up, prior to their arrival. This feeling was reinforced by the analysis of the videotapes which showed that many of the homes visited were in a major state of disorganization. During the last interview, parents were asked if the visits of the research team had any impact on their ideas and thinking about safety (See Appendix 7). Except for one mother who said that she had to "rethink" her strategies, all the caretakers responded negatively, indicating no change in their thinking or behavior. Originally, interventional effects were a source of serious concern for the research team. Results suggested that this was not a major problem, and overall, methodology involving home visits is effective because of the richness and spontaneity of the data collected.

A methodological weakness of this research is that almost all the data regarding the child are reported by the caretaker and except for the physical location of the child during the visits, which is coded directly from the videotapes, all child characteristics reflect parents' own interpretations. Among others, these include the physical ability of the child, her obedience, character, behavior and her understanding of the rules. There was no way of checking the reliability of this information, and from what the researchers saw, some of the reports by the caretakers may be questionable. To overcome this problem, a separate tour of the kitchen with the target child was originally planned and piloted. However, due to following problems the idea is abandoned. Piloting of the child tours showed that, except for the three-year-olds, the population was too young to be able to carry out a tour with a stranger. When the parents were included in the tour, it was not possible to keep them from probing and guiding the child towards correct answers. Despite these

drawbacks, the idea itself seemed to be a valuable one and it should be modified and implemented by future research.

The biggest improvement for the study however, would have been to contact the parents after the completion of the analysis and the generation of hypotheses. This way, all the parents could have seen the diagrams and models developed for their families and be able to critique them. Such an input would have been very valuable for understanding the strengths and weaknesses of the conceptualizations used in this study. Unfortunately, the two-year time lapse between the data collection and analysis prevented such feedback from happening. May attempts to contact some of the families (for other reasons) were not successful. A number of the families either moved or changed their phone numbers. This was not surprising. Such mobility was expected from young, New York City based, low and middle income population.

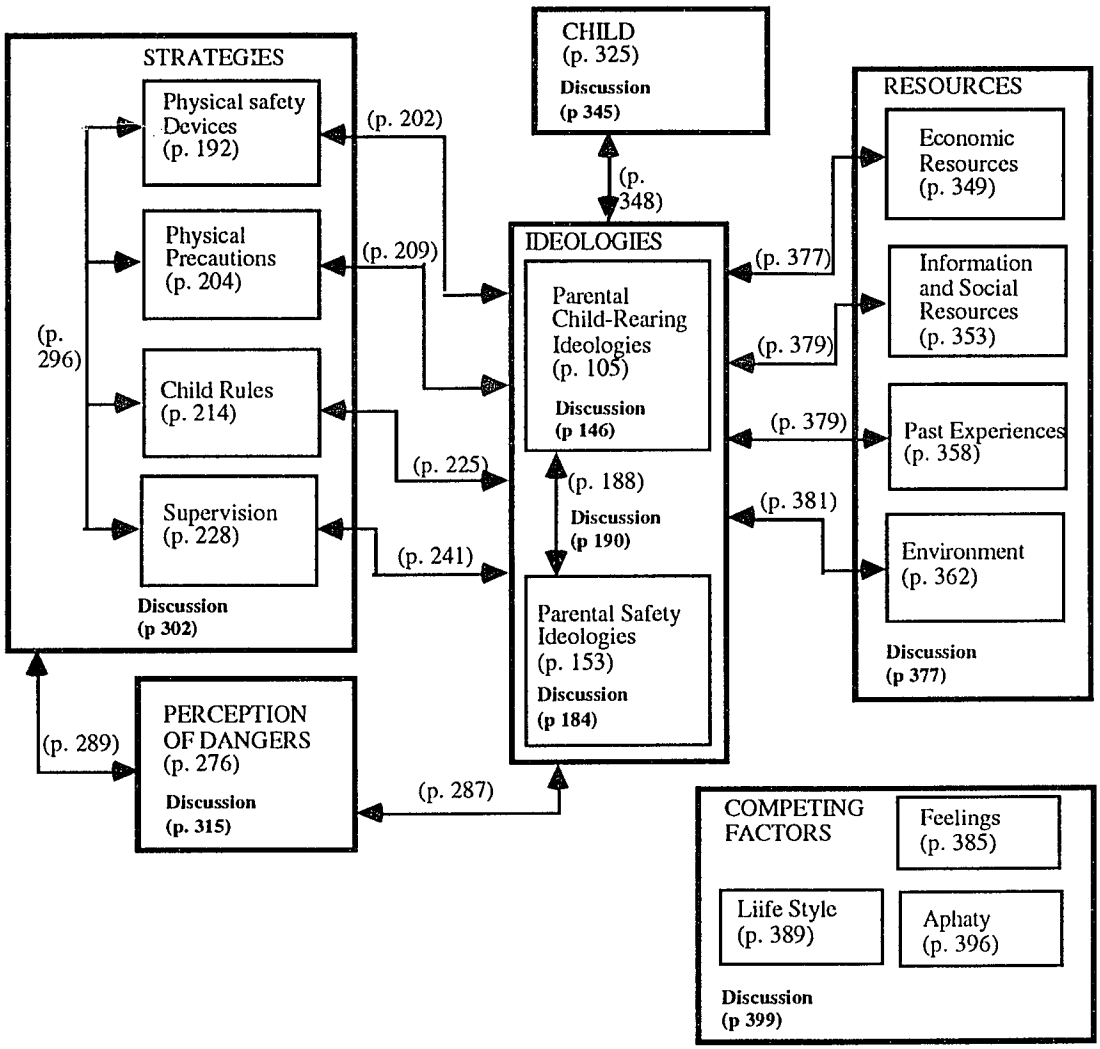
FINDINGS 1: PATTERNS OF IDEOLOGY

The findings of this study are arranged in two sections. This section, Findings 1, will focus on generating patterns of parental ideologies, safety behaviors, and uses of space. Findings 2, Components of the Safety Management Strategies and their Relationship to Parental Ideologies, will attempt to identify the relationships among the components of the safety management system.

In this section, the term "significant" is used to identify findings that had probability of less than .05. However, it should be noted that due to small sample size, these findings can only be interpreted as "suggestions" pointed out by the data.

The findings section is organized to follow the theorethical model presented before. Figure 5 illustrates the graphichal representation of the organization of the findings and the page numbers that correspond to them.

Figure 5. Organization of the findings



Emerging patterns of child rearing ideology

What are the basic components of parental ideologies?

The purpose of this section is to evaluate the emerging components of the child-rearing ideologies of parents, and to identify the relationships among individual components. An initial qualitative analysis of all the responses to the questions on parental ideologies about child-rearing, was conducted. From this analysis seven major dimensions were identified and used to that define the child-rearing ideology of each parent. These components are:

a) Parental sensitivity to child's actions.

b) Parental knowledge regarding the value of different types of play.

c) Parental knowledge of, and attitudes toward the child's developmental milestones.

d) Parental beliefs regarding the genetic and environmental bases of individuality and gender-specific behavior.

e) Parental disciplining strategies.

f) Parental beliefs regarding the influences on the child's development.

g) Parental flexibility and rigidity in daily schedules and the level of restrictions on the child.

Analysis of the data enabled me to address whether there were any demographic differences among the families who have different ideologies on child rearing. In order to describe these relationships, parents' child-rearing ideas were compared with the demographic composition of the families. In addition to the frequency breakdown of all the

answers on child-rearing ideologies, this section will report the relationships identified between child-rearing ideologies and family characteristics.

Parental sensitivity

Questions: What do you think a mother should do when her child cries for no apparent reason? Why?

What do you usually do when ..... (your child) cries for no apparent reason?

Parental sensitivity was evaluated by the parents' ideas about how any parent should respond to a child who is crying with no apparent reason. It also included parents' descriptions of how they themselves would behave in a similar situation. Depending on their attitudes, parents fell into five different categories. The analysis revealed five distinct attitudes toward a crying child. These are labeled as *Exploring*, *Affectionate*, *Ignoring*, *Punishing* and *Worrying*. *Exploring* parents are those who believe that a child never cries without a reason, and therefore they believe that a parent's task is to explore and find out why the child is crying. *Affectionate* parents do not explore the reasons, since they accept that a child may cry without any apparent reason. They typically show some affection to the crying child by picking him up and try to soothe him by hugging and kissing. *Ignoring* parents believe that children should cry until they "get it out of their system" and let the child cry as long as necessary.

Ms. Abbott, mother of two-year-old boy:

Q: What would you do if he [target child] cries for no apparent reason

A: Well...if he is just whining and crying for no apparent reason just let him cry it out...sometimes you have to ignore it, you know, because if you keep running to them every time they cry, then they're going to end up controlling you and running you up the wall.

Parents who are in the *ignoring* category were not necessarily uninterested in their child. They believe that the particular relationship they have with their child allows them to know when the child is genuinely distressed or if she is putting on a show. If they believe it is the latter, they "ignore" the crying.

Ms. Admer, mother of three-year-old boy:

Q: What do you think a mother should do when her child cries for no apparent reason?

A: Oh it...I mean I know the tear already, the different kind of tears, it's nothing.

Q: Why?

A: Cause it's part...you know... it's on film and you see it's perfect ...it's... They're smart. I mean as little as they are, these kids are smart. They, they know.

Q: So what kind of tears do you think that was?

A: Ah!, put on tears, I mean, faucet you know [laughs]. His eyes are dry.

Q: What do you usually do when he cries for no apparent reason?

A: I try to ignore it.

Q: Do you think that your husband thinks the same way on this?

A: Yes [shakes her head 'yes'] We call him [the child] an actor, you know.

Punishing parents view the child's crying with no apparent reason as a defiance and try to make her stop by using various disciplining techniques.

Ms. Ivanoff, mother of three-year-old boy:

Q: What do you think a mother should do when her child cries for no apparent reason?

A: Isolation I think is the best response, and I found this with my other one [child] too. I put her in a room by herself and she'll come out by acting differently.

Worrying parents are those who think that something is physically wrong with a crying child, and if they cannot figure out the reason, they call a professional. More than half of the parents interviewed (55.6%) fell into the *Exploring* category, with the second most frequent category being the *Affectionate* parents. Table 3 gives a breakdown of all categories on parental sensitivity.

Table 3. Frequency distribution for parental sensitivity.

	Count	Percent
exploring	15	55.6
affectionate	5	18.5
ignoring	4	14.8
punishing	2	7.4
worrying	1	3.7
Total	27	100.0

All parents who fell under the *ignoring* and *punishing* categories were the parents of two and three-year-old children. Table 4 shows the relationship of parental sensitivity to the age of the target child.

Table 4. Types of parental sensitivity by the age of the target child

	Age of the target child			
Parental sensitivity	One yr olds	Two year olds	Three yr olds	Totals
exploring	6	6	3	15
affectionate	3	1	1	5
ignoring	0	1	3	4
punishing	0	0	2	2
worrying	0	1	0	1
Totals	9	9	9	27

Parental knowledge and beliefs regarding the value of play

Questions: Do you think it is valuable for your child to play?

- Why? (probe for completeness)

Do you believe there are any special values in playing with objects? What?

Do you believe there are any special values in playing with children? What?

Do you believe there are any special values in pretend play? What?

Does he like to play on his own?

About how long will he play by himself without wanting your attention?

Do you think it is good that he plays alone ?

Is there any sort of play you don't allow? For instance do you allow him/her to make a lot of noise in the house?

- Why or why not?

During the first family visit, parents were asked in four different questions to assess the value of different types of play for children, and to give reasons for it (See Appendix 5). While all the parents agreed that play is valuable for children, some parents were able to give a list of elaborate reasons why it was so. These reasons were categorized under benefits for general learning, cognitive development and intellectual development, physical development, development of gross motor skills, development of fine motor skills, social development, personality development, emotional development and gaining practical skills. For each parent an overall score was calculated by counting all the different categories where parents mentioned a benefit for the child, while they were explaining the value of different types of play. The largest category of parents (37%) gave three different types of reasons regarding the value of play and the mean was 4.3. All parents managed to give at least one reason, while at the maximum end, one parent mentioned 11 different types of benefits. While parents were more clear in explaining the value of object play and social play, they were not as confident in terms of pretend play. While some parents thought that

their child was too young for pretend play, a few said that it may have negative safety implications. (This was during the First General Interview, before injury prevention had been identified as the goal of the study).

Ms. Wright, mother of two-year-old boy:

Q: Is there any sort of play you don't allow?

A: Um...for instance, Saturday morning Superman comes on. Again...you know Superman. And he watches him jump. We have HBO so Superman movie comes on. So he would try to jump, fly [showing the coffee table, couch and side table] To there, to that or here. Then [showing the big rocking chair] or here because this rocks and reclines [showing the back of the chair] so he tries to get up to here and [showing the window] jump over there.

or,

Ms. Gomez, mother of one-year-old boy:

Well, I don't know yet, sometimes my child plays Batman or Superman but I find it dangerous because if he puts something around his neck and says he is going to fly...

Table 5. illustrates the frequency distribution of the number of reasons given by the parents regarding the value of play.

Table 5. Frequency distribution of the total number of different types of reasons given by the parents regarding the value of play during the first general interview.

From ( )	To (<)	Count	Percent
1.0	2.0	2	7.4
2.0	3.0	0	0.0
3.0	4.0	10	37.0
4.0	5.0	4	14.8
5.0	6.0	5	18.5
6.0	7.0	3	11.1
7.0	8.0	1	3.7
8.0	9.0	1	3.7
9.0	10.0	0	0.0
10.0	11.0	1	3.7
	Total	27	100.0

For some parents a side benefit of play is that it keeps the child busy and allows the parent to have some peace.

Ms. Gomez, mother of one-year-old boy:

Well I bring him toys to try to distract him so he does not insist that I stay with him.

or,

Ms. Christopher, mother of two-year-old girl:

Q: Do you think it is valuable for her to play?

A: Why not? It keeps her busy.

These and similar responses were not counted while calculating parents' total score on the value of play.

Parents from two-parent households were generally able to describe a larger variety of benefits for children's play, compared to single parents [F (1, 25) = 7.2, $p < .02$]. Family size [F (1, 25) = 3.4, $p < .08$] and the presence of a secondary caretaker [F (1, 25)

= 3.4, $p < .08$] were also somewhat related to the parental score for value of play. Parents from larger families with an additional caretaker were able to predict a higher number of benefits for play.

Most of the parents showed a lot of sensitivity while describing the benefits of social play for children. For these parents their child's ability to play with other children without antisocial behavior was very important.

Ms. Fish, mother of two-year-old boy:

> ...they're not sharing now but they'll start to understand what sharing means participating in a very simple game and the fun of it ...I mean all those things that they're starting to learn at that age.

Parental knowledge and attitudes toward the child's developmental milestones

Question: If a child does not walk, talk or is not toilet trained within the same year as most children, what would you make of this?

a. What might be some of the reasons why a child does not do these things at the same time as other children?

b. Would it be good or bad? Why?

Parents' responses differed regarding their ideas about such children's developmental milestones as walking, talking and toilet training, and what to do in the case if children do not do these things within the same year as other children. Overall, the study population split into two main groups. One group (55.6%) believed that all children develop at their own pace and a mother should consider any delay in these milestones as "normal" and should not try to push the child.

Ms. Friedberg, mother of three-year-old girl/boy twins:

> Q: If a child does not walk, talk or is not toilet trained within the same year as most children, what would you think or do about this?

A: Absolutely nothing. He [target boy] didn't walk until he was 18 months [looks at her son]. She was about 14 months [touches her daughter's head]. And my first son, he was about 8 months when he walked. I mean, you worry a little bit, but you knew that they were developing quickly. They just started talking the last [pauses] I'd say, the last 4 or 5 months.

Q: So what might be some of the reasons why a child was not ready to speak?

A: They just weren't ready.

Q: So, they'll do it when they are ready?

A: Yeah. You know, as long as they're perfectly healthy, there is nothing wrong with them, they'll develop when they can.

The parents in the second group thought that if children are late in achieving these milestones, it is likely that something may be wrong with them and parents should consult a specialist.

Table 6. shows the breakdown of the population into these two groups.

Table 6. Frequency distribution of parents' responses in the case of a developmental delay by the child

Parent's response	Count	Percent
Go to specialist	12	44.4
Normal-wait	15	55.6
Total	27	100.0

Sometimes parents try to push their children to potty train, not because of ideological but for economic and practical reasons.

Ms. Abbott, mother of two-year-old boy:

> I'm having a kind of problem like that [potty training], I think I'm trying to rush Lavane [2 year old target child] to potty because two packages of diapers, you know, for her [6 months old girl] and for him, you know [are expensive]. So I think that might have a bearing on it.

Parents' views regarding developmental delay were related to the size of the family. Parents with large families were more likely to consider a developmental delay normal and wait for the child to reach the milestone by himself [F (1, 25) = 5.1, $p < .04$]. This finding is a likely effect of the total number of children the family has, since the number of male children in the family [F (1, 25) = 4.2, $p < .06$] seem to be related to parental views on child's developmental delay where families with more boys and more children also considered developmental delay as normal.

In families with more than one child, attitudes towards developmental delay may change from one child to the other. Previous experience of the parent, character of the child and family circumstances such as the mother going back to work full time, are some factors that may influence parental attitudes.

Ms. Bosch, mother of three-year-old girl:

Q: If your child does not walk, talk or is not toilet trained within the same year that other children do, what would you think?

A: Well, I'd like to say that I wouldn't care but ah [pause] it, it is...it's frustrating because you really wait for those milestones really so much and when they don't come or they're delayed or whatever it does cause a lot of apprehension. I know I pushed her [target child] a lot. Him, [older brother] I didn't toilet train because I was working at the time. My baby-sitter did it. But her, she was so stubborn about it like she is about everything else. I knew she was capable of it, she just refused to do it personality-wise, you know because it was her personality. She would just get on there and sit for as long as we wanted her to, and we'd say

'make it, come out' and she'd be like 'no.' You know, and get off.

Parents gave different reasons why a delay would take place during a child's development. While all parents agreed that the reason will be partially child-based, such as genetic reasons, a physical problem with the child, or a natural delay in child's development, eight parents (29.6%) were certain that parents of the child may be responsible for such a delay.

Ms. Falcon, mother of one-year-old girl:

Some kids just don't know how to do anything...Sometimes kids have everything done for them. You know, what they don't need to do, anything. Like, say talking. I felt like Zed was ready to talk maybe a lot earlier than he actually started saying things...He would point at something and we would run to him with it. And one time when our pediatrician said, you know, why not try demanding more. Then he says things. And we did, and he changed and he started talking more. I didn't just get him juice if he pointed to the bottle of juice in the refrigerator. I made him say juice.

Table 7. gives the breakdown of parents who did and did not blame parents for children's developmental delay.

Table 7. Parental beliefs about parental responsibility in children's delay in reaching developmental milestones.

Parents who believe that for developmental delay parents are	Count	Percent
not responsible	19	70.4
responsible	8	29.6
Total	27	100.0

The biggest predictor for parents who say that they themselves might be responsible for a developmental delay of a child was the occupational index of the father [F (1, 19) = 9.6, $p < .006$]. Parents from families where the father's occupational index (Hollingshead, 1975) was high were much more likely to believe that parents may be responsible from a developmental delay on the part of the child. These families were also smaller in size, compared to families where parents who did not see any relationship between parental behavior and the developmental delay of the child [F (1, 25) = 3.2, $p < .09$].

Parental beliefs regarding the individuality of children

Questions: Do you think that all children are basically alike or are they different?

- In what ways?

Do you think all children should be raised in the same ways? Why?

Parents' beliefs in the individuality of each child was very strong. 22 parents (81.5%) thought that all children were basically different. Their responses stressed the personality and behavior differences that can be observed even among the very young children.

Ms. Fish, mother of two-year-old boy:

Q: Do you think all children are basically alike or are they different?

A: I think they're all very different.

Q: In what ways?

A: I think their degrees of sensitivity are very different, I think their methods of expressing themselves are very different, [pause] you know, some are much more verbal, some are much more physical, [pause] and I think, you know, definitely, the way they are developed mentally is different so that I think that brings out different things in children.

The remaining five parents had an opposite view, and they stressed the similarities among children of the same age. One of the five parents was a parent of boy/girl twins. Because she has twins, and belongs to a parent's group with many opportunities to compare notes with other parents about children she was able to make comparisons in normative developmental terms.

Ms. Friedberg, mother of three-year-old girl/boy twins:

Q: Are all children alike?

A: I think they're all basically alike. I do.

Q: In what ways?

A: I belong to the mothers of twins club, and I know that around their age group we all have the same complaints or the same comments and it's the same thing up through the line, everyone who has a six-month-old say basically the same things.

Table 8 shows the frequency distribution of all the answers.

Table 8. Parents answers to the question "Do you think all children are basically alike or are they different?".

	Count	Percent
Different	22	81.5
Alike	5	18.5
Total	27	100.0

Even though most parents believe that all children are different, many thought that they all should be raised the same way. Only 32% argued that, because each child is so different, they should also be raised differently. Two parents (8%) elaborated on the need to raise all children basically the same but by compensating for the differences in their personalities. A complete breakdown of the answers are shown in Table 9.

Table 9. Parental responses to the question "Do you think all children should be raised in the same ways?"

	Count	Percent
Same	15	60.0
Different	8	32.0
Basically same but in some ways different	2	8.0
Total	25	100.0

Parental beliefs regarding gender differences

Questions Do you believe there are any differences between boy babies and girl babies? (If "I don't know", ask for best guess).

What are they?

Why?

Do you think that boys and girls might need to be raised differently? How and why?

If your boy (girl) was a girl (boy) how would you raise her (him)? Why?

In terms of their attitudes towards gender, parents overwhelmingly (74.1%) taught that boys and girls are different, starting at very early ages. Descriptions of these differences usually focused on the behavioral and personality differences of boys and girls.

Ms. Kunik, mother of one-year-old boy:

> I don't think its...I don't think it's how you treat them 'cause I don't treat him [target child] any different that my daughter, or I would a girl baby. You know, it's not like you, you know you cuddle a boy just as much as you do a girl. But I just think that, I think maybe they're born with something in them. Something different.

or,

Ms. Andreas, mother of one-year-old girl:

Being that she is that female they are supposed to be that delicate, fragile, kind of, you know, very dainty kind of people. Boys, you expect them to be, you know, to climb trees, bang their chin and get bruises on their knees, where girls...you try to restrain her.

Sometimes the differences focused more on the physical capabilities of boys and girls.

Ms. Kunik, mother of one-year-old boy:

Q: Do you think there are differences between boy and girl babies?

A: Yeah, definitely, yes. I think boys are [pause] um, much more active. From my ...from what I can...you know, from what I can judge it by, um boys are a little quicker. Umm, that's not to say they're smarter, just quicker in what they do. And they're just, more active.

Q: Why?

A: I think they play different. Instinctively they play different.. Instinctively he'll be, you know, much wilder, you know. From what I see and what I see in other...

Q: Like beating up things and stuff like that?

A: Into everything, yeah. From what I've seen from other kids too, not just mine.

These views were not shared by all the parents.

Ms. Ivanoff, mother of three-year-old boy:

Q: Do you believe that there are differences between boy babies and girl babies?

A: Oh no. I think that is as good excuse when you have an active boy.

Two parents (7.4%) argued that there were no visible differences during the first few years of life, and differences develop in later years.

Ms. Bassinger, mother of two-year-old boy:

MOTHER: I don't think at this age there's that much difference between them. They tend to play with the same toys and have same abilities. I think maybe as they get older there is more differences.

Q: Why?

A: Because the way society accepts certain behavior from girls and different behavior from boys.

Q: So they somehow figure out that certain things are good for girls and certain...

A: Right. Like, have my son likes to play with kitchen stuff, but we wouldn't buy him a...his own...a toy kitchen. Because you know, we just, somehow don't feel that comfortable with, in doing it.

Two parents also said that even though there are no differences between boys and girls at birth, they quickly occur at very early ages. Table 10 shows the distribution of responses.

Table 10. Parental attitudes towards gender differences.

	Count	Percent
Yes (there are differences)	20	74.1
No (differences)	3	11.1
Not now, but will be differences later	2	7.4
No differences at birth, but they quickly occur	2	7.4
Total	27	100.0

Parents' opinions about raising the boys and girls differently was not as strong. 12 parents (44.4%) insisted that boys and girls should be raised differently because of the traditional sex roles.

Ms. Nicotra, mother of two-year-old girl:

Q: Do you think boys and girls need to be raised differently?

A: Umm I don't... I don't really know. [pause] I guess so I would say, given society, I would think so.

Q: How?

A: It's hard to say since I don't have a son. Would I raise him differently? I know my husband would. I know he'd have a lot more expectations. Umm..

Q: Like what?

A: Well, well for instance, he always makes...uh...this...a son of his couldn't play with dolls. Now I would personally let him play with dolls, but I probably wouldn't push it the same way [pause] on him you know, that I would [pause] on a girl, you know. So I know that's a difference right there. I mean, I think there are other things like that.

Parents who stressed that boys should be raised "tougher" argued that compared to girls, they should be ready for a more challenging future both in a physical and social sense. This view is usually expressed in a very clear manner.

Ms. Frattini, mother of one-year-old boy:

Q: Do you think that boys and girls might need to be raised differently?

A: Unfortunately, yes.

Q: How come?

A: Well, boys have to deal with more dangerous things in life, you know, fighting... I think there is a little bit more competition, while girls...if you are an active young lady, you know how to ride a bike, you know how to roller skate, things that are relatively safe, they could be safe, while boys have to learn how to play with a bat and a ball... they play hockey and football.

or,

Ms. Vanderpelt, mother of three-year-old girl/boy twins:

A: Yes, yes. A boy, you have to give them more responsibilities and you have to be stronger with a man than you do with a woman. Even though that's old fashioned [laughs] it is. Woman, a woman is always gonna end up going back into the kitchen, you know, and raising children. She is always gonna want that little inf...you know, child. I believe that a girl should be raised with not so much [pause] oh! I don't know. All right, yeah, they have to be raised differently. They have to be.

On the other hand, a few parents argued for gender differences, from the perspective of being a "girl" or a "woman", and gave examples from their childhood.

Ms. Wright, mother of two-year-old boy:

Even when I was younger, I'll never forget. I was about nine, and my father and his brother were in the living room. They did have a few drinks, and I have pyjama tops and I did not have my robe on. And my uncle went hugging me and everything else, and my mother smacked me. She did not yell at me. But [shaking finger] she told me to put a robe on and everything. I never [pause] yeah, she did not stress to me that I did anything wrong. But I thought I was a big nine year old. I was almost fat. I was very heavy, I was big for my age. Sooo...you know, it is different for females. You know that.

In direct contrast to those who believe in raising boys and girls differently according to traditional sex roles, an equal number of parents (44.4%) argued for raising boys and

girls exactly the same way. Only one parent mentioned the need to raise the boys and girls differently in order to compensate for all of the traditional sex stereotyping that would be affecting them from beyond the parents later on. Table 11 shows the frequency distribution of different parental attitudes towards raising boys and girls.

Table 11. Parental attitudes about raising boys and girls in the same way or differently.

	Count	Percent
Raise differently for traditional sex roles	12	44.4
Raise the same way	12	44.4
Raise the same way until later	2	7.4
Raise differently to compensate for bias	1	3.7
Total	27	100.0

Parental ideologies on the disciplining of the child

Questions: What do you usually do when ..... (your child) cries for no apparent reason?

How do you punish her/him when s/he is naughty?

Can you give me a scenario? Why did you do it?

What do you do if your child is doing something that s/he is not supposed to do?

If s/he continues, what do you do next?

Is it helpful to use threats to motivate her/him to obey you?

To evaluate their ideas on the punishment of children, parents were asked what they would do if their children did something they were not supposed to do, and keep on doing it. Parents were also asked if threats are helpful. Analysis of the responses revealed four distinct disciplining styles. These are *Loose, Evasive, Corporal* and *Verbal.*

Loose parents basically do not believe in any form of "punishment" for children in this age group. They typically use physical restrictions and remove the child from the

trouble spot when necessary. They sometimes correct the child verbally and use distractions frequently. Parents in this group stressed the importance of freedom for young children, and said they never use threats.

Evasive mothers try to avoid direct confrontations with the child and use distractions as their primary strategy. They also frequently revert to threats and physical removal of the child, but never use corporal punishment.

Ms. Hallman, mother of three-year-old boy:

Q: What do you do if he does something he is not supposed to do?

A: Distraction helps. If it is not such a major thing he can be distracted. Distraction is the best thing to do rather than getting into confrontation.

or,

Ms. Kunik, mother of one-year-old boy:

...Like if I go get clothes out of the drawer then he'll start, but I just try, you know, distract him and get him into doing something else, that's the main thing about getting him to stop doing something I don't want him to is distracting him. You know, going on to something else and then he forgets about it.

Corporal parents, on the other hand use corporal punishment in serious and mock forms. They usually hit the child slightly on the hand, at the rear, or on the legs, either by hand or by using an object such as a belt which is used as a symbolic object for punishment. This form of punishment is usually accompanied by strong verbal reinforcement.

Ms. Blank, grandmother of two-year-old girl:

Q: How do you punish her when she's naughty?

A: Punish her? I spank her on the leg with my hand, the fat part of leg [slaps her own leg down by the calf] now she know what I'm saying right now [laughs]. Oh yes, that's...

Q: So can you give me a scene, can you think of when that's happened before?

A: When did I spank her [pauses]? I think was yesterday. She broke a cup, an' I told her don't touch it on the table. And she won't cry most times when you spank her, she just ...she's tough. That's it. But just cryin', she's not a kinda baby.

Q: What do you think you should do if a child's doing something she's not supposed to do?

A: Tell her don't do that. Don't do that again. And if she do it again, I'm gonna put you in the bed. And she don't do it again.

Q: And what if she kept doing it?

A: Spank her! [emphasis, and laughs]

Use of a symbolic object such as a belt or a newspaper by the parents who exercise corporal punishment may have reasons that are much deeper than practicality or convenience.

Ms. Vanderpelt, mother of three-year-old girl/boy twins:

Q: Do you think some ways of raising a child are better than others?

A: Yes [nodding her head]. I don't believe in hitting, I'll tell you that. But I do occasionally, you know, cause they get like aaa...Cause my sister -in-law tells me "you shouldn't hit with your hands. You always hit with a belt. Because your hands are for love." And it is the truth, you know, it is.

Verbal parents use verbal reinforcement as their main disciplining strategy. While they may use some occasional corporal punishment, they usually use verbal interventions

by raising their voices, using body language, and repeating the word "no". These verbal interventions are usually followed by the physical removal of the child from the trouble spot. Some parents who use this strategy say, they need to get angry before the child can understand them.

Ms. Frattini, mother of one-year-old boy:

> I definitely yell. I do yell a little and tell him no. I do remove him from whatever I want him to stop doing. I keep on doing it and he gets the message boy. He gets the message because after a while I am, you know really frantic, and Justine knows. He looks at me shocked.

Not all parents agreed that verbal reinforcing, especially using the word "no" is an effective way to teach children how to behave properly.

Ms. Andreas, mother of one-year-old girl:

> I don't use the word 'no'. I don't, because everything can be no. You could say no a hundred times a day and I think that is a word that should be erased from the vocabulary. I use eye contact. I use gestures, I use the tone of my voice; I say 'eh, eh, eh' and she knows.

Another parent, Ms. Goodwin, parent of three-year-old girl, who had a similar idea, but a slightly different solution presented the problem as follows:

> Not always being told 'no, no, no' sort of like...Hmm my father used to say that when, if you kind of like, if you kind of constantly saying 'no' what you should do is say 'yes' to a lot of the things that don't matter. So when something big comes, when you say 'no' the kid , or the person, your wife, or whatever, doesn't feel like she's always getting [pause] you know, the wrong end of the deal.

The following Table 12 shows the frequency distribution of the parents in the study, according to their disciplining strategies.

Table 12. Breakdown of parents according to their disciplining strategies.

	Count	Percent
loose	13	48.1
evasive	7	25.9
corporal	5	18.5
verbal	2	7.4
Total	27	100.0

The most significant factor in determining the beliefs on parental disciplining was the total number of children in the household [F (3, 23) = 3.8, $p < .03$]. The average number of children in households where parents believed in *evasive* disciplining strategies was significantly higher than in those families who use other strategies.

Even though it was not statistically significant, the age of the target child was a factor in parents' ideas regarding disciplining strategies. None of the parents with a one year old target child fell under the categories *corporal* or *verbal* . These parents were sensitive to the cognitive capabilities of their children.

Ms. Kunik, mother of one-year-old boy:

Q: How do you punish him when he's being naughty?

A: I don't punish him.

Q: Can you give me a typical scene when he's being naughty, what do you do?

A: Oh sure, he'll just, you know, there will...Yeah, the other day...umm usually, before I go to sleep at night I'll make sure everything's put away, so when I get up in the morning I can just let 'em out and go make his breakfast. But somebody left the newspaper out so he, you know, the newspaper was strewn all over the living room, and I come out and he goes to me [in child's voice] 'no, no, no'. So he knew he did wrong, but that wasn't gonna stop him from doing it. But you know, basically, he just, you know, if he's holding something that he shouldn't be, I'll take

> it away and say no, you know, but you can't punish them at this age. They don't,...I don't think they really know really right from wrong, not yet anyway.

There were no significant differences between the parents of two-year-olds and three-year-olds in terms of their ideas regarding disciplining strategies. Table 13 shows the disciplining categories under which parents of one, two and three-year-old target children fell under.

Table 13. Parents beliefs regarding the disciplining of children by the age of the target child.

	Age of the target child			
Parental disciplining	One yr olds	Two year olds	Three yr olds	Totals
loose	7	3	3	13
evasive	2	2	3	7
corporal	0	2	3	5
verbal	0	2	0	2
Totals	9	9	9	27

The gender of the target child was not a factor which influenced parents' ideas regarding discipline.

There were differences between single parents and two parent families. Only one of the mothers out of the 13 who believed in *loose* disciplining was a single mother. The remaining five single mothers believed and used *evasive* or *corporal* disciplining strategies.

What factors affect parent's ideas regarding punishment? There may be a range of hidden factors that shape these attitudes, many of them rooted in the individual's past or present. One parent was so upset that her ex-husband and his girlfriend are using corporal punishment on the weekends when the child was with them that, she promised herself never to hit the child under any circumstances.

Ms. Christopher, mother of two-year-old girl:

Q: How do you punish her?

A: If you hit her you are not going to accomplish anything. She is going to do it again and she is not going to learn anything, and she is not gonna like you and you could hurt her. You don't know how to hit. She can move and you can hurt her.

Q: Why do you think kids should be raised the way you are talking?

A: It's safer. They understand more. I don't believe hitting anybody. They should be treated like human beings, not like animals; like her father does.

Q: It sounds like there are some issues, some differences.

A: Yeah. She is telling me that his girlfriend is hitting her with a wooden spoon. I think she is not supposed to. I mean, what can she understand? She is a little kid.

Parental beliefs about the influences regarding the development of children

Questions Do you think your child's character will change as she grows older?

- Why?

What do you think influences the kind of person a child becomes?

(Probe for completeness)

A major difference among the parents was their beliefs regarding what affects children's future development. While talking about the factors that influence the kind of person a child becomes, 11 parents (40.7%) stressed that the character of children is defined at birth and stays basically the same throughout their lives. As in many other cases, parents heavily based their answers on personal experiences like Ms. Nicotra, mother of a two year old girl.

Ms. Fish, mother of two-year-old boy:

Q: Do you think his [two-year-old target child] character will change as he gets older?

A: No, I don't. I think [long pause] the way they are is the way they are. That's been my initial experience.

or,

Ms. Nicotra, mother of two-year-old girl:

A: No, not much. I think pretty...I mean I think that more things will come out, but I think her basic character is pretty much formed now, by now.

An equal number of parents stressed that characters of children change as they grow up, mainly because of various social influences. Five parents said that while a child's character does change, the factors that effect it are not only social, but also physical (environment), economic (change in income) and educational. Effects of the urban environment was one of the environmental variables that was mentioned in addition to the quality of the neighborhood and housing development.

Ms. Nicotra, mother of two-year-old girl:

Q: What do you think influences the kind of person she'll become?

A: I think she has a lot of...you know, her family and where she's growing up. Umm, you know like being in the city as versus the suburbs or some other place. You know that's influenced how she sees a lot more things in the city.

or,

Ms. Kunik, mother of one-year-old boy:

...like just taking 'em outside, when he looks around at the cars and buses and people and, you know, a lot of kids don't ...a lot

of...um...one of my friends really kept her kid very sheltered, and her kid is afraid, like when he went to the circus he was like freaked out 'cause he couldn't handle the crowds. You know, things like that. He's [friend's child] very shy in public. And she kept him in a lot. She just never exposed him...she never had people coming over, she never had noise in the house. I have a lot of noise in my house. In fact I keep the radio on for him when he goes to sleep. So that he was, you know, got accustomed to noise 'cause my house is far from quiet, so you know, there's always people in and out and noise and everything.

The stress on the importance of earlier years was not uncommon as mentioned by Ms. Fish, mother of two-year-old boy:

Q: What do you think influences the kind of person a child becomes?

A: What do I think? [Pause] I think there are a lot of things that influence them but I think actually at this point in my [pause] career [laughter] in raising children, that it really does have to do with their first few years, and I think the factors that affect them are both their parents, no, their immediate family and I think their environment. I think both.

or,

Ms. Andreas, mother of one-year-old girl:

A: Her family other than Adam [husband] and I. Outside, the outside world. Christian must be around other people than her family. She needs to be out of her home in different environments.

Table 14 gives the breakdown of parents beliefs regarding developmental influences on children.

Table 14. Frequency distribution of parents beliefs concerning the factors that influence a child's development and character.

	Count	Percent
nature	11	40.7
nurture-soc	11	40.7
nurture-soc+other	5	18.5
Total	27	100.0

All the parents who argued that a child's character is solely defined at birth came from two-parent families. All the single parents believed that social and other factors were also significant in how a child develops [$\underline{X}^2$ (2, N=27) = 5.3, $\underline{p} < .07$]. Table 15 illustrates the responses of the parents from single-parent and two-parent families.

Table 15. Numeric breakdown of parent's beliefs on developmental influences on children.

Developmental influences	Single parents	Two-parent family	Totals
nature	0	11	11
nurture-(social)	4	7	11
nurture-(social+other)	2	3	5
Totals	6	21	27

Out of the 27 families in the study, 13 parents used an additional caretaker such as a baby-sitter or a family member on a regular basis. 14 parents had no additional caretakers and mothers were totally responsible from the child at all times. All 5 parents who believed that child's character is influenced by multiple factors, social and otherwise, were parents from families without an additional caretaker [$\underline{X}^2$ (2, N=27) = 5.9, $\underline{p} < .06$]. Table 16 illustrates this relationship.

Table 16. Beliefs regarding the influences on children's development of parents with and without an additional caretaker.

Beliefs on developmental influence	No additional caretaker	Additional caretaker	Totals
nature	4	7	11
nurture-soc	5	6	11
nurture-soc+other	5	0	5
Totals	14	13	27

Parental beliefs about the appropriate flexibility and rigidity of daily schedules and the amount of freedom that should be given to a child.

Questions: How do you decide when to feed your child?

Are there exceptions? Why?

Do you stick to a regular time schedule?

Some people think that children should be fed at the same times every day, others believe that they should be fed whenever they are hungry, or when adults eat. What do you think is best? Why?

How do you get your child to go to bed? Can you describe a typical scene?

Is there a regular time?

Are there any exceptions? When?

Flexibility of daily schedule and the leniency toward children has always been at the center of the discussions on parental child-rearing styles. In order to group the parents on this dimension, various types of data are used. These included parental descriptions of what "any parent" should do about the scheduling of the child's day and parents' own scheduling practices with their children. In addition to parents' ideas about the strictness of mealtimes and bedtimes, a total variation in minutes for their child's meal times and bedtimes were calculated from parents' descriptions of their child's typical daily schedule.

Finally, parents were differentiated according to their restrictions on their child's play for reasons of inconvenience, such as not allowing them to make a lot of noise in the house.

Identifying restrictions on play on the basis of "restrictions due to inconvenience" versus "value based restrictions" was necessary, because some parents imposed restrictions on play because of their own value judgments, by not allowing play with guns or any kind of war games. These restrictions achieved varying degrees of success.

Ms. Fish, mother of two-year-old boy:

I used to think that you could keep boys from being interested in guns and things like that but I don't believe that anymore since it didn't work for me.

or,

Ms. Kaplan, mother of three-year-old boy:

Q: Is there any sort of play that you don't allow? For instance, lots of noise?

A: There's...what I really hate is guns. I don't like gun toys. We have some here and...and sometimes they find them in the closet or something and they come out, and I let it go for a while and then I sneak 'em all back an' hide 'em....I don't like to bring it up 'cause they love 'em. They just love 'em. It seems to be normal.

Q: What happened when you tried to keep them tucked away?

A: They snuck in, you know and [pause] I don't care for it, but I do...then they kinda talk of I'll...I'll do this to you and that to you and all that stuff it [playing with guns] brings out. I mean, it's observable, I mean I know people have observed it, but I've seen it, you know, and I just don't like it. I don't care if they wanna make it out of cardboard or legos or whatever, but I prefer not to put the replicated object in their hands and I...you know, when we go out to the park sometimes, if the big ones want to, we let 'em

> run around and do that and then he has to [points to child in her lap], but that's really my only thing that I just really don't care for, they can scream and [laughs] do whatever they want. Run back and forth.

Parents were grouped in four categories according to their flexibility and leniency. These groups are *Strict, Average, Loose* and *Very Loose.*

Strict parents are the ones who have minimal variation in their child's daily schedules. Mealtimes and bedtimes are strictly regulated and no exceptions are allowed.

Ms. Christopher, mother of two-year-old girl:

Q: How do you decide to feed her?

A: I have my schedule. Like every five hours she gets [a meal].

Strict parents also are likely to restrict the play of the children if the play is inconvenient to them and likely to affect the aesthetics of the home.

Average parents are the ones who follow a daily schedule for mealtimes and bedtimes. However they allow the schedule to vary under special conditions. For example they may allow the child to eat late if they are out shopping with them, or go to bed late if there are visitors in the home.

Loose parents are the ones who either do not have a fixed bed or mealtimes for their children, or they allow large variations in their schedule. While these parents are loose about the child's schedules, they usually make sure that the child gets three meals a day and get to bed before it is very late, usually before 10 PM. They usually do not mind their child having snacks in between meals.

Ms. Bassinger, mother of two-year-old boy:

He has a basic time when he would eat his three meals, but you know, if he tells me 'I'm hungry', I'm not gonna say 'you can't eat' because it's not time to eat.

Very loose parents do not have any schedule whatsoever. They usually allow their children to eat whenever they want and go to sleep whenever they feel like it. They also try not to restrict any form of play in the house no matter how inconvenient and messy it is. It should be noted that parents in this group do not necessarily adopt such a stance for purely ideological reasons. While some of these parents did believe that the right way to raise a child is to "let them be themselves", at least one mother had to adopt such a style because as a single parent with three young children, she found herself unable to control them in any other way.

Table 17 shows the breakdown of the population into these four categories.

Table 17. Parental flexibility in scheduling of the child's day and parental restrictions on play.

	Count	Percent
strict	8	29.6
average	7	25.9
loose	8	29.6
very loose	4	14.8
Total	27	100.0

While most of the parents believed that their approach is the best way, a few mothers criticized themselves for being looser than necessary.

Ms. Tillman, mother of one-year-old girl:

Q: Do you think there are better ways than others to raise children?

A: Yes I think that. In my case, I'm too lenient. I know that. But for me, that's me. I think [the best way is] for someone to be just a little bit stricter than me, I think that's right.

The opposite of this self criticism never happened, in other words none of the parents said that they are too strict and should be looser.

Age of the target child was a factor in parent's beliefs and practices regarding the flexibility of daily schedules [$\underline{X}^2$ (6, N=27) = 11.1, $\underline{p} < .09$]. Only two out of the nine parents with one-year-olds believed in following a *strict* or *average* schedule. Parents of two or three-year-olds were more likely to believe in strict or relatively strict maintenance of daily schedules. Similarly, all four parents who believed in *very loose* schedules were the parents of one-year-old target children. Table 18 shows the complete breakdown of all the families.

Table 18. Parental beliefs on the flexibility of daily schedules by the age of the target child.

	Age of the target child			
Parental flexibility	One yr olds	Two year olds	Three yr olds	Totals
strict	1	4	3	8
average	1	3	3	7
loose	3	2	3	8
very loose	4	0	0	4
Totals	9	9	9	27

Existence of a secondary caretaker seems to effect the parents' ideas regarding the strictness of the daily schedules [$\underline{X}^2$ (3, N=27) = 9.5, $\underline{p} < .03$]. Seven out of the eight families who believed in *strict* scheduling were from families with no additional caretaker. Table 19 shows the relationship between the flexibility of schedules and the existence of a regular secondary caretaker in the family.

Table 19. Parents beliefs about the flexibility of daily schedule by the existence of a secondary caretaker.

Flexibility of daily schedule	There is no secondary caretaker	There is a secondary caretaker	Totals
strict	7	1	8
average	1	6	7
loose	5	3	8
very loose	1	3	4
Totals	14	13	27

There was a weak relationship between the flexibility of daily schedules and SES Seven out of the eight families who preferred a *strict* daily schedule were from families with a low SES. Families with *average*, *loose*. and *very loose* schedules were distributed among the two SES groups more or less equally. Table 20 shows the relationship of SES to the flexibility of daily schedules.

Table 20. Parental flexibility of daily schedules by SES

	SES		
Parental flexibility	LOW	MIDDLE	Totals
strict	7	1	8
average	3	4	7
loose	3	5	8
very loose	2	2	4
Totals	15	12	27

From the responses of some parents, it was clear that parental practices of strictness or leniency may change over time or from child to child. A few parents indicated that they were stricter with their first born compared to a second or a third child.

Ms. Summer, mother of one-year-old girl:

I suppose I would be considered liberal I guess. I'm somewhat moderate, I mean, I'm pretty much let them leave me a little bit. I

> don't believe in too many scheduling. It is not too tight you know. They are hungry, they can eat, they want to go to bed [they can]...right now it's pretty loose. Because I was pretty uptight with Nicki [brother]. He had to be in bed this much, sleep this much. I used to read all those books with him and it made me crazy, probably. And with Joan [target girl] I don't do it and I think it worked out pretty well.

Interrelations among the different ideological variables

What kind of relationship exists among the different components that make up a parent's child-rearing ideology? Do parents have a coherent and systematic view on these issues? To reveal the answers to these questions, relationships among the components of child-rearing ideologies were explored.

Parents' ideas about what influences a child's development is somewhat related to their disciplining strategies [$\underline{X}^2$ (6, N=27) = 12.0, $\underline{p} < .07$]. None of the parents who believe that the child's character and development is defined from birth, fell under the *corporal* disciplining category. A large majority of these parents preferred a *loose* disciplining style which does not use any form of real "punishment." On the other hand, parents who believe that a child's character and development is strongly effected by social influences were more likely to use corporal punishment strategies. Table 21 shows the frequency distribution of the disciplining preferences of parents by their beliefs on developmental influences.

Table 21. Disciplining styles of parents according to their beliefs on major developmental influences on children.

	Parental disciplining strategy				
Beliefs on developmental influence	loose	evasive	corporal	verbal	Totals
nature	8	1	0	2	11
nurture-soc	3	5	3	0	11
nurture-soc+other	2	1	2	0	5
Totals	13	7	5	2	27

Disciplining styles of parents are slightly related to parental flexibility of schedules. Even though the results were not statistically significant, 8 of the 12 parents who believe in a *loose* or *very loose* daily schedule are the parents who use a loose disciplining strategy. Table 22 shows the relationship between parents beliefs on the flexibility of daily schedules and their disciplining strategies.

Table 22. Breakdown of parents according to their beliefs on the flexibility of daily schedules and their preferred disciplining strategies.

	Parental disciplining strategy				
Flexibility of schedule	loose	evasive	corporal	verbal	Totals
strict	2	3	3	0	8
average	3	2	1	1	7
loose	5	1	1	1	8
very loose	3	1	0	0	4
Totals	13	7	5	2	27

Parents who believe in a *loose* style of disciplining are also likely to believe that parents of children may be responsible for any delay in their child's reaching such developmental milestones as walking, talking and toilet training. Parents who had *evasive* or *corporal* disciplining styles were less likely to believe in parental responsibility for developmental delay. Table 23 shows the breakdown of responses.

Table 23. Beliefs on parental responsibility for developmental delay by disciplining strategies.

	Are parents responsible for developmental delay		
Parental disciplining strategy	yes	no	Totals
loose	11	2	13
evasive	4	3	7
corporal	2	3	5
verbal	2	0	2
Totals	19	8	27

In addition to disciplining strategies, sensitivity to the child emerged as a core variable for defining the parental child-rearing ideologies. Parental sensitivity is closely related to perceptions of gender differences. A large majority of the parents who fell into the *exploring* category in terms of parental sensitivity believed that boy babies and girl babies are different [X^2 (12, N=27) = 22.8, $p < .03$]. Table 24 shows the relationship between views on gender differences and parental sensitivity.

Table 24. Parental sensitivity by perceptions of gender differences.

	Beliefs on gender differences (Are boys and girls different?)				
Type of parental sensitivity	Yes (there are differences)	No (differences)	Not now, but will be differences later	No differences at birth, but they quickly occur	Totals
exploring	13	0	2	0	15
affectionate	3	2	0	0	5
ignoring	2	0	0	2	4
punishing	1	1	0	0	2
worrying	1	0	0	0	1
Totals	20	3	2	2	27

As a response to an unexpected developmental delay by the child, *exploring* and *punishing* parents are less likely to rush to a specialist, compared to *affectionate* and *worrying* parents. Table 25 shows this relationship.

Table 25. Parental behaviors in the case of a developmental delay for parents with different types of parental sensitivity.

	Parental reaction to developmental delay		
Type of parental sensitivity	Go to specialist	Normal-wait	Totals
exploring	5	10	15
affectionate	4	1	5
ignoring	2	2	4
punishing	0	2	2
worrying	1	0	1
Totals	12	15	27

Exploring parents were also likely to believe that a developmental delay on the part of the child may be due to the behavior of the child's parents . Table 26 shows the distribution of parents according to their sensitivity and their beliefs about parents' role in developmental delay.

Table 26. Parental sensitivity by beliefs about parents' role in developmental delay.

	Do parents play a role in developmental delay?		
Type of parental sensitivity	yes	no	Totals
exploring	12	3	15
affectionate	3	2	5
ignoring	3	1	4
punishing	0	2	2
worrying	1	0	1
Totals	19	8	27

Parents' ideas about the individuality of children, and if all children should be raised the same way, is related to their attitudes about how to behave in the case of a developmental delay [$\underline{X}^2$ (2, N=25) = 6.5, $\underline{p} < .04$]. While parents who think all children should be raised the same way are more likely to do nothing but wait in the case of a developmental delay, the majority of parents who stress the individuality and think that all children should be raised differently, indicated that they would go to a specialist in the case of a developmental delay. Table 27 shows the breakdown of parents ideas about how all children should be raised according to their response to a delay in development.

Table 27. Parents' ideas about raising all children the same way by their responses to developmental delay.

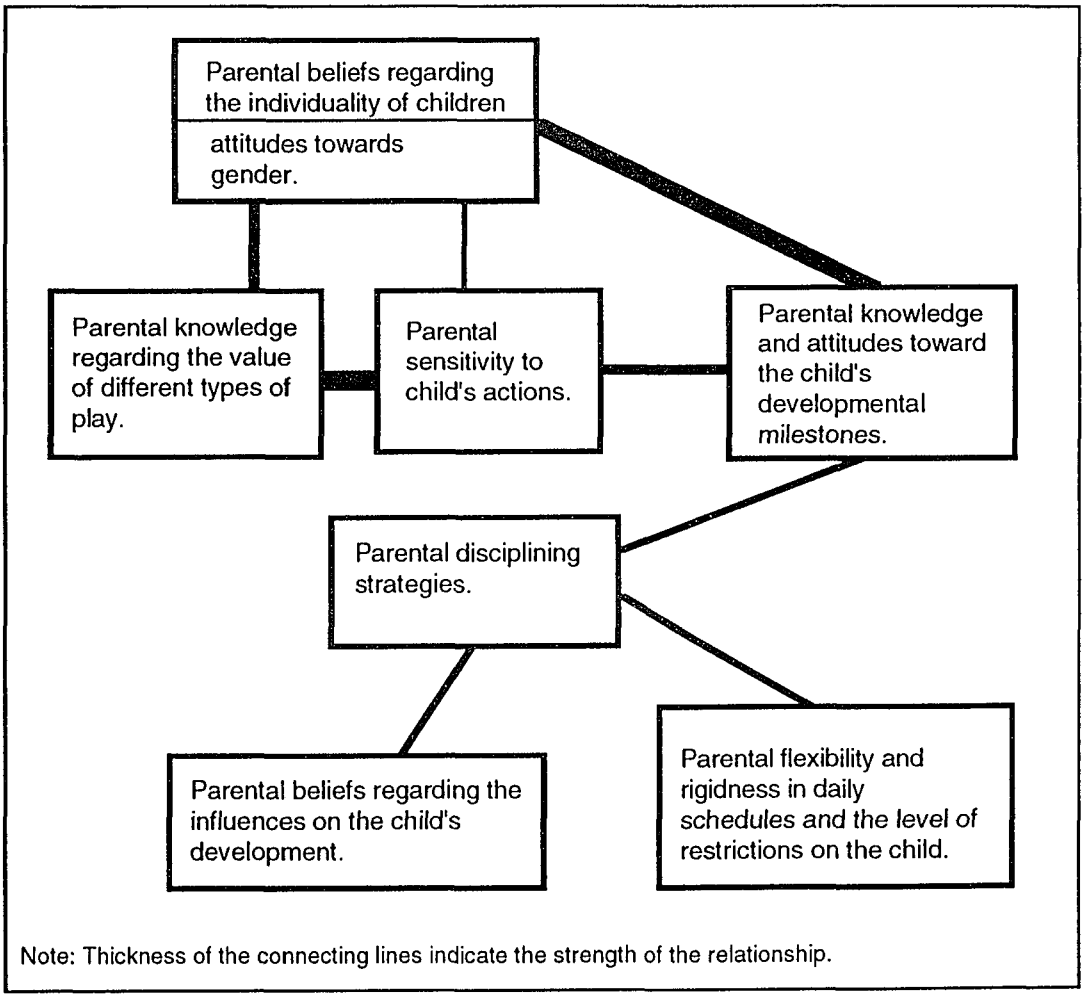
	Behavior in the case of developmental delay		
Ideas regarding if all children should be raised the same	Go to specialist	Normal-wait	Totals
Same	4	11	15
Different	6	2	8
Some ways diff.	0	2	2
Totals	10	15	25

Parents' ideas about the value of different types of play were closely related to the types of parental sensitivity [$\underline{F}$ (4, 22) = 2.8, $\underline{p} < .05$]. In general, parents who were most elaborate in describing different reasons for the value of play were the ones in the *ignoring* category in terms of parental sensitivity.

A weaker relationship was existing between the parental score for value of play and the ideas related to the individuality of children. Parents who thought that all children should be raised the same way were able to list a higher number of reasons for the value of different types of play, compared to parents who argued that all children should be raised differently.

Overall, various components of the parental safety ideologies were found to be somewhat loosely related. Sensitivity towards children and disciplining strategies emerged as core concepts relating to and tying the other dimensions together. An overall diagrammatic representation of all the components are shown in Figure 6.

Figure 6. A diagrammatic representation of parental child-rearing ideologies.



Family profiles: Grouping of the families according to their child-rearing ideologies

The absence of high correlations among the different components of the child-rearing ideologies prevented a very clear-cut grouping of the families. However by using the core concepts of disciplining and beliefs regarding the individuality of children, it was possible to generate six major categories and divide the families into seven major groups. In terms of their disciplining, flexibility of schedules, beliefs about the developmental influences and sensitivity towards children, families are grouped under three major categories. *Lax* parents are the ones who mostly have loose daily schedules and loose disciplining strategies. They tend to believe that major personality characteristics of children are defined at birth. They usually show a high degree of sensitivity towards child's needs and requests. *Dictating* parents are strict in their scheduling and punishment, believe that the child's character is mostly shaped by social influences. They also show limited sensitivity towards the child's crying or requests. *Irresolute* parents are usually evasive and inconsistent in their disciplining strategies. They usually attempt to establish impractical and strict daily schedules but do not always adhere to them. While they mostly show a high degree of sensitivity to children, depending on the situation, they sometimes can be ignoring too.

In terms of their beliefs regarding the individuality of children and gender differences, parents can be grouped under three categories. *Differentiating* parents believe all children are different. They also believe in gender differences and argue that each child should be raised differently according to their characteristics. *Undifferentiating* parents do not think that all children are alike and do not believe in gender differences. They also think that all children should be raised basically the same way. *Impartial* parents do believe in individual differences among children and boys and girls, however they think parents should ignore these as much as possible and try to raise all children in the same way.

Figure 7 shows how the seven categories that are generated and how the sample population is distributed according to their child-rearing ideologies.

Figure 7. Distribution of the sample population into seven major child-rearing categories.

Lax-Differentiating (7 families)	Dictating-Differentiating (3 families)	
Lax-Undifferentiating (4 families)		Irresolute-Undifferentiating (4 families)
Lax-Impartial (6 families)	Dictating-Impartial (2 families)	Irresolute-Impartial (1 family)

Discussion of the findings on parental child-rearing ideologies

The two core concepts, parental beliefs about disciplining and individuality of children that emerged from the analysis are both significant in terms of management of children's safety in the home. Existing research shows that mothers with the least developed ways of knowing, use the most power-oriented strategies with their children (Monsey, Bond, Belenky, Weinstock, & Burgmier, 1991). Since disciplining practices of the parents are closely related to safety training of the child, this issue requires further investigation. Additional questions need to be asked like, "do parents treat unsafe behavior as any other punishable behavior?", and "do they use different criteria to punish particularly high risk behaviors? If that is so, what are the effects of such an approach on the safety training of the child."

Similarly, beliefs in the individuality of each child emerge as another research domain since it can affect parents' setting limits on their child's behavior. It may also encourage parents to custom-designing safety strategies for each child in multi-child households.

The three patterns of ideology, *Lax*, *Dictating*, and *Irresolute* unavoidably show some similarities to Baumrind's (1970, 1978) definitions of three parenting styles *Authoritarian*, *Authoritative* and *Permissive*. One of the reasons for this similarity is that many of the aspects of parenting that Baumrind used were taken into consideration during the design of the research instruments for this study. In reality, the differences between the two categorizations are more numerous than their similarities. While *Lax* parents show similarities to *Permissive* parents and *Dictating* parents to *Authoritarian* ones, in terms of parental disciplining and control, the young age of the children in this study prevent further comparisons between the two conceptualizations. For example, one of the key concepts for *Authoritative* parents is their reasoning with the child and their willingness to engage in verbal give and take. Due to the young age of children, a comparable type of parent did not emerge in this study.

Another reason for the incompatibility of two conceptualizations stem from the differing focus of the two approaches. Baumrind is interested in the implications of parental attitudes on the socialization of the children. This study has a more utilitarian focus regarding children's safety. From this focus, parental definitions like *Differentiating*, *Undifferentiating* and *Impartial* are generated. A good example of the impact of study context on the conceptualization of ideologies is the group of parents defined as *Irresolute*. Since consistency is a key dimension for safety strategies, *Irresolute* parents, who are basically inconsistent in their thought and practices, generate a useful category for the analysis of parenting ideology within the SMS. However the relevance of the same conceptualization for the socialization of school aged children may be limited.

The issue of the changing nature of parental disciplining strategies within each family was not addressed during this research. Results of this study indicate that parental reactions to a crying child are related to the age of the child. Parents of one-year-olds showed the tendency not to let their child cry, or did not punish their child for crying, while parents of some two or three-year-olds thought it is acceptable to let the child cry or punish them for crying. Dix & Grusec (1985) found a similar relationship where they demonstrated that parents perceive children's undesirable behavior to be increasingly intentional as the age of the child increases. A longitudinal investigation of families is necessary to reveal if parents do change and adopt their disciplining methods according to the increasing cognitive abilities of the growing child.

Parents' child-rearing strategies in relation to their child's personality

The focus of most parents upon the individuality of each child suggests that parents adopt their ideologies and practices according to how they perceive their child. A parent who believes that her child is very active and at-risk may try to limit the child's access to many places, while another parent who believes that her child is very scatter-brained and forgetful may not insist on teaching her about safety in a repetitious manner. A comparative study of parents' safety management of siblings would prove valuable in revealing the influence of child characteristics over parental ideology.

Single-parent versus two parent families

Findings indicated that mothers from two-parent families were able to come up with a larger number of reasons regarding the benefits of play for children compared to single mothers. At the first look, one can argue that this may be a result of SES or education,

since all of the single parents in the study were from families with low SES. However analysis did not reveal any relationship between parents' knowledge of value of play and SES or parental education. If that is the case, why are mothers from two-parent households more sensitive and knowledgeable towards play? One hypothesis is that the intense communication between the two parents about the child's behavior and play can contribute to increased knowledge, an advantage lacking in single-parent households. The same argument can be extended to explain other findings that indicate the relationship between knowledge regarding value of play and family size as well as the presence of a secondary caretaker. Do adults from large families with many children and with additional caretakers discuss and learn more about child behavior and especially children's play? If they do, does this increase in knowledge also apply to issues related to safety? In other words, if the issues related children are more frequently and more substantially discussed in large families, the knowledge generated from this process should inevitably include safety issues. To answer this question fully, we need studies which focus on intra-family communication and sources of child and safety knowledge in parents.

Beliefs about individuality

The beliefs about the individuality of each child and differences between boys and girls is shared by many parents. Since all the mothers who participated in the study were basically non-working mothers who spend a lot of time being together with and observing their children, it can be expected that they were very much aware of their child's individual characteristics. As manifested in the interview with one of the mothers who was actively participating in a parents' group activities, it can be hypothesized that parents who have the experience of coming in frequent contact with many other children or parents will be more likely to be able to see the commonalties among children who are at the same age.

Despite the belief that all children are basically different, parents mostly agreed that there should be common standards in raising children. What is the implication of this finding in terms of safety? Findings suggest that in some domains, parents are likely to apply similar standards to all their children. On the other hand, there would be domains where different rules would be designed according to the individual characteristics of each child. Does safety belong to the former or latter domain, and why? Research should investigate the answer to this question in order to help design effective intervention strategies. The same questions are also valid, while discussing the attitudes of parents towards boys and girls.

The ideological and practical factors that affected the findings related to parental attitudes towards developmental delay were hard to distinguish. Generally parents did not differentiate between questions posed as "What do you think a parent should do...?" from "What would you do...?" and answered the former with the latter causing the ideological and practical issues to get intermingled. The two groups who answered this question differently might not be doing so because of purely ideological reasons. Therefore it was likely that parents who said that one should wait for the child to develop at her own pace, might be thinking about their lack of easy access to a specialist. On the other hand for middle SES families, where it is easier to take the child to a specialist, parents may choose to do so out of curiosity. On the other hand, it is also possible that low SES parents may genuinely have a more relaxed attitude towards developmental delay. The answer to this question should be investigated by focusing on a population of parents with delayed children and by comparing their actual behaviors and their justifications of these behaviors.

Disciplining strategies/styles

The four disciplining styles *loose, evasive, corporal* and *verbal* that emerged during this study were closely related to the number of children in the household. This finding suggests the significance of family dynamics and sibling relations over parental disciplining styles. Why are parents with many children more likely to use *evasive* strategies? One explanation is that parents with many children may feel less in control and find it harder to reinforce *corporal* punishment strategies. They might also not be adopting *loose* disciplining strategies, for fear of losing control. The significance of this finding in terms of the management of safety is that, for the purposes of safety management, an evasive style can possibly increase the injury risk for the child. Because unlike other styles, an *evasive* style of disciplining does not use physical punishment in the teaching of the child.

The findings also suggest that age is a factor in parental flexibility in scheduling the child's day. With parents becoming stricter with children as they grow up.

Some findings indicate that the presence of an additional caretaker other than the parents may have an influence on parents beliefs about child development and flexibility. Parents who use -or who can afford to use- additional caretakers seem to be more aware of social influences on their child's development and are also less strict. There may be many explanations for this phenomenon. The most apparent one is that the presence of, and communication with, a secondary caretaker affects parental ideology. Future research should address the effects of secondary caretakers on family systems.

In terms of the findings about the interrelationships of individual components of safety ideologies, the most significant finding was the lack of a stronger relationship between beliefs about the flexibility of daily schedules and parental disciplining styles. These two concepts, which are the building blocks of the Baumrind's *Authoritative, Authoritarian and Permissive* categories of parenting styles, were expected to be related

much more closely. In light of the findings of this study, the definitions of these three basic categories may need to be reexamined and redefined. This redefinition should include such concepts as, beliefs regarding developmental influences and parental responsibility which, in this study were identified as to be closely related to disciplining styles.

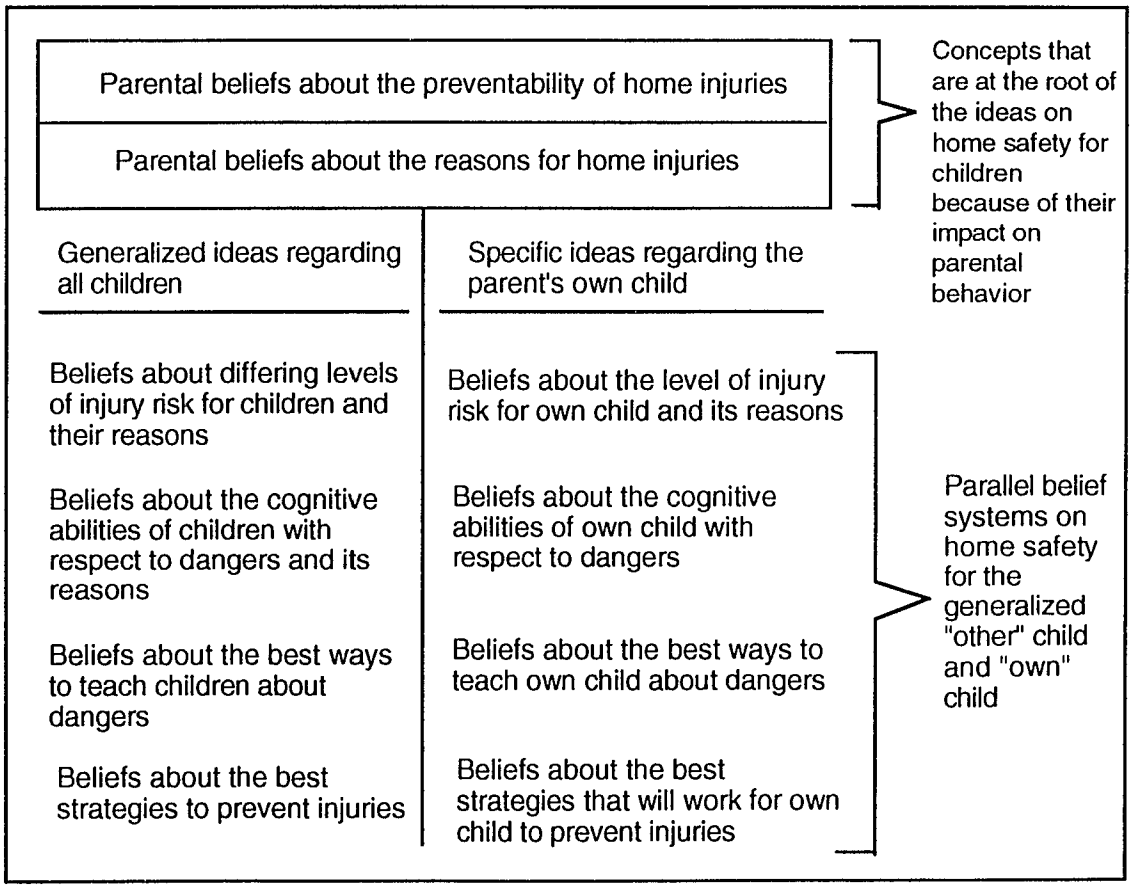
What is the significance of the seven categories on child rearing ideology proposed by this study? Proposed categories which define parental ideologies on the basis of *Lax-dictating-Irresolute* and *Differentiating-Undifferentiating-Impartial* may have a utilitarian purpose in evaluating parental ideologies and their relevance towards child safety. Structured and standardized tests need to be developed and applied to test the validity of this hypothesis.

Emerging patterns of parental safety ideologies

Structure and elements of safety ideologies

The safety ideology of parents results from the beliefs of parents, (a) about the reasons for and preventability of home injuries, (b) children's cognitive abilities regarding dangers and (c) effective ways to prevent injuries. Figure 8 illustrates the major components of parents' safety ideologies as generated by a qualitative analysis of parental responses to open-ended questions on safety issues.

Figure 8. Major components of parental safety ideologies.



As illustrated in Figure 8, parents' ideas about the reasons and preventability of injuries are usually generalized for all children and establish a framework for other beliefs. With respect to all other beliefs about safety, however, parents usually refer to experiences with their own children in making their generalizations. In other words, they frequently use their specific knowledge rather than their general knowledge.

Ms. Ivanoff, mother of three-year-old boy:

Q: Why do you think children's accidents happen?

A: With Thomas, he is just trying to be too much. But otherwise children basically want to explore, try to do things and they don't realize they are incapable of doing things.

or,

Ms. Christopher, mother of two-year-old girl:

Q: Do you think there are differences between boys and girls in terms of the number of accidents they have?

A: I would say almost the same.

Q: Why?

A: Because sometimes she [meaning her daughter] does just as much as he [her son] does.

Elements of the Safety Ideology

This section will look at the different elements of the safety ideology outlined in Figure 8, and evaluate each of these elements by describing their demographic implications and by exploring the themes that emerged from the data.

Why do children's injuries happen?: Beliefs about the reasons for home injuries

Question: Why do you think children's accidents happen?

Many parents (37%) indicated that the character and behavior of young children are the sole reasons for home injuries. The limited cognitive abilities of the child and its developmental stage were the two most frequent reasons given by this group.

Ms. Admer, mother of three-year-old boy:

Q: Why do you think children's accidents happen?

A: Because they are too young to see the danger of things, they get preoccupied...in a playground they get preoccupied with a bird flying and, say, let go whereas an older person or a child may be, would be more aware of that.

or,

Ms. Bassinger, mother of two-year-old boy:

Q: Why do you think children's accidents happen?

A: ...Partly judgment, they don't realize that they are not capable of what they are trying to do. They don't recognize when there is danger.

Natural curiosity of the child was frequently mentioned, usually in a positive tone. Answers implied that children get into dangerous situations as a result of natural curiosity and pose an inconvenient nuisance that parents must learn to deal with.

Responding to the "table vignette" (See Appendix 6).

Ms. Christopher, mother of two-year-old girl:

Q: Why do you think a one-year-old would do this?

A: He is wondering, he is curious.

Q: What do you think he is curious about?

A: What's on the table, if he can play with what's on it.

or, responding to the "poison vignette" (See Appendix 6), Ms. Bassinger, mother of two-year-old boy said:

Q: Why do you think a one-year-old would do this?

A: He is curious. aam...but I think one year olds still do a lot of exploration with their mouth.

A few parents indicated that in addition to curiosity and exploration, children sometimes do get involved in a dangerous activity to get the attention of the parent, since the child knows that it will definitely get a response from the adult.

Ms. Admer, mother of three-year-old boy:

Q: Do you think that your child would do this?

A: He has, yes.

Q: When he has, how old was he?

A: Probably a year and something; because it was before I had this particular table and I was still using a tablecloth.

Q: Do you think that he knew he was not supposed to do it?

A: He might have because I have reprimanded him prior to that.

Q: Why did he do it?

A: That time it was curiosity but I remember a particular time when I was on the telephone. So probably it was to get my attention.

A smaller group (22%) said that in addition to the child, behavior of the caretaker is a factor in home injuries.

Ms. Kaplan, mother of three-year-old boy:

Q: Why do you think children's accidents happen?

A: They get into [things] more. I think it has to do with watching. A lot of times when my kids got into [accidents] I think I was partially to blame for not watching more closely and some things are just unavoidable. You know.

At least one parent very strongly argued in favor of the necessity of allowing children to develop their physical skills for the sake of their future development.

Ms. Bosch, mother of three-year-old girl:

Q: Why do you think children's accidents happen?

A: I think there are a couple of reasons. I think some parents don't take enough precautions. I think one reason, which is going to sound crazy, is that kids don't get enough freedom. The more you say 'don't touch this, don't touch that', you know, 'don't climb on this, don't climb on that', I think those kids have more accidents. They are too overprotected. I let my kids climb on everything. I think they need to climb and learn. If they are never allowed to climb on stairs or climb on the couch, when they are 10 or 12 years old they are very clumsy.

Five parents out of the 27 (19%), included "fate" or "bad luck" as one of the reasons why injuries happen. The realization that it was impossible to prevent all injuries played an important role for the parents who stressed this point.

Ms. Frattini, mother of one-year-old boy:

Q: Why do you think children's accidents happen?

A: You really have to be watching them all the time. For me I have to watch him all the time.

Q: Do you think it is really possible to watch him all the time?

A: I can't do that. You can't do that,...When I had him in the bathroom he slipped. He just slipped in the bathroom. I was changing his pamper. I took off his pamper, I was going to give him a bath and he slipped.

Q: On the floor?

A: He had peed and I did not notice so I said 'Justine', I took off his pamper, felt the water [temperature], turned around and said 'Come on baby'. He came, walked on, stepped [on the wet surface] and slipped...and he hit the back of his head...

Q: Of those accidents which occur to children in the home, do you think most of them can be prevented?

A: It's hard. Some of them, as far as bumps, those kind of accidents, I don't think they can be prevented too much.

Table 28 shows a complete breakdown of all the answers.

Table 28. Frequency Distributions of the answers given by parents about the reasons of child injuries.

Injury reason	Count	Percent
Child only	10	37.0
Child/caretaker	6	22.2
Fate + other	5	18.5
Multiple-no fate	5	18.5
Caretaker only	1	3.7
Total	27	100.0

While SES was not a factor in parents' judgment of injury reasons, age of the target child was. The largest group, the ten parents (37%) who implicated the child as the sole reason for injuries all were parents of two or three-year-olds. None of the parents with a one-year-old target child indicated that child's personality and behavior is the only cause for injuries [$\underline{X}^2$ (8, $\underline{N}$ = 27) = 18, $\underline{p}$ < .025].

Can most of the children's injuries be prevented?: Beliefs about the preventability of home injuries

Question: Of those accidents which occur to children in the home, do you think most of them can be prevented? How?

In terms of preventability of home injuries, 16 parents (59%) said that most home injuries can be prevented. 11 parents (37%) were unable to answer the question clearly and either indicated that it is possible to prevent some of the injuries or said that they did not know the answer. The following quotes explain why many answers were ambiguous. Parents who were able to evaluate the importance of a complex range of factors such as the characteristics of the child, environment and the role of the caretaker were careful to point out the relative importance of all these factors.

Ms. Admer, mother of three-year-old boy:

Q: Of those accidents which occur to children in the home, do you think most of them can be prevented?

A: Depends on what kind of an accident it is. If it is falling down a flight of steps...umm...it depends on the child. I mean some children can walk up and down the steps at x age whereas others can't. Or if it is dark, anyone, even an adult loses his balance and just goes down. So I think, can it be prevented, yeah, it depends on what kind of an accident it is.

or,

Ms. Fish, mother of two-year-old girl:

Q: Of those accidents which occur to children in the home, do you think most of them can be prevented?

A: Yes. mmm. I'm sure there is a percentage that can't [be prevented]. But I think that if you have a safe...I mean you really

have to baby-proof the house, you really do have to figure out, and you also have to...it's constantly changing. What a kid can do at 8 months is totally different from what he can do at 12 months. So it's like an ongoing...You know, I really do feel that you can't prevent most accidents. Also in order to fix your house that way [totally safe] you have to go to extremes.

Q: [laughs] Pad the walls?

A: Yeah.

Only one parent (4%) said that most home injuries cannot be prevented. She argued that, as a parent it is impossible to judge the upcoming behavior of the child even while supervising him in the same room.

Ms. Gomez, mother of one-year-old boy:

Q: Of those accidents which occur to children in the home, do you think most of them can be prevented?

A: No, because in part, one does not think that the child is going to do that [dangerous behavior] and suddenly one realizes that he is doing it.

While the gender of the target child has no effect on parents' thinking about the preventability of home injuries, parents who have at least one girl child seem to think that most home injuries are preventable, while parents with all boys are not clear if most injuries can be prevented [F (2, 24) = 3.238, $p < .06$].

Are some children at a higher risk?: Beliefs about the differing levels of injury risk for children

Questions: Do you think some children are more likely to have accidents than others? Why?

Do you think in terms of accidents, your child is more or less at risk than most other children of her/his age? Why?

While discussing the levels of risk for children, parents overwhelmingly agreed that some children are at a higher risk then others. 23 parents (88%) validated the idea of high risk children, while only three (12%) said that all children are at the same level of risk in terms of home injuries. While evaluating risk, most parents gave the activity level and the behavior of the child as a reason.

Ms. Goodwin, mother of three-year-old girl:

Q: Do you think some children are more likely to have accidents than others?

A: Yes I do.

Q: Why?

A: Well, I think there are more active children and less active children and more cautious and less cautious and more coordinated and less coordinated...so it is just different personality traits. I mean some children are more quiet than others.

or,

Ms. Admer, mother of three-year-old boy:

Q: Do you think some children are more likely to have accidents than others?

A: Mine is more at risk.

Q: Why?

A: It is nature, his physical makeup, what he does. Definitely more at risk.

Q: For example what does he do?

A: I'll give you one example. [She takes the interviewer to the back patio and points to the 3-feet high railing] You know more mild children would not even think of it. [She points to the railing] He has been climbing up here and standing [on it]...this is what he will do. My friend's child, same exact age would not even dream or think of doing that.

This last quotation also illustrates how parents frequently referred to the behavior of their own child and their personal experiences while answering general questions regarding safety.

Parents beliefs regarding the effects of gender differences on injuries

Questions: Do you think there are differences between boys and girls in terms of the number of accidents they have? Why?

