SOCIAL SUPPORT AND PARENTING COGNITIONS

IN ADOLESCENT MOTHERS

by

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Abstract

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Abstract

The purpose of this study is to explore the contribution of the adolescent mothers' support system to her parenting cognitions. Fifty-nine low-income, urban, ethnic minority adolescent mothers were interviewed using the Inventory of Social Contacts (Richardson, 1984) and the Adult Adolescent Parenting Inventory (Bavolek, 1984). In addition, behavior rating scales were submitted by school staff to measure students' psychosocial adjustment. All participants were enrolled in a comprehensive social services program at their schools including on-site day care for their babies and counseling from a social worker. The study found a link between overall family interference and inappropriate or maladaptive parenting cognitions. Support and interference from other network sectors were not found to be related to parenting cognitions. Analyses of the interviews indicate that professionals and friends provided more childcare and emotional support than family and partners did, while family and partners provided more material support. Family and partners were also more likely to create stress in the areas of childrearing and emotional stress. Comparisons of Hispanic and African-American respondents revealed no differences on the parenting cognitions measure. Hispanic participants reported having

smaller support networks and less support from peers. For African-Americans, support from family tended to coincide with family interference. Limitations of the study are discussed including psychometric problems with the parenting cognitions measure and the under-representation of teenage mothers with low levels of professional support. Implications for school psychologists include the identification of at-risk teenage mothers and the importance of interventions to reduce family interference and to encourage extra-family support.

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Social Support and Parenting Cognitions In Adolescent Mothers

Chapter 1:Introduction

Overview of the study

Decades of research have found adolescent childbearing to be a risk factor for poor economic and developmental outcomes for teenage parents and their children. However, there is great individual variability in the functioning of adolescent-parent families, and much overlap with the functioning of the general population of adult parents. Recently, researchers have studied adolescent parenting in order to identify sources of strength and resilience as well as risk. One important factor in the parenting process is the support system of the adolescent mother, which has been identified as a significant mediator of stress in parenting in general and of parenting skills. The purpose of this study is to understand how the support system influences parenting cognitions, that is, the beliefs, attitudes, and values that parents hold toward children and childrearing. Parenting cognitions have been linked to parenting as well as child outcomes in adolescent mothers, but little attention has been paid to the ecological determinants of these cognitions. This study examined how various types and sources of support contribute to the formation of more appropriate parenting cognitions, as well as how they may prove to be a source of interference. In addition, this study examined ethnic differences between African-Americans and Hispanics in terms of support systems as well as parenting cognitions.

Fifty-nine minority urban adolescent mothers participated in this study. All were students at New York City public schools and were enrolled in the Living for Young Families through Education (LYFE) program, through which they received on-site day care and counseling by a social worker. Parenting cognitions were measured using the Adult-Adolescent Parenting Inventory (Bavolek, 1984) a pencil-and-paper Likert type scale, and support systems were measured using the Inventory of Social Contacts

(Richardson, 1984). Both were administered in a one-to-one interview conducted at the school. In addition, information about each student's psychosocial functioning was measured using the Teacher Report Form (Achenbach, 1991), a problem behavior rating scale. This was done to control for the effect of psychological maladjustment and its relationship to both social support and parenting cognitions. It was hypothesized that even when controlling for the effects of age, ethnicity, and underlying psychosocial adjustment, supportive social relationships would predict more appropriate parenting cognitions, and that high degrees of conflict and interference in social relationships would predict problematic attitudes toward parenting.

The results supported the hypothesis that family conflict contributes significantly to inappropriate parenting beliefs in adolescent mothers. However, other hypotheses about the contribution of the support network to the formation of childrearing attitudes were not supported by the data. Neither the percentage of supportive people in one's network nor the percentage of interfering people in one's network was found to be related to parenting cognitions. Emotional, childcare, and material support and interferences were measured and network members were categorized as family, friends, partners, or professionals. However, no type or source of support emerged as significant predictors of parenting cognitions, even when the control variables (age, ethnicity, and problem behavior) were removed from the equation.

There is much to be learned from the responses to the social support measure itself about the structure and function of the adolescent mother's support network. Analyses of these results revealed that different network members vary in the type of support or conflict they generate. Friends and professionals tended to provide the most emotional support, and professionals provided the highest levels of childrearing support, while family and partners provided the most material assistance. However, family and partners were most likely to generate emotional and childrearing stress. The patterns of intercorrelations between support and interference variables suggest that the support provided by family and partners, tends to be comprehensive; when these networks were supportive, they

provided high levels of all types of support. Overall, the results imply that adolescent mothers tend to rely on all their network sectors to fill their emotional, childcare, and material needs, but that the support of those outside their immediate family is crucial because it tends to come with lower levels of stress.

Differences between ethnic groups were also found in the patterns of social support and interference. In this sample, African-American teenage mothers were found to have more extensive support networks and to enjoy more support, especially from friends. It was also found that for African-Americans, family support tended to come at the price of higher conflict, while other networks provided support with "no strings attached." However, for Hispanic participants, it was support from friends and not family that tended to co-occur with higher levels of stress. While nationality and length of residence in the United States were not systematically measured in this study, it is possible that immigration experiences may have weakened the peer support systems of the Hispanic participants, and made the experience of family support less conflicted.

One explanation for the lack of significant results in exploring the hypothesized relationship between social support and parenting cognitions in adolescent mothers is related to the AAPI. It was suggested that problems with the reliability and validity of the parenting cognitions measure may have decreased the power of the study. Future research should use other parenting cognitions measures as well as measures of parenting skills as further validation of attitude surveys.

The implications for service provision to adolescent mothers confirm the importance of assessing conflict within the support network, especially family interference, in addition to assessing support, in determining risk status for poor parenting. Moreover, professionals who can provide interventions aimed at reducing conflict with family members have the potential to reduce this risk. Results of this study also underscore the significance of school staff and others outside the immediate family as sources of support for teenage parents. For this sample, who were all attending school and receiving a package of social services, school attendance afforded them access to high levels of

childcare and emotional support with relatively lower levels of stress. Staying in school, then, is crucial not only for the adolescent mother's future career trajectory but for her current emotional well-being and her role as a parent. Future research comparing recipients of services such as LYFE with other adolescent mothers may further illuminate the importance of these programs in strengthening the personal and parenting resources of young mothers in high school.

Chapter 2: Review of the Literature

History and demographics of adolescent parenthood

Toward the end of the twentieth century, the United States led the Western world in its teenage pregnancy and fertility rates, according to one study analyzing fertility among 15- to 19- year-olds in five Western countries. (Jones, Forrest, Henshaw, Silverman & Torres, 1988). In 1999, more than 485,000 infants were born to adolescent mothers, representing approximately 12% of all children born in the USA (Ventura, Martin, Curtin, Menacker & Hamilton, 2001). These young mothers are overwhelmingly poor and low income, and include disproportionate numbers of ethnic minority women (Alan Guttmacher Institute, 1994; Mackay, Fingerhut & Duran, 2000). For example, the birth rate for non-Hispanic African-American teenagers in 1999 was more than twice that of non-Hispanic Whites (83.7 and 34.0 live births per 1000 women, respectively), and the birth rate for Hispanic adolescents (93.4 live births per 1,000 women) was nearly three times that of non-Hispanic Whites (Ventura et al., 2001). While adolescent parenthood is actually less frequent now than it was in post-World War II America, the cost to individual and society has increased (Vinovskis, 1981). The majority of the infants of adolescent mothers are born out of wedlock , as marriage rates continue to plummet, particularly among minority adolescents (Alan Guttmacher Institute, 1994). While the birth rate among adolescents has actually dropped significantly over the past 30 years (Ventura et al., 2001), teenage parents are much more likely to raise their own children than in the past. In the 1970's, 90% of babies born to unwed mothers were placed for adoption, while in the 1980's, 90% or more of these children were kept by the mother (Alan Guttmacher Institute, 1994; Hayes, 1987; Vinovskis, 1981).

Life trajectories of adolescent mothers and their children

The poor outcomes of teenage pregnancy and parenthood for both mothers and children have been extensively researched. (Brooks-Gunn & Chase-Lansdale, 1995; Brooks-Gunn & Furstenberg, 1986; Phipps-Yonas, 1981; Whitman, Borkowski,

Schellenbach, & Nath, 1987). Teenage pregnancy and parenthood generally occur within the context of poverty, reduced educational opportunities, and continued dependence on government support (Brooks-Gunn & Chase-Lansdale, 1995). After a comprehensive review of the issues involved in teenage pregnancy, a panel of the National Research Council came to the following conclusion:

> Women who become parents as teenagers are at greater risk of social and economic disadvantage throughout their lives than those who delay childbearing until their twenties. They are less likely to complete their education, to be employed, to earn high wages, and to be happily married; and they are more likely to have larger families and to receive welfare (Hayes, 1987, p. 138).

More recent research has supported these conclusions. In one study (Klepinger, Lundberg & Plotnick, 1995) which analyzed the interviews of more than 2700 women, having a child before age 20 significantly reduced the level of attained education, with consistent results found among whites, African-Americans, and Hispanics. This was found after controlling for an extensive set of background variables, such as parents' educational attainments and availability of abortion and family planning services in the community, challenging the theory that other variables in the disadvantaged backgrounds of adolescent mothers put them at risk for poorer educational outcomes. Furthermore, the Alan Guttmacher Institute's review (1994) of demographic trends reaches similar conclusions regarding educational attainment and poverty. That review concludes that while given their economic and educational deficits, 16% of teenage mothers would have been poor in their 20's and 30's even had they not borne children, adolescent motherhood compounds their initial disadvantage. However, long-term studies, such as the Baltimore study done by Furstenberg, Brooks-Gunn and Morgan (1987), reveal wide variability in the life course of women who became mothers as adolescents. At the 17-year follow-up of 300 low-income African-American teenage mothers, about one-third had obtained some college education, and more than two thirds were employed. Despite these educational and occupational recoveries, marital histories in this group tended to be highly unstable, a

finding which is a consistent characteristic of early child bearers, regardless of ethnicity (Alan Guttmacher Institute, 1994; Hayes, 1987).

Children of adolescent parents have also been shown to be at risk for poor developmental outcomes, predicted in part by the combination of poor socioeconomic circumstances which often accompany early childbearing (Baldwin & Cain, 1980; Brooks-Gunn & Furstenberg, 1986, Hayes, 1987; Lamb & Elster, 1990). Reviewers have found that in samples with good prenatal care, maternal age has no effect on neonatal health, with the possible exception of very young mothers (under age 15) (Baldwin & Cain, 1980; Brooks-Gunn & Furstenberg, 1986; Phipps-Yonas, 1980; Schellenbach, Whitman, & Borkowski, 1992). However, small but consistent differences in intellectual and social-emotional development emerge in infancy, toddlerhood and childhood (Brooks-Gunn & Furstenberg, 1986) and these differences are compounded by the adverse psychosocial factors associated with adolescent pregnancy (Lamb & Elster, 1990). Brooks-Gunn and Furstenberg's (1986) review of the literature regarding child outcomes of teenage pregnancy may be summarized as follows: preliminary studies suggest that infants of adolescent parents may have distinct difficult temperamental characteristics (i.e., being more active and less adaptable), possibly due to differences in caregiving. In the preschool years, differences in IQ emerge and rates of mental retardation are more common among children of adolescent mothers, particularly for boys. Differences in IQ and achievement status continue to be found in studies involving school-age children, although they tend to be mediated by factors such as maternal education, family size, and single-parent households, factors which commonly accompany teenage parenthood. The direct effect of age at first childbearing, after controlling for these factors, is often found to be significant, but small. Behavioral difficulties are reported more frequently for school-age children of teen parents, and these adjustment difficulties persist into adolescence. Finally, children of adolescent parents are more likely to become adolescent parents themselves. (Alan Guttmacher Institute, 1994; Furstenberg, Levine, & Brooks-Gunn, 1990; Hayes, 1987).

In many studies, differences are often mediated by socio-demographic factors, although a unique contribution of maternal age is a consistent finding.

Parenting Skills of Adolescent Mothers

Empirical findings.

Poor parenting among adolescent mothers has been posited as one factor contributing to these developmental outcomes (Brooks-Gunn & Chase-Lansdale, 1995; Whitman et al., 1987). Indeed, many empirical studies comparing adult and adolescent parenting skills suggest that adolescent parents may tend to be less sensitive and more harsh in their interactions with their children (Schellenbach et al., 1992) and may provide less verbal and intellectual stimulation (Levine, Garcia Coll, & Oh, 1985; Stevens & Duffield, 1986). However, much of this research is riddled by methodological difficulties such as small sample size, failure to control for confounding demographic factors, and focusing mostly on first-born infants (Luster & Mittelstaedt, 1993). Furthermore, as Brooks-Gunn & Chase-Lansdale (1995) point out, even when obvious demographic variables are controlled for, and they often aren't, comparisons between adult and adolescent parents are confounded by differences in marital status. Not enough research has been done, according to these researchers, comparing older and younger single mothers matched for socioeconomic factors. Another confounding variable is verbal ability, which has been frequently overlooked in these studies. Furthermore, these reviewers caution that many of the parenting outcomes that have been studied, such as disciplinary style, are derived from research involving white middle-class norms, and may be inappropriate for the adolescent parenting community, which is overwhelmingly of minority and lower socioeconomic status. For example, "authoritarian" parenting, which is considered by Baumrind (1973) to be maladaptive, may actually be more appropriately labeled "directive" in lower-income groups and may be associated with better parenting in this instance. In fact, a study by Camp, Burgess, Morgan and Malpiede (1984) found that authoritarian attitudes in adolescent mothers predicted their infants' developmental scores

at 12 months, although a subsequent study (Camp, 1996) found that the persistence of authoritarian attitudes into school-age was correlated with lower child IQ's.

These qualifications notwithstanding, consistent differences between adult and adolescent parents have been found. The following studies represent a sampling of recent research into adolescent parenting. Most of the research cited included some control for background demographics.

In 1980, Jones, Green & Krauss, while studying another aspect of mother-infant relationships, made the unexpected finding that mothers ages 19-23 demonstrated more maternal responsiveness to their newborn infants than did mothers ages 17-18. Further analyses revealed that these differences were not attributable to race or marital status, and all subjects were from a low SES background. Unfortunately, the samples used were quite small (17 mothers under age 19) and the adult sample contained some adolescent (19-year-old) mothers.

McAnarney, Lawrence, Aten and Iker (1984) challenged Jones' et al.'s (1980) findings with their study of adolescent, low SES mothers. In their sample, age was not predictive of observed mother-infant interactions during the immediate postpartum period. However, only a very limited sample of interaction was used in this study, and the results do not address the issue of teenage versus adult mothering behaviors.

Brooks-Gunn and Chase-Lansdale (1995) report several studies finding consistently that adolescent mothers are less verbally responsive to their infants' cues, perceive their infants to be more difficult, and have unrealistic expectations for their children's development. Other research cited in this review has found that adolescents have difficulties in affective regulation which may in turn affect parent-child interactions. As these researchers point out, most of the research along these lines has not looked at parent-child interactions beyond the toddlerhood stage, and does not explore the possibility that adolescent parents become more adequate parents over time.

Levine et al. (1985) compared mother-infant interactions in a group of low- to middle-class adolescent and non-adolescent mothers and their 8-month infants.

Differences were seen when the mothers were directed to teach a particular task to their infant; adult mothers tended to "walk through" each step of the task with their child, while teenage mothers tended to hand the object to their infant and say "Here, you do it". There were no significant differences between the groups in their tendency to verbalize during freeplay interactions, although the adult mothers were found to show significantly more positive affect toward their children across both situations. The study also found that the infants of the adult mothers tended to vocalize more, which supports the notion that lower IQ's among children of teenage mothers may be mediated by reduced verbal stimulation in their early environment. Demographic differences between the groups, such as marital status, were documented in this study, but not entered into the statistical analysis of group differences.

Recently, researchers have attempted to be more rigorous in their control of confounding demographic factors (Brooks-Gunn and Chase-Lansdale, 1995). An example of this line of research is the 1986 study of Stevens and Duffield. Using a large sample of low-income African-American women and their infants, they found a significant relationship between mother's age and maternal behaviors (i.e., verbal responsivity, punitiveness, and instrumental support for intellectual development). In a hierarchical regression analysis, maternal age accounted for unique, significant variance independent of maternal education, albeit the effect was small. Despite these differences in maternal behaviors, mother's age was not associated with differences in babies' mental development; nor were maternal behaviors predictive of infant outcome. The authors hypothesize that because many of the adolescent mothers were co-residing with their own mothers, who were directly involved in childcare and provision of a more appropriate home environment, the grandmothers' care provided a buffer for the poor parenting of the mothers.

Using a large sample of mostly white, middle-class mothers ages 16-38, Ragozin, Basham, Crnic, Greenberg and Robinson (1982) also found a continuous effect of age on maternal behaviors. Both verbal interaction and affect with 4-month old infants were

more adaptive as maternal age increased. However, the results were limited to subjects with full-term infants and not those with premature infants. The age effect also interacted with parity, so that for multiparous mothers, the age effect was no longer seen.

One recent well-designed study yielded mixed results. Sommer et al. (1993) looked at differences between adult and adolescent mothers in cognitive readiness for parenting, parenting stress, and parent-child interactions. To measure parenting behaviors, two observational measures were used: The Maternal Interaction Scale, which was a more global measure of parenting style such as positiveness and flexibility, and the Maternal Behavior Assessment, a molecular measure of discrete behaviors such as gaze aversion and maternal prompts. The findings were inconsistent. The more global measure found between-group differences on eight of the ten facets of appropriate parenting, even when demographic covariates were controlled for, while the molecular measure of mother-child interactions found no differences, even without use of covariates. Furthermore, in a series of hierarchical regressions, much of the variance in the more global Maternal Interactional Scale was found to be attributable to demographics.

Hann, Osofsky, Barnard, and Leonard (1994) found effects of maternal age on parenting that were independent of socioeconomic risk status. They compared adolescent (high-risk), adult high-social-risk and adult low-social-risk in their interactions with their 6-month infants in a toy play situation. They found that the teenage mothers showed more negative affect and engaged in more dyadically misregulated affect exchanges than did either of the other groups.

Unlike most other researchers, Stevenson, Barrat, and Roach (1995) compared adolescent and adult single mothers, and evaluated mothering behaviors as they changed over time. They found that at both 4- and 12-months, adolescent parenting was less adaptive, but was qualitatively different in these points in time. At 4 months, adolescent mothers interacted less with their infants, vocalized less, smiled less, and offered fewer toys to their infants. At 12 months, the adolescent mothers were interacting more often with their infants, but their interactions were significantly less appropriate than the adult

mothers and they were less likely to respond vocally to their infants' vocalizations. While these researchers did control for background variables through matching, the study suffers from a small sample size at the 12-month assessment.

However, some research has not found significant differences between adult and adolescent parenting. Sandler, Vietze, and O'Connor studied a large sample of primarily low-income mothers. In this study, no significant differences were found between adults and adolescent maternal behaviors in observed mother-infant interactions. However, it should be noted that all subjects were receiving a comprehensive medical intervention which may have affected the results. Similarly, Schilmoeller and Baranowski (1985) report that in their sample of adult and adolescent mothers, no significant differences were found between teenage and older mothers in observed interactions. These included caregiving, physical, verbal, and social behavior. However, the samples, comprised of 11 adolescent and 15 adult mothers, were small.