Do you think there are differences between boys and girls in terms of the types of accidents they have? Why?

Perceptions on gender differences proved to be an important variable. 14 parents (52%) indicated that there are differences between boys and girls in terms of the numbers and the kinds of accidents they get involved in. These parents stressed that it is the "nature" of the boys that gets them into more trouble compared to girls.

Ms. Kunik, mother of one-year-old boy:

Q: Do you think there are differences between boys and girls in terms of the number of accidents they have?

A: Just from between my two kids and from what other people told me, I think that boys seem to be a lot wilder. Definitely apt to get more mischievous than girls.

Q: Because they are wilder?

A: Yes, just nature, yes.

Eight parents (30%) said there are no differences between boys and girls in terms of their injuries. Some parents in this group said that it is basically the personality of the child that matters while some others highlighted the discrepancy in parents' behavior and attitudes towards boys and girls.

Ms. Bosch, mother of three-year-old girl:

Q: Do you think there are differences between boys and girls in terms of the number of accidents they have?

A: I don't know if it is related to any specific sex. It is more outgoing curiosity that gets a child in trouble.

Q: Do you think there are differences between boys and girls in terms of the types of accidents they have?

A: I can't see if I would relate it to sex or personality.

and, as opposed to:

Ms. Nicotra, mother of two-year-old girl:

Q: Do you think there are differences between boys and girls in terms of the number of accidents they have?

A: I don't know, but I would not be surprised if boys had more accidents.

Q: Why?

A: I don't know if it is the difference between boys and girls but maybe parents encourage their boys, you know, even in the playground I don't know but with children at Emma's age [two] the mothers of the girls seem to be right behind the girl and not let her do certain things and say 'no, no, no, that's not the way we do it'. Like going up the slide backwards.

Q: Are the boys allowed to do it?

A: I don't know. I don't see parents right behind their boys as much as the girls.

5 parents (18%) said that they would not know the answer to the question about boy/girl differences and refused to speculate. While many (57%) married couples indicated gender is not a factor in the frequency and seriousness of children's injuries, the majority of the single mothers (67%) argued otherwise, and pointed out that boys are more likely to have more frequent and more serious accidents.

What is the most effective strategy to prevent accidents?

Questions: What would you do if you saw your child like this?

What would you do next if it did not work?

How would you prevent this from happening again?

If you have to leave your child with somebody who has never taken care of her/him before, what kind of general things would you tell them about your child's safety?

While responding to the two visual vignettes (See Appendix 6), parents were asked what course of action that they would follow to prevent injury in such situations. Responses varied mainly because, while some parents mentioned only one strategy others referred to multiple strategies. The most common answer (30%) involved some form of physical intervention where the dangerous object or objects were made inaccessible to the child either by removing them or by locking them up.

Responding to the "poison vignette" (See Appendix 6).

Ms. Nicotra, mother of two-year-old girl:

Q: How would you prevent this from happening again?

A: I would find some latch and put on it so she couldn't open it [the cabinet] or remove it.

The second most frequent answer was increased supervision of the child (15%) in order to prevent her from getting too close to the dangerous situation. The need for continuous supervision as the best available strategy is mentioned frequently by some parents.

Ms. Fish, mother of two-year-old boy:

Q: If you have to leave your child with somebody who has never taken care of him before, what kind of general things would you tell them about your child's safety?

A: Basically I'd tell them that they had to watch him every minute. Because I think that's really the only way to really prevent the accidents.

While responding to the vignettes, only seven parents (26%) said that they would use more than one strategy simultaneously to prevent the situation from happening again.

How does a child learn about the dangers in the home?

Questions: Do you think the child knows that this is a dangerous thing to do? How does the child eventually learn that this is dangerous?

Many parents (12) believe that parental intervention is necessary for children eventually to learn about dangers. These parents see the training of the child as the only way for them to learn about dangers. For young children this does not necessarily involve a lot of explanation and reasoning.

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

Q: How does the child eventually learn that this is dangerous?

A: By their mother constantly telling them 'no'. Yeah. A kid can not do it on his own. It's gotta be the mother doing it for him.

Some parents (8) also stressed that in order for the children to be able to learn and be trained about dangers, they have to be at a certain developmental stage.

Ms. Joan, mother of two-year-old boy:

Q: How do you think that the child eventually learns that this is dangerous?

A: By a year old I don't think[they can learn]...I think it will take them until they were about three. When they are two, they will still go for it.

Few parents (3) thought that in addition to training and development, children learn through their mistakes and past experiences.

Ms. Christopher, mother of two-year-old girl:

Q: How does the child eventually learn that this is dangerous?

A: If he gets hit with something in the head he knows that it hurts and he would not do it anymore.

In this answer parent assumes that the child will be able to understand the cause and effect relationship between her action and its outcome.

At least one mother stressed the importance of younger siblings learning from older ones. In some cases these older children act as informers to help the parent learn about dangerous situations that develop in the home.

Ms. Gomez, mother of one-year-old boy:

Q: How does a child eventually learn that this is dangerous?

A: Well, because one starts teaching him that this is poison, that is veneno [Spanish for poison]. If the oldest child sees the small one grabbing this he says 'mommy, mommy, look, he is grabbing

poison.' So I know Edward [target boy] is doing something bad or wrong. That it is not good that he has that in his hands.

Table 29 shows a complete breakdown of all the responses.

Table 29. Frequency distribution of parental beliefs about children's learning about dangers.

Parents' beliefs about how children learn about dangers	Count	Percent
Training	12	44.4
Training/Development	8	29.6
Training/Experience	3	11.1
Development	2	7.4
Training/Experience/Development	1	3.7
Other	1	3.7
Total	27	100.0

How would parents react when they witness their own child involved in a dangerous activity?

Questions: What would you do if you saw your child like this?

What would you do next if it did not work?

How would you prevent this from happening again?

When parents were presented with a hypothetical situation where they witness their own children involved in a dangerous activity, their reactions differed widely. In their responses to visual vignettes, parents indicated that there would be primary and secondary interventions. Primary intervention is the first course of action that a parent takes, when he or she sees a child in a dangerous situation. Secondary intervention is the follow up actions taken due to the failure of the primary intervention or to reinforce the results of the primary intervention. Parents indicated that their most common intervention would involve

some form of punishment (37%) together with the modification of the physical environment.

Responding to the "poison vignette" (See Appendix 6), Ms. Abbott, mother of two-year-old boy:

Q: What would you do if you saw your child like this?

A: Well the first time I'll tell him 'no', I'll put it [the container] away, I'll explain to him that 'no, that's dangerous'. But then if he did it again, you know, I'll tell him, then I'd spank him.

Q: What would you do next if it didn't work?

A: Well, [laughs] continue spanking until it finally register, you know.

or,

Responding to the "table vignette" (See Appendix 6), Ms. Kunik, mother of one-year-old boy:

Q: What would you do if you saw your child like this?

A: I would say, you know, "no, no". I would run over and try to get the tablecloth away from him but like I said, at this age "no, no" doesn't particularly mean anything to them.

Q: So if that didn't work what would you do?

A: I guess, if there was a really dangerous situation, I would smack his hand and say "no, no". You know...but other than that there is really nothing to do.

The second most common intervention mentioned was a combination of environmental modification and training of the child (33%).

Ms. Joan, mother of two-year-old boy:

Q: What would you do if you saw your child like this?

A: I would take it away from him and I would tell him best I could, not to touch it.

Q: And what would you do next?

A: Lock it up, get a better lock, a safety device or something or somewhere else, maybe put it up.

Q: How would you teach the child not to do this again?

A: I would tell him not to do it but I will lock it [the container] up.

Table 30. shows the major categories of interventions described by parents.

Table 30. Frequency distribution of parents' preferred primary and secondary interventions

Primary intervention	Secondary intervention	Count	Percent
Env. Modification/training	Followup	9	33.3
Punishment/other	Env. modification	3	11.1
Training	Env. modification	2	7.4
Env. modification	Env. modification	3	11.1
Punishment/other	Followup	10	37.0
Total		27	100.0

The types of interventions mentioned by the parents are related to the age of the target child [$\underline{X}^2$ (8, N=27) = 14.067, $\underline{p} < .08$]. In contrast to what would have been an expected outcome, young children are not necessarily punished less. Modification of the physical environment is also not as heavily used for one-year-olds as for two and three-year-olds. Similarly training is not limited to older ages. Table 31 shows the breakdown of the answers according to three age groups.

Table 31. Breakdown of parents' preferred primary and secondary interventions by the age of the target child.

Type of parental intervention (primary and secondary)		One yr olds	Two year olds	Three yr olds	Totals
Env. Modification/training	Followup	4	2	3	9
Punishment/other	Env. modif.	0	0	3	3
Training	Env. modif.	0	2	0	2
Env. modif.	Env. modif	2	0	1	3
Punishment/other	Followup	3	5	2	10
Totals		9	9	9	27

How would a parent train and teach a young child about the dangers in the home?

Question: How would you teach the child not to do this again?

The problems related to training a young child about dangers were raised by a few parents. The following quote where the parent of two-year-old boy, described how she would teach her son not to pull the tablecloth off the table set with heavy glass objects, illustrates her frustration.

Ms. Bassinger, mother of two-year-old boy:

Q: How would you teach your child not to do this again?

A: Amm...I think, maybe I would...[hesitates]...[long pause]...no...I don't know. I was going to say I would show him how would it all fall but then he might end up thinking that it was fun.

One point that was raised involved the nature of the danger and immediacy of the effect. One parent said that some hazards are easier to teach because it is possible to illustrate the effects to the child immediately, without really hurting them.

Ms. Ivanoff, mother of three-year-old boy:

Q: How does the child eventually learn that this is dangerous?

A: By the parent teaching it. It is hard to explain danger to a child. 'Hot' is immediate. The immediate effect of 'hot' [is easy to explain]. Danger, I think, is very difficult to teach a child.

There is a relatively strong relationship between the type of response to dangerous situations and the total number of the people living in the household [F (4, 22) = 2.843, p < .05]. The two interventions that involve any form of punishment are used most by the households with larger numbers of people living in them.

What did parents describe as the best intervention strategy for their own child?

What would you do if you saw your child like this?

What would you do next if it did not work?

How would you prevent this from happening again?

When parents were asked about their course of action when faced with a situation where their own child is imminent danger, more than half of them (54%) indicated that they would use a strategy limited to physical modification of the environment. Remaining parents indicated that they would either use the physical modification of the environment together with training, or a combination of physical modification with increased supervision. Table 32 shows the frequency distribution of all the answers.

Table 32. Frequency distribution of preferred parental safety interventions for their own child.

Type of intervention	Count	Percent
Physical/Training	8	30.7
Physical only	14	53.8
Physical/supvision	4	15.3
Total	26	100.0

Mother's education, SES and occupational index seem to mildly effect the choice of action. The four parents who chose the combination of physical and increased supervision are all from a low SES, low occupational status group [F (2, 23) = 2.935, $p < .075$]. These parents sometimes indicated their desire to increase supervision of their child, and to warn their child in advance, before he gets within the close proximity of the danger.

Ms. Abbott, mother of two-year-old boy:

Q: How would you prevent this from happening again?

A: By putting it away and by just warning him when he is getting away to go towards it just let him know ahead of time not to do that so he'll stop.

Internal dynamics and consistency of parent's safety ideologies

As illustrated in Figure 8, parents' beliefs regarding home safety evolve around two parallel patterns, one for generalized ideas that apply to all children, and another, a more specific set of ideas that apply to the parent's own child. This section will investigate this structure by looking at the internal relationships among various generalized and family-specific beliefs and the degree of overlap between these two parallel domains.

Table 33 shows the reasons parents gave while they were evaluating the level of risk for any child and their own child in terms of home injuries.

Table 33. Observed frequencies for parental reasons for any child's risk as compared to their own child's risk.

Reasons for any child's risk	Reasons for own child's risk: Other	Child+Other	Child only	No reason	Totals
All children are at equal risk	1	0	1	0	2
Child only	5	2	5 [a]	6 [b]	18
Child + other	3	2 [a]	1	1 [b]	7
Totals	9	4	7	7	27

[a] These parents gave the same reasons while evaluating the risk of their own child and any other child.

[b] These parents did not give any reason while evaluating their own child's level of risk, because they indicated that their child had the same level of risk as any other child.

In evaluating the injury risk of any child and their own child, only seven parents gave the same reasons. Five parents indicated that the personality of the child, whether their own or not, accounted for a higher or lower risk. Two parents indicated that for their own children as well as any other child, the risk is dependent upon the personality of the child and such other factors as the physical environment or the caretaker. Of the remaining 20 parents 13 used different criteria in evaluating their own child's risk and any child's risk. Seven parents gave no reason because they saw their child at the same level of risk as any other child.

While evaluating the reasons why children do get injured, parents used the same criteria [$\underline{X}^2$ (20, $\underline{N}$ = 27) = 40.387, $\underline{p} < .005$]. Table 34. illustrates the reasons given by the parents to the questions why any child and their own child would engage in dangerous activities.

Table 34. Observed frequencies of the reasons given by parents for any child getting into a dangerous situation compared to the reasons given why their own child would get into a dangerous situation.

	Own child						
Any child	Child	Child+Env	Child+Env+Care	Env	No reason	Child+Care	Totals
Child	8 [a]	1	1	1	1	1	13
Child+Environment	2	4 [a]	2	0	3	0	11
Child+Env.+Careta.	0	0	1 [a]	0	0	0	1
Environment	0	0	0	1 [a]	0	0	1
Caretaker	0	0	0	0	0	1	1
Totals	10	5	4	2	4	2	27

[a] These parents gave the same reasons while describing why any child and why their own child will engage in a dangerous situation.

As shown above, 14 parents gave exactly the same reasons for why any child or their own child would engage in a dangerous activity. Nine parents gave different reasons, and four parents gave no reason regarding their own child. Overall, parents indicated that the personality and cognitive level of the child is the most important reason for risky behavior. The second most frequent answer was a combination of child related and environment related reasons.

How do parents decide if their children know the actions that they are not supposed to do? The following parent discusses the environmental and behavioral aspects of a child's getting in a risky situation. She also gives the "caught-in-the-act" attitude of the child as a proof that the child knows about what to do and what not to do.

> Responding to the "poison vignette" (See Appendix 6), Ms. Falcon, mother of one-year-old girl:
>
> Q: Do you think your child would do this?
>
> A: No, well...maybe I should have qualified that. She isn't able to do that at our house [because detergents are locked] but she might pick up a bottle if it is sitting around.

Q: So if it is available she might go for it?

A: Yes.

Q: Do you think s/he [your child] knows s/he is not supposed to do it?

A: She definitely knows, but it doesn't mean that she won't do it.

Q: Why do you think she would do it then?

A: I think that kids...do it...I mean, they know in their minds they are not supposed to be doing these things but they just cannot control their body from doing it. Well, I mean, I see it with Zed [older sibling] all the time and even with her [target child] I mean there are definitely things that she knows she is not supposed to do and she'll go if I'm not there or something. As soon as I come in and she is, like you know, caught in the act.

Parent's assessment of the knowledge of children regarding dangers

Questions: Why do you think a one-year-old would do this?

Do you think the child knows that this is a dangerous thing to do?

How does the child eventually learn that this is dangerous?

While assessing the cognitive abilities of one-year-olds in understanding dangers, parents responded to two visual vignettes (See Appendix 6) depicting children in dangerous situations. All the parents indicated that the one-year-old in the vignettes would not know that this is a dangerous situation. However when asked if their own child would know if this is a dangerous thing to do, 19 parents (70%) said yes to at least one of the situations described in the two vignettes. Only six parents (22%) indicated that their child would not know that both situations are dangerous. Two parents were unable to judge the knowledge of their own child. Of the parents of one-year-olds, five out of nine parents indicated that

their child would know that at least one out of the two situations is dangerous. Only two parents with one-year-old target children said that their child would not know that both situations are dangerous. Table 35 illustrates the breakdown of the responses given by the parents of one, two and three-year-olds, regarding their child's knowledge of dangers.

Table 35. Observed frequencies for age of the target child by the parent's judgment about her own child's knowledge of the danger.

	Parents' answers to the question "Does your child know this is dangerous?"			
Age of the target child	Yes to at least 1 vig.	No to both vig.	Don't know	Totals
One yr olds	5	2	2	9
Two year olds	8	1	0	9
Three yr olds	6	3	0	9
Totals	19	6	2	27

What is the relationship between parents' assessment of their child's knowledge about dangers and their child's likely behavior in a critical situation. While responding to two visual vignettes depicting children in dangerous situations, parents judged their child's knowledge and likelihood of getting into such a situation. Table 36 shows the breakdown of the answers.

Table 36. Observed frequencies for the parents' assessment of their child's likelihood of getting into a dangerous situation by their estimate of their child's knowledge of dangers.

Own child's likelihood of getting into a dangerous situation	Responses to the vignette depicting a dangerous situation and the question "Do you think that your child knows this is dangerous?"			
	Yes to at least 1 vig.	No to both vig.	Don't know	Totals
Yes	7	3	2	12
No	3	0	0	3
Maybe	9	3	0	12
Totals	19	6	2	27

As illustrated in Table 36, of the 19 parents who indicated that their child knows that at least one of the situations is dangerous, seven parents said that their child would engage in such an activity, and nine said that their child might engage in such an activity. Only three parents were confident that their child knew the dangers and would not engage in such an activity.

The following quote from an interview illustrates what at first seems to be an inconsistency in a parent's thinking.

> Responding to the "table vignette" (See Appendix 6), Ms. Frattini, mother of one-year-old boy:
>
> Q: Do you think that a one-year-old knows this is a dangerous thing to do?
>
> A: No
>
> ...
>
> Q: Do you think your child would do this?
>
> A: I'd like to say no. No he wouldn't do it. I think he might not.

Q: Do you think he [your child] knows he is not supposed to do it?

A: Once I told him. Yes he would know.

Some parents stressed the distinction between knowing about rules and understanding the dangers. The consensus was that, at young ages, even when most children knew the rules, they would be unable to understand the real reasons for the dangers.

Responding to the "poison vignette" (See Appendix 6), Ms. Andreas, mother of one-year-old girl:

Q: Do you think she [your child] knows she is not supposed to do it?

A: No, I mean she knows that we try to teach her and she knows that that cabinet she is not supposed to go in but she doesn't understand why.

Some parents however, believed that even if the child cannot understand the reasons behind the danger, their behavior can be altered through repeated punishment.

Responding to the "poison vignette" (See Appendix 6), Ms. Abbott, mother of two-year-old boy:

Q: What would you do if you saw your child like this?

A: Well the first time I'll tell him 'no', I'll put it [the container] away, I'll explain to him that 'no, that's dangerous'. But then if he did it again, you know, I'll tell him, then I'd spank him.

Q: What would you do next if it didn't work?

A: Well, [laughs] continue spanking until it finally register [sic], you know.

The past experience of the child is also mentioned as an important variable which affects a child's knowledge about dangers. In homes where the physical environment is

heavily regulated, children may be exposed to fewer dangers and opportunities for training may be limited.

> Responding to the "poison vignette" (See Appendix 6), Ms. Kaplan, mother of three-year-old boy:
>
> Q: Does your child know he is not supposed to do this?
>
> A: No.
>
> Q: Why?
>
> A: He does not because he does not come in contact with it.

What is the relationship between a parent's beliefs concerning the causes of injuries and their own child's knowledge and behavior?

Questions: Do you think your child would do this?
Do you think s/he knows s/he is not supposed to do it?
(If yes) Why do you think s/he would do this?

In terms of their beliefs concerning the causes of injuries, parents fall into two categories. *Child-ascribing* parents are the ones who believe that personal and behavioral characteristics of children are the only cause for unintentional injuries. *Multi-agent-ascribing* parents are the ones who believe that one or more additional factors in addition to the child are responsible for injuries.

Parents who indicated the less likelihood of their child getting into a dangerous situation were mainly the parents who believed that the personal characteristics of any child are the only reason why a child may get injured (*child-ascribing*). Parents who indicated multiple numbers of reasons for risky behavior (*multi-agent-ascribing*) were usually the

same parents who were more convinced that their child would engage in a dangerous activity [$\underline{X}^2$ (2, $\underline{N}$ = 27) = 5.018, $\underline{p}$ < .09].

What is the relationship between the ideas about a parent's belief concerning her child's knowledge of dangers, and her beliefs about the causes of injuries. All the child-ascribing parents indicated that their children knew about at least one of the dangerous situations presented to them. Table 37 shows the relationship between parents beliefs about the causes of injuries and their ideas about their child's knowledge about dangers.

Table 37. Observed frequencies for child-ascribing and multi-agent ascribing parents by their estimate of their own child's knowledge.

	Parents' answers to the question "Do you think your child knows that this is dangerous?"			
	Yes to at least 1 vignette	No to both vignettes	Don't know	Totals
Child-Ascribing	8	0	0	8
Multi-Agent ascribing	11	6	2	19
Totals	19	6	2	27

Similarly, beliefs regarding the causes of injuries are also related to the course of action that will be taken by the parent when she witnesses a dangerous situation involving her child [$\underline{X}^2$ (4, N = 27) = 8.029, $\underline{p}$ < .095]. Table 38 shows the relationship between these two factors.

Table 38. Observed frequencies for Child-Ascribing and Multi-Agent Ascribing parents by their preferred intervention strategies.

Parental safety intervention (Primary and Secondary)		Child Ascribing	Multi-agent Ascribing	Totals
Env. Modification/training	Followup	1	8	9
Punishment/other	Env. modif.	1	2	3
Training	Env. modif.	2	0	2
Env. modif.	Env. modif	0	3	3
Punishment/other	Followup	4	6	10
Totals		8	19	27

As seen in Table 38, multi-agent ascribing parents were more likely to avoid any form of punishment in their intervention strategies.

None of the child-ascribing parents saw the combination of the interventions, modification of the physical environment, and training as a viable prevention strategy. Most of these parents indicated that they would use physical modifications only [X^2 (2, N = 26) = 4.580, $p < .1$]. Table 39 shows the preferred strategies of child-ascribing and multi-agent ascribing parents.

Table 39. Observed frequencies for Child Ascribing and Multi-agent Ascribing parents by their preferred injury prevention strategy.

Parental intervention	Child Ascribing	Multi-agent Ascribing	Totals
Physical/Training	0	8	8
Physical only	5	9	14
Physical/supervision	2	2	4
Totals	7	19	26

Age of the target child is a significant factor in parents' safety ideologies. While parents of older children do not necessarily select reasoning over enforcement, their beliefs about the causes of injury is related to the age of the target child [X^2 (2, N = 27) = 6.750,

$p < .035$]. Table 40 shows the breakdown of the *child-ascribing* and *multi-agent ascribing* parents according to the age of their target child.

Table 40. Observed frequencies for child-ascribing and multi-agent ascribing parents by the age of their target child.

	Age of the target child			
	One yr olds	Two year olds	Three yr olds	Totals
Child Ascribing	0	5	3	8
Multi-agent Ascribing	9	4	6	19
Totals	9	9	9	27

As illustrated in Table 40, none of the parents of one-year-olds believe that the child is the only responsible agent in the occurrence of injuries. They all believe that there are other factors involved. Parents of two-year-old children are the only group whose majority thinks that children are the sole cause of home injuries.

Child Ascribing parents were also coming from smaller families, while multi factor oriented families came from relatively larger families [$F(1, 25) = 3.836$, $p < .065$].

An analysis of variance indicates that a relationship exists between the type of parental safety ideology and the total number of children in the home [$F(6, 20) = 2.249$, $p < .09$]. While six out of ten (60%) of the parents who have only one child indicated that the characteristics of the child are the only reason for home injuries, only two out of 17 parents (12%) who have more than one child said that child related factors are the only cause for home injuries.

Dominant patterns of safety ideology: Major grouping of the families

The most salient aspect of the safety ideology is a parent's belief concerning the causes of risk and injury, and her beliefs about the most effective ways to react and deal

with her child in the short and long term. A qualitative analysis of parents' responses to a set of questions related to safety (See Appendix 5: First Safety Interview) revealed the following. In terms of their beliefs regarding the causes of injuries, parents fall into two categories. *Child-ascribing* parents believe that the character and the cognitive abilities of the children are the only reason behind home injuries. In contrast, *multi-agent ascribing* oriented parents see that in addition to the characteristics of the child, there are other factors such that play an important role for the child's safety as the quality of the physical environment, attentiveness of the caretaker and the training of the child.

The second important dimension is the initial and long term response of the parents to an injury threatening situation. There are four different approaches that parents think should be adopted when they are confronted with an injury threat to their child. *Enforcing* parents are the ones who use any intervention together with initial and subsequent punishment. They repeat those actions until they get results or are able to change the child's behavior. This group does not attempt to reason with the child or try to explain the dangers to them. *Reasoning* mothers will use a mixture of strategies also but they would not use any form of punishment initially or as a follow-up strategy. Instead they always attempt to explain the dangers and their consequences to their children. *Enforcing/Reasoning* parents are the ones who use punishment as well as explanation of the dangers to the child. Finally, *Verbal-directive* parents do not punish or reason but try to discourage the child from attempting a dangerous behavior by verbally saying "no" and by repeating it in one form or other at each level of the strategy.

The 27 parents who participated in this study fell into seven major groups. These groups and the number of families in each group is displayed in Table 41.

Table 41. Frequency distribution of the dominant safety ideology of all parents

Major parental safety ideology categories	Count	Percent
Child-enforcing	2	7.4
Multi-enforcing	6	22.2
Child-reasoning	3	11.1
Multi-reasoning	7	25.9
Multi-verbal	5	18.5
Child-enforcing/reasoning	3	11.1
Multi-enforcing/reasoning	1	3.7
Total	27	100.0

The largest group is the seven parents who believe that home injuries are caused by multiple factors and who also reason with their children. The second largest group consists of the six parents who also believe in multiple factors but who use punishment techniques to control their children.

Discussion of findings on parental safety ideologies

The most frequently mentioned causes of injury by the parents included personality, cognitive limitations, curiosity and the physical capabilities of the child. The child's desire to get parent's attention, parents' behaviors and "faith" were among other reasons. Results are consistent with past research that show most parents think that injuries are preventable (Eichelberger, Gotschall, Feely, Harstad, & Bowman, 1990). This large variety of factors mentioned by parents indicates how difficult it is for them to identify the real reasons for childhood injury. It is clear that all the factors presented by parents are valid and worthy of investigation. It is also clear that they are representative of the weaknesses inherent in the different safety management systems of individual families. While parents individually are aware of some of these reasons, they usually lack a consistent and systematic understanding of how these factors work and relate to each other. Further research needs

to clarify the major weaknesses in parental understanding of their own safety management systems in order to help develop effective interventions.

Findings indicate that some parents do see the personality of the child as the only cause for childhood injuries. This raises some critical questions. Do parents who believe that the child is totally responsible for injuries, design their safety strategies around the child? Are they likely to focus less on the physical environment, and use fewer safety devices and physical precautions? What are the risk implications of blaming the child for injuries? These are some of the issues that need to be addressed by future research.

Unlike parents of one-year-olds, parents of two or three-year-olds were more likely to believe that the personality of the child alone could be responsible for her injuries. This is likely the indication of an overall trend, where as the child grows up, parents gradually switch more and more responsibility for safety from themselves to the child.

Parents' focus on the highly active child was also evident in the findings concerning their ideas on differing levels of injury risk among children. At a time where safety literature has formally dropped the concept of "accident prone child" as a viable alternative, this focus on the child's character by parents, was an interesting contrast. Further investigation of parents' concept of "the child accident repeater" is necessary in order to integrate it into the safety management system.

Parents labeled as *child-ascribing* by this study are those who see less injury risk for their children, who believe that their child has some knowledge of dangers and who punish or train their child when they witness a near miss. This attitude is totally different from that of *multi-agent ascribing* parents, who are likely to see their child at a higher risk, do not have confidence in their child's knowledge of dangers and who are likely to modify the environment when they witness a near miss. It is not possible to understand the strategies of these two types of parents, without considering the basic differences in their safety

ideologies. Similarly, interventions designed for these families need to consider the ideological differences in order to be successful.

On issues of safety, parents seem to feel much more responsible for intervening and training than they do in other domains. This finding does not support Sameroff & Frail's (1985) argument that parents' descriptions of their children is context free. Even though this may not be very surprising, this finding is significant in indicating the uniqueness of safety ideologies and their possible independence from the rest of the parental ideological framework. It also suggests that it may be inappropriate to use research tools designed to measure parental ideologies on socialization of children within the domain of safety. A clear example of this is the punishment method and the age of the child. Findings indicate that when safety is considered, even very young children (one-year-olds) can be punished.

Parental emphasis on different forms of punishment and reprimand is contradictory from the perspective of existing theory. According to Piaget (1932), a pre-operational child, as a result of punishment, cannot perform the cognitive operations that result in alternate ways of behavior. Mancuso & Lehrer's (1986) dichotomy for reprimand can be applied to the punishment styles of *Enforcing*, *Reasoning* and *Verbal-Directive* parents. This dichotomy divides reprimand strategies either as *relevant* or as *tangential*. While relevant reprimands "reference the transgressor's constructions of the event and enhance elaboration of his or her schemata" tangential reprimands "provide comparatively little elaboration with respect to conception about the rule-related event"(Mancuso & Lehrer, 1986, p.74). From this perspective, for children under four years old, the punishment strategies of the *Enforcing* and *Verbal-Directive* parents can be considered as *Tangential.* Reasoning mothers on the other hand, can be considered to be experimenting what in the future may turn out to be a *Relevant* punishment strategy.

Punishment of the child for safety reasons is more frequent in large families than in small ones. There may be several explanations for this. One is that consistent

reinforcement of other strategies such as rules and physical precautions that require repeat actions and coordination among all the family members is much harder to implement in large families. Knowing this, parents in large families may turn to punishment as a quick and easy way out.

Another major finding about parents' ideas regarding safety is that there is a discrepancy between parents' views about themselves and their own children compared with their views regarding other parents and other children. This discrepancy is clear in parents' evaluation of children's cognitive abilities in relation to injury risk. Most parents use one type of criteria while evaluating their own child and family, and another set of criteria while evaluating other families. Parents also show a tendency to overestimate the cognitive capabilities of their own children and the effectiveness of their own strategies and that may result in a false sense of security, and an increase in the injury risk for the child. Similar findings have been demonstrated by existing research. For example Dix & Grusec (1985) showed that despite the vast changes in the knowledge of children in different ages, parents did not view the misconduct of younger children as more constrained by lack of knowledge than the misconduct of older children. Dix and Grusec label this finding as "surprising" and point to the possibility of important shortcomings in parents' attribution process. A possible explanation to this phenomena is put forth by Valsiner & Lightfoot (1987) who argue that during the reasoning of the caretakers about the safety aspects of child-environment relationships, a very unique process takes place, where parents integrate "general knowledge," with their "personal knowledge" of their child and their specific environment. These two forms of knowledge may or may not be compatible with each other. This issue will remain a critical one for research in safety, and is likely to affect how research should be designed and interpreted in the future.

Relationships between parental child-rearing ideologies and parental safety ideologies

Some degree of overlap exists between parental child-rearing ideologies and parental safety ideologies. The sample size of this study is not big enough to determine if a significant relationship exists between the seven patterns defined for each of these ideologies. Analysis done by comparing individual dimensions of ideologies revealed following relationships.

Parents who have a *lax* attitude towards child-rearing indicated that they are not confident in estimating their child's likelihood in getting involved in a dangerous activity, compared to parents who have *dictating* or *irresolute attitudes* [$\underline{X}^2$ (4, $\underline{N}$ = 27) = 8.629, $\underline{p}$ < .075]. Table 42 shows this relationship.

Table 42. Parents' estimate of the likelihood of their child's involvement in dangerous activity by their child-rearing ideology

	Parents' estimate of the likelihood of their own child's involvement in dangerous activity			
Child-Rearing Ideology	Yes	No	Maybe	Totals
Lax	6	1	10	17
Dictating	2	2	1	5
Irresolute	4	0	1	5
Totals	12	3	12	27

This finding is probably an indirect result of the relationship between parental disciplining strategies and parent's estimate of their child's risky behavior. Many of the parents with *loose* or *verbal* disciplining strategies were not confident if their child would or would not engage in a specific dangerous activity. *Evasive* parents were confident that they would [$\underline{X}^2$ (6, $\underline{N}$ = 27) = 13.381, $\underline{p}$ < .04]. Table 43 shows the answers.

Table 43. Parents' estimate of the likelihood of their child engaging in a dangerous activity compared to their beliefs regarding the disciplining of children.

	Parents estimate of the likelihood of their child's involvement in a dangerous activity			
Parental *disciplining* strategy	Yes	No	Maybe	Totals
loose	4	1	8	13
evasive	6	0	1	7
corporal	2	2	1	5
verbal	0	0	2	2
Totals	12	3	12	27

In teaching the child about dangers, *dictating* parents overwhelmingly said that they would use punishment, while most of the *lax* or *irresolute* parents indicated that they would rely on verbal reinforcement and explaining dangers to their child and not use punishment at all [$\underline{X}^2$ (12, $\underline{N}$ = 27) = 19.641, $\underline{p}$ < .075].

In terms of the strictness of daily schedules, all of the parents who were categorized as *very loose* indicated that their child is more or equally at risk in terms of injuries. On the contrary, parents who were labeled as *strict* in terms of their daily schedules considered their child at less risk in terms of injuries [$\underline{X}^2$ (9, $\underline{N}$ = 27) = 16.194, $\underline{p}$ < .065].

Parental beliefs regarding the disciplining of the child is related to parental beliefs regarding the cause of injurious events. While parents who have *corporal* and *verbal* disciplining styles believe that the behavioral and personality characteristics of children do cause most injurious events, parents identified as *loose* or *evasive* were more likely to mention a variety of reasons as a cause for injury in the home [$\underline{X}^2$ (3, $\underline{N}$ = 27) = 9.017, $\underline{p}$ < .03]. These reasons included fate, behavior of the caretaker and social and environmental factors. Table 44 shows this relationship.

Table 44. Relationship between parental disciplining and beliefs regarding the cause of injuries.

Parental disciplining strategy	Child Ascribing	Multi -agent Ascribing	Totals
loose	2	11	13
evasive	1	6	7
corporal	3	2	5
verbal	2	0	2
Totals	8	19	27

Discussion of findings on the relationship between parental child-rearing ideologies and parental safety ideologies

While findings indicate some relationship between child-rearing ideologies and safety ideologies, the overlap is not very big. This is partially a result of different ways the two ideologies are conceptualized. However even in areas like disciplining, the overlap is not complete, which indicates that parents may be using different criteria when dealing with safety. The overall pattern generated from these findings point out the relationship between the style of child-rearing and beliefs regarding the injury risk for the child. Parents with a *loose* or *lax* style are generally more cautious about their child's risky behavior compared to *strict* and *corporal* or *verbal* parents. What is the implication of such a difference? It is possible to hypothesize that parents who continuously expect that their child may be engaged in a risky behavior will be more prepared in terms of safety, compared to parents who are confident about the behavior of their child. There are a few questions that future research must clarify in order to justify this hypothesis. The first question is the actual risky behavior of the children of these two types of parents. Do the children of *strict* and *corporal* parents engage in less risky behavior? The second question is the effect of the perceptions of risk for the child on the actual safety strategies of parents. Do parents who

believe that their child is at a higher risk develop better safety strategies? If future research answers these questions, not only will it be possible to clarify the relationship between parental ideologies and safety strategies, but will also help the design of effective *active* intervention instruments to diagnose and improve the safety management systems of at-risk populations.

FINDINGS 2: COMPONENTS OF THE SAFETY MANAGEMENT STRATEGIES AND THEIR RELATIONSHIP TO PARENTAL IDEOLOGIES

Patterns of safety strategies of the families

This section will describe the findings regarding parents' safety strategies. As was illustrated in Figure 4, parents use four distinct strategies to prevent child injuries. These strategies are: the installation of *physical devices* , *physical precautions*., a *rule* system for the child and *supervision* of the child. Each family uses some or all of these strategies with different degrees of effectiveness. This section will look at each of these strategies and attempt to identify major issues raised by the parents about each strategy and try to answer why different parents prefer different safety strategies. This section will also look at the demographic implications of this question. It will also attempt to find the relationships that exist among the different components of the SMS through a comparison of safety strategies with these different components such as parents' child-rearing and safety ideologies, family resources, and the characteristics of the child.

Physical safety devices

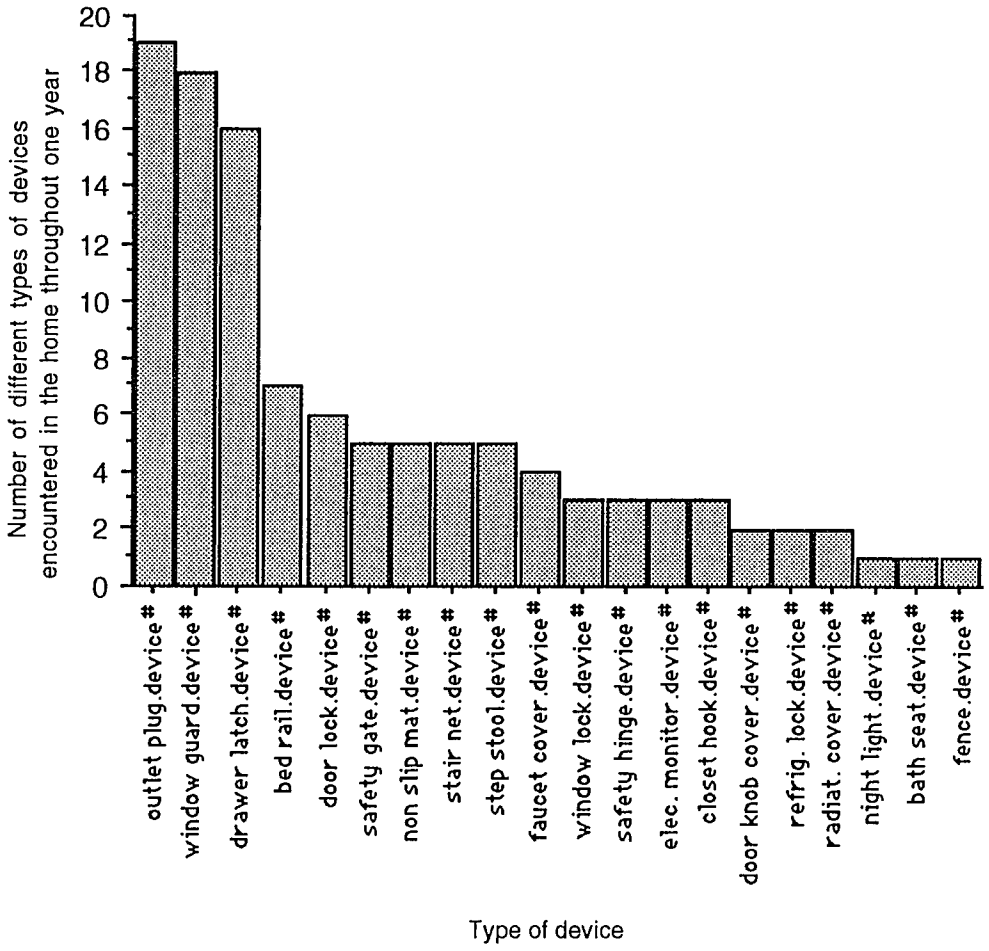
Parental use of safety devices

The use of physical devices is one of the strategies which is heavily promoted by existing safety literature. A typical safety device is usually store-bought as were most of the devices encountered during this study. However, in a few cases, parents used some

home made devices like, for example, a piece of rope to keep a cabinet door closed. Similarly, not all the physical interventions encountered were designed and marketed specifically as "child safety devices": In a few cases, parents used regular hooks or padlocks as safety devices to prevent the child access to dangerous locations.

Figure 9 shows a list of safety devices encountered in the homes of this study. In addition to window guards, which are required by New York City Law, electrical outlet plugs and cabinet and drawer latches were the most frequently used items.

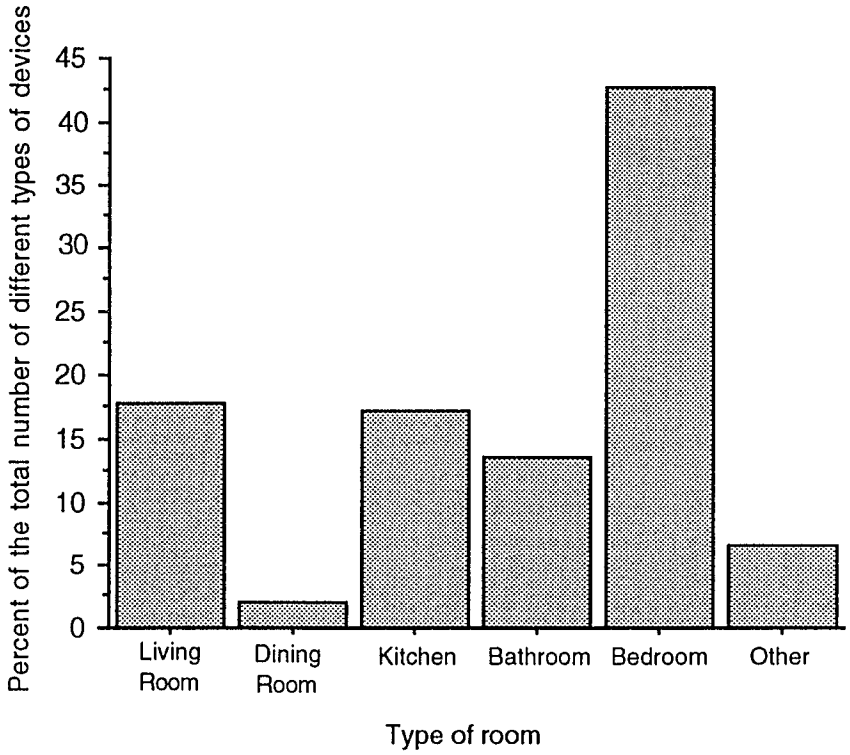
Figure 9. List and numbers of safety devices recorded during the study[1]



[1] Numbers indicate the number of homes with that type of device. Each type of device in each household is counted as one, regardless of the actual number of the same type of devices repeated within the home.

More than 40% of all the devices recorded in the study were installed in bedrooms. This is not surprising since the most popular devices were window guards and electrical outlet plugs, and parents were installing them in places where the children are most likely be alone. Figure 10. shows the distribution of safety devices in different rooms of the home

Figure 10. Percent distribution of all devices recorded during the study by type of room.



The total number of devices found in the home was closely related to the SES [F (1, 25) = 6.0, p < .03] and mothers education; whether she has a college degree [F (1, 25) = 8.9, p < .007], and her total years of formal schooling [F (1, 25) = 5.9, p < .03]. Families with higher SES and better educated parents were more likely to have a larger number of safety devices compared to families with a lower SES and less education.

The number of devices in a household is also related to the size of the family. Larger families [F (1, 25) = 4.4, p < .05] and families with many children [F (1, 25) = 3.6, p < .08] had fewer devices. Assuming that this finding can be an effect of SES and education, since less educated families with low SES were also the large families with many children, the analysis was repeated for low and middle SES families separately. Although the results were not significant, the same pattern held for both groups separately.

Parents' attitudes towards the usefulness of safety devices varied. Some parents were skeptical about the things they saw in the stores which are being sold as safety devices. Mothers either did not know anything about relatively uncommon devices or their knowledge was based only on what they heard from other parents. A good reason for this is the lack of generally available information that cover the complete range of available safety devices.

Ms. Admer, mother of three-year-old boy:

MOTHER: Just shopping in local stores, you know there's always the child's department, and...trying to sell you as many child safety things, I mean, for example, a friend of mine has, for the bath tub, for the spout, you know the...there's something that covers the spout. I [emphasis] just never thought it was necessary. But she obviously did. Cause I felt...I mean, I [pauses] I have left him [her own child] alone in the tub. And I will continue doing so especially now that he's that much older.

Q: For how long would you leave him alone?

A: Five min...not even five minutes, it's like , ah, one two..answer the phone...but so I'm saying going back to the spout, I have never seen that advertised, plus I know my friend has it. But I just...I thought it was a waste. I mean, you also see advertised, it's called Baby-sitters. It's also for the tub. You place the child right in it and there's suction cups...I think that's a waste of money. You know its...if the parent is right there, I just don't think it's necessary.

This example is typical of the views of many parents for some of the less common devices. Furthermore, most parents consistently stressed, that no device is a real substitute for direct and continuous parental supervision.

Another common problem is the design deficiencies of many of the child safety devices on the market. In many cases a badly designed device loses its effectiveness and

becomes a "toy" for the child. The individual plastic electrical outlet covers are a good example.

Ms. Hallman, mother of three-year-old boy:

MOTHER: He ends up taking them [outlet covers] out and putting them back in.

Q: So it becomes a game?

A: Oh yeah. If somebody has used something and the cap is just laying on the floor he'll put it back in. He'll say 'Hey, you forgot to put this back in' so I don't know what purpose they really serve for him.

or,

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

Q: Do you have any physical safety device installed in here (living room), other than, the window guards?

A: Yeah, yeah, yeah.

Q: What do you have?

A: [Mother walks and shows the electrical outlet plugs] Here, you see? They're all covered up. Because, I don't know if he did but my son [older teenage son, not living in this household] and his friends has to do a cleaning job and he [target boy] has stuck something into one of the sockets...but you see, I'm not sure about it; because if it really happened...he never came and said anything to me. So I don't know if it's true but I had to put things in there.

Q: You did. In here?

A: No, not in here. In his room. He'll take it out. Because sometimes what I do is, when my daughter [older daughter living separately] is over, allright, what I do is put the little TV that I

have in my room in the back room, alright? And then I set up a Nintendo in my room, OK? So he [three-year-old son] tries to unplug and plug it in, alright? He knows how to take the cap [outlet plug] off, you know, but he knows at the same time, at the same token I don't allow and that it's wrong, but they [both twins] still do it.

In some cases, a device can be a hazard itself. The following quote illustrates a case where the parent, realizing that the safety device she had previously installed was now a hazard, had to come up with a safety rule for the child.

Ms. Falcon, mother of one-year-old girl:

MOTHER: [pointing to the safety gate]: This is not an ideal gate to have. I didn't realize how dangerous this thing was when I bought it. So one of the rules in this place is not playing with the gate, which is, kind of, you know, a crazy rule to have but unfortunately, this is the gate we have. We've never, you know, for whatever the reason leaving this, for whatever, had not time to remove it. Generally, it's not used anymore, except the fact, I just totally can't have them in the kitchen. At that point I would close it. It rarely gets closed and mostly stays back here [mother holds the gate and pushes it to the wall] like this, so hopefully they won't even notice it and don't play with it. But if for some reason it got open [opens the gate slightly] and something, they came to it, then the rule will be not play with it, cause it's highly dangerous.

Q: Like how?

A: Like this [holds the gate, opens it slightly and shows with her hand as fingers going through]. Well, [pause] they can get their fingers caught here. Anyway, it has these sharp metal things [holds the lock] to bump their heads on, and so I do close it, like, for instance, like Friday night, part of the Sabbath, you are not allowed to cook on Saturdays, so often the stove top remains on, you put something on and your food stays warm on it. So a lot of

times Friday nights I will close it to close off the kitchen just cause its hot in here and stuff and I just don't want them in here messing anything up.

The most common problem with many of the parent-dependent devices, that is, devices which require consistent action by the parent to be effective, is that they create a false sense of security. Safety gates that need closing and locking every time an adult walks through them, or cabinet locks that need manual locking after each use are examples of these devices.

Mr. and Ms. Andreas, parents of one-year-old girl:

FATHER: The only thing is carelessness. One time she fell off a high chair because my wife and I both put her in. So I assumed that my wife had put the straps in. When I put the table part on which also holds her up.

MOTHER : And I thought he [emphasis] put the straps in.

FATHER: [continues] So when she finished eating I took the table part off and when she is strapped in she can't fall but my daughter leaned forward, she went right on the face.

In many cases, parents will insist that they always perform the actions necessary to keep the physical devices in operating condition. They will argue that they always keep the gates closed, always lock the cabinets locks and always install the outlet plugs after use. However, even though it was not recorded systematically, during the interviews the safety research team consistently stumbled upon devices which were not properly installed, or in operating condition.

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

Q: So in your estimate, do those caps [electrical outlet plugs] work alright?

A: Yeah.

Q: They do. Are there any times that you forget to plug them in?

A: No, never, I never forget.

Q: You have to take them out...

A: Yeah, then I put it back in. I never forget. Because I'm afraid of that, you know, they can die from that. They can stick some metal stuff, that's it.

Q: But you said that sometimes in the bedroom they fail, because they [children] take them out.

A: Yeah, yeah. He takes them out, not her. She's little bit afraid.

Another major limitation of physical safety devices is that their effectiveness becomes vulnerable to the cognitive and physical development of the child. What works for a child one day can be totally ineffective a week later. Parents who rely on safety devices as a major part of their strategy have to reassess the capabilities of their children continuously and upgrade or modify their strategies accordingly.

Ms. Joan, mother of two-year-old boy:

Q: Do you have any physical safety devices in this room [kitchen]?

A: Yeah, well we have of our oven and nails [showing the tied knobs of the cabinet doors]

Q: So do you find that they work?

A: Not anymore. Now he figured that out.

Q: When did that happen, do you know?

A: Aaa, about a month ago. He can now open them. So we have to, you know, to change something. And now, he did, just figured it

out, about a week ago how to open the refrigerator. He wasn't doing before. So I have to change that too.

or,

Ms. Nixon, mother of two-year-old boy:

...safety is a continual thing. It changes, you know, what a three month old can do, what a one year old can do and what a two year old can do. It changes, so you can't just say 'oh, my house is childproof.' Maybe it is childproof for a one year old but then when a two year old comes, it may not be childproof. So you have to evaluate your child's abilities and interests and you know, things that never might occurred to him to do before, you have to think about now.

A continuous reassessment of the child's physical capabilities is very hard even for parents who watch their children all the time. Many parents were unsuccessful in anticipating the development of their child during the two months between visits. It was also common that they were frequently unable to clearly answer questions regarding the physical abilities of their child.

Ms. Admer, mother of three-year-old boy:

Q: Can he climb onto the toilet himself?

A: You mean when it's closed?

Q: Yeah.

A: Ah, he probably can, he hasn't thought to do that. But as far as using it, he can climb up by himself.

or,

Ms. Brasswell, mother of three-year-old boy:

Q: What are dangers in the kitchen?

A: Uh, the stove. Basically.

Q: Can he turn the knob?

A: I don't know. I hope not.

Many parents kept the safety devices installed, even if they found that the devices did not work as expected or that their child could circumvent them. For these parents, the devices were useful because they slowed the child down. Some parents felt that the time gained could be beneficial in order to reinstate their supervision of the child.

Ms. Nixon, mother of two-year-old boy:

MOTHER: Well, all these cabinets are locked. So all the bottom cabinets are locked. This cabinet we thought we need as a different kind of lock, we pull it out and push it down so now we can keep...stuff in here. He can get in there. He just learned the other day. See these [cabinet locks], you have to pull out and push down. It's harder. So I tried a few different brands to see which one is better. And these are easier for you to do but I also found out they're easier for him to do it.

Q: So you feel that, that one is no longer...

A: No longer, no. It's, you know...as far as he just goes in there and takes a paper cup out if he wants it and helps himself, so it is not deterring him in any way. But I figure I'll leave them on 'cause it might slow him down when he gets to that point.

Effect of parental ideologies on safety device use

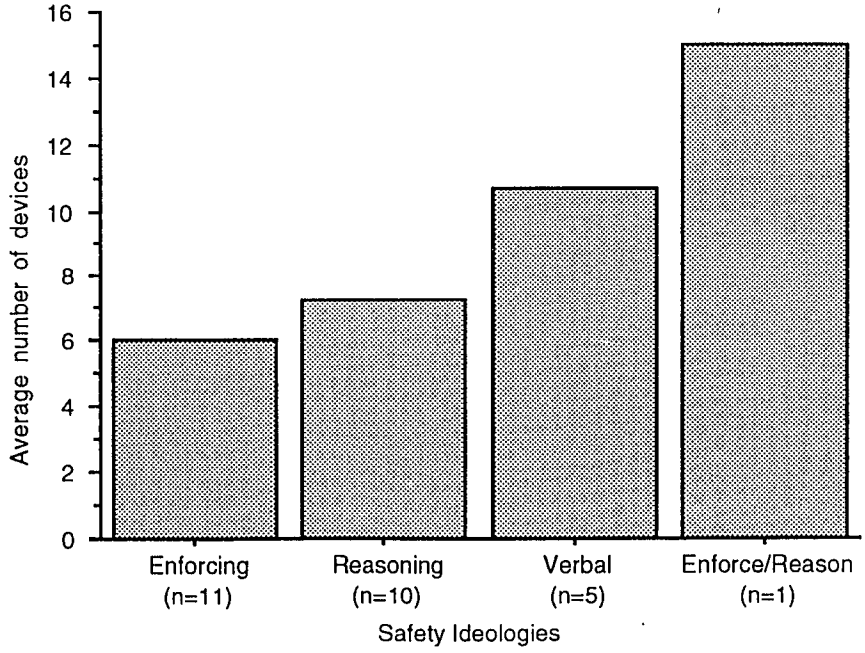
Parental beliefs regarding the individuality of children is a related to the number of different types of safety devices used in the home [F (1, 25) = 3.046, $p < .095$]. Parents who believe that all children are basically alike were using larger number of devices (Mean

= 10.3, n = 5) compared to parents who believe that all children are different (Mean = 7.1, n = 22).

Parents with different attitudes towards a developmental delay by their child were different in their use of safety devices [F (1, 25) = 7.412, p < .015]. Parents who would rush to a specialist in the case of a developmental delay had the tendency to use a higher number of safety devices (Mean = 9.7, n = 12) compared to parents who prefer to wait because they believe that all children develop at their own pace (Mean = 6.1, n = 15)

Differences emerged between parents with different safety ideologies in terms of their safety device use. *Verbal* and *Enforcing-reasoning* parents were using significantly higher numbers of safety devices than *Enforcing* or *Reasoning* parents [F (3, 23) = 3.932, p < .025] Figure 11 shows the differences in safety devices use across four types of safety ideologies.

Figure 11. Safety device use by parents with different safety ideologies



Physical precautions

Parental use of physical precautions

Physical precautions are modifications made to the physical environment, to make it safer for the child. They usually take one of two different forms. One is a home-made device, or a physical modification to the environment that serves the same purpose as a store bought device. Tying cabinet doors with a rope is an example to this type of physical modification. The second form is, a parental rule related to the physical environment. Keeping the bathroom door closed at all times is an example for this type of physical precaution. Physical precautions can range from simple precautions like locking the cabinets, to large scale modifications like re-arranging or removing furniture. On the extreme side, one mother forced her husband to build a three-feet high wall in front of the railing next to the stairs going down to the basement.

Ms. Morrison, mother of one-year-old girl:

MOTHER: Now, this whole block has this railing like that, and I am the only one that put the wall up.

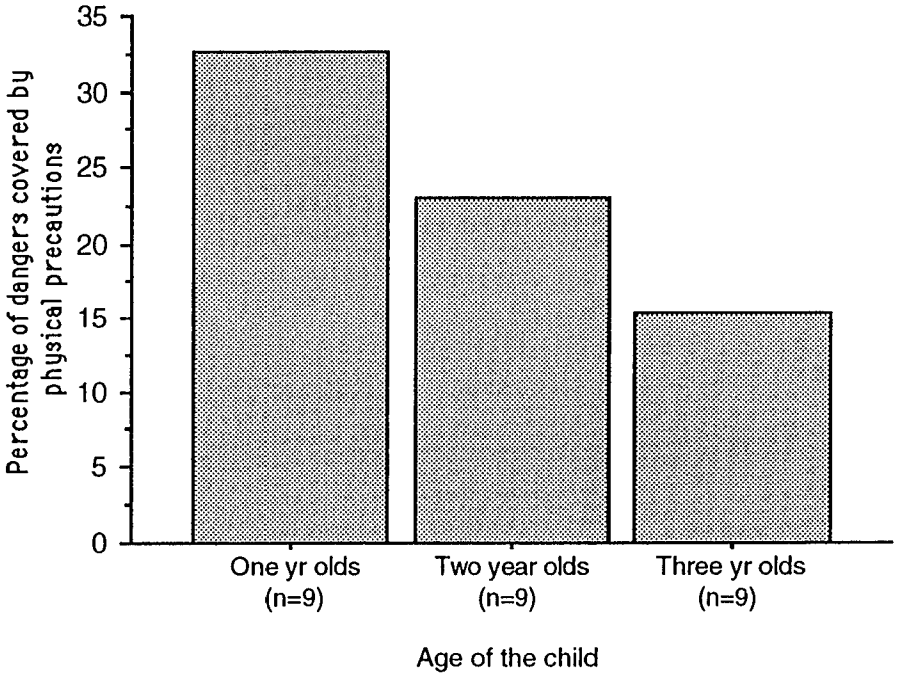
INTERVIEWER: Right, and all the others have children?

MOTHER: Well, if they are old now, they had children. That lady over there, she has five children and she baby-sits now for about five other ones in the home. She thought I was nuts when I wanted to put the wall up. But you watch your child and you see what she can do by just observing her.

The most frequently used mode of physical precaution is moving dangerous and poisonous items from low level storage spaces to higher locations. Tying or locking cabinets and removing the knobs for the stove are two other frequently used strategies.

Unlike what was true regarding safety devices, SES is not a predictor of the total number of physical precautions in the home; however, the age of the child is. The number of physical precautions in the home fall significantly as the child gets older [F (2, 24) = 3.508, $p < .05$]. Figure 12 illustrates the drop in the use of physical precautions from age one to three.

Figure 12. Dangers covered by physical precautions, as a percentage of the total number of dangers mentioned by the parent, by the age of the target child.



The years of formal schooling of the mother was also related to the number of physical precautions used in the home [F (1, 25) = 4.654, $p < .05$]. Less educated mothers seemed to use a higher number of physical precautions compared to well educated parents.

Most of the physical precautions fall into one of the two categories. The first type is a one-time physical modification of the environment, such as blocking the electrical outlets with furniture, or moving poisonous items to a higher shelf. Once accomplished, this type of precaution does not need repeated action by parents. The parents must, however, monitor the child's behavior to see if the precaution is still effective.

Ms. Joan, mother of two-year-old boy:

Q: Are there any reasons for you to arrange this room as it is in terms of specific changes or arrangements related to the child?

A: Oh yeah, we don't have any tables, you know, coffee tables, things like that. We have everything up that used to be down, as far as the little knick-knacks and things, I put all that away. The furniture is,... mostly not any sharp edges.

A second type of precaution requires repeated action by parents, these include precautions such as keeping certain doors closed, or keeping some appliances unplugged. Since they require repeated parental intervention, this type of precautions are usually associated with a parent rule. Some parents were aware of the distinction between the two types, and agreed that former is more effective and foolproof than the latter.

Ms. Bassinger, mother of two-year-old boy:

Q: What are the safety related rules for this phase for parents or caretakers in here with him?

A: Umm...I would say, the number one thing is keeping the poisonous things locked up. Yeah, I know people that haven't done that, you know, I think, you know, taking a big chance. Actually, in the "Baby's life class" they said that what I do isn't enough. They should be in the upper cabinet , not just locked up in the bottom. But you know.

Sometimes a change in the physical environment can be negative for those using for a safety strategy that relies on repetitive parent-based physical precautions. One mother who had just moved from a downstairs apartment with no doors to an upstairs apartment with a lot of doors explained her problem as follows:

Ms. Summer, mother of one-year-old girl:

> This room [kitchen] will be restricted. That's the trouble because I forget to close the door. Because we never had any doors downstairs. You know what I mean, it is a new world for us.

Sometimes, physical precautions were creative solutions that parents devised. In one single-mother family, the parent used an old child size mattress to block the child from certain areas or to block access to kitchen cabinets. She carried the mattress around and leaned it against doors or cabinets whenever she felt it necessary.

Ms. Tillman, mother of one-year-old girl:

> MOTHER: ...we are going to use the mattress from the crib to block the way so it gives us more time to hear them coming.
>
> Q: [pointing the mattress leaning against the kitchen cabinets] So this actually blocks more than one...
>
> A: Yeah, we move it all around.

It should be noted that some physical precautions like removing or rearranging the furniture interfere with the aesthetics and functionality of the space. In cases like these, parents evaluate the potential risk to the child against the inconveniences and may decide not to do anything.

Ms. Hallman, mother of three-year-old boy:

> When he was a little boy and growing up this table [a big heavy glass coffee table] was a big problem. What do we do with the table? Get rid of it? Fortunately it doesn't have pointy edges because it really

would have been a problem. But as he started to walk, he would hold on to it and he would sometimes fall and nothing serious ever happened but he hit his chin. I suppose if we have been crazy about childproofing the apartment we would have gotten rid of the table. But there are limits. You just have to be vigilant and accept some...some of the things that are gonna happen are just gonna happen.

On the other hand, Ms. Kunik, a mother of one-year-old boy had a completely different perspective:

:

Q: Did you change this room to prevent accidents?

A: Definitely [laughs], yeah, completely. The house was completely different before I had him, because...I...I can't even begin to...it was completely different. There was all kinds of glass things in...in...you know...in-reach and...completely different.

Q: Did you have to rearrange the furniture?

A: Definitely.

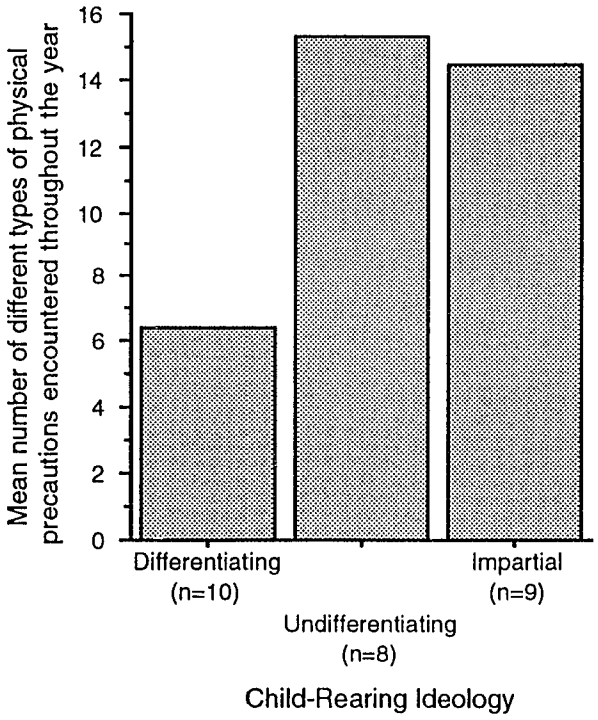
Q: What did you do?

A: Anything that, you know, he could get hurt...you know, either break or hurt himself with. I believe in the theory, you know, there's different theories, you can either put everything away or leave everything out and constantly be saying 'no, no', or you can leave some things out that aren't really breakable, and then, you know, and then deal with it. And I believe in that theory. That you can leave some things out that they can't hurt themselves with and try to teach it from that, but I don't believe in leaving the things, you know, glass ashtrays and stuff like that around, or anything glass that they can hurt themselves, or they'll break.

The role of parental ideologies on the use of physical precautions

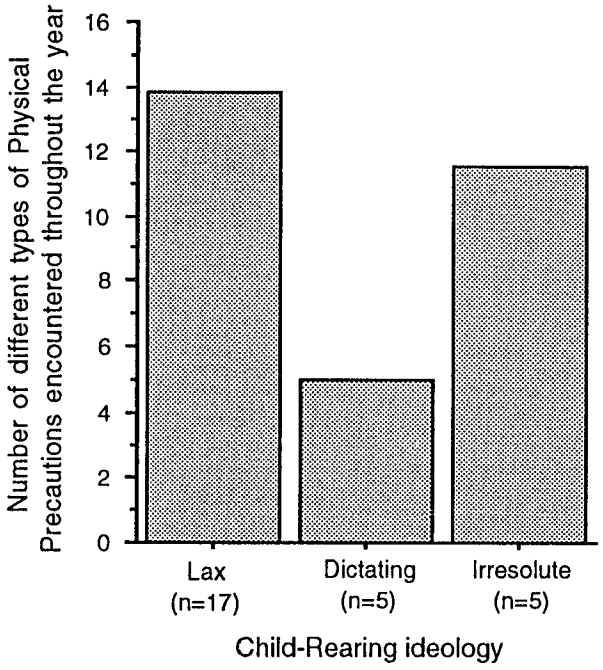
Parents categorized as *Differentiating* according to their child-rearing ideologies were on the average using fewer physical precautions compared to parents who are categorized as *Undifferentiating* or *Impartial* [$F(2, 24) = 2.521$ $p < .1$]. Figure 13 shows the total number of different types of physical precautions mentioned by the parent throughout the year for *Differentiating*, *Undifferentiating* and *Impartial* parents.

Figure 13. The average number of different types of physical precautions mentioned by the parent throughout the year for *Differentiating*, *Undifferentiating* and *Impartial* parents.



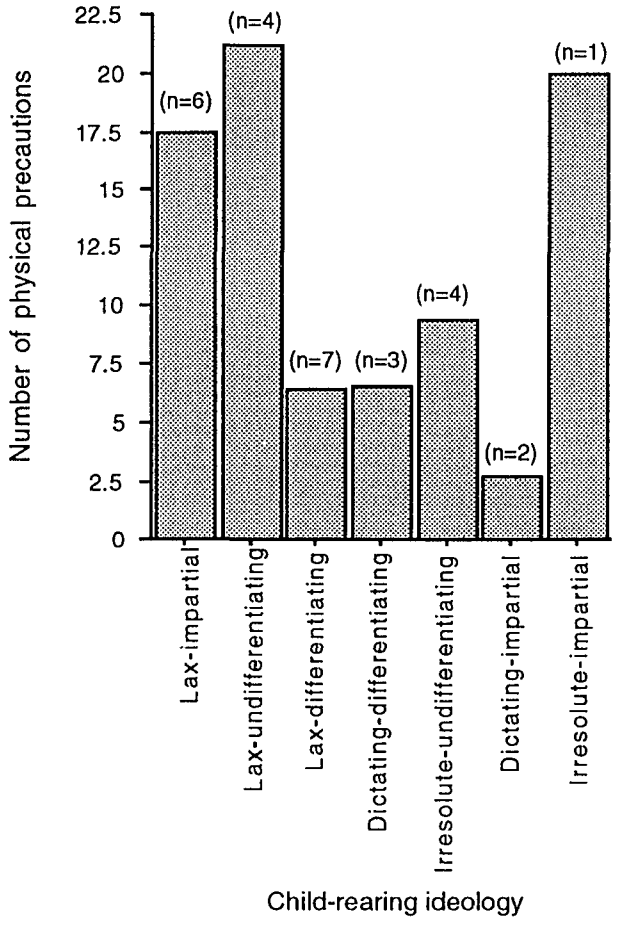
Even though the results were not statistically significant, differences exist between *Lax*, *Dictating* and *Irresolute* parents in the number of physical precautions they used in the home. *Dictating* parents was the group who used the least amount of precautions, when compared to the other two groups. Figure 14 shows this relationship.

Figure 14. Differences between *Lax, Dictating* and *Irresolute* parents in terms of the numbers of safety precautions they use.



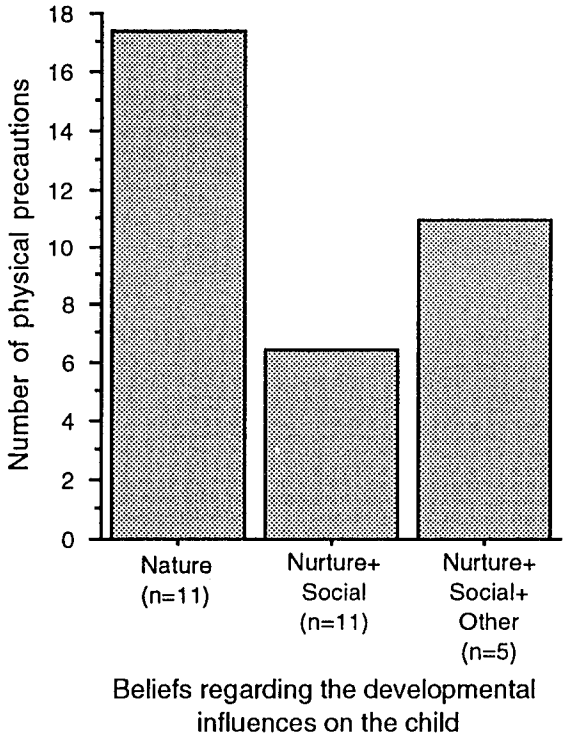
Findings indicate wide differences in the use of physical precautions between parents when families are analyzed using the combined categories of child-rearing ideologies. *Lax-impartial, Lax-undifferentiating* and *Irresolute-impartial* parents were using a large number of physical precautions. On the other hand, *Lax-differentiating, Dictating-differentiating* and *Dictating-impartial* parents were using a much smaller number of physical precautions as a part of their safety strategies [F (6, 20) = 2.4 $p < .06$]. Figure 15 shows the average number of physical precautions encountered during the year for parents in each of the six child-rearing ideology categories.

Figure 15. Average number of physical precautions encountered during the year for parents in each of the six child-rearing ideology categories.



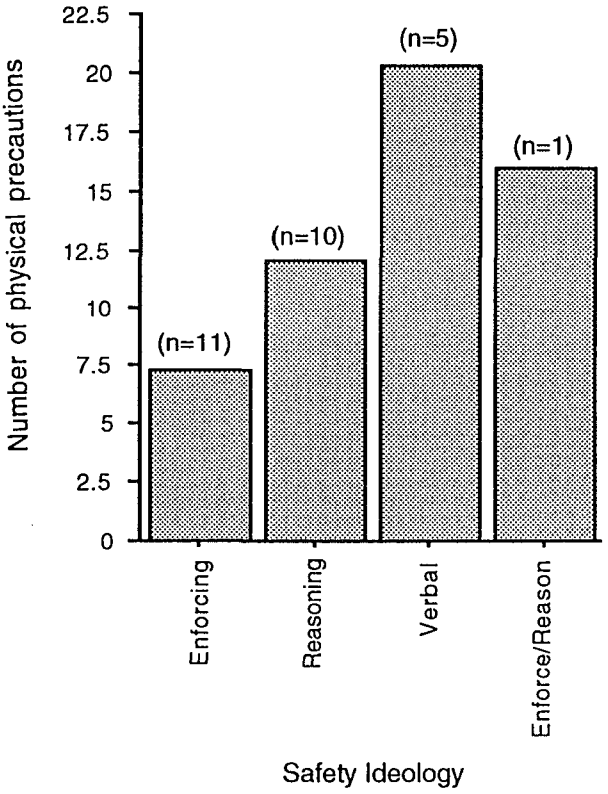
Another difference between parents in terms of the use of safety precautions was related to their beliefs regarding the development of children. Parents who believe that a child's character is basically defined at birth were more likely to use a larger number of safety precautions compared to parents who believe that a child's character is mostly shaped by various social and environmental forces [F (2, 24) = 4.136 p < .03]. Figure 16 shows this difference.

Figure 16. Average number of physical precautions used by parents throughout one year by the parental beliefs regarding the developmental influences on the child.



Safety ideology of the parents seemed to play an important role in the number of physical precautions used by parents. There were differences in the use of physical precautions between the parents in each of the four safety ideology categories. For example *Enforcing* parents were found to be using a much fewer safety precautions compared to *Reasoning* parents (Means = 7.2 and 12.0 respectively). Figure 17 shows the average number of physical precautions used by parents for each category of safety ideology.

Figure 17. Average number of physical precautions used by parents for each category of safety ideology

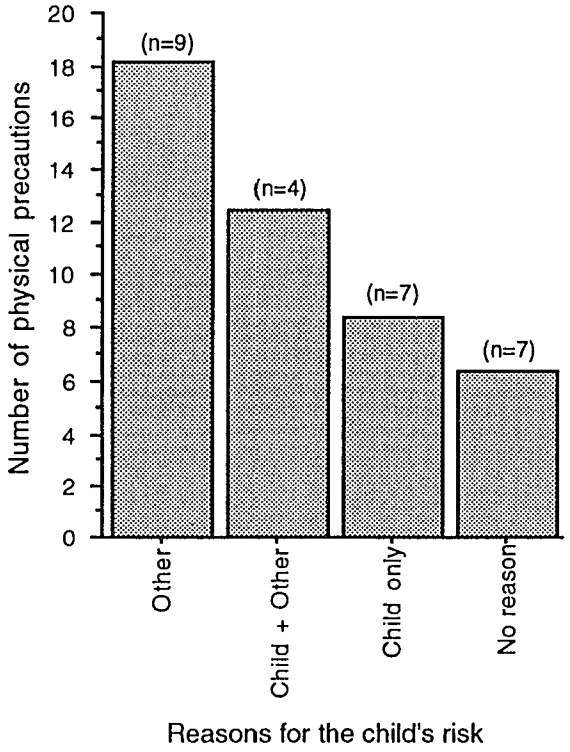


Similarly parents who have different ideas regarding the reasons for home injuries differed in their use of physical precautions. Parents who believe that children themselves are mostly responsible from the occurrence of home injuries were more likely to use a smaller number of physical precautions compared to parents who think the injuries are a result of multiple factors in addition to the character of the child [F (1, 25) = 3.068 p < .095] (Means = 6.8 and 13.9 respectively).

This finding is also reinforced by the answers given by parents to the question "Why do you think in terms of accidents, your child is more or less at risk than most other children of her/his age?" Parents who included factors other than the child's character in their answers to this question were also the parents who were using larger number of safety

precautions in the home [F (3, 23) = 2.564 p < .08]. Figure 18 shows the relationship between average physical precaution use and parents' reasons for evaluating their child's injury risk.

Figure 18. Relationship between average physical precaution use and parents' reasons for evaluating their child's injury risk.



Parental rule systems for the children

Parental use of children's rules

Parents' rule systems for children are among the most complex and confusing components of safety strategies. For some parents, safety rules for children were the

central strategy. These parents saw rules for children as the first step in training them and therefore they believed that rules had to be established as early as possible.

Ms. Abbott, mother of two-year-old boy:

> Teach them what is right and what is wrong when they are very very small. Because it's like if you wait until it's too late, it's like watching a tree grow, and if you let it grow one way without training it to grow straight up, it's gonna go stroll that way, right? And that's the way, the same way in raising a child. If you teach them to grow up training them which way is the right way, then he'll grow up basically in that way.

or,

Ms. Christopher, mother of two-year-old girl:

Q: You said one of the safety rules for this room was not to pull off the stuff on the dresser; do you still have to tell her not to do it?

A: No, no. she knows that. She knows.

Q: How old was she, do you think, when you started telling her not to do that?

A: Nine months.

Q: Really?

A: Yes, because she started walking, pulling things down. The earlier you start, the better it is.

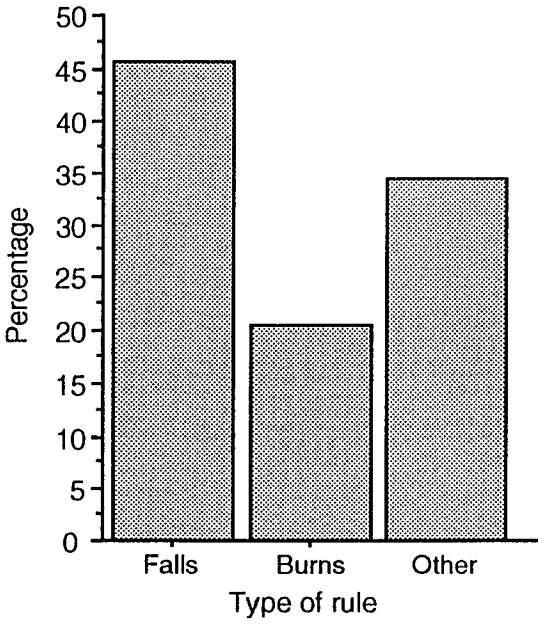
Some other parents thought differently. For them the freedom of the child was more critical than following certain rules. These parents tried to keep the number of rules to a bare minimum. Inevitably, these "absolutely necessary" rules were mostly related to safety.

Ms. Fish, mother of two-year-old boy:

> The first thing that's very important to me is really letting them. I think letting them be who they are. And, trying not to put a lot of constraints on them ...For us that means, we try to let them know what's O.K., what's not O.K. but without trying to get into a battle with them. But I think that in the first years, it's major. I mean that you can battle with your children at this ages, both of them, over absolutely everything. So for me, I'm with them most of the time, it really means [pause] thinking about whether to say yes or no and not saying no unless absolutely necessary.

Rules and type of injury: Overall the most frequent type of rules were designed to prevent falls and burns. Rules related to these two types of injuries totaled 65% of all the rules encountered within the home. Figure 19 shows this relationship.

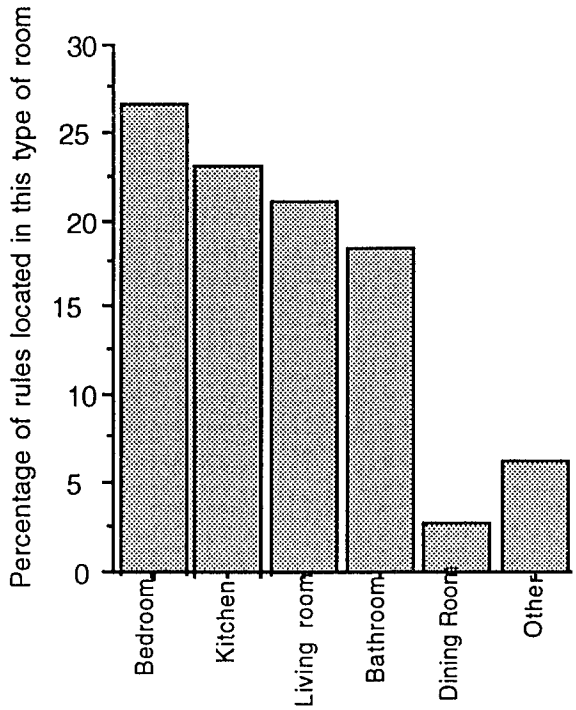
Figure 19. Child rules about falls and burns as a percentage of all other rules.



It should be noted that the percentages given in Figure 19 are based on frequencies of the rules mentioned by the parents and they do not necessarily imply that a high number means vigorous reinforcement by the parents.

What was the room-by-room distribution of the child rules? Even though bedrooms have the highest percentage of child rules, they are more or less equally distributed among the major rooms of the home. Figure 20 illustrates the distribution of child rules among different rooms of the home. The low number in dining rooms is because of the fact that not all families in the study have dining rooms.

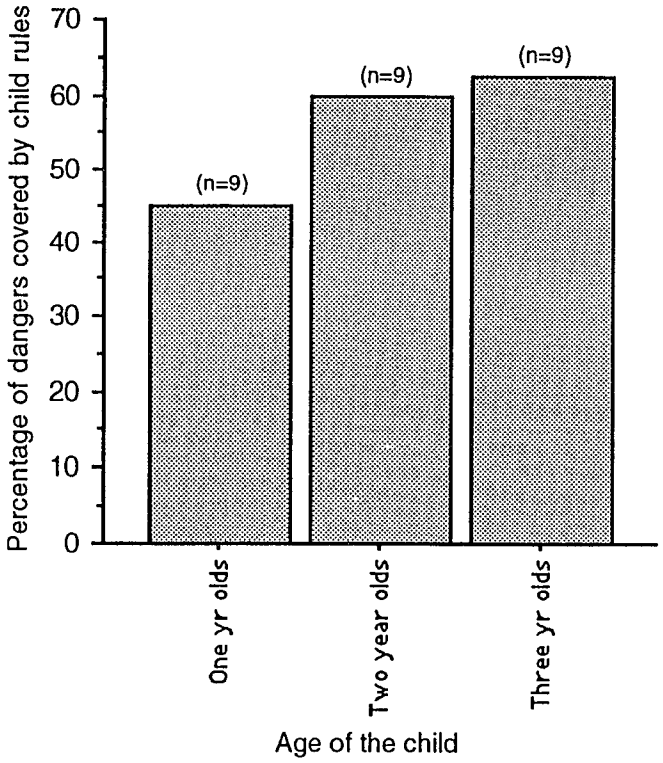
Figure 20. Distribution of child rules among different rooms of the home[1]



[1]The category "Dining Room" is based on an n of 8 as many families do not have dining rooms.

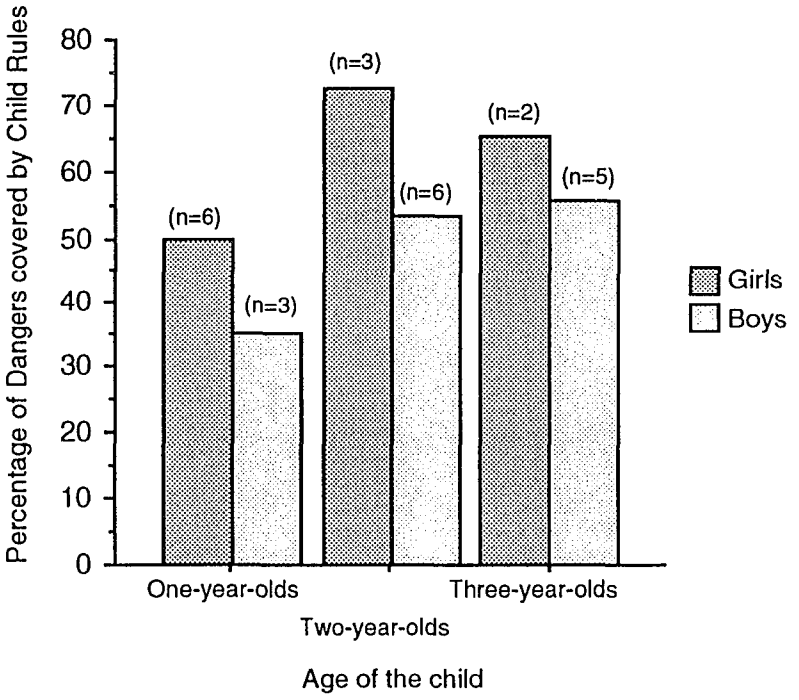
Who were the parents who used a lot of safety rules for children? As expected, there were differences in the use of rules across the three age categories [F (2, 24) = 3.215, p < .058]. Parents relied more on rules as the children got older. Figure 21 shows the percent of dangers covered by rules for each age group.

Figure 21. Percent of dangers mentioned by the parents that are covered by child rules by age.



Other than age, none of the demographic variables were a significant predictor of child rules as a strategy. However there were some differences between the number of rules of parents of boys versus girls. Parents seem to have more rules for girls compared to boys at all age categories. For one-year-olds, the difference is almost significant [F (1, 7) = 3.666, $p < .098$]. In terms of child safety rules, the gap between boys and girls is smaller at the age of three. Figure 22 shows the percentage of dangers covered by rules for boys and girls across three age categories.

Figure 22. Percent of parental dangers covered by child rules by gender and age



The genesis of rules: Safety rules are usually generated when the parents witness a dangerous activity by the child. This event, which can be labeled "*The critical incident*" usually triggers a set of responses, and one of these responses is the establishment of a new child rule.

Ms. Falcon, mother of one-year-old girl:

> Like, here is something that she could get to. Though it's never happened, so I've never, like had to make it a rule but there is, like, a plug in here. It's always,...something is always plugged in to it. The wires are available. None of my kids,...I guess, cause, it is in this tiny little crevice. But they can get to it. And if I would see them doing it, it would definitely be a rule not to touch those wires but, other than that that's the really only thing they can get to.

The critical incident was not the only reason for new rules to be generated. Though it was infrequent, some parents anticipated the upcoming behavior of their growing child, and established or prepared to establish new safety related child rules.

Ms. Falcon, mother of one-year-old girl:

Q: Do you think there will be any new rules for this space in two months?

A: Climbing out of the little sassy seat that gets attached to table when she is eating, I mean, that's a rule, it will be a rule now, but I haven't seen her doing it yet. But there is a good chance that in two months she will be able, she'd do that.

Q: Anything else?

M: I've never seen her open these drawers. I suppose if she could open them it would be a real problem, but she can't open them.

Q: Do you think that's gonna happen in the next two months?

A: Possibly. Yeah in...probably in two months she'll be able to open the drawer and then I'll...you know

Q: So then that would be a rule for her?

A: Yeah. Yeah, I can see her doing that in two months.

Parents were usually reluctant to set up new child rules before the child showed a specific interest in a dangerous place or an activity. A probable reason for this was that they did not want to attract the child's attention to a potential danger.

Ms. Frattini, mother of one-year-old boy:

Q: Is there anything that he is supposed to know not to do in here [bathroom]?

A: Well, he doesn't pull the towels, he doesn't do anything.

Q: So you don't have any rules for him?

A: He doesn't do anything.

Parents who established safety rules for children at early ages, knew that their child was too young to understand and follow these rules but they wanted to lay out a foundation as early as possible. It also gave them an excuse to say "no" to certain things.

Ms. Kunik, mother of one-year-old boy:

> Yeah, I'll say to him 'no, no, no' but I, like I said, I don't really think at this age...he knows 'no' he knows the word 'no' and he'll say...and he actually knows when he did something wrong, but that's not gonna stop him from doing it, I don't think, yet. I think he's too young for that concept.

or,

Ms. Fish, mother of two-year-old boy:

Q: Does he know about all these rules?

A: No...He knows about the tables...he knows about the stereo, he knows about the ones that come up all the time but like under the table, you know, certain things, he doesn't really... But they are rules. I mean we would both enforce them should they come up.

or,

Ms. Bassinger, mother of two-year-old boy:

Q: Do you think he knows these rules? You know, that he is not supposed to pull the cord, he is not supposed to stand on his chair?

A: I would say he knows it. Ummm but it's not gonna stop him from doing it.

There are many other reasons why parents allow their children to break the rules. Among others, these reasons include the personality of the child, the mood of the mother and the type of the activity that she is engaged in. In other words, enforcement of the safety rules is generally in conflict with the daily routine of everyday life.

Ms. Joan, mother of two-year-old boy:

Q: Does he know the rules?

A: Yeah, he does.

Q: Does he always follow them?

A: No, of course not.

Q: Why do you think he doesn't?

A: He doesn't? Aaa, well, the VCR, he loves buttons. He can't resist it. They're tempting. The other things [pause] like throwing the chair down, is when he's really angry. So he does that for spiting I think. Anyway, he really must have...And the outlet is kind of like a tease, you know, he'll go up there, he'll turn around, look at me, go for it and he won't touch it but he knows that I'm gonna say something.

For some parents, child rules are only meant to work in conjunction with parental supervision. Even when parents thought the child knew about the rules, they were aware that the child might be too young to follow them while alone. Therefore, these parents reinforced the rules only when they themselves were around.

Ms. Admer, mother of three-year-old boy:

Q: In terms of any rules anything that he's not supposed to touch in this space [kitchen]?

A : Dishwasher.

Q: He's not supposed to open it you mean?

A: Ah, just open it or press the buttons.

Q: Anything else?

A: That's basically it.

Q: So then you don't have a rule about the stove or the drawers yet for him?

A: Well, [pauses] I mean, I go over and I say 'don't touch' and...[shrugs shoulders]

Q: How about opening the refrigerator?

A: He's not supposed to. He does though. He does.

Q: So do you think he knows these things?

A: Oh, he knows.

Q: But do violations occur?

A: Uh huh [shakes head 'yes' and laughs]

Q: When do they typically occur?

A: Ah [pauses] if either my husband or I haven't come down to the kitchen yet, and he's decided, you know, it's breakfast time [smiles] or [pause] that's...you know...or...he's decides it's whatever meal time he's up to, he'll just [do it].

How can the parents be so sure about their children's knowledge and understanding of the rules? What information are these parents relying upon when they say that their children "know" the rules? Usually there is a very complex non-verbal communication that goes on between the parent and the child. Certain looks, gestures and behaviors are all elements of this communication. A parent who is in a harmonious relationship with her child is well aware of this language and usually relies on these cues to decide upon her child's knowledge regarding the rules.

Ms. Morrison, mother of one-year-old girl:

MOTHER: I try to tell her not to go in the garbage can. But now that I just got a new garbage can, she doesn't open it.

Q: Do you think she can?

A: Oh, yes, I think she can. She taps it, but she means 'I know I am not supposed to open it, so I'm gonna tap it, I'm gonna put my toys on it, but I know you don't want me to open it'. So I think she got the message.

When do parents decide that the rules are internalized? As children grow, parents watch and gradually rely more and more on the safety rules. Eventually when the parents become convinced that the children have internalized the rules completely they will allow them into dangerous areas without supervision or physical devices and precautions.

Ms. Friedberg, mother of three-year-old boy/girl twins:

Q: Do you have any safety devices installed in this room, like cabinet locks...

A: No, everything is open. Sockets are open. No...sockets are in use. They know they have to leave the plugs in, they know not to touch it. They really are very...

Q: Since when do you think, have they learned?

A: At first we had the socket covers, and now everything's in use. But I've never had the problem. I say to them 'no' and, thank God, they listen...it's like all these little figures up here [points to a shelf above couch] one wants to climb on the chair and touch it. After that one time that's it. They know what they can do and can't.

It is not, however, always so easy for a parent to decide if the rules have been truly internalized by the child and some parents are aware that a misjudgment on their part can have serious consequences.

Ms. Bassinger, mother of two-year-old boy:

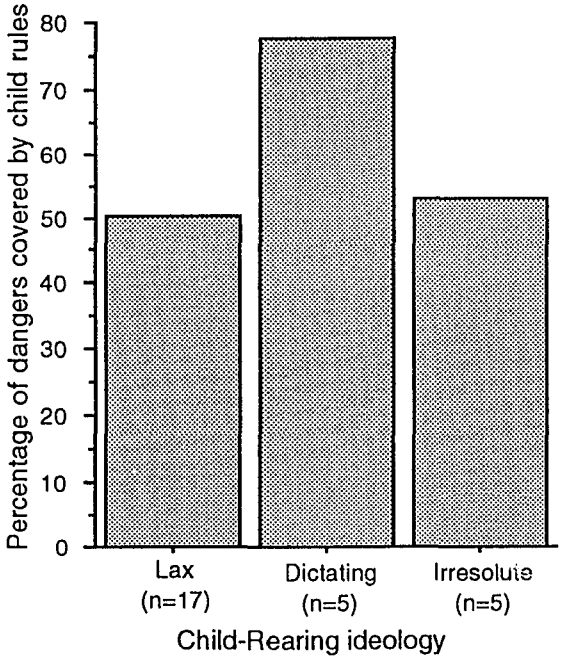
Q: Do you think that there's gonna be a change in the next couple of months in terms of the safety rules?

A: Ummm I'm not sure. But I heard that sometimes three year olds actually could be worse because you think they know what they should be doing and then they're all curious.

Relationship of parental child rearing ideologies to the number of child safety rules used by the parent

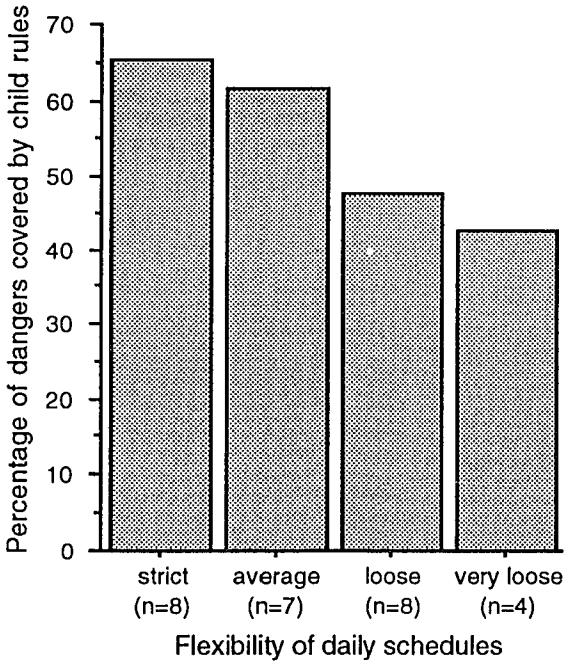
The findings indicate a strong relationship between the "leniency" of parents and their use of safety related child rules. An analysis of the number of safety related child rules during the first safety visit indicate that *Dictating* parents are more likely to use a large number of child rules compared to *Lax* or *Irresolute* parents [$F(2, 24) = 7.885$, $p < .0025$]. Figure 23 compares the use of child related safety rules for parents with three different safety ideologies.

Figure 23. Percentage of dangers covered by child safety rules by *Lax*, *Dictating*, and *Irresolute* parents during the first safety visit.



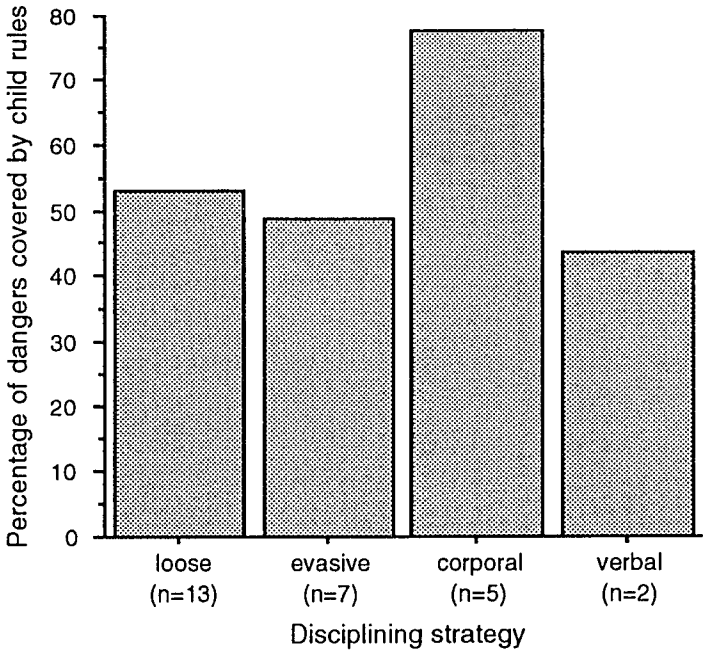
Similarly, parents with *Strict* and *Average* daily schedules were more likely to use a larger number of safety related child rules compared to parents whose daily schedules are categorized as *Loose* or *Very loose* [F (3, 23) = 3.089, $p < .05$]. Figure 24 shows the relationship between the strictness of parental daily schedules and the number of safety related child rules used by parents.

Figure 24. Strictness of parental daily schedules and the number of safety related child rules used by parents



Disciplining is another variable closely related to the number of child related safety rules. Findings indicate that parents who use *Corporal* disciplining strategies are much likely to have higher number of child rules [F (3, 23) = 5.513, $p < .006$]. Figure 25 compares the number of child rules used by parents who adopt *corporal* disciplining strategies with parents who use other disciplining strategies.

Figure 25. Number of safety-related child rules used during the first safety visit by the type of disciplining used by the parent.



Supervision

Parental use of supervision

Supervision is found to be the most common strategy used among the parents. Unlike rules, physical precautions and safety devices, which may or may not be a part of a safety management strategy, supervision is used by all parents. However, the effectiveness of supervision changes from family to family. Parents who participated in this study used three forms of supervision. These were "direct", "delegated" and "auditory" supervision.

Direct supervision: Direct supervision is carried by the parent herself and is always visual. The child under direct supervision was usually required to be in the same room as the parent. Sometimes the parent would allow the child in the next room, but only if she had direct visual access to that room.

Ms. Joan, mother of two-year-old boy:

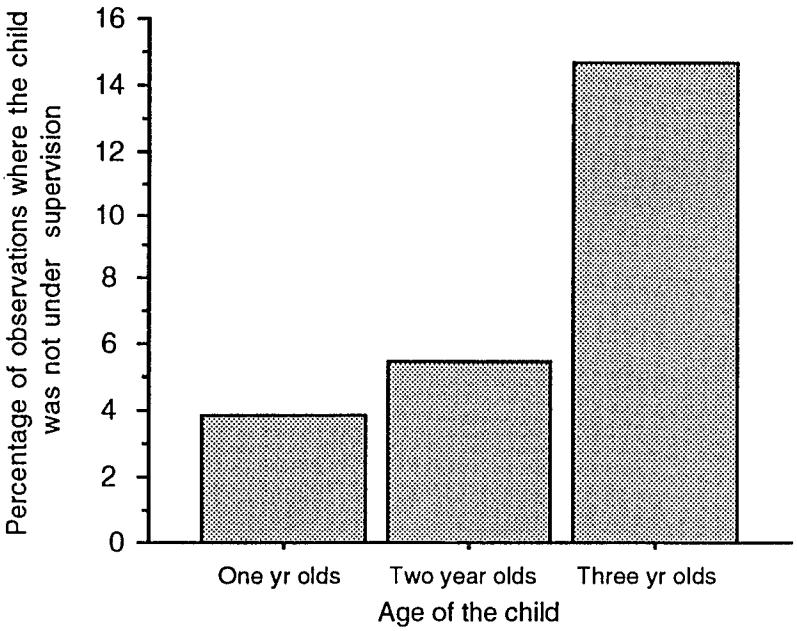
Q: In terms when you are in this room [dining room] where else in the house can he go?

A: Aaa, Well he can go in the kitchen and the living room where I can see him.

Some parents considered direct supervision the most effective form of supervision in terms of ensuring the safety of the child.

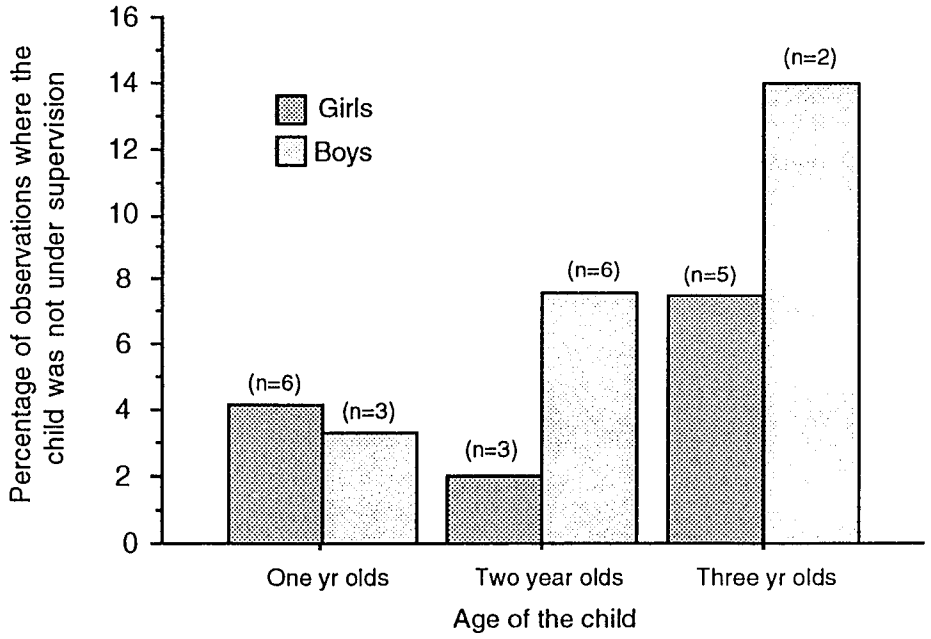
During the videotaping of the interviews, the cameraperson tried to keep the parent and the child on the screen at all times. For that reason, during the coding of the videotapes, the coders were able to identify the times when the child left the room without any visual contact with the parent. This code indicated that, age was the major predictor for whether a child would be left alone and unsupervised in other rooms of the house [F (2, 22) = 6.369, $p < .007$]. The results indicate that during the interviews, three-year-olds were allowed to be alone unsupervised in a different part of the home much more than one or two-year-olds. Figure 26 shows the results.

Figure 26. Percentage of the observations where the child was let alone and unsupervised in another part of the home during the seven interviews.



In terms of gender, at ages two and three, parents allowed boys to go other rooms without adult supervision, more often than the girls. Figure 27 shows this relationship.

Figure 27. Boys and girls access to other rooms of the house without adult supervision during the interview, across three age categories.

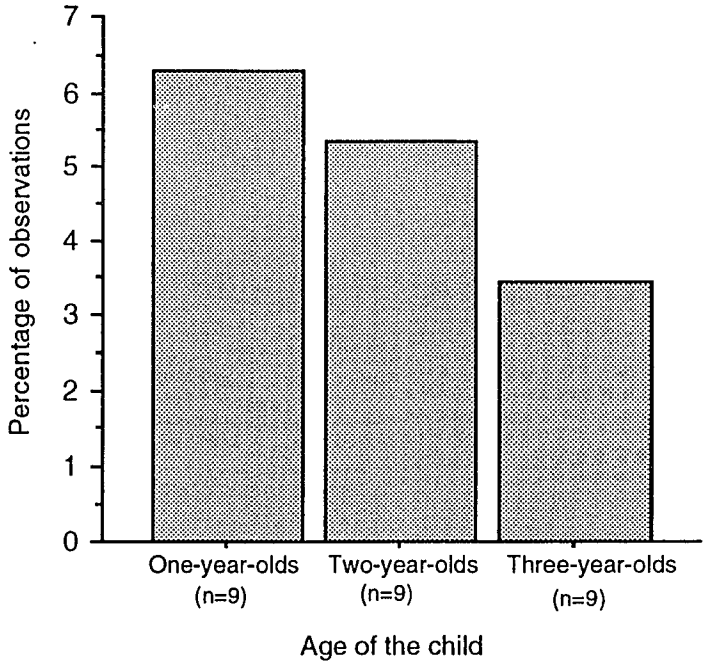


The characteristics of unsupervised children: The results indicate that target children from families with a large number of children were more likely to be allowed unsupervised in other rooms [F (1, 23) = 4.662, $p < .05$]. This implies that even though adult supervision was missing, parents were relying on the older siblings to supervise or at least to let them know when the potential for trouble arises. In this sense they were "delegating" their supervisory powers to the older children who were anywhere between four to seven years old.

For some parents, the physical location of the child relative to them, even within the same room, was an important factor. Since falls are an important injury category for young children, close proximity of the parent to the child is critical in terms of a quick intervention. As expected, distance from the parent increases dramatically as the child grows up. An analysis of variance on the observational data coded from the videotapes

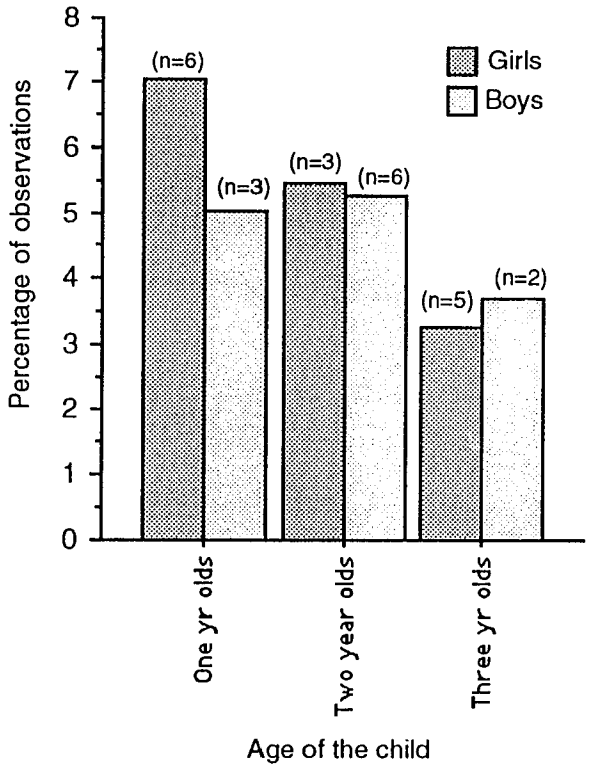
reveals extremely high statistical differences in degree of proximity to parent according to age [F (2, 22) = 12.197, p < .0004]. Figure 28 shows the means for the three age groups.

Figure 28. Mean percentages for all the observations of the child when he/she was either in contact or within reaching distance of the primary caretaker.



A different picture emerges, however, when the data is looked from the perspective of gender differences. When the data is split by gender, it reveals that already at the age of one, there is a clear difference between boys and girls, that is the parents tended to keep girls closer to themselves than boys. This tendency was less over older girls [F (2, 7) = 6.016, p < .035] whereas for boys there seemed to be no change. They were still allowed greater autonomy within the room and, on the average, a two-year-old girl was kept more in contact or within reach of the mother than one-year-old boys. Figure 29 illustrates this relationship.

Figure 29. Observed mean percentages for boys and girls who are in contact or within reach of the mother for three ages.



Effects of an older sibling - Delegated supervision: In families where the target child had an older sibling, it was evident that the dynamics between the two children was crucial for the management of the safety. In some cases, parents relied on the older child as "informants". In other cases the older sibling was "officially" in charge of taking care of the younger one.

Ms. Kunik, mother of one-year-old boy:

> ...Yeah, but like what happened today, I told you about before. I had asked Jessica [older sibling] to watch him and a friend was here and my niece and I asked her [Jessica] to watch him because I was gonna mop the kitchen floor, and he walked away and she screamed out 'he's coming' but it was too late, and he slipped on a puddle of bleach and it could have potentially been a really serious situation. So I

didn't really yell at Jessica after but I think she knows better now. When I mean 'watch him' I don't mean sit on your ass on the couch and don't get up if he, you know...I, if I asked her to watch him, you know, obviously wanted to do something and that I couldn't watch him. And you know, she was wrong in not getting up and following him where he was going.

Auditory supervision: The third form of supervision used by parents was auditory supervision. Many parents relied heavily upon auditory supervision as a major strategy. In this form of supervision, the mother continuously monitors the sounds coming from the room where the child is. In order for this form of supervision to be exercised, there must be a continuous or frequent noise generated by the child. During auditory supervision, any form of quiet play is not acceptable by the parent and forces her to go to the room where the child is and check visually.

Ms. Wright, mother of two-year-old boy:

MOTHER: I still have to be able to hear him, and if I don't hear him, forget it. There is no way, no way. I got to hear him

Q: What do you listen for?

A: I listen for him, what he's doin'. What he is feeling, playing, touching with. If he is with a toy and he is banging on something else, you know.

Parents who relied on auditory supervision were very confident about their ability to decipher the sounds their children made.

Ms. Friedberg, mother of three-year-old girl/boy twins:

Q: How long would you leave them alone here

A: [interrupting] I don't know what you mean by leave them alone.

Q: For example, you're reading and they...

A: I hear everything that goes on.

Q: You don't hear any sounds...

A: Three seconds within no sound being made [laughs]. If I hear a noise I'm fine.

Q: So you're using noise a lot as a way to find out what they are really doing?

A: Oh, yeah.

Q: How can you tell...

A: I know every noise that goes on, I know if a drawer is being opened, I know if the TV is being played with. I know the refrigerator, the dryer [laughs] I know all the noises.

Q: So, for example, if you are in there reading something, you always listen to what's going on.

A: mm hmm.

Q: With kids in here...

A: Constantly.

Q: And if you don't hear any noise that's...

A: I'm right in [laughs].

Q: How come?

A: It usually means they're working together, doing something. It's usually not one doing it, it's usually the both of them.

Problems in achieving effective and continuous supervision: Supervision is one of the safety strategies that can be in substantial conflict with the other routines of daily life. In that sense the "continuity" of supervision becomes a significant issue. Parents indicated

that they usually "check" the children who were in other rooms, at regular intervals. Sometimes this periodic checking was coordinated with auditory supervision.

Ms. Andreas, mother of one-year-old girl:

MOTHER: She can be here [living room] as long as she wants but we have to periodically check on her.

Q: What kind of period?

A: Every ten minutes, but within that ten minutes we have to hear that she is doing things. Because if it is too quiet, she can be mischievous.

Q: So if it is too quiet does it mean that she is being bad?

A: Well, it is a sign; it can be a sign.

Or other times supervision can be reinforced with the use of a safety device as Ms. Falcon, mother of one-year-old girl describes:

That is my problem because many times when I got involved in a long phone conversation the gate to the kitchen is not closed, then I inevitably always have to leave my phone call half way [run to the kitchen] clean up [after the child] and close the gate.

One parent who frequently allowed her three-year-old child to play alone in the attic which was two floors up, said that the length of the disappearance of the child from her view triggered suspicion on her side, since the child usually "likes to be around mommy" therefore she would go and check on her.

Ms. Bosch, mother of three-year-old girl:

Q: During the day if you're downstairs and she disappears and comes up here, how long before you check on her?

A: About 15-20 minutes. She doesn't really stay away from me that long, so if was that long she was like...if it was like 20 minutes

and I hadn't heard from her, I would have come up to see what she was doing. 'Cause chances are then that she's probably lookin' at one of those magazines, you know, or something she's not supposed to touch. Here she'll touch things that she's not supposed to, for some reason.

Q: So this is where she breaks the rules?

A: Yeah, I guess, or it's so far away from where I am that she can get away with it. But here she'll touch things.

Total and continuous visual supervision for the child is virtually impossible and even though parents did not want to admit it, they knew that there were potentially hazardous situations generated by a breakdown in supervision. In the following example the different attitudes of the two parents in the same household, towards supervision are shown to be the reason for the breakdown of the safety system.

Ms. Brasswell, mother of three year old boy:

Q: What about bathing?

A: His...yeah, father gives 'him his bath, you know.

Q: Does he take a bath or a shower?

A: Bath.

Q: While taking a bath his father's always there?

A: Yes.

Q: Do you leave him alone?

A: Um, no...mm, we don't ...I don't ...sometimes my husband will go out and sit in the room and I tell 'im, you know, don't do that 'cause I don't know what Jeremiah might do. He could be hurt, 'cause he thinks he can swim. You know.

Q: Do you know if he swims?

A: Umm, I don't know.

Being at home and supervising the child all the time is not an easy task. In addition to conflicts with daily routines, it can also be psychologically draining on the parents and some parents admitted that they need periods to be alone and away from their child.

Ms. Bassinger, mother of two-year-old boy:

Q: Do you think it's good that he plays alone?

A: Yes [laughs]

Q: Why are you laughing?

A: Now, for a while he didn't and it drives you crazy when you always have to sit with him and...The day is much more pleasant when he can leave you alone for a while.

For the same reason some parents prefer to limit the checking of the child to quietly monitoring the sounds that they are making, thereby not distracting the child from her solitary play.

Ms. Bosch, mother of three-year-old girl:

Q: Is there any time you want to check on her?

A: Only in the attic.

Q: In the attic?

A: Yeah, only in the attic.

Q: After how many minutes?

A: Fifteen.

Q: How would you check?

A: I would go to the stairs and listen. And if it sounds like she's just talking and playing by herself I wouldn't go up, 'cause once they see they're just gonna follow you back down [laughs].

Sometimes parents needed to supervise their children not for safety reasons but for reasons related to inter-sibling dynamics.

Ms. Goodwin, mother of three-year-old girl:

She also has tough time sharing. No matter what Allison [older sibling] picks it's Dominique's [target child] favorite toy. So there is a lot of supervision around there. Aaa she has trouble playing with her. By herself...needs someone to play, even during the feeding time with Allison, Dominique has like a little problem, being alone in the bedroom.

Importance of the physical layout of the home: Most parents were aware that the size of the apartment and the arrangement and visual accessibility of the rooms was an important factor in their supervision of the child.

Ms. Frattini, mother of one-year-old boy:

...I always seem to catch him. Because I spend a lot of time right here [in the living room where the child spends a lot of time]. I am very close to him. I think that's, you know, and the apartment is comfortable, you know, it is small but it is cozy. So we see a lot of each other.

or,

Ms. Kaplan, mother of three-year-old boy:

You know, it's so small anyway. So I stay in this area, I wash the dishes an' I keep peekin' around the corner. Or I sit right there an' I do something. Or do some laundry. But I don't go far.

Some parents who did not want to limit their child's freedom allowed the child to go in any room they wanted to go and then quietly "spied" on them.

Ms. Andreas, mother of one-year-old girl:

> Christine is allowed to go into any room. But I only give her a minute to spend before I quietly go behind her and check on her to make sure that she is not doing anything that she is not supposed to do.

or,

Ms. Bassinger, mother of two-year-old boy:

Q: Could he be in the kitchen if you weren't there?

A: Yeah. I don't forbid him to go in there but then I would go and see what he is up to.

Q: And what about the bathroom, would it be O.K.?

A: Ummm...I try to discourage it, but you know...

Checking, so as not to disturb the child is usually done by the parents, not only to ensure that the child is not engaged in a dangerous activity at that specific time, but also to learn about the child's interest areas and physical capabilities.

Three of the middle class parents reluctantly admitted that they were using electronic child monitors, especially at night, or during the child's nap times. These devices, available at child and toy stores, work like one way walkie-talkies and allow the parent to hear when the child starts crying. The reluctance of parents to admit their use of these devices might have stemmed from the fact that these devices apparently allowed some parents to leave the house or visit a neighbor, while the child was sleeping. Interestingly none of the owners of these devices were using them as a substitute to actual auditory supervision during the child's solitary play, probably because of the poor sound quality of these devices.

Ms. Nixon, mother of two-year-old boy:

Q: What about this, do you use this?

A: The monitor. I do use that mostly for baby. Not for him [target boy], I did use for him when he was smaller, so when I was downstairs I could hear if he was really sleeping or when he woke up, a lot of times.

Q: It seems you have another one downstairs?

A: Yes I have a walky-talky to take with you anywhere you go. So if I'm outside I can hear if he gets up. That way I know that he is, you know, that he'll start wandering through the house, so I come in to check on them.

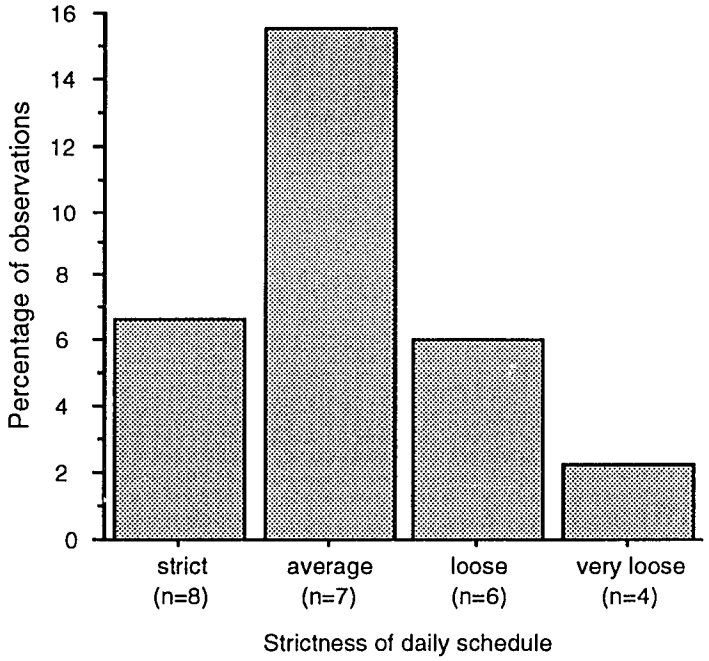
Q: Does it work well?

A: Yeah, pretty well.

Relationship of parental ideologies and use of supervision as a safety strategy in the home

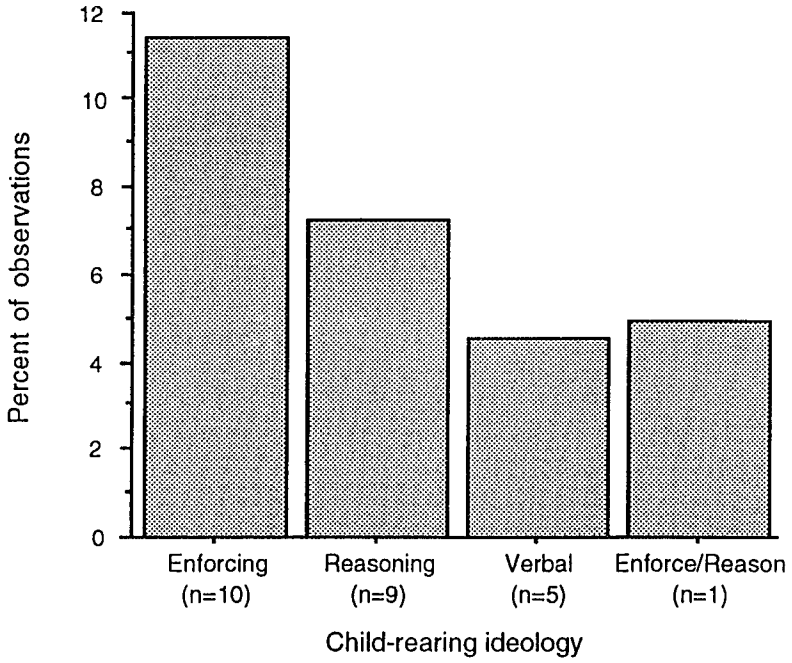
In order to investigate any possible relationship between supervision and parental ideologies, observational data from the videotapes is compared to parental ideologies. Findings show that parents with *average* flexibility in their daily schedules were the ones who would let their child to be in another room unsupervised during the interview [F (3, 21) = 3.908, $p < .03$]. Figure 30 shows the percentage of total observations during the interview when the child was unsupervised and in another room of the home.

Figure 30. Percentage of total observations during the interview when the child was unsupervised and in another room of the home by the parental flexibility of schedules.



In terms of the child-rearing ideologies, *Enforcing* parents were the group who would most frequently let their child in other rooms of the home unsupervised during the interviews. Figure 31 compares the degree of supervision of parents with different safety ideologies during interviews.

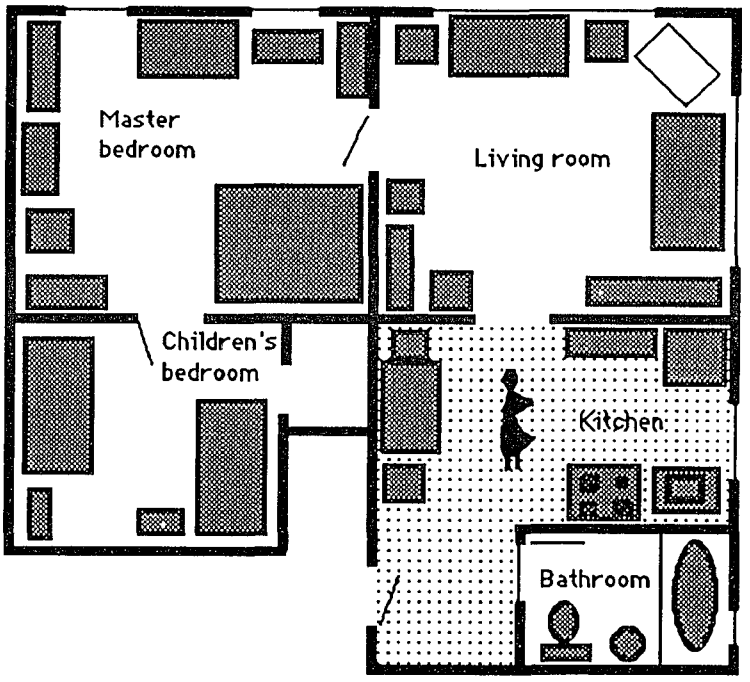
Figure 31. Percent of observations where the child was alone and unsupervised in a different room of the house during interviews by parental child-rearing ideologies.



Zones of accessibility in the home

Parents have different styles when it comes to allowing children access to different rooms of the home by themselves. While some parents "open-up" very limited sections of the home to the child who is not under direct supervision, other parents prefer to allow the child go wherever she wants without limits. The following floor plans compare two families with very different attitudes toward the unsupervised physical accessibility of he child to different rooms of the home.

Figure 32. Zone of accessibility for one-year-old target child in Gomez family when the mother is in the kitchen, at age 1:2.



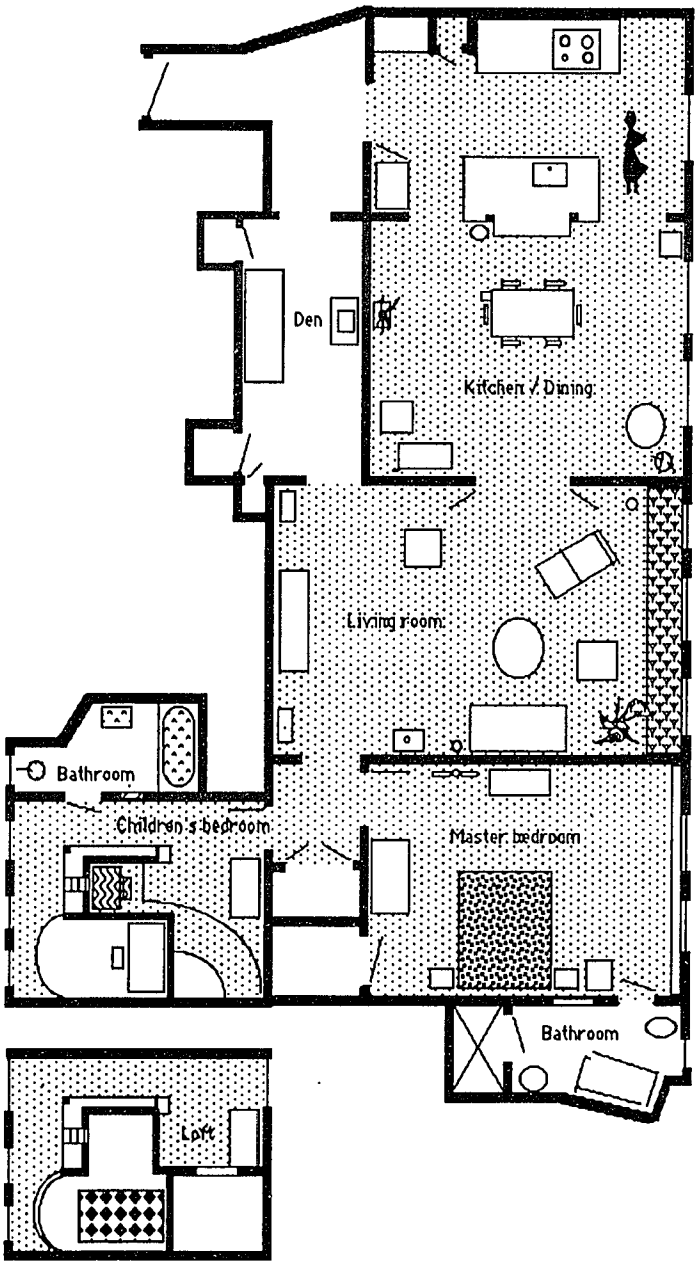
Note: The area where the child is allowed to have access is shown by a dotted pattern.

Family name: Gomez, Age of the target child: 1:2, Gender of the target child: Boy, Total Sq. Ft.: 603, Mean percentage of all the rooms for each location of the mother, where the child is allowed without direct supervision: 20%.

In the Gomez family presented in Figure 32, when the mother is in the kitchen, the child must remain in the kitchen with her. Even the living room right next to the kitchen with a relatively good visibility is off limits to the child. With this approach, the mother has to take the child with her wherever she goes.

In complete contrast with Ms. Gomez, Ms. Burger lets her one-year-old child to roam quite freely through the apartment, as illustrated in Figure 33.

Figure 33. Zone of accessibility for one-year-old target child in Burger family when the mother is in the kitchen, at age 1:2.



Note: The area where the child is allowed to have access is shown by a dotted pattern.

Family name: Burger, Age of the target child: 1:2, Gender of the target child: Girl, Total Sq. Ft. of the home: 1412, Mean percentage of all the rooms for each location of the mother, where the child is allowed without direct supervision: 96%.

The analysis on Zones of Accessibility indicates that overall, parents allowed their children into more than 60% of the rooms of the home [Mean = .686]. The range, however, was quite large. At the minimum level, the most restrictive parents allowed the child access to only 20% of the rooms. The other extreme was 100%, indicating that the child was allowed to go any place in the home, regardless of the location of the mother. The parents who were giving freedom of access to their child were mostly doing this for ideological reasons. Such an attitude is represented in the following quotation.

Ms. Kunik, mother of one-year-old boy:

Q: Are there any rules he should know about this space?

A: He wouldn't understand them. He would not, not right now. I think a kid should feel really free in the house, you know. The dangerous things should not be around. You know, later on when they're older and they can understand...Basically I think that, you know a house should be lived in and I don't think there should be restrictions. I know people that have living rooms that, you know, like their kids can't go in, I think that's absurd. You know, a house is...should be lived in.

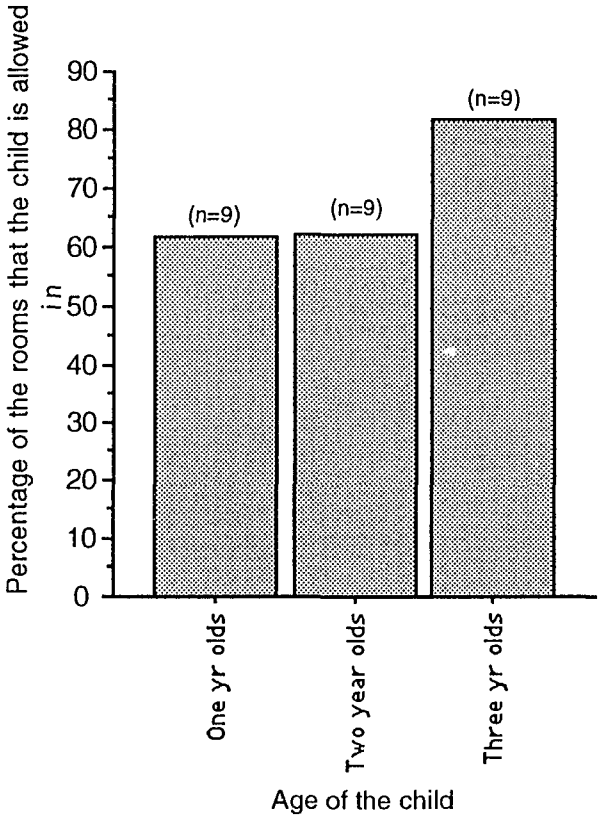
Table 45 shows the frequency breakdown of families according to the percentage of Zones of Accessibility they allow to their child.

Table 45. Mean frequency distribution of the percentage of rooms that the child is allowed without direct supervision for each location of the primary caretaker.

From (≥)	To (<)	Count	Percent
.2	.3	1	3.7
.3	.4	4	14.8
.4	.5	1	3.7
.5	.6	1	3.7
.6	.7	4	14.8
.7	.8	6	22.2
.8	.9	8	29.6
.9	1.0	2	7.4
	Total	27	100.0

The age of the child is related to the Zones of Accessibility [F (2, 24) = 2.857, p < .08], but it only makes a difference after the second year. The accessibility allowed for one-year-olds and two-year-olds was almost identical [Means = 6.17 and 6.21 respectively]. Figure 34 illustrates this relationship.

Figure 34. Mean percentage of rooms that the child is allowed without direct supervision by age



SES and the education of the mother are good predictors of the level of accessibility they give to their child [F (1, 25) = 4.037, p < .056]. Parents who were from middle SES families were more likely to give their child more accessibility in the home, compared to parents from low SES families. Similarly the total years of formal education that a mother had was a significant predictor [F (1, 25) = 6.150, p < .021]. More educated parents were likely to give grater access to heir child in the home.

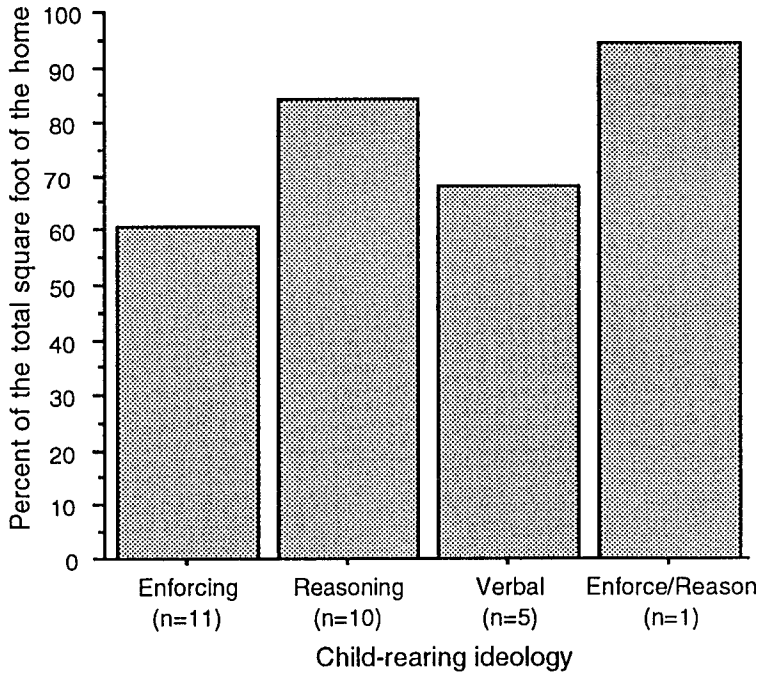
Another significant predictor was the total number of children in the home [F (1, 25) = 4.455, p < .045]. In families with a larger number of children, the target child was given less accessibility to the different rooms of the home.

In addition to the total number of children in the home, birth order was also a significant predictor in the total percentage of rooms made accessible to the child [F (1, 25) = 6.253, $p < .02$]. Findings indicate that second and third children were given much more free range compared to the first child or single child.

How do parental ideologies influence parental decisions to define the zones of access for children in the home?

A relationship exists between the child-rearing ideologies of the parents and the size of the zone that is accessible to the child in the home [F (3, 23) = 3.534, $p < .03$]. Parents who were grouped as *Reasoning* and *Enforcing-reasoning* had defined a larger zone which was accessible to their child compared to parents grouped as *Enforcing* or *Verbal.*. Figure 35. shows the percentage of the home that is accessible to the child for parents in each category of child-rearing ideology.

Figure 35. Overall percentage of total home floor area which is made accessible to the child by parental child-rearing ideology.



At first, this finding may seem to conflict an earlier one, where the children of *Enforcing* parents were observed as having the largest access to the home without supervision. Actually it indicates that while *Enforcing* parents are trying to limit the access of their child to the home using rules to define a small zone, they are observed to be unable to carry that out in actuality and their children are having unsupervised access to a wide area.

Factors that contribute to the success and failure of selected safety strategies

In-depth qualitative analysis of the data revealed 13 factors that contribute to the success and failure of selected strategies. Figure 36 lists these factors.

Figure 36. Factors that contribute to the success and failure of selected strategies.

1. Coordination between the two parents and other adults in the home
2. Effect of siblings on safety strategies
3. Engaging in power struggles with the child
4. Parents' emotional involvement and expression during incidents
5. Explaining the dangers to the child
6. Involving children in daily activities and teaching them how to work with adults
7. Parents' ability to anticipate the behavioral and cognitive development of the child which might put them at risk
8. Exposing the child to controlled high-risk settings to learn about his behavioral capabilities
9. Consistency in reinforcing the strategies and followup on promises and threats
10. Preventive style in contrast to reactionary style in terms of safety strategies
11. Immediacy of punishment or training as opposed to delayed action
12. Clarity and consistency of the established rules
13. Failure to communicate the seriousness of a dangerous situation to the child

1. Coordination between the two parents and other adults in the home.

Coordination among the family members and other adults taking care of the child is critical for the success of selected strategies. Especially in the administration of the rules, and the management of physical precautions that need repeated adult action, such as keeping the bathroom door closed, this coordination can be crucial. In order to establish this form of coordination, parents need to talk about the safety strategies and agree on forms of behavior. In some areas where the threat for the child is very high, such communality in strategies was achieved.

> Ms. Morrison, mother of one year old girl [talking about the door that opens up into the staircase that go down to the basement]:
>
> The restriction is this: if anybody leaves this door open, up here, she [the child] is going to kill herself. She is never down in there [alone] never.

In many of the families who participated in the study, such coordination was either very weak or nonexistent.

> Ms. Friedberg, mother of three-year-old girl/boy twins:
>
> Q: When they [the children] are with their father, is it the same situation [in terms of rules and supervision]?
>
> A: I really don't know. I'm not there, so I honestly don't know what goes on during that time.

As one mother put it very clearly, inconsistencies among the parents may be a result of different beliefs each parent may have regarding the behavior of the child. Furthermore, children usually have different attitudes towards each adult. Ms Fish, who raised these issues also argued that absolute coordination was not necessary, and in some things it was O.K. for both parents to use different rules with the child.

Ms. Fish, mother of two-year-old boy:

> There are certain things I let them do in the house that he [father] wouldn't let them do. But then, he doesn't spend all day with them, so that he might, you know, he might be different. And also I think they [the children] are different with him than they are with me. You know, I think I allow them to push me a little bit more and he is...they,...they won't push him. They won't test him the way they test me...So on most things we agree, you know...they always say you know, you have to be consistent, two parents, have to agree on everything, I don't know. I'm not really sure about what they mean. Cause I think it's O.K. if my husband doesn't think it's O.K. in this particular case and I do. Cause when he's here then they can't do it and when I'm here they can. And I think it's O.K.

Sometimes lack of coordination was an effect of traditional gender roles within the families where all the child-rearing tasks are considered within the domain of the mother. In such families, the task of the father was to reinforce the disciplining strategies and play the role of "backup" for the mother.

Ms. Wright, mother of two-year-old boy:

> He [target child] would take the garbage and he would stand up in the sink and try to get up on the sink and get in there. And...I tell him no! No! No! Well if the no, no, no does not work, usually I tell [shows father] him to tell him [the child] because his...it seems like a man's voice intimidates more. His father sometimes has just to look at him. See, the woman sometimes we have to hey, hey you know; but a man intimidates a boy.

2. Effect of siblings on safety strategies.

Siblings play a major role in the management of safety in the home. This role can be both positive or negative. Some parents showed concern about the relationship among

children who have different cognitive and physical capabilities, indicating that this may increase the injury risk especially for the youngest. During the course of everyday activities, children in the same home usually end up competing for toys, space and activities.

Ms. Goodwin, mother of three-year-old girl:

Q: Can she use the step stool here [bathroom]?

A: Both of them do and they both wanna stand on it together. And they both wanna play with water. But that's, you know, water is running. And they both wanna brush their teeth all the time. With both of them standing on here is dangerous.

Another common risk situation is when a younger child, who either physically or cognitively as well developed as an older one, decides to imitate the behavior of the older sibling.

Ms. Kaplan, mother of three-year-old boy:

Q: Any accidents or near misses in this room [living room]? We can talk about the piano...

A: [interrupts] and they were there [on the piano] because the older one went up first. He was, he was umm being big shot and then the little one crawled up and they're both up there and then the little one tur...the big one decided to be a bigger shot and decided that it was dangerous for Chris to be here and [decided] to pull him off [laughs].

Q: I see, so what happened during the scenario?

A: Oooooh! I did a lot of screaming when I found out what was going on.

Q: How did you find out?

A: Well, I saw 'em. I, I, I look down here [down the hall] because I heard Chris [younger sibling] screaming. Because anytime Mathew [three-year-old target boy] tries to force him to do somethin' he shrieks. And I go and I looked and he's screaming and they're both up there and I just, you know, I just just had a heart attack [laughs].

Q: What did you do?

A: I ran in here and I jerked them both off the piano, I lectured the big one and then I had to stay in the room after that because Chris was determined to go back up there.

Q: Oh really?

A: Yeah, oh yeah! Anything that Mathew starts he's gotta do it.

The effect of the siblings on the safety management strategies are not always negative. Parents usually depend on the older sisters and brothers to reinforce their strategies. This reinforcement can take different forms. At the simplest level, siblings can look after each other. They may also be helpful to inform the parent about potential dangers or breaking of the rules. The following quote illustrates how the mother describes her three-year-old boy/girl twins looking out for each other.

Ms. Friedberg, mother of three-year-old girl/boy twins:

Q: Are they usually together when they are...

A: Always! [emphasis]

I: Always together? It's never...

A: They never separate.

I: It's never a case of one of them is playing there...

M: Never happens.

Q: Do you think it has any effect related to their safety?

A: They're always watching out for each other.

Q: Is it an advantage or a disadvantage?

A: I think it's an advantage. I took them out yesterday to the Long Island Game Park, and they had this stupid ride [laughs] I mean I had to be crazy to put them on it. The room full of balls, you've seen it, all the, all the balls all over. And then they gotta climb through nets an' on top'a balls an' it looks safe. Jeremy was sittin' there, he got underneath all the balls and kids are jumping all over him, and I'm in a panic [emphasis].

I: Oh, those plastic balls that they just dig into?

M: But he was underneath it, looked like he was drowning [laughs]. And I'm screamin' and I can't get in 'cause all the kids are running into it...And I'm going 'Jessie, get Jeremy!' And she' sittin' there tugging on his hand [laughs and does tugging motion with her hands]. But they're always together. Then she goes 'I had to save Jeremy. I know how to watch him'. Jeremy goes 'My sister came to save me' [waves her hand] [pauses] OK. They went, went right back in it again [laughs].

Q: Is there another aspect of this? For example if Jeremy was doing something dangerous or breaking one of the rules...

A: Yeah, they tattle on each other. Or you get Jessie going [in child's voice] 'you know mommy says no' [laughs]. They do tattle.

If the age difference is big enough, the older sibling can be given a more serious and formal responsibility for implementing the safety strategies. This role can be a supervision or implementation of adult rules.

Ms. Tillman, mother of one-year-old girl:

> I was cooking one time, I was making spaghetti or something, and supposedly she was down the hall. Usually what we [she and her 11-year-old daughter] do to keep track of where they [one-year-old and three-year-old] are we say 'Are they with you?' and when they leave we tell the other one so we always know where they [young children] are. Well I was so into what I was doing that I didn't hear my daughter [11 years old] tell me that she left and came in here. So I turned around with a pot of hot water and she [one-year-old target girl] was right there. It didn't spill on her or anything but if I had taken one more step it would have spilled. That was as close as we got.

3. Engaging in power struggles with the child.

During the course of the daily life, a large number of confrontations occur between the parent and the child. Some mothers indicated that it is not wise to enter into a power struggle with the child since the most likely outcome of such a struggle would be frustration for the parent.

Ms. Fish, mother of two-year-old boy:

> ...one thing that comes to mind is how not to get into a power struggle with your child and because nobody is gonna win and I think generally the parents think that they have to make the child do something and it doesn't work that way. And I think there are some times when it does, but for the most part, it doesn't.

The negative influence of power struggles over the effectiveness of selected safety strategies can be very strong. For example, such a struggle can motivate a child to break a safety rule such as not to play with electrical outlets. This may happen not because she is curious, but as a defiance against her parent, since the child knows that her mother does not allow her to do so.

4. Parents' emotional involvement and expression during incidents.

The communication between the parent and the child occurs at multiple levels. Parents who seem attuned with their child can communicate with them using not only language, but also the tone of their voice, mimics and body language. The most obvious instance of this is different ways of saying "no". Many parents in the study argued that their child can sense the real feelings of their mothers and can distinguish between their different emotional states when they admonish them, and therefore, try to avoid getting their mothers really upset.

Ms. Frattini, mother of one-year-old boy:

> There are lots of sockets here [the kitchen] Two here, four over there... there are twelve sockets but he can't get near any of them because they are pretty high. He is not at an age right now that I can say 'Justine, that is really dangerous and I don't want you near that'. Even now he understands a little bit when I say 'Justine, you're really gonna get hurt, please don't.' He gets that feeling that I can get really upset with him and he doesn't want to be there, he doesn't want to touch [the forbidden items] either. Because, he knows that I notice, he wants to please me. I think that.

When the mother witnesses a real dangerous situation or a serious near miss, her reaction -inevitably- may be very severe and dramatic. Many parents insisted that such a reaction helps the child to appreciate the seriousness of the situation and force them to be more obedient to the rules concerning that hazard.

Ms. Bassinger, mother of two-year-old boy:

MOTHER: With the stove it could be dangerous. He tried to touch it once and he hasn't been doing it since. He learned.

Q: OK, how did he learn?

A: Well, he, he was like, one more second, he would have touched it and he, he didn't touch it, but he got so scared because the way I yelled. That, he knows.

Some parents were aware of this form of strong intervention and used it knowingly for frightening the child while she was engaged in the potentially dangerous activity. Such a strategy requires not only rules but also continuous supervision and good timing.

Ms. Blank, grandmother of two-year-old girl:

Q: Tell me what you think are the dangers for her in this room? [kitchen]

A: Nothing. But stay away from this stove, this is the dangerous thing in this room, for Latifa. And when I saw her do this one morning [turns on the gas burner on the stove], she couldn't get it on, she was fixin' to. I took my hand and popped it so hard, she took of an' cried, and she ain't did it since.

Q: Tell me about that, what happened? She came in and...

A: She was jus...She just had a notion to do it [laughs]. She just reach...an' I happen to be right here to see her. I was standing there. And I say [yells]: "Don't touch that!" [claps hands together then pauses] and it scared her, you know. she was startin' to cry, an' run in her room an' sit down.

Q: How long ago was that?

A: That was about two weeks ago. Yeah, you have to be on the watch.

5. Explaining the dangers to the child.

A big difference between parental styles in teaching the child about dangers is the explanation of the rule to the child compared to the enforcement of the rule without any

explanation. Some parents believe that children have the capacity to understand about dangers even at very early ages if the parent takes the time to explain them. Parents who take their time in explaining the dangers to their children were convinced that the method works as an injury precaution strategy, even though they were skeptical about their child's ability to understand the danger.

Ms. Tillman, mother of one-year-old girl:

> I get to talk to her and I explain, I try to get her to understand what she did wrong. It works most of the time. If it is because she understands or if it is because she wants me to stop talking, that part I'm not sure [laughs]. You know, I explain to her and she doesn't do it.

Some parents did distinguish between safety related and non-safety related rules, and indicated that they were using explanations in the former rather than in the latter.

Ms. Kaplan, mother of three-year-old boy:

Q: What do you do if he's doing something he's not supposed to?

A: It depends on if it's dangerous or not. Umm, I mean, you know, if it's dangerous I stop them right away and try to explain, that's dangerous, that could hurt you or whatever.

6. Involving children in daily activities and teaching them how to work with adults

A few parents described a relatively unique strategy in teaching their child about the dangers in the home. This strategy consisted of working together with the child in dangerous areas of the home, to complete some routine daily tasks. These tasks included activities like washing the dishes, ironing or emptying the dishwasher. To accomplish this, the parent was establishing some ground rules by clearly defining her own responsibilities

compared to the child's responsibilities. While doing this, she was careful to assign risk-free tasks to the child while completing the others herself.

Ms. Bassinger, mother of two-year-old boy:

Q: How did you change the rooms in ways to prevent accidents? You said you moved those glass pans up?

A: Yeah, ummm. Once he started getting into things, I took a lot of glass and things that were dangerous out of there, and out of the drawers. The knives are still in. You know, the dinner, steak knives, but he has never shown, you know, gone to them and he helps me empty the dishwasher, he waits for me take the sharp knives out and then he takes the rest of the stuff out.

Q: Well, how did he learn that?

A: I guess I started by, you know, he wanted to help me and I told 'Well I have to take the sharp things out'. Now he just waits.

Q: Now he just waits, so you never had to say 'don't touch those'?

A: Ahhh, I would say sometimes 'You open the dishwasher' and I'd say 'you have to wait, let me take the sharp objects'.

Since many injuries do occur because young children do imitate adults, this form of defining tasks and rules for the child can be very effective in reducing risky behavior of the child.

7. Parents' ability to anticipate the behavioral and cognitive development of the child which might put them at risk

Most of the safety strategies rely on an accurate estimation of the child's physical and cognitive abilities. A parent has to be sure that the child cannot override the safety devices

and physical precautions, and rules have to be formulated so that the child can both understand them and able to follow them. The findings indicate that parents usually have limited ability to anticipate the upcoming development of their child and the anticipation of dangers that will be generated as a result of this development. On each visit we asked parents what they thought their child would be capable of two months hence which might put them at risk. We found that with a few exceptions, parents were unable to answer the question and could not predict the upcoming changes. Unfortunately, home visits were made only at two-monthly intervals. Had we been able to visit more frequently we may have found greater ability in this regard. Parents who have older children had a clear advantage in this aspect, since they frequently referred to the development of their older children.

Ms. Falcon, mother of one-year-old girl:

> During winter time the radiator is a possible danger and I actually, really haven't had to deal with that with her [target girl] yet. Because last winter it was not a problem, she was too young. But this winter it will be. I don't think, you know, unless we get a radiator cover, which we might have to do depending on how quickly, till we get it, then she is not supposed to touch it. We never had a problem with Zed [older brother]. So I am not anticipating having any problem with her. He learned about it right away.

In addition to the anticipation of upcoming dangers, the real problem seemed to be the reluctance or negligent behavior of parents in doing the changes they said that they will do to eliminate new dangers. Over and over again, the research team has been assured by the parents about things like installing window guards or moving poisonous items to upper shelves, but two months later, during the follow-up visit, researchers witnessed that many of those changes did not happen.

8. Exposing the child to controlled high-risk settings to learn about his capabilities

In order to help them in identifying the child's interest areas in specific rooms and also for evaluating the child's cognitive and physical abilities within a space, some parents adopted a methodology of "spying" on their children. This is usually done by deliberately letting the child in a room and inconspicuously watching her behavior for a period of time. Some of the parents were using a similar strategy not only as a form of supervision but also to teach the child about the objects that they are allowed and not allowed to touch. To accomplish this, parents often remove really dangerous objects from the child's reach but leave some others for training purposes, so that the child learns to "live" with them.

Ms. Kunik, mother of one-year-old boy:

Q: You said you try not to leave stuff around?

A: Yeah, I read one book that made sense, to keep some things around that they shouldn't touch. But nothing breakable or something you really want. So basically, like there's things on the shelf that he really shouldn't go to. For a while he was going to the video cabinet and taking all the tapes out. But basically I, don't leave too many things around because I don't wanna go all day saying 'no, no, no'. You know, that's not real healthy either. So basically I, you know...there are some things that have to be there.

9. Consistency in reinforcing the strategies and follow-up on promises and threats

Consistency emerged as one of the most critical dimensions affecting the success or failure of selected strategies. It was clear from the data that some parents were much more consistent in reinforcing their safety strategies than others. Inconsistency was the number one reason why some families had "gaps" occurring in their safety strategies. Inconsistent

supervision, management of safety devices and physical precautions and reinforcement of the rules were frequent and weakened safety management strategies considerably.

One aspect of consistency which was very strongly underlined by the parents is related to disciplining and following up on the threats made to the child.

Ms. Kaplan, mother of three-year-old boy:

MOTHER: I'm for discipline, a lot. and umm, I think that my mom gave me the best advice when she said [pause] if you say you're going to do something, do it [pause]. Follow through. You know, so that they know they have consistency and try to be consistent with the way you react, and I...I'm not saying I do that and I'm perfect at that but I do try...

Q: So you think that's important?

A: I do.

This and similar responses showed that consistency was one of the few areas where parents admitted that they fail frequently.

Ms. Kunik, mother of one-year-old boy:

MOTHER: One of the mistakes that I made with her that I'm gonna try not to make with him was, as far as discipline, I always threatened to do things and never did, and I know it's really important to be consistent, you know, say you're not gonna do this and then not let them do that. She knows that she can basically do anything and I'm not gonna do anything about it. You know, and [to the older sibling] we've discussed it, right? Haven't we discussed it? I mean she knows if I say you're not going out for the next year, she knows by tomorrow she's going out. I was never consistent with her discipline. Because, I just wasn't.

Q: So you'd like to change that?

A: Yeah, that's one thing I'd like to try to do different. That's about the only thing.

Follow-up on the threats was one specific area where parents said that consistency is critical. This was partly dependent upon how parents see children. The belief that children are always ready to go as far as they can, made follow-up on the threats vital for some parents.

Ms. Andreas, mother of one-year-old girl:

They [the children] test you, they will go as far as they can. If you threat, you must follow.

Consistency in punishment and follow-up on the threats was not necessarily as critical for some other parents. For these parents, threats were yet another tool to solve the momentary crisis related to the behavior of the child.

Ms. Gomez, mother of one-year-old boy:

Q: How do you punish him?

A: I reprimand him. I tell him that next time I'll spank him.

Q: Do you do it?

A: No, I almost have never done that because he is a child that does not understand yet. If I tell him not to touch something and he insists in touching it I put him in the crib. That is his punishment because he almost has not used the crib.

10. Preventive style in contrast to reactionary style in terms of safety strategies

In terms of their style in intervening to a dangerous situation, parents fall into two categories. Parents with a *preventive* style intervene before a dangerous situation develops.

This may be a case of the child coming in close proximity to the danger, or attempting to do a physically challenging feat such as jumping down from furniture. A preventive parent usually does not let the situation develop so far that it almost becomes a near miss. In order to do that, she must be able to anticipate the danger and also she must be carefully supervising the child. A parent with a *reactionary* style is the one who usually intervenes after the incident occurs. For example she waits until the child starts jumping on the bed, and after a few minutes, when the child falls or jumps dangerously, tries to stop the child.

Differences in *preventive* and *reactionary* styles are not limited to supervision. They can apply to the administering of all the safety strategies. In that sense they are closely related to the concept of the *critical incident* where a parent witnesses a new danger for the first time through a near miss. Reactionary mothers do modify their strategies for example by installing new devices or generating new rules after such an incident. Another typical behavior of reactionary parents is that their safety precautions are defined by the behavior of the child. In other words, they apply certain precautions such as keeping the doors closed or enforcing of certain rules only at the times where they see a tendency in the child to get into trouble. These precautions are not systematically employed if the child is perceived to be behaving "good" by the parent.

Ms. Wright, mother of two-year-old boy:

> Sometimes he tries to get into the cabinets and so I have a little rope that I tie the cabinets with.

11. Immediacy of punishment or training as opposed to delayed action

Some parents mentioned that in order to be effective, any training or disciplining of the child should immediately follow the dangerous behavior. Parents who use strict

disciplining techniques such as corporal punishment use these techniques immediately following the unacceptable behavior.

Ms. Blank, grandmother of two-year-old girl:

Q: How do you teach her not to do it again?

A: I ..hit her...hit her hand, make her cry. She won't bother it no more.

Q: Did you have to do this?

A: Yes, I did that, plenty of times. Yeah...but...

Q: So she touched something and you...

A: No, it's on the table. If she reach her han' on the table for a fork or somethin', I hit her hand [claps her own hands] an' she started cryin', she ain't gonna do it no more. An' I can leave 'em on the...look at her, she knows I'm telling the truth. An' I can leave 'em on the table, she'll look at me [pause] an' walk on by [laughs] right now.

The basic flaw of this approach is that the parent have to be continuously supervising and monitoring the child to reinforce the disciplining and training. The danger is the child can quickly learn that the trick is not to follow the parent's rules but not to get caught. Such thinking may encourage the child to engage in risky behavior whenever the adults are not present.

12. Clarity and consistency of the established rules

Another major factor contributing to the success of rule-based strategies is the clarity and consistency of the established rules. Findings indicate that in families where there are very elaborate rule systems, violation of the rules by the child is more likely. This type of

violation usually occurs because cognitively the child is not able to follow and understand the established rules. Rules get confusing for the child when they are not consistent over time and place. For example "you can jump on the bed only when there is an adult present" or "you can open only some of the cabinets and not others" are place and situation dependent and harder for the child to grasp and follow.

Ms. Admer, mother of three-year-old boy:

MOTHER: [pointing to the kitchen drawer]...That's what he can't touch...this drawer. He is not allowed to touch those, where I keep the, you know, the bigger knives, otherwise, he can touch the other drawers...he...you know to set the table I allow him to open up the uh...other drawers.

Q: Does he know these rules?

A: I think so.

Q: Does he follow them?

A: No [smiles]. No...he...[shakes her head, sort of 'yes', sort of 'no'] [to child]: That's right, are you allowed to open that drawer?

Q: Which drawer is he opening?

A: It's the second one. [To child]: Scott,...

CHILD: I open these all up.

MOTHER: Yes, but are you allowed to? What drawer are you not allowed to touch?

CHILD: [looks at all the drawers, opens second drawer] That's it...that's it.

M: All right, please close that drawer now.

CHILD: That's...

M: That's right. Don't show us Scott, you're not allowed to show us. This is what you're not allowed to touch.

CHILD: I touch these [picks up something in the drawer].

MOTHER: No, let's not touch anything in this drawer now. All right? The other drawers you can touch, you know that.

CHILD: I touch these all [touches the other drawers].

or,

Ms. Frattini, mother of one-year-old boy:

MOTHER: [opens the lower kitchen cabinet which has no locks on. The cabinet is full of chemicals and detergents. There was also a big container, shaped like a Crayola crayon] See, you see all the stuff here?

INTERVIEWER: Yes.

MOTHER: He won't touch none of it but this [Crayola crayon shaped container] he will... but he won't touch the other stuff.

13. Failure to communicate the seriousness of a dangerous situation to the child

Success and failure of safety strategies are not only dependent upon the parent. Sometimes the child's understanding or misunderstanding of a hazard can play a critical role. A very common example of this kind of a situation is when the child keeps repeating a dangerous behavior because he thinks it is a "game" and great "fun". Such a situation can be very frustrating for a parent who repeatedly fails to communicate the serious consequences of this behavior to her child.

Ms. Kaplan, mother of three-year-old boy:

Q: Any accidents or near misses in this room ? [kitchen]

A: It wasn't really an accident. It's just that he does things that's very funny, to stand there and blow the gas out.

Q: When was the last time he did that?

A: Well, I haven't seen him do it for say maybe two or three weeks. But umm, and he doesn't do it unless I'm in the room specifically cooking. There are not many occasions like leaving something on the pot all afternoon that I would be worried if he blow the flame out, I wouldn't know. I'm not even afraid of the house filling up with gas fumes, I mean, we would smell it, we'd detect it two hours before that but it isn't good for anybody and it's not a good situation.

Q: So what do you do?

A: Well, I always try to stop him but he... This is one thing he thinks is a joke [pause]. I think it's probably from blowing birthday candles out. 'Cause he's been to a lot of birthday parties just this spring. It's a playing, it's fun, you know, and you know if he does it right it comes back on, you know, he blows the flame away, and then it comes back [laughs] [pause].

INTERVIEWER: Great.

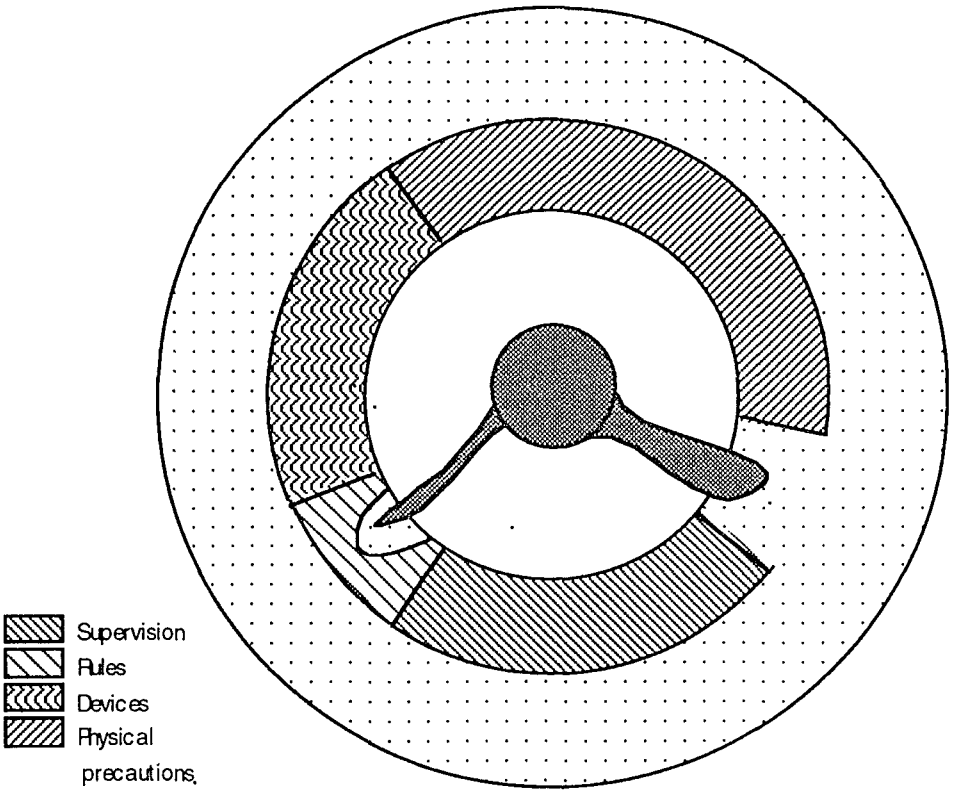
MOTHER: Yeah, it's really great, I know. And lovely try to cook with that [laughs]. And he really thinks its funny. So I really can't tell you if I've made any headway on umm, he has just doesn't...he's just too young to understand what he's doing. On that one.