In summary, then, the bulk of available research indicates that adolescent parenting of infants and toddlers is different from adult parenting (Brooks-Gunn & Chase-Lansdale, 1995; Schellenbach et al., 1992). These differences include a lack of verbal interaction, lack of emotional responsiveness, and inappropriate interaction. Furthermore, some, but not all of these differences appear to be due to socioeconomic circumstances. Although more recent studies have incorporated more rigorous control for background variables, many continue to have small sample sizes and to use non-standardized outcome measures, making comparisons across studies difficult.

However, there is clearly some variability in outcomes; not all adolescent mothers make poor parents. Identifying risk and resilience factors of importance to adolescent mothers has been addressed in the literature as well. To explore the antecedents of more optimal adolescent parenting, we must turn to general theories of parenting.

Ecological models of parenting processes

According to Belsky's ecological model of parenting (1984), parenting behavior is multiply determined by three major domains of influences: personal psychological

resources of the parents (such as cognitive maturity and mental health status), characteristics of the child (such as temperament) and contextual sources of stress and support (such as marital relations and social network). Of these, personal psychological resources are most crucial, and according to his theory, if these resources are strong, the parenting system can still function adequately even if the other two domains are weak. Strong personal resources can in fact help marshal social support in situations of stress, making it an exceptionally important factor. On the other hand, child characteristics are the weakest link in the system; parenting systems that depend only on the child's inherent strengths but are lacking in personal resources or external supports are especially vulnerable.

Investigations into the antecedents of adolescent parenting, in addition to being valuable for their own sake, are ideal testing grounds for ecologically-oriented theories such as Belsky's (Lamb & Elster, 1990). Teenage mothers, because of their developmental status, have presumably fewer personal resources to devote to the task of parenting, less-established support systems, and greater stress. Expanding on Belsky's model, Whitman et al. (1987) proposed a testable model of teenage parenting, including direct and indirect influences on child development. In this model, the quality of teenage parenting is affected by characteristics of the child (e.g. temperament), characteristics of the mother (e.g. psychosocial adjustment, learning ability, health) and the quality of the adolescent's social support system. Direct and indirect pathways can be seen which culminate in child development outcomes. The Whitman et al. (1987) model is more specifically geared toward adolescent parenting than the Belsky (1984) model in its expansion of the concept of "personal resources" to include variables such as maternal health and nutritional status, cognitive readiness for parenting, and learning ability which may be relatively deficient in the young mother. Furthermore, in this model, social support plays a more pivotal and influential role than in the adult model (Nath, Borkowski, Whitman, & Schellenbach, 1991). The adolescent's support system affects parenting directly and indirectly, through its effects on cognitive readiness and on personality and

social adjustment. It also affects child development directly through the provision of childcare. While some criticisms of the model have been put forward in terms of the specificity of variables and provisions for developmental change, it has been well-received (Aber, 1992). The most comprehensive process model of adolescent parenting to date, it has served as the springboard for numerous studies over the past ten years, which have mostly supported its validity (e.g. Dukewich, Borkowski, & Whitman, 1996; C.L. Miller, Miceli, Whitman, & Borkowski, 1996; Mylod, Whitman, & Borkowski, 1997; Sommer et al., 1993).

According to Whitman et al.'s model, one of the indirect pathways through which social support affects parenting is through a construct they call "cognitive readiness for parenting". Included in this variable are expectations and knowledge of normal child development, general cognitive problem-solving ability, knowledge of specific parenting skills, and attitudes toward parenting (Schellenbach et al., 1992; Whitman et al., 1987); in short, cognitions that are relevant to promoting parenting function. As the research which will be reviewed in this paper shows, both social support and cognitive readiness have been amply demonstrated to have an effect on the quality of adolescent parenting. Whitman and colleagues (Nath et al., 1991; Whitman et al. 1987) hypothesize that there is a pathway connecting the two, through the formal and informal education that adolescent mothers receive from their support system, which includes both direct instruction and modeling. However, this relationship between variables has received scant attention in the research, as will be discussed later. Exploration of the relationship between the adolescent mother's support system and her parenting cognitions is important for several reasons. First, it helps in the identification of those at risk for poor parenting. Second, it guides the design of future interventions which may aim to improve social support networks rather than address cognitive deficits directly. Finally, it can confirm the importance of professional support to the parenting skills of young mothers.

Parenting Cognitions

Definitions.

Parenting cognitions, which are referred to by the Whitman et al. model as "cognitive readiness for parenting", is a complex construct which requires farther definition. Various researchers define the cognitions which determine parenting behavior differently, and terms such as "attitudes" "beliefs" "expectancies" and "knowledge" are commonly found in the literature, with little universal acceptance of what these terms refer to and a multitude of instruments with which to measure these constructs (Holden & Edwards, 1989; Sigel, 1985). Holden and Edwards (1989), in their review of more than 80 current child-rearing attitude scales, compiled a list of domains in parent cognitions, which include attitudes, behavioral intentions, beliefs, self-perceptions, and values. "Attitudes" refer to "an affective evaluation of the supposed facts about an object or situation", such as "A good mother should shelter her child from life's little difficulties" (p. 37). "Behavioral intentions" refers to the 'willingness to act in harmony with one's beliefs". "Beliefs" are further divided into descriptive beliefs, such as developmental expectations and instrumental beliefs, or ideas about how to achieve developmental goals. (Sigel, 1985, refers to these two sets of beliefs as the "what" and "how" of development, respectively). "Self-perceptions" tap parents' feelings about parenting and their own parenting self-efficacy. Finally, "Values" are similar to attitudes but somewhat broader and reflect "abstract goals or a coherent set of attitudes" (p. 37) such as "It takes a village to raise a child". This classification system is difficult to apply directly to the parenting belief literature because, as the authors point out, most researchers do not distinguish between the domains and the preponderance of scale items measure only beliefs. However, these definitions of terms are important to keep in mind because they tap different areas of cognition and can be expected to influence behavior differentially (Holden & Edwards, 1989). Indeed, as will be shown later, such differences have been found in Stevens (1984b), for example. It is interesting to note that expectations of developmental milestones are included under the category of "belief" rather than

"knowledge", which is consistent with Sigel's (1985) view that both knowledge and beliefs are "constructions of reality" in the realm of parenting cognitions and that there is no real distinction between the two. In practical terms, it seems more appropriate to label parents' perceptions of when children should be toilet-trained or expected to perform household chores with the more relativistic term "beliefs", when there is a body of research demonstrating that the attainment of such milestones vary from one culture to another, as do the parenting attitudes and values surrounding those developmental expectations (Harkness & Super, 1992; Lightfoot & Valsiner, 1992).

In their model, cognitive readiness for parenting is posited by Whitman and colleagues as an important predictor of parenting outcomes in teenage parenthood (C.L. Miller et al., 1996; Sommer et al., 1993; Whitman et al., 1987.) They define this construct as consisting of three components, which are measured using three different subscales: "Attitudes" (i.e., authoritarianism, nurturance, rejection, independence and role-reversal expectation), "Knowledge" (e.g., knowing at what age most infants can walk independently), and "Style" (i.e., empathic awareness and use of physical punishment). This conceptualization is theoretically based and research using their measure of the construct is fairly new but growing. In their multidimensional model of adolescent parenting, Whitman and colleagues (1987) hypothesize that cognitive readiness indirectly influences child development by directly affecting parenting behaviors.

The relationship between parenting cognitions and age.

Studies have consistently found that teenage mothers generally possess less appropriate expectations and beliefs about normal child development than adult mothers do. For example, Vukelich and Kliman (1985) found that in a small sample of teenage mothers (n=19), these subjects tended to have poor knowledge of normal child development relative to national norms and to a comparison group of adult mothers. Their errors tended to underestimate the age at which developmental milestones emerge, a finding which the authors hypothesize may put these young parents at higher risk for child abuse. In examining the sources of information about child development, the study found

that teenagers tend to rely mostly on their informal support network (family, friends, and neighbors) and are less likely than adult mothers to turn to books, magazines, and formal parent education programs. However, other studies have found that teen mothers tend to underestimate the rate of infant development, that is, they expected infants to reach developmental milestones later than they actually do (Becker, 1987; S.H. Miller, 1980) which puts these young mothers at risk for providing a less stimulating environment for their infants. Similarly, Roosa and Vaughan (1984) found that in comparing older and teenage mothers of preschool children, the younger mothers had significantly less appropriate expectations of child development and evidenced more negative parenting attitudes in comparison to the adult mothers. In this study, parenting attitudes were studied using the Parent Attitude Survey, which contains some elements of the "style" and "attitude" aspects of the Whitman et al. model as well as some aspects of parenting stress. Although SES was not controlled for in this study, the authors conclude that it was probably a significant mediating factor, based on past research. While this study contributes to the general picture of adolescent mothers as ill-prepared both cognitively and emotionally for the challenge of parenthood (Phipps-Yonas, 1981), the authors point out that there was significant overlap between the groups on the parenting measures and suggest that future research focus on better understanding of the "competent teenage mother".

Sommer and colleagues (1993) studied a large sample of pregnant adolescents and comparison groups of nonpregnant adolescents and pregnant adults. For this study, cognitive readiness for parenting was measured by three distinct scales which measure the three components of the construct: knowledge, style, and attitudes. They found that pregnant adolescents were significantly lower than pregnant adults on measures of cognitive readiness, measured both pre- and post-natally, but did not differ significantly from their non-pregnant peers on measures of knowledge of child development and parenting skills. They did, however, have significantly more positive attitudes toward parenting than their non-pregnant peers. The same differences in cognitive readiness were

found when the adult and adolescent mothers were retested at 6 months postpartum. However, no difference was found between the groups in their test-retest gain scores in cognitive readiness pre- vs. post-natally; in other words, the adult mothers did not benefit from the experience of motherhood more than their adolescent counterparts did. Group differences on the cognitive measure were attenuated, however, when the demographic variables of IQ, ethnicity, SES, and educational level were controlled for, suggesting that demographic variables contribute significantly to age-related differences in cognitive readiness.

However, in a study using only low-SES African-American mothers, Field, Windmayer, Stringer and Ignatoff (1980) found that teenage mothers (at birth and 4-months post-partum) were significantly less knowledgeable about infant development than adult mothers were, and they held significantly more punitive childrearing attitudes (both variables measured by the Maternal Developmental Expectations and Childrearing Attitudes Survey, developed by the first author). This finding suggests that teenage childbearing poses a risk factor for poor cognitive preparation for parenthood, independent of the effect of SES. A promising finding of this study is that parenting knowledge and expectations were found to be significantly improved in a group of teenage mothers of premature infants after participating in a home-based parenting training program, with post-test scores reaching the adult control-group level. Other researchers have reported improvements in knowledge of child development and parenting practices in teenagers after exposure to an educational program (Showers, 1991), suggesting that the lack of parenting knowledge characteristic of adolescent parents is remediable with appropriate programming.

S.H. Miller's (1980) study examined the cognitive readiness of very young (under age 16) adolescent mothers. In this multi-site sample, 90% of the respondents felt they needed some information regarding childcare before giving birth. Some 70% of the sample had attended special parenting classes, mostly prenatally. While most respondents did not feel the need for further information at a few months postpartum,

more than half did express a need for further childcare information when their infants were a year old, a time when most adolescent mothers are no longer receiving special classes. Moreover, the adolescents felt more secure in their ability to perform routine tasks, such as bathing an infant, than more complex parenting responsibilities, such as toilet training, and more than half of the respondents expressed a need for information regarding social-emotional development and cognitive development of the baby, subjects often not covered in those well-attended prenatal babycare classes. In measuring the mothers' level of knowledge of child development, Miller found that the teens tended to overestimate the age at which milestones are attained. No comparison to adult mothers on this measure was done in this study. In line with the adolescents' appraisal of their own parenting knowledge, these mothers were found to be more accurate on questions of basic care and physical and motor development than on questions regarding cognitive, language, and social development. The source of information most widely cited was the teenager's own mother, with other relatives a close second. This was especially true after the birth of the baby, when teenagers reported relying more often on their informal support system than on social workers and other professionals, as was found in Vukelich and Kliman (1985). It is not surprising, then, that their performance on the knowledge scale was not related to their attendance in parenting classes. In this study, parenting beliefs regarding developmental milestones were not related to child development outcomes measured at 18 months, although other studies do find this link, as will be discussed further on.

Some researchers have questioned whether older adolescents, who have had greater life experiences and education, might differ significantly in their parenting cognitions from young adolescents such as those in S.H.Miller's (1980) study. The results are mixed and vary somewhat with the scale used to measure parenting cognitions. Reis, in two different studies (Reis, 1988; Reis & Herz, 1987), found some significant differences. Specifically, Reis (1988) found that large samples of younger (14- 16 year old) teenage mothers differed significantly from both older adolescents and adult mothers on the Field et al. (1980) scale in terms of developmental expectations and punitive

attitudes. However, using a sample of adolescents only, Reis and Herz (1987) found differences between younger and older adolescents only on the attitudes subscale of the Field et al. (1980) scale, not the developmental expectations subscale. In neither study were SES factors considered in the analysis. Fox, Baisch, Goldberg and Hochmuth (1987), using the Adult-Adolescent Parenting Inventory (AAPI; Bavolek, 1984), found no differences between 14-16-year-old pregnant adolescents and their older counterparts on any of the four subscales of this measure. The AAPI subscales measure the following constructs: developmental expectations, empathy for child's needs, value of physical punishment, and parent-child role reversal. Similarly, Haskett, Johnson, & Miller (1994) found no differences between older (ages 16-19) and younger adolescents (pregnant and parenting) on the AAPI, with the exception that younger mothers were more likely to endorse physical punishment. In this study, differences in beliefs of pregnant and parenting adolescents were not measured. However, Clark (1982) did find significant differences on all subscales of the AAPI when comparing 14-15-year-old mothers with 16-18-year old mothers.

Cultural and ethnic variations in parenting cognitions.

It has been argued that U.S. ethnic minorities (African-Americans, Hispanics, Native-Americans and Asian-Americans) have developed adaptive strategies for coping with their unique economic and social realities and have specific socialization goals and childrearing beliefs associated with these adaptive strategies (Harrison, Wilson, Pine, Chan and Buriel, 1990). In other words, parenting cognitions can be expected to vary with ethnicity. Harrison and colleagues have posited that all minority groups have childrearing socialization goals which include the fostering of group affiliation, ethnic pride and interdependence. A review of the literature on Hispanic parents in particular concludes that, consistent with their cultural values, Hispanic parents tend to value obedience, conformity, and deference in their children (Zayas, 1994). Harwood and Miller's (1991) study of perceptions of attachment behavior indicates that while Puerto Rican and Anglo mothers both indicated that they found securely attached infants to be more desirable, the

reasons for this offered by the two groups differed. The Anglo parents cited the self-confidence, autonomy, and self-control of the secure infants, values which are important in majority U.S. culture, while the Puerto Rican mothers emphasized the obedience, capacity for relatedness and "good" behavior of those children, values which the author found to be emphasized more in Hispanic culture. Moreover, these differences were found even when comparing subgroups of low-income Anglo and Puerto Rican mothers, suggesting that ethnicity rather than SES accounts for the group differences.

In addition to socialization goals, attitudes towards discipline and developmental expectations have also been found to be culturally sensitive. Bartz& Levine (1978) found that within a low-income, inner-city sample, African-Americans were more likely to endorse the use of strict and controlling behaviors and expressed more concern that their children use their time wisely and not waste it, when compared to Whites and Hispanics. They also found that African-Americans and Hispanics were more likely to expect children to assume early responsibility for their behavior, a finding which somewhat contradicts Harwood and Miller's (1991) conclusion that early autonomy is more valued in Anglos than Hispanics. Perhaps a distinction must be drawn between social autonomy (as found in secure attachment) in infancy and behavioral autonomy in later childhood such as dressing oneself. Furthermore, schooling and length of residency may play a role in the development of this value; Zepeda and Espinosa (1988) found that foreign-born Hispanics differed from U.S.-born Hispanics, African-Americans and whites in that they expected self-help, motor and language skills to develop more slowly.

Another recent study illustrates the effect of acculturation in the United States on the development of parenting attitudes. Wasserman, Rauh, Brunelli, Garcia-Castro, and Necos (1990) studied a sample of New York City low-income African-American and Hispanic mothers within 2 days of delivery. While age (teenage vs. adult) comparisons on an attitude scale (PACR: Goldberg & Easterbrooks, 1984) yielded no significant results, Hispanic mothers regardless of age tended to report significantly more strict and punitive attitudes than did the African-American mothers. Within the Hispanic group, Dominican

parents were more likely to report strictness and feelings of aggravation. It should be noted, however, that these results reflect significant effects of ethnicity on only one of the four subscales for African-American-Hispanic comparisons and country-of-origin effects on only two of the four subscales. Overall, this suggests that the groups were at least as similar as they were different. The authors hypothesize that these differences reflect the process of acculturation, because the groups had different average lengths of residence in the United States.

Fox et al. (1987) found differences between Black and White pregnant adolescents, all from lower SES levels, on three of the four AAPI subscales. The Black respondents had lower scores on the empathy, physical punishment, and role-reversal subscales, indicating less nurturant attitudes and higher risk for abuse on these scales. No differences were found in regard to developmental expectation. The ethnic background of the White mothers was not further described in this study. However, using the separate standardization for Black and White teenagers, a greater percentage of the White teenagers (22.9%) fell within the cutoff for high risk of abuse than did Black teenagers (13%).Using the same measure of parenting cognitions, East, Matthews, and Felice (1994) found that non-Hispanic White adolescent mothers of toddlers expressed significantly more favorable parenting attitudes and expectations than did either Black or Hispanic groups. All subjects were of low income. The two ethnic minority groups did not differ significantly from each other, contrary to the findings of Wasserman et al. (1990). However, Wasserman et al.'s findings were confirmed with a subsample of the original participants, who were followed up at 12 months postpartum (Brunelli, Wasserman, Rauh, Alvarado, & Carabello, 1995). In this analysis, ethnicity accounted for a small but significant amount of variance in the endorsement of power-assertive parenting attitudes (a combination of the strictness and aggravation subscales of the PACR), with mothers of Hispanic origin endorsing more power-assertive beliefs.

In summary, studies have generally found significant ethnic variation in parenting cognitions, although the nature of these differences are not clear. While both theory and

empirical evidence suggest that minority parents are more similar to each other than they to parents from the U.S. majority, a number of studies have suggested that Hispanic parents, as compared to both African-Americans and Whites, are more likely to emphasize the value of obedience in their children and may endorse more strict parenting than either of those two groups. Further research is needed to precisely define the areas of cognition where these differences are found (e.g. expectation of early emotional autonomy vs. expectation of the development of self-help skills) as well as to examine differences within the Hispanic population (e.g. those related to country of origin and length of residency in the United States).

Parenting cognitions and parenting outcomes.