Simultaneous use of multiple strategies: Differences between families and changing levels of risk

One of the key issues that this research attempts to identify is the forces that help parents choose certain types of safety strategies over others and, in order to do this, it is necessary to clearly understand the parents' concepts of danger within the home. From the data it is clear that the strategies developed by the parents were used mainly to cover the hazards that they identified in the home. However each family attempted to do this in quite unique ways. The following examples show three families with very different approaches towards safety.

Ms. Joan managed to minimize risk for her child by carefully evaluating all the hazards and using her strategies in an appropriate manner. Figure 37 shows the safety management strategies of Ms. Joan.

Figure 37. Safety management strategies for the family of Ms. Joan



Age of the child: 2:2, Gender of the child: Boy, SES: Low, Total number of children in the family: 3, Family type: Two parents, Years of formal education of the mother: 12.

Ms. Joan used all the strategies available to her in her safety system. First she attempted to identify all the hazards facing her two-year-old boy and tried to encounter them with physical precautions, even by rearranging or removing the furniture when necessary. She got rid of her coffee tables with sharp edges, and rearranged some of the furniture in a way that blocked the electrical outlet covers. She moved all the medicine and poisonous items to high cabinets and stopped using a tablecloth in the dining table. She installed a number of safety devices such as cabinet latches and locks. She even invented some of these herself. A piece of wood that she stuck in the cabinet doors for example, prevented the child from opening them. She also instituted a small number of rules that she uses repeatedly. She is aware that the child does not follow them all the time, however by

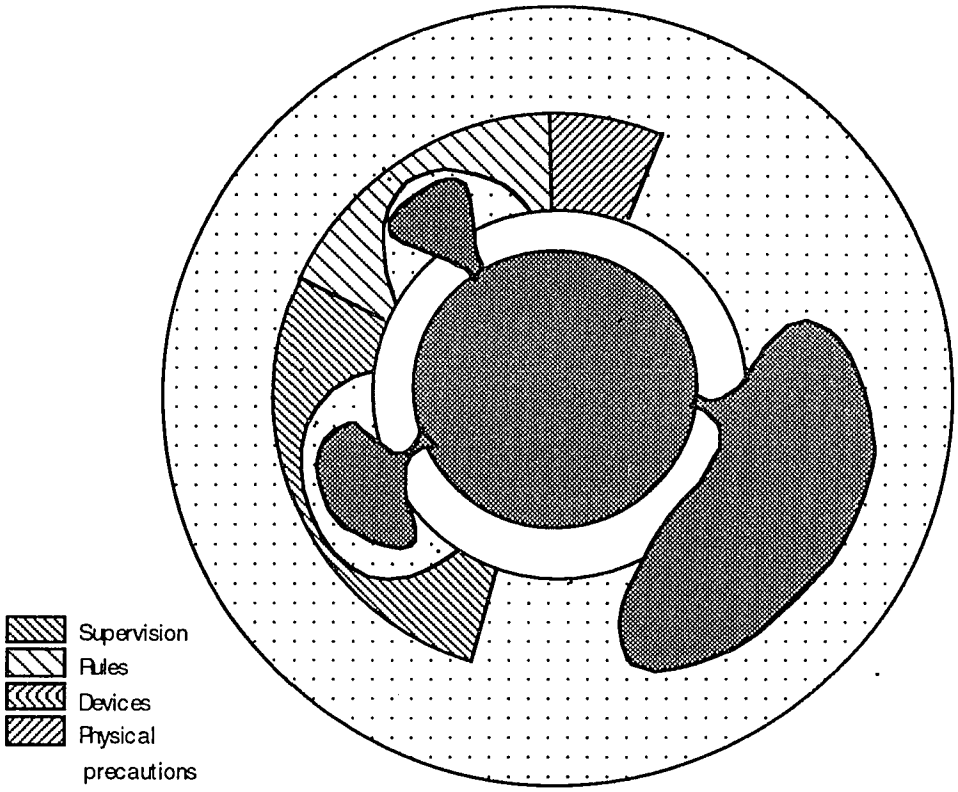
maintaining continuous supervision she has managed to reduce the risk for the child significantly. The character of the child which the mother describes as "Quiet,...shy,... very affectionate,...very aware of his environment,...obeys easily" (Ms. Joan, mother of two-year-old boy), reinforces the effectiveness of her strategies. Unlike many other parents, Ms. Joan also tried to anticipate the upcoming behavior of her son.

Ms. Joan, mother of two-year-old boy:

> He can't reach the medicine cabinet yet. When he climbs up there [toilet bowl] I'm afraid he's gonna figure out how to open the screen and it could be problem.

In direct contrast to Ms Joan, Ms. Brasswell has safety strategies that rely almost completely on supervision and administration of safety rules. Figure 38 illustrates the safety strategies of Ms. Brasswell.

Figure 38. Safety management strategies for the family of Ms. Brasswell



Age of the child: 3:2, Gender of the child: Boy, SES: Low, Total number of children in the family: 1, Family type: Two parent family, Years of formal education of the mother: 14.

Ms. Brasswell built her safety strategies around supervision and obedience to the rules. She does not use any safety devices and takes few physical precautions. On the other hand she established a long list of rules for the child to follow. These rules were mostly expressed in a generalized way but were frequently broken by the very active and defiant child. Some of these rules were, "don't touch glass" (anything made out of glass), "no climbing" (anywhere), "do not open drawers", and "can't touch anything in the kitchen". She tried to reinforce these rules through supervision and occasional punishment. For Ms. Brasswell, teaching her child to behave the "right" way, and teaching him to "obey" were very important aspects for her child's development.

Ms. Brasswell, mother of three-year-old boy:

> We realize there were limitations that we have [as people] and we look forward to a better picture where we would be part of that bonding [with God] which at home makes you a parent. So I think this is very important for him to fear and for us to teach. You know, our child, to fear displeasing him [God] because it's a matter of everlasting life. And our everlasting life depends on that obedience I think, to him [God].

This approach which equates obedience to God and obedience to parents, may end up being effective in the long run, however at the time of the study it did not seem to deter the boy who broke safety rules over and over again. Since it was impossible for the mother to supervise the child at all times, her Safety Management System broke down whenever she was not looking.

Ms. Brasswell, mother of three-year-old boy:

MOTHER: If I'm in the kitchen and he wants some water or something, fine, but when I'm in the kitchen, I don't want him in the kitchen.

Q: If you're here, can he go into the kitchen?

A: No.

Q: But there is nothing to prevent him from going.

A: If I'm here watching him, he better not go into the kitchen.

Q: So he knows?

A: He knows.

Another problem in this case was the parent's sketchy knowledge regarding the physical capabilities of the child.

Ms. Brasswell, mother of three-year-old boy:

Q: [Talking about the front door of the apartment] Can he open the door himself?

A: Ah..I'm not too sure about that but I always keep the chain on.

Yet, in spite of this comment, interviewers observed that there were many times when the chain on the front door was not locked during their visits.

Parental perception of dangers in the home

Perceptions of danger as a basis for selecting safety strategies

Parents' perceptions of dangers in the home was found to be closely related to the safety strategies that they have selected and implemented. The total number of all the different types of dangers that the parents identified in the home is calculated from the family maps. The mean for the population was 27, indicating that on the average 27 different types of dangers were identified per family in one year. The range was from 11 for the parent who identified the least number of dangers to 61 for the parent who had the highest number of identified dangers. Table 46. shows the breakdown for each bracket of five dangers.

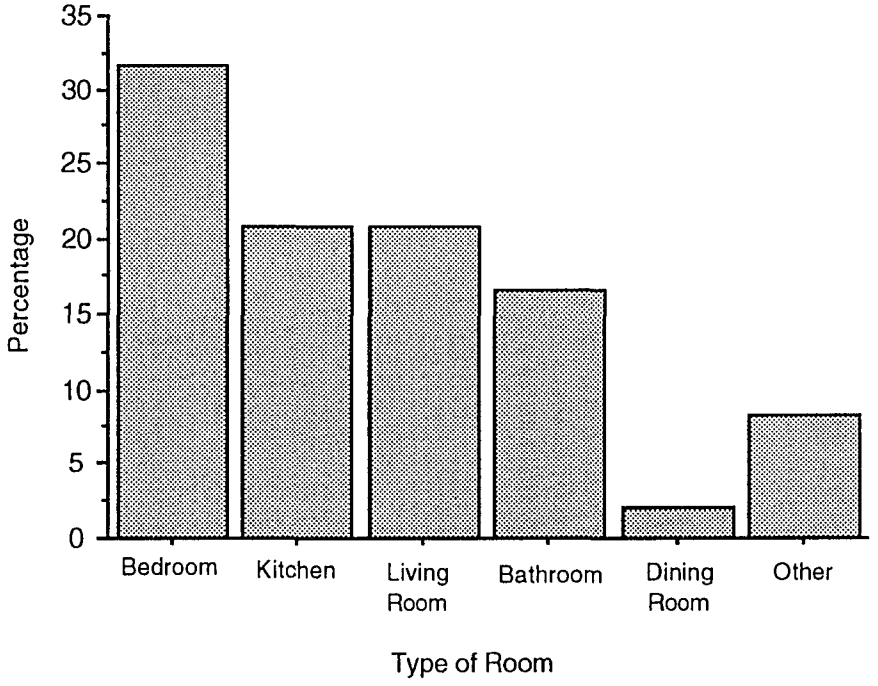
Table 46. Frequency breakdown of all the different types of dangers identified by the parents in the home, over one year

From ( )	To (<)	Count	Percent
10	15	2	7.4
15	20	7	25.9
20	25	5	18.5
25	30	5	18.5
30	35	3	11.1
35	40	1	3.7
40	45	1	3.7
45	50	0	0.0
50	55	1	3.7
55	60	1	3.7
60	65	1	3.7
	Total	27	100

What was the most frequently identified types of dangers by the parents? Poisonings, or types of items that may poison the child, (Constituted 29% of all the identified dangers) was the most frequently identified type of danger. Second and third frequent types of identified dangers were falls (28%) and burns (15%).

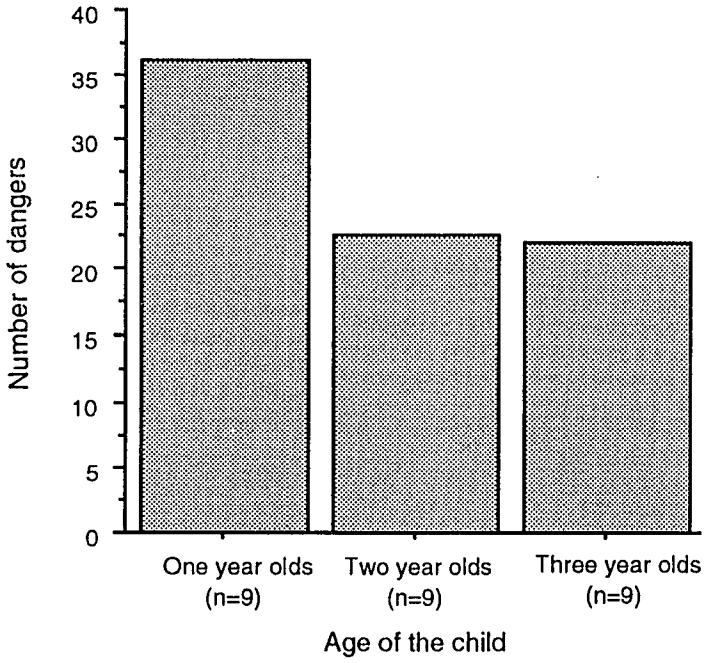
In terms of locations of the dangers, bedrooms, including the child's bedroom was the location where most of the dangers were identified (32% of all the different types of dangers that were identified by the parents were in bedrooms). Kitchens (20%), Living rooms (20%) and bathrooms (17%) were identified as the other high risk areas in the home. Figure 39 shows the distribution of identified danger types to the different rooms of the home.

Figure 39. Locations of dangers identified by parents throughout the year as a percentage of all dangers.



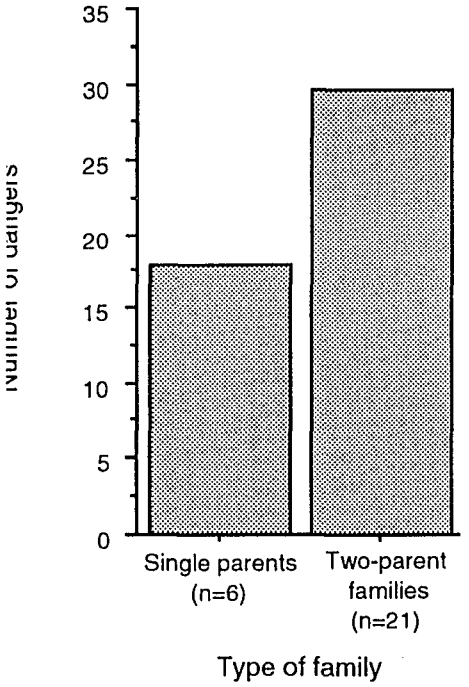
Who were the parents who identified large numbers of dangers, compared to the parents who perceived only a few? An analysis on the demographic characteristics of these two groups revealed the following. Age of the target child was a significant factor that affected parents' perceptions of dangers. Parents whose children were in their second year of life (parents of one-year-olds), identified larger number of hazards within the home environment [F (2, 24) = 4,236, $p < .027$] compared to the mothers whose children were in their third or fourth year of life. Figure 40 illustrates this relationship.

Figure 40. Number of types of different dangers identified by the parents by the age of the target child.



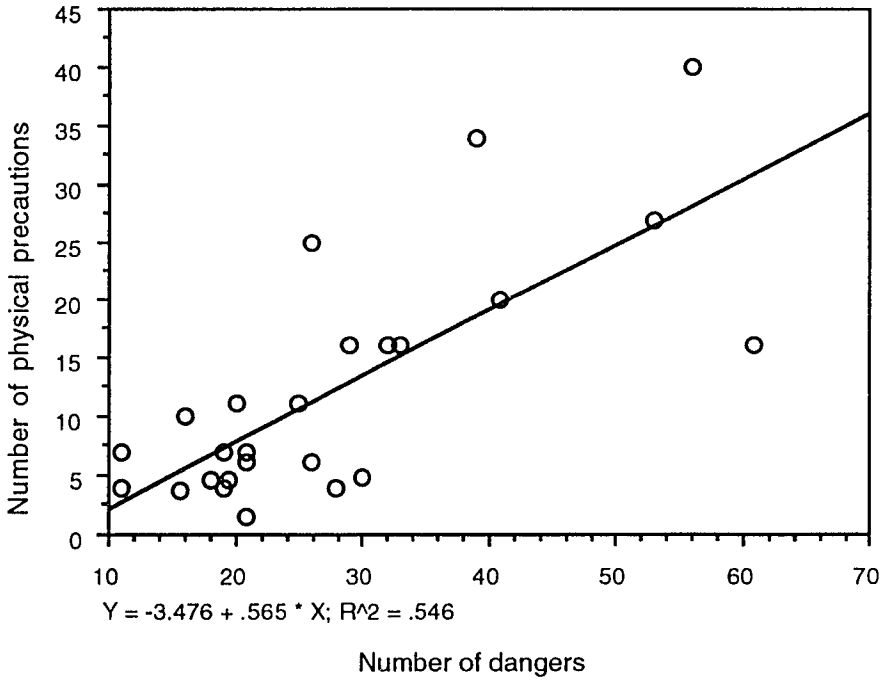
A difference between single parents and two-parent families did also exist [F (1, 25) = 4.134, $p < .053$]. On the average, single parents identified a smaller number of hazards compared to mothers from two-parent families. Figure 41 shows this relationship.

Figure 41. Comparison of single mothers and mothers from two-parent families, in terms of the number of dangers that they have identified throughout the year.



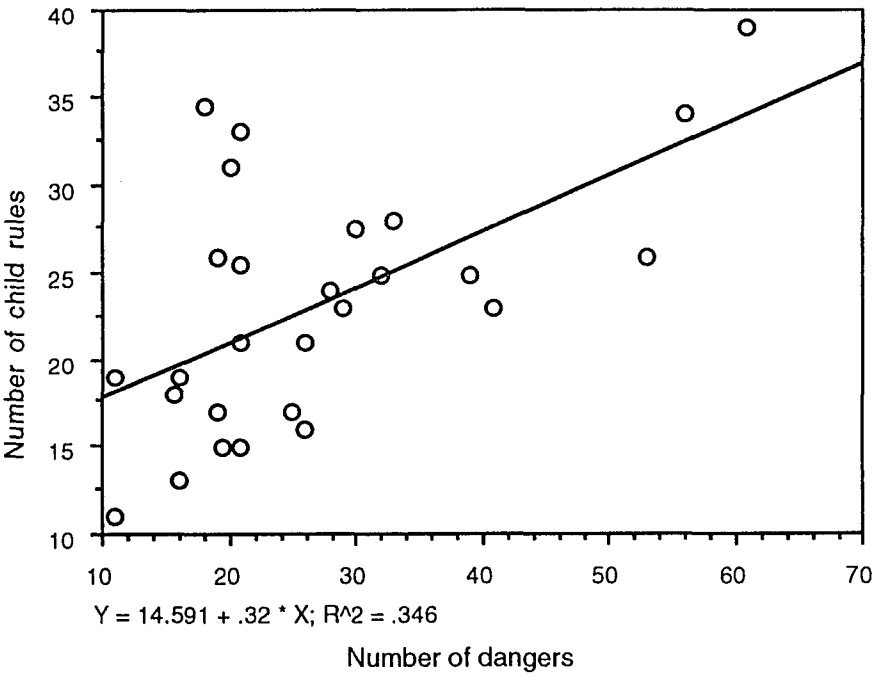
As expected, there was a very close relationship between the number of types of different hazards identified by the parents, and the intensity of the strategies they were using. Parents who identified large numbers of dangers had consistently larger numbers of devices, child rules and physical precautions present in the home. They were also observed to be more likely to keep their child in contact or within reach during the interview. The relationship between the number of dangers identified and the number of physical precautions was found to be the strongest [F (1, 25) = 30.049, $p < .0001$]. The regression plot in Figure 42 illustrates this relationship.

Figure 42. Relationship between the number of dangers identified by the parent and the number of physical precautions located in the home throughout one year.



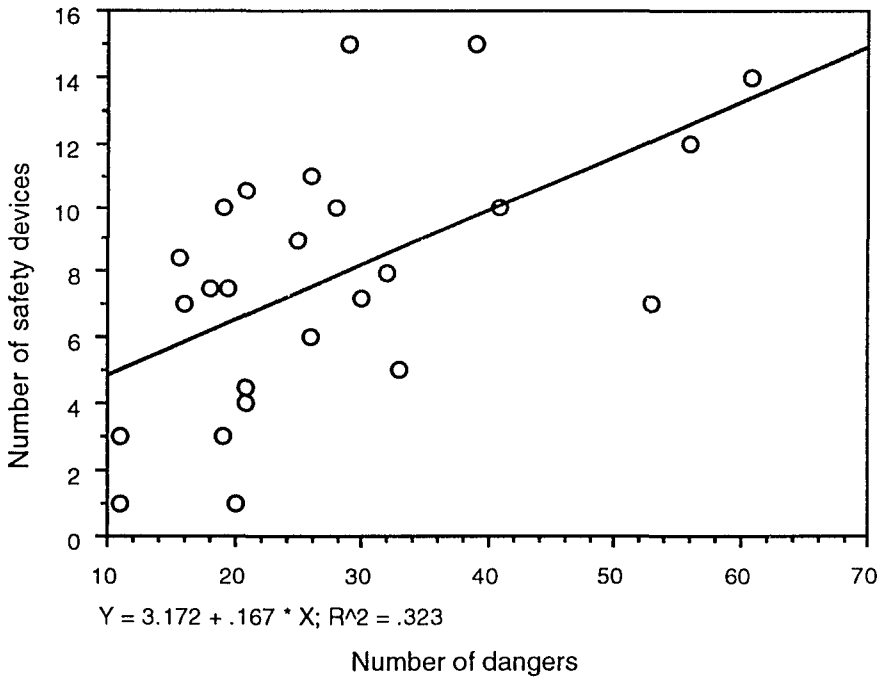
Number of child rules established by the parents were also closely related to the perceived dangers [F (1, 25) = 13.219, $p < .0013$]. The results are plotted in Figure 43.

Figure 43. Relationship between the number of dangers identified by the parent and the number of child rules established in the home.



Similarly, same strong relationship also existed between the number of physical devices and the number of hazards identified by the parents [F (1, 25) = 11.932, $p < .002$]. The relationship is plotted in Figure 44.

Figure 44. Relationship between the number of dangers identified by the parent and the number of physical safety devices present in the home.



Even though not as strong as the others, there was a relationship between the number of identified dangers and the observed physical proximity of the child to the parent during the interviews [F (1, 23) = 5.237, $p < .032$]. Parents who identified larger number of dangers were observed to be in close proximity (either touching or keeping the child within grabbing distance) compared to parents who identified fewer number of hazards in the home.

Qualitative analysis of the interviews revealed the complex nature of relationships among perceptions of danger and parental safety strategies. The initial question to answer is how do parents learn about and decide what are the most threatening hazards for their child? A complete objective evaluation of hazards by identifying what is a danger and what is not within the families homes, is a task which cannot be necessarily accomplished in a

systematic manner. This task is one of the biggest challenges that face parents who struggle to establish effective safety strategies.

Ms. Admer, mother of three-year-old boy:

Q: What are the parts of the house where you're concerned about possible dangers?

A: Well, I mean there...I guess your basic dangers are all over and ... you mean like very serious, I mean how...

Q: Parts of the room or the house that you're most concerned about, like the terrace.

A: Let's say the staircase, falling from the very top all the way down. I mean he could...a child, he could pick anything and make it dangerous...I mean anything could be made into a dangerous situation.

There are basically five different ways that mothers use to identify the dangers in their environment. These are: (a) using common sense, (b) learning from their experience with previous children, (c) watching the behavior of the child while supervising her, (d) witnessing a *critical incident*, a near miss or an injury, and (e) learning about the hazards through one of the information sources such as books, television, friends or pediatrician. Usually mothers use a combination of these methods to build up their knowledge about dangers in the home.

Ms. Admer, mother of three-year-old boy:

Q: As we were going through the house, you told us about the dangers in different locations, do you know where you got this information from?

A: Ah, either friends, reading it...not reading but television...talk from safety. I guess just common sense also, as far as, um, I mean you wouldn't let a baby who's crawling [pause] near an

open staircase, because they just don't know from...you know, what the staircase mean. Um, so I think it's a combination of a lot of things.

Identifying the danger is only part of the process. The mother then has to evaluate if the danger is real enough or serious enough to merit a safety strategy in order to neutralize it. Sometimes she may decide against intervening with a strategy. This may happen because the parent may think that even though some potential danger exists, the threat is not serious enough.

Ms. Bosch, mother of three-year-old girl:

MOTHER: And she's into...[pause]. She thinks she's Superwoman now, she climbs up on the trunk and leaps like, tries to get to the rug. One of these days I wonder if her leg is gonna [hands do breaking motion] [laughs].

Q: Do you think it's dangerous?

A: Probably. But I let her do it.

Non intervention on the part of the mother may also happen because the child has not engaged in a real dangerous activity regarding that particular danger.

Ms. Frattini, mother of one-year-old boy:

MOTHER: I have glass, I have glass in the living room...which is, you know, a lot of people tell me 'oh, how could you have glass?'. This [bangs on the glass lamp on the side table] is glass, you know it is heavy, and Justine can pull on it and he has. But I have asked him not to.

INTERVIEWER: Yeah.

M: And some of this stuff [shows glass artifacts], he touches them but he has not actually taken and thrown anything.

or,

Ms. Admer, mother of three-year-old boy:

Q: [in bathroom] what are possible dangers?

A: Ah...Well...you know, obviously, if he's in the tub, you know drowning. Ah [opens cabinet under sink] This stuff...once in a while he'll try opening, but I reprimand him...so...

Q: He doesn't bother it?

A: Yeah, but as far as like he's [pause] I mean once in a while he'll put soap in his mouth, but...I'm not concerned that he'll...I don't think it's poisonous. And I don't...well although I do keep a detergent type thing down here [points to cabinet under sink], either he's just not aware of it or he just hasn't thought to play with it.

These and similar examples reinforce the importance of *The critical incident* as a motivating force for the parents to take action against certain hazards. The resistance of the mothers to intervene before they witness their child engaging in a dangerous activity was a very strong theme that came across over and over again. Parents sincerely and very strongly argued that the past behavior of their child is a good enough reason for them to keep a potential hazard uncovered by any strategy. Most of these parents said that they will act only after they witness a new interest in their child towards that danger area.

If a parent is somewhat confident in the child's abilities for handling a potentially dangerous situation, this may be yet another reason for her not to use any safety strategy to cover that danger. In these cases the parent may be relying upon the physical competence of the child.

Ms. Frattini, mother of one-year-old boy:

Q: Did he [target child] have any accidents or near misses in this room?

A: No. No, because even if he is getting on the furniture, you know, he has fallen from the furniture but he is never gotten hurt. So I guess I was lucky but he knows how to climb down, he knows how to climb down.

Or the parent may be confident about the cognitive abilities of her child in not doing a dangerous action.

Ms. Friedberg, mother of three-year-old girl/boy twins:

MOTHER: We're pretty lucky, the hot water faucet is on the other side of the sink.

Q: So they can't reach it, or it's easier for them?

A: They can't...Now he doesn't like hot water [points to child who is standing on toilet seat, leaning over sink]. So he knows not to touch hot. The bathtub, when they're taking a bath it's only sitting down, they are not allowed to stand.

Q: Where do you keep your medicine?

A: All up in there [points to cabinet above sink].

Q: But they don't climb up there?

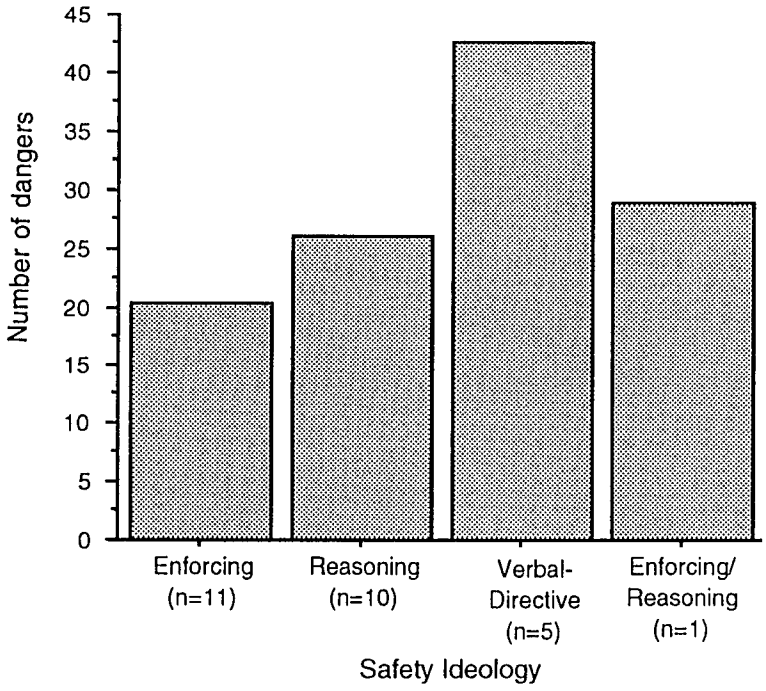
A: They don't climb, they're really pretty good [laughs]. I gotta admit, we got lucky.

Relationship between parental safety ideologies and perception of dangers

Parents who fell under different safety ideology categories differed significantly in terms of the number of dangers that they have perceived in their homes [F (3, 23) = 4.860,

$p < .0095$]. Of the four categories, *Verbal -directive* parents identified a much higher number of dangers compared to *Enforcing*, *Reasoning* and *Enforcing-reasoning* parents. Figure 45 shows the total number of dangers identified by each group.

Figure 45. Number of dangers identified throughout the year by parents with four different types of safety ideologies.



Parental beliefs regarding the reasons for injury is also related to the perception of dangers [F (1, 25) = 4.929, $p < .035$]. Parents who believe that characteristics of the child are the primary cause for injuries identified a smaller number of dangers in the home (Mean = 19) compared to parents who think injuries are the result of multiple factors including the environment (Mean = 30).

Parents' differing levels of dependence on safety strategies: Ordering the strategies in terms of their importance and significance

A closer evaluation of each family's safety strategies revealed the first, second and third strategy used by each parent. Supervision and child rules were most preferred primary strategies. Table 47 shows the frequency distribution of first, second and third strategies.

Table 47. Frequency breakdown of first, second and third safety strategies of families in the study.

Frequency Distribution for the Primary strategy

	Count	Percent
Supervision	10	37.0
Child Rules	10	37.0
Safety Devices	2	7.4
Physical Precautions	5	18.5
Total	27	100.000

Frequency Distribution for Secondary strategy

	Count	Percent
Supervision	7	25.9
Child Rules	5	18.5
Safety Devices	4	14.8
Physical Precautions	11	40.7
Total	27	100.0

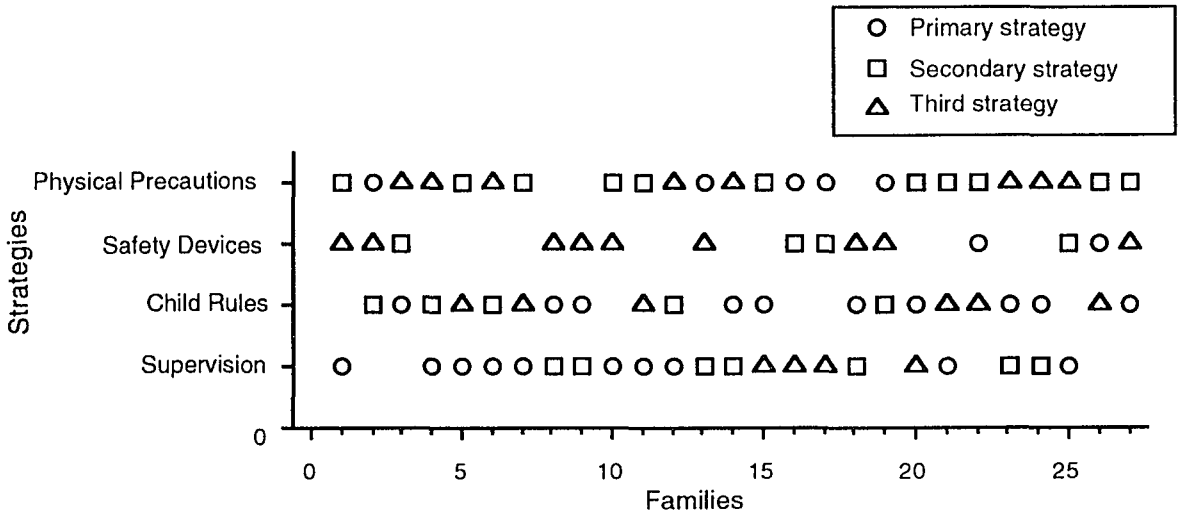
Frequency Distribution for Third strategy

	Count	Percent
Supervision	4	14.8
Child Rules	6	22.2
Safety Devices	9	33.3
Physical Precautions	8	29.6
Total	27	100.0

No strong patterns were detected among the relationships of the first three strategies within themselves. For example, parents who used supervision as the first strategy were

not found to be more likely to use safety devices as the second strategy. In that sense, most families were found to develop their unique style in the order of their safety strategies. Figure 46 shows the primary, secondary and third strategy for each of the 27 families in the sample.

Figure 46. Full distribution of the primary, secondary and third strategies for 27 families.



In terms of the relationship of the primary strategy to the secondary strategy, findings indicate that parents who use *Supervision* as the primary strategy are more likely to use *Physical precautions* as the secondary strategy. Similarly, parents who use *Child rules* as the primary strategy mostly prefer *Supervision* as the secondary strategy. Table 48 shows this relationship.

Table 48. Relationship of the primary strategy to the secondary strategy.

Primary Strategy	Secondary Strategy				
	Supervision	Child Rules	Safety Devices	Physical Precautions	Totals
Supervision	0	3	1	6	10
Child Rules	6	0	1	3	10
Safety Devices	0	0	0	2	2
Physical Precautions	1	2	2	0	5
Totals	7	5	4	11	27

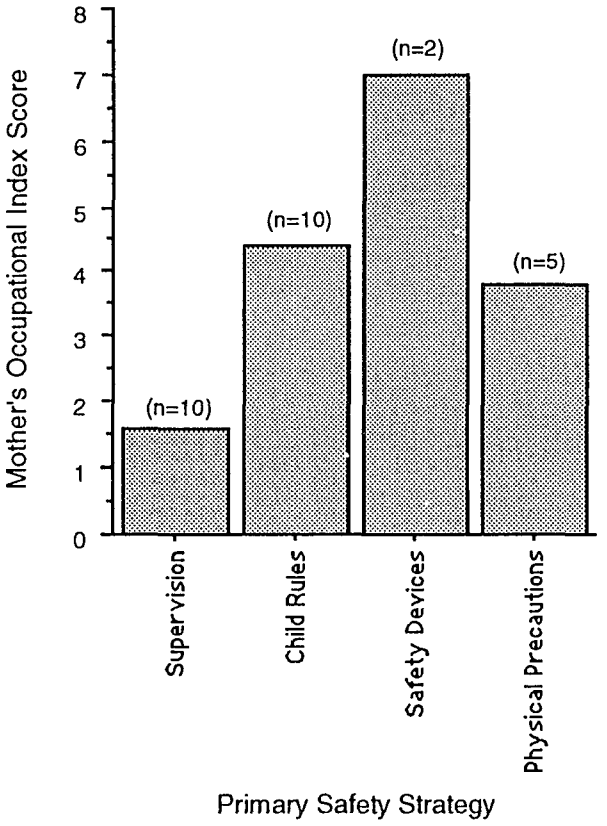
What are the demographic factors that influence the parental decision regarding primary strategies? Findings indicate that age of the child is a major factor in that decision [$\underline{X}^2$ (6, $\underline{N}$ = 27) = 10.800, $\underline{p}$ < .095]. *Child rules* were used only by the parents of two or three-year-old children as the first strategy while *Physical precautions* and *Safety devices* are preferred as the primary strategy only by parents of one and two-year-olds. *Supervision* was more age independent and used as the primary strategy by the parents of all three age categories. Table 49 shows this breakdown.

Table 49. Distribution of primary safety strategies by the age of the child

Primary Strategy	Age of the child			
	One yr olds	Two yr olds	Three yr olds	Totals
Supervision	5	2	3	10
Child Rules	0	4	6	10
Safety Devices	1	1	0	2
Physical Precautions	3	2	0	5
Totals	9	9	9	27

Mother's occupation index was another factor in determining the selection of the primary safety strategy. Parents with low occupational index scores were more likely to use *Supervision* as their primary strategy, compared to parents with higher occupational index scores [$\underline{F}$ (3, 23) = 3.159, $\underline{p}$ < .045]. Figure 47 shows the relationship of the mother's occupational index to their primary safety strategy.

Figure 47. Mother's occupational index score average by primary safety strategy.



Primary safety strategies used by parents were identified as to be independent of any child-rearing or safety ideologies of the parents.

There is an alternate way to look at the primary and secondary safety strategies of families. This is done by looking at the first and second strategy of each family and categorizing them on the basis of these two strategies. Two basic assumptions rest behind this categorization. First, the primary and secondary strategies are the most important elements of any safety system and are enough to reveal the true nature of a parent's approach to safety. Second, it is less important which strategy is the primary and which strategy is the secondary one. What is more critical is to look at how the first two strategies support and complement each other.

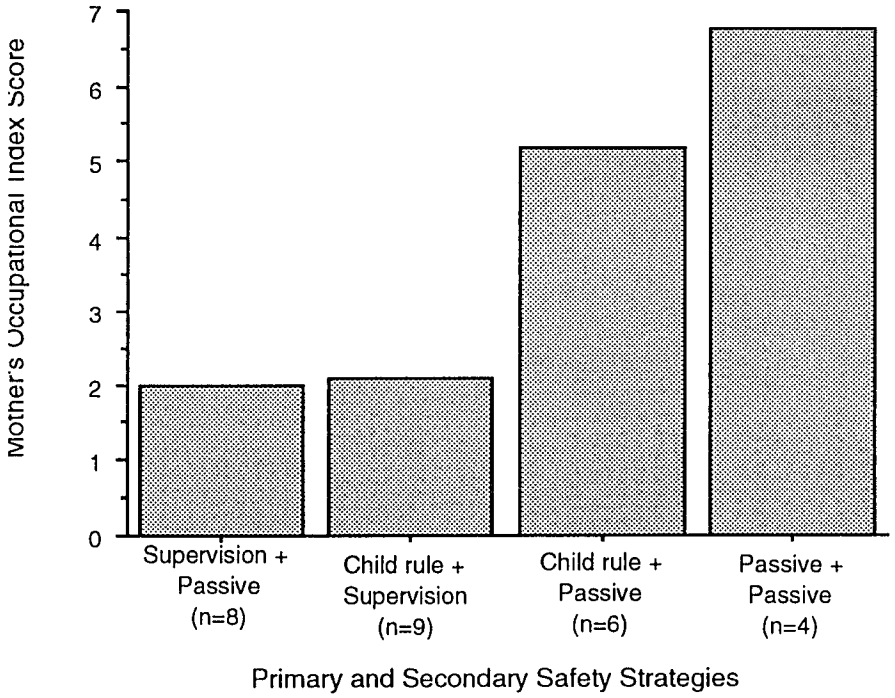
Four different approaches are detected when the families are grouped according to the first two strategies they use. These are: 1) *Supervision + Passive*, 2) *Child Rule + Passive*, 3) *Child Rule + Supervision* and 4) *Passive + Passive*. Families in the *Supervision + Passive* group use supervision and back it up with a passive strategy which is either the use of safety devices or physical precautions. *Child Rule + Passive* families also use the same approach, but instead of supervision, they use child rules as the active component of their strategy. Families grouped as *Child rule + Supervision* do not use any passive strategy as their primary or secondary strategies. Finally, *Passive + Passive* families are the ones who have safety devices and physical precautions as their first two strategies. Table 50 shows the frequency distribution of the 27 families according to their first two strategies.

Table 50. Frequency distribution of the families according to their first two strategies.

Frequency Distribution for First Two Strategies	Count	Percent
Superv+Passive	8	29.6
Child rule+Passive	6	22.2
Child rule+Supv	9	33.3
Passive+Passive	4	14.8
Total	27	100.0

Who are the parents that use these different combinations of strategies? Findings indicate that there is a very strong relationship between a mother's occupational index and the first two safety strategies they use [$F(3, 23) = 5.069$, $p < .008$]. While most parents with a low occupational index score are grouped under *Supervision + Passive* or *Child Rule + Supervision*, parents with high occupational scores fall under *Child Rule + Passive* and *Passive + Passive*. Figure 48 shows this relationship.

Figure 48. Mother's occupational index by the first two safety strategies used by parents.

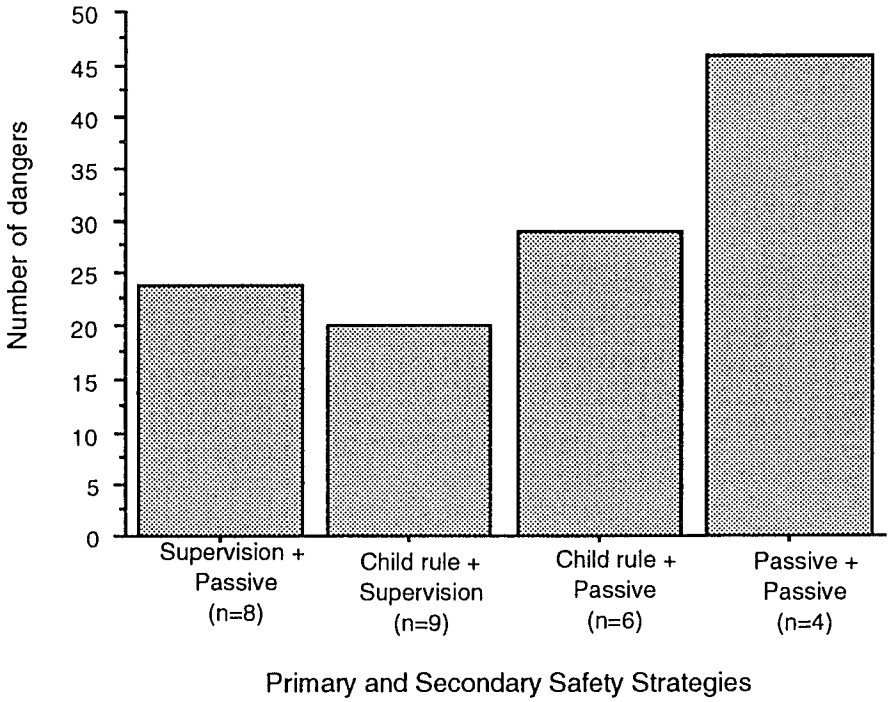


Another demographic variable related to the first two strategies used by parents is the number of adults in the family [F (3, 23) = 3.869, p< .023]. Results indicate that families with few adults are more likely to include *Supervision* as one of their first two strategies. On the other hand, families with more adults are more likely to use a combination of *Child rules*, *Safety devices* and P*hysical precautions* as their first two strategies, and avoid *Supervision* as a primary or a secondary strategy.

It appears that the primary and secondary strategies that are used are strongly related to the number of types of different dangers perceived by the parent [F (3, 23) = 6.270, p< .003]. While the four parents grouped as *Passive + Passive* have identified the largest number of different types of hazards in the home, parents grouped as *Child rule + Supervision* have identified the least number of hazards. In other words, parents who use two passive strategies as their first two choices identified many more types of dangers

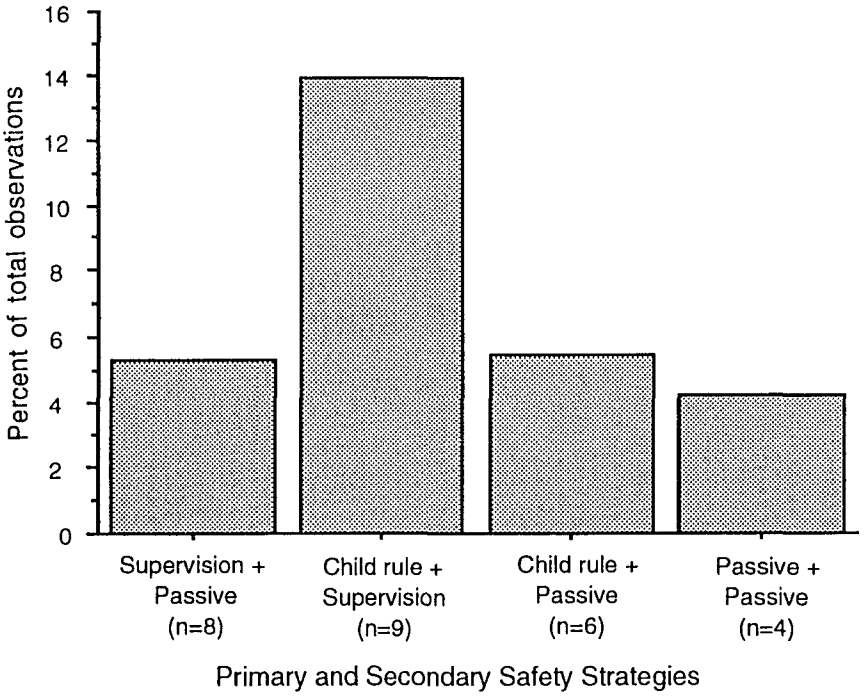
compared to parents who use two active strategies as their primary and secondary safety strategy. Figure 49 shows the relationship between the first two strategies used by parents and the number of different hazards that they have identified in the home throughout the year.

Figure 49. First two safety strategies of the parents according to the number of different types of dangers that they identified in the home.



Parents who were using the two active strategies as their first and second choice also stand out in terms of their supervision of their children. Analysis of the observational data from the videotapes show that, the children of parents who are grouped as *Child Rule + Supervision* were more frequently found to be unsupervised by the parent, in other rooms of the house, during the interviews [$F(3, 21) = 2.727$, $p < .07$]. Figure 50 shows this relationship.

Figure 50. Percentage of the observations when the child was in another room of the house without supervision by the first and second safety strategies used by the parent.



Similarly, data from the videotapes showed that parents who use two active strategies as their first and second choice, that is parents grouped as *Child Rule + Supervision* were least likely to be in contact with their child or keep them within reach, more so than any other group [$F(3, 21) = 2.420$, $p < .094$].

How do different strategies work together?

Different safety strategies like supervision, rules and devices which are used simultaneously by parents are very much dependent upon each other. In many cases these strategies reinforce each other. Supervision is always a critical strategy, since only through supervision, parents can decide if the devices that they have installed and physical

precautions that they have established are effective or not. Supervision is also necessary for the parents to evaluate the effectiveness of the child rules. They do this evaluation by supervising the child and seeing if violations do occur.

Devices and physical precautions were identified as to generate certain adult rules. These adult rules are necessary to insure that adults do follow the repeated actions required during the use of devices and physical precautions. "Always close and lock the safety gate after passing through" or "Never leave the bathroom door open" are examples of typical adult rules. Similarly, adult rules may be necessary to ensure the consistent reinforcement of the child rules. "Never let the child jump on the bed" is an example of an adult rule of this type.

Overlap of strategies

A critical finding about the relationship of safety strategies involves the "overlap" of different strategies in order to cover the same hazard. Findings indicate that most of the dangers identified by parents are covered by at least one strategy. However, while some parents use only one type of strategy to cover each danger, other parents may use more than one strategy to cover individual dangers. This "degree of overlap" is a major variable in evaluating the safety strategies of parents. For this analysis, individual diagrams showing the degree of overlap for each family is generated from the family's second (first safety) visit (See Appendix 11). The diagrams were then coded by counting the number of dangers that are covered by more than one strategy. Results indicate that, on the average 13.5% of all the dangers identified by the parent are covered by more than one strategy. While the minimum was 0% which indicates that none of the identified dangers were covered by more than one strategy, the maximum was 38.9% indicating that for that family

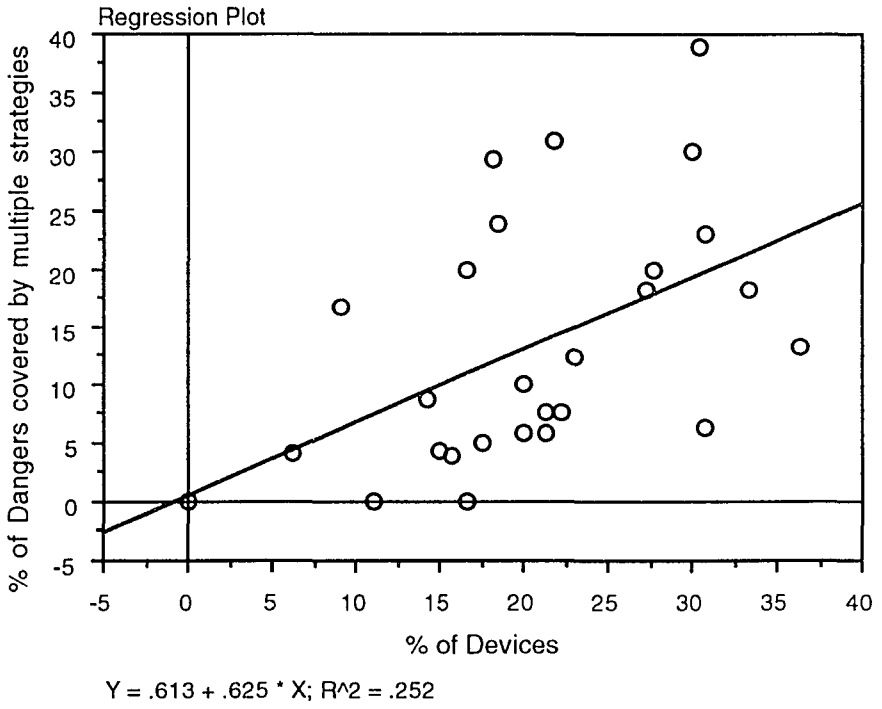
more than one third of all the dangers were covered by multiple strategies. Table 51 shows the frequency distribution of the results.

Table 51. Frequency distribution of the percent of dangers mentioned by the parent during the first safety visit, that are covered by more than one type of safety strategy.

From ( )	To (<)	Count	Percent
0	5	6	22.2
5	10	7	25.9
10	15	3	11.1
15	20	4	14.8
20	25	3	11.1
25	30	1	3.7
30	35	2	7.4
35	40	1	3.7
Total		27	100.0

When do parents feel that they have to cover a specific danger with more than a single strategy? Analysis done comparing the degree of overlap by individual strategies indicate that parents who use large number of devices are very likely to use a second strategy in addition to the device [$F(1, 25) = 8.430$, $p < .008$]. Figure 51 plots this relationship.

Figure 51. Comparison of all families' use of multiple strategies by the percentage of safety devices used in their safety management strategy during the first safety visit.



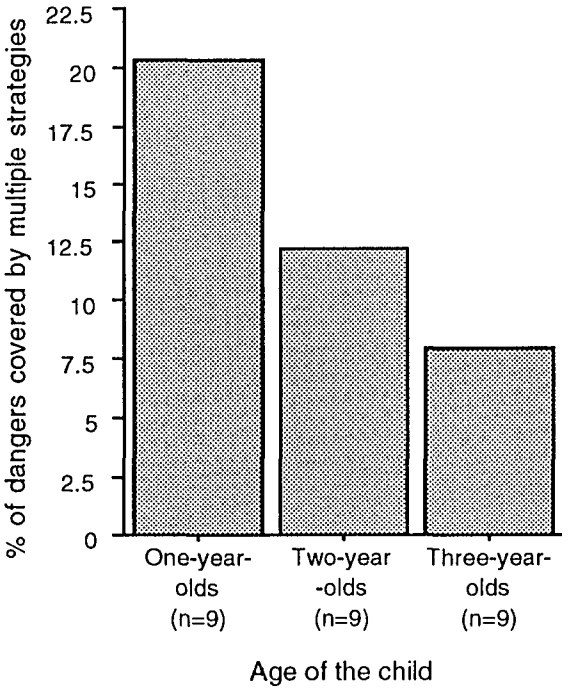
There were differences between families with middle and low SES in their use of multiple strategies [F (1, 25) = 3.762, p < .07]. Parents with middle SES were covering a higher percentage of dangers (Mean = 18) with more than one strategy, while parents with low SES were more likely to use a single strategy to cover each identified danger (Mean = 10).

Similarly, occupation and education of the mother were important variables in terms of the use of multiple strategies. Mothers with higher occupational index score were more likely to use a higher percentage of multiple strategies [F (1, 25) = 3.603, p < .07].

Parents with college diploma were also using a much higher percentage of multiple strategies to cover individual dangers, compared to parents without a college diploma (Means = 19.0% and 8.5% respectively) [F (1, 25) = 8.495, p < .008].

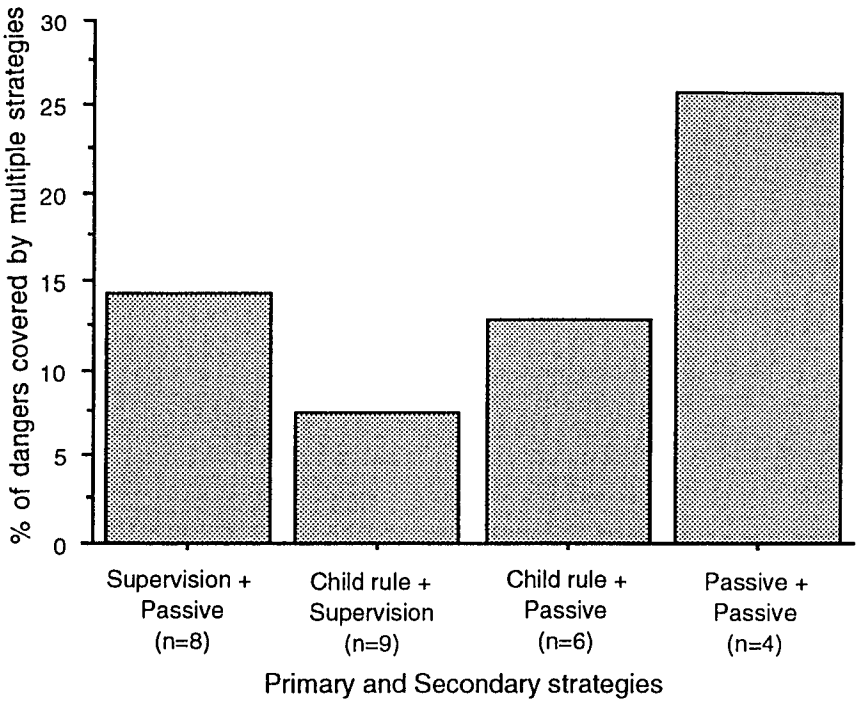
Finally, age of the child was another factor in the use of multiple strategies [F (2, 24) = 3.876, $p < .035$]. Findings indicate that as the child gets older, use of multiple strategies does diminish. Figure 52 shows this drop.

Figure 52. Use of multiple strategies by the parents to cover individual dangers by age of the child.



A relationship exists between families' use of multiple strategies and the type of strategies that they use as their first and second strategy [F (3, 23) = 3.514, $p < .031$]. Families grouped as *Child Rule + Supervision* according to their first two strategies use the least amount of overlap to cover individual hazards. However, families grouped as *Passive + Passive* are the ones who has the highest level of overlap. While more than 25% of all the dangers identified by a *Passive + Passive* parent are covered by more than one strategy, this number is less than 8% for parents in the *Child Rule + Supervision* group. Figure 53 shows this relationship.

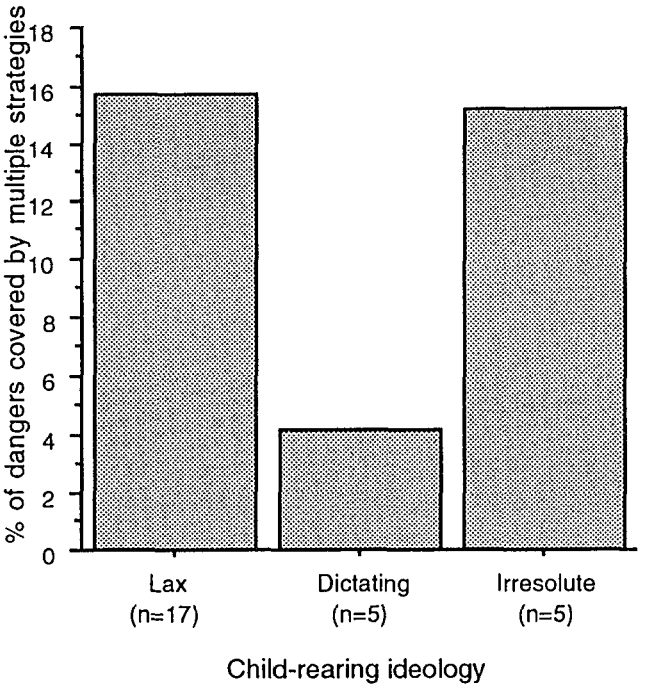
Figure 53. Percent of dangers which are covered by more than one safety strategy by the primary and secondary strategies used by parents.



Relationships between parental ideologies and the use of multiple strategies

What is the relationship between parents' child-rearing and safety ideologies and their use of multiple safety strategies. Findings indicate that *dictating* parents are less likely to use multiple strategies to cover single dangers, when compared to *lax* or *irresolute* parents $F(2, 24) = 2.637, p < .095$]. Figure 54 illustrates this relationship.

Figure 54. The use of multiple safety strategies by three groups of parents with lax, dictating and irresolute child-rearing ideologies



In terms of their safety ideologies, *Verbal-Directive* and *Enforcing-Reasoning* parents were more likely to use multiple safety strategies compared to *enforcing* or *reasoning* parents [F (3, 23) = 3.769, $p < .025$].

Discussion of findings on patterns of safety strategies

This section will look at individual findings in the previous section and attempt to explain them. An overall summary of major findings and interrelations, will be presented in the section titled *Summary of Findings and Conclusion.*

Safety Devices

Parental use of safety strategies and especially the use and misuse of safety devices documented by this study strongly suggests that, basic approaches to injury prevention, including governmental policies, need to be reassessed in the light of parental use and beliefs about safety devices. The small sample in this study indicates that parents do not heavily rely on safety devices and that safety devices are rarely part of the primary safety strategy. This is partly because parents remain uninformed about safety devices and because there is limited accessibility to commercial devices by families with low SES. The safety products that are presently available commercially are not designed or marketed as "safety systems" and only those parents inclined to do a considerable amount of research in order to identify and find different types of devices are likely to be informed of their availability and value. In addition, most of these products are overpriced and marketed primarily for middle and upper middle class parents. This study consequently identified that better educated, smaller in size middle SES families use more safety devices than low SES families that are less educated and larger in size. However, biased marketing and high pricing policies are not the only reasons why commercial safety devices were not popular among the study group. Poor design and quality of existing devices are additional factors.

Most parents thought that safety devices had limitations as an effective strategy and this point must be considered by injury prevention professionals who recommend only device-based solutions. Furthermore a series of large scale studies that investigate safety device use in the homes with young children are necessary to evaluate the effectiveness of existing products.

Basic problems related to safety devices can be summarized as follows:

i) Devices are static and are eventually overridden by a children as their cognitive and physical abilities develop.

ii) Many of the devices in the market are poorly designed and can be hazardous themselves.

iii) Once children figure out how to circumvent a device, it attracts their attention and with repeated play exposes them to the dangers that the devices were designed to shield.

iv) Devices which do require repeated action by adults are usually left in an non-operational state but yet generate a false sense of security.

v) Many devices require complex installation procedures which are beyond the capabilities of the users.

These findings by no means indicate that well designed and implemented devices cannot be effectively used in conjunction with other strategies. Findings of this research confirmed the advantages of using multiple strategies for the parents. Examples of various home-made devices encountered during this study support this conclusion and point to the need for passive interventions as well as active ones. Furthermore, the extra time gained by the parent before the child overruns even an ineffective device is greatly beneficial to parents who primarily depend on supervision and use safety devices only as a back-up strategy.

In terms of the distribution of devices among the rooms of the home, bedrooms had the highest number of different types of devices. Even though bathrooms and kitchens usually are considered much more dangerous locations, the high number of different devices in bedrooms, especially in the child's bedroom, may be the result of the parents' attempt to create a relatively safe "home-base" for the child. Moreover, unlike bathrooms and kitchens, it is possible to achieve a relatively high degree of safety in the bedrooms by only using devices and physical precautions. For these reasons, parents allow the child to stay in his or her "childproofed" bedroom without continuous supervision. Future studies

should investigate the impact of such "safe zones" within the home, on the safety management systems of families.

The relationship between parental ideologies regarding the individuality of children and the number of the devices in the home, points to the possibility that device use may be ideologically motivated. Parents who think that all children are basically alike may be more likely to consider the strategy of using devices which are generically designed with the assumption that children at certain ages have similar cognitive and physical capabilities. On the other hand, parents who believe that all children are different may prefer strategies such as *supervision* and *child rules*, since these strategies allow them the flexibility to deal with the individual characteristics of each child.

Unlike the parents who were using many devices, parents who use few devices are also the ones who are not likely to be alarmed by a developmental delay in their child. Since it is likely that parents who consider a delay in development normal do so because they believe that all children develop at their own pace, this finding reinforces the argument that beliefs regarding the individuality of children are related to safety device use. In other words, devices are usually designed with the assumption that children exposed to them will have similar cognitive and physical capabilities. Therefore, parents who are sensitive to individual differences and developmental discrepancies among children may be more likely to see the weaknesses of devices against children with different capabilities and use them more sparingly.

The differences between *Enforcing*, *Reasoning*, *Verbal*, and *Enforcing-reasoning* parents in terms of their device use may reflect a relationship between parental "confidence" and safety device use. While *Enforcing* parents had the least number of devices, *Verbal* parents had a lot of them. *Reasoning* parents were in between. It can be hypothesized that *Enforcing* parents who have the highest level of "confidence" do not feel the need to use devices as a "backup". On the other hand *Reasoning* parents who may be more aware of

their child's cognitive capabilities may use the devices until their child internalizes the rules. *Verbal* parents may feel the highest need for devices since they are aware of the inconsistent impact of their safety reinforcement strategy on their children. However this hypothesis cannot explain why *Enforcing-reasoning* parents have a high number of devices; it may be attributed to the very small number of parents who fall in that category (n=4).

Physical Precautions

Findings indicate that there is a considerable drop in the use of physical precautions as the child grows from one to three. The same drop is not seen in safety devices. The basic reason for this discrepancy may be that many parents simply do not go through the process of removing and dismantling the devices which are no longer in use or ineffective. On the other hand, such physical precautions as furniture relocation and door closing have a "temporary" quality and the home usually returns to its "normal" state when these precautions are no longer needed. Consequently, it is possible to assume that the actual use of both safety devices and physical precautions drops as children get older. For example, Kindermann (1987) showed that mothers do adjust their socializing interactions to children's growing competencies in developmental tasks. This finding underlines the importance of development and "age-appropriate" quality of different safety strategies. In general, parents seem to move from more "passive" strategies such as *devices* and *physical precautions* to more "active" strategies such as supervision and child rules during the first four years of life. If that is the case, any intervention program which focuses on only one or two of the safety strategies is bound to fail. Consequently, in order to help develop effective interventions, more safety research has to adopt the kind of developmental and ecological approach used here to investigate how parents move from one strategy to another.

The use of physical precautions was more frequent among mothers with less schooling. It is possible that less educated parents with limited access to information about safety devices and with limited economic resources to afford them and transport access to buy them try to compensate for the lack of "passive" strategies by establishing safety precautions that they can design and implement themselves. Given the above-mentioned limitations of safety devices, future research should compare the effectiveness of safety precautions with that of safety devices.

Some findings point to a relationship between child-rearing beliefs and physical precautions. Parents who are categorized as *Differentiating* were found to use fewer number of physical precautions compared to parents categorized as *Undifferentiating* or *Impartial*. Since unlike the other two groups, *Differentiating* parents are the ones who believe that all children are unique individuals and should be raised and cared for accordingly, it is possible to argue that they are likely to shy away from "passive strategies" designed to be effective for all children, and are likely to favor more individualized approaches such as rules, training or supervision. The same argument can be used to explain the trend of parents who believe that a child's character is defined at birth to use more safety precautions than parents who believe that the child's character is socially established.

The differences found in the practices of *Dictating* parents compared to *Lax* or *Irresolute* parents is no doubt a direct reflection of their beliefs. *Dictating* parents who use fewer physical precautions in their safety strategies compared to other groups are the ones who believe that a child's character and behavior are primarily shaped by social influences. These parents are also strict in their scheduling and punishment. In that sense, it is not surprising that their primary goal in their safety management system is the regulation and modification of the child's behavior. This goal is usually achieved through supervision and punishment. Such a parent may consider the modification of the physical environment as

an unnecessary and artificial intervention since it eliminates the potential to impose rules and exercise training strategies. Furthermore, those physical precautions which require repeated adult action shift the responsibility from the child to the adult, and such a shift may not be considered desirable by a *Dictating* parent.

In terms of safety ideologies of parents and the use of physical precautions, a very similar pattern emerged. *Enforcing* parents were found to use the fewest number of physical precautions, followed by *Reasoning* and *Verbal* parents. The same "confidence" argument, which holds that for strategies which involve more initiative from the child require more "passive" interventions, such as devices or physical precautions, can be repeated in this case.

Furthermore, this parallel finding between the devices and physical precautions strengthens the hypothesis that devices and physical precautions are used interchangeably by different populations with different economic and information resources.

The findings show that *Child-ascribing* parents use fewer number of safety precautions compared to *Multi-agent ascribing* parents. This finding is to be expected since *Multi-agent ascribing* parents by definition are more sensitive to the role of environmental factors in injuries. Therefore they are more likely to attempt to neutralize the dangers in the environment with a direct strategy such as physical precaution. On the other hand, parents who believe that the character of the child is the sole reason for injuries, are likely to focus primarily on the child.

@@@

Child Rules

An analysis of all the child rules revealed that rules that are designed to prevent falls and burns were the most frequently used by parents. Since children under four are

relatively unpredictable, are challenged to climb, and cannot totally understand the consequences of burns or falls, there are practical reasons for parents to focus primarily on these dangers. The developmental significance of children's climbing skills and its relevance to injuries related to falls is discussed in detail by Valsiner & Mackie (1985) This finding also reflects a realistic awareness by the parents regarding the most frequent causes of accidental death for young children in United States: according to The National Safety Council estimates, burns and falls are the number one and number four causes respectively, for accidental deaths of children under the age of four. The number two and three causes on the list, drowning and suffocation are less relevant for the population of this study because most home drownings are related to swimming pools and suffocation is a more serious danger for younger children under one-year-old.

Similarly the room-by-room distribution of the child rules also reflect, consciously or not, the accident statistics for children under five where the place of injuries in the home are distributed more or less equally between bedrooms (18%), living rooms (20%), and kitchens (21%) (Hart & Iltus, 1985). The only discrepancy is in the bathrooms where 7% of all the actual injuries take place. By comparison, among the parents in this study, 17% of all the child rules were devoted to bathrooms, probably because of the higher severity of the injuries that occur there.

Developmentally, we should expect big differences between one-year-olds and three-year-olds in their ability to understand and follow rules. Existing research shows that in children, awareness of confidence and pride reactions to success start after 20 months of age (Heckhausen, 1988). Wurtele, Currier, Gillispie, & Franklin (1991) argue that, the youngest age for teaching children safety skills is three and a half years. Yet the findings in this study about how much parents rely upon child rules for three age groups are not strikingly different. There is a significant increase in the percent of dangers covered by rules between the ages one and two (45% versus 60%). However, the increase is only 3%

between two and three-year olds. This indicates that by the end of the third year of life, parents are quite convinced that the children can understand and follow the rules. Even so, for one-year-olds (children in their second year of life) *child rules* do apply to 45% of all the dangers mentioned by the parent. At first, this may look like a very high percentage. However one has to consider the following: the 45% of the dangers covered by child rules are likely to be covered by other strategies. In other words parents may be using *child rules* in early ages as a secondary strategy, expecting that eventually these rules will be internalized by the child. In that sense, it can be argued that it is never too early to include child rules in a safety system, since this encourages the parents to start working on the training of the child for safe behavior. This finding may help explain why many home-based intervention programs were more successful in reducing injury risk compared to wider-based educational campaigns. For example, Wurtele, Currier, Gillispie, & Franklin (1991) showed that an in-home, parent-taught safety program proved to be very effective for young children.

The fact that there are more child rules for girls compared to boys can be explained by the high frequency of traditional gender perceptions by many parents. Overall these perceptions result in a more restrictive strategy toward girls, compared to boys. This finding is consistent with past research that showed mothers verbalize more to girls (Moss, Robson, & Pederson, 1969), allow them to be more dependent (Droppleman & Schaefer, 1963), while they give boys more independence (Barry, Bacon, & Child, 1957) and encourage the intellectual curiosity of the boys more than girls (Lynn & Sawrey, 1962).

The Critical Incident which is defined as the first time a parent witnesses a dangerous situation not perceived before, plays an important role in the generation of child rules. This finding implies that, like child rules, many of the safety strategies are not previously "thought-out" but are developed as a "reaction" to the unexpected behavior of the child. In general, the parents' failure to anticipate a developing child's behavior was a phenomenon

repeatedly encountered in this study and an indication that the education of the parents about the critical phases of child development and behavior should constitute an important component of any safety education program.

The finding that *Dictating* parents use more child rules than *Lax* or *Irresolute* parents is in line with previous discussions about the general characteristics of the *Dictating* parents. In order to exercise their ideology in training the child in the "right" ways, *Dictating* parents need to generate a lot of rules regarding "correct" and "incorrect" forms of behavior including "safe" and "unsafe" behaviors.

Heavy reliance on rules by parents with *Strict* and *Average* daily schedules compared to those with *Loose* or *Very Loose* daily schedules is another indication of the symptomatic relationship that strict methods and schedules require. Similarly, parents who use corporal punishment strategies employ a larger number of safety rules than parents who prefer other forms of disciplining. These findings are not surprising since, in order for parents to adopt *Strict*, *Dictating*, and *Corporal* parenting styles, they need to generate a series of rules for the child. These strategies can not exist without an extensive set of rules. Only when these rules are broken, do parents have the opportunity to exercise the "strict" attitude or the "corporal" punishment. Furthermore findings indicate that parents who rely on strict rule systems in general child-rearing issues will also be likely to use a large number of rules for the management of safety in the home.

Supervision

There was a gradual transition in the "range" of children in terms of their physical proximity to their primary caretaker. Observational data indicate that while parents kept one-year-olds in contact or within reach 63% of the time during the interviews, the percentage was 53% for two-year-olds and 35% for three-year-olds. Here there are at least

two factors operating: the parents' willingness to allow older children more mobility, and the older children's ability and curiosity to explore their environment. Even under supervision keeping the young children outside the arm's reach may have some risks. Garling, Garling, & Mauritzson-Sandberg (1989a) showed that even while supervising, most parents can only assess the danger after their child starts to get involved in the injury-causing event. Mothers should also have this knowledge from their own experiences and may be keeping their young children close-by for that reason.

An additional factor why parents were keeping the younger children close-by may be that one-year-olds have limited mobility and require constant attention in such activities as feeding, changing and rocking, these activities which were frequently carried on by parents during the interviews.

In terms of their spontaneous and unsupervised access to different areas of the home children on average were more free from direct supervision in the fourth year of life. Results indicate that three-year-old children are much more frequently allowed to be alone in different rooms of the home than one or two-year-olds.

In terms of gender differences, parents were found to be "clinging" to their one-year-old girls more than their one-year-old boys. This difference disappears for two and three-year-olds. This is yet another finding where parents show a more restrictive attitude towards their young girls.

Similarly, in terms of having access to the other parts of the home, results show that for one-year-old boys and girls there was no difference in treatment. However, at ages two and three, boys are given more unsupervised access to different areas of the home, and the reason for this phenomena is apparently that parental attitudes towards gender generally become more evident as children grow up. This finding is consistent with past research. Many studies show that mothers allow greater permissiveness toward boys than girls

(Lambert, Yackley & Hein, 1971; Rothbart & Maccoby, 1966, Tauber, 1979). The same pattern is repeated in the differences in injury statistics between boys and girls in these age groups. While boys and girls have similar number of injuries at the age of one, the gap widens as they grow up. By the age of four, boys have four times as many more injuries as girls (Matheny, 1988). There are strong indications that the consequence of parental attitudes towards gender is the discrepancy in the injury rates of boys and girls.

The relationship between the number of children in the home and the degree of unsupervised access to other rooms raises the issue of the role of older siblings in the family. Findings indicate that the target child in families with larger number of children is observed to be alone and without adult supervision in other rooms of the home much more frequently than in families with fewer children. Although the reason for this was not specifically investigated, the following three factors were operating in our sample of families, and there may be more: a) parents allow children in other rooms by "delegating" the supervision to an older sibling, b) parents allow younger children in different rooms on the assumption that one of the older children will be around to look after them, and c) parents in families with many children encounter supervision and control problems and are usually unable to prevent a younger child from wandering off to different parts of the home. The effect of siblings on parental supervision strategies is an important area for further research.

The results indicate that supervision of the child in the home takes many different forms. It can be visual and auditory. It can be carried on by the parent or other adult or a sibling. It can also be formal or informal. Continuous protective supervision of the child at all times is of course impossible to achieve and this puts parents who claim that their only safety strategy is supervision, at a considerable disadvantage. Research that looked at the etiology of home injuries showed that breakdown of supervision immediately preceding the injurious event was very common. In the study of 113 preschool children who had injuries

Meyer, Roelofs, Bluestone & Redmond (1963) found that one fourth of the children were completely alone at the time of the injury.

Enforcing parents were found to be the group which allowed greatest access to their children during the interviews. This result can be explained by the hypothesis that these parents have a conviction about the effectiveness of their style. By strongly enforcing their rules, *Enforcing* parents may be convinced that their child will continue to obey these rules, even when not under supervision. Therefore, *Enforcing* parents are likely to see no problems in letting their children be in other parts of the home without adult supervision.

Zones of accessibility in the home

In terms of overall accessibility of the child to different rooms of the home (as defined by mother's rules) three-year-olds were found to be allowed to a larger range (80% of all the rooms) compared to one or two-year olds (60% of all the rooms). The similar results for one and two-year-olds indicates that parents are making decisions more on the basis of cognitive ability than on the physical ability of the child. Thus even though, on average, a two-year-old is physically much more capable than a one year old in terms of mobility, and especially in walking and climbing, the 40 percent of rooms in the home considered dangerous for a one-year-old are also considered dangerous for a two-year-old as well.

Higher SES and increase in mother's years of formal education also have a bearing on the access given to the child. Educated parents are more likely to value the child's physical experiences and ability to explore the environment, and therefore they may put fewer restrictions on their children in terms of access to the spaces in the home. In addition to education the role of ideology becomes clearer with the finding that all *Reasoning* parents (*Reasoning* and *Enforcing-reasoning*) allow a larger accessibility to their children. On the other hand, *Reasoning* parents are also the group who live in homes with more installed

safety devices and they have fewer children. Because of that, they are under less pressure and the demand on their time to supervise the child is lower. Therefore, they can give more access to the children without compromising the child's safety. This argument is reinforced by the finding that in families with many children, less access is given to the target child. A larger number of siblings in the home not only increase the load on the mother but also generate such non safety issues as inter-sibling rivalry. In summary, even though some older siblings can help the parent in supervising younger children, it can be hypothesized that the dynamics of the family with many children are so complex that the parent may feel compelled to limit unsupervised access to some rooms.

The relationship between birth order and zones of accessibility indicates that parents may change their attitudes in terms of rules and space with every new child. Findings indicate that parents give a much greater access to a second or a third child compared to a single or first child. It should be noted that the age of the child may be significant in this result.

Parental perception of dangers in the home

The number of dangers perceived by the parents in the home is a critical variable for this research. Since most of the strategies were designed to "cover" the identified dangers, this variable was very closely related to all of the safety strategies used by the parents.

When the three areas that concern parents most (poisonings, falls and burns) are compared with the existing child mortality statistics, a close relationship between the two becomes apparent. If all the causes that occur outside the home, such as pedestrian and motor vehicle accidents are excluded, fires and burns, falls and poisonings are three of the four most frequent causes of death for this age group in the United States. (Children's Safety Network, 1991). The fourth cause, which is not mentioned frequently by the

parents is drownings, and it is possible to argue that most drownings at this age are due to swimming pools and not applicable for the sample in this study. It is likely that even though most of the parents interviewed may not be aware of child injury statistics, they were able to pinpoint the areas where real dangers lie, by using their "common sense"

In a similar fashion, the distribution of parents' concerns to different rooms of the home is similar to the results of a study done by the Tokuhata (1972) where the distribution of actual injuries according to different rooms of the home was studied. The only difference was the additional sensitivity shown by the parents in this study towards the potential dangers in the bedrooms. More dangers are identified by the parents in bedrooms (32%) compared to any other location in the home. This can be explained by the fact that bedrooms and especially the child's own bedroom is usually the only location where most parents allow their child to spend time unsupervised. To be able to do this, the parent has to make sure that all the dangers in the child's bedroom are identified and covered satisfactorily. Findings of this study indicate that bedrooms were the number one area in the home where the highest number of different types of safety devices were installed (43% of all the devices encountered in the study were installed in bedrooms compared to 18% living rooms, which was the second most heavily device-installed room in the home). The same sensitivity is usually not shown to other rooms of the home where parents exercise a larger degree of visual supervision.

Findings reveal that parents see the second year of life more risky than third or forth. This is to be expected since during the second year of life the child is a developmental stage where the child starts to walk and climb but not proficiently. His cognitive level at this age is also very limited; he has no real concept of danger and cannot understand or follow rules. Findings show that number of dangers identified by the parents of two-year-olds and three-year-olds is approximately the same, but this does not necessarily indicate that there are no differences between these two age categories. As a matter of fact, a reciprocal

relationship exists between the physical capabilities of children and their cognitive development in terms of safety. A two-year-old is likely to be more limited in her physical and cognitive level and consequently more likely to expose herself to some dangers. She may for example, still be unable to open the refrigerator or climb on the kitchen counter, but a three-year old, on the other hand, is physically and cognitively capable of both. From this perspective, it can be argued that a two year old, is at less risk than a three-year-old. However, a three-year-old is capable of understanding dangers and is consequently more likely to follow and obey parental safety rules than a child one year younger. Therefore, it is possible to argue that a two-year-old is more at risk compared to a three-year-old. This reciprocity of risk may help explain the similarity in the number of dangers identified by the parents of two-year-olds and three-year-olds.

Parents from two-parent families identified a larger number of dangers compared to single parents. Even though all the single parents in the sample were from families with low SES, a separate analysis done by SES did not reveal any differences between low and middle SES families in terms of the number of dangers identified by the parents from these families, contradicting Matheny's argument that "the working class and the poor assess risk less accurately" (Matheny, 1988, p. 110) This implies that having a second parent does affect the perception of dangers. As indicated earlier, this may be the result of the increased level of communication and discussion that goes on between parents in a two-parent family. Parents tend to talk about their child in almost all families. With a young child it is inevitable that discussion will include dangers, near misses and safety issues. Parents will share with each other their experiences with the child and such a communication may contribute to an increased safety awareness for both parents.

The relationship identified between the perception of dangers and safety strategies was one of the strongest relationships found in the study. It is clear that as parents identify different forms of danger in the home they adjust, improve, and expand their safety

strategies in order to neutralize these dangers. If this hypothesis is correct, the first step of any effective injury intervention strategy should focus on increasing the awareness of the parents to potential dangers in the home.

As expected, parental safety ideologies were found to be closely related to the total number of different hazards identified by the parents throughout the year. Mothers categorized as *Verbal-Directive* identified a larger number of dangers than parents who are labeled as *Enforcing*, *Reasoning*, or *Enforcing-Reasoning*. One reason for this difference is revealed by a close examination of the safety management style of the *Verbal-Directive* parents who keep saying "no" repeatedly to every potentially dangerous behavior of the child without systematic punishment and/or reasoning for the hazard. Since this approach is likely to delay the child's learning of safe behavior, it can be hypothesized that a *Verbal-Directive* parent actually has to deal with a larger number of child hazards in the home. In other words, while parents, other than Verbal-Directive ones have safety ideologies that allow a more systematic reduction of dangers through punishment and training, the unsystematic approach of *Verbal-Directive* parents may result in a high-risk environment for their children. It should be noted that even if this argument is correct, such an unsystematic approach does not necessarily diminish the ability of *Verbal-Directive* parents to identify the high-risk situation and dangers associated with it. It is also possible to argue that parents who consistently interfere with their child's behavior by saying "no" repeatedly are more likely to be "sensitized" to many of the dangers in the home, since they are consistently reminded about these dangers as a result of their interactions with their children.

The relationship between parental beliefs regarding the cause of injuries and her/his ability to identify the range of hazards within the home is critical. It can be hypothesized that the more the parent focuses on the child as the sole reason for injuries, the more she is likely to divert her attention from other potential causes such as the physical environment

and the social factors. Being able to identify the hazards is the first and foremost requirement for any parent who is in the process of developing an effective safety management strategy. In that sense, parents who are ideologically equipped to consider multiple factors that are in play will be at an advantage compared to parents who limit their efforts to understanding and changing the behavior of the child.

Parents' differing levels of dependence on safety strategies

Analysis of the strategies that parents primarily depend on reveals that, while 10 parents of 27 depend on *Supervision* as their first strategy, another 10 parents depend primarily on *Child Rules*. This finding points out the importance of "Active" strategies in an average family's SMS. Research shows that mothers' perceptions of injury risk to their children decrease with the degree of supervision they execute (Garling, Garling, & Mauritzson-Sandberg, 1989b) While it is true that the middle and low SES families who participated in this study are more likely to use "active" strategies rather than devices and physical precautions, when it comes to the ordering of strategies in terms of relative importance, it is expected that "active" strategies will take precedence over "passive" strategies, regardless of the SES of the family. The first reason for this is the relationship between the primary strategy and the development of the child. Strategies such as devices and physical precautions are "static" in nature and cannot cope with the developing competencies of the child. Furthermore, most parents are aware that the safety strategies they adopt in the early ages do eventually lead to a phase where children start to manage their own safety. 'Active" strategies have this unique potential for "teaching" the child about dangers. Only through them, the child learns the correct and safe forms of behavior.

The parents' selection of primary and secondary safety strategies indicates that a logical and deliberate pattern exists between these two strategies. One relationship is that

the majority of parents who prefer supervision as the primary strategy use physical precautions as the secondary one. This can be explained as an effort by the parents to compensate for the weaknesses of *Supervision* as a safety strategy. Parents must be aware that it is not possible to supervise a child on a continuous basis. Furthermore, for some hazards *Supervision* may not be the most effective strategy. An example of such an hazard is a boiling pot in the front burner of a range. In a situation like that, even while exercising supervision, a parent's reaction time may not be fast enough to prevent an injury. Considering these two basic deficiencies of *Supervision* as a primary safety strategy, parents are likely to use a secondary strategy such as *Physical precautions* as a form of backup. The important distinction between *Supervision* and the use of *Physical precautions* is while the former is more vulnerable to lapses in human concentration and can be effected by the activity and the psychological mood of the parent, the latter does not require continuous attention of the parent.

The second finding that points to the relationship between the primary safety strategy and the secondary one is that the parents who use *Child rules* as the primary strategy are more likely to use *Supervision* as the secondary strategy. Every parent who is rule-dependent needs to be aware how much and which of her rules are being followed by the child. This requires extensive supervision of the child, especially in situations where a lot of child rules do apply. Since any child's ability and willingness to follow the rules will change from rule to rule, parents need to supervise the behavior of the child and assess which rules are working and which rules are not. Periodic monitoring of the child's behavior is also necessary for the parents in order to make the necessary adjustments to each rule and to make the decision of a rule is finally internalized by the child. In this sense, *Child rules* and *Supervision* are two safety strategies that complement each other.

While parents of one-year-olds did not use *Child rules* as the primary strategy, parents of two and three-year-olds did not use *Safety devices* or *Physical precautions* as

their primary safety strategy. *Supervision* , however, was used as the primary strategy by parents in all three age categories. It is clear that the parents think that the limited cognitive capabilities of one-year-olds make *Child rules* an inappropriate primary strategy for this age group. Similarly, parents of three-year-olds try to avoid dependence on *Safety devices* or *Physical precautions* because of the belief that at that age children should start to learn about most hazards and be able to act safely independent of devices and precautions.

The only SES indicator found to be related to the selected primary safety strategy was the mother's occupational index. Mothers with lower occupational index scores were found more likely to use *Supervision* as their primary safety strategy. The same pattern repeated itself when not only the primary strategy, but the first two strategies of the parents were included in the analysis. It should be noted that these findings may be a consequence of the manner in which the occupational index is calculated, rather than a representation of a relationship between the primary strategy and SES. Hollingshead's Occupational Index Score (Hollingshead, 1975) used in this study does not assign homemakers any score other than zero. As a result of this, it is possible that all the non-working mothers ended up with a very low Occupational Index Score. Since these parents are at home most of the time with their child, it is easier and feasible for them to use *Supervision* as a primary or sometimes secondary safety strategy, compared to mothers who work full-time, part-time or do home-based work.

The relationship between the number of adults in the home and parents' selection of their first two strategies shows that parents in families with many adults are less likely to choose supervision as one of their first two strategies. An hypothesis that can be generated from this finding is that supervision is harder in multi-adult families.. It is inevitable that there will be more activity and more confusion in families with many adults. Furthermore, when supervision is used, rules need to be generated among the adults so that it is clear when each adult is responsible from the child. This requires a high level of coordination

and communication among the adults which is usually very hard to establish. These findings may help explain why children from families with many adults have higher injury rates (Yossi, 1988).

A clear pattern started to emerge from the analysis of the first two safety strategies that parents use. Two types of parents, those that use two active strategies and two passive strategies stand out as different from parents who use a combination of active and a passive strategies as their primary and secondary safety strategies. Parents who use two active strategies and are grouped as *Child rule + supervision* were able to identify fewer types of hazards than parents in any other group. They had the tendency to protect a child from each hazard with only one type of strategy, meaning that they had the least amount of overlap in their strategies. They also provided less supervision of their children during the interviews than all other parents in other groups. On the other hand, parents who used two passive strategies as their primary and secondary strategy and are grouped as *Passive + passive* were at the opposite end of the continuum. They identified the highest number of dangers in the home, had the largest degree of overlap in their strategies and during the interviews, were observed to have the highest supervision rate.

It seems that parents who primarily depend on two active strategies expose their children to the highest amount of risk in terms of injury. There may be two factors that are at work here. The first is the possibility that these parents are neither knowledgeable nor sensitive to potential dangers in the home. The second factor is that active strategies require a big commitment on the part of the parent and are susceptible to unexpected and extraordinary events in the course of a day. The arrival of two interviewers to the home is such an event, and this may explain why these parents frequently failed to supervise their children during the interviews.

Parents who use two passive strategies as their primary and secondary safety strategy seem to belong to a low-risk group. Even though the limitations of passive strategies are

apparent and were discussed in-depth in this study, there is every indication that these parents are using their third and fourth strategies as effectively as the first two. The high degree of supervision during the interviews and a large overlap between strategies in covering individual hazards point to this possibility. Since these parents were also the ones who had identified the largest number of dangers in the home, compared to other groups, it may be safe to argue that in addition to looking at the first and second strategies in isolation, future research should focus on all four strategies and their role in the SMS simultaneously. The small number of parents involved makes it impossible for this study to do meaningful statistical analysis involving all four strategies simultaneously.

Using more than one strategy: How do safety strategies overlap and reinforce each other?

For parents who are aware of the problems in relying totally on a single strategy to cover a critical hazard, it is natural to have a safety system where critical and dangerous hazards are covered with more than one strategy. Findings indicate that families in this study range from 0% overlap, which indicates that every identified hazard is covered by only one strategy, to families where 39% of the hazards are covered with more than one safety strategy. What are the implications of using multiple strategies to cover key hazards? Findings indicate that while families with low SES and without a college diploma are more likely to depend on a single strategy per hazard, better educated middle SES families do more frequently use multiple strategies to cover individual hazards. Undoubtedly, this gives a clear advantage to better educated middle SES parents in dealing with safety in the home. Financial resources of a family can effect this finding, by allowing middle SES families to purchase more safety devices. Since safety devices are usually reinforced by *Supervision* or *Child rules*, it is expected that families with better financial resources have more overlapping strategies that involve devices together with any other strategy. This argument is reinforced by the finding that families who have many overlapping strategies

are also the ones with a large number of safety devices. However, there are good reasons to suspect that the parental use of overlapping multiple strategies is a very complex issue and cannot be explained simply by parental education or financial resources. For example, parents who are categorized as *Dictating* by their child-rearing ideologies are more likely to use single strategies to cover each hazard. This relationship between the parental ideology and use of multiple strategies can be explained by the self-confidence of the *Dictating* parents who use strict scheduling and punishment methods. Since *Child Rules* are the most preferred strategy for *Dictating* parents and their main goal is the "proper" training of the child, it is likely that they will avoid using secondary strategies such as *Safety devices* or *Physical precautions* by thinking that physical control of the environment may interfere with the learning process of the child.

Age of the child also emerged as an important variable in determining the use of multiple strategies by the parents. While parents of one-year-olds had the highest number of overlapping strategies, this number was lower for two-year-olds and lowest for three-year-olds. It is very likely that the unpredictability of a one-year-old combined with the impossibility of continuous supervision forces their parents to use more than one strategy to cover key dangers. On the other hand, for three-year-olds who can understand and follow the rules, parents are likely to think that a back-up strategy such as *Physical precautions* or continuous *Supervision* is not necessary, and therefore choose not to use it as their secondary strategy.

A

PARENTAL IDEOLOGIES IN THE HOME SAFETY MANAGEMENT OF ONE TO FOUR-YEAR-OLD CHILDREN

by

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The behavioral and personality characteristics of the child

From the interviews with parents, it is clear that the internal dynamics of the SMS are related to the behavior and personality characteristics of the child. However, it is also clear that the effect of the child over the SMS is dialectical in nature. In other words, most parents are very much aware of the dynamic relationship between their child's personality and their own actions and therefore, have developed strategies in order to manage their children safely. This chapter will investigate the behavior and personality characteristics of the child with respect to the SMS of the family.

During the research design phase, it was assumed that the most critical characteristics of the child in terms of safety would be his/her level of activity and their ability to follow rules and parental directives.

In the first interview, parents were asked to describe the personality characteristics of their children and their answers were analyzed and coded (See Appendix 5). Since personality characteristics are assumed to help or hinder the parental management of safety, the coded characteristics are used to generate an overall score for each child. Specifically, those children who were described as interpersonally sensitive, conforming to social norms, personally well-adjusted, manageable, not very active, mature and non risk-takers were hypothesized to have a personality helpful to parents in safety management. Conversely, children with the opposite personality characteristics were hypothesized to have the opposite effect. On the basis of these hypotheses, the children in this sample were divided into three groups. The groups were: 1) children whose personality characteristics put them less at-risk with respect to safety, 2) children whose personality characteristics put them more at-risk with respect to safety and 3) children considered average in terms of

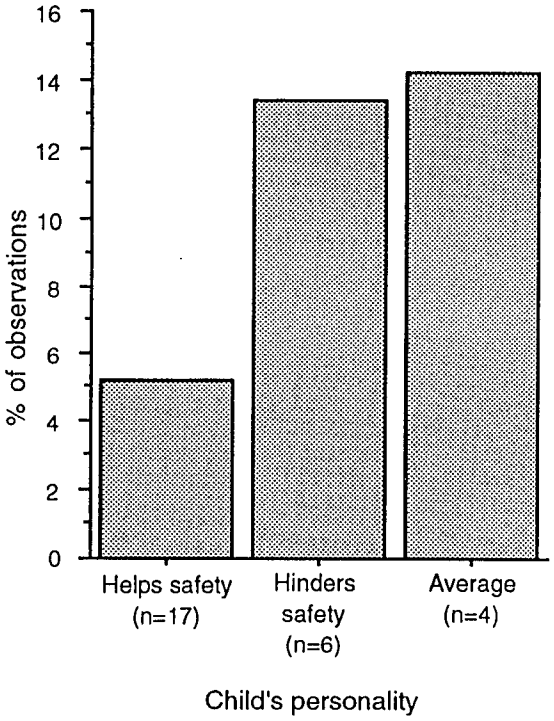
their personality with respect to safety. A frequency distribution of these three groups is shown in Table 52.

Table 52. Frequency breakdown of the children in the sample according to their personality characteristics.

Personality of the child	Count	Percent
helps safety	17	62.9
hinders safety	6	22.2
average	4	14.8
Total	27	100.0

The only finding that was related to this personality grouping was the access of the child to unsupervised parts of the home. Analysis of the data from the videotapes indicates that, children who are categorized as having personality characteristics that help safety, were observed in other rooms of the home without parental supervision less often than the other two groups [F (2, 22) = 4.024 $p < .03$]. Figure 55 shows the respective means for three groups.

Figure 55. Percentage of the times children are located in other rooms of the home, without supervision, for children in three different personality categories.



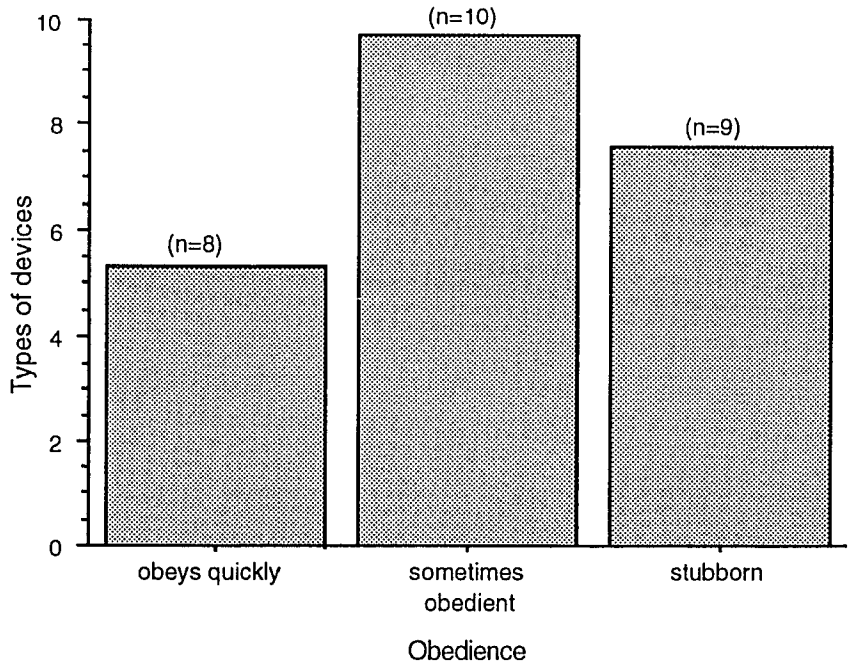
Another hypothesis regarding the personality of children and safety was the ease with which children obeyed the parents' wishes. During the first interview, parents were asked if their children obeyed fairly quickly or if they were stubborn (See Appendix 5). Children in the sample have consequently been divided into three groups according to the parent's answer to this question. These three groups are: 1) the children who usually obey the parent very quickly, 2) children who sometimes obey but are sometimes are stubborn, and 3) children who are usually stubborn and do not obey the parent. Table 53 shows the frequency distribution of these three groups.

Table 53. Frequency distribution of the children according to their obedience to their parents.

Obedience	Count	Percent
obeys quickly	8	29.6
sometimes obedient	10	37.0
stubborn	9	33.3
Total	27	100.0

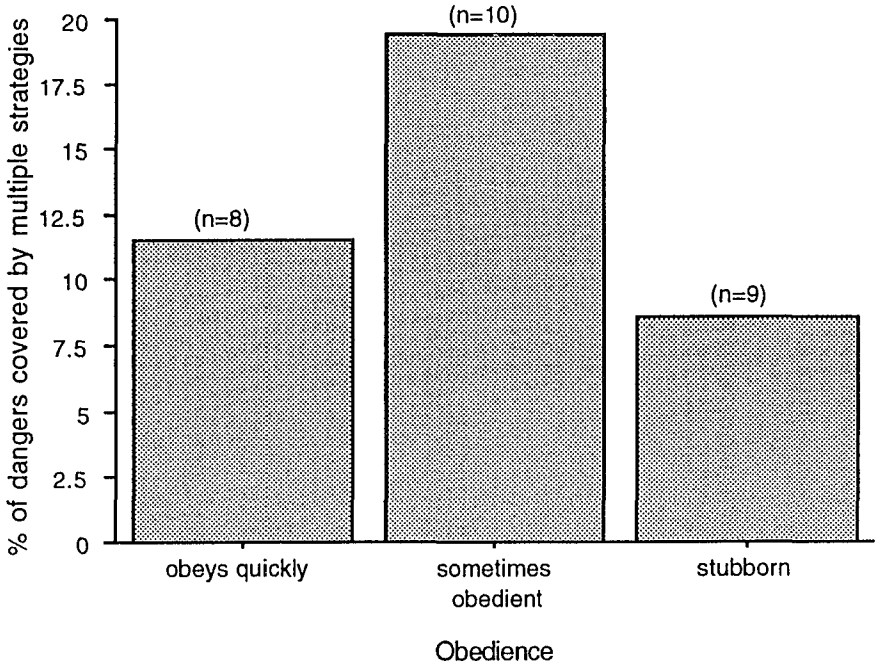
Analyses done on these groupings revealed some interesting relationships The least number of safety device use was encountered in the families of children who fall in the *Sometimes obedient* category [F (2, 24) = 3.437 p < .05]. Figure 56 plots the mean number of different types of devices used by the parents with children who fall under three obedience categories.

Figure 56. Mean number of different types of devices used by the parents with children who fall under three obedience categories.



Parental use of multiple strategies to cover individual dangers is another variable related to child obedience. [F (2, 24) = 3.019 p < .07]. In this case, parents of *Stubborn* children are less likely to use multiple strategies for individual hazards. The highest multiple coverage is seen in the group described as *Sometimes obedient.* Figure 57 shows the means for the percentage of hazards covered by more than one strategy.

Figure 57. Percentage of hazards covered by more than one strategy by the obedience of the child.



Despite attempts to group children, personality and behavior characteristics cannot be reduced to two dimensions and therefore, a more open-ended discussion of behavior patterns and personality traits is necessary. Most parents are aware of this diversity and, as the results indicate, usually show the necessary flexibility in child-rearing strategies.

Ms. Bassinger, mother of two-year-old boy:

Q: Do you think all kids should be raised in the same ways or not?

A: No. Umm...I think it depends on the kind of kid you have, how you raise. You have to learn from the way they are. You can't just do things the way you want. You have to...

Q: Sort of you have to adjust the way the kid is?

A: Yeah.

From the parents' depiction of routine daily activities, it was clear that children differed drastically from each other. In turn, the ways that parents dealt with similar situations showed great variation. This point can be illustrated by comparing the "bedtime scenarios" of three different children in the study. The following example is a typical case where the child almost totally controls the situation.

Ms. Morrison, mother of one year old girl:

Q: How do you get your child to bed?

A: I really never got her to get to bed. It is really difficult. It is up to her. I try, 9 o'clock, try to set up a pattern, try to make the house quieter. We sit in the room, try to read, make it quiet, no distractions...I tell her father don't run up and down the stairs, don't make the TV loud...and try to make her go to sleep but of course that did not work too good because she hates the idea of going to sleep, sometimes she eventually gets very tired, I give her a bottle, sometimes that helps. Then I shut the light in her room. No night light, and hope that she would go to sleep...If not I change the tone of my voice, pretend that I am really mad at her, but sometimes they try everything not to go to sleep and I am not really angry at her but I try to sound like that. I try very hard between nine and ten, but she may go to sleep 10, 11, 12, 1, whatever.

On the other hand, a more cooperative child and a different parental strategy brought about a more harmonious scenario.

Ms. Hallman, mother of three-year-old boy:

Q: How do you get your child to bed?

A: We alternate nights reading to him, so one night I'll read to him and next night my husband will. And he runs in to kiss goodnight the parent who did not read to him. He is then put into bed. He has one of those silly talking big bird things. So big bird then tells him a story as he goes to sleep and he is asleep usually by the end of the first story.

It should be noted, however, that in some families, the child is not always the most important or dominant factor. Again, using bedtime as the example, some parents to use absolute authority to have the last word.

Ms. Vanderpelt, mother of three-year-old boy/girl twins

Q: How do you get them [The children] to go to bed?

A: Go to sleep. That's it. No games. Go to bed. It's good night.

Q: And they follow?

A: They have no choice. Yes, they have no choice.

Though this strategy seems to work for an event such as bedtime which has a fixed time and location, the effectiveness of such a harsh strategy can be questionable.

Consistency of parental strategies and children's behavior

Regardless of their ideologies, parents typically adjust and sometimes completely change their practices to accommodate a crying child but these adjustments and changes are usually not permanent. The general trend seems to be that most parents deal with situations

on a case-by-case basis, and that the behavior of the child is frequently responsible for deviations from the accepted family behavior patterns.

Ms. Gomez, mother of one-year-old boy:

> He has always slept with me. To Vanessa [older girl] I tell her not to do it but since she is such a crying baby, sometimes I give in when she cries. But some other times I tell her to go and sleep, or I distract her mind with something else, so she does not continue insisting on doing the same thing.

Conflicts thus can be resolved by the child giving-in to the parent's wishes but this is likely to happen only if parents display a consistent and determined pattern of behavior.

Ms. Goodwin, mother of three-year-old girl:

> Q: Does she usually obey rather quickly or do you have to keep after her to get her do things?
>
> A: Usually three times, you know, I say it louder and louder and then I usually take something away if she cries, you know, she apologizes very quickly.

Key child personality and behavior characteristics relevant to safety

The study sample was not big enough to reveal a wide variety of child behavior "types" or character "traits". However, some child characteristics seem to be very important for the SMS. Parents identified three types of children who can be labeled as low-risk. These are: a) the cautious child, b) the clinging child and c) the physically coordinated child.

The "cautious" child is usually defined as a child who takes her time when confronted with objects and situations which are out of the ordinary or new. She moves in slowly,

examines the situation, and often alerts her mother on the way. For the parent the biggest advantage of this behavior trait is the extra time for intervention.

Ms. Falcon, mother of one-year-old girl:

Q: Do you think, in terms of accidents, that she is more or less at risk than most other kids her age?

A: Than most kids at her age, less at risk. Once, I think we made her home fairly safe, child proof home and even though she is adventurous and likes to try everything, I also detect some cautiousness or whatever you call it, on her part more than I have seen in other kids.

Q: What have you seen?

A: Well, both my kids have this thing about really examining things, you know, staring long time on something, really focusing on it...I mean, like picking up certain items, like examining and I've always been usually surprised at how long it takes, you know, looking before they actually go near it.

The "clinging" child is described by parents as one physically attached to them. The child follows the mother from room to room and rarely disappears from her sight. This makes supervision much easier that it is with independent children who become more adventurous in their home.

Ms. Fish, mother of two-year-old boy:

He goes from one thing to another and he doesn't really do much...he doesn't spend any time, much time on one particular thing. But he likes to be where I am so I've always tried to encourage either of them to bring something to where I am and that's pretty much how I do it. That's how we do it.

Results indicate that the "physical competency" of the child is another important factor related to injury prevention. Children who parents define as "physically coordinated" are

usually considered as less at risk, than children less competent. Though good physical coordination may lead to higher level of activity and risk-taking by the child, most of the parents did not consider this a problem. Overall, most parents valued physical coordination highly and stressed that since children eventually need to learn to be physically independent, it is less risky for them to try things earlier as long as they have the necessary coordination. But as in everything else parents used their personal judgment to decide what is dangerous and what is not.

Ms. Goodwin, mother of three-year-old girl:

> [Pointing the child] See, she's been...coordinated. I think that if we just, sort of let them [try things] without constantly saying 'no, no, no, no'... Even on the monkey board and stuff, she's pretty good. I don't think she has fallen any more than any other kid but you know, you got to feel right.

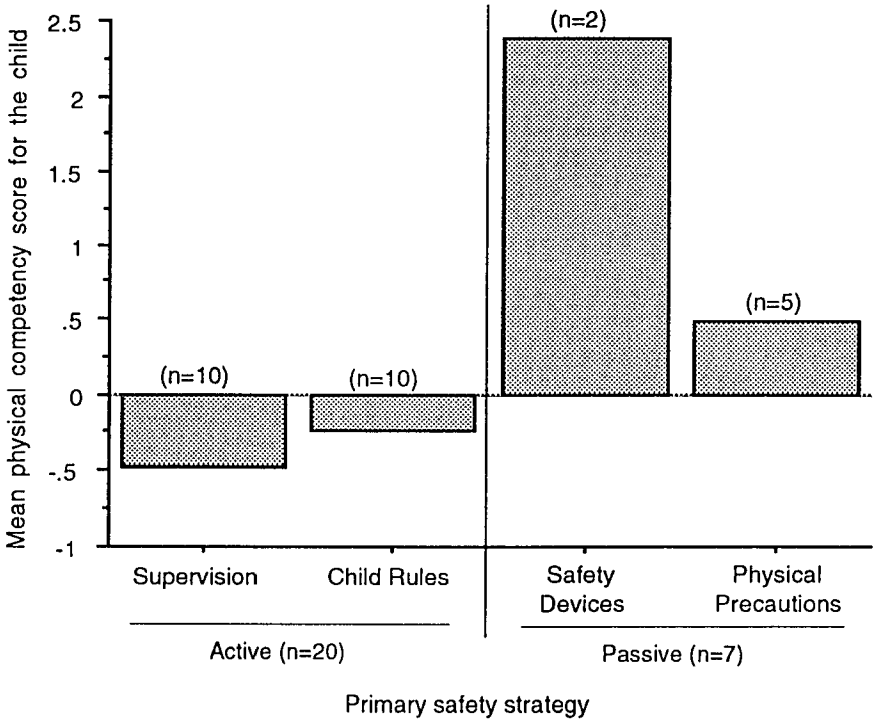
During the second interview (first safety interview) parents were asked if their child is able to accomplish some basic safety-related activities, such as climbing stairs and opening drawers. These questions were adjusted according to the developmental level of the children and are therefore different for all three age groups (See Appendix 6). During the data analysis phase, a physical competency score was computed for each child. A zero score indicates that a child's physical competency is equal to the mean competency for his age group. A positive score means that the child's competency is higher, and a negative score means that his competency is lower than that of the other children in his age group. Table 54 shows the frequency distribution of the physical competency score for all the children in the sample.

Table 54. Frequency distribution of the physical competency score for the study sample.

From (≥)	To (<)	Count	Percent
-5.0	-4.0	1	3.7
-4.0	-3.0	1	3.7
-3.0	-2.0	1	3.7
-2.0	-1.0	4	14.8
-1.0	0.0	1	3.7
0.0	1.0	16	59.3
1.0	2.0	2	7.4
2.0	3.0	0	0.0
3.0	4.0	1	3.7
	Total	27	100.0

Analysis of the data revealed a relationship between the physical competency of a child and the primary safety strategy selected by the parent [$F(3, 23) = 2.459$ $p < .08$]. The overall physical ability of the children of the seven parents who were using a passive strategy as their primary safety strategy was higher than the physical ability of the children of other parents who were found to be using an active strategy as their primary strategy. Figure 58 shows the average physical ability of the target child by the primary safety strategy used by their parents.

Figure 58. Physical ability score of the target child by the primary safety strategy used by their parents.



An interesting insight came from a parent who insisted that the key factor that puts a child at risk is the relationship between the child's cognitive and physical capabilities. She insisted that when a child has a precaucious physical development, it can result in an incompatibility between their physical and cognitive abilities:

Ms. Summer, mother of one-year-old girl:

> She [her one-year-old] walked earlier, she had less sense to do things and you know, my son walked at 14 months so by that time, he had some sense of safety. She walked so early - 9 months - that she gets in a lot of trouble without realizing that it can make her [injured].

Typical child behavior patterns that result in parent-child conflicts

Along with general personality traits, parents revealed a number of child behavior patterns that play an important role in generating conflicts between parents and children. Most of these patterns are likely to apply only to the one to four-year-old age group.

The most dominant and clear pattern that emerged is about to the *periodic interests of the child.* According to some parents in this study, young children get a sudden curiosity related to certain objects or places. Once their curiosity is aroused, they keep repeating certain actions. They will, for example, repeatedly open the same cupboard or repeatedly climb on the same table. While children eventually lose their interest in these specific objects or places, parents do not forget the problems they experienced during the period when the child's interest was focused on them.

Ms. Burger, mother of one-year-old girl:

Q: What are the dangers in this room?

A: I guess if she were to pull those bottles down [from the racks] that would be a problem.

Q: Has she tried to do that at all?

A: She has tried taking bottles out but she has not tried that quite a few months. She was interested for a short period of time, that may be the first time she learned 'no'.

or,

Ms. Morrison, mother of one year old girl:

The only thing that is, here is the wire [of the heavy lamp on the side table] is attached, so if she pulls on it, it won't come down and smash on her. She lost interest in that too, she was interested in that about a month ago. It is not exciting anymore.

An interesting side effect of these periodic spurts of interest in children is that they give the parent a false sense of security and confidence. When children repeat the same actions or show interest in the same things over a period of time, some parents come to be convinced that they have knowledge of the basic interests of their children.

Ms. Goodwin, mother of three-year-old girl:

> There's nothing in there that, I mean, we pulled out, we've looked at it. There was nothing in there that she'd even like. So she just leaves them alone.

When a child's interest focuses on a hazardous action or object, however, it creates a serious problem for the parent. If the physical removal of the hazard is not possible, parents must come up with more effective strategies. Momentary distractions do not work in these situations, because the child's interest in the hazardous item is frequently renewed.

Ms. Kunik, mother of one-year-old boy:

> MOTHER: You know, I'd walked in the room and he'd be standing in the window. That was definitely dangerous, not because he'd fall out, the guard is there, just because he'd fall back down. That's about it though.
>
> Q: When does that kind of thing happen?
>
> A: Uh, just when he thinks about it [laughs]. He hasn't thought about it for a couple of days.
>
> Q: Particularly when you're out of the room?
>
> A: No, he'll do it right in front of me...you know, it doesn't matter whether I'm here or not. It's just, you know, if he thinks about it.
>
> Q: Think about the time he did it, where were you, what happened?
>
> A: Well, the first time he did was like at night. I think before he went to sleep and we were amazed. He woke up the next morning. I

thought he would forget about it. He woke up the next morning and the first thing he did was take a chair and he put it by the window to go back up. So he didn't forget about it over night. I thought he would, but no.

Repeated risky behavior by the child can be very frustrating for the parent. When the situation presents a serious hazard, parents need to take more determined steps to break the pattern in the child's behavior. However in many cases, even when they succeed, it is not clear if the change in the child's behavior is the result of parents actions or a natural loss of interest by the child.

Ms. Fish, mother of two-year-old boy:

MOTHER: He has fallen off the toilet.

Q : He gets up here and jumps off?

A: Yeah, well he slips, you know, it did happen once and I didn't even stop it after that. We had some near misses and I just stopped letting him do it and he just got out of the habit which I find with both my children. What happens is you just kind of say you never going to let them do it. They just stop doing it after a while. They forget that they could do it, or something.

A few parents indicated, however, that, even after their children lost interest in a certain area or object, they sometimes relapsed and started focusing on the very same things they focused on a few months ago. These parents had no explanation for this kind of behavior and seemed puzzled by it.

Ms. Kaplan, mother of three-year-old boy:

Q: Does Chris know these safety rules, stay off the piano, don't touch the plugs?

A: I'm not sure. I haven't seen him try either for some time. But he, you know, he's kind of cyclical about that. He, umm [pause]

> You'll go through a stage of 'aah, stop that, don't do that' or whatever, and, and then it'll fade off and you'll think 'oh good' you know, 'we're over this'. And then it'll come back for who knows what reason. Maybe its just reinforcement. I don't know. I don't know. They have their own ways [laughs].

In addition to the periodic interests of children, which are probably related to children cognitive development, as described above, the interviews revealed some other child behavior patterns that are relevant for the management of safety. One of these patterns is described by the parents as the child's continuous *"testing" of parental resolve*. According to some parents in this study, children need to determine the limits of their freedom. To do this some children repeat certain actions they know are forbidden and deliberately break rules from time to time. Some parents argue that children do this because they want to see how the parents will react to their challenge.

Ms. Falcon, mother of one-year-old girl:

> They just love testing their parents. Yeah, they do that. They just want to see what limits are gonna be, you know, imposed on them, I think.

The parents who raised this as an issue stressed the importance of consistency in parental behavior. According to them, since children are consciously "testing" parents and evaluating their responses, children will continue breaking rules if parents allow a rule to be broken even one time in front of them. Therefore, it is critical for parents to be consistent and strict about the reinforcement of rules, especially if they are broken in their presence.

Ms. Nixon, mother of two-year-old boy:

> If I'm here he knows he can't do those things so he'll, you know, he'll try to put on a few, you know, throw on one pillow and then look to see how I respond. I tell him 'no' and then, sometimes I let him play with smaller pillows when he starts ripping the whole couch

apart, you know, and he'll go over and he'll pull on the curtain and like, smile at me and see if I'm gonna tell him 'no, no', you know.

A third child behavior pattern is *imitation of a parent, or other adult.* This is a common phenomenon, and can be quite risky for young children who try to imitate behavior without realizing the consequences. Plugging metal objects in the electrical outlets, reaching for items on the stove top and playing with knives can be all dangerous if imitated by the child. Being aware of the problem, sometimes parents come-up with toy items such as toy knives, or toy pots and pans in an attempt to limit a child's access to these objects that "belong" only to the child.

Ms. Nicotra, mother of two-year-old girl:

Q: About the knives, has anything changed?

A: I haven't changed, I still keep the knives all here [shows drawer with knives]. And she has ...where's her knife [pauses and looks through the drawer] I got her, I don't know where it is right now, maybe it's in the dishwasher, a little, umm, pretend knife to play, so instead, when I'm doing things...'cause that's what she really likes them for is when I'm...to imitate me, so she has a pretend one.

Q: Has she gotten into that drawer?

A: No, not so far, no, no.

The final pattern that emerged from the data is related to the issue of *power relationships between child and parent.* According to some parents, children like to have a sense of control over the environment and adults. To achieve this, children sometimes climb up to the light switch to turn it on and off or open or close the doors inside the apartment in imitation of adults. Yet, while most of these actions are obviously imitations of the adult behavior, some parents believe the motivation behind them is more complex

because of the high level of resistance they often get from children when it is necessary to intervene in potentially dangerous situations.

Ms. Kaplan, mother of three-year-old boy:

> I try to keep things out of the way so he's not doin' somethin' that's wrong. [long pause] I'm trying to think of an example. Like switching the TV on and off. If he would get the remote and sit there and do that just asking him 'don't...please' don't do it [does not help] because he wants to do it, and he feels powerful doing it. So you have to get the screaming and crying and [laughs] all that to go with it.

Some parental techniques related to the personality and behavior of the children

How do parents deal with these unpredictable changing behavior patterns of children? In most cases, they clearly show a large degree of flexibility in safety management strategies and a willingness to modify them according to their observations and experiences.

Ms. Hallman, mother of three-year-old boy:

> [Pointing to the glass shelves with heavy glass objects on them] He cannot touch the pottery and the glass. And he knows that and he does not, he really does not [touch them]. He's very good. The only changes we made was when he was much little when he was pulling himself up and examining everything. I moved things up to upper shelves so he couldn't reach it to just get it out of his way. But as he's been fine with them I put everything back to lower shelves.

One parent also mentioned the relationship between her physical proximity to the child and her ability to make the child pay attention to what she is saying. According to this parent, trying to communicate with the child from a distance, such as from across a hallway, was less effective than communicating with her at close quarters.

Ms. Tillman, mother of one-year-old girl:

> She is pretty good. It has to do with the distance she is away from me. Like in this small room there are no problems, because it is just about anywhere she is I can reach over and pull her over pretty quick. But say I was in the kitchen and she is down the hall, I can tell by how close I get to her, the difference in her paying attention to what I'm saying.

Relationships between parental ideologies and behavioral and personality characteristics of the child

From the analysis of family dynamics, and from the way that parents describe how they adjust their strategies regarding child behavior, it is likely that the relationship between parental ideologies and the child's character and behavior is mutually dependent. One of the findings in that respect is the relationship of parental sensitivity to the personality characteristics of the child regarding safety [$\underline{X}^2$ (8, $\underline{N}$ = 27) = 21.913, $\underline{p}$ < .005]. Results indicated that a large majority of children whose parents are defined as *Exploring* were the ones with children whose personality characteristics help the management of safety in the home. Similarly, most mothers categorized as *Ignoring* had children with personalities that hinder safety Table 55 shows this distribution.

Table 55. Frequencies for the personality characteristics of the child with respect to safety by the parental sensitivity of the mother.

	Child-rearing ideology					
Personality	exploring	affectionate	ignoring	punishing	worrying	Totals
helps safety	12	3	0	1	1	17
hinders safety	2	0	4	0	0	6
average	1	2	0	1	0	4
Totals	15	5	4	2	1	27

Another relationship is between the *Lax*, *Dictating* and *Irresolute* parents and the safety personality of the child [$\underline{X}^2$ (4, $\underline{N}$ = 27) = 8.377, $\underline{p}$ < .078]. Again, 13 of the 17 children whose character is defined as helpful to safety were the children of *Lax* parents, with mostly loose daily schedules and loose disciplining strategies. Table 56 shows these frequencies.

Table 56. Frequency distribution of children who belong to parents defined as Lax, Dictating and Irresolute by the personality of the child with respect to safety.

	Child-rearing ideology			
Personality	Lax	Dictating	Irresolute	Totals
helps safety	13	2	2	17
hinders safety	2	3	1	6
average	2	0	2	4
Totals	17	5	5	27

What is the relationship between parental safety ideologies and child personality characteristics? Analysis failed to reveal strong relationships between the personality of the child and safety ideologies of parents. However, there is a strong indication that children with personalities helpful to the management of safety are more likely to come from families with parents categorized as *Reasoning* [$\underline{X}^2$ (6, $\underline{N}$ = 27) = 14.034, $\underline{p}$ < .03]. Table 57 shows this distribution.

Table 57. Frequency distribution of children's personality by the safety ideology of parents

	Safety ideology				
Personality	Enforcing	Reasoning	Verbal	Enforce/Reason	Totals
helps safety	4	8	5	0	17
hinders safety	4	2	0	0	6
average	3	0	0	1	4
Totals	11	10	5	1	27

Discussion of findings on the behavioral and personality characteristics of the child

In general, results in this study indicate that, a child's character is not the most dominant factor within the system (SMS). For example, the relationship identified between the child temperament and parental assessment of the child's liability for injuries, by Metheny (1987) could not be repeated here. Yet, findings show that the child has an effect on how parents adjust their strategies and how they make modifications in their day to day safety behavior. However, while the effect of the personality of the child over selecting one strategy over the other seems to be small, the ability of the child's personality to significantly influence parental ideologies seems even less significant. At first, this seems contradictory to Baumrind & Black's (1967) findings where, a clear relationship have been identified between the child's behavior and the mother's ideology. There are some notable aspects of this research design that may have played a role in this inconsistency. The first is that, due to the safety focus of this study, only safety-related characteristics of the child are highlighted and used in all analyses. Consequently, findings can not be generalized to include the possible relationships between parental ideology and non-safety related personality characteristics of the child. There may well be, for example, a much strong relationship between parental ideologies, parental behavior and the social personality of a child. Second, a large percentage (63%) of the population in this study had more than one child. Since each child has his own personality, the cumulative effect of these personalities on parental behavior and ideology can be expected to be different from the effect of the personality of a single child. Unfortunately, the sample size was not big enough to conduct a comparative analysis of single child families compared with families with more than one child. Finally, only five children in the target population were grouped as having characteristics which "hinder safety." This is partly due to the fact that no objective scores were used to assign children to the three safety personality characteristics. These child personality categories were generated mainly from the parents' description of their

children. Since the parents usually have the tendency to avoid mentioning or stressing the negative qualities of their children, especially to relative strangers, it is possible that many of the hard-to-manage children were not identified as so.

A possible confusion can occur if the overall personality traits of the child are confused with the immediate behavior of the child. The lack of relationship between the parents' perceptions of their child's behavior and their ideologies does not mean that parental attribution is unrelated to a specific behavior of the child. On the contrary, research shows that child behavior is a significant determinant of parental attribution (Dix & Grusec, 1985; Scott 1991). Therefore, it is very likely that parents' behavior in the presence of their child's risky actions will follow an identifiable pattern. Further detailed analysis of the child-parent social interactions from the videotapes of this study may reveal some aspects of this phenomenon.

The relationship of the safety-related personality characteristics of the child and SMS

Children who were defined as having personalities that help safety were found during the interviews, to have less unsupervised access to other rooms of the home compared to other children. The interview setting was a test of the child's independence and accessibility to the other parts of the home. Since parents were busy answering questions they usually were not in a position to enforce rules or control their child effectively. This finding therefore may be viewed as justification for categorizing children in the sample according to their personalities. In other words, since it is expected that children who have personalities that help safety are by definition, manageable, not very active, mature and not risk-taking, their behavior during the interviews can be explained by these personality traits. Therefore in this case the most manageable children were the ones who did not leave their mother's side and wander into the home during the interviews.

The only suggestion of a relationship between the personalities of children and specific strategies is the use of safety devices. The highest device use was among the families where obedience was described as erratic (sometimes obedient). Yet this same group of parents was also the one that used the highest percentage of multiple strategies to cover individual hazards. It is possible that these findings may be a part of the same pattern that emphasized the importance of consistency and dependability in child actions. For parents, it may be easier to manage the safety of a consistently stubborn child rather than an unpredictable one. Thus predictability and unpredictability in child behavior should be the focus of future studies that look at the behavioral characteristics of children with respect to safety.

The role of the physical ability of the child on safety strategies

The findings suggest a relationship between the physical ability of the child and the safety strategies selected by their parents. It is hypothesized that while the parents of physically capable children prefer passive strategies as their primary strategy, parents of less capable children have the tendency to choose an active one. It is conceivable that mothers of children who are capable far beyond their peers may revert to passive strategies due to the inconsistency between the physical and cognitive capabilities of these children. In other words, if parents think that their children are too young to train and learn how to follow rules, but also capable of physical activity that will endanger them, they may choose to limit a child's access through safety devices and physical precautions.

Relationships between parental ideologies and behavioral and personality characteristics of the child

The results failed to indicate a strong relationship between the personality of the child and the child-rearing or safety ideologies of the parents. It is possible to argue that parental ideologies regarding children are shaped by a number of different forces including social and personal ones and the behavior and personality of the child has a rather limited effect in determining these parental ideologies. If this is true, parental ideologies need to be looked at as significant, stable and influential components of any safety system which cannot be easily altered by the behavior of the child. This also reinforces the importance of parental ideologies as a critical research component in the study of SMS.

Findings suggest that parents of children who are defined as having personalities that help the management of safety are both *Lax* and *Exploring*. By definition, these types of parents have more flexibility in their schedules, they do not use strict punishment techniques and they are more sensitive to the child's demands. On one hand, for parents it is easier to adopt a *Lax* and *Exploring* attitude if the child is manageable and has a personality which reduces her injury risk. On the other hand, the data is not conclusive enough to argue that the behavior or personality of the child is not at least partially an outcome of the parent's ideologies and strategies. This dilemma should be investigated through well-structured research projects that look at families longitudinally.

The role of the resources of the family on the Safety Management System

As stated in the conceptual model of the family SMS, this study makes the assumption that the resources of the family are an integral part of the family's Safety Management System, and therefore various family resources directly and indirectly effect the way a child's safety is managed. Again, as depicted in the SMS model, the resources of the family will be analyzed in five categories. These are: 1) economic resources, 2) physical resources, 3) social resources, 4) informational resources and, 5) past experiences of the primary caretakers. This section will look at each of these resources and present the findings related to role of these resources on the SMS.

Impact of economic resources on SMS

The significance of the economic resources on the SMS is apparent and in this study they are discussed within the framework of safety strategies. To prevent intimidating the participants, they were not asked about the level of their income. As a result, the income of the family could not be used as a measure. Instead, to evaluate the impact of economic resources on the SMS a 'Family Occupational Index' was calculated by averaging the mother's and father's Occupational Index Scores (Hollingshead, 1975). For single parent households, the occupational index score of the single parent was used as the Family Occupational Index score. These scores are based on the parents' occupations at the time of interview. Tables 58 and 59 show the occupations of all the mothers and father's in the population.

Table 58. Occupation list for the mothers in the population.

Mother's Occupation	Count
homemaker	13
legal secretary	1
bookkeeper	3
not working	1
doll maker	1
babysitter	1
nursing	2[1]
clerk	1
store manager	1
writer/editor	1
sells jewelry	1
audiologist	1
Total	27

[1] One of the nurses was a grandmother.

Table 59: Occupation list for the fathers in the population

Fathers Occupation	Count
construction	1
traffic inspect	1
store owner	1
gas co. clerk	1
unemp/McDon	1
city worker	1
store manager	1
chauffer	1
constrct/drman	1
parks service	1
bus driver	1
laundry rt	1
correction offi	1
computer anal	1
sales	1
law student	1
assistant D.A.	1
piano teacher	1
contractor	1
port authority	1
elect. engineer	1
Total	21

The Family Occupational Index calculated from these has a range from 0 to 7.5 with mean of 3.7. Table 60 shows the frequency distribution of this score.

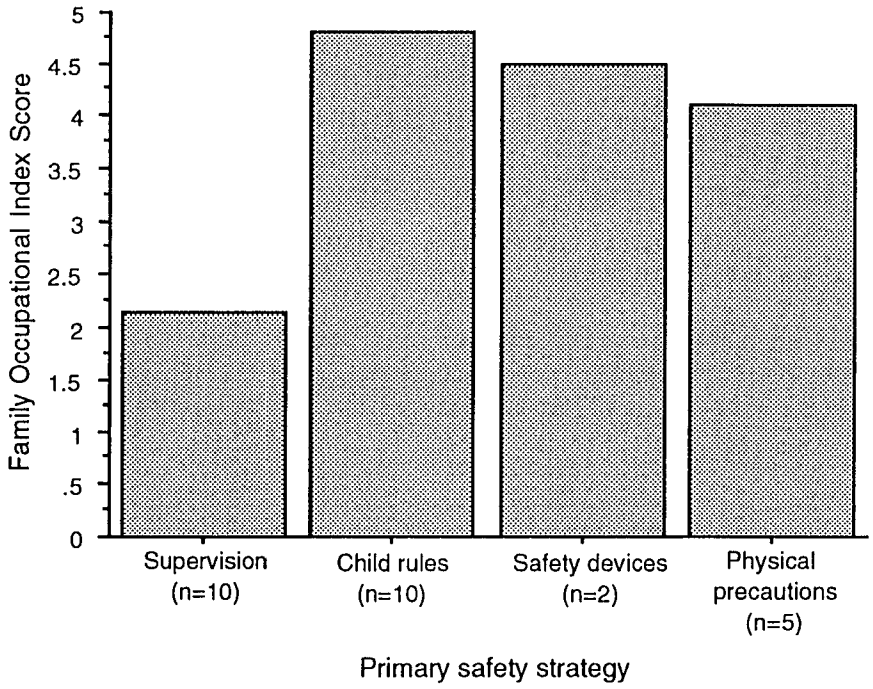
Table 60. Frequency distribution for the Family Occupational Index score

From (≥)	To (<)	Count	Percent
0.0	1.5	6	22.2
1.5	3.0	3	11.1
3.0	4.5	6	22.2
4.5	6.0	5	18.5
6.0	7.5	7	25.9
	Total	27	100.0

As expected, Family Occupational Index is significantly related to mother being a college graduate [F (1, 25) = 23.565 p < .0001], mother having attended graduate school [F (1, 25) = 10.208 p < .004], father being a college graduate [F (1, 19) = 7.931 p < .01] and father having attended graduate school [F (1, 19) = 13.990 p < .002].

Results show that there is no relationship between the Family Occupational Index Score and any of the variables on ideology. However, economic resources seem to influence preferences for safety strategies. Families with lower Occupational Index Scores seem to prefer *Supervision* as their primary strategy compared to families with higher scores [F (3, 23) = 2.473 p < .09]. Figure 59 shows the relationship of Family Occupational Index Score to the primary safety strategy preferred by the parents.

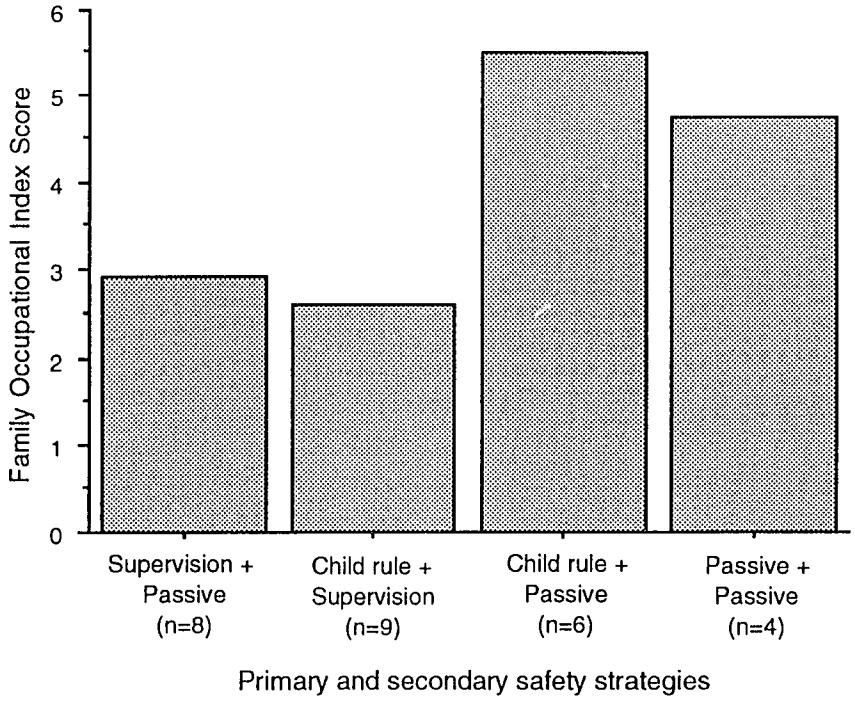
Figure 59. Family Occupational Index Score by Primary Safety Strategy.



Supervision seems to be the choice of low SES parents, not only as the primary strategy but also as one of the first two safety strategies used by parents. In other words,

parents who use supervision as one of their first two strategies on the average have lower Family Occupational Index Scores than families who do not include *Supervision* as one of their first two safety strategies. The chart in Figure 60 shows this relationship.

Figure 60. First two safety strategies used by parents by the Family Occupational Index Score.



Impact of informational and social resources on SMS

Information resources of the family are defined as the level of education of the parents and their access to relevant child-rearing and safety information, while social resources are the amount of social support that a family gets to help with child-rearing tasks. These two resources usually are related very closely. Parents who belong to parent support groups, religious organizations and other social groups or have strong relationships with the rest of

their family not only use these sources for practical and psychological support but also use them as a source for information regarding child-rearing and safety issues.

Ms. Nixon, mother of two-year-old boy:

> We have the basement of a church that's good for...the kids just play and there's toys and mothers talk about different topics, you know, child raising, it is helpful because, right now I'm having a little problem. Jimmy has a colicky bouts, you know, and its good because, you talk to your doctor and he says 'well, you'll get through it' and that's all he tells you and there's two other girls who're having similar infant problems and you know, we can laugh about it because you know, you're so frustrated.

To assess the extent of the parents' information and social resources, a score is calculated. During the interview, parents were asked about where and how they learn about child-rearing and safety issues (See Appendix 5 and Appendix 6). All the different types of sources that mothers did mention while answering these questions are counted as one point and a total score is obtained for each parent. These sources mentioned include other family members, friends, doctors, media and magazines, religious and social groups and professional organizations. The total score ranged from one to 10 and the mean was 5.6. Table 61 shows the frequency distribution for the Social/Informational Resource Score of the families.

Table 61. Frequency distribution for the Social/Informational Resource Score of the families.

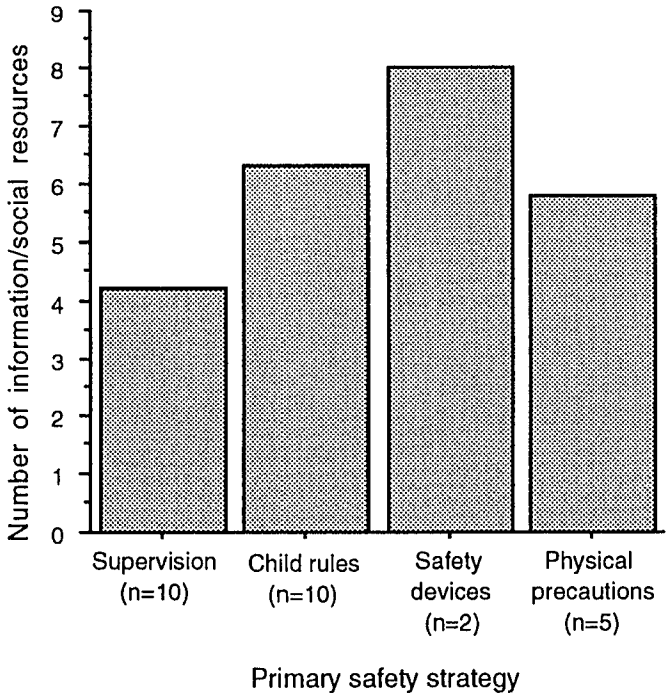
From ( )	To (<)	Count	Percent
1	2	2	7.4
2	3	1	3.7
3	4	3	11.1
4	5	2	7.4
5	6	3	11.1
6	7	6	22.2
7	8	5	18.6
8	9	3	11.1
9	10	1	3.7
10	11	1	3.7
	Total	27	100.0

What was the demographic composition of the parents who have access to a large variety of information and social resources? Findings indicate that they have higher Family Occupational Index scores [F (1, 25) = 15.974 $p < .09$], they come from families with more than one adult [F (1, 25) = 6.218 $p < .02$] and have younger mothers [F (1, 25) = 3.226 $p < .08$]. However the most significant result is that families with a large variety of informational and social resources are two-parent families [F (1, 25) = 17.116 $p < .0003$]. While the mean for number of information/social resources for single parent families is 2.8, it is 6.3 for two-parent families. It is notable that the number of information/social resources is not related to any parental education variable.

What is the effect of rich social/information sources on safety? Families with a high number of information resources identified a larger number of hazard types throughout the year [F (1, 25) = 3.219 $p < .08$] and they were using larger number of physical precautions in their safety strategies [F (1, 25) = 3.082 $p < .09$]. They differed in terms of the primary safety strategy that they were using. While people with the most social/informational resources preferred safety devices and child rules as their primary strategy, the group with the least number of social/informational resources used supervision. Figure 61 shows the

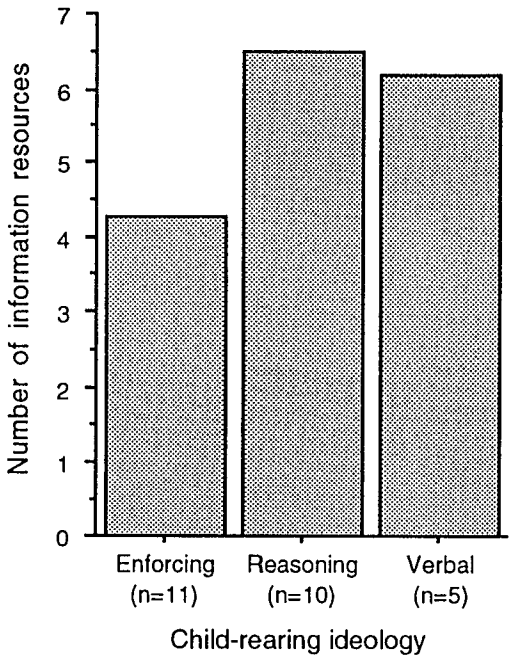
relationship of the number of information and social resources of a family to the primary safety strategy used by the parents.

Figure 61. Number of information/social resources by primary safety strategy.



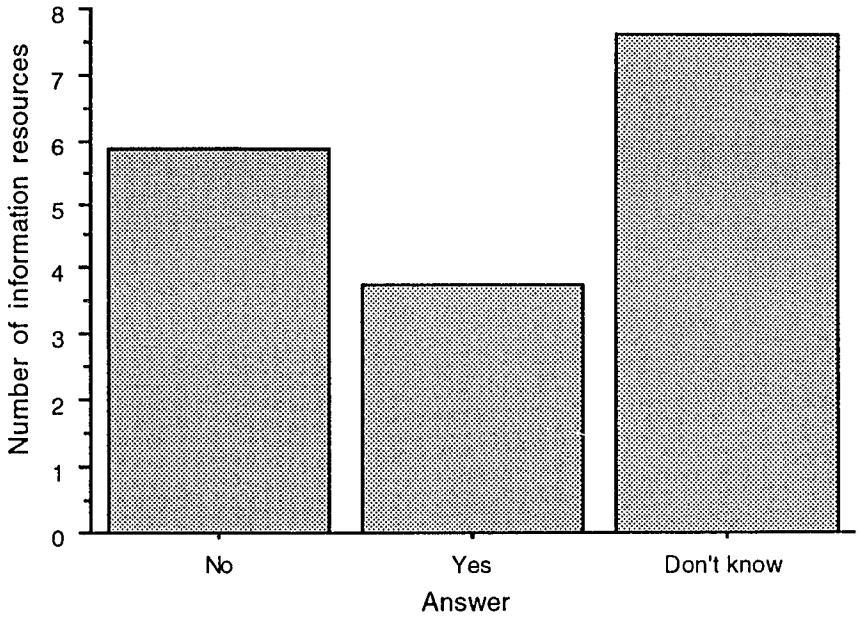
The level of information and social resources seems to be related to parental ideologies. Findings indicate that parents identified as *Enforcing* parents have less number of information and social resources compared to parents who are *Reasoning* or *Verbal* [$F(2, 23) = 3.048$ $p < .07$]. Figure 62 shows this relationship.

Figure 62. Number of information/social resources for *Enforcing*, *Reasoning* and *Verbal* parents.



Parents with rich information resources also were able to mention a larger number of reasons explaining the value of play for children [F (1, 25) = 4.966 $p < .035$]. Another difference was in their answers to the question which asked if there are any differences between boy babies and girl babies. While parents with the least number of resources said "yes," parents with highest number of information resources answered by saying, "I don't know." Figure 63 is a bar chart showing the three types of answers.

Figure 63. Parents' answers to the question "Are there differences between boy babies and girl babies" by the number of information/social resources they have.



Impact of the past experiences of parents on SMS

One of the most important resources of parents is their past experience in child-rearing and managing safety. Parents with more than one child repeatedly referred to their experiences with older children and admitted that they learned many things about child-rearing and safety through their own experiences. The following quote is a typical example.

Ms. Joan, mother of two-year-old boy:

Q: You told us about dangers in different locations. Where did you get that information, from where, do you know?

A: From experience mostly. You know I've had two older ones. And I also learn from him, doing, doing what he's not supposed to, we then realized we had to do something about it.

Q: So is it that he does something for the first time or something and you see that he's able to do it?

A: Yeah, usually does, yeah.

Q: Was there anything that you felt that you expected him that he...

A: [interrupts] Yeah, I knew that I had to put it, everything high and out of his reach. Ummm[pause] I knew from the other kids that I, certain things like the stove, the cabinets, I had to lock up.

The role of experience with one's own children is discussed in the sections above, namely in the Safety Strategies section, under *Supervision*, *The Critical Incident*, and *Success and failure of strategies*; it will not be repeated here. This section will focus on the role of parental life experience on child-rearing and safety ideologies.

The most outstanding finding is the impact of a parent's own childhood and life experience on ideology. This became most clear in answers to the question which asked if they are raising their children the same way they themselves were raised. Seventeen of 27 parents indicated that they were trying to raise their child differently. Table 62 shows the breakdown of the answers.

Table 62. Parents answers to the question "Are you trying to raise your children the way that you were raised yourself?"

Answer	Count	Percent
no	17	63.0
yes	10	37.0
Total	27	100.0

The majority of parents who were trying to raise their children differently explained that they were raised strictly and without sufficient sensitivity or attention. They also felt that they were giving their own children more flexibility and many options that they themselves did not have. This point came across very clearly in some of their answers.

Ms. Friedberg, mother of three-year-old girl/boy twins:

Q: Are you trying to raise your children the way that you are raised yourself?

A: Absolutely not. [laughs] Absolutely not.

Q: Why? If it's different, in what ways is it different?

A: Ah, in what ways. I give them more choice, more freedom than I feel I was given. Ah, with my husband we certainly give them more attention than he was given, and a lot more understanding.

From the answers of many other parents it became clear that their own childhood experiences had a profound affect on how they are trying to raise their own children today. When explaining the factors that affected their upbringing, parents in this study made it clear this was not simply a parenting choice made by their own parents, but a rather choice rooted in cultural and ethnic standards.

Ms. Christopher, mother of two-year-old girl:

Q: Tell me about how you were raised?

A: Strict I would say, very strict. If you come from an Italian family, forget about it. They are very strict.

Q: How many people are in your family?

A: We had three girls and one boy, but if you are the first girl, they are very strict with you. They say, if you train the first one right...

Q: [laughs]

A: Because you know, my sister is getting away with murder. She doesn't do bad things but they let her out. There was a time that I was not allowed out. I was 18 years old. They told me 'no.' I was not allowed out.

Reaction to a strict or negative childhood experience is not the only thing mothers remembered. Some of them learned the basic values of child-rearing from the destination of the past and focused their efforts on preventing their children having a similar experience. The value of good nutrition and simple toys is expressed passionately by this grandmother.

Ms. Blank, grandmother of two-year-old girl:

Q: How were you raised?

A: ...children should be brought up...better than I was brought up. The life now that children get, is a much better life than I made. My father...that's my father right there [points to a picture on the wall] he was a painter, and we didn't get what we asked for. What they put on the table we ate. And we had benches to sit around the table. That's what we didn't do, asked 'em for cer'al, ice cream, an' puddin's, we didn't know what they were. And we'd sad because come these big peppermint sticks candy. That's what we got. And an orange and apple. That was it. They [pointing to her grandchildren] get everything [emphasis] [laughs]. Everything. We didn't know what that was. My father was a plowman. What he did raise, that's what we lived on. 'Cause he was a good father. Fruit, molasses, sugar cane, flour...

Q: Where did you grow up?

A: In North Carolina, Charlotte, North Carolina. Have you heard of Charlotte?

INTERVIEWER: Well you bet. I have a lot of relatives there.

A: Well, that's where I was born and brought up...finished high school, right there. But, I tell 'em every Christmas, they never know when to quit buying. I didn't get a baby doll the whole time I was living and they gotta but 10 or 20 here [pause]. That makes me mad [laughs].

Environment as a resource: Physical characteristics of the home

This section will look at the home environment as a physical resource for the management of safety in the home. Two critical factors effecting safety in the home are the adequacy of design in supporting child-care functions and, the level of visual accessibility within the home. Along with these, some other factors that are to a large extent within the control of parents, will be considered. These include safety-related attributes of the interior, including the overall organization and cleanliness of the home, television dependency of the family and, the amount of clutter and confusion within the home.

It was clear from the interviews that, for parents, physical design of the home for the prevention of home injuries was not the factor that had primary importance; maintaining social safety was. While evaluating their homes, parents stressed the importance of the safeness of their housing complex. Second to that, they stressed the importance of having physical and social resources near their homes or in their neighborhood. These resources included parks, playgrounds, supermarkets and Laundromats. In the following quotation Ms. Vanderpelt described her joy and satisfaction in moving to her current home in Astoria from a crime-ridden neighborhood.

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

This is a very...let me tell you, I was so happy when I moved in here. The people here are very to themselves. If they do anything they keep

> inside their apartment which I am so happy about, you know. Like, when they [her children] grow up to be young adults I don't have to worry about them going out there and looking somebody shooting up all, copin', you know what I mean. I don't have to worry about that, where I did with my other two [previous children].

Impact of inferior design and poor space arrangements

Along with visual accessibility within the home, which will be discussed under a separate heading, two critical design issues emerged from the study. These were, problems related to the tightness of the kitchen and, the design features of the home which allowed the parents to create a safe room or corner that specifically belongs to the child.

Smallness of the kitchen, especially in public housing, was brought up repeatedly by the parents as a significant safety issue. The key problem is the inability of mothers to operate safely within the kitchen, while their children were there and getting in the way.

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

> You see what it is? When you cook in this sink, it is so small, the kitchen, you know, I can get burned or they [the children] can get severely burned. You could have a pot here, your hand sticking up one little bit, they come running and you know. It's small, this kitchen is very small.

Since mothers need to spend considerable time in the kitchen, they have to allow the children in the kitchen while they are cooking in order to supervise them. This problem can be averted if the kitchen has a good view of the other parts of the home.

Ms. Abbott, mother of two-year-old boy:

Q: What does he [the child] do when he is in this space [kitchen]?

A: He will sit right here in the middle of the floor when I am trying to cook and play with his toys. They just want to be near me, you know, no matter where I am, they are right there...When I'm cooking I tell them either sit in one spot or go into the dining room, because there is only a little bit of space, when they are all over the floor it is dangerous. I don't want something to fall on them or anything. I tell them either stay in one spot or stay out in the living room, because I can still keep an eye on them when I am cooking, whatever.

In addition to the size of the kitchen, the arrangement of appliances, the type of appliances, especially the stoves and ovens, are mentioned frequently by the parents as potential hazards. In the following example, even though the mother is aware of many of the safety issues, her options are limited because of the poor arrangement and inefficient design.

Ms. Kaplan, mother of three-year-old boy:

MOTHER: Actually my worst fear with the setup of that kitchen is with the stove and sink being apart and umm...my worst thing is carrying pot of hot water, boiling water. I'm pretty good about keeping the handles from getting pulled down. The knobs have never been on my stove since I've had kids.

Q: You took them out?

A: Aha [nods for yes]. They pull right off. And they [the children] can turn them on. When they were younger they did not have the strength because it's a push in and turn. But now they can. So they don't turn the stove on now [because the knobs are not on] but Chris has learned to blow the flames. He's just high enough to go 'fff' [gestures as blowing the flames] on the gas and that bothers me 'cause I never know if he's gonna blow the flames out and I'm gonna have the stove on with the gas. So that...I'm always, I do try to walk over there and make sure that those are clicked off [pause] but my concern in that room is the cooking

> going on in the midst of [everything], you know, they are all over the floor and dripping something hot...

A second design concept that seems critical to some parents is a "Safe Haven" within the home for the child to retreat. In some homes, this was the bedroom. In others where there was no separate bedroom for the child, parents created spaces defined by furniture for the children to spend time in. It was particularly important for these parents that this space belong only to the child and not be used for other purposes.

An analysis of interview videotapes indicates that, out of 27 families, 17 had a dedicated domain for the child and only 10 did not. Families who chose to create a safe and dedicated domain for the child were the ones who lived in relatively larger homes [F (1, 25) = 6.8 $p < .015$], used more safety devices [F (1, 25) = 3.8 $p < .06$], were able to specify a larger number of reasons regarding the value of play [F (1, 25) = 3.4 $p < .07$], and believed that home injuries happen not only because of the child's character but because of a multiple number of factors including social and environmental ones [X^2 (1, N = 27) = 3.2, $p < .07$].

In some families, these safe domains for the child change, evolve and diminish depending on family dynamics. The following example illustrates the importance of a safe zone for a small child in the family, first to protect her from other siblings, and second, to allow her to engage in activities without repetitive interference from others.

Ms. Goodwin, mother of three-year-old girl [Dominique]:

> MOTHER: Umm space is important. I know that this whole thing is about space. There is like certain areas that when Allison was littler that Dominique had a safe spot. It's gotten, kind of demolished with the book case going up but there's areas where, when Dominique is coloring and stuff and Allison's up there. We blocked up to make a safe spot and Allison can't be around

because, I mean, this one's [Allison] always like after everything Dominique has.

Q: [interrupts] So why do you think it is important to have space?

A: So that you're not constantly aggravated. It's very important to paint at a certain time and there's, no talking her [Dominique] out of it. What's the big deal, you know, but this one [Allison] can't paint, because she, she'll eat the paint. So it's, if it's that important she'll need to get it out of her system. Paint for a little while. And without this one [Allison] always touching. Before Allison could get on the bed, it [the bed] was a safe spot but now the bed is a toy.

Visual accessibility inside the home

It is hypothesized that the visual openness of the interior of a home may have an impact on the Safety Management System (SMS) of the family. For example, are parents who live in homes where many rooms and spaces are visible, more likely to use supervision as their preferred strategy, because they have the ability to follow their child more easily than parents who live in compartmentalized homes? Answers from interviews reveal that visual openness is an issue that parents consider carefully.

Ms. Frattini, mother of one-year-old boy:

Because the way this apartment is [designed], if you notice, it is all very open...the rooms are side-by-side so that even if I am sitting in the living room, I can still see straight into the kitchen.

Even if some parents are not aware of the impact of high visibility inside the home, they are likely to use this advantage in their safety strategies. One striking example is the case of the Summer family. After their first interview, they moved to a new apartment in the same building. While their original apartment was a very open loft-like space, their

new home followed a more traditional plan with rooms and separating doors. Ms. Summer described the impact of this change as follows.

Ms. Summer, mother of one-year-old girl:

> It is a very strange sensation for me because downstairs, I had an eye view of her just about any place, and up here it is very funny feeling not to see her constantly. It is a new way. I know that it is an interesting contrast. It really is.

To be able to estimate the differences of "interior openness" among the homes in the study, a Visual Openness Score (VOS) was calculated from the floor plans of the homes. The calculation of the VOS is described in detail in the methods section of this study. A higher score indicates a visually open home interior, while a lower score means a highly compartmentalized environment. The mean score for all 27 homes was 26.8, while the minimum score was 11.7 and the maximum score was 44.4. Table 63 shows the frequency distribution of VOS for the 27 homes.

Table 63. Visual Openness Score (VOS) for the 27 homes in the study.

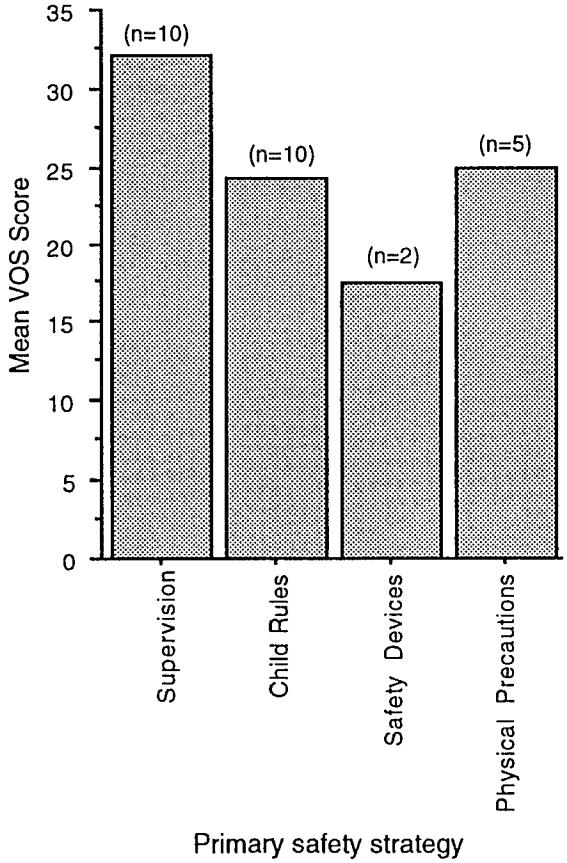
	From (≥)	To (<)	Count	Percent
Less open	10.0	15.0	1	3.7
	15.0	20.0	4	14.8
	20.0	25.0	6	22.2
	25.0	30.0	8	29.6
	30.0	35.0	5	18.5
	35.0	40.0	0	0.0
More open	40.0	45.0	3	11.1
		Total	27	100.0

It should be noted that in this sample, there is a close relationship between the VOS and the total square footage of the home [F (1, 25) = 9.8 $p < .004$] Smaller homes generally have a higher VOS score and larger homes have a lower one. This outcome is expected because none of the families lived in large and open loft spaces. Generally large

homes with bigger square footage were multi-story private homes with a large number of individual rooms. As a result, these homes scored lower on VOS scale, while small apartments with few rooms had a higher VOS score.

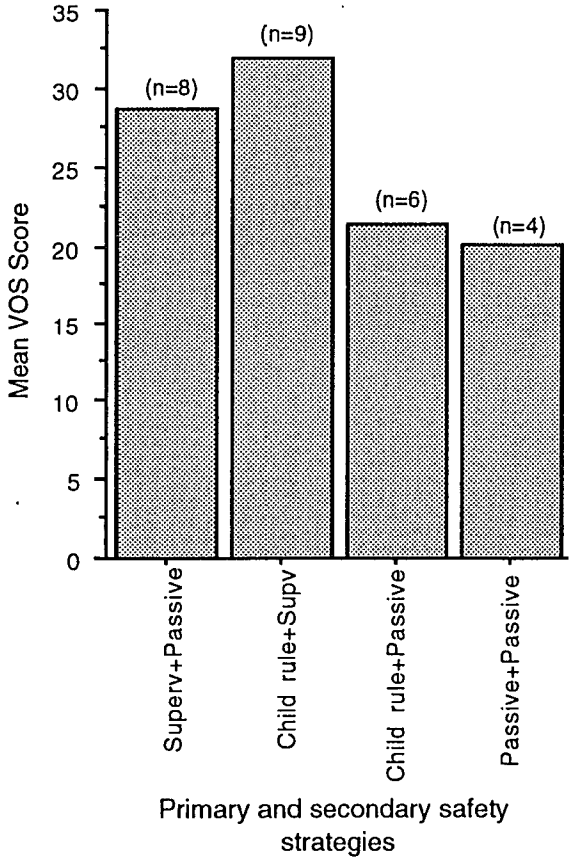
The most important impact of visual accessibility is on the type of safety strategies selected by the parents. Results show that families who use Supervision as their primary strategy mostly live in homes with good visibility while families in homes with little visual access prefer *Safety Devices* as their primary strategy [$\underline{F}$ (3, 23) = 4.099 $\underline{p} < .018$]. Figure 64 shows the Primary Strategy of each family according to the total VOS of the home that they live in.

Figure 64. Primary Safety Strategy by Visual Openness Score (VOS) of the home.



When the first two safety strategies are considered, the results are even more striking. Findings show that people who live in visually accessible homes are more likely to choose two active strategies (*Supervision* and *Child Rules*) as their first two choices. In contrast, parents who live in homes where there is minimum amount of visibility use two passive strategies (*Safety Devices* and *Physical Precautions*) as their primary and secondary safety strategies [F (3, 23) = 5.227 p < .007]. Figure 65 shows the first two safety strategies of families by the VOS.

Figure 65. First two Safety Strategies by the Visual Openness Score (VOS) of the home.



Parents who live in visually open and accessible homes were able to identify a larger number of types of dangers in the home environment, than parents who live in more closed compartmentalized housing with limited visual access[F (1, 25) = 6.8 p < .015].

In terms of Safety Ideologies, the only finding was the difference between the *Child-Ascribing* and *Multi-agent Ascribing* parents. *Child-Ascribing* parents who believe that the child's characteristics are primarily responsible for injuries were mostly from homes with good visibility and high VOS score (M = 32.6). *Multi-Agent Ascribing* parents, on the other hand, were primarily from homes that had bad visibility and low VOS scores (M = 24.4) [F (1, 25) = 7.962 p < .009].

Quality of the home interior

It is hypothesized that the interior quality of the home may act as a supporting or restricting factor for the SMS. Qualities that are believed to be indicative of Home Quality were as follows: a) the absence of objects lying on the floor, b) the absence of large objects, furniture or appliances which do not functionally belong to the room they are in, c) availability of variety of toys and play objects, d) the presence of plants, e) the presence of child oriented decorations in child's room or play areas, f) absence of excessive noise, g) absence of excessive clutter and, h) availability of books in the home.

Videotapes of the visits are coded to reveal all these aspects of the home interior, and a composite Home Quality Score (HQS) is calculated for each household in the study. The range was between 6 and 19 with Mean = 13.7. Analysis of HQS against demographic variables revealed that, Home Quality was not related to parental education or parental occupation, but it was related to family size. Homes with a high population had a lower score compared to homes with fewer residents [F (1, 25) = 4.8 p < .04]. The total number of children was another factor that effected the HQS [F (1, 25) = 9.4 p < .005]. Families

with fewer children scored much better than families with several children. Finally, larger homes scored better than smaller homes [F (1, 25) = 6.2 $p < .02$].

How does the overall home quality effect the SMS? No relationship could be identified among the Home Quality Score and the type of safety strategies that families use or with any of the parental ideology variables.

Television dependency

During the coding of the interview videotapes, coders, like the interviewers, needed to deal with some impracticalities as a result of television sets being left on at a high volume by the parents. In many cases, interviewers needed to ask parents for permission to lower the volume of the televisions. Furthermore, in this regard, it is apparent that families differ radically in terms of the number of television sets that they have in their homes. Given these facts, it is possible that television has an impact on the SMS of the families, both as an information resource and as a regulator of home life. To test this hypothesis, a Television Dependency Score (TDS) was calculated from the two factors noted: a) if the television set was left on by the parent during the interview, and b) the total number of televisions in the home.