In addition to comparing adults and teenagers on parenting cognitions, Sommer et al. (1993) also explored the predictive influence of cognitive readiness on two parenting outcomes: parenting stress (as measured by a self-report scale) and parenting behaviors (as measured by two behavioral observation scales of mother-infant interaction). They found that postnatal cognitive readiness (when infants were six months of age) was a significant predictor of concurrent parenting stress, even when prenatal cognitive readiness and demographic variables were controlled. The results involving parenting behavior were inconsistent, however. One measure of parenting behaviors was shown to be predicted by cognitive readiness, but only prenatal readiness and not when demographic variables were controlled. The other measure of parenting behaviors was not affected by cognitive readiness. Multiple regression analyses revealed that the combination of demographic variables and postnatal cognitive readiness was the best predictor of parenting behaviors. The authors suggest that the lack of a clear-cut effect of cognitive readiness on behavioral observations of parenting behavior may be attributable to methodological difficulties with one of the behavioral scales.

Using a subset of the sample from Sommer et al.'s study (1993), C.L. Miller et al. (1996) investigated the links between prenatal cognitive readiness of adolescent parents, perceptions of parenting stress (as measured by the Parenting Stress Inventory) and of

their child (as measured by the Revised Infant Temperament Questionnaire), and their children's emotional and intellectual development. They found that prenatal maternal cognitions were significantly related to parenting perceptions at 6 months, that is, that adolescents who were better cognitively prepared during pregnancy tended to have more favorable postnatal perceptions of themselves as parents and of their children. Looking at child outcomes at age 3 years, prenatal cognitive readiness was found to predict child IQ and internalizing behavior problems (on the Child Behavior Checklist) but not externalizing behaviors. A mediating effect of maternal perceptions (at 6 months) on IQ and CBCL scores was found, suggesting that maternal perceptions mediate the relationships between prenatal cognitive readiness and child outcomes. In contrast, maternal behavior recorded during observations of mother-child interactions (at 6 months) was predicted by cognitive readiness, but did not mediate the relationship between cognitive readiness and child outcomes. C.L. Miller et al. also found that when maternal IQ was entered into the analyses, cognitive readiness significantly mediated the relationship between maternal IQ and child internalizing behaviors.

Using an adult population of mothers and their 6-month-old infants with groups of different SES levels, Parks and Smeriglio (1986) found the low SES group had significantly lower scores on the Infant Caregiving Inventory, a measure of knowledge of the relationship between caregiving practices and developmental outcomes (roughly equivalent to the "style" facet of cognitive readiness and similar to Holden and Edward's concept of "instrumental beliefs"). This was not true for subscales measuring knowledge of practices fostering growth and physical health, where lower SES parents may receive adequate information from health care facilities. These results closely mirror the findings by S.H. Miller (1980) about the relative weakness of adolescent mother's knowledge about child development in the areas of cognition, language, and socialization. Furthermore, in this study, there was a correlation between parenting knowledge and scores on the Caldwell and Bradley's (1979) Home Observation for the Measurement of the Environment (HOME) measure. The HOME is a scale which combines interview and

observation in the home environment and it measures the affective relationship between mother and child and the provision of appropriate stimulation. This correlation between parenting cognitions and HOME scores was found only for the low SES group. The middle- and high-SES groups were thought to suffer from ceiling effects and lack of variance on the knowledge variable. Finally, HOME scores correlated with a measure of infant development at 6 months, illustrating the long-term significance of parental cognitive readiness for optimal child development.

In Stevens' study (1984b), knowledge of development was found to predict the provision of a stimulating home environment for a sample of teenage and adult mothers. The author makes an interesting distinction between knowledge of developmental milestones (similar to the "knowledge" facet of cognitive readiness") and knowledge of the importance of environmental influences on development (similar to the "style" facet of cognitive readiness), and measures these constructs with different scales (the High Scope Knowledge of Early Infant Development and the Knowledge of Environmental Influences on Development Scale, respectively). In his sample, while both scales predicted parenting behaviors, the latter measure explained a greater degree of variance on the HOME scale. In other words, the knowledge of appropriate parenting practices was more effective in predicting parenting behaviors than was knowledge of developmental milestones. Using a subsample of African-American adolescent mothers, Stevens found that only the knowledge of environment scale and not the H/SED predicted maternal responsivity, support for cognitive development, and support for language development. Despite the finding of significant results, Stevens cautions that both measures suffer from psychometric and practical shortcomings and encourages further research to identify better measures of cognitive readiness for parenting.

Luster and Rhoades (1989) studied low-income, White mothers and found that in both adolescent and adult groups, HOME scores were correlated with scores on the Parental Beliefs Survey, which was developed to measure beliefs regarding effective and appropriate parenting practices (r = .40 to .74 in the adolescent mother sample). That is,

mothers who did not endorse the belief that being responsive and affectionate will spoil babies or the importance of control and discipline and did endorse allowing the child to explore their environment and the importance of reading to and talking to their child, were found to provide a more stimulating and supportive home environment.

In a large sample of adolescent mothers, Reis and Herz (1987) found three factors to be predictive of HOME scores: punitive parenting attitudes (as measured by the Field et al., 1980 scale), age of the mother, and ethnicity, with older, White adolescents who held less punitive attitudes obtaining the highest HOME scores. Overall, the model accounted for 20% of variance in outcomes, which reflects only modest predictive power. However, the poor internal consistency of the Field et al. (1980) scale may have reduced its predictive power.

Mylod et al. (1997) found a long-range effect of prenatal parenting cognitions, as measured by their cognitive readiness scale. All subjects were of low SES and constituted an ethnically mixed sample with a majority of Black mothers. A composite of prenatal "maternal resources" including cognitive ability, cognitive readiness for parenting, personal adjustment and social support predicted a composite outcome measure three years later, including cognitive ability, depression, anxiety, parenting skills and abuse potential. Further analysis showed that of the maternal resources composite, only prenatal cognitive ability and cognitive readiness for parenting were related to abuse potential (r=-.48 and -.54) and maternal interactions with child (r=.43 and .37). Again, the influence of parenting cognitions is modest but significant and is sustained over time.

Stoiber and Houghton (1994) examined the effect of adolescent mother's cognitions on their children's emotional and social functioning. In their study of 39 teenage mothers and their young children, they found that more mature "parenting expectations", or attitudes toward childrearing and children, were negatively correlated with parenting stress and maternal depression and were positively correlated with maternal behavioral involvement with her child. Furthermore, parenting expectations were found to be significant predictors of both objective and subjective measures of the children's coping

behaviors, even after controlling for mother's IQ and perceptions of social support. The authors concluded that expectations have a direct effect on parenting behaviors, which in turn influence child development, confirming the model of Whitman and colleagues (1987).

Adolescent mother's level of knowledge about normal child development has also been shown to be associated with lower risk for child abuse. Fulton, Murphy, and Anderson (1991) studied this association in their evaluation of the effectiveness of a teenage parenting intervention. In their sample of 76 adolescent mothers, scores on a measure assessing knowledge of child development were negatively correlated with Child Abuse Potential scores, a measure of child abuse potential. In a similar study, Contreras, Rhodes, and Mangelsdorf (1995) found that pregnant African-American teenagers who were more knowledgeable regarding infant and child developmental milestones were also more likely to hold positive expectations for their child's temperament, which may in turn affect how they interact with their child. Also, Haskett et al. (1994) found that AAPI scores were correlated with Child Abuse Potential scores in their sample of pregnant and parenting adolescents, although certain subscales were unrelated. More specifically, strong correlations were found between the CAP subscale of Rigidity and three of the AAPI scales (lack of empathy, belief in physical punishment, and role reversal), suggesting that inappropriate parenting attitudes and rigidity of thinking go hand in hand.

Dukewich et al. (1996) explored the relationships between several risk factors common in adolescent mothers, including cognitive readiness, and child abuse potential. In this study, the "cognitive readiness" concept was reformulated slightly; "parenting preparation", one of the risk factors, was measured by a "knowledge and expectations" subscale and a "child centeredness and role reversal" subscale, which are roughly equivalent to the Knowledge and Attitudes subscales used in other studies by Whitman and colleagues. However, the third subscale, Parenting Style, was included in another construct, "Predisposition for Aggressive Coping" and which was hypothesized to mediate the relationship between risk factors and child abuse potential. (It is interesting to note

that the correlations calculated between the three subscales and reported in this study were significant but moderate, ranging from .31 to .38). They found that while the total risk composite (including social and financial support, maternal psychological adjustment, infant temperament, and preparation for parenting) predicted abuse potential, of all the risk factors, parenting preparation was most closely related to child abuse potential. Further analysis revealed that this relationship was partly direct and partly mediated by the construct of predisposition for aggressive coping. Furthermore, of the factors contributing to aggressive predisposition, "Parenting style" was found to be more important in its mediating role than was the other component, "parenting stress". This finding suggests a more complex relationship between the various components of "cognitive readiness" than was originally reported in the Whitman et al. (1987) framework. The picture that emerges is that parental belief in the appropriateness of aggressive parenting is the catalyst for child abuse when knowledge and expectations of child development are poor, as is often the case with adolescent parents. As the authors suggest, "A lack of knowledge about child development...may lead to parental misperceptions of the young child's abilities to understand and comply with parental requests" (p. 1042), leading the parent who is predisposed to act aggressively to resort to physical punishment quickly as a means to control the child.

One recent study explores the factors that contribute to appropriate parenting beliefs in adolescent parents as well as the effect of these beliefs on subsequent parenting behavior. In their sample of 114 low-income teenage mothers, Juang and Luster (1996) examined the relationships between child temperament, maternal self-esteem, maternal depression, social support, parenting beliefs (as measured by the AAPI), and observed parenting behavior. They found that beliefs did change somewhat over time from pregnancy to 12 months postpartum and became more appropriate, supporting the notion that teen parents may become more competent "on the job". However, beliefs tended to be highly stable, and beliefs measured prenatally were able to predict actual parenting behavior at one-year postpartum. In analyzing which factors contributed to parenting

beliefs, they found that irritable child temperament, maternal depression, and maternal low self-esteem were correlated with inappropriate parenting beliefs. Surprisingly, no relationship was found between reported social support and parenting beliefs, probably because of the lack of variance in the support measure (almost 90% of respondents agreed with one of the statements, for example).

Summary of parenting cognitions literature.

"Parenting cognition" is a multi-dimensional construct which includes beliefs about development and parenting practices, attitudes, and values. While there is a lack of consensus about what exactly those dimensions are, most recent studies draw a distinction between "descriptive" beliefs about developmental sequences and milestones and "instrumental" beliefs about the appropriateness of various parenting practices. Both of these areas of parenting cognitions, as well as others, have been implicated as risk factors for adolescent mothers.

Studies have consistently found that pregnant and mothering adolescents have less appropriate expectations of normal child development than their adult counterparts do (Becker, 1987; Field et al., 1980; S.H. Miller, 1980; Roosa & Vaughn, 1984; Vukeljich & Kliman, 1985). However, results are mixed regarding whether teenagers tend to overestimate or underestimate the attainment of developmental milestones, a difference with implications for differential parenting practices. It has also been found that in seeking information regarding parenting, teens tend to rely on their informal support system more heavily than do adults. Furthermore, adolescent mothers tend to be more knowledgeable regarding physical and motor development than about cognitive, language, and social development (S.H. Miller, 1980). This is typical of low SES mothers in general (Parks & Smeriglio, 1986), and there is some evidence that demographic variables contribute significantly to differences in cognitive readiness between adults and adolescents (Sommer et al., 1993). There is, however, evidence of an effect of age on cognitive readiness, independent of SES (Field et al., 1980). Research has also shown that pregnant and parenting teenagers tend to have less knowledge of appropriate parenting practices and

more negative parenting attitudes (Field et al., 1980; Roosa & Vaughn, 1984; Sommer et al., 1993).

Within the adolescent mother population, there is some evidence to suggest that older adolescent mothers have more appropriate parenting cognitions, although the results are mixed (Fox et al., 1987; Haskett et al., 1994; Reis, 1988; Reis & Herz, 1987). A few studies have also shown that parenting cognitions vary with ethnicity, with a general trend of finding more adaptive and appropriate parenting beliefs and attitudes in non-minority parents (East et al., 1994; Wasserman et al., 1990). However, the findings have not been widely replicated, and at least one study (Fox et al., 1987) found the reverse trend.

Parenting cognitions have been shown to be related to parenting outcomes. Cognitive readiness has been related to parenting stress, maternal perceptions of child temperament, and parenting behaviors (Contreras et al., 1995; Juang & Luster, 1996; C.L. Miller et al., 1996; Sommer et al., 1993; Stoiber & Houghton, 1994). Knowledge of appropriate parenting practices in particular has been linked to the provision of a stimulating home environment, especially with low SES mothers (Luster & Rhoades, 1989; Mylod et al., 1997; Parks & Smeriglio, 1986; Reis & Herz, 1987; Stevens, 1984b). Finally, poor cognitive preparation has been shown to be a risk factor in teen parents for child abuse (Fulton et al., 1991), particularly when combined with a predisposition for aggressive coping (Dukewich et al., 1996).

The adolescent mother's cognitive readiness to parent has been related to child outcomes as well. Cognitive readiness has been shown to predict children's emotional coping, IQ at age 3, and behavioral symptomatology (C.L. Miller et al., 1996; Parks & Smeriglio, 1986; Stoiber & Houghton, 1994). While parenting behaviors are believed to mediate these relationships (Stoiber & Houghton, 1994; Whitman et al., 1987), empirical support for this hypothesis has not been firmly established (C.L. Miller et al., 1996).

Social Support Networks of Adolescent Mothers

Social support and social networks are important for the adjustment of any parent (Cochran & Brassard, , 1979; Power & Parke, 1984). The presence of effective social support has been posited by many researchers as an important mediator of the adolescent's adjustment to pregnancy and later, motherhood (e.g., Barrera, 1981; Brooks-Gunn & Chase-Lansdale, 1995, Nath et al., 1991; Whitman et. al., 1987). In Whitman et al.'s model, the social support system has numerous indirect effects on child development through its influence on psychosocial adjustment, physical health, cognitive readiness, and parenting behavior. Moreover, the social support system directly affects child outcomes, through direct provision of childcare. The presence of a strong, effective social support system is more crucial for the adolescent parent, who has fewer physical, emotional, and cognitive resources for coping with the demands of parenthood, than it is for adult parents (Nath et al., 1991). Perhaps no other predictor variable in teenage pregnancy and parenting has come under more scrutiny in the literature. Studies have examined the structure, density, and subjective importance of teenage mothers' support systems, as well as their effect on the subsequent well-being of mother and child.

The facets of social support

Barrera (1981) outlined three facets of social support which may be assessed. The first facet is the size of the support network, a quantitative assessment of the number of providers of support, including both conflicted and unconflicted sources of support. Another attribute of social support is the individual's perceived satisfaction with the support system, which is a more subjective and qualitative appraisal of support. A third aspect of support involves assessment of actual supportive behaviors and activities carried out by the members of the support system. Using a sample of 86 pregnant adolescents, Barrera used the Inventory of Socially Supportive Behaviors (ISSB) to measure the last of the three facets and the Arizona Social Support Interview Schedule (ASSIS) to measure network size and satisfaction with social support. The ASSIS allows for the identification of networks for different types of support (e.g. material aid,

guidance, task assistance) as well as the identification of sources of interpersonal conflict. Barrera found that these three facets were mildly correlated with one another, but had distinct relationships to other variables. Specifically, satisfaction with the support system had the clearest negative association with symptomatology of psychopathology. While network size (total and unconflicted) did not have a direct correlation with symptomatology, it interacted with life stress, serving as a buffer to reduce symptomatology for those teens experiencing high levels of life stress. Number of supportive behaviors in and of themselves did not correlate with symptomatology, but rather served as a barometer of overall life stress, i.e. with the more stressed teens receiving more helping behaviors overall. Barrera concludes that interventions with pregnant teens should focus on improving satisfaction with social support systems and increasing the size of the teens supportive network.

Panzarine, Slater, and Sharps (1995) used Barrera's measure to illustrate the different functions of frequency of support and satisfaction with support in adolescent mothers. Interviewing teenage mothers at 6 months postpartum, they found that mothers who reported mild to severe depressive symptoms reported receiving the same amount of social support as did teenage mothers without depressive symptoms, but were more likely to report dissatisfaction with the support they received. In other words, the depressed teenagers interpreted their support system differently, and this misinterpretation (rather than the absolute amount of assistance they received) could pose a risk factor for the future emotional health of the adolescent mother. The findings closely reflect those of Barrera (1981), although in this study causality is hypothesized to flow in the opposite direction.

In their review of the literature regarding teenage parenthood and social support, Nath et al. (1991) further emphasize the importance of researching social support as a multifaceted construct. They recommend that future research document source (e.g. family, friends, male partner), type (e.g. financial, emotional, childcare), and amount of support (overall network size and amount of helping behaviors) in understanding the way

in which this construct operates. These authors conclude, based on the research, that adolescent mothers have support needs which are distinct from those of adult mothers, and which change with the development of the infant. Furthermore, they suggest that more attention be paid to the independent variables that contribute to a healthy support system (e.g. age, depression, and perceived needs).

Patterns of social support and conflict in adolescent mothers

Richardson, Barbour, and Bubenzer (1991) have studied the constructs of conflicted and unconflicted sources of support in greater depth, using the Inventory of Social Contacts (ISC) (Richardson, 1984), a measure designed specifically to measure the social networks of adolescent mothers. It yields ratings of both support and interference in three areas (childrearing, emotional, and material) from friends, family, and neighbors. In their sample of 46 teenage mothers, relatives and friends were the most important sources of support, with family holding a slight lead over peers in order of importance. In terms of actual supportive behaviors, there was no significant difference between family and peers in provision of child-rearing, material, and emotional support, a finding which contradicts those of other researchers. However, differences emerge in the area of interference, with family members as the more frequent source of interference, especially in the areas of childrearing interference (e.g., unsolicited child-rearing advice or assistance) and emotional interference (e.g. arguing, criticizing). Furthermore, the results indicated that when either help or interference occurred, it tended to so across all three areas. However, support and interference were not intercorrelated; as Barrera (1981) found, the presence of support does not preclude the existence of a conflicted relationship. The authors conclude that any assessment of social support systems of adolescent parents must take into account both support and interference and understand that these support systems may involve "bittersweet connections".

Unger and Wandersman (1985) have also explored the mixed blessing of the adolescent mother's support system, using mothers of infants. They distinguish between social support, which is defined as perceived support or satisfaction with support, and

support networks, which is defined as the structural and functional dimensions of support including size, composition, density, geography, and type of support. In their study, they found that perceived support was associated with several beneficial outcomes including higher HOME scores at eight months. However, density of kin networks was associated with less parenting satisfaction and greater anxiety. Additional children in the adolescent mother's home was related to less responsive parenting of the infant.