Results show that TDS for the population ranged from 1 to 9 with Mean = 4.3. TDS score seems to be independent of such demographic variables as education and occupation. An inverse relationship exists however, between the TDS and the total number of different information resources that a family has. Families who have access to a large variety of information resources are less dependent on television [F (1, 25) = 4.2 $p < .05$]. Families who scored as highly TV-Dependent were the ones who gave less access to their child within the home [F (1, 25) = 3.4 $p < .07$].

Some parents who were dependent on television indicated that they consider it a powerful learning and development tool for their children.

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

Q: What do you think influences the kind of a person a child becomes?

A: TV

or,

Ms. Blank, grandmother of two-year-old girl:

Q: What do you think is valuable about kids her age playing?

A: To be frank with you, I think TV has a lot to do with that. Kids learn from TV. And grown-ups too.

Other parents did not agree about the positive influences of television on a child's development or safety. Take for example, the case of this father who was fearful about his child imitating the things that he has seen on television.

Mr. Brasswell, father of three-year-old boy:

Q: Is there anything dangerous for him in this room [living room]?

A: [father] There's a few things I always try to impress on his mind how dangerous whenever he's watching TV ...[pause] uhh, you know, he has a tendency to watch TV... if they watch from a very young age, sometimes, imagination and reality's a little mixed up. So, between a person and the screen , something like that, but I told 'im never do that to people, it is very dangerous and you could be very hurt and get killed.

Regardless of their views on the effects of television, it was clear that many parents used it as a behavior modification tool within their SMS. Interestingly, television was

being used as a punishment in very different ways. In the two examples below, one parent forced overactive children to watch television to calm them down, while the second parent punished her child by not allowing her to watch television for a period of time.

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

Q: Is there any sort of play that you don't allow in the house?

A: Hittin'. I don't allow no roughness, that's one thing. Like the other day he started. He has a very bad habit of hittin' her or bitin' her, alright? Then I put them all down here, I put them, put toys away, make them all sit down here and watch TV.

and,

Ms. Bosch, mother of three-year-old girl:

Q: What did you do the last time when she was naughty?

A: Yeah, it was...that's what I was thinkin' about TV because I know just I told her that she couldn't watch it for the whole day. You wanna know what she did?

Q: Yeah, how she reacted.

A: She gets very upset. She gets very upset.

Q: Does she follow what you say?

A: Oh yeah.

Q: When you say you can't watch it for the day then you don't give in?

A: Right. Oh, I'm very tough like that.

Clutter in the home:

The degree of clutter in the home may be an important factor in children's injuries, especially if one considers that falls and being hit by objects are major hazards for children under four. The homes in the study ranged from very orderly to very cluttered; the degree of clutter was coded from the videotapes by a judge. The results are shown in Table 64.

Table 64. Frequency distribution of homes in terms of clutter.

Clutter	Count
Minimal	8
Average	14
Excessive	5
Total	27

The degree of clutter in the home was not necessarily a choice of the parents but sometimes resulted from lack of space.

Ms. Kaplan, mother of three-year-old boy:

Q: Are there reasons for you to arrange this room the way that it is?

A: It's...it's dictated by the smallness of the space. Ideally, I think that everything should be lower, but we literally go up the walls [laughs], you know, in these places, and so things are high and sometimes we have to reach...[pointing to the shelves on the wall] these are all the games and you know, that's just the way it is. So space is dictating the arrangement for now.

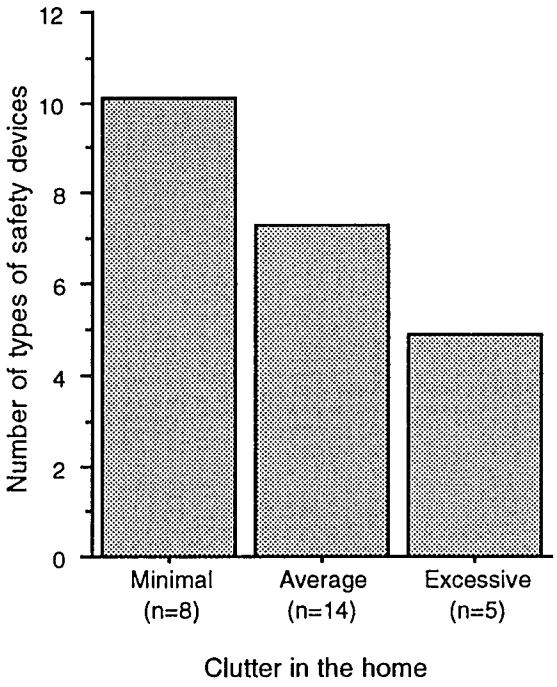
For some other parents clutter was part of the reality of having children in the home. For them it was important to let children play wherever they chose and clutter was the consequence.

Ms. Goodwin, mother of three-year-old girl:

> I also think that trying to keep the house neat is unnecessary. I don't remember if I read it like one of these Psychology Today or somewhere else that a real messy house, not dirty but messy, sort of like, if all their toys are around when they need them, it's easy for them to play because picking up after them, they feel like they're not allowed to play , they're not allowed to do their stuff. So I mean, in the kitchen there's all the arts and crafts stuff and if she can just sit by herself and do it once in a while, it's OK. The toys are dragged around the house, I mean, I clean up at midnight. You know, when everybody is sleeping and I've done some work and whatever and I sit quietly for a few minutes and say "oh, it's nice to have a clean house". But during the day it's just like, you know, you can't. So I think that, you know if you can just leave them alone and let them play and not worry about the mess. That helps them [the children] also.

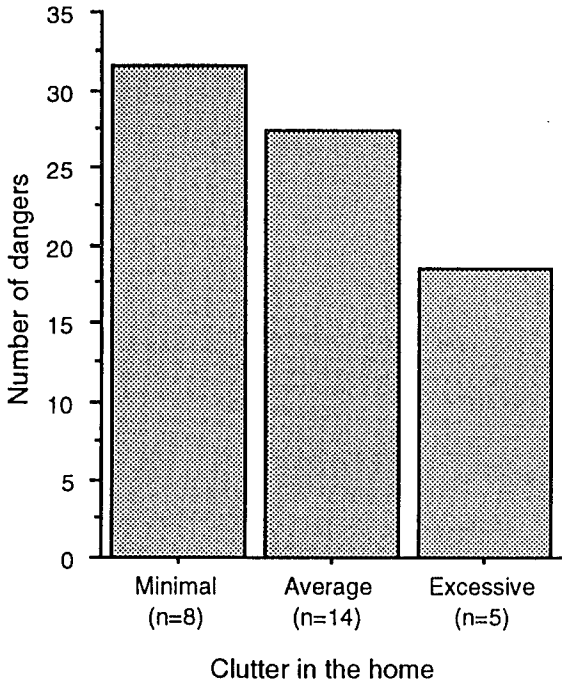
What was the impact of clutter on the SMS? Results show that parents in cluttered homes have fewer safety devices than parents in uncluttered homes [$\underline{F}$ (2, 24) = 3.6 $\underline{p}$ < .04]. Figure 66 shows this relationship.

Figure 66. Number of different types of safety devices installed in the home by the degree of clutter.



Parents in uncluttered homes were also able to identify a larger number of hazards than parents in cluttered homes. This result however, was not significant. Figure 67 compares the number of dangers identified by parents in uncluttered, average and cluttered homes.

Figure 67. Number of different types of dangers identified by the parent throughout the year by the degree of clutter in the home.



Discussion of findings on the role of the resources of the family on SMS

Specific findings regarding the effects of the Resources of the Family on the SMS are discussed below.

Economic resources of families

The most unexpected finding is the absence of a relationship between the economic resources of the family and their ideology, especially when the economic resources are so closely associated with the education of the parents. The most straightforward explanation

for this finding is the possibility that the Child-Rearing and Safety Ideologies of the parents are independent of the economic resources and education. Such an explanation will require a re-interpretation of the existing research data that limits the definition of high-risk populations to SES. This re-interpretation will become necessary, because parental ideologies will need to be entered into the analysis as a new factor that is independent of the commonly used SES variables such as income and education. This finding also implies that improving the economic resources of a family does not necessarily help reduce the injury risk for the child automatically.

It should be noted however that the study sample only covers families with a limited range of economic resources excluding upper middle and high income categories. The maximum Family Occupational Index Score was 7.5 out of the possible 9 identified by Hollingshead. The exclusion of families with extensive economic resources limits applicability of this finding to families of low to middle income.

Economic resources are related to the primary and secondary safety strategies of families. Findings related to these variables followed the previous patterns found during the analysis of each individual strategy where parents with fewer economic resources opting for *Supervision* either as their primary or secondary strategy. Why is *Supervision* the choice of economically disadvantaged parents? For one thing, it does not carry with it the financial burden generated by purchasing of the safety devices. However, *Child Rules* and *Physical Precautions* are equally cost efficient. The most important characteristic of supervision that separates it from other strategies is its ephemeral character. In other words *Supervision* does not require advance planning and estimation of child's behavior or development. For all the other strategies, a parent needs to anticipate behaviors, identify dangers, set up a plan and execute it. A supervising mother just needs to supervise at all times with minimum preparation. Probably it is this characteristic of their strategies that makes 'supervising parents' a high-risk group for children's home injuries.

Information and social resources of families

Findings indicate that two-parent families and families with more than one adult have fewer problems in gaining access to information resources than single parent families. It is extremely likely that this phenomenon is beyond the control of the single parents who are usually under considerable financial and time pressure and are unable to establish the necessary information networks for child-rearing and safety. These networks include friends, family, professionals and social support groups and the relative isolation of single mothers from all these resources may be the reason their SMS is primarily dependent on *Supervision* and why they constitute the biggest at-risk group in the population for child injuries (Wadsworth, Burnell, Taylor & Butler, 1983).

Parents with few or limited resources tended to use other family members and friends much more than books, magazines or professionals. This is consistent with the findings of Santer & Stocking (1991), where they found that parents overwhelmingly cited grandparents when asked who or what had been most helpful in keeping their children safe. Reading materials and physicians were the least cited resources for their low-income urban sample of 118 parents.

In terms of ideologies, *Enforcing* parents were the group with the fewest information resources, and consequently were least exposed to the strong anti-punishment attitude enunciated through the media and by child professionals. Unlike *Reasoning* and *Verbal* parents, *Enforcing* parents use initial and subsequent punishment for their child as their safety training interventions. Degree of exposure to information probably also explains parents' attitudes towards gender differences and value of play. Parents with extensive resources tend to value play more highly and are usually more reluctant to comment on inborn gender differences.

These results should be evaluated within the context of Eichelberger, Gotschall, Feely, Harstad & Bowman's (1990) findings. In their survey of 404 parents, they discovered that most parents feel confident that they already have enough information to prevent many common childhood injuries, especially "household accidents." Therefore, actual demand for written information sources may be low among many parents.

Impact of the past experiences of parents on SMS

Findings indicate that parents adopt ideologies which are closely related to their own experiences as a child, or which are developed in reaction to past experiences. This, of course, does not mean that certain values are not embedded in the family heritage and are not transferred from generation to generation. On the contrary, many of the interviews revealed values that should be studied within the context of the *cultural-ecological model* proposed by Ogbu (1981). Such an approach will not be ethnocentric; it will allow the researchers to look at issues such as child-rearing, disciplining, and safety, with a framework broad enough to encompass forces that are usually excluded in conventional research.

Further examination of the role of past experience on the ideology of parents is beyond the scope of this study but it should be done despite the complexity of the question and the need for elaborate research. The key question in this research must be "Why do you think that your parents raised you the way they did?" and participants would need to reflect on these experiences from the perspective of their new standing as parents, not children.

Home environment as a resource

Findings also show that housing design can support or obstruct a parent's struggle to maintain child safety at home. Surprisingly, in recent years, very few studies have taken this factor into consideration or attempted to establish a link between housing design and child-rearing. Generally parental complaints regarding the design of the home are limited to familiar observations about the lack of adequate space, especially in the kitchen, and the lack of good visibility. However, there is a clear need to look at home design, from the perspective of behavior and supervision needs of the parent. Even when compared to more institutional environments, home is emerging as an extremely dangerous environment for young children. Rivara, DiGuiseppi, Thompson, & Calonge (1989) showed that the rate of injuries in the home was twice as much of the rate of injuries at daycare. This is especially true in most public housing, where the location and size of the kitchen is not compatible to the amount of time a mother spends in it on a typical day. Research on this issue must be undertaken within the field of Environmental Psychology by focusing on the evaluation of traditional family roles, and the behavior patterns of family members in different cultures, with attention to the implications of these findings on new housing design.

A second concern raised by parents was the need to have a dedicated domain for the child. The lack of space and crowding in low-income housing makes it impossible for some families to have separate bedrooms for children. However, by looking at the innovative solutions that parents come up with to create play areas for their children, it is impossible not to ask why designers have not tried to develop safe spaces for children within the home.

Another key concern is visibility within the home. The balance between privacy and visibility is crucial for the researchers and designers to study. Unfortunately the impact of visibility on effective supervision of children in the home has not been studied in the past.

Even within the small sample of the study, it was enlightening to see how much the VOS changed from home to home. Inevitably, larger homes had a smaller VOS score, because of the greater number of rooms and sometimes levels. However, it was clear that even in homes of approximately the same size design can improve or block visibility. Furthermore, the VOS score in this study is an overall average and is not directly related to the use of each room of the home. Future studies that look at the impact of visibility should consider the daily usage of each room by the parents and children and calculate visibility scores based on these use patterns. For example, the overall VOS for a two story home can be low, but may be meaningless if the mother and the children confine all of their daily activities to a single floor. The scope of this study did not allow the generation of detailed use patterns of the home for analysis.

When the primary and secondary safety strategies of the families are considered, parents living in the homes with highest visibility were found to use *Supervision* as their first strategy and *Active* strategies as their first two strategies. In contrast, parents who were in the most compartmentalized homes used *Safety Devices* as their primary strategy and *Passive* strategies as their first two choices. The possibility of a direct relationship between safety strategies and the physical environment should be carefully explored by future research. If visual openness encourages parents to use *Supervision* as a main safety strategy, this finding become an important consideration in all the interventional programs targeted to reduce home injuries. Today, in this country, the visual openness of the home is not a variable that is recognized by the existing safety research. On the other hand, findings imply that the lack of visual openness forces parents to install safety devices and physical precautions. It is even possible to speculate that the visually open homes may create a false sense of security in the parents by giving them the feeling that their children are always under their supervision. Findings also show however, that parents in visually open homes were able to identify a larger number of hazards in the home. These positive and negative impacts of visual openness on SMS have to be balanced by close cooperation

between Designers, Safety Researchers, and Safety Professionals for the development of physical designs and programs, devoted to the reduction of childhood injuries at home.

Further, from the vantage point of child safety, findings on television dependency indicate that families use television for two very different uses. The first is as a potential information and education resource. But it should be noted however, that even the parents who claim that the television is important for their children's development, do not use it as a resource for child development and safety themselves. The findings also show that television-dependent families are the ones with a minimum number of additional information sources. These two findings together raise critical questions regarding the viability of television as an educational tool for parents and may have important implications for people developing safety education packages for high-risk families.

The second use of the television within the SMS is as a tool for parents to manage the behavior of children. This somewhat more unorthodox use of television needs to be evaluated within the context of family behavior and dynamics. Direct effect of television dependency on the SMS is hard to judge. The only quantitative finding was the relationship of TV-Dependency to the child's accessibility to other areas of the home. Children in TV-Dependent families had limited accessibility compared to TV-Independent ones. It is therefore possible that in homes with high TV-Dependency, children are discouraged from exploring their environment and are encouraged or allowed to spend a lot of time in front of the television set. The data from this study however, are not detailed enough to reach such a conclusion with certainty.

Clutter in the home did not come across as a very critical variable. While it was true that parents in uncluttered homes were using more devices and were able to identify a higher number of hazards, these findings are not enough to suggest that clutter is closely related to safety strategies of the parents. It seems that clutter is related more to the parental attitudes and ideologies that focus on the freedom given to the child for play.

Unlike the findings by Matheny (1987) ,variables related to the overall quality of the home, including noise and number of books did not emerge as significant. It is important however, that while Matheny was looking at the home quality variables against the actual occurrence of injuries, this study looked at them against parents' perceptions of risk and injury. Findings also did not duplicate the relationship between child-rearing beliefs and the physical qualities of the home environment found by Luster & Rhoades (1989).

Previous findings showed the existence of a relationship between family size and safety strategies used by parents, implying that crowding in the home can be an important factor. The relationship between family size and home size and possibly design, determines the level of crowding. In her study of 11,966 five-year-old children, Bijur (1986) failed to show that crowding was a significant contributor for the level of injuries. However, a different result may come forth, if the concept of crowding in the household is re-evaluated within the framework of some new concepts such as visual openness and auditory privacy, generated in this study.

Factors competing with safety

Undeniably, the management of safety is a very high priority for most parents. On the other hand, complexities of everyday life generate a number of factors that at one time or other may be in conflict with the SMS. Factors conflicting with safety are numerous and usually unpredictable. Therefore, it is not possible to generate a comprehensive listing of them in this study. Analysis of the data revealed, however, that the factors which compete with safety fall in two categories. The first category is related to the feelings of the parents, and especially the mother, about raising their children. These feelings are rooted deeply in ideology and in parents' perceptions of themselves. Factors in the second category are related to day-to-day events and to more practical issues stemming from the life-styles of the families.

Mothers' feelings about their children

The sincere and outspoken attitudes of the mothers during the interviews reveal that, while all the participants in the study were loving and caring parents, some mothers felt a strong frustration about certain aspects of parenthood. Overall, many of the mothers were satisfied in their role as a parent and admitted that they enjoyed the company of their children and seeing them grow. One parent gave an example about how her children allow her to look at things from a different perspective.

Ms. Bosch, mother of three-year-old girl:

Q: What's the best thing about raising a child?

A: Ah, they keep you young [smiles]. They really have a way of looking at things that just opens your eyes again to stuff that you just look at everyday as ordinary.

Q: Like what?

A: Well, also things that you would consider a nuisance or annoyance. We went to a puppet show last weekend, and in that rain. It was really awful weather, and they just were thrilled to death. You know, the umbrellas, and the raincoats and the puddles, and you know. You know, when we were just looking at it as such a nuisance, to have to get in the car with three kids, you know, three people, and you gotta run through the rain, and get in and everyone's all wet, and you know, like sticky, and they loved it. To them it was like 'ah, we get to wear our raincoats', you know. That was cute, to look at it like that. You know, we got to see the park...everybody goes to park when it's sunny and nice. It was nice to walk through the park. It was in Prospect Park. And we couldn't find the place so we ended up walking through the park. And it was nice to see it in a different light. And they brought that to our attention.

In an even more dramatic example, a mother described how her children played a critical role in changing her whole life around.

Ms. Vanderpelt, mother of three-year-old boy/girl twins:

In the beginning I had two children and then their father left me. Things started going downhill, so I started doing drugs, a great deal. I met their father, he bossed me up a little bit, alright? Then after he...and after a while, I decided to get pregnant with them. I was living in a furnished room, I went into Queens Bridge projects, alright? Like now, like now I don't care about the drugs, you know. I feel so good inside about myself, you know, I'm a mother again, you know, I'm out there making a purpose in the world. Yeah, they gave me something. Otherwise, the other children had already gone, alright? I would have been still out there, you know, probably, excuse me, a junkie or a prostitute, God knows what now, you know. But when I had them, in the beginning it was hard, alright? But let me tell you, it changed my whole life. I don't drink anymore, I'm not out there looking for men anymore, I'm happy. I'm proud of myself.

> I do things. Like I hooked up my plants, I do things like I have not done with other two. Then about five years I just let everything go. About myself, yeah, they gave me a purpose like I can't wait for them to go to school, to go to PTA, to start meeting other parents like me, yeah, I feel good about it, I really do.

The role of the children on the lives of all parents is not always this positive. With differing degrees of reluctance, some parents noted that a degree of sacrifice is associated to the joys of parenting.

Ms. Admer, mother of three-year-old boy:

Q: How do you feel about taking care of your child?

A: [laughs] On a good day or on a bad day? No I, I think it's important. I enjoy it. It's my job. Ah, you know, what I chose.

The two most common frustrations felt by the mothers are related to the impact of children on their career plans and social life. Due to the unavailability of affordable and safe child-care options, mothers needed to stop working in order to look after their children on a full time basis. This is especially a problem for mothers with young children. At least one mother had to make the decision between trusting her child to a third person or advancing her career.

Ms. Frattini, mother of one-year-old boy:

> I'll tell you the truth. I never thought that I would feel that I don't want anyone else to come in contact with my son, because I know that the people have to work and they have to leave their children with somebody. But now that I am actually in the situation of having to leave my son, I don't want to. I really don't want to and it is such a clash because I expected I would return to work. I took a leave of absence for a short period of time and the thought of actually leaving him with somebody that I don't know how they are gonna really be

with him. And they [other caretakers] cannot tell me everything that I wanna know [about my son].

The last point made by this parent reinforces the value of parents' direct experience with their own children. Besides her fears about the quality of care that her son might get in the hands of a hired caretaker, Ms. Frattini also worried about losing the developmental knowledge that she was gaining about her son by simply being with him all day long.

Another frustration voiced by the parents was related to the negative impact of a new child on the social life of the family. A few parents (bitterly) complained that they were unable to go out and participate in social activities as they used to.

Ms. Tillman, mother of one-year-old girl:

Q: Did your life change drastically after the birth of your child?

A: Yes, because I was not a home person, which I am not now. But I was more like I might sit there and watch two and three things on the television, go in the room, get dressed to kill and are you going with me or not, you know, to my husband, and very well, no problem, I'll see you when I get back. And I'd just go. Now after when she was born I kinda became stuck in the house for a while.

The relationship of parental attitudes to safety becomes clearer when one looks at the significant adjustments that parents make in order to improve their child-rearing and safety management strategies. Some parents are not only more willing to make these changes but also more conscious and aware of the implications of their actions. One parent even presented a theory of her own, on two different forms of parenting.

Ms. Falcon, mother of one-year-old girl:

Q: Do you think there are better ways to raise kids then?

A: Better ways than others. Well, I definitely see environments that I think are better for kids than others, and the things that are different in those environments. A parent who is providing their kids, you know, with lot of stimulation, and some who don't. I generally analyze them as two categories.

Q: O.K., we'd like to hear about that.

A: Actually, it's gonna sound weird but basically what it was down to is their kids, their play, their environments, where the parent's priority is the child, or the kids and that's what I think is the best environment. But then there is the second group which is where, you know, basically I am talking about the mother, the mother's main priority is maintaining her household in terms of like housekeeping, cooking dinner and, you know, home centered things, domestic things and that I think tends to exclude, well, you can include children, but generally it doesn't, that's what I have seen. I think, it excludes them [children] and therefore they don't get, you know, all the things that I think a child should from the outside world.

Life-Style of families as a competing factor

Many of the factors that clash with the management of safety in the home are generated from the realities of everyday life. Some of these are routine and expected while others are unique and unexpected by parents. It would be impossible to generate a comprehensive list of all these factors without a major study. However analysis of the data reveals seven examples that may be among the most frequent types of conflict between life style and safety. These examples are discussed below.

Home esthetics

The concern for esthetics of a home can at times, conflict with the management of safety. In many homes with young children, it is not unusual to see all the coffee tables cleared of decorations and furniture arranged or removed in the interest of safety concerns. Similarly, many of the safety devices like safety gates are designed with no esthetic concern and can ruin the appearance of what parents may call a "beautiful home." For some parents, esthetics of the interior is not an issue. A drastically modified child-safe environment causes no particular anguish. For others however, this conflict presents a serious dilemma. Parents in this second group tend to think that families should not completely surrender their existing life style because of the safety of the child and try to get away with minimum amount of physical modification to the interior of their homes.

Ms. Nixon, mother of two-year-old boy:

> I still try and insist on doing the things I did, and going places, seeing people, doing things that we did before we had the children. So of course it's difficult now you add two children to the...to going and seeing things, but you know. I'm still trying to be stubborn and not give in, and have people over and you know, not rearrange my entire house, you know, and keep some things nice. Because, some people just say 'Oh, I have kids' and just throw in the towel. And your house looks like, you know, a bomb hit it [laughs] and you're never gonna have anything nice or fragile again, but you know, I do, and still insist on having my life style to an extent. I've given in on things and sometimes I think I would never have given in. It's a give and take situation. You have to see what's gonna work for you. You know, some children, they come in, they don't touch anything at all umm, you know, Thomas is a very, you know, picks everything up and looks at it, and takes it, you know, and climbs up and you know, so you have to...I had to adjust my lifestyle to his personality and his way of doing things too.

Mood of the parent

The changing mood of the parent is another factor which from time to time conflicts with consistent implementation of the SMS. Under the pressures of day-to-day life, the mood of the parents and their tolerance for their children changes. This seriously effects the systematic reinforcement of the safety rules for the child and the methods of intervention and punishment as well.

Ms. Bosch, mother of three-year-old girl:

> Let's say she's tormenting a dog or something. The dog likes to sleep in the room where she plays. Sometimes she just has it in her head what she wants that just bother him. I mean, just pull his tail and you know, pile toys on top of him so you can't see him, you know. And I'll tell her 'Michelle, stop,' you know, and she, like stops for a minute, and you walk out of the room and I hear her again pilin' toys on 'im. And, just kinda...it depends on the mood I'm in. If I'm in a really bad mood, I'll just kind of scream, grab her outa the room, stick 'er on the couch, or something and say 'watch Beetlejuice, leave dog alone'. You know, kick the dog outa the room, and you know I'll remove her from the situation, remove the dog from the situation, and that's kind of it. If I'm in a little bit patient mood, then I might just kind of [pause], without yelling just kind of direct her attention to something else. You know, take a puzzle out and say 'ooh, we haven't done this in a long time', you know, and they're really easy to...[pause], to way-lay. You know, just take out somethin' they haven't seen in ah, two weeks, and they're like 'oooh, ooh' and they forget all about what they were doing. So I try to do that.

What options exist for parents? One parent suggested that talking with the child and explaining that her mother is in a bad mood works as a strategy.

Ms. Goodwin, mother of three-year-old girl:

> Sometime screaming doesn't do the trick. You can scream all you want but you have to follow your threats or your promises. And I

> think that sort of being honest with them is good. I mean, if you're feeling blue, feeling sad and she sort of sees you, you have to explain things like that.

Privacy needs of the parents

Sometimes parents who are alone with their child all day long feel they need some "peace and quiet", some privacy away from their child. They want to be alone for special activities such as working at home, cooking or dressing, free from their child's interference.

Ms. Falcon, mother of one-year-old girl:

> My kids usually don't let me get dressed by myself and I, many times get ready in the morning in the bathroom. So, lot of times they would follow me in there. I do sometimes just try to close them out. I lock the door many times, you know, they are just being so impossible that I do not let them in with me.

For parents who primarily depend on *Supervision,* having privacy means a temporary breakdown of their SMS.

Parents working at home

Some mothers in the sample did part-time work at home and faced a conflict between the need to conduct business and the need to simultaneously manage the safety of their children. For some parents the tools of their trade also posed a potential danger to their children.

Ms. Nicotra, mother of two-year-old girl:

> Then I have all my photography chemicals up there [points to cabinet high up above the refrigerator]. Umm [pause] which, again it's not a problem, she can't get them up there, but when I start using them and things, [pause] you know, I usua...probably do it when she's asleep.

Involvement of other adults

Other adults, members of the family or friends who are visiting or baby-sitting can knowingly or unknowingly, interfere with the established SMS of the family. Parents need to communicate a great deal to understand and agree on the strategies to be used to keep their child safe. This communication can be in the form of discussion between the parents on issues related to safety, or it can be non verbal in the form of parents watching the safety-related behavior of each other and learning through observation. It is very hard to communicate such a complex form of knowledge to people who do not regularly share the life of a family. As a result, other adults not living in the same home with the child often fail to comprehend the reasons behind the safety-related actions of the parents, especially if those actions do not confirm with common sense. In the following example, Ms. Kunik describes how she got aggravated when her father-in-law used chairs rather than the safety gate to block her son's access to the kitchen.

Ms. Kunik, mother of one-year-old boy:

> MOTHER: I'll give you an example. My father-in-law was watching him [the child] last night, one of my friends came in the house and my father-in-law had two chairs over by the door to prevent him [the child] to come in here [the kitchen], so he couldn't come in the kitchen. Because he [father-in-law] didn't want to have to run after him. So he [father-in-law] kinda, you know, gated it [kitchen door] off so he [the child] couldn't get in here [the kitchen].

Q: So he did not use the gate?

A: Not the gate, he just put like chairs in front of it [kitchen door], but that aggravated me to no end, I...one of my friends came down while it was done and he [father-in-law] was like talking to her and I was thinking, you know, get those chairs away. 'Cause he's [the child] used to, you know, the way I have it set up [with the gate].

Part of Ms. Kunik's anxiety resulted from her concern for how her son would react to a safety strategy he was not used to.

Limitations on the control of the physical environment

Parents can not always modify the environment, according to their child-rearing and safety goal in the way they would like. A typical example of this is when the child is taken to a new place, like the grandparents' home, for a visit. It is very difficult for parents and grandparents to evaluate potential hazards and predict a child's behavior in an environment where they do not routinely manage the safety of the child. In the following example Ms. Frattini describes how her strategy of letting her child free to touch everything in her own home backfires when the child repeats the same behavior in other people's homes.

Ms. Frattini, mother of one-year-old boy:

He plays with everything. As a matter of fact, I think I have to stop letting him play with everything. Because he goes to other people's houses and he thinks he can do the same. He thinks he can play with the stereo, he thinks he can play with the TV. He thinks he can pick up things.

An additional example of the conflict between the physical environment and safety occurs when parents are prohibited from modifying the interior of their home for any of a

variety of reasons One parent, for example, has been living with her child in her boyfriend's house and consequently was not free to make the changes she would have preferred.

Ms. Morrison, mother of one year old girl:

> You have to understand. This is not my house, you know. This is an apartment and...um... some of these things are done for my child but some of these the way this set up is here because if we move, the next tenant [has to find them acceptable]. The color is chosen to make it easier for the next tenant. I would make it more colorful.

Pets

Having pets at home is another potential threat to child safety, not only because pets themselves can pose a danger to the child but also because of the complications that may arise from pet-specific hardware that needs to be kept in the home.

Ms. Nicotra, mother of two-year-old girl:

> MOTHER: Then, there's over here is the refrigerator that she now can open. Which I caught one day, I have a cat who's diabetic, and we have insulin for it. And I couldn't find the insulin when I gave it to her at night and she knows how...that I give a shot, and we found her [the child] playing with the insulin. So, if that broke, that could be dangerous. Then to make matters worse, I had...
>
> Q: That's for the cat? [meaning the insulin]
>
> A: That's for the cat, the insulin.
>
> Q: I didn't know cats could be diabetic.

A: Yeah, they can and uh, you have to keep it refrigerated. There's no, ...you know you don't have much of a choice. So then to keep the needle...the needle's in the freezer. In here. So one day I found, she [the child] dragged a stool over to the freezer, took out the needle, opened it up and stuck herself with it. So, not bad but just enough to...I mean she came in crying, that's how I knew.

Parental apathy towards dangers

From time to time, during the interviews, the research team came across a situation where a parent identified a hazard, but also admitted that they did not do anything about it. Although this type of behavior was not widespread, it happened frequently enough to raise a research question regarding parental apathy towards dangers. An analysis done during the first safety interview shows that the percentage of dangers which are identified but not covered by any safety strategy ranges from 0% to 42% with Mean = 20%. Table 65 shows the frequency breakdown of these results.

Table 65. Frequency breakdown of the percentage of hazards identified but not covered by any strategy during the first safety visit.

From (≥)	To (<)	Count	Percent
0.0	10.0	7	25.9
10.0	20.0	6	22.2
20.0	30.0	8	29.6
30.0	40.0	4	14.8
40.0	50.0	2	7.4
	Total	27	100.0

In general, parental reluctance to take action against certain hazards was hard to explain. Even parents themselves, when asked why they failed to neutralize a particular danger, could not explain the reason clearly. A typical conversation went like this:

Ms. Bosch, mother of three-year-old girl:

Q: She can come in the bathroom anytime?

A: Yeah.

Q: What about when taking a bath?

A: Ah [pause, laughs]. She would like it if I stayed in there the whole time with her, but I don't, 'cause that's my only time to get anything done. You know, if I have a phone call to make and I don't want her to disturb me, that's when I'll do it.

Q: How does she take a bath?

A: I fill the tub and she gets in and the water is constantly running, so we always have the chance of it overflowing. So I have to keep coming in and picking up the drain to make sure it drains out and refills and...

Q: But you leave her alone?

A: Yes.

Q: And she has toys?

A: Yes. She, they're right there [shows the shelf next to the tub]. They're there, so she can reach them from the tub. She takes what she wants.

Q: She can come in anytime?

A: Yes, she comes here to use the bathroom like by herself. Closes, locks the door.

Q: She does?

A: Yeah.

Q: There's a lock on the door?

A: Yeah.

Q: But you keep the door open all the times.

A: Yes. So if it's closed you know she's in there. Now I had an electrical appliance out, and she wouldn't plug that in, you know I'm not afraid to leave that out.

Q: Are there any dangers?

A: Yeah, that's probably pretty dangerous [laughs].

Q: Electrical appliances?

A: Yeah. [to the child] Michelle, just 'cause I'm talking about it doesn't mean you have to touch it. [to the interviewer] She knows.

Similarly, parents did not always follow-up on the safety precautions that they told the interviewers that they would take as soon as possible. In many cases, when the safety team visited the home two months later, they found out that the hazards were still there.

Ms. Bosch, mother of three-year-old girl:

MOTHER: I have to play it by ear, but she's very big with windows, that's why we put up the window bars, because she...

Q: Oh, there are window bars here?

A: Not here yet but I might put them, 'cause she likes to look out my window, it's one of the windows she likes.

Q: Are they open?

A: Yes. And the screens are paper thin. And she sits in the window sill and leans against the screen [laughs].

Q: So you may...?

A: I might install, yeah.

[Note: the bars were never installed in this home, but when the winter arrived, parents kept all the windows shut and this was no longer an issue]

Discussion of findings related to the factors competing with safety

Findings of this section illustrate how difficult it is for the parents to maintain a consistently effective SMS against all the conflicting factors generated through the realities of everyday life. Examples given in this study are probably very selective, and a more comprehensive study of all these factors is necessary to understand the complete influence they have on the SMS.

It can be hypothesized that the overall satisfaction of the mother with her role in the home and as a parent is likely to affect her management of the SMS. Literature on safety and child-rearing takes parental satisfaction for granted. However, the role of children in the parents' life as well as their impact on their work, social life and psychological well-being should be considered as factors which can potentially reinforce or conflict with SMS. In a follow-up study where they surveyed the child-rearing attitudes of parents six years later, Hurley and Hohn (1971) found that changes in the parental child-rearing attitudes were closely related to the occupation of the parents.

More critically, day-to-day conflicts between SMS and life style have the potential to increase the injury rates for children. Matheny (1985) showed that the children of the mothers who depicted themselves as "emotionally overwhelmed" and "less energetic" suffered from a higher rate of injury liability. Straightforward looking daily conflicts are not necessarily easier to address. For example, the conflict between the aesthetics of the home and safety needs of a child can be traced to the overall ideology of the parents. Specifically, when the parents argue that they need to keep all the artifacts in place, because

their goal is to teach their child not to touch them, it is hard to distinguish if they really mean that, or if they are using this developmental argument as an excuse to keep their home in an esthetic state that they prefer.

Similarly, the fluctuations in the mood of the parent can influence that part of the SMS where the interpersonal communication between the parent and the child operates according to the rules they both understand. Mancuso & Lehrer (1986) for example, argue that emotion can significantly alter the goals of reprimand. More specifically, as revealed in this study, some parents use enactment of anger as an effective tool in order to get their message across to their child. It was also clear that the children were expecting their mother to play the "anger" role. If due to the mood changes, a legitimate anger by the parent is introduced to the reprimand, its effects on the parental disciplining strategies require careful consideration.

Parental apathy towards identified dangers is an issue that is hard to explain. It is possible that there are a number of factors at work behind this. The first one is the nature and the degree of the threat. All cases of parental ignorance of dangers are not as life threatening as in the examples given above. It is possible that after evaluating the severity of danger, parents decide that the threat posed is not worth immediate attention and that they can live with the risk. This may happen especially for low-risk dangers that are likely to cause nothing more serious than pinched fingers or some scratches on the child. Another possibility is the parents' belief that their child will not engage in that particular activity related to the dangers that they are ignoring. Such a belief is usually reinforced by the previous disinterest of the child in the object or area where the danger exists. Finally, it is also possible that even though the parents genuinely appreciate the danger and though they mean to do something about it, they just never find the opportunity to take the action against it. Of the three explanations offered, this last one, if true, has the biggest potential for a serious injury to the child.

Variations in the Driving Force for the Safety Management System

The five components of the SMS (arental ideologies, resources of the family, types of safety strategies used by the family, the child and competing factors with safety), are all influential in determining how the SMS is shaped and they also help determine the level of risk for the child in terms of home injuries. When the SMSs of the families in the study were evaluated, it was clear that each component of the system affected the SMS in different degrees. This effect was either in a positive direction so that it improved and reinforced the SMS, or it was in a negative direction where it caused the SMS to break down frequently.

While all of the components of the SMS can have supportive or destructive effects to differing degrees, a family-by-family analysis revealed that there is at least one factor whose effect on the SMS is much stronger than all of the others. This dominant component of the SMS will be referred as the *Driving Force* of the SMS. For example, for some families the *Driving Force* may be a child with an hyperactive character or it may be extremely limited physical and economic resources. Whatever the reason, *Driving Force* is strong enough to affect the whole safety system and usually causes parents to willingly or unwillingly adjust the remaining components of their SMS in order to be able to deal with its negative effects.

Theoretically it is possible that each of the five components of the SMS can constitute the *Driving Force* for a system. This study revealed patterns where only four of the five components of the SMS constituted the *Driving Force*. Overall, however, there was a total of six specific combinations. Table 66 shows the breakdown of the components of the SMS as the *Driving Force* for the families in the population.

Table 66. Frequency breakdown of the Driving Force of the families

	Count	Percent
Ideological focus	5	18.5
Inadequate strategy	5	18.5
Successful strategy	4	14.8
Child negative	4	14.8
Child positive	4	14.8
Inadequate resources	5	18.5
Total	27	100.0

Ideological focus

Five families in the study are identified as being driven by the strong ideologies of the parents. These families are those where parents have very clear and strong ideologies regarding child-rearing. All the safety practices of the family are designed around these ideologies. These five families, however, had very different approaches toward child-rearing. One clear example of the ideology effecting the SMS was in families where parents believed in the value of giving the child almost complete freedom.

Ms. Bosch, mother of three-year-old girl:

> Um, the freedom that they're allowed...my children have absolute freedom...from when they were born they always had full roam of the whole house. They could crawl up the stairs, they were allowed upstairs. I know...I never fenced them in any place. I let them climb on the furniture, they jump off the furniture. They're very...they're both very athletic. They, they're good bouncers, they're good jumpers, they're good climbers. Because I never was like [gasps] 'Don't go up there, you will fall' You know, I think the more you put fears in their head, the more they're gonna be afraid.

Many mothers who encourage their children learn about the physical environment thought that the risks they take are worthwhile since the best way for the child to get

physically competent is through play and exploration that is supported and not obstructed by the parents.

Ms. Frattini, mother of one-year-old boy:

> I let him touch the egg shaped things. You know, I was more into teaching him like to touch flowers. I would let him touch whatever he wanted...I play with him, you see I put these things on the floor [at this time, mother picks up one of the cushions on the sofa and places it on the floor next to the sofa and creates a soft step] and I let him roll from here to there [from the sofa to the pillow and to the floor]. So I let him play...I think that is why he doesn't really get hurt, cause I let him play, I let him use the furniture...like a lot of mothers, they tell me 'oh, I don't let my son jump on the furniture'.

The interesting point was that, parents were aware that they were exposing their children to a higher risk of injury by encouraging them to be daring and independent. In the following example, Ms. Morrison admits that her child is at more risk in terms of possible injuries because of her parental attitude.

Ms. Morrison, mother of one year old girl:

> I think the, she [child] is more at risk [compared to other children] because she is more exposed to a lot of things that I see that other mothers don't expose them to, and because I let her free, she is not cooped up in the playpen,...so she is more exposed to things. Even though I feel that she is very cautious, she is more exposed.

Moreover, the physical competence of her child is not the only thing that concerns Ms. Morrison. From her ideological perspective, she strongly believes that it is her child's right to be given the same opportunities and treatment that adults get.

Ms. Morrison, mother of one year old girl:

Q: Are there better ways than others to raise children?

A: Yes, I don't believe in hitting children, I don't like to tell her no. For instance, she wants this mike [microphone being used by the interviewer]. I feel that why shouldn't she have this mike, after all I'm taking it. I don't believe saying 'you can't have that, you can't touch that.' That's how they learn. They want to explore, you know. So if she breaks something, I don't care. See, those things don't matter to me. There is nothing really valuable for me anymore.

The second type of ideology driven family had the exact opposite approach. These are the families which believe that a child's behavior should be regulated in the strictest fashion in order for them to develop in a positive way. The importance of social control over the child's development is expressed by Ms. Blank in the following quotation.

Ms. Blank, grandmother of two-year-old girl:

Q: How do you think kids should be raised?

A: Well, the best way I can say is the way I raised these. Mannerly, plenty of sleep, food and manners. And they obey. Be obedient. They know when their time come to rest, and when people come in, no noise, go in their room and be quiet. Take their naps, get up and have their lunch, meals, and [pause]. Let me see, there's one more thing. They have to be brought up to have their baths, and hair combed, teeth brushed. And out to play, in the fresh air. Not in the house all the time. That's the way I think they should...that's what they get.

The past experiences of the grandmother undoubtedly shaped the way she looked at life and needs of the children. Her emphasis on the importance of basic needs such as nutrition and physical comfort were possibly acquired during the hard times of the past.

Ms. Blank, grandmother of two-year-old girl:

...they [her grandchildren] havin' a good time, and got food, and a nice bed to sleep in, and plenty a' room in a queen size bed, the two of 'em [pause]. So now what better life would you want.

Finally, the third type of family where the *Driving Force* was the parental ideology was the family with a strong religious orientation. For these families in this category, all aspects of life, including child-rearing were organized within strict religious guidelines.

Ms. Abbott, mother of two-year-old boy:

MOTHER: We are Jehova's witnesses. We are not only responsible but also it is a way of living. Some people think it is a religious cult but it isn't. We raise them [their children], not only teach them how to do things but also to learn the way Jehova likes to do things. So by teaching them why this is right and this is wrong, we teach them from the Bible, not necessarily just because I said so. We teach them from the Bible, to help them to learn who God is, and why he doesn't like things that way so they [children] begin to understand what is right and what is wrong.

...

Q: How do you think children should be raised?

A: [laughs] Well...[pause]. Basically the way that Bible teaches you. Because the Bible teaches you to train up a child from infancy, and that's important because...like teaching them when they are very small what not to touch, for example, my baby daughter, she is 6 months old, she goes around in her walker and touches everything. And I tell her don't touch and I spank her [lightly taps on her own hand] and let her know 'no, you don't touch that' because when you go to someone else's house, if they are not taught at home how not to touch things and they break down everything in your home and you go to someone else's house, they are going to do the same thing and they are not going to like that, you know. So that is important, the way you raise them at home influences how they act outside.

In summary, it is safe to assume that most of the families whose SMS is driven by their ideology are the ones with strong and clear beliefs regarding child-rearing. This is logical since families with less extreme views are likely to have forces other than ideology to drive their SMS.

Unlike the other components of the SMS, the impact of a strong ideology on the SMS is not clear without looking at the system as a whole. In other words, while the negative effect of an overactive child or the positive effect of abundance of family resources on the SMS are more direct and therefore easier to assess, the implications of an ideological stand are more indirect and subtle. For example, the decision of the parent who willingly puts her child in risky situations in order to improve his physical coordination may be or may not be sound. Furthermore it is likely that while she is taking smaller risks in the short run, she may be avoiding bigger risks in the long run. Answers to these questions require an in-depth analysis of the SMS of that particular family in a longitudinal fashion.

Inadequate or successful safety strategies

For some families, the *Driving Force* of the SMS lies within the selection and implementation of the safety strategies. Again, the impact of safety strategies on the SMS can be both ways. While properly selected and well implemented strategies help to reinforce the SMS, poorly designed and badly implemented strategies may constitute a *Driving Force* that weakens the SMS and increases the injury risk for the child. What distinguishes successful safety strategies from unsuccessful ones? Key elements of successful strategies include the following: (a) they are comprehensive and cover a wide range of hazards; (b) they use multiple strategies to cover each individual hazard; (c) they are consistent and consistently implemented and; (d) they are precautionary rather than reactionary. Inadequate strategies lack most or all of these qualities. The following quote

is an example of how some parents change safety rules in the home, according to different circumstances.

Ms. Nixon, mother of two-year-old boy:

Q: Are there any specific rules he's supposed to follow in here [child's bedroom]?

A: Just not to jump on the bed. 'Cause I'm afraid he'll fall off and break his neck. He, will from time to time jump up and down and have a great time on the bed which I don't mind if I'm in the room I'm watching him but so...

Another example is from a mother who uses a combination of rules and passive strategies and reverts to punishing the child when those fail.

Ms. Admer, mother of three-year-old boy:

MOTHER: Lately I've been trying to get him to his room. But because he's bigger...

Q: And you close the door?

A: Yeah. And I can put him on this.. I, I hate to do it but it's [pauses] the only way I can, he has a, you know a child proof door thing, and I put it on the inside because he would not stay in his room, he'd just walk right out, so...and that infuriates him. umm at the end I spank him.

If the SMS of a family is strategy-driven, it is likely that positively influencing it with an outside intervention, such as a parental safety education program, would be possible. Modifying the safety strategies of a family should be easier than changing their ideology, improving their resources or changing their child's personality. However, if the small sample in this study is representative of the population, it means that only nineteen percent of the families can significantly benefit from intervention programs that are targeted to

change their safety strategies. Other families who are at risk because of their poor resources, overactive children or questionable ideologies, will need different interventions.

Personality and behavior of the child

For some families, the personality of the child can be the determining factor for how the SMS is set up. A very active and non-complying child may force the parents to increase supervision and use strict disciplining strategies. Findings did not show a clear pattern relating safety strategies to the child's characteristics, suggesting that parents may be dealing with problem children in different ways, on a child-by-child basis. Ms. Ivanoff, who characterizes her child-rearing practices with the words "nothing is routine in my house" agrees that an individualized approach is the best one.

Ms. Ivanoff, mother of three -year-old boy:

Q: Do you think all children should be raised in the same ways?

A: Oh no.

Q: Why?

A: They just take it differently. Thomas needs a lot of discipline. He is constantly pushing to see how far he can go. I mean, children do it anyway but he is doing more so. Elizabeth is disciplined merely by me disciplining him. Completely opposite, she is much more sensitive...Thomas is all a show, all an act.

The character and behavior of Ms. Ivanoff's son Thomas, constitutes the Driving force for the SMS of this family. Without appropriate resources, Ms. Ivanoff tries her best to manage Thomas's safety, but the level of injury risk in this family still remains significantly high.

Ms. Ivanoff, mother of three -year-old boy:

Q: Does he [Thomas] obey you?

A: No.

Q: Why?

A: That's Thomas. I have to constantly be on him.

Q: Do violations to the rules occur?

A: Yes

Q: When do they occur?

A: When I'm not looking.

In some families, the child's behavior had a completely opposite effect. Even when the parent's strategies were not totally appropriate and consistent, the very calm, cautious and obedient nature of the child supported the SMS of the family and injury risks were kept low. In these families, the *Driving Force* of the SMS was still the child herself, but this time it was playing a supporting role by having a positive influence on the SMS. Ms. Falcon is the parent of such a child, who engages in risk-free behavior for relatively long periods and also makes herself visible periodically as if to help her mother in supervision.

Ms. Falcon, mother of one-year-old girl:

Q: How long would she play by herself?

A: Well, I'm so proud of my little daughter. I am often amazed that how I'd be in the kitchen preparing dinner and she will not bother me the entire time. Like one thing, [reaches and picks up a small doll] she is obsessed with dolls. Now she just discovered them in the beginning of April, not with me, because we were away and the kids had dolls and she just fell in love with them and she can really get absorbed. One time I was making dinner, she literally played with the doll the whole time. But generally, she'll, like, play and then she'll come to say 'hi' to me and then go back.

Inadequate family resources

Sometimes, the major weakness in a family's SMS is diagnosed as the lack of adequate resources for the parents. Usually, in families like this, parents are under such pressure that it is not possible for them to maintain an effective SMS with the available resources. In other words, the root of the problem is that the parents do not have the social support systems in place to maintain an effective SMS. Single parents seem to fall into this category more easily than couples. In this study, three out of the five families whose *Driving Force* was Inadequate Resources were single-mother families. This finding partially explains why according to injury statistics, teenage single mothers constitute the highest risk group in terms of child injuries. Similar problems can also exist for some mothers with husbands and partners. In these two-parent homes, however, all the responsibility for child-rearing is on one parent.

Ms. Abbott, mother of two-year-old boy:

Q: When your husband is home does he typically supervise the kids?

A: [laughs] No. I do. Unless umm, because most of the time he is resting and doesn't want to be bothered. So [pause] it is like when things really get out of hand, then he'll step in and take over, you know, but most of the times I supervise them.

Lack of child-rearing support is not the only reason why inadequate resources become the major negative *Driving Force* on the SMS. Another common phenomena is when parents do not have a way to be informed about safety-related issues. With no intervention programs, reading materials, social support or education, their knowledge of child safety is insufficient. These parents usually revert to using common sense, or rely on their observations of other parents and their own past experiences.

Ms. Christopher, mother of two-year-old girl:

[After the mother stated that she does not have any information sources to learn about safety, the interviewer asked]

Q: So how do you find out about it [safety]

A: Because my sister. I baby-sat her sixteen years ago and I remember. Because we are like 12 years apart.

Q: Was it through you mom or through baby-sitting her?

A: Through baby-sitting her.

If the basic weakness of a family's SMS can be traced to lack of adequate family resources, it may be possible to improve the situation by introducing well-placed social and educational support networks for these families, which in turn will result in the reduction of child injuries.

Why is it important to identify the Driving Force, or forces, on the SMS of families? First, the *Driving Force* can be used as an effective way to evaluate injury risk in the family. Second, it is important to look at the other components of the SMS to know the major forces that are in play. That is, by assessing the influence of the *Driving Force* on every component. Third, more effective interventions can be designed, when the *Driving Force* of the SMS is known. If the *Driving Force* of the system has negative influence on the SMS, it is natural that it should be the primary target of the specific intervention programs for that family.

Discussion of findings on the variations in the driving force for the safety management

The level of risk taken by each parent raises a very critical issue in terms of the management of safety and overall injury risk for the child. Since the overall goal of the SMS is to minimize the injuries, it can be assumed that the less risk a parent takes, more

effective the SMS will be. However for any parent the management of the child's safety is a long term project. Taking a limited amount of risk, as the parents above had indicated, may help the child to avoid injuries by learning new skills. The child can improve his physical abilities and also learn about some hazards through the "hard way". In that sense, it is possible to argue that some minor injuries and incidents can have a positive educational impact on the child. A child who slightly hurts himself with a hot oven may me much more careful in the future. However it is important for the parents to evaluate how much risk taking is acceptable and to develop a planned strategy for implementing it. In that sense there is a major difference between unplanned random risk-taking by the parent and taking risks as a consequence of a conscious safety ideology. In the case of a minor incident, parental risk taking could be totally pointless unless the parent clearly communicates the cause-effect relationships of the event to the child and uses each incident as an educational opportunity.

Postscript: Personal reflections as a parent

In this section I will try to explain how being a parent influenced my views and perceptions in this study. While I tried to present the findings as directly as possible, it is likely that I have been influenced by my personal experiences as a parent in interpreting some of these findings. This section will compare the safety strategies that my wife Ahu and I have been using with those of the study population, so that readers can evaluate our SMS as parents with extensive safety related information.

Background

Our first and only daughter Misra was born on December 24, 1990. At that time this research was in a very advanced stage. Almost all the data had been collected, and only a fraction of the interviews remained uncompleted. In other words, being a parent did not influence the research design. Ironically, none of the other members on the research team had children either. The birth of Misra consequently gave me a new perspective. While I was observing the development of my daughter through the critical ages of zero to three I was also working on the data analysis and interpretation of the results.. I tried to compare the SMS of our family, with the SMS's of the families in the study. I could now read the personal accounts of the parents in the study, not only from the perspective of a researcher, but also from the perspective of a parent as well. Consequently, I think I was less critical of the inconsistencies and contradictions voiced by the parents. I understood and appreciated the importance of all the factors competing with safety. Finally, the experience of being a parent gave me valuable insights into the hidden agendas behind certain strategies. I understood more clearly what parents were trying to accomplish, for example, when they set up rules and allowed the child to break them repeatedly. In summary, I think

the experience of being a parent helped me professionally, I am thankful for this lucky coincidence and for this beautiful daughter.

Self interviews when own child was one and two-years-old

In order to document the safety strategies that Ahu and I have been using, I conducted a self-interview when my daughter was one-year-old, and again when she was two-years-old. Both Ahu and I participated in these interviews, and since we communicate about safety-related issues frequently, we were in complete agreement regarding the answers to the questions. The self-interviews focused on the different strategies that we used in the home. More specifically, we identified the types of hazards, safety devices, physical precautions and the child rules that we were using at the time.

I then compared the results of the self interview at one year, to those of the nine parents who had one-year-old children, and the results of the second self-interview with the corresponding interview with the same group of parents.

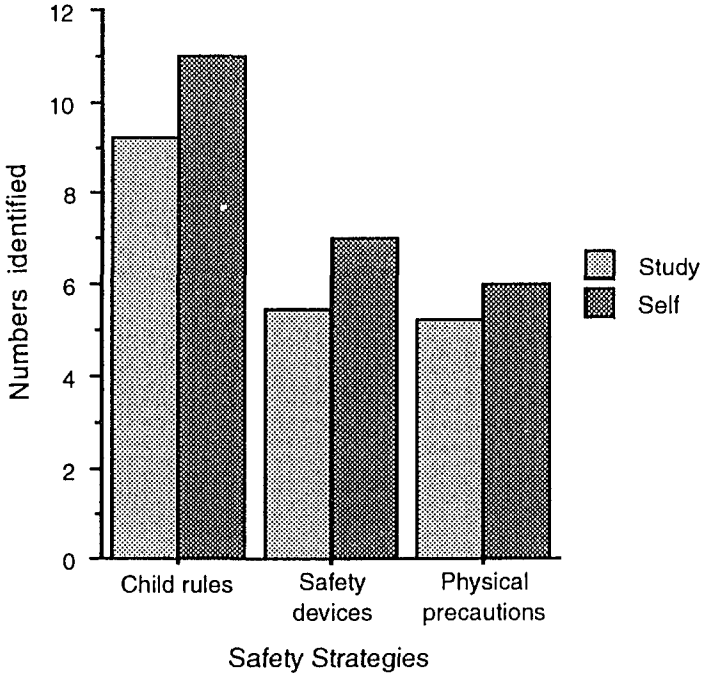
In terms of the types of dangers perceived in the home, there was not a big difference between our observations and those of the study group. Unexpectedly, the mean number of dangers identified by the study group was almost the same as higher than the ones I have identified in the home. Table 67 shows this comparison.

Table 67. Types of dangers identified by the author and parents of one-year-olds in the study.

Perceived dangers when the child was one-year-old	Mean	Count	Minimum	Maximum
Study	16.9	9	6.0	29.0
Self	16.0	1	16.0	16.0

However when it came to the use of *Safety devices*, *Physical precautions* and *Child rules*, our strategies returned slightly higher numbers than the study means. Figure 68 compares the results of the self-interview with the study group for one-year-old children.

Figure 68. Comparison of the strategies used by the author against that of the study group for children at one years of age.



In summary, the results of the self interview done when our daughter was one-year-old was very close to that of the study group, indicating that the impact of extensive information in safety on our safety strategies was moderate when the numbers of hazards, devices, precautions and rules were considered. It should be noted however, that the mean figures for the nine families are not indicative of them as a group. The range of the differences between these nine families was very high, varying from 6 to 29 in the number of hazards identified in the home.

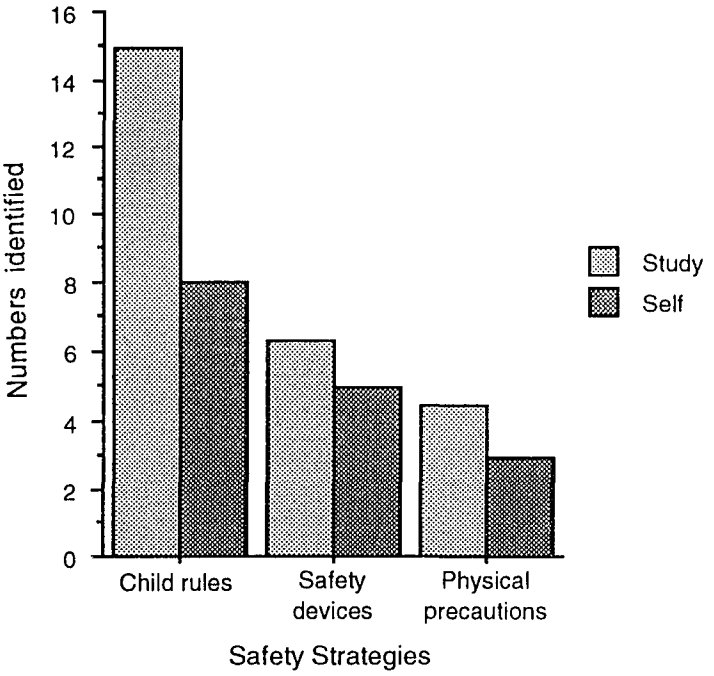
When comparison was made after our second self interview at age two, a totally different picture emerged. The number of hazards we identified was now significantly below the study mean. Table 68 shows this comparison.

Table 68. Types of dangers identified by the author and parents of two-year-olds in the study

Number of perceived dangers	Mean	Count	Minimum	Maximum
Study	20.6	7	6.0	43.0
Self	10.0	1	10.0	10.0

The intensity of the strategies used by our family when our child was two years old also dropped below that of the parents in the study group, but the drop in the number of *Child rules* was especially dramatic. Figure 69 shows this relationship.

Figure 69. Comparison of the strategies used by the author against that of the study group with children at two years of age.



Several factors may have influenced these differences. While the study group had a higher number of child rules at age two, ours was much smaller. From our perspective this was intentional since it was our strategy to keep the number of safety rules to a manageable minimum in order not to overwhelm a two-year-old child. However, it was also our intention to reinforce the existing rules strictly and in truth, I am not sure how well this strategy worked. At least some of the rules we tried to reinforce were frequently broken by our daughter, and one breakdown of such infraction even led to a moderately serious injury.

Another factor that differentiated us from the rest of the parents originated from our life style. Since both Ahu and I work full time outside the home our daughter Misra has been attending a full time day-care center and is in the care of others. However, when we are together as a family, at the end of the day and during weekends, we usually spend most

of our time in the same room. This arrangement is very different from that of the mothers in this study, who commonly spend almost all their time at home with their children. However our life style did result in us using direct supervision in the times we were home together with our daughter. This heavy reliance on supervision, combined with the limited hours that our family spends in the home, partially explains the difference in the intensity of our strategies as compared to those of the study group.

Another important factor is the character of our daughter. Although she is physically active all the time, she is not adventurous or a big risk-taker. Furthermore, her behavior is quite predictable for us, either because she has identifiable behavior patterns and very specific interests, or because we spent significant amount of time discussing her behavior, her interests and physical capabilities.

Specific insights as a parent

One puzzling issue for me is related to parents identifying dangers in the home and not acting upon them in a specific manner. For example in the following quote a parent describes a dangerous situation, and admits that she allows it to happen over and over again.

Ms. Frattini, mother of one-year-old boy:

> I am not upset by it [safety]. I was little lacking in the safety of this apartment; little things. I mean like the fact that I never tied Justine in his high chair. That's where, I think, he learned to stand, and when he stands, you know, he stands but he does never fall. He has never fallen off his high chair. I tell you, every single day, three meals a day, this child stood up in his high chair but he never fell. Seemed like he really was learning good balance. I was just lucky. I think I'm just lucky.

Before considering this situation as a parent, such attitudes were confusing to me. After examining our own SMS however, I understood that parents have to make some critical judgments about the risks that they are willing to take. I found out that after taking care of the high risk items such as windows, stove, hot water, and small items that may cause choking, we were willing to loosen our SMS to take a certain degree of risk. There were multiple reasons for this. The first was that we wanted to expose our child to a relatively "normal" environment, where she can learn safe behavior through her own mistakes. As a result, she did fall a lot, and did suffer considerable number of small bruises and scratches. However in the long run, she was quick to grasp where the potential risks were and avoided similar risky behavior through her own self-control. We also did not want to impose a lot of restrictions in the form of rules, and allowed her to interact with the physical environment in relative freedom.

A second insight that the parental experience provided is related to having a safe spot in the home for the child. As a strategy, even though there are a number of uncovered hazards in other rooms of our home, Ahu and I have made sure that our daughter's bedroom is completely safe. This way, whenever she was in there, we feel that we do not have to check her with the frequency that it is necessary when she is in other parts of the home. I have discovered that many of the parents in the study use a similar strategy, even though they failed to elaborate on it during the interviews.

Finally, being a parent helped me to appreciate the enormous value of talking to Ahu, and the other family members and friends who are in contact with our daughter. It is through these discussions that I learn more and more about her interests, behavior and capabilities. The first person to witness a developmental breakthrough such as a new climbing skill or a new fine motor development, would immediately alert the others. In that way we all managed to keep ourselves up to date on the physical and intellectual development of our child.

Intera family communication also helps our SMS in dealing with the issue of responsibility in supervision. Ahu and I make a habit of alerting each other, whenever we feel child care responsibility is switching from one of us to the other. When, for example, Misra is under my supervision, and I needed to leave for any reason, I verbally alert Ahu indicating that she should take over the responsibility and I only leave after I get a confirmation from Ahu. We do this automatically and extend this system to the other adults who participate in the supervision of our daughter. I think this strategy works quite effectively and helps reduce possible confusion about the division of responsibility among family members. Unfortunately, many parents in the study either do not have equivalent family members to establish such a system, or by not alerting each other, they do not take full advantage of opportunities such an arrangement can provide.

SUMMARY OF FINDINGS AND CONCLUSION

This section summarizes the findings presented in the previous sections and presents them in graphic form. It shows the major relationships between findings and discusses the implications of this research. The summary follows the same outline with the research and findings are presented in a summarized format.

Summary of Findings

FINDINGS 1: PATTERNS OF IDEOLOGY

Emerging patterns of child rearing ideology

What are the basic components of parental ideologies?

Five distinct attitudes by the parents are identified toward a crying child . These are labeled as *Exploring, Affectionate, Ignoring, Punishing* and *Worrying*.

Parental sensitivity

All parents who fell under the *ignoring* and *punishing* categories were the parents of two and three-year-old children.

Parental knowledge and beliefs regarding the value of play

Parents from two-parent households were generally able to describe a larger variety of benefits for children's play, compared to single parents.

Parents from larger families with an additional caretaker were able to predict a higher number of benefits for play.

For most of the parents, their child's ability to play with other children without antisocial behavior was very important.

Parental knowledge and attitudes toward the child's developmental milestones

Parents with large families were more likely to consider a developmental delay normal and wait for the child to reach the milestone by himself.

Parents from families where the father's occupational index was high were much more likely to believe that parents may be responsible from a developmental delay on the part of the child.

Parents from larger families did not see any relationship between parental behavior and the developmental delay of the child.

Parental beliefs regarding the individuality of children

81.5% of all parents thought that all children were basically different.

Parental beliefs regarding gender differences

Most parents taught that boys and girls are different, starting at very early ages.

Parental ideologies on the disciplining of the child

Findings revealed four distinct disciplining styles. These are *Loose, Evasive, Corporal* and *Verbal.*

Most of the parents who use *evasive* disciplining strategies were from multi-child households.

None of the parents with a one year old target child fell under the categories *corporal* or *verbal* .

Single parents used *evasive* or *corporal* disciplining strategies more frequently, compared to mothers from two-parent households.

Parental beliefs about the influences regarding the development of children

All the parents who argued that a child's character is solely defined at birth came from two-parent families.

All the single parents believed that social and other factors were also significant in how a child develops.

All the parents who believed that child's character is influenced by multiple factors, social and otherwise, were parents from families without an additional caretaker.

Parental beliefs about the appropriate flexibility and rigidness of daily schedules and the amount of freedom that should be given to a child.

Parents were grouped in four categories according to their flexibility and leniency. These groups are *Strict, Average, Loose* and *Very Loose.*

Parents of two or three-year-olds were more likely to believe in strict or relatively strict maintenance of daily schedules.

Families with no additional caretaker were more likely to believe in *strict* scheduling.

Interrelations among the different ideological variables

Parents who believe that a child's character and development is strongly effected by social influences were more likely to use corporal punishment strategies.

A big majority of the parents who fell into the *exploring* category in terms of parental sensitivity believed that boy babies and girl babies are different.

The majority of parents who stress the individuality and think that all children should be raised differently, indicated that they would go to a specialist in the case of a developmental delay.

Parents who were most elaborate in describing different reasons for the value of play were the ones in the *ignoring* category in terms of parental sensitivity.

Family profiles: Grouping of the families according to their child-rearing ideologies

In terms of their disciplining, flexibility of schedules, beliefs about the developmental influences and sensitivity towards children, families are grouped under three major categories; *Lax* , *Dictating* and *Irresolute.*

In terms of their beliefs regarding the individuality of children and gender differences, parents are grouped under three categories; *Differentiating, Undifferentiating* and *Impartial.*

Emerging patterns of parental safety ideologies

Structure and elements of safety ideologies

Parents' ideas about the reasons and preventability of injuries are usually generalized for all children.

Elements of the Safety Ideology

Why do children's injuries happen?: Beliefs about the reasons for home injuries

37% of the parents indicated that the character and behavior of young children are the sole reasons for home injuries while 22% of the parents said that in addition to the child, behavior of the caretaker is a factor in home injuries while 19% included "fate" or "bad luck" as one of the reasons why injuries happen and 19% blamed a combination of reasons including child and social and physical environment.

None of the parents with a one-year-old target child indicated that child's personality and behavior is the only cause for injuries.

Can most of the children's injuries be prevented?: Beliefs about the preventability of home injuries

Parents who have at least one girl child seemed to think that most home injuries are preventable, while parents with all boys were not clear if most injuries can be prevented.

Are some children at a higher risk?: Beliefs about the differing levels of injury risk for children

Parents overwhelmingly agreed that some children are at a higher risk then others.

Parents beliefs regarding the effects of gender differences on injuries

The majority of the single mothers (67%) argued that boys are more likely to have more frequent and more serious accidents.

How would parents react when they witness their own child involved in a dangerous activity?

The types of interventions mentioned by the parents are related to the age of the target child. Findings indicate that young children are not necessarily punished less.

How would a parent train and teach a young child about the dangers in the home?

Interventions that involve any form of punishment are used most by the households with larger numbers of people living in them.

Internal dynamics and consistency of parent's safety ideologies

While evaluating the reasons why children do get injured, parents used the same criteria.

What is the relationship between a parent's beliefs concerning the causes of injuries and their own child's knowledge and behavior?

In terms of their beliefs concerning the causes of injuries, parents fall into two categories; *Child-ascribing* and *Multi-agent-ascribing*. Parents who indicated multiple numbers of reasons for risky behavior (*multi-agent-ascribing*) were usually the same parents who were more convinced that their child would engage in a dangerous activity

Age of the target child is a significant factor in parents safety ideologies.

Child Ascribing parents were coming from smaller families, while multi factor oriented families came from relatively larger families.

Dominant patterns of safety ideology: Major grouping of the families

In terms of their beliefs regarding the causes of injuries, parents fall into two categories;*Child-ascribing* and *Multi-agent-ascribing.*

In terms of their initial and long term responses to an injury threatening situation parents fell into four categories: *Enforcing, Reasoning, Enforcing-reasoning* and *Verbal-directive.*

Relationships between parental child-rearing ideologies and parental safety ideologies

Parents who have a *lax* attitude towards child-rearing were less confident in estimating their child's likelihood in getting involved in a dangerous activity, compared to parents who have *dictating* or *irresolute attitudes* .

Evasive parents were the most confidant group in estimating if their child would or would not engage in a specific dangerous activity.

Dictating parents were more likely to use punishment compared to *Lax* and *Irresolute* parents.

Parents who were grouped as *strict* in terms of their daily schedules considered their child at less risk in terms of injuries.

Parents identified as *loose* or *evasive* were more likely to mention a multiple number of reasons as a cause for injury in the home.

FINDINGS 2: COMPONENTS OF THE SAFETY MANAGEMENT STRATEGIES AND THEIR RELATIONSHIP TO PARENTAL IDEOLOGIES

Patterns of safety strategies of the families

The four basic safety strategies that parents use are: the installation of *physical devices* , *physical precautions.*, a *rule* system for the child and *supervision* of the child.

Physical safety devices

Parental use of safety devices

In addition to window guards, which are required by New York City Law, electrical outlet plugs and cabinet and drawer latches were the most frequently used items.

More than 40% of all the devices recorded in the study were installed in bedrooms.

Families with higher SES and better educated parents were more likely to have a larger number of safety devices compared to families with a lower SES and less education.

Larger families and families with many children had fewer devices.

Parental knowledge regarding the range and availability of devices were limited. Parents either did not know anything about relatively uncommon devices or their knowledge was based only on what they heard from other parents.

Many parents who use safety devices kept them installed, even if they found that the devices did not work as expected or that their child could circumvent them.

Effect of parental ideologies on safety device use

Parents who believe that all children are basically alike were using larger number of devices compared to parents who believe that all children are different.

Parents who would rush to a specialist in the case of a developmental delay had the tendency to use a higher number of safety devices.

Verbal and *Enforcing-reasoning* parents were using significantly higher numbers of safety devices than *Enforcing* or *Reasoning* parents.

Physical precautions

Parental use of physical precautions

The most frequently used mode of physical precaution is moving dangerous and poisonous items from low level storage spaces to higher locations.

The number of physical precautions in the home fall significantly as the child gets older.

Less educated mothers seemed to use a higher number of physical precautions compared to well educated parents.

The role of parental ideologies on the use of physical precautions

Parents categorized as *Differentiating* according to their child-rearing ideologies were on the average using less number of physical precautions compared to parents who are categorized as *Undifferentiating* or *Impartial* .

Lax-impartial, *Lax-undifferentiating* and *Irresolute-impartial* parents were using a large number of physical precautions. On the other hand, *Lax-differentiating*, *Dictating-differentiating* and *Dictating-impartial* parents were using a much smaller number of physical precautions as a part of their safety strategies.

Parents who believe that a child's character is basically defined at birth were more likely to use a larger number of safety precautions compared to parents who believe that a child's character is mostly shaped by various social and environmental forces.

Enforcing parents were found to be using a much fewer safety precautions compared to *Reasoning* parents.

Parents who believe that children themselves are mostly responsible from the occurrence of home injuries were more likely to use a smaller number of physical precautions compared to parents who think the injuries are a result of multiple factors in addition to the character of the child.

Parental rule systems for the children

Parental use of children's rules

Most frequently encountered type of rules were designed to prevent falls and burns.

Child rules were more or less equally distributed among the major rooms of the home.

Parents of older children relied more on rules compared to the parents of younger children.

Parents seem to have more rules for girls compared to boys at all age categories, however this gap between got smaller as the children got older.

Safety rules are usually generated when the parents witness a dangerous activity by the child.

Relationship of parental ideologies to the number of child safety rules used by the parent

Dictating parents were more likely to use a large number of child rules compared to *Lax* or *Irresolute* parents.

Parents with *Strict* and *Average* daily schedules were more likely to use a larger number of safety related child rules compared to parents whose daily schedules are categorized as *Loose* or *Very loose* .

Parents who use *Corporal* disciplining strategies were much likely to have higher number of child rules.

Supervision

Parental use of supervision

Parents who participated in this study used three forms of supervision. These were "direct", "delegated" and "auditory" supervision.

During the interviews, three-year-olds were allowed to be alone unsupervised in a different part of the home much more than one or two-year-olds.

Parents allowed boys to go other rooms without adult supervision, more often than the girls.

Target children from families with a large number of children were more likely to be allowed unsupervised in other rooms.

During the interviews, the observed distance of the child from the parent was dramatically larger for older children compared to younger children.

Relationship of parental ideologies and use of supervision as a safety strategy in the home

Parents with *average* flexibility in their daily schedules were the ones who would let their child to be in another room unsupervised during the interview.

Enforcing parents were the group who would most frequently let their child in other rooms of the home unsupervised during the interviews.

Zones of accessibility in the home

On the average, parents allowed their children into more than 60% of the rooms of the home.

Parents who were from middle SES families were more likely to give their child more accessibility in the home, compared to parents from low SES families.

More educated parents were likely to give grater access to heir child in the home.

In families with a larger number of children, the target child was given less accessibility to the different rooms of the home.

Second and third children were given much more free range compared to the first child or single child.

How do parental ideologies influence parental decisions to define the zones of access for children in the home?

Parents who were grouped as *Reasoning* and *Enforcing-reasoning* had defined a larger zone which was accessible to their child compared to parents grouped as *Enforcing* or *Verbal*..

Factors that contribute to the success and failure of selected strategies

Thirteen factors are identified as having an impact on the success and failure of safety strategies in the home. These are:

1. Coordination between the two parents and other adults in the home.
2. Effect of siblings on safety strategies.
3. Engaging in power struggles with the child.
4. Parents' emotional involvement and expression during incidents.
5. Explaining the dangers to the child.
6. Involving children in daily activities and teaching them how to work with adults
7. Parents' ability to anticipate the behavioral and cognitive development of the child which might put them at risk
8. Exposing the child to controlled high-risk settings to learn about his capabilities
9. Consistency in reinforcing the strategies and follow-up on promises and threats
10. Preventive style in contrast to reactionary style in terms of safety strategies
11. Immediacy of punishment or training as opposed to delayed action
12. Clarity and consistency of the established rules
13. Failure to communicate the seriousness of a dangerous situation to the child

Parental perception of dangers in the home

Perceptions of danger as a basis for selecting safety strategies

Poisonings, or types of items that may poison the child, was the most frequently identified type of danger.

In terms of locations of the dangers, bedrooms, including the child's bedroom was the location where most of the dangers were identified.

Parents whose children were in their second year of life (parents of one-year-olds), identified larger number of hazards within the home environment compared to the mothers whose children were in their third or fourth year of life.

On the average, single parents identified a smaller number of hazards compared to mothers from two-parent families.

Parents who have identified many hazards were also the ones who were using the largest number of safety devices.

Parents who identified larger number of dangers were observed to be in close proximity (either touching or keeping the child within grabbing distance) compared to parents who identified fewer number of hazards in the home.

Relationship between parental ideologies and perception of dangers

Verbal -directive parents identified a much higher number of dangers compared to *Enforcing*, *Reasoning* and *Enforcing-reasoning* parents.

Parents who believe that characteristics of the child is the primary cause for injuries identified a smaller number of dangers in the home compared to parents who think injuries are the result of multiple factors including the environment.

Parents' differing levels of dependence on safety strategies: Ordering the strategies in terms of their importance and significance

Parents who use *Supervision* as the primary strategy are more likely to use *Physical precautions* as the secondary strategy. Similarly, parents who use *Child rules* as the primary strategy mostly prefer *Supervision* as the secondary strategy.

Child rules were used only by the parents of two or three-year-old children as the first strategy while *Physical precautions* and *Safety devices* are preferred as the primary strategy only by parents of one and two-year-olds.

Parents with low occupational index scores were more likely to use *Supervision* as their primary strategy, compared to parents with higher occupational index scores.

Four different approaches are detected when the families are grouped according to the first two strategies they use. These are: 1) *Supervision + Passive*, 2) *Child Rule + Passive*, 3) *Child Rule + Supervision* and 4) *Passive + Passive*.

While most parents with a low occupational index score are grouped under *Supervision + Passive* or *Child Rule + Supervision*, parents with high occupational scores fall under *Child Rule + Passive* and *Passive + Passive*..

Families with few adults were more likely to include *Supervision* as one of their first two strategies.

Parents who use two passive strategies as their first two choices identified many more types of dangers compared to parents who use two active strategies as their primary and secondary safety strategy.

Children of parents who are grouped as *Child Rule + Supervision* were more frequently found to be unsupervised by the parent, in other rooms of the house, during the interviews

Parents grouped as *Child Rule + Supervision* were least likely to be in contact with their child or keep them within reach, more so than any other group.

How do different strategies work together?

Overlap of strategies

On the average 13.5% of all the dangers identified by the parent are covered by more than one strategy.

Parents who use large number of devices are very likely to use a second strategy in addition to the device

Parents with middle SES were covering a higher percentage of dangers with more than one strategy, while parents with low SES were more likely to use a single strategy to cover each identified danger.

Mothers with higher occupational index score were more likely to use a higher percentage of multiple strategies.

Parents with college diploma were found to use a much higher percentage of multiple strategies to cover individual dangers, compared to parents without a college diploma.

Families grouped as *Child Rule + Supervision* according to their first two strategies use the least amount of overlap to cover individual hazards. However, families grouped as *Passive + Passive* are the ones who has the highest level of overlap.

Relationships between parental ideologies and the use of multiple strategies

Dictating parents are less likely to use multiple strategies to cover single dangers, when compared to *lax* or *irresolute* parents.

In terms of their safety ideologies, *Verbal-Directive* and *Enforcing-Reasoning* parents were more likely to use multiple safety strategies compared to *enforcing* or *reasoning* parents.

The behavioral and personality characteristics of the child

Children who are categorized as having personality characteristics that help safety, were observed in other rooms of the home without parental supervision less often than the other two groups

Parents of *Stubborn* children are least likely to use multiple strategies for individual hazards.