Several researchers have addressed the question of whether adolescents who become mothers have personal characteristics which predispose them to have poorer social relationships. In her review, Phipps-Yonas (1980) concludes that while there is no hard data to support the notion of a "pregnant teenage" profile,

> ...if we consider all of the points at which a choice is made along the path that leads to teenage motherhood, it is possible to build the case that it is the least appropriate candidate for that role who moves forward at each conjunction. (p. 420)

One of the implications of this research is that poor relationships with one's own parents, friends, and community put some adolescents at higher risk for pregnancy. Research along these lines continues to be plagued, however, with the methodological problems of controlling for the demographic and socioeconomic characteristics which have been consistently linked to teenage parenthood (Barth, Schinke, & Maxwell, 1983; Brooks-Gunn & Chase-Lansdale, 1995). For example, Olson and Worobey's study (1984) of 20 pregnant adolescents found that in comparison to non-pregnant students from the same school district, the pregnant group reported more difficulties in their relationships with their own mothers, as measured by self-reports of their mothers' behaviors toward them as well as reports of the affective mother-daughter relationship. However, differences in school achievement and income level between the two groups were not completely controlled for. Moreover, most (5 out of 8) of the mother-child interaction

variables failed to discriminate significantly between the groups. In a better designed study comparing pregnant, parenting, and non-pregnant adolescents, Barth et al. (1983) found that pregnant teenagers reported having the broadest and most helpful networks, in comparison to both parenting and control group adolescents. Parenting adolescents scored significantly higher than the other two groups on a measure of perceived satisfaction with the support system. Pregnant and parenting adolescents both reported lower levels of conflict with parents than controls did. While there were few differences between groups on self-report measures of mental health (e.g. depression, self-esteem, and anxiety), the association between mental health scores and social support scores was stronger for adolescent parents than for the two other groups. These findings suggest that pregnant and parenting teenagers are not necessarily socially disadvantaged and isolated relative to their age peers. In fact, this study found that for the entire adolescent sample, the presence of a good support system and SES were better predictors of emotional well-being than was parenting status. The findings do suggest that the adolescent mother who is experiencing the stress of early parenthood and diminished SES is in greater need of the support of friends and family.

However, a recent study based on the Whitman et al. (1987) model (Passino et al., 1993) does suggest that poor interpersonal skills may put some adolescents at greater risk for pregnancy and subsequent parenting difficulties. Using large samples of pregnant adolescents, pregnant adults and non-pregnant adolescents, they studied differences in social adjustment (as measured by the Youth Self-Report and a social problem-solving measure). They found that pregnant adolescents had weaker social problem-solving skills and poorer social competence than their non-pregnant peers. Furthermore, this study finds some support for the long-term effects of personal and social maladjustment posited by the Whitman et al. (1987) model. In comparison to adult mothers, the adolescent mothers in this sample were found to have higher degrees of parenting stress and poorer parenting skills, even after controlling for ethnicity and SES. As predicted, they found links between personal adjustment and parenting stress as well as between parenting

stress and parenting behaviors. The results suggest a chain of events leading from personality disturbances in the pregnant adolescent to poorer developmental outcomes for her child.

Garcia Coll, Hoffman, and Oh (1987) studied the patterns of child-care networks used by White adolescent and adult mothers, using a structured interview based on Crockenberg (1981) which assesses the number of people and the frequency of help with childcare activities. In comparing the two groups in pairs matched for SES level, they found that adolescent mothers were more likely to rely on their childcare network than were adult mothers, and that their support was more likely to come from other teenagers and their own mothers. Adult mothers relied almost exclusively on their partners for assistance with childcare, and were more likely than adolescent mothers to receive help from their partner's relatives. Adolescent mothers, in describing their common life stresses, were more likely to report serious arguments with members of their support network, suggesting their support networks were conflicted. It should be noted that this difference was not found in a subsample matched for SES, suggesting that demographic variables are implicated in the frequency of conflicted relationships for the teens.

Sherman and Donovan's study of pregnant adolescents (1991) further examines the patterns and correlates of social support during pregnancy. While they did not compare pregnant and non-pregnant teens directly, their finding that 20% of their sample reported having no relationship with their own mothers or with the fathers of their babies is a disturbing indication that some members of this group are significantly isolated from potential sources of support. Furthermore they found that teens who reported higher levels of maternal warmth and acceptance in the past from their own mothers reported higher levels of emotional support from the father and his family during pregnancy. These adolescents also expressed greater expectations that emotional and childcare support would be forthcoming from their own mothers and from their partners after the birth of their child. Similarly, Crockenberg (1987) found that perceptions of maternal acceptance among teenage mothers were associated with frequency of task assistance by partner and

mother. In the Sherman and Donovan study, the perception of maternal acceptance was particularly important in predicting the expectation of support from the mother after giving birth (as opposed to actual support from the mother during pregnancy). This study, as well as others, suggests that there are important shifts in the support system at different stages of adolescent parenthood (Caldwell & Wolford, 1996) and that a history of poor relationships with one's own parents may make the transition to parenthood even more difficult.

Caldwell and Wolford (1996) studied ethnic differences in patterns of parental emotional support. Contrary to their expectations, they found neither age (older vs. younger adolescents) nor ethnicity (African American vs. European American) had a main effect on the level of parental support (e.g. mutual sharing of feelings, perceptions of emotional closeness) reported by teenage mothers. They did, however, document a significant shift in mother-daughter relationships toward the more positive side after the birth of the child. Mother-daughter relationships were reported as very positive during the pregnancy as well. Father-daughter relationships also reflected a positive shift following childbirth, although this was not as strong. These findings counter the stereotype of teenage mothers coming from emotionally conflicted families. Finally, father-daughter support was found to predict the psychological adjustment of teenage mothers. Mother-daughter relationships did not have the same predictive power, probably due to lack of variance in the independent variable, with most adolescents describing their relationship with their mothers as very positive.

The role of the adolescent's mother.

As has been mentioned earlier, the maternal grandmother is an important source of support for adolescent mothers. Several studies have focused on this relationship, including residential patterns, and its effect on parenting. For example, Chase-Lansdale, Brooks-Gunn, and Zamsky (1994) studied the effects of three-generational households on parenting (measured by direct observation of a teaching task), using a sample of African-American, low-income young adult and adolescent mothers. They found that for co-

residing grandmothers, negative aspects of the mothers' and the grandmothers' parenting (such as negative affect and authoritarian parenting) were highly correlated, while for non-coresiding families, the positive aspects were more likely to be correlated. Overall, grandmother co-residence was associated with more negative parenting variables for the entire sample. However, they also found that for the adolescent subsample, grandmothers' parenting skills were of higher quality among the co-residing families. Of course, causality is difficult to determine; the self-selecting co-residing grandmothers may have been those with generally higher parenting skills.

Spieker and Bensley (1994) found partial support for the benefits of grandmother co-residence with adolescent mothers as well as some evidence of negative effects. In their study of adolescents and their one-year-old children, they found that those living with neither partners nor grandmothers (i.e., living alone or with friends or relatives) had higher parenting scores on a teaching task, but the opposite effect of co-residence was found on HOME scores. Furthermore, high grandmother support (regardless of residence) was associated with higher HOME scores. Finally, in predicting infant attachment, the group that lived with partners and had high grandmother support had more secure infants than those living with partner with low-grandmother support. In fact, under conditions of low-grandmother support, those mothers living alone had more securely attached infants than those with a partner. This study also examined the possibility that personal resources (IQ and social skills) were responsible for both the arrangement of support systems and subsequent parenting skills; their analysis revealed that residential and support patterns predicted parenting skills even after the effect of personal resource covariates was controlled for. Further complicating the picture is the finding that grandmother co-residence improved the adolescent mother's chances of remaining in school, suggesting that co-residence supports the adolescent's role as student but not as mother. Overall, the study provides some support for the hypothesis that non-coresidence with high levels of grandmother support may be the best combination for adolescent mothers and their children.

Two more recent studies have documented the "mixed blessing" of grandmother co-residence. Black and Nitz (1996) found that in their group of predominantly African-American, unmarried, low-income adolescent mothers, grandmother co-residence was associated with less maternal warmth, even after controlling for maternal age, education, parity, perceived family support and parenting stress. However, there was no relationship documented between co-residence and perceived support or parenting stress and no effect of co-residence on maternal perceptions of child temperament. The effect of co-residence on child outcome was mixed; for normal children, co-residence was related to better motor development, but for children with Failure-To-Thrive syndrome, motor development was improved without co-residence. Overall, this study shows some additional support for the hypothesis that co-residence with the grandmother may interfere with the adolescent's acquisition of adequate parenting skills.

Perhaps the most comprehensive study of adolescent mothers and their own mothers was done by East and Felice (1996). Using a large sample of Hispanic, African-American and White adolescent mothers, they found that grandmother variables were intercorrelated: grandmother co-residence was associated with high grandmother-provided childcare assistance as well as reports of grandmother-adolescent conflict. Grandmother childcare assistance was also significantly correlated with conflict. Unlike other researchers, they found very few significant negative effects of co-residence on the adolescent's parenting. However, high grandmother assistance in childcare was strongly associated with unfavorable parenting variables including mother's parenting attitudes (as measured by the AAPI), parenting confidence, mother's involvement in childcare, knowledge of child and infant development, and commitment to parenting role. These associations were found for most of the follow-up interviews, conducted at 6, 12, 18 and 24 months. Grandmother-adolescent conflict was associated with unfavorable parenting attitudes and low maternal involvement with childcare. The results were less clear-cut, however, when the sample was further divided by age at birth. For mothers age 16 and under, those with greater grandmother childcare assistance were more confident, were

more involved with their children's care, and had more accurate child development knowledge. For older teenage mothers, having mothers who helped out more with childcare involved none of these benefits and was associated with higher degrees of parenting stress. No age-related benefits of co-residence were found and co-residence was found to have a negative effect on young adolescent mothers' children's aggression scores. The authors conclude that grandmother involvement in childcare is clearly beneficial for the younger adolescent mother. Furthermore, grandmother co-residence was found to interact with grandmother assistance. Adolescent mothers with high grandmother support but not co-residence were found to have the most favorable parenting attitudes and the lowest levels of child aggression.

Cultural and ethnic variations in social support.

In the adult parenting literature, ethnic variations in social network use have been found. For example, MacPhee, Fritz and Miller-Heyl (1996) found that in a large, low-income parent sample, American Indians had frequent interactions within a dense social network, Hispanic parents had fewer sources of emotional support but had large networks, and Anglo parents had high degrees of emotional support with a diffuse network. Studies involving ethnic variations in social support patterns for adolescent mothers have found mixed results. As mentioned, Caldwell and Wolford (1996) were surprised not to find differences in support according to ethnicity. Similarly, Felice and East (1996) found similar levels of childcare assistance and co-residence in their three ethnic samples, although conflict was greater in the African-American adolescent group than in any other. It should be noted that both of the previous studies looked only at a limited portion of the support network, that is, the adolescent mother's relationship with her own parents, which may account for the lack of ethnic differences. In the East and Felice (1996) study, grandmother co-residence didn't interact with ethnicity to affect parenting outcomes. However, grandmother childcare assistance did interact with ethnicity to affect parenting outcomes; in each case, grandmother assistance was associated with negative outcomes, but was linked to different outcomes based on

ethnicity. For instance, for White teens, high grandmother assistance was related to less favorable parenting attitudes, while for African-American teens, childcare assistance was associated with stressed parent-child interactions and for Hispanic adolescent mothers, having high child-care assistance was related to reduced involvement in their children's care. However, a benefit was seen in that co-residence for African-American children of adolescents was associated with lower social withdrawal scores. Wasserman, Brunelli, Rauh, and Alvarado (1994) did find ethnic differences in social support for adolescent mothers, due perhaps to their use of more comprehensive social support measures. In their sample of African-American, Puerto-Rican and Dominican parents, they found that at a postnatal interview and at 12-month follow-up, African-American parents reported the highest levels of all types of support (tangible, emotional, guidance, and social interaction), followed by Puerto Rican parents, despite the fact that African-American mothers were less likely to be married than either of the other groups. Instrumental assistance was further studied at 12 months and it was found that African-American adolescent mothers reported the highest levels of involvement of the babies' fathers in childcare, and Puerto Rican fathers' involvement in childcare surpassed that of Dominican fathers. Similar to East and Felice (1996), no ethnic differences in amount of maternal grandmother's assistance in childcare or housework was found.

Social support and parenting outcomes.

Using an adaptation of Barrera's ASSIS (1981) scale as well as a parental acceptance-rejection questionnaire, Contreras et al. (1995) found that this combination of indicators was a significant predictor of pregnant teenagers' positive expectations of their infant's temperament. The authors conclude that "the quality of a teen's extant relationships may serve as a basis for making appraisals of future relationships" (p. 292). Moreover, the mother's expectations of her infant's temperament may be seen as part of cognitive readiness for parenting, in that it reflects parenting beliefs and attitudes to some degree.

Some researchers have studied the relationships between teen mothers' social support and their own parenting skills. Coletta (1981) carried out an influential study in which several aspects of social support, including amounts and sources of various types of supportive behaviors, were correlated with self-reported parenting behaviors (as measured by the PARQ, Rohner, 1975). Total social support was found to be related to the adolescents' scores on measures of warmth/affection, aggression/hostility and neglect/indifference in their interaction with their own infants. Of the various types of support, emotional support appeared to be the most significantly related to parenting ability, especially when it came from the teenager's immediate family. Partner support also proved to have a strong relationship to parenting behavior, particularly support in the form of task assistance. Unfortunately, the sample represented a mix of ethnicity and SES and these demographics were not entered into the statistical analysis.

Levine et al. (1985) found that mother-infant interactions were predicted by maternal age as well as level of child-care support. Specifically, older mothers and mothers who reported greater levels of support with child care were found to have better eye contact and display more positive affect toward their children.

In a study of a multivariate model of teen parenting, Crockenberg (1987) looked at the predictors of punitive control of toddlers in adolescent mothers. She found that frequency of supportive behaviors was not in itself a predictor of either maternal punitive behaviors or of child behaviors towards the mother, both of which were observed during a compliance task and with the HOME scale. However, the adolescents' self-report of their relationship with their mother during childhood (which has been linked by Crockenberg in this study and Sherman and Donovan, 1991 to current social support) was predictive of the adolescents' punitive control of their toddlers. Punitive control was in turn linked to behavior problems in the child. Current partner support (across the range of supportive behaviors) was found to mediate this relationship. Mothers who had reported earlier maternal rejection but had high levels of current partner support were found to be significantly less punitive in their parenting than were "rejected" mothers who did not have

supportive partners. This particular finding demonstrates the powerful influence of the current supportive environment.

Stevens (1988) studied the psychosocial predictors of parenting in different groups of low-income mothers. His sample included three groups: African-American adults, White adults and African-American teenagers. In his findings for the African-American adolescent mothers, overall network size did not predict parenting skills, but willingness to report child-rearing problems and to consult with family members for childrearing information did. This finding implies that for this population, general social support may be less significant than support which is specifically geared toward increasing cognitive readiness. In fact, total network size showed a trend toward negative correlation with parenting skills. The author concluded that either some support systems may undermine teen parenting skills (recalling Barrera's (1981) distinction between conflicted and unconflicted networks) or simply that less skillful parents demand more support from their network. Another variable of interest in that study, locus of control, was not found to predict parenting ability for the teen group, again suggesting that interdependence with significant others (rather than self-reliance or feelings of self-efficacy) is important for adolescent mothers. The suggestion that locus of control is not a good predictor of successful outcomes in the African-American adolescent parent population has been found elsewhere in the literature (Sandven & Resnick, 1990) and underscores the importance of exploring ethnic group differences. It is interesting to note that in this study, parenting skills for African-American adult mothers were predicted only by the locus of control variable, and for white adult mothers, locus of control and seeking help from family members and from professionals were the most important predictors of parenting skills. Perhaps because of the teens' relative lack of information regarding childrearing, this type of support is most crucial for them.

Social support and child outcomes.

Social support has been linked to important outcomes for the children of adolescent parents. Frodi et al. (1984) found that in 30 dyads of teenage mothers and

their one-year-old infants, social network size predicted secure infant attachment as well as infant persistence on a cognitive task. Furthermore, co-residence with the maternal grandmother predicted infant persistence, and increased help from the grandmother in childcare predicted infant attachment. Interestingly, maternal self-reports of general stress did not predict child outcomes, suggesting a well-supported teen mother and her child are able to cope with the considerable stresses attendant on early motherhood.

Leadbeater and Bishop (1994) examined the predictors of behavior problems in the preschool children of adolescent mothers. Significant correlations were found between the teens' perceptions of social support (from both family and friends) and CBCL scores as well as frequency of repeat pregnancies. In a hierarchical regression analysis, these authors found that residence with the mother, child's ethnicity, and maternal depressive symptoms were the most significant predictors of CBCL scores. Perception of support from friends had a nearly significant influence. In their correlational analysis, they found that support from family at six to twelve months and support from friends at 12 months all correlated significantly with CBCL scores at toddlerhood. The authors conclude that the social support from friends and family, particularly for adolescents who may be troubled by depressive symptoms, is important for the emotional well-being of the children of adolescent mothers.

Summary: Social support and the adolescent mother.

It is clear from the above review of the literature that social support is not a unitary concept, but includes several facets such as the number of people in the support system, the type of helping behaviors, and the perceived satisfaction with the support system (Barrera, 1981; Nath et al., 1991; Richardson et al., 1991). Progress in this area is hampered by the lack of well-validated and broadly-accepted measures, with nearly every study constructing its own instrument. Nevertheless, the literature does support the notion that the adolescent mother's support system is important for her adjustment to early parenthood, even more so than for the adult mother. While far from clear, there is evidence that teenagers with poor social skills are at slightly greater risk for pregnancy

(Passino et al., 1993). The event of pregnancy and childbirth usually marshals the support of friends and family, and the adolescent mother's relationship to parents may actually improve with the birth of a child (Caldwell & Wolford, 1996). Nevertheless, teen mothers also report high levels of conflict with their support system, so that becoming a mother may entail spending more time in difficult relationships, or what has been called "bittersweet connections" (Richardson, Barbour, and Bubenzer, 1991).

The results from several recent studies regarding maternal grandmother co-residence and support are mixed, but the majority of the evidence suggests that over-involvement of the maternal grandmother may undermine the adolescent's development of her own parenting skills and attitudes, particularly for the older adolescent (Black & Nitz, 1996; Chase-Lansdale et al., 1994; East & Felice, 1996; Spieker & Bensley, 1994). However, some benefits of co-residence have been found, especially for child development (Black & Nitz, 1996; East & Felice, 1996; Frodi et al., 1984) While some ethnic variations in support systems have been found for teenage mothers (Wasserman et al., 1994), the primacy of the adolescent mother-maternal grandmother relationship occurs across ethnic groups (Caldwell & Wolford, 1996; East & Felice, 1996).

Studies looking at the effects of the support system have found that for pregnant and parenting adolescents, a good support system can buffer stress (Barrera, 1981), improve parenting skills (Colleta, 1981; Crockenberg, 1987; Levine et al., 1985; Stevens, 1988), and decrease the risk of later child behavior problems (Frodi et al., 1984; Leadbeater & Bishop, 1994). What remains to be explored in greater depth are the cognitive pathways involved in the link between social support and parenting behaviors.

Social Support and Parenting Cognitions

Studies with adult parents

For adult mothers, there is a substantial amount of theoretical and empirical support for a link between the parenting social support network and parenting attitudes and beliefs. Belsky, (1984), in his model of parenting includes social support as one of the

three most important determinants of parenting, and posits that it influences parental functioning by providing emotional support, instrumental assistance, and social expectations. Furthermore, he maintains that the influence of the support system is even more critical in cases where one of the other main determinants is weak; namely, the personal psychological resources of the parent, which in the case of the adolescent parent are likely to be immature and underdeveloped. Belsky (1984) in turn, drew upon the theoretical work of Cochran and Brassard (1979), who analyzed the importance of personal social networks for childrearing. They, too, posit different pathways through which social support systems influence parenting in general and parenting beliefs in particular: by providing access to emotional and material assistance, by providing sanctions for particular parenting styles or attitudes, and by providing direct models. As has been pointed out by others, this influence is not always entirely positive. For example, unwanted child-care advice from grandparents may undermine the parental role of new parents, as found in East and Felice's work (1996) with 3-generation adolescent mother households.

A few studies have empirically examined the relationship between the social support network and parenting cognitions in adult parents. For example, Corse, Schmid, and Trickett (1990) studied 52 mothers from abusing and non-abusing families. They found abusing mothers not only held more negative parenting beliefs, but had fewer peer relationships, more conflict with relatives, and were more isolated from the larger community. Various indices of social support were found to correlate with parenting cognitions, such as enjoyment of parenting, encouragement of autonomy, and authoritarian control. The most important social support indices were found to be number of peers in network, number of professionals in network, and community involvement, and these relationships were found in both abusing and non-abusing families. While these results suggest that a similar process exists in adolescent parenting, the relative importance of different network subsystems in influencing parenting cognitions with this population remains to be explored.

Another study to examine this relationship was carried out by Cotterell (1986). Using 96 mothers of preschool students in rural and mining towns, he explored the relationship between community influences, child-rearing attitudes and parenting behaviors, using the Parent as a Teacher inventory to measure attitudes and the HOME survey to measure behaviors. While several aspects of the social support system were measured for this study, unfortunately only "amount of informational support" was entered into the analyses regarding influences upon childrearing attitudes. Nevertheless, this factor was found to be highly significant; it correlated significantly with maternal attitudes towards teaching and mother-child play as well as HOME scores. Moreover, in a regression analysis, the combined model of father absence (due to work), mother's informational support, and community characteristics accounted for 40% to 60% of the total variance in the childrearing variables, with the support factor having the most power to add significantly toward variance.

Similarly, Crnic, Greenberg, Robinson, and Ragozin (1984) found that in a mostly White, middle-class adult sample, intimate social support (but not community support) was useful in predicting maternal childrearing attitudes at eighteen months. This was true for the concurrent effect of social support as well as the long-term effect of social support measured at one month postpartum. Specifically, subjects who reported highly satisfying relationships with a spouse or partner expressed more positive childrearing attitudes.

Brunelli, et al. (1995) also found a significant positive effect of partner support on adaptive parenting attitudes, in their sample of urban minority adult and adolescent mothers of 12-month-old infants. Specifically, a composite of emotional and instrumental partner support was found to significantly predict maternal power-assertive child-rearing attitudes in the expected direction. Further analysis revealed that paternal emotional support, in comparison to paternal instrumental, childcare, and housework support, was the only significant predictor of maternal parenting attitudes. Interestingly, grandmother support did not have the same predictive power, even when analyzed separately for a

subsample of mothers living with grandmothers. Furthermore, support did not interact with ethnicity in its relationship to parenting attitudes.

Some researchers have documented the negative influence of certain aspects of the support system on parenting beliefs. For example, Palacios and Moreno (1996), in their survey of Spanish parents found that those with lower levels of schooling tended to have a more "traditional" parenting belief system, which was more authoritarian, innatist, and rigid in gender roles, while those with more schooling were more "modern," believing in a nature-nurture interplay and having more authoritative parenting beliefs. They posit that those with less schooling rely more upon their informal social networks in forming their belief system, as opposed to consulting with specialists and books. The "less educated" parents in this study have much in common with American adolescent mothers, whose schooling is often interrupted by childcare demands.

Studies with adolescent parents

Thus far, the literature reviewed suggests that having appropriate parenting cognitions and a healthy support network are both important for the teenage parent, in terms of predicting parenting skills and child outcomes. Whether or not the support system aids or interferes with the development of appropriate parenting beliefs in adolescents has not been studied as much. Only about a dozen studies of adolescent mothers have explored the relationship between the adolescent's support system and her parenting beliefs, and most of these did not study either variable in much depth or with well-validated measures. For example, Juang and Luster (1996) found no relationship between the variables, and Becker (1987) found a relationship that contradicted expectations, although both studies used questionable measures of social support. Mylod et al. (1997) found that prenatal measures of emotional social support did not correlate with measures of cognitive readiness, and that prenatal social support did not predict child abuse potential (including abusive beliefs) at three years. Similarly, Dukewich et al. (1996) found no correlations between prenatal measures of emotional support and cognitive readiness for parenting. However, both studies examine only a limited aspect of

support (amount of emotional support) and shed light only on pregnant, but not parenting teenagers. As Holden and Edwards (1989) have argued, asking parents about their expectations of future parenting events may have questionable validity. Similarly, Stoiber and Houghton (1994) found no significant relationship between social support and parenting expectations in their group of teenage mothers and their infants, but both scales measured unitary, undifferentiated constructs. Camp, Holman, and Ridgeway (1993) examined the relationships between multiple measures of social support facets and a short measure of hostile parenting beliefs and found no significant correlations. However, the correlation with network size approached significance in the expected direction. The authors hypothesize causality to flow from the adolescent to her environment, such that individuals with hostile childrearing attitudes were more likely to have poor interpersonal relationships in general, resulting in smaller networks.

However, there is a growing body of literature that supports the existence of a connection between the support system and the development of parenting beliefs in adolescent mothers. Steven's (1984a) study of three-generation African-American households found evidence of intergenerational transmission of parenting expectations, with a high correlation between the developmental expectations of teenage mothers and their own mothers. However, beliefs regarding the importance of the environment for development were not correlated. Wasserman et al. (1990, 1994), while not directly measuring this relationship, did find that those ethnic groups with higher levels of social support also tended to have more nurturant and less strict attitudes toward childrearing. McKenry, Kotch, and Browne (1991) used a large sample of African-American and White adolescent mothers at one year postpartum. Using regression analysis to test Belsky's model of the ecological determinants of parenting, they found that, as predicted, personal resources (such as self-esteem, depression, and coping skills) were most powerful in predicting parenting attitudes (as measured by the AAPI), followed by contextual sources of stress and support. Of these stress and support variables, lower scores on a composite measure of the frequency and quality of contacts with a variety of supportive sources was

the most powerful predictor of inappropriate developmental expectations, positive attitudes toward corporal punishment, and lack of empathic awareness. Only the role reversal subscale was unaffected by levels of social support, and was instead predicted by greater poverty. Being unmarried was associated with lower empathic awareness, but was otherwise not predictive of parenting attitudes and beliefs.

Some studies have documented a negative influence of the support system on the parenting cognitions of adolescent mothers. Dunst, Vance, and Cooper (1986) studied 21 teenage mothers enrolled in a social support intervention program. They found that the size of the support network correlated negatively with a scale measuring the belief that parents should play an important role in the education of their children. They hypothesize that those who have a more supportive network may have less opportunity to play with their own child and may feel they have a less important influence. Similarly, East and Felice (1996) found that high levels of grandmother-provided childcare assistance was associated with poorer parenting attitudes, lower knowledge about infant and child development, lower parenting confidence, and lower involvement of the adolescent in childcare. In their study, conflict with the maternal grandmother was also associated with more negative parenting attitudes and lower maternal involvement in daily childcare. However, there were interactions with both age and ethnicity. For younger teenagers (less than 17 at time of birth), having more childcare help from their own mothers was related to more appropriate expectations of child development, greater involvement in childcare, lower parenting stress and greater parenting confidence. Furthermore, when dividing the sample by ethnicity into White, Hispanic, and African-American, only White teenage mothers were found to have less positive parenting attitudes when receiving higher levels of grandmother childcare assistance. For African-American mothers, higher levels of grandmother assistance were associated with greater parenting stress, and for Hispanic mothers, more assistance from their mothers was associated with less involvement in their children's care.

In summary, there is some evidence that the hypothesized link between the teenage mothers' social support system and their parenting beliefs exist, although it has not been found consistently in all studies. While it has generally been found, as with adults, that greater social support is associated with more appropriate developmental expectations and more nurturant beliefs, some evidence of an interfering effect has been found. Furthermore, the flow of causality has not been firmly established — perhaps adolescents with other symptoms of psychological maladjustment are more prone to hold negative parenting beliefs and are also less likely to establish supportive networks.

Chapter 3: Methodology

Statement of Problem and Purpose of Study

Parenting cognitions have been linked to social support variables in adults (Corse et al., 1990; Cotterrell, 1986; Crnic et al., 1984) and the literature regarding the ecology of adolescent parenting hypothesizes a link as well (Nath et al., 1991; Whitman et al., 1987). However, few studies to date have explored this link empirically in any depth. Previous studies have focused on pregnant adolescents and have generally measured parenting cognitions and social support variables as unitary constructs. Furthermore, while ethnic variations in both constructs have been found, more research along these lines is needed.

The purpose of the current study is to explore the nature of the relationship between the adolescent mother's support system and parenting cognitions in depth. This will be done by examining the relationships between the multiple facets of each construct.

This study will expand upon previous research by using psychometrically sound, multifaceted measures of both social support and parenting cognitions validated with adolescent parents. Some aspects of the support system may interfere with the development of adaptive parenting cognitions while others may facilitate this development. Therefore, a detailed analysis of the relationships between subcomponents of these constructs should allow for a more powerful test of hypotheses than in some previous studies.

Another aim of this study is to explore ethnic differences in both social support and in parenting cognitions. Furthermore, the current study will expand on the previous literature by including four significant sources of support for the adolescent mother: friends, relatives, spouse/partner, and professionals. Special attention will be paid to the role of the maternal grandmother both as a source of support and interference.

Research Design

This study employed a correlational design to explore the relationship between the two main variables, parenting cognitions and social support. A series of regression

analyses were performed with parenting cognitions as the dependent variable, and social support variables as the predictors. Psychosocial adjustment, age and ethnicity were entered into the analyses as predictors as well, to control for their relationships with parenting cognitions.

Participants

Fifty-nine adolescent mothers, ranging in age from 14 to 20 ($M = 17.1$, $SD = 1.6$) participated in this study, although all were 19 or under at the time of the birth of their child. This sample is younger than the average teenage mother nationwide. Nationwide, 18 and 19-year-olds account for 64% of all births to teenagers (Ventura et al., 2001). However, in this sample 54% of respondents were 17 or younger at the time of the interview, which in some cases was a year or more after having given birth. The youngest mothers (under age 15) were over-represented in this sample, with only .02% nationwide and 7% in this study. The children of the teenage mothers in this study were all between the ages of two months to three years.

Of the total sample, 31 respondents identified themselves as African-American, 21 as Hispanic, 5 as African-American/Hispanic and 2 as "other." While this over-represents minority teenage mothers in the total U.S. population, it does reflect their higher fertility rates. African-American and Hispanic teenagers between the ages of 15 and 19 have fertility rates of 83.7 and 93.4, respectively, while the rate for non-Hispanic white teenagers is 34.0 live births per 1,000 women (Ventura, et al., 2001). Of the Hispanic participants, several were born outside the United States.

Participants were recruited from the "Living for the Young Family through Education" (LYFE) program in the New York City public schools, which serves adolescent parents and their families. Of the students contacted, all but one agreed to participate in the study. Students were required to be sufficiently proficient in English to be interviewed without the aid of a translator, although letters of parental consent in Spanish were made available for those students whose parents were Spanish-speaking. All but one had only one child. One participant with two children was included because

most recent research has not found a relationship between parity and parenting cognitions, particularly in the adolescent population (Brunelli et al., 1995; East et al., 1994; Reis, 1988; Reis, Barbera-Stein & Bennet, 1986; Seymore, Frothingham, Macmillan & Durant, 1990).

LYFE is a school-based support program for adolescent parents and their families incorporating daycare services in a nursery under the direction of early childhood teachers as well as social services provided by a social worker and family outreach paraprofessional. Daycare services are provided for children between the ages of two months and three years. While the program has no income eligibility requirements, approximately 95% of students enrolled in the LYFE program citywide are eligible for free lunch from the Board of Education (J. Davis, personal communication, April 17, 2001). The social services component serves to encourage school attendance, assist in the transition to post-high school education or employment and to help find future childcare placements.

Participating Schools and Programs

Four schools participated in this study. Two were traditional large high schools serving the zoned areas in which they were found, one was a smaller vocational high school, and one was a small alternative high school for pregnant and parenting teenagers. The dynamics of the school environment differed from school to school and were apparent literally as one walked through the door. In one of the large high schools, students passed through a metal detector as they went in. In the other, the school entrances were staffed by a team of school safety officers, who stood at the entrance. These security officers strictly enforced rules regarding the school dress code and permitted entry to the school building only between classes. In contrast, the security in the smaller schools usually consisted of a single officer at a desk who knew the students personally, sometimes letting them linger a while and chat. One student in the vocational high school even listed two school security guards as members of her support network.

The relationship between the faculty and students were typically more intimate in the smaller schools as well. At the school for pregnant and parenting teenagers, for instance, the principal knew every student by name as well as her daily schedule. In the smaller schools, students were more likely to list principals, assistant principals, and classroom teachers of varying subjects as sources of support. Students commented that these teachers gave them advice regarding childrearing, emotional support, or donations of clothes or toys. In these schools, staff was also encouraged to spend time in the LYFE nursery, feeding or reading to the children of the adolescent mothers there.

In all schools, the LYFE program was open by application to all students whose children fell within the age range of two months to three years, regardless of income. The nurseries had space for 10 to 20 children. In one school, it was observed that while several students showed an initial interest, not all followed up by completing and submitting the necessary forms. In each program, as the year went on, space became less and less available, so that some had to be turned away. One social worker commented that when space was becoming tight, she would give preference to those students who had no alternative childcare arrangements at home.

The LYFE social workers, in all schools, had close personal relationships with all LYFE students and knew them well, maintaining daily contact with them. However, some were at the site part-time, while others were at the school all week. Space and time constraints on the LYFE social workers and their students also differed from one site to another. At one school, a large outer office, decorated with photographs of LYFE mothers and their children, served as a gathering place for students. There, students would bring lunch or snacks and socialize with the LYFE staff and with each other. The social worker at that site also provided art supplies for the students and helped them make crafts to sell as fund-raisers. In contrast, at another site, the social worker's office was more like a narrow cubicle with barely space for one student to visit at a time. Outside that office, several signs in the guidance suite discouraged loitering and instructed students to leave if their counselor were unavailable. At this site, the social worker spent much of

his time at the LYFE nursery, where there was room to sit and talk. In some schools, group meetings with the LYFE social worker were scheduled regularly. At others, this was not possible because of conflicting student schedules and lack of space.

The provision of formal parenting education in these schools varied from school to school. In the school for pregnant and parenting students there were formal parenting classes taught daily as part of the regular curriculum, while in others, parenting education was provided less formally. Ongoing guidance in parenting skills was provided in daily contact between the parenting students and day care staff.

Instruments

Teacher's Report Form (Achenbach, 1991).

The Teacher's Report Form (TRF) is a commonly-used standardized rating scale of problem behaviors in children and adolescents ages 4 through 18, designed to be completed by a teacher who has known the student in a school setting for at least two months. It is closely related to the Child Behavior Checklist and the Youth Self-Report by the same author (Achenbach, 1991). This rating form was completed by the LYFE social workers assigned to the adolescent mothers regarding their observed psychosocial adjustment, except for one case in which it was completed by a teacher. The TRF consists of 3 scales: a one-item academic performance scale, a four-item adaptive functioning scale, and the body of the measure which is a 113-item behavior problem scale. Each item of the behavior problem scale is rated by the teacher from a scale of 0 (Not True) to 2 (Very True or Often True). The behavior problem scale is further subdivided into eight subscales: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. The summary of ratings for items in each subscale is converted to T-scores, and cutpoints for the identification of clinical ranges are suggested by the author (for sample items, please see Appendix C). For this study, only the total problem scale score was used to reflect psychosocial adjustment.

The problem behavior scale has good test-retest reliability (.92) and moderate inter-rater reliability (.54-.55). The subscale structure is supported by factor analysis and the TRF correlates very strongly with the Conners Revised Teacher Rating Scale (Goyette et al., 1978), another widely used teacher rating scale, with a correlation of .83 for the total scale scores and correlations of .63 to .83 on similar subscales. The TRF has also been shown to successfully discriminate clinically referred populations from non-referred populations (misclassification rate = 11%) (Achenbach, 1991).

Inventory of Social Contacts (ISC) (Richardson, 1984).

The Inventory of Social Contacts (ISC) is a structured interview which comprehensively assesses the adolescents' support network, including both supportive and interfering functions. A modified form of the ISC was administered in this study. In this measure, the respondent was asked to name all relatives, friends, and professionals whom she considers important in her life, whether as supportive or interfering members of her network. Next, ratings of supportiveness (or level of interference) on a 7-point scale were generated for each network member in each of three categories of support (childrearing, emotional and material), with a rating of 1 signifying "no support" and a rating of 7 signifying "extreme support" (for sample items, please see Appendix A). Childrearing support is defined to include instrumental childrearing assistance such as babysitting and diaper-changing as well as childrearing advice and guidance. Childrearing interference includes criticism of the mother's parenting skills, unwanted parenting advice, or "handling your child in a way you don't like." Emotional support is defined as "being there when you need to someone to talk to," while emotional interference involves "making you upset or hassling you." Material support includes the provision of food, money, toys, clothing, or other useful material while material interference includes borrowing, breaking, or using up the materials that the adolescent mother needs.

The original ISC has been modified in this study to exclude neighbors, which was found by Richardson and her colleagues (Richardson et al., 1991, 1995) to be the least commonly-reported source of support among adolescent mothers. In its place, the

categories of support by professionals and by partner/spouse are included in this study because of their prominence in the literature and hypothesized relationship to adolescent parenting (Crockenberg, 1986 & 1987). The partner/spouse sector was defined to include the adolescents' current partner or spouse, regardless of whether this individual is the father of the baby and regardless of current living arrangements. Crockenberg's (1987) found that this variable was predictive of maternal behavior in adolescent mothers. In addition, this structuring of the support measure allows for more meaningful comparisons to the adult literature, in which partner/spouse support has been closely studied (e.g., Crnic et al., 1984). Several respondents mentioned their partner's relatives as sources of support or stress. These network members were included in the family network sector.

Professional support was defined as "someone whose job it is to help you" and included paraprofessional support. This network category was included in this measure because the participants in this study were attending school and receiving the support of social workers, guidance counselors, day care providers, teachers and administrators. These sources of support are hypothesized to be significant resources for the adolescent mothers in this study, although previous research has generally not studied professional support of adolescent mothers in any depth. Crockenberg (1986) found that 74% of adolescent mothers in her sample reported receiving parenting advice from physicians, public health nurses, teachers, or counselor/therapist, and that most were satisfied with these contacts.