The overall physical ability of the children of the parents who were using a passive strategy as their primary safety strategy was higher than the physical ability of the children of other parents who were found to be using an active strategy as their primary strategy.

Key child personality and behavior characteristics relevant to safety

Three key child personality types were identified by the parents. These were: a) the cautious child, b) the clinging child and c) the physically coordinated child.

Relationships between parental ideologies and behavioral and personality characteristics of the child

A large majority of children whose parents are defined as *Exploring* were the ones with children whose personality characteristics help the management of safety in the home.

Most of the children whose character is defined as helpful to safety were the children of *Lax* parents, with mostly loose daily schedules and loose disciplining strategies.

Children with personalities helpful to the management of safety are more likely to come from families with parents categorized as *Reasoning* .

The role of the resources of the family on the Safety Management System

Impact of economic resources on SMS

Families with lower Occupational Index Scores seem to prefer *Supervision* as their primary strategy compared to families with higher scores.

Parents who were using supervision as one of their first two strategies on the average had lower Family Occupational Index Scores than families who did not include *Supervision* as one of their first two safety strategies.

Impact of informational and social resources on SMS

Parents who had access to a large variety of information and social resources were coming from two-parent families.

Families with a high number of information resources identified a larger number of hazard types throughout the year and they were using larger number of physical precautions in their safety strategies.

Enforcing parents had less number of information and social resources compared to parents who were *Reasoning* or *Verbal* .

Parents with rich information resources were able to mention a larger number of reasons explaining the value of play for children.

Environment as a resource: Physical characteristics of the home

Impact of inferior design and poor space arrangements

Families who chose to create a safe and dedicated domain for the child were the ones who lived in relatively larger homes, used more safety devices, were able to specify a larger number of reasons regarding the value of play, and believed that home injuries happen not only because of the child's character but because of a multiple number of factors including social and environmental ones.

Visual accessibility inside the home

Smaller homes generally have a higher VOS score and larger homes have a lower one.

Families who were using Supervision as their primary strategy were mostly living in homes with good visibility while families in homes with little visual access did prefer *Safety Devices* as their primary strategy.

Parents who were living in homes where there was minimum amount of visibility were using two passive strategies (*Safety Devices* and *Physical Precautions*) as their primary and secondary safety strategies.

Parents who were living in visually open and accessible homes were able to identify a larger number of types of dangers in the home environment, than parents who were living in more closed compartmentalized housing with limited visual access.

Child-Ascribing parents who believe that the child's characteristics are primarily responsible for injuries were mostly from homes with good visibility and high VOS score while *Multi-Agent Ascribing* parents, were primarily from homes that had bad visibility and low VOS scores

Quality of the home interior

Homes with a high population had a lower Home Quality Score compared to homes with fewer residents.

Families with fewer children scored much better in terms of overall home quality, than families with several children.

Larger homes scored better in home quality than smaller homes.

Television dependency

Families who had access to a large variety of information resources were less dependent on television.

Families who scored as highly TV-Dependent were the ones who gave less access to their child within the home.

Clutter in the home:

Parents in cluttered homes have fewer safety devices than parents in uncluttered homes.

Conclusions and suggestions

Parental beliefs about disciplining and individuality of children that emerged from the analysis are both significant in terms of management of children's safety in the home and require further investigation. Since the results of this study indicate that parental reactions are related to the age of the child, q longitudinal investigation of families is necessary to reveal if parents do change and adopt their disciplining methods according to the increasing cognitive abilities of the growing child. Similarly, the focus of most parents upon the individuality of each child suggests that parents adopt their ideologies and practices according to how they really perceive their child. Studies comparing parents' safety management of each siblings in the home would be valuable in revealing the influence of child characteristics over parental ideology.

It is hypothesized that the intense communication between the two parents about the child's behavior and play can contribute to their increased knowledge, an advantage lacking in single-parent households. The same argument can be extended to explain other findings that indicate the relationship between knowledge regarding value of play and family size as well as the presence of a secondary caretaker. Future research should address the effects of secondary caretakers on family systems.

Findings suggest that in some domains, parents are likely to apply similar standards to all their children. In order to help design effective intervention strategies, future research should investigate if child safety falls in such a domain.

Findings suggest the significance of family dynamics and sibling relations over parental disciplining styles. Parents with many children were more likely to use *evasive* strategies than others. An in-deph study of parents who use *evasive* strategies is necessary to find if the lack of any physical punishment increases the injury risk for families who use *evasive* strategies.

Since some parents do see the personality of the child as the only cause for childhood injuries these parents may be more likely to ignore the physical environment, and use fewer safety devices and physical precautions? Future research should investigate the implications of this hypothesis.

Due to parents' focus on the highly active child, further investigation of parents' concept of "the child accident repeater" is necessary in order to integrate it into the safety management system.

Safety interventions designed for families need to consider the ideological differences among them in order to be successful.

Research tools designed to measure parental ideologies on socialization of children may not be applicable within the domain of safety.

There may be a discrepancy between parents' "general knowledge" of safety and their "personal knowledge" of their child and their specific environment. Future research needs to be aware of this since findings indicate that these two forms of knowledge may not always be compatible.

Future research needs to investigate if parents who believe that their child is at a higher risk develop better safety strategies. It also needs to clarify the relationship of strict and punishment-oriented safety strategies and actual risky behavior of the child.

Approaches to injury prevention, including governmental policies, need to be reassessed in the light of parental use and beliefs about safety devices. Especially for low income populations, device use is very limited. Biased marketing, high pricing policies and poor design and quality of existing devices are major reasons for lack of use. Improving the design and availability of the devices and having parents use them as a

secondary back-up strategy can improve the Safety Management Strategies of many at-risk families.

Physical precautions were a more common strategy between parents with less schooling. It is also a type of strategy that requires anticipation of the child's development and creativity on the parents' side. Because they are created by the parents according to the abilities of specific children, in many cases they can be more practical than the safety devices. Future research should compare the effectiveness of safety precautions with that of safety devices.

It is hypothesized that *Dictating* and *Enforcing* parents may be considering the modification of the physical environment as an unnecessary and artificial intervention since it eliminates the potential to impose rules and exercise training strategies. Some research should focus on these types of families to evaluate the impact of such an ideology on injury prevention.

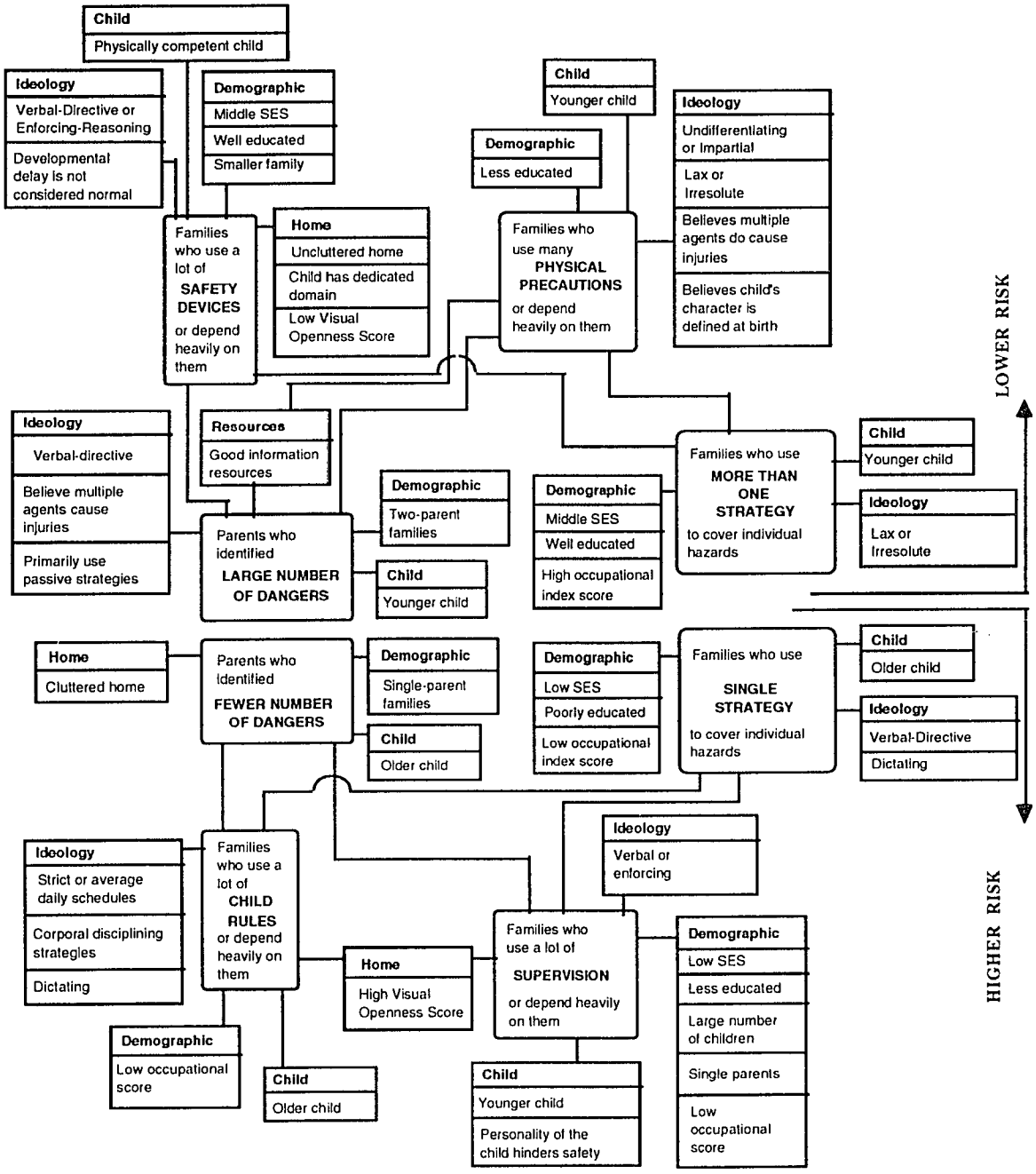
A positive correlation was identified between the types of child safety rules and the statistical data showing the most common types of injuries that happen in the home. This indicates that overall parents are good judges of injury risk. Still, the high number of unintended injuries suffered by many children implies that even though parents are mostly aware of the dangers, in many cases they are failing to establish effective safety strategies to prevent these incidents. This can be an important starting point for designing safety interventions in the future.

Supervision is the one strategy that parents consider most dependable. However the results indicate that it is one of the most problematic. First, supervision is one strategy that is mostly "reactionary" and it does not require the parents to anticipate the long term cognitive and physical development of the child. Second, as the results indicate, it creates an illusion of security because many times the when the parent was claiming to supervise

the child, she was outside the visual and auditory reach of the parent. While evaluating the SMS of families, special recognition should be given to families whose SMS rely primarily on supervision.

Figure 70 illustrates the major relationships of the variables of SMS. For clarity, it is organized around the four safety strategies identified in this research, however alternate organizations are also possible. Parental perception of dangers and the use of multiple strategies also play a central role in this organization since they are strongly related to the family patterns. Connecting lines between the variables represent strong relationships.

Figure 70. Summary of major relationships that exist among the different variables of the SMS.



In this organization, four family patterns are distinguished by the relationship between their safety strategies and the other components of their SMS: ideology, child,

demographic factors and resources. It would be wrong to attempt to determine which of the components are dependent variables and which are independent. Inevitably, some dependencies do exist, but it is better to look at these components as the elements of a complex interactive system.

Figure 70 may be used to divide the families into two different patterns, Lower Risk and Higher Risk.. Families which use the passive strategies of *Safety Devices* and *Physical Precautions* as their primary or secondary strategies or depend on them within their SMS, seem to have a different demographic composition and ideological framework than families which primarily depend on Child Rules or *Supervision* as the main strategy of their SMS.

The most striking relationship is the difference in SES of families which use passive strategies and those which use active strategies. A partial explanation for the high number of *Safety devices* in families with middle SES is their financial ability to afford them. However results indicate that a more complex relationship exists. For example, less educated parents who make great use of *physical precautions* fall into the same Low-risk category as the high SES families which use *Safety devices*. The two key factors that put these families in the Low-risk category are their perceptions of hazards and their use of multiple strategies to cover individual dangers. The use of multiple strategies is critical, since as this research clearly shows, no single strategy is efficient or comprehensive enough to neutralize a potential danger by itself. However, multiple safety strategies are only effective when they work together in a coordinated way. This makes the difference between a single-strategy household and a multiple-strategy household crucial for the evaluation of SMS. Reinforcing an active strategy with a passive one, or vice versa, is the real strength of the families who fall into the upper half of the pattern drawn in Figure 70. Though the more affluent of these families may use safety devices and poorer ones may use physical precautions as the passive component of their strategy, they are still different from

the families represented in the lower half of this pattern because they do not depend on a single strategy to cover a particular hazard.

Lower risk families are also different in that, they are able to identify more dangers than high-risk families. The relationship between the number of identified dangers and the passive strategies employed is the outcome of an educational process. Parents must first identify the danger area and then develop strategies to cover it. Results indicate that two-parent families have a distinct advantage in identifying hazards over single-parent families. One of the key reasons behind this is that adults in a multi-adult family are in an environment where they have the opportunity to discuss the behavior and safety of the child. Single-parents, many of whom already have limited resources, lack this opportunity to talk about their children with other concerned adults in a meaningful fashion.

The process of active participation in changing the environment for safety is exceptionally impressive in families which rely on physical precautions in the home. Unlike well educated and more affluent safety-device users, they have to come up with their own environmental solutions to the safety problems they have identified. Unlike the well educated mother who already has access to a parental safety books and checklists and the means to purchase and install the devices, the less educated parent needs to "create" her own solutions. Consequently she herself must analyze the behavior of the child, assess his physical and cognitive competencies and change the environment accordingly.

The absence of a process similar to this one, is one of the weakest aspects of supervision, and is likely to put those families heavily dependent on supervision at risk. Two critical characteristics of supervision are 1) its ephemeral quality and 2) the perception by many parents that supervision is the most effective and reliable strategy. Supervision is "ephemeral" in the sense that it does not require advance planning on the parent's side, nor does it require serious thinking about the physical environment. It is true, as Garling, Garling & Mauritzson-Sandberg (1989a, 1989b) point out that parents, while supervising,

need to assess how close their child is to danger and to decide when to interfere, however, this kind of involvement is based only on the behavior of the child and therefore does not require the systematic scan and evaluation of all the dangers in the home necessary for setting up effective devices and/or physical precautions.

In order for supervision to be effective, it also has to be continuous. Yet, this research has shown that even in what seem to be ideal conditions, non-stop supervision is impossible to achieve. Furthermore, supervision-dependent families are usually those with the most limited resources and a large number of children, factors that frequently interfere with effective supervision. Regardless, parents who depend on heavy supervision still believe that they can effectively maintain the safety of their children. Consequently, these families constitute one of the highest risk groups in this study.

Nevertheless, it would be a grave mistake to interpret the above discussion as support for passive strategies and an argument against active strategies. The critical point is not that passive strategies are better than active ones, but that parents who employ passive strategies are more likely to use a combination of active and passive, and therefore their SMS is more stable than the SMS of parents who mainly rely on one active strategy. Active strategies alone are not inferior, but, as the author knows from his own experience, it is much harder to implement them effectively; and existing child-safety research and proponents of passive strategies can be partly blamed for this outcome. Because, while there is an extensive literature on passive strategies, and while parental safety guides have sections on "how to childproof one's home", a systematic analysis and description of active strategies is missing from the literature. There are no studies that look at how child rules are generated and how they evolve, what types of rules are more effective, how children learn about the rules, why parents allow their children to break the rules and what kind of rules are appropriate at which age levels. Similarly, studies that investigate the effectiveness of different supervision methods are also missing. As a result, there are no resources

available for parents to learn about the effectiveness and implementation of active strategies. They have to depend on their own intuition and experiences, and as demonstrated in this study, they are usually less than successful.

A closer examination of Figure 70 reveals that families who are defined as low-risk have much better informational resources than the high-risk families. This is a very critical difference. It implies that availability of resources is a more critical variable than parental education in the reduction of a child's injury risk.

The pattern is less clear when the families in four different strategy clusters are examined from the perspective of their ideologies. Among them, the strongest pattern emerges in the families which rely on child rules. These families are set apart from the rest because they have much stricter and dictating ideologies, and they use corporal disciplining strategies. The safety strategies of these families are to a large extent guided by a strong ideological focus. These families value social control and teach their children "correct" and safe forms of behavior, at a very early age.

It is possible to argue that there are good reasons why parents who rely on child rules consider only a limited number of dangers and use a single strategy per danger. That is the natural outcome of the limitation of the strategy itself. The dangers need to be limited to a few in number so that a young child can remember and obey them. By reinforcing their SMS with strict punishment, parents who depend on Child rules are generally confident that their children will follow them. This confidence is probably the weakest aspect of families in this strategy cluster. Of course, many other parents use *Child rules* as a secondary strategy, but the big difference is that they are aware of the limitations of the child, and use rules only as the first step in preparing their children for self-sufficiency in terms of safety.

Another interesting pattern emerges when one looks at the ideologies of parents who rely on *Physical precautions*. They favor treating all children alike (*Undifferentiating* or *Impartial*) and are either loose or inconsistent in their level of strictness (*Lax* or *Irresolute*). On the other hand they do believe that environment plays a critical role in the management of the child's safety and while they are less strict with their children, they are more careful in making the environment safe for them.

What are the practical implications of these results? It is clear from the findings that the SMS of families differs widely from on to the other. It is also obvious that there is no single intervention strategy that can be effectively implemented by all families. The injury risks and weaknesses in the SMS of each family need to be assessed and safety interventions need to be designed individually for each family. This can be done by identifying the major gaps in the SMS. Therefore the most effective intervention style would be a home-based model where each family is evaluated as a complete "system."

It is likely that parents who are ideologically motivated and who design their safety strategies according to their ideology (such as the families which are clustered under Child rule in Figure 70), will be most resistant to a modification of their strategies through intervention. However, a goal of this research was to develop some of the tools that will help identify these families. Nevertheless, regardless of their ideology and strategies, families whose SMS suffers because of missing resources, can be assisted by being provided with the key resources that they lack. These interventions can be as simple providing access to safety information relevant to their particular household, or as complex as developing a parent discussion and support group on safety where they can participate in information give and take.

The natural step as a follow up to this study should be the testing of the hypotheses generated here by tracking actual injury data with a larger sample. Such research could

confirm the hypotheses of this study and make possible the development of actual diagnostic tools necessary for identifying the gaps in the SMS of high-risk families.

Implications of the Research

The series of hypotheses generated by this study should help design future studies that can focus on more specific aspects of the Safety Management Systems of Families. Due to the small sample size of this research, many of the hypothesis need to be tested with a larger sample. The findings of this study should help identify the key issues and key questions in evaluating the SMS of any family with young children. Because with the help of this study, the issues and types of questions to be asked can be narrowed down to the most relevant ones, the methodology of such a follow-up study should be less complex than this one.

The more practical implications of this research could be seen the way it may impact the design of safety interventions targeted to high risk families. The questions and hypotheses can be used to design assessment tools to help identify the gaps in the SMS of families. These tools can be in the form of easy to use checklists and highly graphic representations of the hazards and the precautions in each home. Such project is currently being designed to be implemented as a part of the HIPPY (Home Intervention Program for Preschool Youngsters) program. The intervention is being designed to be implemented in the homes by well trained paraprofessionals. As made clear in this study, such a customized and home-based approach should have the largest impact in the reduction of child injuries.

Finally, many of the findings should be helpful for planners and architects who design and renovate housing. Ideally many of the passive devices such as cabinet locks, outlet covers and window guards should be standard design elements incorporated into any newly built or renovated housing project. Additionally, designers need to consider a range of concepts to improve the layouts of the homes to help parents and especially single parents who need to monitor several children at a time. Currently concepts such as visual

accessibility, auditory supervision and safe zones for children are not considered at all while designing the homes. Research that investigates use patterns, room arrangements and styles of managing children in the home are also missing. It should be possible to improve everyday lives of many parents and reduce childhood injuries in the home, if the environmentally based ideas that started to evolve from this study can be explored fully and implemented in the design of homes.

APPENDIX 1: FAMILY VOLUNTEER FORMS

AN INVITATION TO PARENTS WITH CHILDREN UNDER THREE YEARS OF AGE

City University of New York

Children's Home Environment Study

Children's Environments Research Group
CUNY Graduate Center, 33 W 42 st. New York, NY 10036 (212) 944-2334

What is this form about?

This form is designed to select families with children of three years of age or under, who are willing to participate in research on the layout of homes and child rearing. The research will be conducted by *The City University of New York.*

What will the research involve?

If you are willing to participate, and selected as one of the families that will be included in the research, you will be visited in the Fall of this year. The visit will be conducted by a man and a woman from the City University. If you require it, a third person will also be present to babysit your children during the visiting period. The visit will last approximately two hours. You may of course change your mind at any time during this visit and choose not to be involved in the study. You will be paid $20 for your time.

What will happen during a visit?

The two members of the research team will ask you questions about the activities of your children and about problems related to rearing and looking after them in relation to the layout of your home. They will make sound recordings of your answers. They will also ask you to take them into each room of your home, and videotape these spaces.

What about your privacy?

All your answers and videotapes will be kept strictly confidential, and videotapes will not be shown to the general public. Your name, address, phone etc. will not be used or published anywhere.

If you are interested in participating, please answer all the questions on the back side of this page and return in the attached stamped addressed envelope.

over.

Your name: Mr./Ms _____

Your address:

Street Address: _____

City: _____

State: _____ Zip: _____

Phone numbers and when you can be reached at them:

Phone number	When you can be reached
( ) -	
( ) -	

Total # of people living in your household: ☐

Please fill in the names, ages and sex of children living with you:

name	date of birth or expected date of birth	sex

Please check all persons living in your home (including yourself)

mother: _____ ☐
father: _____ ☐
grandmother: _____ ☐
grandfather: _____ ☐
other: (please name): _____ ☐ _____
other: (please name): _____ ☐ _____
other: (please name): _____ ☐ _____
other: (please name): _____ ☐ _____

Does a babysitter(s) look after your child each week? YES ☐ NO ☐

If YES, how many days? _____

What work do you do? _____

Type of dwelling:

☐ High rise apartment
☐ Apartment building 6 story or less
☐ Private house
☐ Other (please describe) _____

Do you have a yard or garden that you can use? YES ☐ NO ☐

APPENDIX 2: FAMILY RECRUITMENT FLIER

PARENTS!

If you have a child under three years, who has a birthday in December, January or February call us.

WE WILL PAY YOU A TOTAL OF $110 FOR SEVEN INTERVIEWS IN YOUR OWN HOME.

Tell us about your child-rearing practices.

Research sponsored by City University of New York

Call Nancy: (212) 944-2334

City University of New York
Children's Environments Research Group
CUNY Graduate School, 33 W. 42nd St. New York, NY 10036

TAKE ONE

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PADRES!

Si tiene un hijo menor de tres años, y que cumpla años en diciembre, enero, o febrero, llamenos.

LE PAGAREMOS UN TOTAL DE $110 POR SIETE ENTREVISTAS EN SU CASA.

Hablenos acerca de sus experiencias en la crianza de sus hijos.

Este proyecto de investigación es patrocinado por la City University of New York

Llame a Nancy: (212) 944 - 2334

City University of New York
Children's Environments Research Group
CUNY Graduate School, 33 W. 42nd St. New York, NY 10036

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APPENDIX 3: NEWSPAPER ADVERTISEMENT

PARENTS!

IF YOU HAVE A ONE TWO OR THREE YEAR OLD CHILD, WHO HAS A BIRTHDAY IN FEBRUARY, MARCH OR APRIL

CALL US

WE WILL PAY YOU A TOTAL OF $110 FOR SEVEN INTERVIEWS IN YOUR OWN HOME

Tell us about your child-rearing practices.

Research sponsored by The City University of New York

Call Suzanne: (212) 642-2969

APPENDIX 4: PHONE INTERVIEW FORM

Name _____ Date _____

Phone # _____ Source_____

Home Safety Project November 16, 1987

Outline of the initial phone interview with volunteer parents;

Introduction:

1. I am calling from the City University of New York. You have filled out and sent us the form about our study of child-rearing. We are in the process of selecting our families for our study and if you are willing to participate, we will be getting back to you shortly. But first I would like to ask you a few more questions. It will only take about ten minutes.

Defining caretakers:

2. We are particularly interested in issues related to raising children at home, and (name of the child).

- Does s/he usually spend her time at home?

- Can you tell us who takes care of (name) most of the time?

- Do you have a baby-sitter, or somebody else like another family member, relative, friend that regularly looks after her?

Who?

When?

3. How many hours are you with your child every day?

- on the days when she is at home.

- on the days when she is not home.

Special children:

- Is your child disabled in any way?

Defining the SES

4. What kind of work you do you do?

4a. What kind of work does your husband do?

5. Who do you work for?

5a. Where does your husband work?

6. Do you have a high school diploma?

Did you do any later education after high school?

What was it?

(If so) Did you get a degree?

6a. Does your husband have a high school diploma?

Did he do any later education after high school?

What was it?

(If so)Did he get a degree?

7. How old are you?

7a. How old is your husband?

8. What is your ethnic background?

8a. What is your husband's ethnic background?

Housing situation:

10. How long have you been living in your present location?

10a. How many rooms do you have?

11. Are you planning to move or have a major renovation at your home during the next year?

Additional indicators of SES:

12 a. Did you take a vacation last year? If so for how long?

12 b. Are you planning to take a vacation in the next year?

If so, for how long?

13. How do you usually find out about the news?

13a. Are there any newspapers or magazines that you regularly read?

What are they?

13b. Do you have an idea how your husband gets the news?

Are there any newspapers or magazines that he regularly reads?

What are they

I would like to thank you very much for your participation. At this time I need to talk with my colleagues and look at the information we got from different families. We will get back to you shortly regarding your further participation in the study.

APPENDIX 5: FIRST HOME INTERVIEW

Children's Home Environment Study - First Home Visit

Coding Sheet 1

Introduction:

Name of the family:

Category:

Interview #:
Interview Date:

1.- What are the different rooms of the house?

1.
2.
3.
4.
5.
6.
7.
8.

2.- Is there a separate bedroom for the children?

Yes No

3.- Do you own/rent this house/apartment?

Own Rent

4.-Can you briefly describe your family.

a. Who are the family members?

b. How do you divide up the responsibilities?

5. Can you tell me about your child's typical week day, from the time that s/he wakes up until the time s/he goes to bed.

Day:

Hours	Activity	Place	Duration	Frequency Daily or not	Who with

6. - Do you organize your child's day differently for different days of the week?

Yes **No** **Other**

If so, which days are different?

For each caretaker mentioned during the typical day:

7. -In your estimate, what amount of time ~~the child's time is spent with~~ this person each week? spend ~~time~~ in the home when the child is awake.

Caretaker A: **days/hrs**
Caretaker B:
Caretaker C:

8. - When ~~does~~ (caretaker) ~~spend time with~~ is supervising your child?

Caretaker A:
Caretaker B:
Caretaker C:

9. - What kinds of things does s(he) do with your child: feeding, clothing, bathing, playing with, etc.

Caretaker A:
Caretaker B:
Caretaker C:

10. -In addition to the people mentioned,do you ever have any other people to help look after your child.

a. -who are they?

b. -when do they help?

11.- Do you have a car?

yes no

Another vehicle?

How many?

12. - Do you take vacations?

yes no sometimes

What do you do on your vacations?

Where?

For how long?

13. How would you describe what kind of a person your child is, to someone who has never seen him/her before?

a. Do you thinkyour child's character will change as she grows older?

b. - Why?

14. What do you think influences the kind of person a child becomes?

Children's Home Environment Study - First Home Visit | Coding Sheet 4

15.. How do you think children should be raised? √

- Why?

a. Do you think there are better ways than others to raise children?

b. Are you trying to raise your child the way that you are raised?

If it is different, in what ways?

How were you raised?

16..what kind of play do children of your child's age play?

17.. Do you think it is valuable for your child to play?

- Why?

Things? **a. Do you believe there are any benefits in playing with objects? What?**

b. Do you believe there are any benefits in playing with children? What?

c. Do you believe there are any benefits when children pretend to be other people? What?

18. - How does your child play?

a.-Do you think that his/her play differs from the play of the children of the same age?

19. Does he like to play on his own?

- About how long will he play by himself without wanting your attention?

a. Do you think it is good that he plays alone ?

20. Is there any sort of play you don't allow? For instance do you allow him/her to make a lot of noise in the house?

- Why or why not?

21. Do you think that all children are basically alike or are they different?

In what ways?

a. Do you think all children should be raised in the same ways? Why?

22. Do you believe there are any differences between boy babies and girl babies?

- What are they?

- Why?

a. Do you think that boys and girls might need to be raised differently? How and why?

b. If your boy (girl) was a girl (boy) how would you raise her (him)? Why?

23. If a child does not walk, talk or is not toilet trained within the same year as most children, what would you think or do about this?

a. What might be some of the reasons why a child does not do these things at the same time as other children?

For one -year olds : **Did your child crawl and stand within the same month as other children? When did your child crawl and stand?**
For two - year olds : **Did your child walk and talk within the same month as other children? When did your child walk and talk?**
For three -year olds: **Was your child toilet trained within the same year as other children? When did your child toilet train?**

24. If you had more money, would you raise your child differently?

-If so, how?

25. If you had no space limitations, how would you arrange the spaceof your home for the benefit of your child?

Children's Home Environment Study - First Home Visit | Coding Sheet 8

26. There are different ideas about what is ideal for the care of a child of _____'s (child) age. Some of these ideas are:

It's better for one parent to be at home
It's better for both parents to work
It's good for a grandmother to be involved
Day-care centers are important

- Do you think that there is an ideal arrangement for how your child is cared for throughout the day?

- What is it?

27. How do you feel about taking care of _____?

a. What is the best thing about raising a child?

28. Did your life change drastically after her/his birth? How?

a. What do you think you have sacrificed after his/her birth? Why or why not?

b. Are there other sacrifices you can think of?

c. What are your personal future plans?

29. Do you find (your child) good company?

30. How do you decide when to feed your child?

a. Are there exceptions? Why?

b. Do you stick to a regular time schedule?

c. Some people think that children should be fed at the same times every day, others believe that they should be fed whenever they are hungry, or when adults eat. What do you think is best? Why?

31. How do you get your child to go to bed? Can you describe a typical scene?

a. Is there a regular time?

b. Are there any exceptions? When?

32. What do you think a mother should do when her child cries for no apparent reason? Why?

a. What do you usually do when ..... (your child) cries for no apparent reason?

Do you think that your husband thinks the same way you do on this issue?

If different: **Dow does he think?**

33. How do you punish her/him when s/he is naughty?

a. Can you give me a scenario? Why did you do it?

b. What do you do if your child is doing something that s/he is not supposed to do?

c. If s/he continues, what do you do next?

d. Is it helpful to use threats to motivate her/him to obey you?

Do you think that your husband thinks the same way you do on this issue?

If different: **Dow does he think?**

34. Does s/he usually obey you fairly quickly or do you have to keep at her to get her to do things?

a. Why or why not?

35-There are times where all families have problems, Are there any special problems for your family just now?

Children's Home Environment Study - First Home Visit | Coding Sheet 12

36- Are you a member of any clubs/organizations?Which ones?

37- Think of your closest friend. What is her/his first name?

a- Does she/he work? What kind of work does she/he do?

b- Does she/he have a high school diploma? Any further education?

c- How old is he/she? Does she/he have children? If so, how many?

38. Can you tell me where have you gone for help or for information while raising your child?

a. Are there any special people you turn to for advice? Who are they?

b. Are there any books or magazines that you have read on childrearing? Which ones?

c. Are there any tv programs that you have watched on this subject? Which ones?

d. Are there any other places where you get information about how to raise a child? What are they?

One year olds :
39 . Can your child:

Walk without help?

Carry objects from one place to another?

Open cupboards?

Unscrew a lid of a jar?

Climb on the sofa?

Two year olds:
39. Can your child:

Open cupboards?

Unscrew a lid of a jar?

Open drawers?

Climb up the stairs?

Climb down the stairs?

Three year olds :
39. Can your child:

Open doors?

Open drawers?

Climb up the stairs without help?

Climb down the stairs without help?

Reach over the kitchen counter?

Room-by-room survey of the home.

Now we would like to take a tour of the house with you and with (the child). Our cameraperson will also come with us and videotape each room.

For each space ask following questions:

40. Space use and supervision:

a. - What is this space used for by the family?

b -Are there any reasons fr you to arrange this room as it is? What are they?

(probe for specifics and ask about the furniture layout)

c - Can the child come into this space/ At what times? With whom?

d - Can s/he be alone in this space at any times? At what times? How long?

e - What does s/he usually do when she is in this space?

f - Who usually looks after her/him when s/he is in this space?

g - What do you generally do when you are in this room?

- Where is (the child) allowed to go or play when you are in this room?

h - Are these rules carried out when the child is with others? (Father, grandmother, baby-sitter, etc.)

41. Are there any rules for this space

a - that adults are supposed to follow?

b - that the child is supposed to follow?

c. Does (the child) know them?

d. Does s/he always follow them? If not why?

e. Do (other caretakers) use these same rules with your child? How do you know? If not, what rules do they use?

42. Do violations occur?

a. When do they occur?

b. Why do they occur?

c. Please give examples.

43. .Can your child ..... (room specific competence questions)

(Look at the room and ask questions about the child's ability to reach, climb, carry and open objects specifically in that room.

44. . What do you think will change about the rules/precautions in this room two months from now? Why?

Conclusion

Thank you very much for your patience. At this time we would like to arrange a time for our next visit. At that visit we will be asking you questions about how you manage safety in the home in order to prevent home accidents.

APPENDIX 6: SECOND HOME VISIT - SAFETY INTERVIEW

Children's Home Environment Study - Second Home Visit-Safety

Introduction:

At this second visit, we are hoping to learn more from you. _____ (the child) is two months older now, and we are interested in the changing ways that you manage him/her as s/he grows up.We are particularly interested in how you and your family manage safety in the home. Therefore we will be asking you questions related to home accidents and your child.

We would like again to go for a walk around the house, but before we do so, we would like to ask you some general questions regarding your child's safety. Is there somewhre we can sit and do this?

Beliefs and ideology regarding child safety:

1. Do you think some children are more likely to have accidents than others? Why?

2. Do you think there are differences between boys and girls in terms of the number of accidents they have? Why?

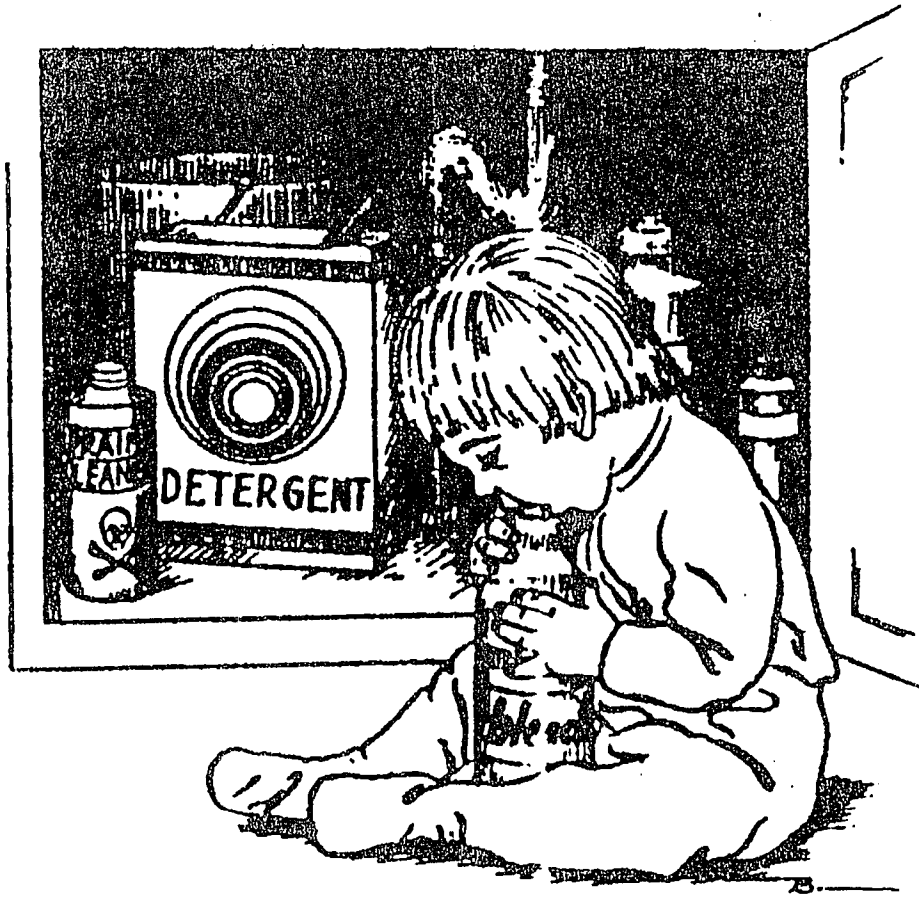
a.Do you think there are differences between boys and girls in terms of the types of accidents they have? Why?

3. Why do you think children's accidents happen?

4. Of those accidents which occur to children in the home, do you think most of them can be prevented? How?

5. If you have to leave your child with somebody who has never taken care of her/him before, what kind of general things would you tell them about your child's safety?

6. Do you think in terms of accidents, your child is more or less at risk than most other children of her/his age? Why?


DETERGENT

8. Poisoning:

- Why do you think a one-year-old would do this?

- What do you think might happen in this situation?

- Do you think the child knows that this is a dangerous thing to do?

-How does the child eventually learn that this is dangerous?

-Do you think your child would do this?

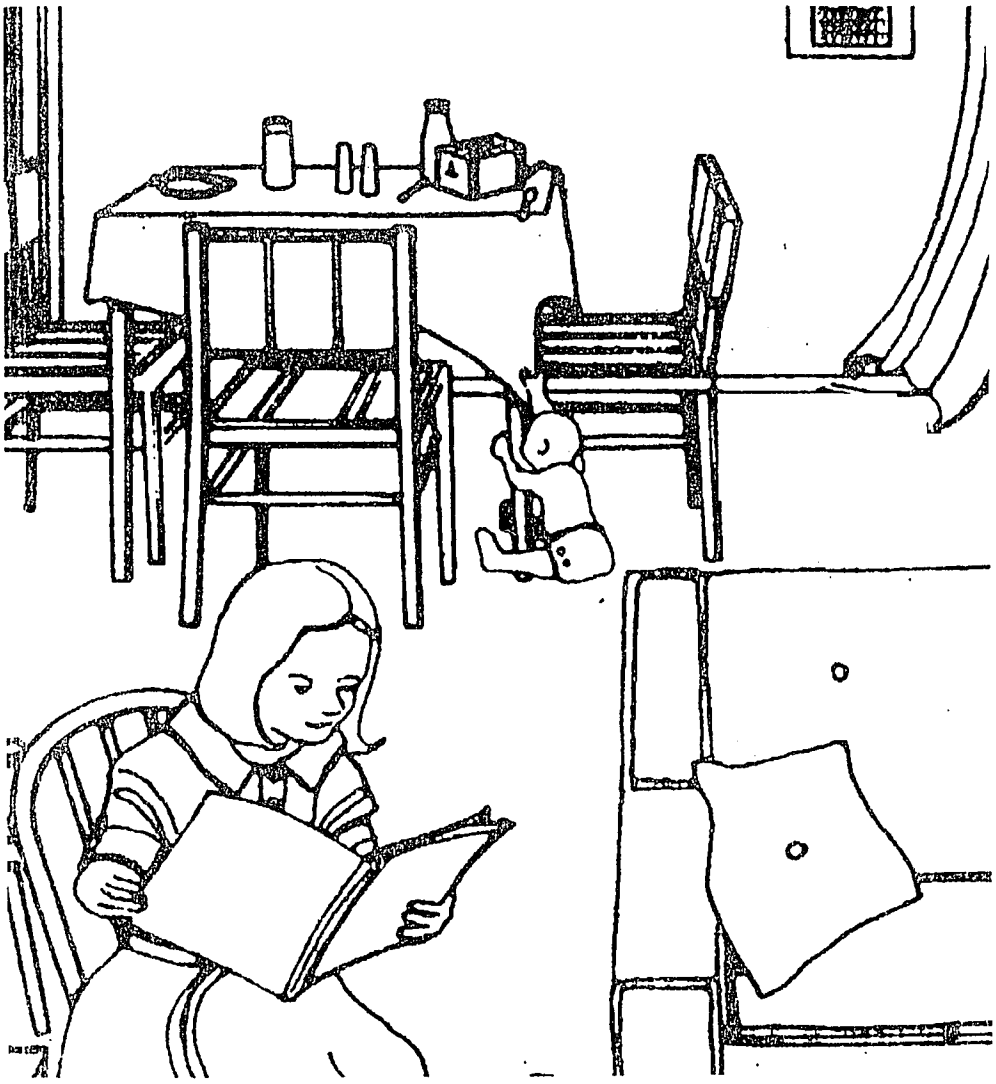
- Do you think s/he knows s/he is not supposed to do it?
  (If yes) Why do you think s/he would do this?

- What would you do if you saw your child like this?

- What would you do next if it did not work?

- How would you prevent this from happening again?

- How would you teach the child not to do this again?



9. Falling

- Why do you think a one-year-old would do this?

- What do you think might happen in this situation?

- Do you think the child knows that this is a dangerous thing to do?

-How does the child eventually learn that this is dangerous?

-Do you think your child would do this?

- Do you think s/he knows s/he is not supposed to do it?
  (If yes) Why do you think s/he would do this?

- What would you do if you saw your child like this?

- What would you do next if it did not work?

- How would you prevent this from happening again?

- How would you teach the child not to do this again?

Overall perceptions of danger and unsafe parts of the home.

10-What are the rooms or parts of the home or yard that you are most concerned about possible dangers to your child?

(For each of these places ask Why?)

11-Are there any areas in the home where you allow (the child) to be out of your sight for any time?

- If so, what are these places?

Room-by-room survey of the home.

Now we would like to take a tour of the house with you and with (the child). Our cameraperson will also come with us and videotape each room.

For each space ask following questions:

A. Space use and supervision:

12- What is this space used for by the family?

13- Can the child come into this space?
- At what times?
- With whom?

14- Can s/he be alone in this space at any times?
- At what times?
- How long?

15- What does s/he usually do when she is in this space?

16- Who usually looks after her/him when s/he is in this space?

17- What do you generally do when you are in this room?

18- Where is (the child) allowed to go or play when you are in this room?

19- Are these rules carried out when the child is with others? (Father, grandmother, baby-sitter, etc.)

B. Hazards:

20- What do you think are the dangers for (the child) in this room? - Why?

C. Past accidents/near misses:

21- Did s/he have any accidents or near misses in this room?
What happened?
When did it happen? (Nearest month)
Who was in the house at that time? Where were they?
What were they doing?
Why do you think it happened?

D. Rules:

22- What are the safety related rules for this space for the parents/caretakers?

23- What are the safety related rules for this space for the child?

Does (the child) know them?
Does s/he always follow them?
If not why?
Do (other caretakers) use these same rules with your child? How do you know? If not, what rules do they use?

24- Do violations occur?
When do they occur?
Why do they occur?
Please give examples.

E. Safety devices:

25- Do you have any physical safety devices installed in this room?
What are they? Where are they?
Do you use it?
Does it work? Why?
Has it ever failed to work with your child? If yes in what ways?
Who in the family generally buys these kind of safety devices? Who else?
Who in the family generally installs them? Who else?

26- Have you changed the room in any ways to prevent accidents ibn this room?
-If so, in what ways?

27 .Can your child ..... (room specific competence questions)

(Look at the room and ask questions about rchild's ability to eachi, climb, carry, open objects and room-specific items.

28. What do you think will change about the rules/precautions in this room two months from now? Why?

Sources of safety knowledge

29. While we were going through the home you have told us about dangers in different locations. Do you know where you got that information from?

a. Are there any special people you turn to on learning about dangers in the home? Who are they?

b. Are there any books or magazines that you have read on safety? Which ones?

c. Are there any tv programs that you have watched on this subjet? Which ones?

d. Are there other sources whre you get information about safety in the home? What are they?

APPENDIX 7: SEVENTH -LAST- SAFETY VISIT INTERVIEW

Children's Home Environment Study - 7th (Last) Home Visit-Safety

It has been almost a year sinceour first interview, and there may be some changes. I would like to repeat some of the questions that I have asked you at the beginning of our study.

1. Why do you think children's accidents happen?

2. Of those accidents which occur to children in the home, do you think most of them can be prevented? How?

3. Do you think in terms of accidents, your child is more or less at risk than most other children of her/his age? Why?

4-What are the rooms or parts of the home or yard that you are most concerned about possible dangers to your child?

(For each of these places ask Why?)

How long have you been living in this place?

I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE PLACES THAT YOU PREVIOUSLY LIVED IN.

What was your place like where you were living before this one?
-(prompt for size, location etc)

How long have you lived there?

Why did you move here?

What would that place have been like to raise a child, compared to here?
-Was it better or worse?
- What were the advantages and disadvantages?
-Why?

Children's Home Environment Study - 7th (Last) Home Visit-Safety

Room-by-room survey of the home.

BECAUSE THIS IS OUR LAST INTERVIEW, JUST LIKE WE DID IN THE BEGINNING, I AM GOING TO ASK YOU TO TELL ME ALL THE DANGERS, DEVICES, ACCIDENTS ETC. FOR EACH ROOM. -prompt for existing but not mentioned items afterwards.

For each space ask following questions:

A. Space use and supervision:

12- What is this space used for by the family?

13- Can the child come into this space?
- At what times?
- With whom?

14- Can s/he be alone in this space at any times?
- At what times?
- How long?

15- What does s'he usually do when she is in this space?

16- Who usually looks after her/him when s'he is in this space?

17- What do you generally do when you are in this room?

18- Where is (the child) allowed to go or play when you are in this room?

19- Are these rules carried out when the child is with others? (Father, grandmother, baby-sitter, etc.)

B. Hazards:

20- What do you think are the dangers for (the child) in this room? - Why?

C. Past accidents/near misses:

21- Did s/he have any accidents or near misses in this room?
What happened?
When did it happen? (Nearest month)
Who was in the house at that time? Where were they?
What were they doing?
Why do you think it happened?

D. Rules:

22- What are the safety related rules for this space for the parents/caretakers?

Do violations occur?
When do they occur?
Why do they occur?
Please give examples.

23- What are the safety related rules for this space for the child?

Does (the child) know them?
Does s/he always follow them?
If not why?
Do (other caretakers) use these same rules with your child? How do you know? If not, what rules do they use?

24- Do violations occur?
When do they occur?
Why do they occur?
Please give examples.

E. Safety devices:

25- Do you have any physical safety devices installed in this room?

What are they? Where are they?

Do you use it?

Does it work? Why?

Has it ever failed to work with your child? If yes in what ways?

Who in the family generally buys these kind of safety devices? Who else?

Who in the family generally installs them? Who else?

26- Have you changed the room in any ways to prevent accidents ibn this room?

-If so, in what ways?

27 .Can your child ..... (room specific competence questions)

(Look at the room and ask questions about rchild's ability to eachi, climb, carry, open objects and room-specific items.

28. What do you think will change about the rules'precautions in this room two months from now? Why?

Sources of safety knowledge

29. While we were going through the home you have told us about dangers in different locations. Do you know where you got that information from?

a. Are there any special people you turn to on learning about dangers in the home? Who are they?

b. Are there any books or magazines that you have read on safety? Which ones?

c. Are there any tv programs that you have watched on this subjet? Which ones?

d. Are there other sources whre you get information about safety in the home? What are they?

Children's Home Environment Study - 7th (Last) Home Visit-Safety

5. I have been asking you about ~~the~~ safety throughout your rules ~~in different parts of the~~ home. Can you tell me how these rules are made?

-Can you give an example.

Are these ~~of~~ safety rules throughout your home

6. ~~Are these rules~~ the same for each caretaker ~~in your home~~? of your child's

(If different) How are they different?

8. Are there differences betwen you and (the other caretaker) in the ways that you deal with safety issues?

-What are they?

Information about the child's physical competence at the time of the visit.

One year olds :

30. Can your child:

- Walk without help?
- Carry objects from one place to another?
- Open cupboards?
- Unscrew a lid of a jar?
- Climb on the sofa?

Two year olds:

30. Can your child:

- Open cupboards?
- Unscrew a lid of a jar?
- Open drawers?
- Climb up the stairs?
- Climb down the stairs?

Three year olds :

30. Can your child:

- Open doors?
- Open drawers?
- Climb up the stairs without help?
- Climb down the stairs without help?
- Reach over the kitchen counter?

- Do you think our visits influenced you in the ways that you ~~deal with~~ your children?

- Do you think our visits influenced you in the ways that you deal with the safety of your child?

- How much do you think we influenced you?

- In what ways?

- Have you made any changes in your home, as a result of our visits?

-what?

- Have you made any changes in the rules that you had, as a result of our visits?

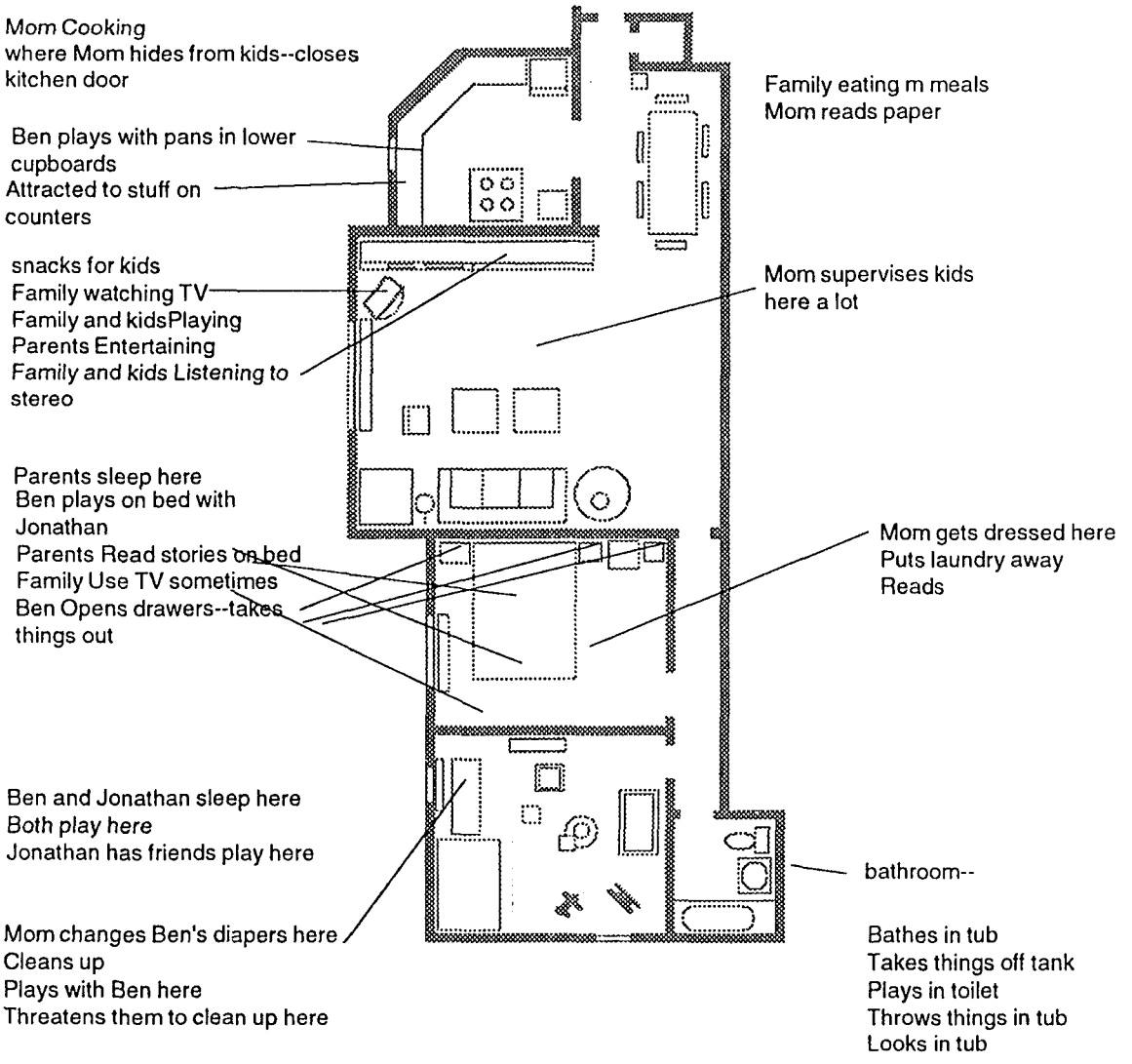
-what?

- Have you made any changes in your thinking about raising children, as a result of our visits?

-what?

APPENDIX 8: SAMPLE FAMILY MAPS FROM FIRST INTERVIEW

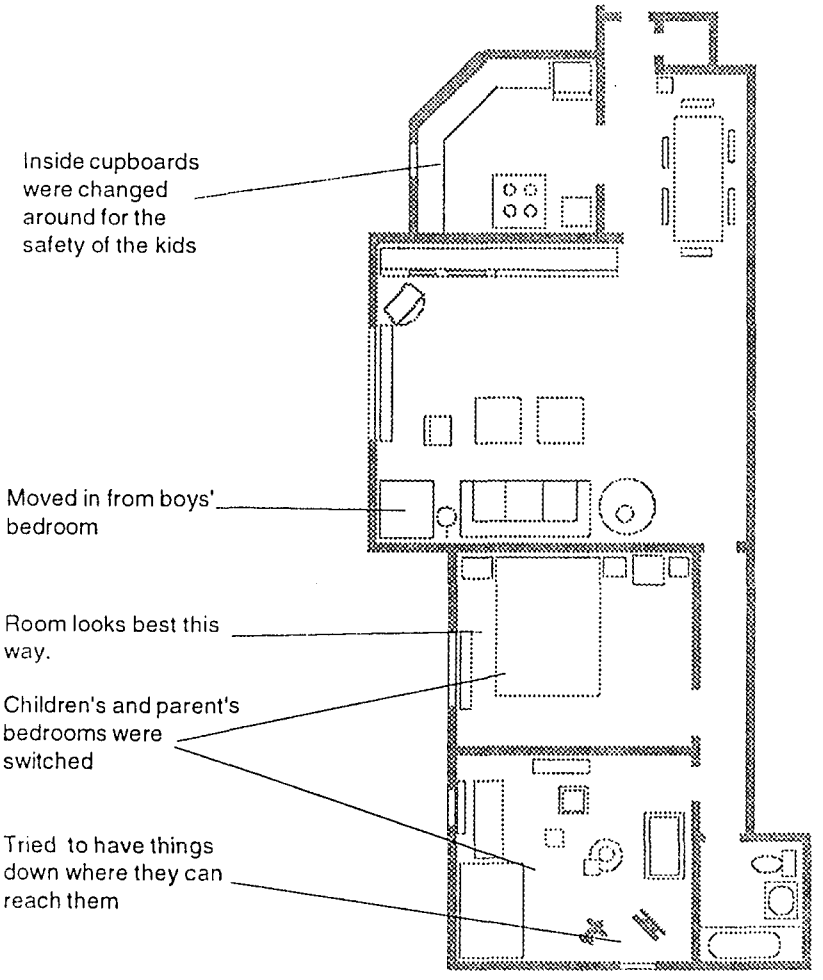
First Interview
Activity Map



First Interview

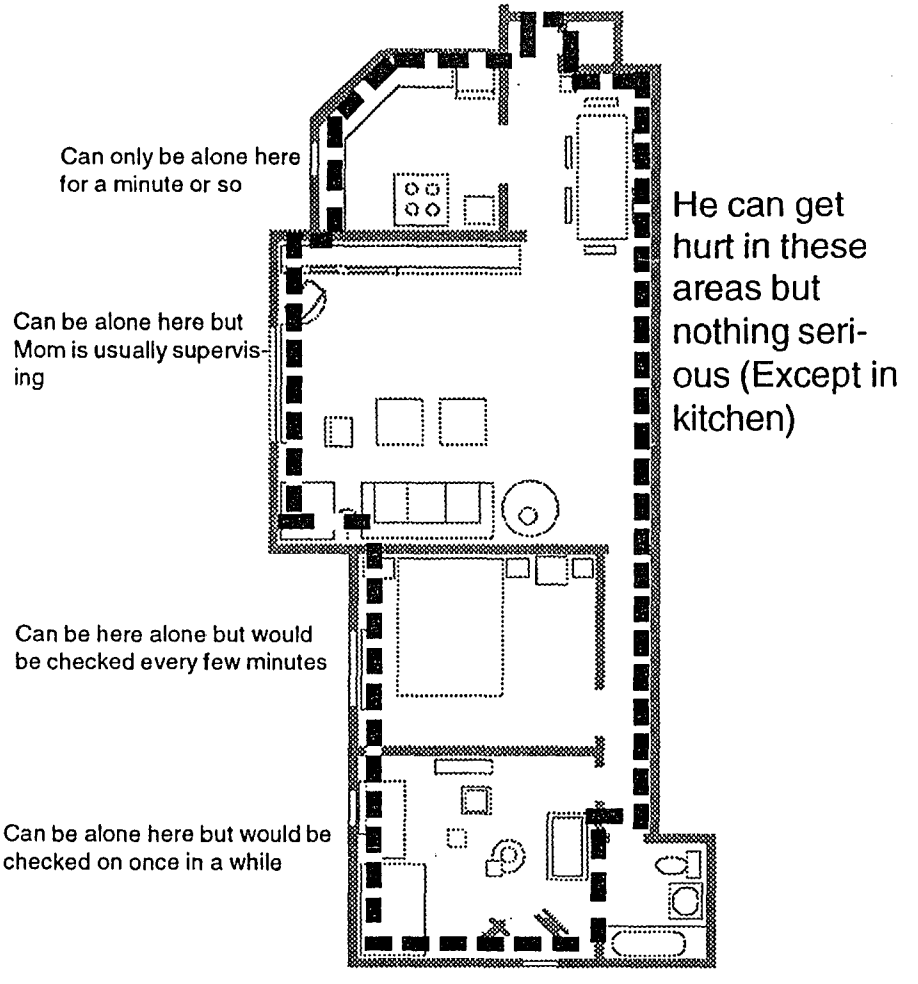
Arrangement Map

Arrangement was basically like this before they had kids



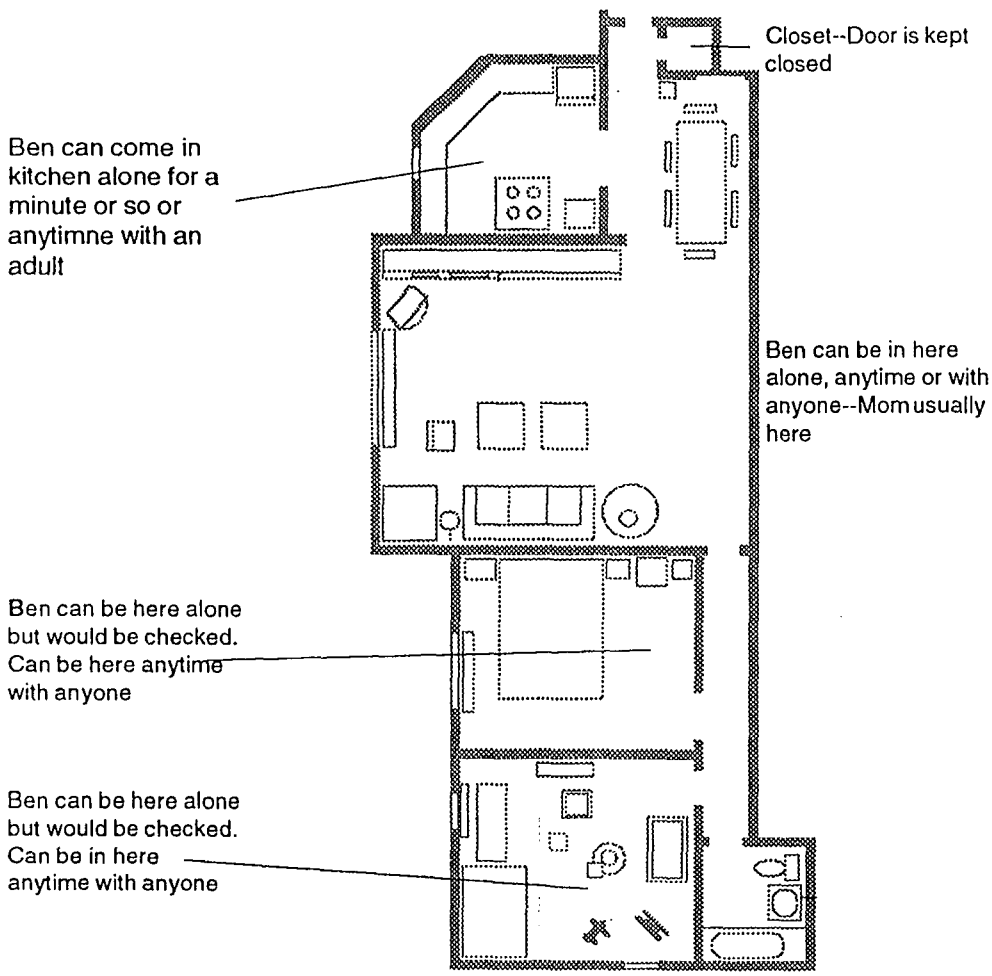
First Interview

Space where child can be alone



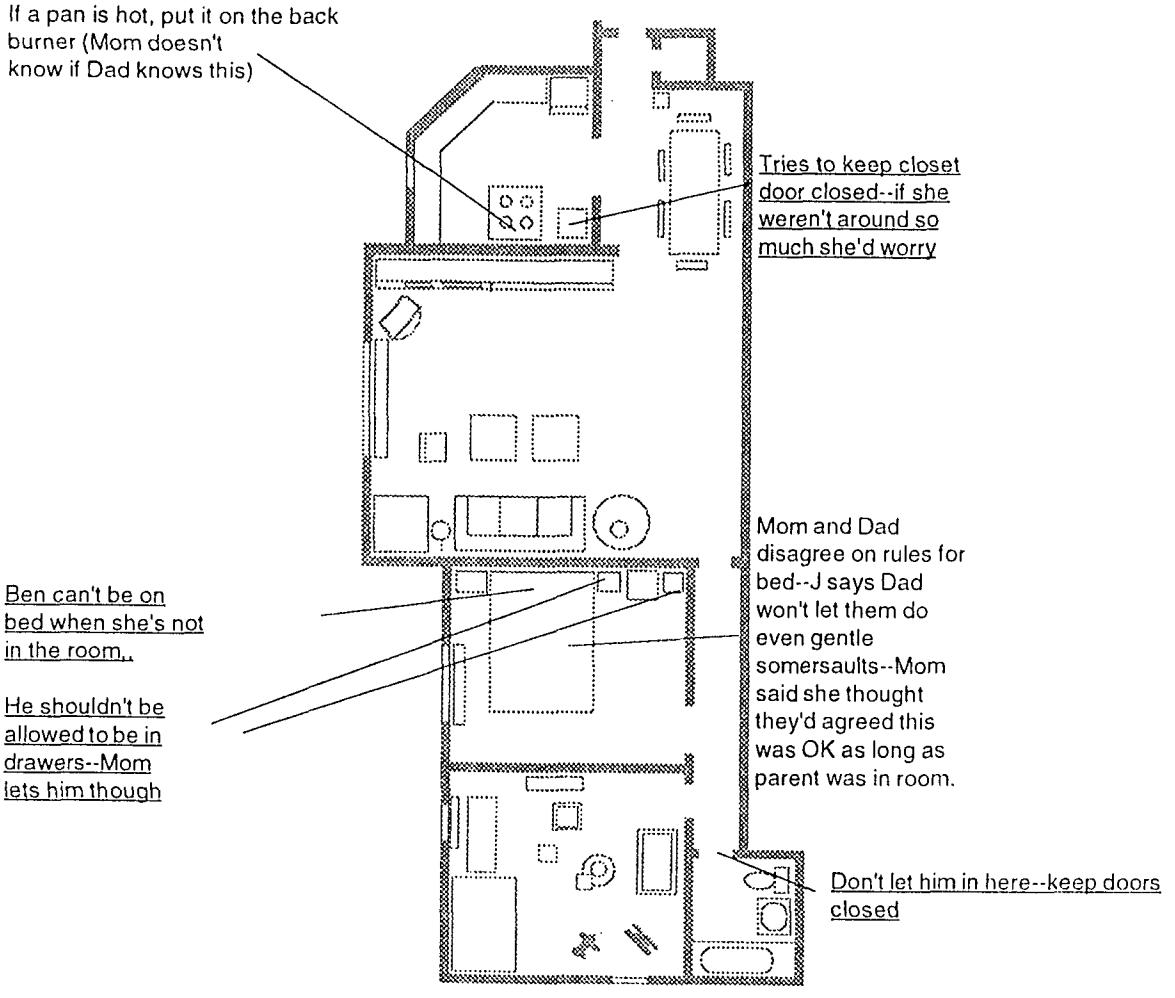
First Interview

Zones of Supervision



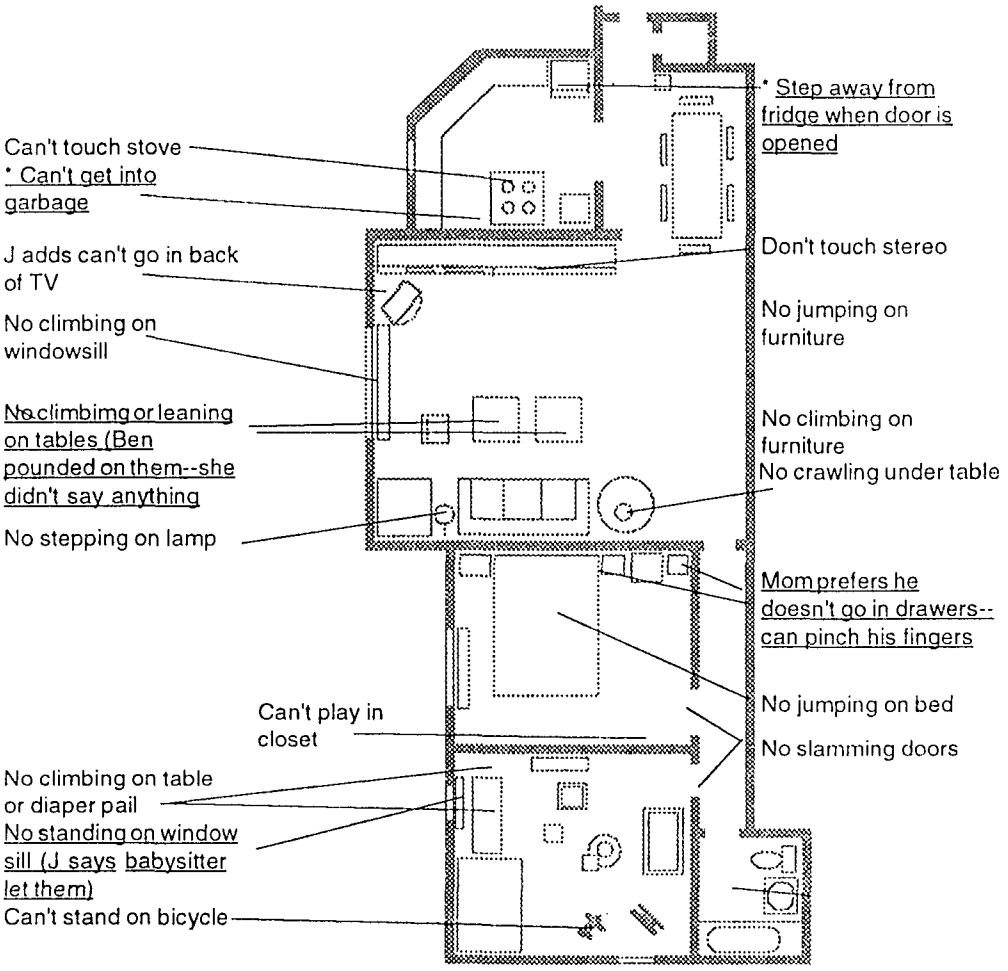
First Interview

Rules for caretakers and parents



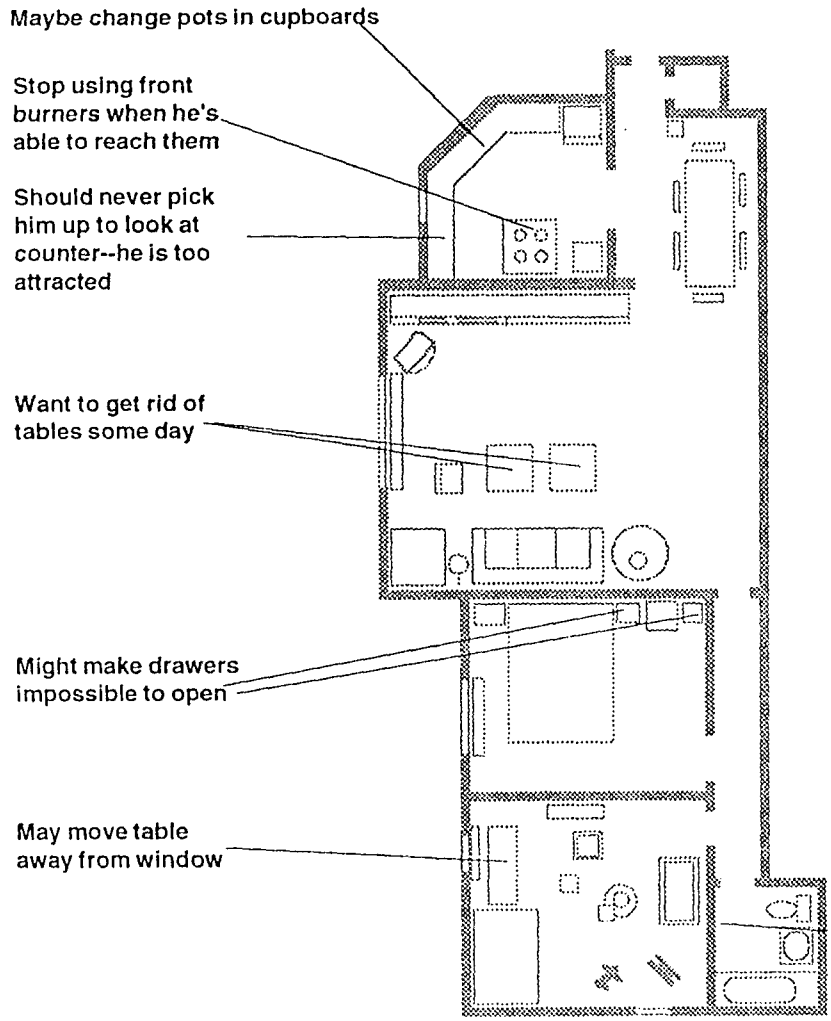
First Interview

Rules for children and subsequent Violations



First Interview

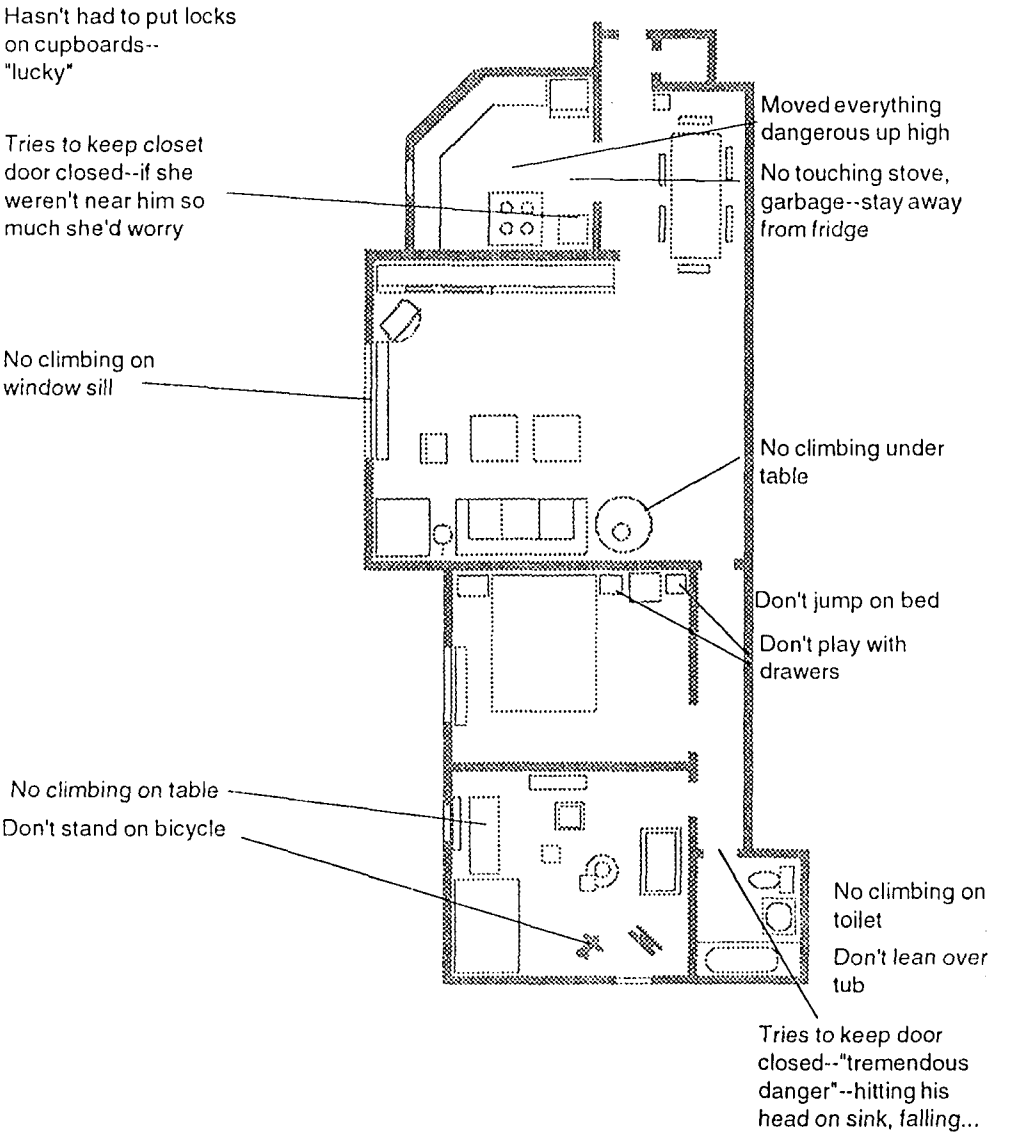
Future Changes



"Rules may change depending on how much he listens to *me*"

First Interview

Spontaneous Safety

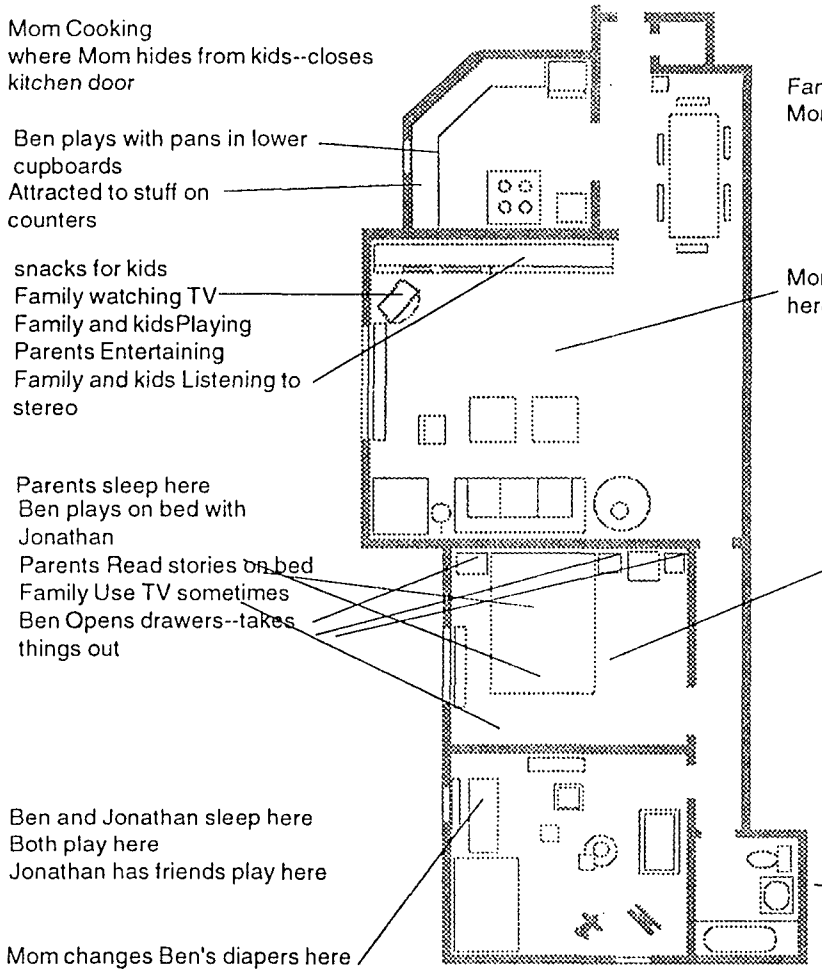


"Every room is a potential danger alone"

(Most of her rules seem to be safety rules)