Participants provided six ratings (three support and three interference) for each member of her network. In order to derive scores that are comparable across networks sectors (i.e., relatives, friends, and professionals), the scores of all members of a given sector were summed and divided by the number of members in that sector. This procedure was repeated for all six types of support and interference, yielding 18 mean scores for each respondent. In addition, separate scores for the maternal grandmother and for the partner/spouse were derived. In some analyses, all scores of one type of support or interference (e.g., childrearing) were summed across network sectors, and in others, all

scores of one network sector (e.g., friends) were summed across types of support or interference.

The ISC takes approximately 20 to 30 minutes to administer, depending on the number of individuals listed by the respondent. Inter-rater reliability data for the ISC is not available from the author. In this study, inter-rater reliability was measured by having six of the fifty-nine interviews taped and re-scored by an independent research assistant who is a graduate student in Educational Psychology. Validity studies show that the ISC has been found to relate to quality of parenting in single-mother households (Richardson, 1984). Richardson et al. (1995) found that peer support correlated negatively with parenting stress in adolescent mothers (r=-.34 to -.36). While it has not been extensively studied, the ISC was chosen for this study because it has been used for research purposes with adolescent and single mothers and it is a comprehensive measure of network dimensions identified by Nath et al. (1991) as being of interest in adolescent mothers. These include type, amount, and source of support. Network size was computed from the interview responses by totaling all network members with a score of at least "2" in one area of support or interference. Network members who were assigned a score of "1" in all areas (indicating no support or interference at all), were not included in calculating network sizes. However, for maternal grandmother support and partner support, respondents who reported having no contact with these network members were assigned values of "1" in all areas of support and interference for statistical analyses. In such cases, the absent partners and maternal grandmothers were not included in the calculations of the network sizes, however. The supportive network percentage was measured by computing the total number of network members with a score of "4" or more in one or more areas of support and dividing this by the total number of network members. This provided an index of the size of the respondents' supportive network, in a way that could be meaningfully compared across individuals. An index of conflicted network percentage was computed similarly using interference scores. Finally, a ratio of supportive network

members to interfering network members was calculated, in order to have an index of the interaction between support and conflict.

Adult-Adolescent Parenting Inventory (AAPI) (Bavolek, 1984).

The AAPI has been used extensively to study adolescents' parenting cognitions. It consists of four subscales that measure four constructs associated with the values, attitudes and beliefs of potentially abusive parents: inappropriate parental expectations of the child, lack of empathy toward children's needs, parental value of physical punishment, and parent-child role reversal. The instrument consists of 32 statements rated by the respondent on a 5-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree." The reading level is at the sixth grade and should take approximately 20 to 30 minutes (for sample items, please see Appendix B). Subscale scores are derived by summing all ratings and dividing by the number of items in each subscale, with higher scores reflecting more appropriate parenting attitudes in all four subscales. These scores may then be converted to standard scores, using the appropriate norming table according to age, (adult and adolescent) sex (male, female, and combined), ethnicity (African-American, White, and combined) and status (abused/non-abused and abusive/non-abusive). Standard scores of 1 and 2 (below the 5th percentile) on any construct are to be considered a risk indicator for abusive parent-child interactions. For the purposes of this study, raw scores were converted to mean scores for each subscale, in order to compare data across subscales and across ethnicities, which is not possible to do with the norms given in the manual. East and Felice (1996) and Fox et al. (1987) used a similar procedure with their multi-ethnic samples.

The AAPI was normed on more than 6500 adolescents, including 305 abused participants, as well as abusive and non-abusive adults. The four-subscale structure is supported by factor analysis and the subscales have good internal consistency in adolescents (.70 to .82) and adequate test-retest reliability (.39 to .85 for the subscales, .76 for all items combined) (Bavolek, 1984). The AAPI has been shown to successfully discriminate abusive from non-abusive parents, measure attitude changes after exposure to

parenting education (Bavolek, 1984) and discriminate between the parenting cognitions of younger and older adolescent mothers (Bavolek, 1991). Furthermore, Baranowski, Schilmoeller, and Higgins (1990) found that the developmental expectations subscale correlated with HOME scores for adolescent mothers and their 12-month-old infants, and that the empathy and corporal punishment subscales correlated with the HOME scores of adult mothers and their 12-month-old infants. Juang and Luster's study (1996) with adolescent mothers found that the empathy subscale scores measured prenatally predicted HOME scores at 12 months.

Procedure

The investigator visited the participating school and delivered a short introduction about herself and the study during LYFE group meetings, after which consent forms were distributed, to be signed by both parents (for students under the age of 18) and the students themselves. A copy of the consent form can be found in Appendix G. A Spanish form of the consent form was made available. Where meeting with students in a group forum was not possible, participants were recruited by the LYFE social worker and a short introduction to the study and explanation of the procedure was given by the investigator before commencing the actual interview. Participants were offered $15 remuneration for their participation as well as a small picture book for the student's child. Once the investigator had obtained consent, participants were administered both the ISC interview and the AAPI questionnaire in an individual session, with varied order of presentation. Interviews were conducted during students' lunch periods or after school and were usually completed within one to two sessions. A script of the introductory statements to the interview can be found in Appendix D. The researcher read the AAPI to the participants to facilitate comprehension and completion of all questions. Interviews were tape-recorded and a sample of interviews was submitted for scoring to a research assistant in order to calculate inter-rater reliability for the ISC. On the consent form, participants were given the option to refuse to be audiotaped. LYFE social workers filled

out the TRF forms for each student, with the exception of one student who was very new to the LYFE program and whose TRF information was provided by a classroom teacher. In most other cases, the LYFE social worker was the best reporter of behavior, because he or she knew the adolescent mothers well, had daily contact with them, and could report on a range of behavior both inside and outside the classroom. The procedures for this study were reviewed and approved by the Institutional Review Board of the City University of New York Graduate Center as well as the Division of Assessment and Accountability of the Board of Education of the City of New York. Letters of approval from these review boards can be found in Appendix H.

Rationale and Hypotheses

The following hypotheses involve relationships between social network variables and parenting cognitions. Unless stated otherwise, all analyses included age, ethnicity, and pyschosocial adjustment as predictors, because of their demonstrated relationships to the dependent variable. Psychosocial adjustment was included because the literature suggests a connection between parenting attitudes and social and emotional functioning. For example, Larsen and McCreary Juhasz (1985) found significant correlations between the AAPI subscales and a self-report measure of social-emotional maturity. Unless stated otherwise, the parenting cognition subscales (i.e., Parental Expectations, Empathy, Value of Physical Punishment, and Role Reversal) were combined into a composite score for regression analyses to reduce the number of variables and to simplify the analysis. The subscales have been found to correlate significantly with one another (.51 to .70), (Bavolek, 1984; East & Felice, 1996) and overall test-retest reliability has been .76 (Bavolek, 1984), justifying its use as a composite score. In this section, when a variable is said to have a positive relationship to parenting cognitions, it is meant that variable is expected to correlate with more appropriate or adaptive parenting cognitions.

There is conflicting evidence regarding the importance of the size of the social network in the adolescent's adjustment to parenthood. Barrera (1981) found that network size interacted with stress to reduce symptomatology in adolescent mothers with high

stress. However, Stevens (1988) found that overall network size did not predict parenting skills and actually showed a negative correlation with parenting skills. Conflicted support, or interference, has not been studied extensively but has been hypothesized to interfere with the development of parenting skills (Barrera, 1981; Richardson et al., 1991). Consistent with this, East and Felice (1996) found that conflict with the maternal grandmother was associated with less appropriate parenting attitudes and low maternal involvement with childcare. In view of these points, the following hypothesis is predicted:

H01: In predicting parenting cognitions from the supportive percentage of the overall network and the interfering percentage of the overall network, supportive percentage will have a positive relationship with parenting cognitions and interfering percentage of the network will have a negative relationship to parenting cognitions.

Past research has suggested that the beneficial effect of social support on teenage parenting depends on its source. For example, Richardson et al. (1991, 1995) have identified friends and family as the most frequent sources of all types of support for adolescent mothers, and both sources of support have been associated with greater parenting satisfaction and less parenting stress (Unger & Wandersman, 1985). Support from family has been linked to better parenting skills (Stevens, 1988) and from friends to decreased parenting stress (Richardson et al., 1995). Partner support has been found to predict more positive childrearing attitudes (Brunelli et al., 1995).

H02: In predicting parenting cognitions from overall levels of support from the following sources: family, friends, partner/spouse, and professionals, all sources of support will be significant, but support from family and friends will be the most powerful predictors of parenting cognitions. In addition, separate analyses will be run using each of the four parenting subscales as a dependent variable whenever a source of support is found to be a significant predictor of parenting attitudes. No particular hypotheses are advanced in connection to this analysis; rather, this is an exploratory analysis to determine whether social support differentially affects various aspects of parenting cognitions.

Once the significant sources of support in predicting parenting cognitions have been established from the above analysis, follow-up analyses will be conducted to determine which types of support from those sources are the most significant predictors. Richardson and colleagues (Richardson et al., 1995) found that friends were most likely to provide emotional support rather than other types of support and that this type of support from friends was most strongly related to reduced parenting stress. Childcare support (Stevens, 1988) and emotional support (Coletta, 1981) are family support variables that are strongly linked to parenting skills. Of all the types of partner support, emotional support has been most predictive of parenting attitudes (Brunelli et al., 1995). In view of the preceding points, the following hypotheses are proposed:

H03: In predicting parenting cognitions from the three types of family support (i.e., childrearing, emotional, and material), childrearing support will emerge as the most important predictor of parenting cognitions.

H04: In predicting parenting cognitions from the three types of partner/spouse support, emotional support will emerge as the most important predictor of parenting cognitions.

H05: In predicting parenting cognitions from the three types of friends' support, emotional support will emerge as the most important predictor of parenting cognitions.

Interference has been most commonly reported as emanating from family rather than friends (Richardson et al., 1991) and conflict with the maternal grandmother has been linked to negative parenting outcomes (East & Felice, 1996). In view of these points, the following hypothesis is predicted.

H06: In predicting parenting cognitions from overall interference from all sources (i.e., family, friends, professionals, and partner/spouse), interference from family will be the most significant negative predictor.

Following the identification of significant sources of interference, follow-up regression analyses will be conducted to determine which type of interference from those sources is most predictive of parenting cognitions. Richardson and colleagues

(Richardson et al., 1995) found that of the types of interference, childrearing and emotional interference were most common in families. East and Felice (1996) found that childcare-related conflict from the maternal grandmother predicted negative parenting attitudes in adolescent mothers, and Crockenberg (1987) found that maternal rejection by the maternal grandmother predicted punitive parenting in adolescent mothers.

H07: In predicting parenting cognitions from family interference, childrearing and emotional interference will be the most significant negative predictors.

A more in-depth analysis of professional childrearing support (including childrearing advice and parenting education) will be carried out. While the literature suggests that professional interventions can promote more adaptive parenting cognitions (Field et al., 1980; Showers, 1991), their effect may be underestimated in an analysis where professional support is compared with informal support.

H08: In predicting parenting cognitions, level of professional childrearing support will show a positive relationship to parenting cognitions.

A more in-depth analysis of the effect of the childrearing support of the maternal grandmother will be carried out, as this function has been identified as significant in the literature. High levels of maternal grandmother support have been found to correlate with the provision of a more stimulating home environment and more securely attached infants (Frodi et al., 1984; Spieker & Bensley, 1994). High levels of conflict with the maternal grandmother have been associated with less nurturant parenting cognitions (East & Felice, 1996). Because support and interference are found to co-occur (East & Felice, 1996), it is hypothesized that support and interference will interact such that high levels of support and low levels of interference will produce the most beneficial effect on parenting cognitions.

H09: In predicting parenting cognitions from maternal grandmother childrearing support and interference, grandmother childrearing support will predict more appropriate parenting cognitions and grandmother childrearing interference will have a negative influence on parenting cognitions.

H1O: Interaction effects of support and interference from the maternal grandmother will be analyzed. It hypothesized that the beneficial influence of support will be moderated by the negative influence of interference.

Additional analyses

Descriptive analyses of the support networks and the parenting cognitions of the respondents will be carried out.

1. A comparison of the means of support and interference from different sources and of different types will be carried out, using multivariate analysis of variance. This will determine which network sectors are most significant in providing which types of support and interference in this sample.

2. Further analysis will be done to determine whether these patterns vary by ethnic group. T-tests will be carried out to compare the means of the ethnic groups on the ISC.

3. Comparison of the mean scores of the parenting cognitions subscales will be contrasted with published norms for each ethnic group, using separate analyses of variance for each ethnic group. The scores from African-American participants will be compared with norms for non-abused African-American adolescent females, while the scores from the Hispanic group will be compared with norms from the general non-abused adolescent population (male and female). Furthermore, whether parenting cognitions vary according to ethnicity within this sample will be determined, using t-tests. For this analysis, raw scores will be used.

4. In support of its use as a control variable, correlations between psychosocial adjustment, support and interference, and parenting cognitions will be presented.

Chapter 4: Results

Statistical Analyses

Hypotheses 01-09 were analyzed using multiple regression analyses, using parenting cognitions as the dependent variable and some combination of support variables as the predictor variables. In all analyses, age, ethnicity, and psychosocial adjustment were entered first to control for their contribution to the variance in the dependent variable.

In H01 and H09, the significance of the beta weights was investigated. In Hypothesis 01, it was hypothesized that the supportive percentage of network would have a positive beta weight and that the interfering percentage of network would have a negative beta weight. In Hypothesis 09, it was expected that grandmother childrearing support would have a positive beta weight and that grandmother childrearing interference would have a negative beta weights.

In H02-H07, the significance of the beta weights was investigated and the relative size of the beta weights of the different predictor variables were compared. It was predicted that support variables would have a positive beta weight and that interference variables would have a negative beta weight.

In H08, the significance of the beta weight of the single predictor variable was analyzed. In H10, the significance of the beta weights from the two main variables and of the cross product were investigated.

An alpha level of .05 was used for all statistical tests, unless otherwise noted.

Outcome Variable

Adult-Adolescent Parenting Inventory (A.A.P.I) Scores

The AAPI (Bavolek, 1984) is a 32-item Likert-type scale measuring parenting cognitions. It consists of statements regarding child development and childrearing which the respondent may agree or disagree with on a 5-point scale. Four subscales are

included, each measuring a factor or construct: Inappropriate Developmental Expectations, Lack of Empathy Toward Child's Needs, Parental Value of Corporal Punishment, and Parent-Child Role Reversal. On all subscales, a higher score reflects more adaptive or appropriate parenting cognitions. Lower scores are associated with greater risk of abusive parenting. For all subscale analyses, raw scores were converted to mean scores to make meaningful comparisons across factors.

On the Adult-Adolescent Parenting Inventory, the mean raw score was 109.1 (n=58, SD= 10.3). Of the 59 participants, one extreme low score, nearly three standard deviations below the mean was noted, and this subject's scores were dropped from all subsequent analyses involving the AAPI. Means and standard deviations for the AAPI subscale scores are found in Table 1.

Table 1

Means and Standard Deviations for the AAPI

N=58

	Minimum	Maximum	Mean	Standard Deviation
AAPI Total (Raw)	92.00	131.00	109.10	10.31
Inappropriate Developmental Expectations*	2.67	5.0	3.78*	.47
Lack of Empathy	2.13	4.88	3.42	.68
Value of Corporal Punishment	2.0	4.50	3.37	.51
Parent-Child Role Reversal	1.63	4.63	3.17	.69

*Significantly higher than other scales,(F=10.195, df = 3,228, p<.01).

Mean scores on AAPI subscales ranged from 3.2 to 3.8 (on a scale from 1 to 5), indicating moderately high scores on all subscales. Standard deviations for the four subscales ranged from ranged from .5 to .7.

Comparisons to the author's published data (Bavolek, 1984) reveal that this sample's AAPI subscale scores were slightly higher than published norms for the general non-abused adolescent population, regardless of sex and race. The ethnic minority teenagers in this sample scored .2 to .4 points (out of a scale of 1 to 5 points) higher on each of the mean subscale scores, than the norms given for all ethnic groups combined. The African-American subsample in this study had higher mean scores (.2 to .8 points higher) than the African-American Non-Abused Adolescent scores reported by Bavolek.

Bavolek (1984) suggests that individuals with a sten, or standardized, score of 1 or 2 in any subscale are at high risk for abusive interactions with their children. These scores represent the lowest 6.7% of the population on any given subscale. Using the general adolescent population norms for comparison, only four participants in the current study scored a sten score of 2 (6.9%) on one subscale and there were no sten scores of 1 on any subscale. No participants scored sten 2 or lower on more than one subscale. Of these low scores, two were in the Parental Value of Corporal Punishment subscale and two were in the Role Reversal subscale. Comparison of the AAPI scores of the African-American participants in this study with the African-American norms published by the measure's author reveal no subscale score falling in the high risk range for this ethnic group.

In comparing the teenage mother's scores to adult norms, all subscale means fell slightly below (.01 to .6 points lower) those of the adults described in Bavolek (1984). This was true when comparing the scores of the total sample with those of the general non-abused adult population, as well as in the comparisons of the African-American subsample with the African-American female adult scores reported in the measure's manual.

Independent Variables

The variables entered in the regression equation are described below:

Teacher Report Form (TRF)

The TRF (Achenbach, 1991) is a 113-item rating scale of problem behaviors. This measure was included to represent psychosocial adjustment, a variable thought to underlie both the ability to make supportive social contacts and to form appropriate parenting cognitions. The problem behaviors covered by the TRF include withdrawn behavior, somatic complaints, anxious/depressed symptoms, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior.

Scores on the Teacher Report Forms ranged from 0 to 65, with a mean of 13.47 and a standard deviation of 13.67. There was a pronounced skew; that is, most scores fell toward the lower part of the range. However, the presence of mostly low scores is to be expected in a normal school population, because the TRF is essentially a measure of psychopathology. The results obtained here are comparable to those cited in the author's manual (Achenbach, 1991), where a mean raw score of 15.4 and a standard deviation of 19.5 were found for 379 non-referred female students ages 12-18.

Inventory of Social Contacts (ISC)

The ISC (Richardson, 1984) is a structured interview that measures the number of people in the respondent's social network who are important in terms of the support they offer or the conflict or stress they create in her life. Each person is rated on a scale of 1 to 7 in terms of how helpful they are in three areas of support and three areas of conflict, or interference: childrearing (including instrumental and informational childrearing assistance), emotional, and material/financial. Also, each member of the network is assigned to one of four networks: friends, family, partner, or professional, depending on the nature of their relationship with the respondent.

Inter-rater reliability for the ISC was calculated by correlating the investigator's scores with those of a research assistant, for six of the taped interviews. The research assistant assigned scores by listening to the audiotaped interviews. Correlations were computed for the number of supportive network members and the number of interfering

network members and for summed support and interference scores of all sectors. These scores were selected because they are summaries incorporating other raw scores. Correlations of the two sets of scores ranged from .92 to 1.0, indicating a high level of agreement.

The average total network size was 19.24, with a standard deviation of 7.29. Social networks were overwhelmingly more supportive than interfering. Percentage of network members with high support scores (a score of 4 or more on any area of support) averaged 90%, with a standard error of 12%, and ranged from 55% to 100%. The percentage of network members producing high interference (a score of 4 or more on any area of interference) was lower and more variable, with a mean of 30%, a standard deviation of 21% and ranging from 0% to 78%. Of the four network sectors, family networks were largest, averaging 9.23 members (S.D.= 3.99). Friend and professional networks averaged 4.54 and 4.46 respectively, (S.D. = 3.26 and 2.79). Partner networks were the smallest and usually (81.4%) consisted of a single partner. Of the remaining respondents, 8.5% reported that there was no significant partner in their networks and another 10.2% had a partner network size of two, usually consisting of the father of the baby and a current boyfriend. One respondent had children from two different fathers.

The interviews revealed that support networks can have varied forms and functions for the adolescent mother. This was most clearly seen in family support. About half the participants reported receiving significant support and assistance of all kinds from members of the baby's father's family. In some cases, the "in-law" relationships were more supportive than the relationship of the teenage mother to her own family of origin, though the majority of respondents were not married. A few students mentioned that close family members were living in other countries, usually in South America or Central America, but that they were supportive from afar through phone calls and letters. Although many students lived at home with at least one natural parent, several had no relationship with their father, and four had no contact with their mothers, usually because the mother was deceased. Usually, other family members stepped in to fill the void; for

one student whose mother had died, there were 16 family members listed including aunts, uncles, cousins, and a stepmother. However, there was not always a clear-cut "mother figure." And although most family networks were large, one student described hers as consisting only of one member, her mother.

A few of the teenage mothers commented that they received very little support or had few social contacts (e.g., "I don't associate with too many people" and "Nobody helps me"). While this was rare, it was more common for respondents to comment that since childbirth their peer networks had become smaller or less supportive, as they had less time to spend with friends. One respondent mentioned having no same-age peers. More commonly, the friend network contained several adult friends, such as friends of the family or parents of teenage friends. Sometimes, friend support came from co-workers or work supervisors.

Professional support usually came from those professionals whose job it was to provide emotional or childcare support such as the LYFE staff, guidance counselors, or other mental health professionals. However, teachers were often mentioned as well and these included teachers of every subject including vocational and sports instructors as well as teachers of academic subjects. A few respondents mentioned receiving significant support from church pastors or church members.

The partner category usually elicited the most extreme scores, with respondents reporting high levels of support and interference, often at the same time. Some made comments such as "He's a headache" or "Can I give him a 10?" (in interference), although several partners were described as highly supportive in every area and not at all interfering. For others, the reverse was true, offering little or no support and extremely high levels of conflict and stress. In some cases, these difficult relationships were offset by the presence of a more supportive current boyfriend.

Descriptive statistics including network sizes and composite (summed over childrearing, emotional, and material) support and interference scores are summarized in Table 2 below.

Table 2

Inventory of Social Contacts

Means and Standard Deviations

Network Sector	Network size	Composite Support Score	Composite Interference Score
Family	9.27 (3.99)	13.40 (3.07)	6.64 (2.38)
Friends	4.54 (3.26)	13.82 (13.59)	4.74 (2.06)
Partner	1.02 (.44)	14.99 (6.18)	9.00 (4.93)
Professional	4.46 (2.79)	13.40 (3.9)	4.03 (1.35)
Maternal GM	N.A.	14.80 (.62)	8.41 (4.82)

As can be seen, partners provide the highest levels of both stress and support. Family, friends, and professionals provide similar amounts of support, although interference levels from family members are higher than those of friends and professionals. Within the family network, maternal grandmothers appear to provide higher levels of support but also high levels of stress. Support and interference scores for specific areas will be reported and discussed in a later analysis.

The results for friend and family networks are similar to those found by Richardson et al. (1995) with the ISC. Support and interference scores in this sample were all within .5 points of those reported in that study, with a few exceptions. Family childrearing interference was higher in the study by Richardson and colleagues (3.09 versus 2.21) and the family interference composite was higher as well (8.12 versus 6.64). Family network sizes were nearly twice as large in this study as in the Richardson et al. study, averaging 9.24 and 5.52, respectively.

Testing Hypotheses

Results of the regression analyses testing the ten main hypotheses are presented in Tables 3 through 13. In each regression analysis, age, ethnicity, and psychosocial adjustment were entered into the equation first to control for their contribution to parenting cognitions. Ethnicity is represented by the two dummy variables X1 and X2, where X1 has a value of 1 for African-Americans, and X2 has a value of 1 for Hispanics.

In Hypothesis 01, the relationship between network size variables and parenting cognitions was explored. Results of the regression analysis are presented in Tables 3 and 4. First, total network size was entered into a regression analysis together with the background variables of age, psychosocial adjustment, and ethnicity to determine its contribution to parenting cognitions. The hypothesis was not supported by the regression analysis, which had an F statistic of 1.044 (df = 5, 52; p.=.402), indicating that total network size did not have a relationship with parenting cognitions. The hypothesis was further tested by examining the contribution of relative sizes (not the absolute sizes) of support and conflicted networks. It was hypothesized that even if the absolute network size were not predictive of parenting attitudes, that the proportions of supportive and interfering individuals within the network would predict parenting outcomes. This was done by entering the percentages of supportive and interfering network members into regression analyses. The hypothesis was not supported by the regression analysis, which had an F statistic of 1.355 (df = 6,51; p=.251).

Table 3

Regression: Hypothesis 01A

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	553.066	5	110.613	1.044	.402[a]
	Residual	5510.313	52	105.968		
	Total	6063.379	57			

a. Predictors: (Constant), total network size, trf total score, AGE, X2, X1

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	112.421	16.294		6.900	.000
	AGE	-9.03E-02	.903	-.014	-.100	.921
	X1	4.075	4.817	.192	.846	.401
	X2	-3.139	4.540	-.153	-.691	.492
	trf total score	-.138	.113	-.184	-1.218	.229
	total network size	1.313E-02	.203	.009	.065	.949

a. Dependent Variable: aapi total raw

Table 4

Regression: Hypothesis 01B

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	833.880	6	138.980	1.355	.251[a]
	Residual	5229.499	51	102.539		
	Total	6063.379	57			

a. Predictors: (Constant), conflicted percent of network, AGE, supportive percent of network, X1, trf total score, X2

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	121.563	18.087		6.721	.000
	AGE	-2.10E-02	.887	-.003	-.024	.981
	X1	5.109	4.785	.240	1.068	.291
	X2	-2.220	4.454	-.108	-.498	.620
	trf total score	-7.53E-02	.118	-.100	-.638	.526
	supportive percent of network	-9.461	11.395	-.111	-.830	.410
	conflicted percent of network	-10.900	7.031	-.220	-1.550	.127

a. Dependent Variable: aapi total raw

Hypothesis 02 (Table 5) examined the relative role of different sources of support (i.e., family, friends, partner, professional) in contributing to parenting cognitions. For this analysis, support was totaled over all three areas (childrearing, emotional, material) for each of the four networks. In this regression analysis, total family support, total friend support, total partner support, and total professional support were entered as predictor variables. The hypothesis was not supported by the regression analysis, which had an F statistic of .941(df= 8, 49; p=.492).

Table 5

Regression: Hypothesis 02

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	807.636	8	100.954	.941	.492[a]
	Residual	5255.744	49	107.260		
	Total	6063.379	57			

a. Predictors: (Constant), total professional support, AGE, total partner support, X1, trf total score, total friend support, total family support, X2

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	122.976	17.489		7.031	.000
	AGE	-.293	.928	-.046	-.316	.753
	X1	4.284	5.153	.201	.831	.410
	X2	-3.086	4.528	-.150	-.677	.501
	trf total score	-.139	.119	-.185	-1.166	.249
	total family support	-.730	.610	-.219	-1.198	.237
	total friend support	.136	.475	.050	.286	.776
	total partner support	-9.41E-02	.255	-.055	-.369	.714
	total professional suppor	.183	.428	.067	.427	.672

a. Dependent Variable: aapi total raw

In Hypothesis 03, the contribution of family support variables to parenting cognitions was highlighted (Table 6). Each family support variable was entered as a predictor variable in the regression analysis. These included family childrearing support, family emotional support, and family material support. The hypothesis was not supported by the regression analysis, which had an F statistic of .907 (df = 7,50; p=.509).

Table 6

Regression: Hypothesis 03

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	682.958	7	97.565	.907	.509[a]
	Residual	5380.421	50	107.608		
	Total	6063.379	57			

a. Predictors: (Constant), family material support, trf total score, AGE, X2, X1, family emotional sup, family childrearing sup

b. Dependent Variable: aspi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	116.70	16.485		7.079	.000		
	AGE	-.183	.932	-.028	-.196	.845	.845	1.183
	trf total score	-.123	.118	-.164	-1.048	.300	.721	1.388
	X1	3.282	5.025	.154	.653	.517	.318	3.144
	X2	-4.404	4.709	-.215	-.935	.354	.335	2.985
	family childrearing sup	-.024	.244	-.048	-.099	.922	.076	13.210
	family emotional support	.157	.176	.358	.891	.377	.110	9.083
	family material support	-.170	.225	-.375	-.754	.455	.072	13.916

a. Dependent Variable: aspi total raw

Hypothesis 04 examined the contribution of partner support variables to parenting cognitions (Table 7). In this regression analysis, partner childrearing support, partner emotional support, and partner material support were entered as predictor variables. The hypothesis was not supported by the regression analysis, which had an F statistic of 1.126(df =7,50; p=.362).

Table 7

Regression: Hypothesis 04

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	825.870	7	117.981	1.126	.362[a]
	Residual	5237.510	50	104.750		
	Total	6063.379	57			

a. Predictors: (Constant), mean partner material support, X2, AGE, trf total score, mean partner emotional support, X1, mean partner childcare support

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	116.129	15.593		7.448	.000
	AGE	-.219	.913	-.034	-.239	.812
	trf total score	-.149	.115	-.198	-1.297	.201
	X1	5.894	4.925	.277	1.197	.237
	X2	-2.188	4.509	-.107	-.485	.630
	mean partner childcare support	.378	1.139	.078	.332	.741
	mean partner emotional support	-1.429	.969	-.315	-1.474	.147
	mean partner materiel support	.442	1.273	.094	.347	.730

a. Dependent Variable: aapi total raw

In Hypothesis 05, the relationship between friend support variables and parenting cognitions was explored (Table 8). The predictor variables were friend childrearing support, friend emotional support, and friend material support. The hypothesis was not supported by the regression analysis, which had an F statistic of .982 (df = 7,50; p=.455).

Table 8

Regression: Hypothesis 05

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	733.054	7	104.722	.982	.455[a]
	Residual	5330.325	50	106.607		
	Total	6063.379	57			

a. Predictors: (Constant), friend material support, AGE, trf total score, X2, X1, friend emotional support, friend childrearing support

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	115.15	15.487		7.435	.000		
	AGE	-.138	.905	-.021	-.152	.879	.889	1.125
	trf total score	-.113	.115	-.151	-.982	.331	.745	1.343
	X1	6.002	5.116	.282	1.173	.246	.304	3.289
	X2	-3.017	4.503	-.147	-.670	.506	.363	2.755
	friend childrearing support	-.121	.344	-.225	-.352	.726	.043	23.320
	friend emotional support	-.057	.295	-.102	-.193	.848	.062	16.085
	friend material support	.069	.309	.129	.223	.824	.052	19.145

a. Dependent Variable: aapi total raw

Hypothesis 06 analyzed the composite interference scores from the four network sources (friend, family, partner, and professional). Results are presented in Table 9. These included total family interference, total friend interference, total partner interference, and total professional interference. As was done with the support variables in Hypothesis 02, the interference scores were summed for each source of interference across the three types of interference (childrearing, emotional, and material) to determine their relative contribution to parenting attitudes. The hypothesis was not supported by the regression analysis, which had an F statistic of 1.609 (df = 8,49; p=.147).

Table 9

Regression: Hypothesis 06

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1261.685	8	157.708	1.609	.147[a]
	Residual	4801.714	49	97.994		
	Total	6063.379	57			

a. Predictors: (Constant), total professional interf., AGE, X1, total family interference, trf total score, total friend interference, total partner interference, X2

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	123.964	17.295		7.168	.000
	AGE	-.299	.966	-.046	-.309	.759
	trf total score	-4.14E-02	.119	-.055	-.348	.729
	X1	2.848	4.712	.134	.604	.548
	X2	-3.680	4.339	-.180	-.848	.400
	total family interference	-1.764	.803	-.402	-2.196	.033
	total friend interference	-.108	.838	-.021	-.128	.898
	total partner interference	6.638E-02	.384	.032	.173	.863
	total professional interf.	.791	1.133	.104	.699	.488

a. Dependent Variable: aapi total raw

In Hypothesis 07, the contribution of different types of family interference to parenting cognitions was explored. Results are presented in Table 10. These interference variables included family childrearing interference, family emotional interference, and family material interference. The hypothesis was not supported by the regression analysis, which had an F statistic of 1.888(df = 7,50; p=.091).

Table 10

Regression: Hypothesis 07

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1267.548	7	181.078	1.888	.091[a]
	Residual	4795.832	50	95.917		
	Total	6063.379	57			

a. Predictors: (Constant), mean family material interf., X1, AGE, mean family childrearing interf., trf total score, X2, mean family emotional interf.

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	126.228	16.233		7.899	.000
	AGE	-.416	.903	-.065	-.463	.645
	trf total score	-3.59E-02	.119	-.048	-.302	.764
	X1	3.222	4.588	.151	.702	.486
	X2	-4.062	4.302	-.199	-.944	.350
	mean family childrearing interf.	-2.919	2.092	-.275	-1.395	.169
	mean family emotional interf.	.130	2.261	.013	.057	.955
	mean family material interf.	-2.499	2.246	-.187	-1.113	.271

a. Dependent Variable: aapi total raw

Hypothesis 08 examined the relationship between professional childrearing support and parenting cognitions (Table 11). Other professional support variables were not entered in this equation because it was hypothesized that professional interventions directly related to childrearing would be the most likely of all professional support to have a positive effect on parenting outcomes. The hypothesis was not supported by the regression analysis, which had an F statistic of 1.15(df = 5,52; p=.346).

Table 11

Regression: Hypothesis 08

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	603.890	5	120.778	1.150	.346[a]
	Residual	5459.490	52	104.990		
	Total	6063.379	57			

a. Predictors: (Constant), professional childrearing support, AGE, trf total score, X2, X1

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	111.111	15.412		7.209	.000
	AGE	-.108	.896	-.017	-.120	.905
	trf total score	-.131	.113	-.175	-1.159	.252
	X1	4.156	4.779	.195	.870	.388
	X2	-2.746	4.495	-.134	-.611	.544
	professional childrearing support	6.157E-02	.088	.094	.699	.488

a. Dependent Variable: aapi total raw

Hypothesis 09 studied the contribution of maternal grandmother childrearing support and interference to parenting cognitions (Table 12). These two maternal grandmother variables in particular have been linked in the past to parenting outcomes in adolescent mothers. In this analysis, the F statistic was 1.199 (df = 6,51; p=.322) and so the hypothesis was not supported.

Table 12

Regression: Hypothesis 09

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	749.542	6	124.924	1.199	.322[a]
	Residual	5313.838	51	104.193		
	Total	6063.379	57			

a. Predictors: (Constant), mgm childrearing interf., X1, AGE, mgm childrearing support, trf total score, X2

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	118.871	15.833		7.508	.000
	AGE	-.152	.896	-.024	-.170	.866
	trf total score	-9.35E-02	.119	-.125	-.783	.437
	X1	2.694	4.869	.127	.553	.582
	X2	-4.339	4.572	-.212	-.949	.347
	mgm childrearing suppor	-.553	.683	-.120	-.810	.422
	mgm childrearing interf.	-.605	.770	-.115	-.786	.436

a. Dependent Variable: aapi total raw

Closely related to the previous hypothesis, Hypothesis 10 examined the relationship between composites of maternal grandmother support and interference and parenting cognitions. Results are presented in Table 13. Because maternal grandmother support and interference have been found to co-occur, the contribution of the interaction between interference and support generated by the maternal grandmother was analyzed as

well. In this analysis, total maternal grandmother support and total maternal interference as well as the maternal grandmother support by interference interaction were entered as predictor variables. However, total maternal grandmother support was later excluded due to colinearity with the other variables. The hypothesis was not supported by the regression analysis, which had an F statistic of 1.688 (df = 6,51; p=.143).

Table 13

Regression: Hypothesis 10

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1004.425	6	167.404	1.688	.143[a]
	Residual	5058.954	51	99.195		
	Total	6063.379	57			

a. Predictors: (Constant), mgm support x interference interaction, AGE, X1, trf total score, total mgm interference, X2

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	120.313	15.268		7.880	.000
	AGE	-6.64E-02	.871	-.010	-.076	.939
	trf total score	-7.75E-02	.117	-.103	-.664	.510
	X1	2.789	4.689	.131	.595	.555
	X2	-4.641	4.410	-.227	-1.053	.298
	total mgm interference	-.265	.378	-.125	-.699	.488
	mgm support x interference interaction	-.233	.228	-.188	-1.022	.311

a. Dependent Variable: aapi total raw

Thus, the regression analyses failed to reach significance at the .05 level. Only one hypothesis, in which family childrearing, emotional, and material interference were entered as predictors of parenting cognitions approached statistical significance. When the background variables of age, TRF scores, and ethnicity were removed from the equation, this test of the hypothesis still failed to reach significance at the .05 level. However, when the three family interference scores were summed together as a composite, this composite family interference score did significantly predict parenting cognitions ($F = 2.591$, $df = 5, 52$, $p. = .036$) even when age, ethnicity, and psychosocial variables were entered into the equation. The beta weights of the variables in this equation are presented in Table 14. The family interference variable had a negative beta weight indicating that adolescents with higher levels of combined family interference had less adaptive parenting cognitions. Further regression analyses using the individual AAPI subscales found that only the measure of attitudes toward corporal punishment was significantly predicted by family interference. The results of that analysis are presented in Table 15. Although age was also a significant predictor of attitudes toward corporal punishment, with older adolescents more likely to endorse more punitive attitudes, the analysis of beta weights indicates that family interference is a better predictor of these childrearing attitudes. Correlational analysis of the predictor variables revealed that age is not correlated with level of family interference.