APPENDIX 9: SAMPLE FAMILY MAPS FROM THE SECOND INTERVIEW

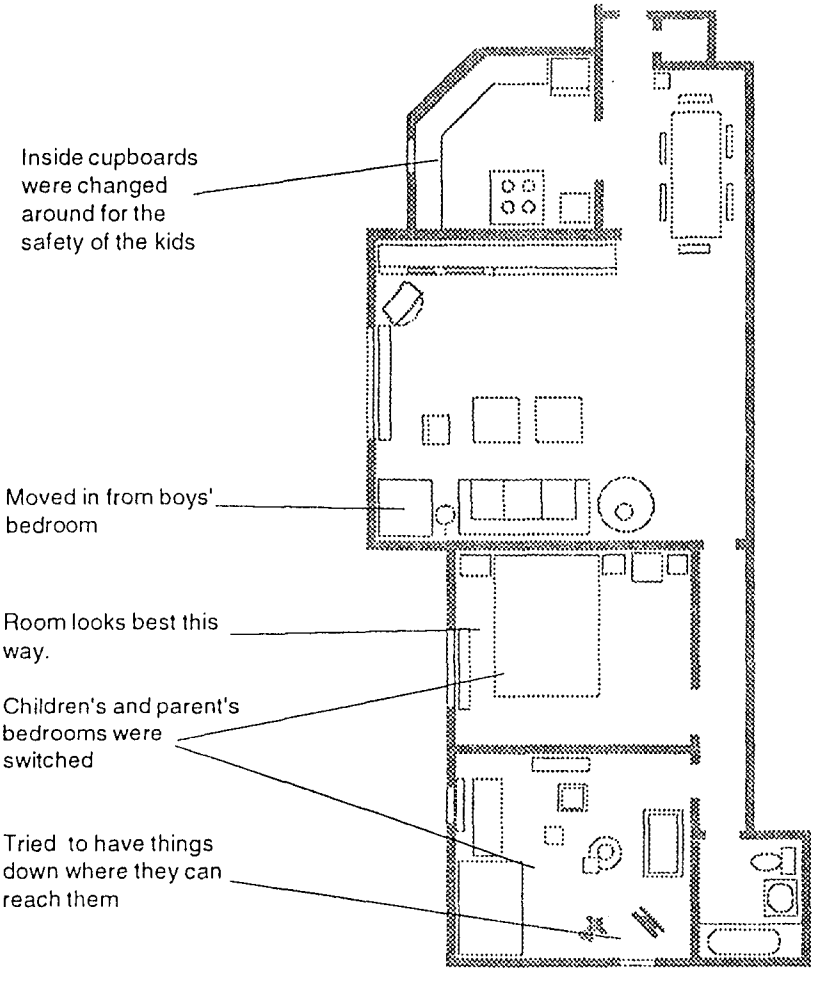
Second Interview
Activity Map



Second Interview

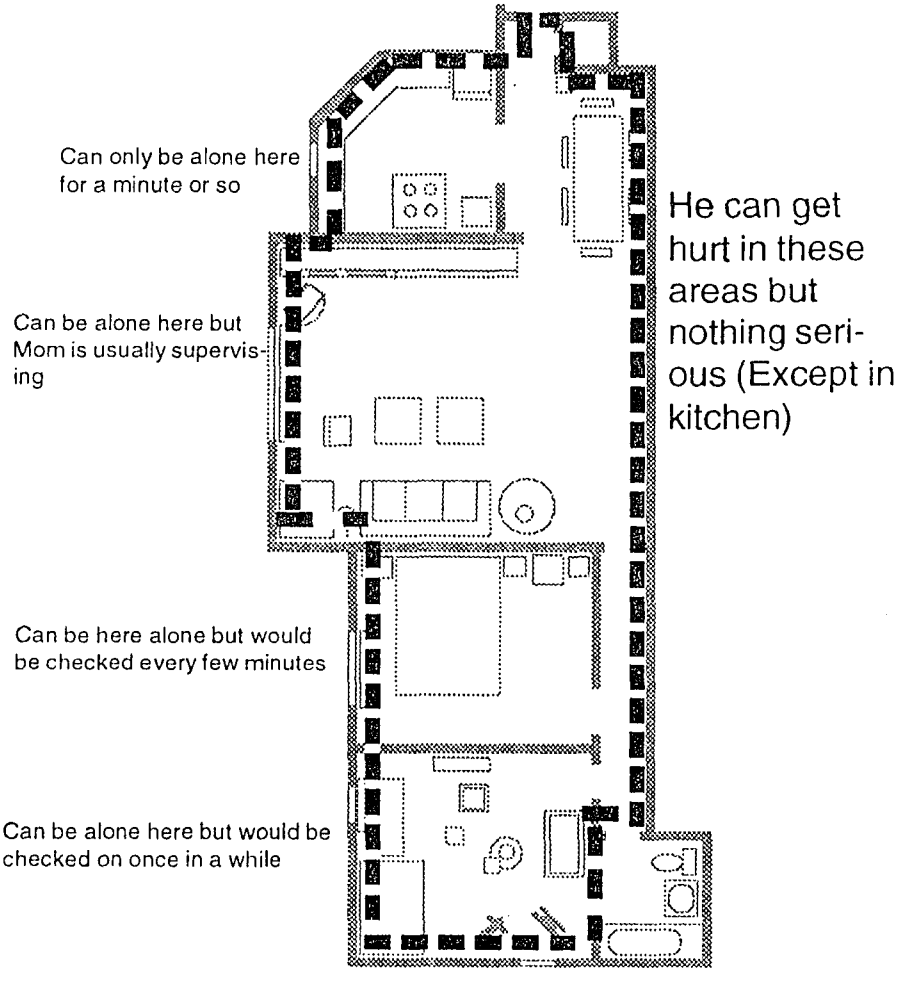
Arrangement Map

Arrangement was basically like this before they had kids



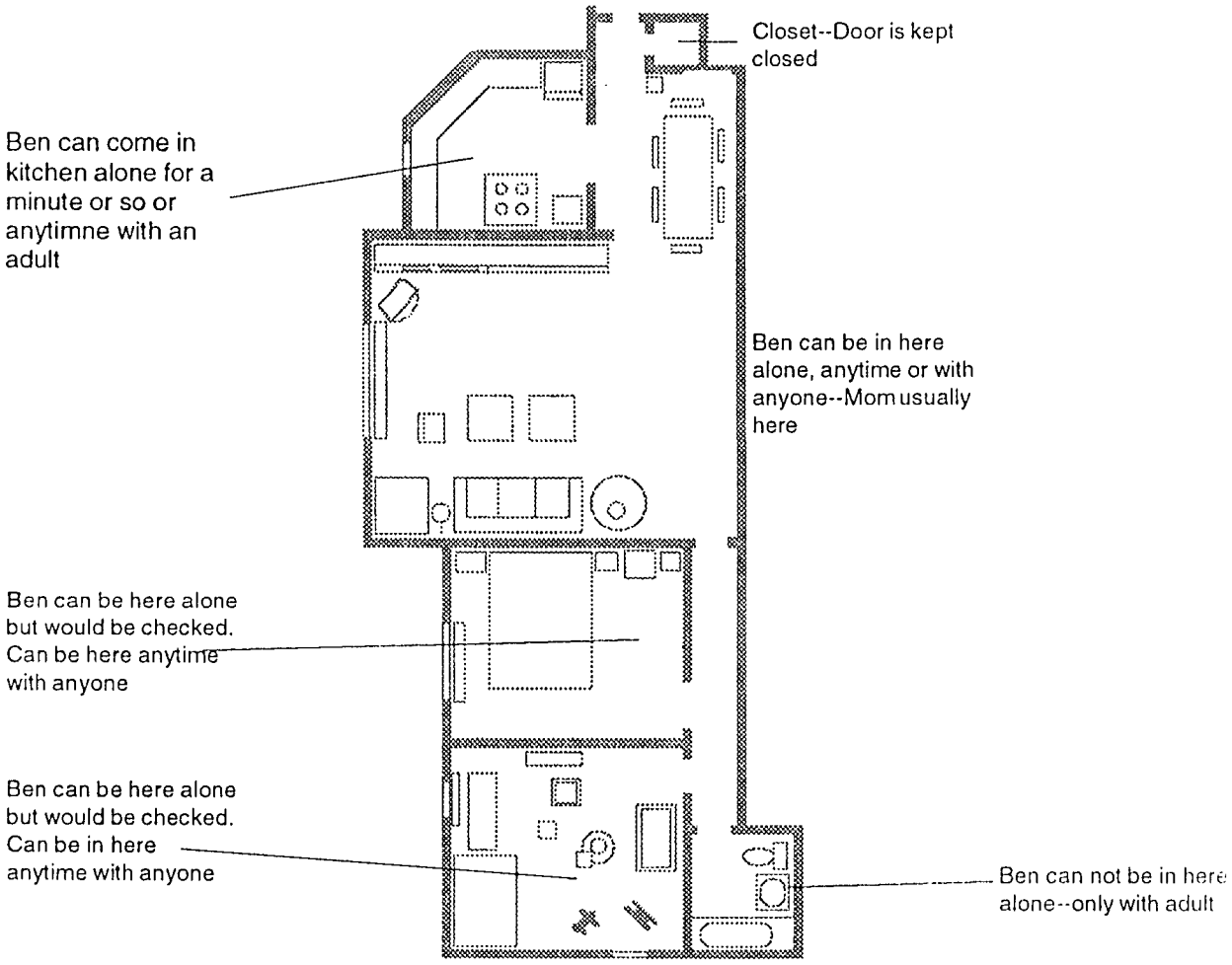
Second Interview

Space where child can be alone



Second Interview

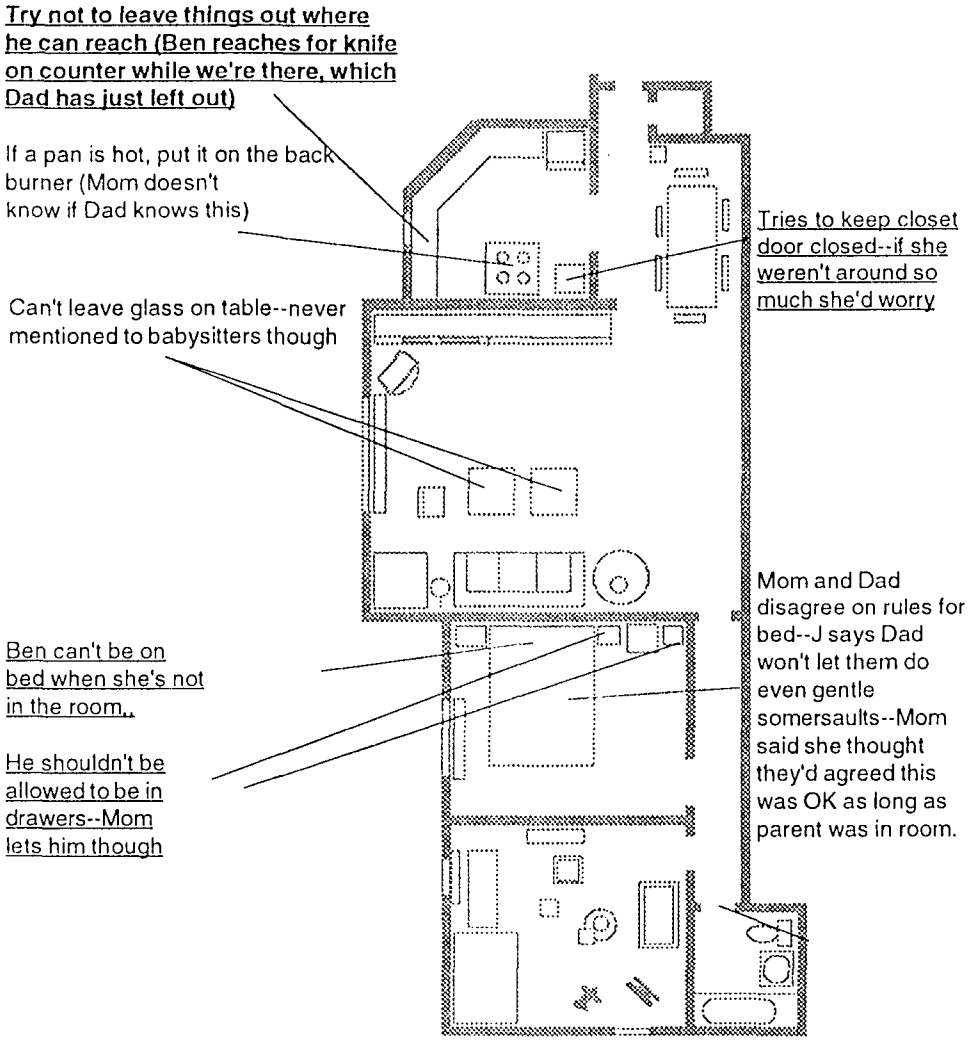
Zones of Supervision



Note: Supplementary Zone Maps for first and second interview are missing--question not asked appropriately

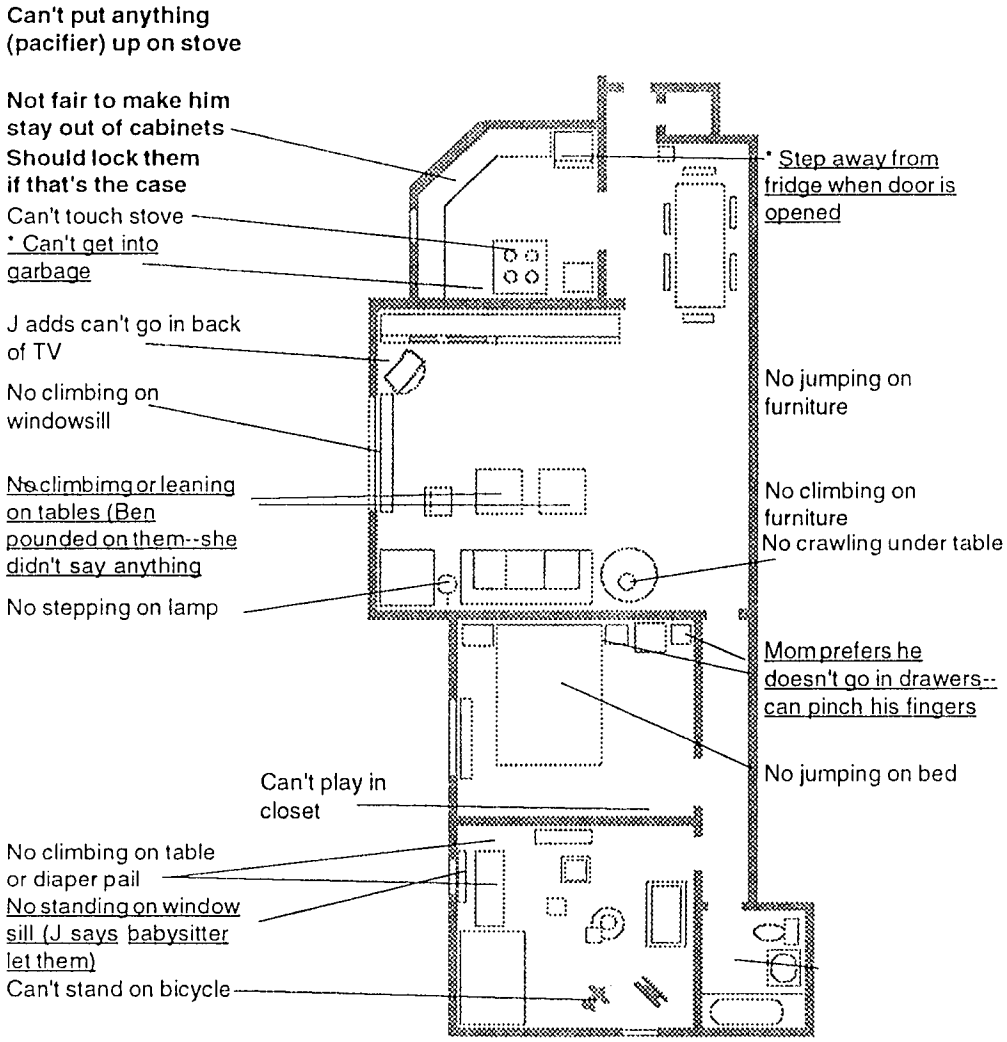
Second Interview

Rules for caretakers and parents



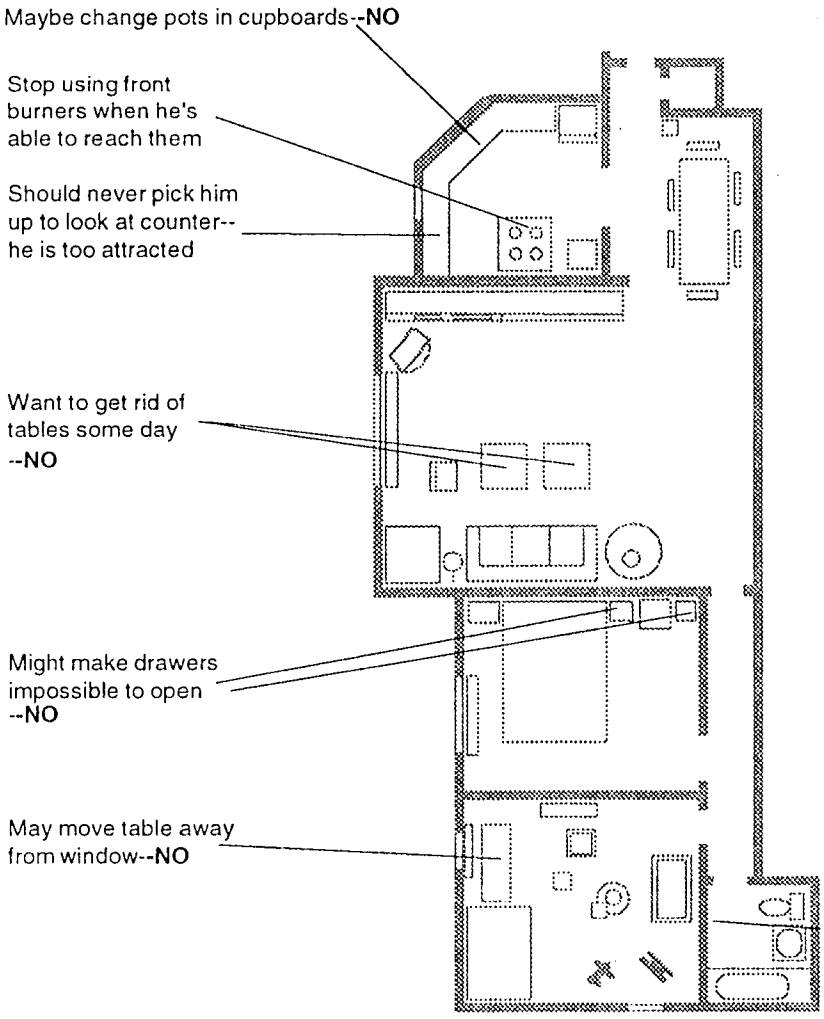
Second Interview

Rules for children and subsequent Violations



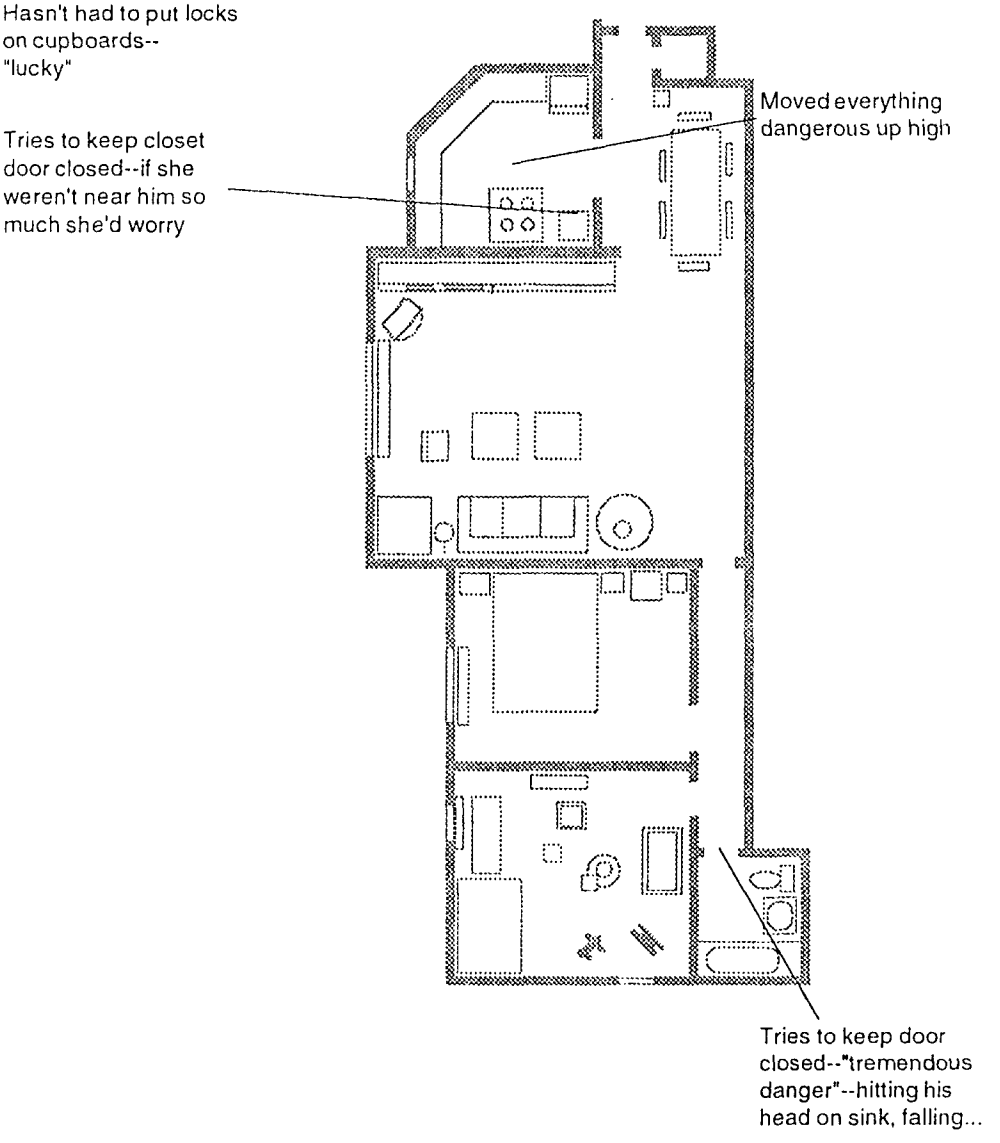
Second Interview

Future Changes



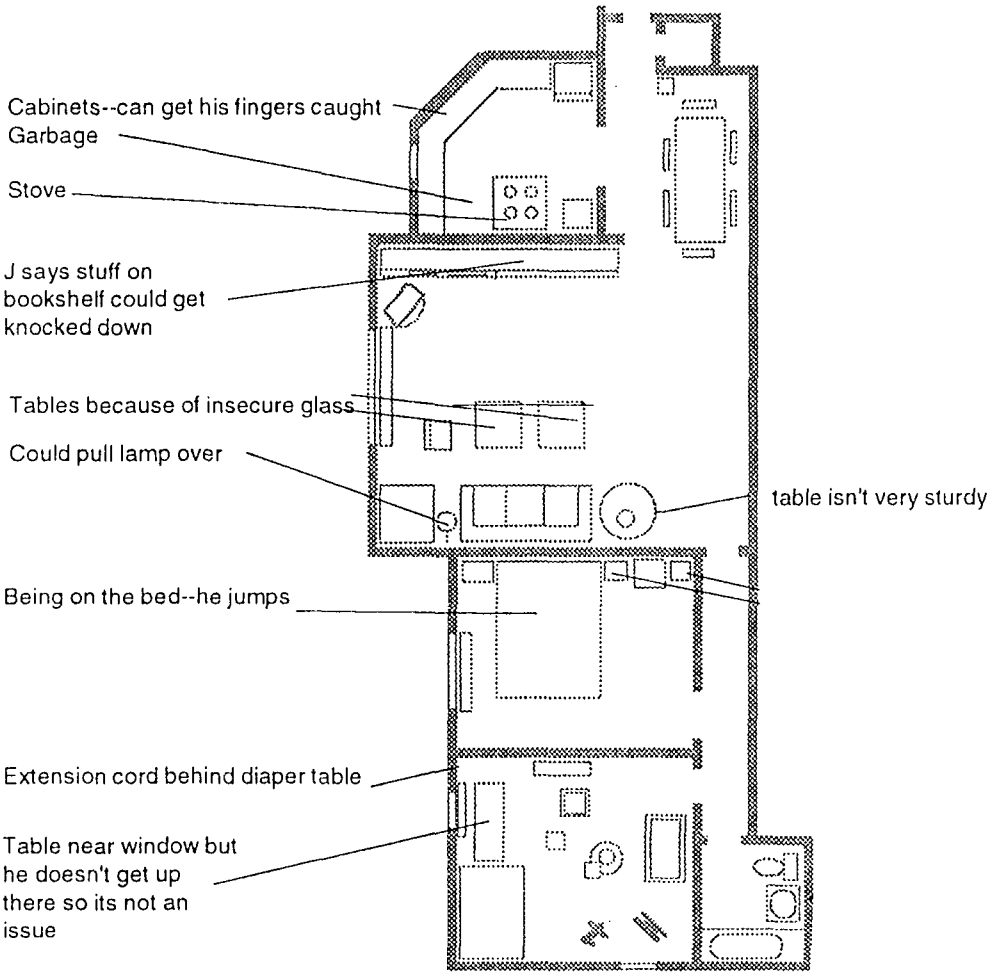
Second Interview

Perceptions of Danger Areas



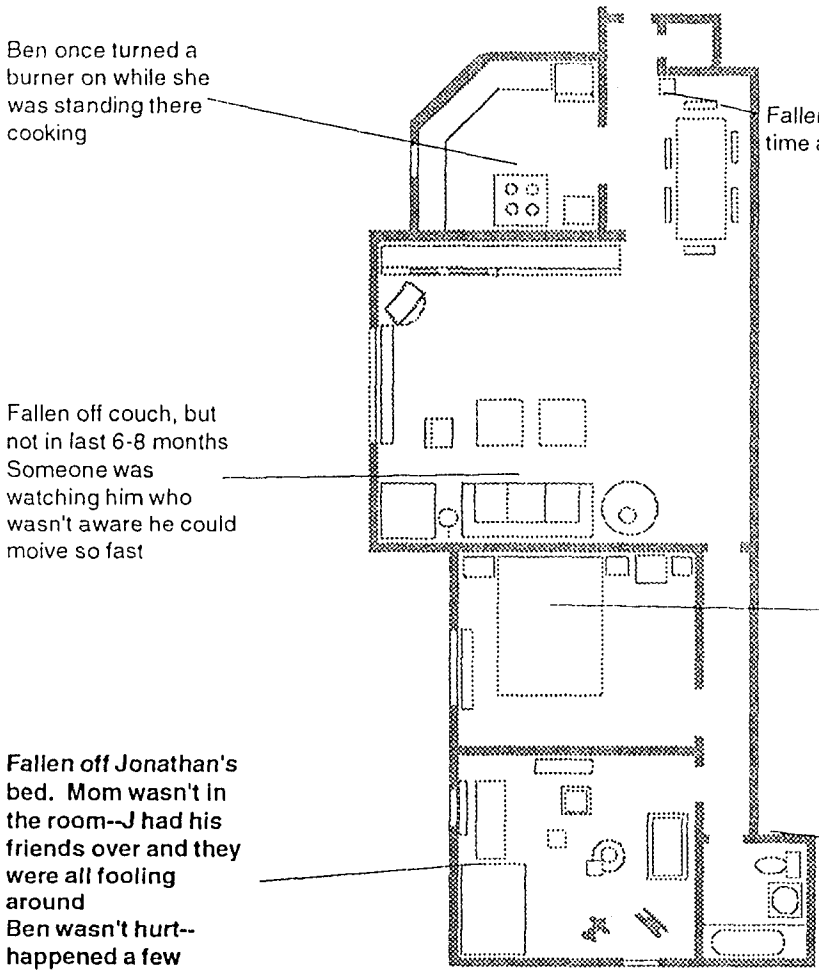
Second Interview

Dangers Room by Room



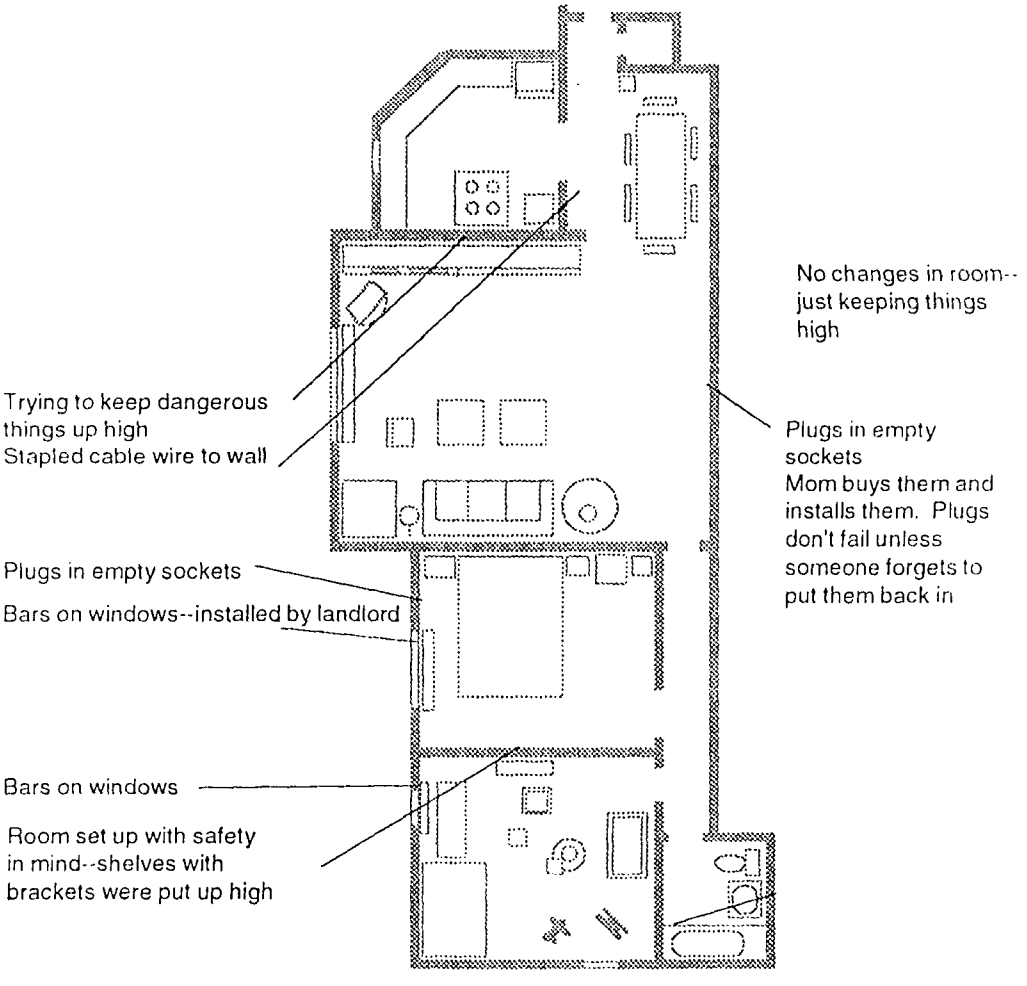
Second Interview

Accidents or near misses



Second Interview

Safety devices and physical precautions



APPENDIX 10: SAMPLE FAMILY SMS ANALYSIS DIAGRAM

FAMILY SYSTEM CHART

Family: 2(2)

Demographics:

- 2-year-old girl living with her grandmother, and her 5-year-old cousin and her father (Grandmother's son).
- Mother is in "drug rehab" for several months.
- Father is not acknowledged.
- Grandmother has high school diploma—worked for 11 years as a nurse.
- Family is African-American.
- Grandmother's son is the primary wage earner for the household.

Family Resources:

Human:

- Grandmother has many friends but limited visits due to children.
- Son is not involved with childcare.
- Mother sometimes takes child for the day or weekend--took her for month or so at one point.

Material:

-Very limited resources as Grandmother cannot work with the 2-year-old at home.
- Son contributes.

Space:

- Small, 4-room apartment.
- Grandmother sleeps on couch so that the two girls have a bed to sleep in.
- Her son's bedroom is the girls' playroom when he is not home.
- No adequate sight lines from room to room.
- Window/intercom

Information:

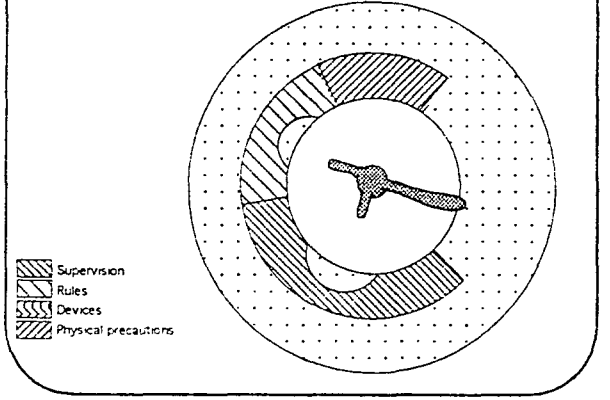
- Grandmother uses her 11 years of experience as a nurse and her experience as a mother to inform her practice now.
- Does not read books or use friends as resources.
- Belongs to a Mothers' Association.

Beliefs and Ideology:

Childrearing Ideology:

- Authoritarian grandmother.
- Must train them to obey you.
- Supervising is primary intervention with child.
- Most important thing is to feed them well and keep them clean and healthy.
- Teach them good manners and good health habits.
- Be consistent and don't use empty threats—spank them when they don't listen.
- Don't leave children alone.

Exposure to Risk:
Safety Strategies at age 2:3



Safety Beliefs and Ideology:

- Accidents often happen because children aren't trained.
- Must constantly supervise children because they don't pay attention to what's going on.
- Often need to spank them to teach them what's a danger.
- If train them not to do something when adult is there, won't do it when adult is gone.

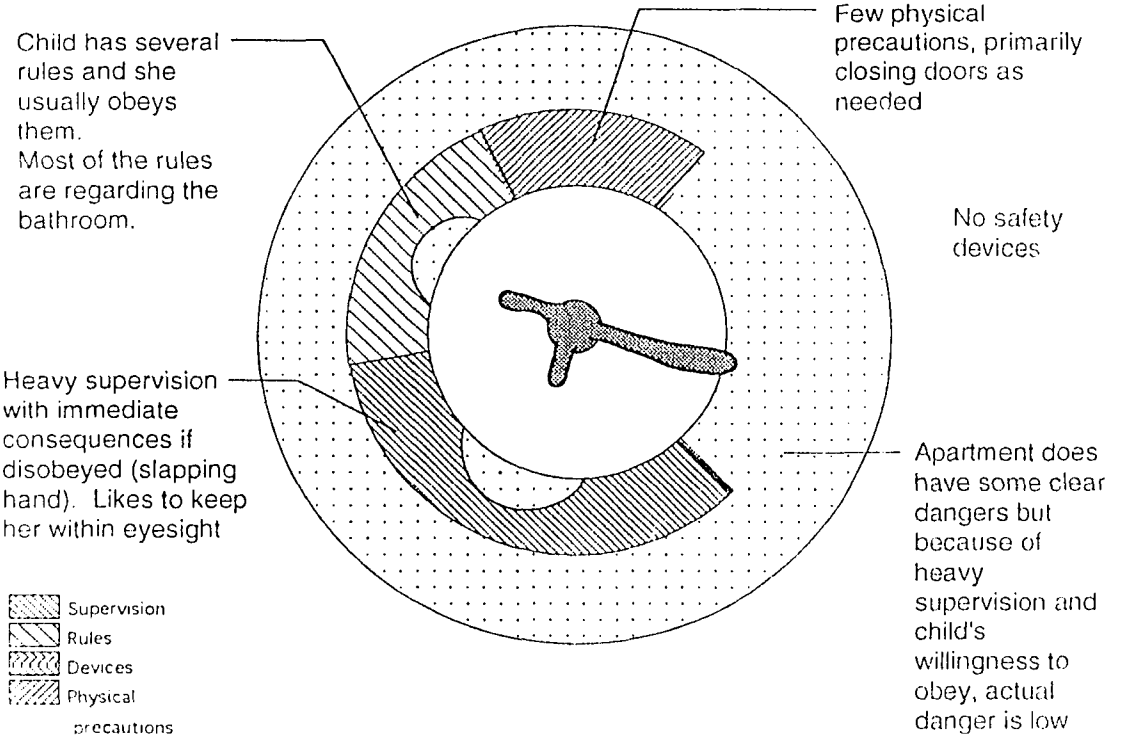
Safety Practices:

- No safety devices, though furniture is placed to block certain dangers.
- Strong emphasis on adult supervision, but also uses older granddaughter's "tattling" as way to monitor younger child's activity.
- Uses spanking after initial warning to make child aware of dangers.
- Kitchen and bathroom always off limits except when necessary to use them; two BR's are often demarcated as off limits if danger (like fan) present.
- Child has many rules which grandmother enforces strictly—many of these rules are meant to be longstanding and will not change over time—many rules focus on bathroom.

Child Characteristics:

- Normal to early physical development.
- Very quiet—does not talk yet (Grandmother is concerned).
- Poor eyesight—wears glasses.
- Less active than the norm.
- Easy to manage.
- Close relationship with older cousin.

Child age: 2:3 **Family Code:** 2 (2) **Visit #:** 2 **Child gender:** Girl



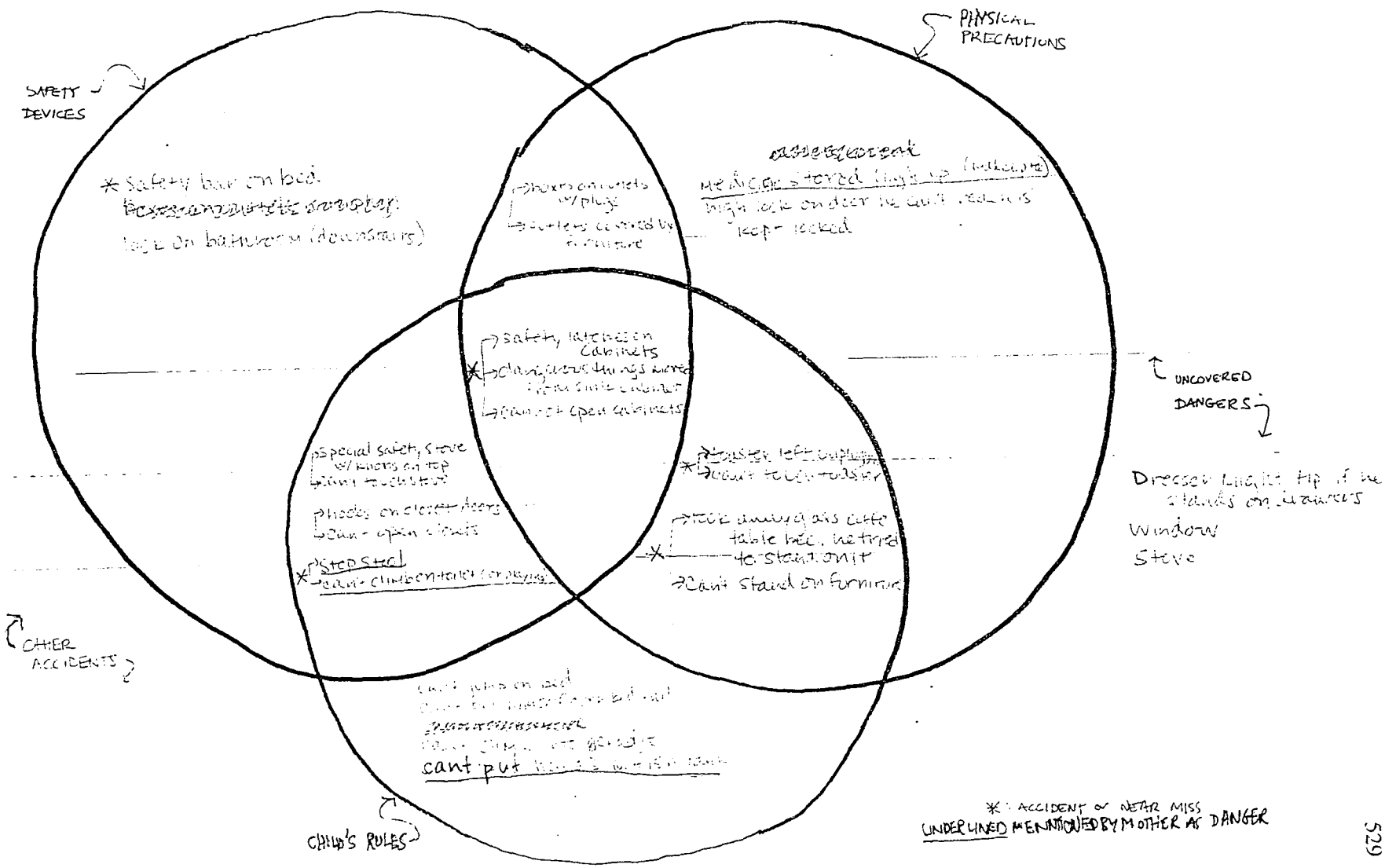
Child's activity: Low level of activity and obeys readily.

Supervision: Bathroom is off limits except when necessary to use it. Other rooms are often off limits as well, depending on which room Grandma is in at the time. Unless grandma or Lorielle (5-yr-old cousin) are around to supervise her, she is not allowed to be alone, except in living room and the bedrooms. Since she doesn't seem to want to be alone anyway, this is not a problem. She doesn't wander off much.

Rules: Grandma has many rules for the child, in the form of "don't touch," which are generally followed. Because grandma supervises her closely, she doesn't have much opportunity to break rules. So even though there are real dangers in the home (like rat poison on the floor behind the TV), this system seems to work fairly well for protecting this particular child, with her obedience and low level of activity. Many specific rules in the bathroom—grandma often uses older granddaughter to supervise child here, during baths and sink use.

Physical Precautions: The home has no safety devices, such as safety plugs or window guards. Grandma does use furniture to block certain dangers though, for example, sockets are blocked by the TV.

APPENDIX 11: OVERLAP OF SAFETY STRATEGIES FOR ONE FAMILY DURING THE FIRST SAFETY VISIT


SAFETY DEVICES
PHYSICAL PRECAUTIONS
UNCOVERED DANGERS
OTHER ACCIDENTS
CHILD'S RULES
* Safety bar on bed.
toilet on bathroom (downstairs)
doors on closets w/ play
outlets covered by furniture
safety latches on cabinets
special safety stove w/ knobs on top
plastic on closet doors
locks - open closets
plastic
can't climb on table or chairs
can't touch outlets
can't stand on furniture
can't jump on bed
can't climb on furniture
can't open doors
can't put
Dresser tips if he climbs on drawers
Window
Steve
* = ACCIDENT OR NEAR MISS
UNDERLINED MENTIONED BY MOTHER AS DANGER

APPENDIX 12: CHILD REARING IDEOLOGY CODING SHEET

FIRST INTERVIEW - IDEOLOGY CODING SHEET

Notes and explanations for coders

1 **Name of the family:**

2 **Category:** 5(2)

format n(a)
n: family category, a: age of the child

3 **Interview #:** 1

4 **Is there a separate bedroom for the children?**

Put (1) in apropriate boxes
Mark only one choice

Yes	1
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

5 **Do you own/rent this house/apartment?**

Put (1) in apropriate boxes
Mark only one choice

Own	
Rent	1
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

6 **Who are the family members?**

(Living in the same household)

put total # for each category

Mother	1
Father	1
# of children	3
# of other adults	

# of any older siblings 1

# of children older than the target child
repeat even if counted in #no of children

7 **How do you divide up the responsibilities?**

1 of his wife

put (1) in applicable box

Primary caretaker gets some kind of childcare support from other family members	
Question not asked	
Question was not answered	1
Misunderstood the question	
I don't know	

This sheet is for coder's own use only.

Fill out only for the typical week day

Can you tell me about your child's typical week day,
from the time that s/he wakes up until the time s/he goes to bed.

Hours	activity	place	duration	frequency	with who
6:00 - 6:30	Wake-up				
7:00 - 8:30	Breakfast				
	Bags or Cleaning				
	Lunch				
	Naps				
	Eat, rest & Lunch				
	Play				
6:00	Dinner				
11:00 — 11:00	Bedtime				

Excursions outside the home with the child are mentioned [1]

Adult visitors coming home is mentioned [ ]

Answer questions 8 to 15 for a typical d.
0= not mentioned
1= mentioned

10 **Child visitors coming home is mentioned** [ ]

11 **Variation in schedule:**

		For the target child
Wake-up	30	# of minutes in range
Lunch	0	# of minutes in range
Dinner	0	# of minutes in range
Bedtime	40	# of minutes in range

12 **Play is mentioned in daily routine** [1]

13 **Watching TV for the child is mentioned during a typical day** [ ]

14 **Mother's one to one interaction with the child other than routine *childcare activities* is mentioned** [ ]

(within House only)

- Playing with the child
- reading to the child
- singing to the child
- etc.

15 **Child's one to one interaction with another adult other than *routine* childcare activities is mentioned** [1]

Other adult may be father grandmother

16 **Do you organize your child's day differently for different days of the week?**

Yes	1
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

17 **Fill the following form for additional caretakers**

Caretaker	Hrs/week
Father (mother)	[redacted] 20-- 35 /

Activity	
Just supervising	1
Regular caretaking activities	2
Play/Education	
Irregular contact	

18 **Fill the following form for additional caretakers**

Caretaker	Hrs/week
Babysitter	
	Activity
Just supervising	1
Regular caretaking activities	
Play/Education	
	Irregular contact

How many hrs/wk spent by this person

Put (1) in all that apply.
Watching the child
Inc. Feeding, changing, washing etc.

19 **Fill the following form for additional caretakers**

Caretaker	Hrs/week
Grandparent	
	Activity
Just supervising	
Regular caretaking activities	
Play/Education	
	Irregular contact

How many hrs/wk spent by this person

Put (1) in all that apply.
Watching the child
Inc. Feeding, changing, washing etc.

20 **Fill the following form for additional caretakers**

Caretaker	Hrs/week
Neighbor	
	Activity
Just supervising	
Regular caretaking activities	
Play/Education	
	Irregular contact

How many hrs/wk spent by this person

Put (1) in all that apply.
Watching the child
Inc. Feeding, changing, washing etc.

21 **Fill the following form for additional caretakers**

Caretaker	Hrs/week
Other	
	Activity
Just supervising	
Regular caretaking activities	
Play/Education	
	Irregular contact
	1

How many hrs/wk spent by this person

Put (1) in all that apply.
Watching the child
Inc. Feeding, changing, washing etc.

22 **Total # of secondary caretakers**

1

put (0) if none

23 **Do you have a car?**

Yes	
No	1
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

24 **Another vehicle?**

Yes	
No	|
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

25 **How many?** (0)

put total number of vehicles

26 **Do you take vacations?**

Yes	|
No	
Sometimes	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

27 **How would you describe what kind of a person your child is, to someone who has never seen him/her before?**

put (1) in all that apply

	positive	negative
Interpersonal sensitivity/ expressivenes		|

positive
Getting on well with other children
being cooperative
sharing things
able to express love and affection
being sensitive to others needs and fee
good sport
friendly

negative
(opposite of all the above)
anti-social
not friendly
Mean.
fights.

	positive	negative
Independence in thought and action		

positive
being independent
able to stand up for oneself
able to work things out
able to think and solve problems
having a good imagination
being creative
being curious
interested in how & why things happen

negative
(opposite of all the above)

	positive	negative
Conformity to social norms		

positive
being honest
having good morals
being well behaved

doing what they are told
being well mannered
neat and tidy
trying hard at things they do
acting like a "boy" or "girl"
being responsible

negative
(opposite of all the above)

Success and achievement

positive | negative

positive
doing well at school
being good at certain activities

negative
(opposite of all the above)

Personal well-being

positive | negative

positive
having a good sense of humour
being happy
being well adjusted
being healty

negative
(opposite of all the above)

Manageability

positive | negative

positive
Easy to manage
follows parents rules

negative
(opposite of all the above)
needs discipline

Level of activeness

active | passive

active
Agressive, physically active,
full of life, tough
assertive

passive
Passive, quiet
easygoing, shy, introverted

Mental quickness

positive | negative

positive
bright, clever, sharp,
learns fast

negative
(opposite of all the above)

Maturity

positive | negative

positive
mature

negative
babyish, childish, immature

	positive	negative	
Risk taking			positive Cautious negative adventureous

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

28 **Do you think your child's character will change as she grows older?** check only one

Will change
Will not change
Some of it will change
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

29 **Why** check all that apply
if "total environment" is mentioned check all except (a) and (c).

Will not change-
a. Born as they are

will change-
b. Social influences — company, friends, peers,
c. Natural development — growth
d. Family influences — discipline, supervision, training
e. Change in SES → overall. — money, job
f. Change in physical environment
g. Level of education

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

30 **What do you think influences the kind of person a child becomes?** check all that apply
if "total environment" is mentioned check all except (b).

a. Social influences — company, friends, peers
b Natural development — growth
c. Family influences — discipline, supervision, training
d. Change in SES — money, job
e. Change in physical environment
f. Level of education

Other
Question not asked

Basic principles

Question was not answered
Misunderstood the question
I don't know

31 How do you think children should be raised? Why?

in order to be able to answer this question completely, also listen to the answers to Q. 32 (check all that apply)

a. Stresses freedom, letting the child explore, creativity
b. Stresses discipline, training or punishment.
c. Describes specific family arrangement or composition
d. Describes physical environment
e. Stresses the social environment outside the home and family — school, church, etc.
f. Stresses physical well-being. — health, bodily strength, food, nutrition.

yes / no

g. There is a coherent system of ideas about raising children — check only one

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

32 Do you think there are better ways than others to raise children?

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

33 Are you trying to raise your child the way that you are raised?

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

34 If it is different, in what ways? (check all that apply)

a. Stresses freedom, letting the child explore, creativity
b. Stresses discipline, training

or punishment.

c. Describes specific family arrangement or composition ☐

d. Describes physical environment ☐

e. Stresses the social environment outside the home and family ☐ school, church, etc.

f. Stresses physical well-being. ☐ health, bodily strength, food, nutrition.

Other ☐ religion
Question not asked ☐
Question was not answered ☐
Misunderstood the question ☐
I don't know ☐

35 **How were you raised?** check only one

Positive experience ☐
negative experience ☐
Other ☐
Question not asked ☐
Question was not answered ☐
Misunderstood the question ☐
I don't know ☐

36 **What kind of play do children of your child's age play?** (check all that apply)

Object play ☐ Playing with things
Constructive play ☐ Building things
Social play ☐
Pretend/symbolic play ☐
Socio dramatic play ☐ Social play with others
Physical play ☐ Large motor activity
Indoor games ☐ Inc. Board games
Outdoor games ☐
Electronic games ☐
Arts and crafts ☐

Other ☐
Question not asked ☐
Question was not answered ☐
Misunderstood the question ☐
I don't know ☐

37 **Do you think it is valuable for your child to play?**

Yes ☐
No ☐
Other ☐
Question not asked ☐
Question was not answered ☐
Misunderstood the question ☐
I don't know ☐

38 **Why?**

a. General learning ☐

b. Cognitive/intellectual
c. Physical development/ gross motor
d. Physical development/ fine motor
e. Physical development/ general
f. Social development
g. Personality/emotional development — inc. working out personal conflicts
h. To have fun
i. Practical skills — inc. artistic skills
j. Keeps child busy
k. Burn off energy

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

39 Do you believe there are any benefits in playing with things?

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

40 What?

a. General learning
b. Cognitive/intellectual
c. Physical development/ gross motor
d. Physical development/ fine motor
e. Physical development/ general
f. Social development
g. Personality/emotional development — inc. working out personal conflicts
h. To have fun
i. Practical skills — inc. artistic skills
j. Keeps child busy
k. Burn off energy

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

41 Do you believe there are any benefits in playing with children?

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

42 What?

a. General learning
b. Cognitive/intellectual
c. Physical development/ gross motor
d. Physical development/ fine motor
e. Physical development/ general
f. Social development
g. Personality/emotional development
h. To have fun
i. Practical skills
j. Keeps child busy
k. Burn off energy

inc. imitating other children.

inc. working out personal conflicts

inc. artistic skills

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

43 Do you believe there are any benefits when children pretend to be other people?

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

44 What?

a. General learning
b. Cognitive/intellectual
c. Physical development/ gross motor
d. Physical development/ fine motor
e. Physical development/ general
f. Social development
g. Personality/emotional development
h. To have fun
i. Practical skills
j. Keeps child busy

inc. working out personal conflicts

inc. artistic skills

k. Burn off energy

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

45 How does your child play?

Object play
Constructive play
Social play
Pretend/symbolic play
Socio dramatic play
Physical play
Indoor games
Outdoor games
Electronic games
Arts and crafts

Playing with things
Building things
Kisses & Hugs)

Social play with others
Large motor activity
Inc. Board games

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

46 Do you think that his/her play differs from the play of the children of the same age?

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

47 Does he like to play on his own?

Yes
No
Sometimes
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

48 About how long will he play by himself without wanting your attention?

(indicate the time in minutes)

30 minutes

Question not asked
Question was not answered
Misunderstood the question
I don't know

49 **Do you think it is good that he plays alone ?**

Yes	X
No	
Sometimes	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

50 **Is there any sort of play you don't allow? For instance do you allow him/her to make a lot of noise in the house?**

Yes	X
No	
Sometimes	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

51 **Why or why not?**

Unsafe	
Inconvenient	
Value related	X
Aesthetic reasons	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

52 **Do you think that all children are basically alike or are they different?**

Alike	
Different	X
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

53 **In what ways?**

Physical / appearance	
Behavior	
Personality	X
Developmental	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

54 **Do you think all children should be raised in the same ways?**

Yes	I
No	I
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

55 **Why?** Depends on child's age
depends on the child's personality
up to them if family raises.

Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

56 **Do you believe there are any differences between boy babies and girl babies?**

Yes	I
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

57 **What are they?**

Physical / appearance	
Behavior	I
Personality	I
Developmental	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

Was asked

58 **Do you think that boys and girls might need to be raised differently?**

Yes	
No	
After a certain age	I
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

59 **How and why?**

Boys should be taught to respect girls.

Question not asked
Question was not answered
Misunderstood the question
I don't know

60 **If your boy (girl) was a girl (boy) how would you raise her (him)?**

a Exactly same
b Basically same but different technique
c Basically different
d Other
e Question not asked
f Question was not answered
g Misunderstood the question
h I don't know

61 **Why?**

Question not asked
Question was not answered
Misunderstood the question
I don't know

62 **If a child does not walk, talk or is not toilet trained within the same year as most children, what would you think or do about this?**

Considers normal and do nothing
Thinks something is wrong but do nothing
Go to a specialist
Push/Force the child
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

63 **What might be some of the reasons why a child does not do these things at the same time as other children?**

Genetic reasons
Physical problem with child
Because children develop at different times
Parents' fault
Environmental influences
Other
Question not asked
Question was not answered

Misunderstood the question
I don't know

64 **For one -year olds : Did your child crawl and stand within the same month as other children? When did your child crawl and stand?**

For two - year olds : Did your child walk and talk within the same month as other children? When did your child walk and talk?

For three -year olds: Was your child toilet trained within the same year as other children? When did your child toilet train?

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

months

65 **If you had more money, would you raise your child differently?**

Yes
No
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

66 **If so, how?**

Enhance/change:

a Family structure/composition
b Social env. outside the home
c Physical environment
d Health/ nutrition/ food
e Additional childcare

f Other
g Question not asked
h Question was not answered
i Misunderstood the question
j I don't know

67 **If you had no space limitations, how would you arrange the spaceof your home for the benefit of your child?**

Same way/ no change
Separate the sexes (bedrooms)
Separate room for child
Play room

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

68 **There are different ideas about what is ideal for the care of a child of _____'s (child) age. Some of these ideas are:**
It's better for one parent to be at home
It's better for both parents to work
It's good for a grandmother to be involved
Day-care centers are important

Do you think that there is an ideal arrangement for how your child is cared for throughout the day? What is it?

Best arrangement:
One parent at home | 1
Two parents at home
Grandparents involved
Day care
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

69 **How do you feel about taking care of _____?**

a Love it
b Don't like it
c Conflicted because of career
d Conflicted because not enough time for oneself
e Causes emotional stress | 1
f Social life suffers
g Tension within family
h Nothing to say

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

70 **What is the best thing about raising a child?**

watch them grow + change. watch them apply what they're learned. play with them + listen when they do these things together.

Question not asked | 1
Question was not answered
Misunderstood the question
I don't know

71 **Did your life change drastically after her/his birth?**

Yes	
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

72 **How?**

No change	
Positive change	
Negative change	I
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

73 **What do you think you have sacrificed after his/her birth? Why or why not? Are there other sacrifices you can think of?**

No sacrifices	
Any number of sacrifices	I
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

74 **What are your personal future plans?**

		Interferes with childcare
No plans		
Career oriented		
Education oriented		
Family oriented	✓	
Other		
Question not asked		
Question was not answered		
Misunderstood the question		
I don't know		

(Check all that apply in the
If the plan interferes with c
activities in any way also ch
the second column

75 **Do you find (your child) good company?**

Yes	
No	
Sometimes (conflicted)	I
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

76 **How do you decide when to feed your child?**
a. Are there exceptions? Why?

b. Do you stick to a regular time schedule?
c. Some people think that children should be fed at the same times every day, others believe that they should be fed whenever they are hungry, or when adults eat. What do you think is best? Why?

answer the two groups

a	Clock based	
b	Child based	X
c	Family routine based	

a	Very strict	
b	Strict with exceptions	
c	Loose	X

Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

77 How do you get your child to go to bed? Can you describe a typical scene?

	yes	no
There is a ritual	X	

check all that are true

if yes:		
Choice/control given to child		
Includes reading	X	
Includes music	X	
Includes story telling		
Includes praying		
Includes hygiene		
Includes TV		
Includes quiet time		
Includes other	X	

78 Is there a regular time?

Yes	X
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

Flexibility in minutes [ ] minutes

79 Are there any exceptions? When?

Rarely	
Sometimes	X
Frequently	
Only on weekends	
Only on special days	
Other	
Question not asked	

Question was not answered
Misunderstood the question
I don't know

80 **What do you think a mother should do when her child cries for no apparent reason?**

Ignore
Explore the reason
Punish
Show attention/affection
Call professional
Use threats
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

eg: call for husband

81 **What do you usually do when ..... (your child) cries for no apparent reason?**

Ignore
Explore the reason
Punish
Show attention/affection
Call professional
Use threats
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

Tell, Rém le le quiet

82 **Do you think that your husband thinks the same way you do on this issue?**

Yes
No
Does not apply
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

83 **If different: Dow does he think?**

a Less sensitive
b More sensitive

a Less strict
b More strict

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

84 **How do you punish her/him when s/he is naughty?**

No punishment	
Verbal	
Limit access	|
Physical restriction/removal	
Limit privilages	4
Corporal	|
Distractions	

Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

85 **What do you do if your child is doing something that s/he is not supposed to do?**

No punishment	
Verbal	|
Limit access	
Physical restriction/removal	
Limit privilages	
Corporal	1
Distractions	

Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

86 **If s/he continues, what do you do next?**

No punishment	
Verbal	|
Limit access	
Physical restriction/removal	
Limit privilages	
Corporal	|
Distractions	

Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

87 **Is it helpful to use threats to motivate her/him to obey you?**

Yes	|
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	

I don't know

88 **Do you think that your husband thinks the same way you do on this issue?**

Yes
No
Does not apply
Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

89 **If different: Dow does he think?**

a Less sensitive
b More sensitive

a Less strict
b More strict

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

90 **Does s/he usually obey you fairly quickly or do you have to keep at her to get her to do things?**

Usually very quickly
Sometimes
Usually stubborn

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

91 **Why or why not?**

Mood of the child
Character of the child
Child does not want to do it
Child ignores parent

Other
Question not asked
Question was not answered
Misunderstood the question
I don't know

92 **There are times where all families have problems, Are there any special problems for your family just now?**

No problems

Financial	
Health	
Other child related problem	
Other family related problem	|

Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

93 **Are you a member of any clubs/organizations? Which ones?**

	yes	no
	|	

Sports oriented	
Church/religious	|
Charity volunteer	
Social	
Professional	

	yes	no
Affliated with childcare related organization		

Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

94 **Can you tell me where have you gone for help or for information while raising your child?**

Experts	|
Books	
Magazines	
Family members	|
Friends	|
TV/Media	

Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

95 **Are there any special people you turn to for advice?**

Yes	|
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

96 **Who are they?**

Elders in congregation. Older mothers. Mid wives. Her husband.

write the answer

97 **Are there any books or magazines that you have read on childrearing?**

Yes	1
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

98 **Which ones?**

Bible
Parenting Book
Family Circle

write the answer

99 **Are there any tv programs that you have watched on this subject?**

Yes	1
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

100 **Which ones?**

Special on Mental Health

write the answer

101 **Are there any other places where you get information about how to raise a child?**

Yes	1
No	
Other	
Question not asked	
Question was not answered	
Misunderstood the question	
I don't know	

102 **What are they?**

The Bible

write the answer

103 **Can your child**

	yes	no
One year olds :		
Walk without help?		
Carry objects from one place to another?		
Open cupboards?		
Unscrew a lid of a jar?		
Climb on the sofa?		
Two year olds:		
Open cupboards?		
Unscrew a lid of a jar?		
Open drawers?		
Climb up the stairs?		
Climb down the stairs?		
Three year olds :		
Open doors?		
Open drawers?		
Climb up the stairs without help?		
Climb down the stairs without help?		
Reach over the kitchen counter?		

APPENDIX 13: SAFETY IDEOLOGY CODING SHEET

CODING SHEET FOR THE SAFETY IDEOLOGY (beginning of the second interview)

1. Do you think some children are more likely to have accidents than others?

- [X] yes
- [ ] no
- [ ] Indefinite
- [ ] *don't know*
- [ ] question not asked
- [ ] question not answered

Why?

- [X] Child related
  - [ ] sex
  - [X] personality
  - [ ] activity level
  - [ ] physical characteristics/ability
  - [ ] cognitive ability
  - [ ] activity type
  - [ ] other
- [ ] primary caretaker related
  - [ ] supervision
  - [ ] training
  - [ ] discipline
  - [ ] physical precautions
  - [ ] other
- [ ] related to the social environment
  - [ ] stress in the family
  - [ ] child abuse
  - [ ] effect of siblings
  - [ ] effect of peers
  - [ ] Cultural factors
  - [ ] other
- [ ] Physical environment
  - [ ] physical precautions
  - [ ] physical deterioration/conditions of the home
  - [ ] physical layout
  - [ ] other
- [ ] other

2. Do you think there are differences between boys and girls in terms of the number of accidents they have?

- [ ] yes
- [X] no
- [ ] Indefinite
- [ ] don't know
- [ ] question not asked
- [ ] question not answered

if yes

- [ ] boys have more accidents
- [ ] girls have more accidents

Why?

- [X] Child related
  - [ ] sex
  - [ ] personality
  - [X] activity level
  - [ ] physical characteristics/ability
  - [ ] cognitive ability
  - [ ] activity type
  - [ ] other
- [ ] primary caretaker related
  - [ ] supervision
  - [ ] training
  - [ ] discipline
  - [ ] physical precautions
  - [ ] expectations of accidents
  - [ ] expectations of gender related behavior
  - [ ] other
- [ ] related to the social environment
  - [ ] stress in the family
  - [ ] child abuse
  - [ ] effect of siblings
  - [ ] effect of peers
  - [ ] Cultural factors
  - [ ] other
- [ ] Physical environment
  - [ ] physical precautions
  - [ ] physical deterioration/conditions of the home
  - [ ] physical layout
  - [ ] other
- [ ] other

parent referred to her own children or children of close friends or relatives while answering the question

- [X] yes
- [ ] no

a.Do you think there are differences between boys and girls in terms of the types of accidents they have?

- [ ] yes
- [X] no
- [ ] Indefinite
- [ ] don't know
- [X] question not asked
- [ ] question not answered

if yes

- [ ] boys have more serious accidents
- [ ] girls have more seriousaccidents

Why?

- [ ] Child related
  - [ ] sex
  - [ ] personality
  - [ ] activity level
  - [ ] physical characteristics/ability
  - [ ] cognitive ability
  - [ ] activity type
  - [ ] other

- [ ] primary caretaker related
  - [ ] supervision
  - [ ] training
  - [ ] discipline
  - [ ] physical precautions
  - [ ] expectations of accidents
  - [ ] expectations of gender related behavior
  - [ ] other

- [ ] related to the social environment
  - [ ] stress in the family
  - [ ] child abuse
  - [ ] effect of siblings
  - [ ] effect of peers
  - [ ] Cultural factors
  - [ ] other

- [ ] Physical environment
  - [ ] physical precautions
  - [ ] physical deterioration/conditions of the home
  - [ ] physical layout
  - [ ] other

- [ ] other

parent referred to her own children or children of close friends or relatives while answering the question

- [ ] yes
- [ ] no

3. Why do you think children's accidents happen?

- [X] Child related
  - [ ] sex
  - [ ] personality
  - [X] activity level
  - [ ] physical characteristics/ability
  - [ ] cognitive ability
  - [ ] activity type
  - [ ] other
- [ ] primary caretaker related
  - [ ] supervision
  - [ ] training
  - [ ] discipline
  - [ ] physical precautions
  - [ ] expectations of accidents
  - [ ] expectations of gender related behavior
  - [ ] other
- [ ] *related to the social environment*
  - [ ] stress in the family
  - [ ] child abuse
  - [ ] effect of siblings
  - [ ] effect of peers
  - [ ] Cultural factors
  - [ ] other
- [ ] Physical environment
  - [ ] physical precautions
  - [ ] physical deterioration/conditions of the home
  - [ ] physical layout
  - [ ] other
- [ ] because of fate (they are inevitable)
- [ ] other

4. Of those accidents which occur to children in the home, do you think most of them can be prevented?

- [ ] yes
- [ ] no
- [X] Indefinite Maybe Sometimes
- [ ] don't know
- [ ] question not asked
- [ ] question not answered

How?

- [X] physical precautions
- [/] supervision
- [ ] training/punishing
- [ ] other

5. If you have to leave your child with somebody who has never taken care of her/him before, what kind of general things would you tell them about your child's safety?

- [ ] Space elated instructions
- [ ] Rule oriented instructions
- [X] Instructions related to child's behavior &/or child rules
- [ ] other eg. health related instructions

don't go out

leave phone numbers?

- [ ] yes
- [X] no

6. Do you think in terms of accidents, your child is more or less at risk than most other children

- [ ] more
- [ ] less
- [X] about the same
- [ ] Indefinite
- [ ] don't know
- [ ] question not asked
- [ ] question not answered

Why?

- [ ] Child related
  - [ ] sex
  - [ ] personality
  - [ ] activity level
  - [ ] physical characteristics/ability
  - [ ] cognitive ability
  - [ ] activity type
  - [ ] other
- [X] primary caretaker related
  - [ ] supervision
  - [ ] training
  - [ ] discipline
  - [X] physical precautions
  - [ ] other
- [+] related to the social environment
  - [ ] stress in the family
  - [ ] child abuse
  - [ ] effect of siblings
  - [ ] effect of peers
  - [X] Cultural factors
  - [ ] other

Economic factors

- [ ] Physical environment - intrinsic
  - [ ] physical precautions
  - [ ] physical deterioration/conditions of the home
  - [ ] physical layout
  - [ ] other
- [ ] other

2. Poisoning:

- Why do you think a one-year-old would do this?

- [X] cognitive level of the child
- [ ] lack of supervision
- [ ] lack of training
- [ ] lack of physical precautions
  - [ ] locking cabinets
  - [ ] level (height) of storage

- [X] personality / curiousness of the child (includes comperative answers)
- [ ] developmental stage (generalized answers)
- [ ] similarity to feeding bottle
- [ ] other

- What do you think might happen in this situation?

injury
- [X] poisoning
- [ ] skin irritation — get sick.
- [ ] burns
- [ ] choking
- [ ] eye irritation
- [ ] other

degree of injury
- [ ] none
- [ ] light injury
- [ ] serious injury
- [ ] death
- [ ] other

degree of treatment
- [ ] none
- [ ] first aid at home
- [ ] physician/office visit
- [ ] hospital visit
- [ ] emergency room visit
- [ ] other

type of activity
- [ ] swallow
- [ ] break it
- [X] other — take it

- Do you think the child knows that this is a dangerous thing to do?

- [ ] yes
- [X] no
- [ ] unsure
- [ ] conditional
  - [ ] training
  - [ ] other

- [ ] don't know
- [ ] question not asked
- [ ] question not answered

-How does the child eventually learn that this is dangerous?

- [X] training
- [ ] past experiences
- [ ] cognitive development
- [ ] physical age
- [ ] over time (eg: eventually they learn)
- [ ] other

-Do you think your child would do this?

- [X] yes
- [ ] no
- [ ] maybe
- [ ] don't know
- [ ] question not asked
- [ ] question not answered

because

- [ ] cognitive ability (e.g.: he knows it is dangerous)
- [ ] training
- [ ] supervision
- [ ] physical precautions
- [ ] personality
- [ ] lack of interest in the item (past behavior)
- [ ] rule
- [ ] physical ability
- [ ] other

- Do you think s/he knows s/he is not supposed to do it?

- [ ] yes
- [X] no
- [ ] maybe
- [ ] don't know
- [ ] question not asked
- [ ] question not answered

Why do you think s/he would do this?

- [ ] cognitive level of the child
- [ ] lack of supervision
- [ ] lack of training
- [ ] lack of physical precautions
  - [ ] locking cabinets
  - [ ] level (height) of storage

- [X] personality / curiousness of the child (includes comperative answers)
- [ ] developmental stage (generalized answers)
- [ ] similarity to feeding bottle
- [ ] to test the caretaker
- [ ] other

- What would you do if you saw your child like this?

- [ ] physical punishment
- [ ] verbal punishment
- [ ] remove child from the scene
- [ ] remove object
- [ ] first aid at home
- [ ] visit physician
- [ ] visit hospital
- [X] training
- [ ] other

- What would you do next if it did not work?

- [ ] physical punishment
- [ ] verbal punishment
- [ ] remove child from the scene
- [X] remove object
- [ ] first aid at home
- [ ] visit physician
- [ ] visit hospital
- [ ] training
- [ ] other

- How would you prevent this from happening again?

- [X] physical precaution
  - [X] remove object
  - [ ] lock cabinet
  - [X] make space unaccessible
- [ ] more supervision
- [ ] training
- [ ] punishment
- [ ] other

- How would you teach the child not to do this again?

- [X] saying no strongly
- [X] explaining the consequences
- [ ] punishment
- [ ] other

3. *pulling the sheet*

- Why do you think a one-year-old would do this?

- [ ] cognitive level of the child
- [ ] lack of supervision
- [ ] lack of training
- [ ] lack of physical precautions
  - [ ] *locking cabinets*
  - [ ] level (height) of storage

- [X] personality / curiousness of the child (includes comperative answers)
- [ ] developmental stage (generalized answers)
- [ ] similarity to feeding bottle
- [ ] other

- *What do you think might happen in this situation?*

injury
- [ ] cuts bruises
- [ ] strong shock to head
- [ ] burns
- [ ] other

degree of injury
- [ ] none
- [ ] light injury
- [ ] serious injury
- [ ] death
- [ ] other

degree of treatment
- [ ] *none*
- [ ] first aid at home
- [ ] physician/office visit
- [ ] hospital visit
- [ ] emergency room visit
- [ ] other

type of activity
- [X] *pulls down the items on table*
- [ ] break it
- [ ] other

- Do you think the child knows that this is a dangerous thing to do?

- [ ] yes
- [X] no
- [ ] *unsure*
- [ ] conditional
  - [ ] training
  - [ ] other

- [ ] don't know
- [ ] question not asked
- [ ] question not answered

How does the child eventually learn that this is dangerous?

- [ ] training
- [x] past experiences
- [ ] cognitive development
- [ ] physical age
- [ ] over time (eg: eventually they learn)
- [ ] other

Do you think your child would do this?

- [ ] yes
- [x] no
- [ ] maybe
- [ ] don't know
- [ ] question not asked
- [ ] question not answered

because

- [x] cognitive ability (e.g.: he knows it is dangerous)
- [x] training
- [ ] supervision
- [ ] physical precautions
- [ ] personality
- [ ] lack of interest in the item (past behavior)
- [ ] rule
- [ ] physical ability
- [ ] other

Do you think s/he knows s/he is not supposed to do it?

- [x] yes
- [ ] no
- [ ] maybe
- [ ] don't know
- [ ] question not asked
- [ ] question not answered

NO

Why do you think s/he would do this?

- [x] cognitive level of the child
- [ ] lack of supervision
- [ ] lack of training
- [ ] lack of physical precautions
  - [ ] using a tablecloth
  - [ ] other

- [ ] personality / curiousness of the child (includes comperative answers)
- [ ] developmental stage (generalized answers)
- [ ] similarity to feeding bottle
- [ ] to test the caretaker
- [ ] other

- What would you do if you saw your child like this?

- [ ] physical punishment
- [ ] verbal punishment
- [ ] remove child from the scene
- [ ] remove object
- [ ] first aid at home
- [ ] visit physician
- [ ] visit hospital
- [x] training
- [ ] other

- What would you do next if it did not work?

- [ ] physical punishment
- [ ] verbal punishment
- [ ] remove child from the scene
- [x] remove object
- [ ] first aid at home
- [ ] visit physician
- [ ] visit hospital
- [ ] training
- [ ] other

- How would you prevent this from happening again?

- [x] physical precaution
  - [ ] don't use rablecloth
  - [ ] make space unaccessible
  - [ ] other
- [x] more supervision
- [ ] training
- [ ] punishment
- [ ] other

- How would you teach the child not to do this again?

- [ ] saying no strongly
- [x] explaining the consequences
- [ ] punishment
- [ ] other

APPENDIX 14: SPACE ANALYSIS CODING SHEET

Name
Visit 1
7(1)

time	code		time	code
1	14 1		43	14 3
2	14 1		44	14 3
3	14 1		45	14 3
4	14 1		46	14 3
5	14 1		47	14 2
6	14 1		48	
7	14 3		49	14 3
8	14 3		50	14 2
9	14 3		51	14 3
10	14 3		52	14 3
11	14 3		53	14 3
12	14 3		54	14 3
13	14 3		55	14 3
14	14 3		56	14 3
15	14 3		57	14 3
16	14 3		58	14 3
17	14 3		59	14 3
18	14 3		60	14 3
19	2 12		61	14 3
20	3 12		62	14 3
21	14 1		63	14 2
22	14 3		64	2 12
23	14 3		65	14 3
24	14 3		66	1 12
25	14 3		67	2 12
26	14 3		68	2 12
27	1 12		69	3 12
28	1 12		70	3 12
29	11		71	3 12
30	3 12		72	11
31	7 --	comment	73	11
32	3 12		74	14 1
33	3 12		75	11
34	3 12		76	11
35	3		77	3
36	14 1		78	3 12
37	14 3		79	3 12
38	14 2		80	3 12
39	1		81	3 12
40	14 2		82	3 12
41	14 2		83	3
42	14 2		84	3

SPATIAL CODING

1 PHYSICAL CONTACT : (INCLUDES CARRIED OR HELD).

* THIS CODE SHOULD BE STRICTLLY FOLLOWED. IF THE CHILD IS OFF THE CAMERA AT TIME 'B' AND SEEN TO BE SIMPLY TOUCHING THE MOTHER AT TIME 'C' (2 MIN. AFTER), THEN TIME "B' SHOULD BE CODED AS "WITHIN REACH ". IF HOWEVER THE CHILD IS BEING CARRIED OR HELD IN THE LAP AT TIME "A" AND TIME "C" (2 MIN. AFTER) THEN IT CAN BE INFERRED THAT THE CHILD WAS WITHIN " PHYSICAL CONTACT" AT TIME "B".

2" WITHIN REACH ":
IF THE CHILD COULD BE TOUCHED BY THE MOTHER BY MOVING HER BODY , STANDING UP, LEANING ETC. , BUT WITHOUT MOVING HER FEET THEN THAT IS WITHIN REACH. IF THE CODER HAS ANY DOUBTS ABOUT THIS THEN THEY SHOULD MAKE A GENEROUS INTERPRETATION OF THE CODE.

3. WITHIN VISUAL CONTACT IN THE SAME ROOM

4.WITHIN VISUAL CONTACT IN ANOTHER ROOM.

* *"ANOTHER ROOM"* - REFERS TO ANY SPACE WHICH HAS A DOORWAY ,ARCH OR PARTIAL WALLS (NO MATTER HOW SHORT) SEPARATING IT FROM THE SPACE WHERE THE INTERVIEW IS CURRENTLY TALKING PLACE . IF THE CHILD IS ON THE BARRIER BETWEEN THE TWO ROOMS, THEN FOLLOW THE *"TENNIS RULE"* I.E. THE CHILD IS WITHIN THE SAME ROOM (#3).

**IF THE GATE IS OPEN (OF THE CRIB ETC.), AND THE CHILD IS FREE TO MOVE IN AND OUT, THEN CODE AS #3 OR #4, DEPENDING ON WHICH ROOM THE CRIB / COT IS IN.

5. IN A CRIB OR COT ;(PLAYPEN) BUT ACTIVE.
6. CRIB, COT, OR BED: (SLEEPING).
7. WITHIN HOUSE
8. WITH BABYSITTER OR OTHER ADULT IN ANOTHER ROOM:
9. GARDEN OR YARD:
(SAME CODING AS #3) IF THE CHILD REMAINS IN THE HOUSE WHILE MOTHER IS IN THE GARDEN, THEN CODE AS #7 AND

COMMENT.

10. NOT AT HOME:

11. UNKNOWN:IF A CHILD IS NOT WITHIN VIEW THEIR LOCATION SHOULD BE RECORDED AS "UNKNOWN" UNLESS ONE OF THE FOLLOWING CRITERIA ARE MET:

A. SOUNDS ARE EMITTED WHICH INDICATES THE CHILD HAS BEEN CONTINUOUSLY ENGAGED IN THE SAME ACTIVITY/LOCATON AS A PREVIOUS TIME WHEN THE CHILD WAS IN VIEW.

B. THE CHILD IS RECORDED BY THE CAMERA TO BE IN THE SAME POSITION AT TIME "C" AS AT TIME "A" (2 MIN. AFTER). IT CAN BE INFERRED THAT THE CHILD WAS AT THIS SAME POSITION AT TIME "B" UNLESS THEIR WAS SOME RELIABLE INFORMATION TO THE CONTRARY (E.G. CHILD SAYING SO, FOOTSTEPS' ,CHILD CROSSES THE CORNER FIELD ETC.).

12 OTHER ADULT IS PRESENT

13. SIBLING IN THE SAME ROOM

14.ANOTHER ADULT IS PRIMARY CARETAKER

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