Table 14

Regression of Family Interference on Overall Parenting Cognitions

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1209.350	5	241.870	2.591	.036[a]
	Residual	4854.030	52	93.347		
	Total	6063.379	57			

a. Predictors: (Constant), total family interference, AGE, X1, trf total score, X2

b. Dependent Variable: aapi total raw

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	123.871	14.952		8.284	.000
	AGE	-.200	.845	-.031	-.236	.814
	trf total score	-3.19E-02	.113	-.043	-.281	.780
	X1	3.455	4.512	.162	.766	.447
	X2	-3.576	4.199	-.175	-.852	.398
	total family interferenc	-1.568	.591	-.358	-2.652	.011

a. Dependent Variable: aapi total raw

Table 15

Regression of Family Interference on Attitudes toward Corporal Punishment

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	317.617	5	63.523	2.784	.027[a]
	Residual	1186.401	52	22.815		
	Total	1504.017	57			

a. Predictors: (Constant), total family interference, AGE, X1, trf total score, X2

b. Dependent Variable: aapi construct c (corporal p)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	55.853	7.392		7.556	.000
	AGE	-.961	.418	-.300	-2.300	.025
	trf total score	6.795E-02	.056	.102	.677	.502
	X1	-1.052	2.231	-.099	-.472	.639
	X2	-.317	2.076	-.031	-.153	.879
	total family interferenc	-.865	.292	-.396	-2.958	.005

a. Dependent Variable: aapi construct c (corporal p)

Additional Analyses of the ISC

Comparisons of types and sources of support and interference

The scores on the Inventory of Social Contacts were analyzed to determine which network sectors were most significant in providing which types of support. First, a MANOVA was performed on the averaged support scores to determine whether network sectors (friends, family, partners, and professional) differed from one another within each type (childrearing, emotional, and material) of support. Results are displayed in Table 16 and are displayed in chart form in Figure 1. These scores represent the summed support rating averaged over the number of network members; for each network sector, the number represents the average support rating for that sector.

Table 16

Average Support Scores

According to Type and Source of Support

N= 59

	Childrearing	Emotional	Material	F (within-rows differences)[b]
Family	4.73(1.07)	4.25(1.27)	4.42(1.25)	2.445
Friend	4.75(1.50)	5.28(1.39)	3.84(1.73)	12.980**
Partner	5.10(2.18)	4.56(2.31)	5.33(2.24)	1.677
Professional	5.57(1.25)	4.92(1.57)	2.91(1.92)	44.113**
F (within -column differences)[a]	3.746*	4.119**	18.233**	

*p<.05

**p<.01

Cells contain means and standard deviations in parentheses.

[a] F values represent differences in level of support given by different networks

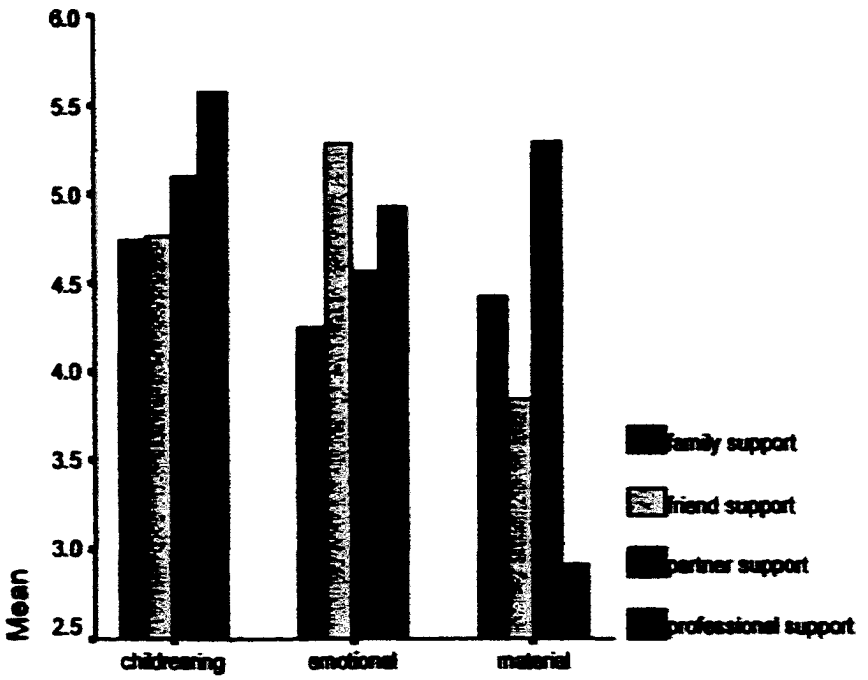
[b] F values represent differences between types of support given within each network

Post hoc analyses are reported in the text.

Figure 1

Mean Levels of Types of Support

From Different Sources



Within each type of support, there were significant differences between the sectors (F's = 3.75-18.23, $p < .05$). Post hoc Student-Newman-Keuls analyses demonstrate that in the area of childrearing support, partners and professionals provided the highest levels. Furthermore, professional childrearing support was significantly higher than family and friend childrearing support. For emotional support, friends and professionals provided the highest levels of support and this was significantly greater than the emotional support provided by family networks. Finally, partners provided significantly higher levels of material support than any other network, while professionals provided significantly less material support than any other network.

Table 16 also displays the results of a MANOVA comparing the different types of support within each network, using support type as the independent variable and network as the dependent variable. No significant results were found within the family and partner networks. That is, support from families and support from partners were homogeneous and did not vary according to the type of support. However, within the friends network, a significant effect of support type was found, ($F = 13.0$, $p < .01$) and post-hoc Student-Newman-Keuls analysis indicates that respondents received significantly more emotional and childrearing support from their friends than material support. The MANOVA also found significant results within the professional network, ($F = 44.10$ $p < .01$) with post-hoc analyses finding more childrearing than any other type of support, and more emotional than material support from professional sources.

Similar MANOVA's were performed to analyze the different sectors and types of interference. Results are displayed in Table 17 and Figure 2.

Table 17

Average Interference Scores According to Type and Source of Interference

N= 59

	Childrearing	Emotional	Material	F (within row differences)[b]
Family	2.21(.98)	2.64(1.08)	1.80(.77)	11.49*
Friends	1.70(1.12)	1.71(1.02)	1.33(.58)	3.22
Partner	3.10(2.21)	3.88(2.34)	2.00(1.63)	12.14*
Professional	1.50(.79)	1.46(.70)	1.06(.21)	9.07*
F (Within column differences)	15.50*	35.18*	12.02*	

*p<.01

Cells contain mean scores and standard deviations in parentheses.

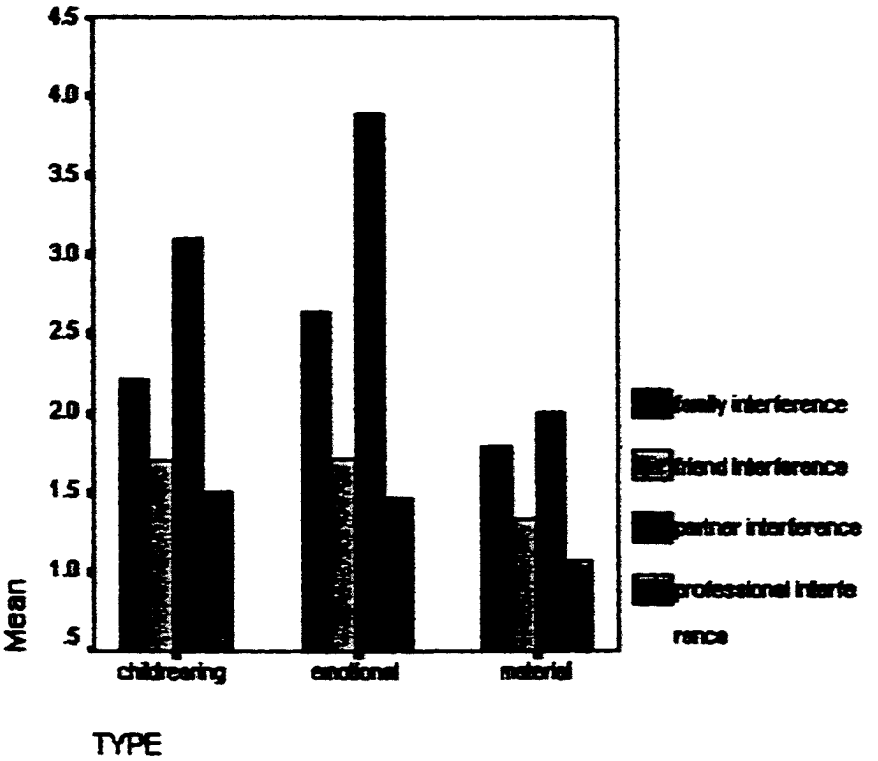
[a]F values represent differences in level of interference by different sectors, within each type of interference.

[b]F values represent differences in level of interference of different types, within each network sector

Post-hoc analyses discussed in text

Figure 2

Mean Levels of Types of Interference from Different Sources



Within each type of interference, there were significant differences among the four network sectors (F's = 12.02 - 35.18, p. <.01). Post-hoc Student-Newman-Keuls analysis reveals that in childrearing interference, partners created significantly higher levels of interference than any other network did, and family members generated more childrearing conflict than friends and professionals. For emotional interference, partners again were the greatest source of interference, while families were more interfering than professionals or friends. Finally, in material interference, professionals and friends were found to create less conflict than families or partners did.

Within network sectors, differences between the types of interference emerge as well (Table 17). Significant differences were found within the family, partner, and

professional sectors (F= 11.49,12.14,9.07, respectively, p<.01). Specifically, post-hoc Student-Newman-Keuls analyses indicate that families create more emotional interference than childrearing interference and more childrearing interference than material interference. Like families, partners also generated the most interference in the area of emotional interference and created more childrearing interference than material interference. Professionals, although they provided generally less interference than family or partners in most areas, did create more emotional or childrearing interference than material interference.

While not separated from the other family network members for statistical analyses, the support and interference scores for the maternal grandmother are presented here in Table 18.

Table 18: Support and Interference Levels from the Maternal Grandmother

Support and Interference Levels from the Maternal Grandmother

	N	Mean	Std. Deviation
mgm childrearing support	59	5.1780	2.2298
mgm emotional support	59	4.4661	2.3247
mgm material support	59	5.1525	2.3105
mgm childrearing interf.	59	2.9153	1.9413
mgm emotional interf.	59	3.5932	2.1665
mgm material inter.	59	1.8983	1.7684

Informal comparisons of the grandmother variables to the means of the networks indicate that the maternal grandmother appears to provide higher levels of support than the average family member and higher levels of stress or conflict as well. However, professional support levels are still higher than those of the maternal grandmother for all types of support.

Ethnic Comparisons of ISC scores

Further analyses were carried out to determine whether support and interference scores differed by ethnicity. T-tests comparing ISC scores were performed using only the 31 Hispanic and 21 African-American participants (Tables 19-22)

Table 19

Ethnic Differences in ISC Scores

	African-American(n=21) M, SD	Hispanic (n=31) M, SD	t	sig. (2-tailed)
total network size	22.33 (7.91)	16.68 (5.92)	2.95*	.01
supportive percent of network	.92 (.11)	.90 (.12)	.56	.58
conflicted percent of network	.35 (.24)	.30(.19)	.83	.41

$p \leq .01$

On average, African-American participants had larger overall networks. Although the Hispanic networks were smaller, they contained the same proportions of supportive and conflicted members. In both cases, approximately 90% of the network were individuals who were at least "somewhat helpful" in some area, and 30-35% were at least "somewhat interfering" in some area.

Ethnic comparisons on the maternal grandmother (MGM) support and interference variables are presented in Table 20. No significant differences emerge between the two ethnic groups, although there is a non-significant tendency for the Hispanic subsample to report higher levels of MGM support and lower levels of MGM interference.

Table 20

Ethnic Differences in Maternal Grandmother ISC Scores

	African-American (n=21) M, SD	Hispanic (n=31) M, SD	t	sig. (2-tailed)
MGM total support	14.71 (7.36)	14.94 (5.60)	-.123	.90
MGM childrearing support	5.10 (2.55)	5.18 (2.08)	-.127	.90
MGM emotional support	4.52 (2.52)	4.73 (2.15)	-.310	.76
MGM material support	5.10 (2.63)	5.03 (2.14)	.095	.93
MGM total interference	9.30 (5.91)	7.39 (3.81)	1.411	.16
MGM childrearing interference	3.14 (2.10)	2.48 (1.77)	1.221	.23
MGM emotional interference	3.71 (2.39)	3.42 (2.05)	.476	.64
MGM material interference	2.43 (2.29)	1.48 (1.26)	1.72	.10

A similar comparison of ethnic groups was carried out for family support and interference variables, including family network size. Although a significant difference was found in family network size (African-American = 10.24; Hispanic = 8.23; t=2.06, p.=.04), no other significant ethnic differences were found in family support or interference variables.

When comparing support and interference from friend networks, several differences between the African-American and Hispanic groups emerge. Results are found below in Table 21. The African-American respondents had significantly larger friend networks, more overall friend support, higher levels of each type of friend support, and higher levels of friend material interference.

Table 21

Ethnic Differences on Friend ISC Scores

	African-American (n=21) M, SD	Hispanic (n=31) M, SD	t	sig. (2-tailed)
Friend network size	6.38 (3.58)	3.45 (2.61)	3.42	.00*
Friend total support	16.37 (2.52)	12.50 (3.59)	4.28	.00*
Friend childrearing support	5.54 (.86)	4.35 (1.72)	3.28	.00*
Friend emotional support	5.78 (.92)	5.11 (1.44)	2.03	.05*
Friend material support	5.06 (1.35)	3.04 (1.07)	5.04	.00*
Friend total interference	5.26 (2.26)	4.44 (1.82)	1.45	.15
Friend childrearing interference	1.84 (1.00)	1.64 (1.20)	.60	.55
Friend emotional interference	1.77 (.80)	1.57 (.82)	.89	.38
Friend material interference	1.65 (.76)	1.23 (.46)	2.31	.03*

*$p \leq .05$.

Comparisons of the two ethnic groups in partner support and interference yielded a few significant differences. Specifically, material interference from partners was higher for the African-American group as was the composite partner interference score. No differences were found in any of the partner support variables. Results are reported in Table 22 below.

Table 22

Ethnic Comparisons of Partner Support and Interference

	African-American (n=21) M, SD	Hispanic (n=31) M, SD	t	sig. (2-tailed)
Partner network size	1.10 (.44)	.94 (.44)	1.29	.21
Partner total support	12.02 (6.61)	15.00 (6.40)	.01	.99
Partner childrearing support	4.98 (2.33)	5.15 (2.27)	-.261	.80
Partner emotional support	4.90 (2.18)	4.46 (2.46)	.67	.51
Partner material support	5.14 (2.29)	5.40 (2.39)	-.38	.71
Partner total interference	10.98 (5.29)	7.82 (4.52)	2.30	.03*
Partner childrearing interference	3.74 (2.52)	2.66 (1.90)	1.67	.11
Partner emotional interference	4.40 (2.21)	3.55 (2.39)	1.30	.20
Partner material interference	2.83 (2.21)	1.61 (.99)	2.38	.03*

*p<.05

Similar comparisons of the ethnic groups in terms of professional support and interference variables were carried out. Only one significant difference was found in these analyses, and that was in professional childrearing interference. African-Americans reported higher average levels of this type of professional interference (1.87 versus 1.31, t=2.31, p=.03).

Intercorrelations of the support and interference variables

Intercorrelations among support and interference scores for each network sector and for maternal grandmothers were computed for the total sample, for the African-American subsample, and for the Hispanic subsample, respectively. Selected tables are reproduced here for illustration. All correlation matrices for these analyses can be found in Appendix F.

For the maternal grandmother support and interference variables, support scores were highly intercorrelated, as were interference scores. That is, support of different types tended to co-occur, and when interference was high it was similarly high across all types of interference. There were no significant negative correlations between support and interference variables, so that high support did not preclude the presence of high levels of interference. In fact, childrearing support from the maternal grandmother had a significant moderate correlation with childrearing interference, indicating that where childrearing support was found, it tended to co-occur with childrearing interference.

Intercorrelations of the ISC maternal grandmother scores were examined separately by ethnic group. Results can be found in Tables 23 and 24. For both groups, the support variables tended to intercorrelate highly. However, in the Hispanic group, interference variables did not intercorrelate. More striking were the different patterns of correlations between support and interference variables. In the African-American group, childrearing and emotional interference correlated significantly with childrearing and material support. In the Hispanic group, however, there were no positive correlations between support and interference variables, and there were two significant negative correlations: emotional support and emotional interference ($r=-.378$), and childrearing support and material interference ($r=-.376$).

Table 23

MGM support and interference correlations for African-American Group (n=21)

	total mgm support	mgm childrearing support	mgm emotional support	mgm material support	total mgm interference	mgm childrearing interf.	mgm emotional interf.	mgm material inter.
total mgm support	1.000	.970**	.946**	.952**	.362	.423	.484*	.040
mgm childrearing support	**	1.000	.887**	.896**	.383	.454*	.530*	.018
mgm emotional support	**	**	1.000	.830**	.244	.268	.341	.026
mgm material support	**	**	**	1.000	.408	.486*	.515*	.068
total mgm interference					1.000	.941**	.891**	.784**
mgm childrearing interf.		*		*	**	1.00	.873**	.598**
mgm emotional interf.	*	*		*	**	**	1.000	.452*
mgm material inter					**	**	*	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 24

Correlations of MGM support and interference, Hispanic Group, (n=31)

	total mgm support	mgm childrearing support	mgm emotional support	mgm material support	total mgm interference	mgm childrearing interf.	mgm emotional interf.	mgm material inter.
total mgm support	1.000	.906**	.844**	.866**	-.291	-.078	-.286	-.307
mgm childrearing support	**	1.000	.637**	.755**	-.141	.134	-.147	-.376*
mgm emotional support	**	**	1.000	.582**	-.391*	-.170	-.378*	-.330
mgm material support	**	**	**	1.000	-.231	-.163	-.224	-.105
total mgm interference			*		1.000	.783**	.872**	.508**
mgm childrearing interf.					**	1.000	.541**	.086
mgm emotional interf.			*		**	**	1.000	.255
mgm material inter		*			**			1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Intercorrelations of family variables on the ISC are presented in Appendix F. For the overall sample as well as the African-American subsample, support variables were significantly intercorrelated as were interference variables. However, for the Hispanic group, interference variables did not intercorrelate as often. In the overall sample, emotional support was negatively linked with childrearing interference and with emotional interference in small but significant correlations. In the African-American subsample, however, these patterns were not seen, but there was a significant relationship between material interference and childrearing support. For the Hispanic group, no correlations between support and interference variables were found.

For the total sample, moderate intercorrelations were seen among the friend support variables and among the friend interference variables respectively, indicating a tendency for friends to be either consistently supportive or interfering in different areas. However, there were a few small positive correlations between support and interference.

Specifically, childrearing interference correlated with childrearing support (r= .268) and total friend interference correlated with material support (r=.264) and with childrearing support (.290), indicating that interference or conflict with friends sometimes co-occurs with support. Comparisons of patterns of friend support reflected that this "mixed blessing" of support and interference tended to occur mainly in the Hispanic group (Table 26), where there were several moderate (r=.402-.456) correlations between support and interference variables. In contrast, in the African-American group (Table 25), the only correlation between support and interference variables was negative (r=-.471, total friend interference and friend emotional support). In both groups, friend support variables tended to correlate with each other, but for the Hispanic participants, friend interference variables were all unrelated to one another. In other words, for Hispanics, friends who were generally supportive often created conflict in specific, discrete areas.

Table 25

Friend support and interference correlations, African-American group (n=21)

	friend network size	total friend support	friend childrearing support	friend emotional support	friend material support	total friend interference	friend childrearing interference	friend emotional interference	friend material interference
friend network size	1.000	.244	.235	-.000	.345	.241	.183	.218	.247
total friend support		1.000	.871**	.615**	.891**	-.170	-.133	-.176	-.146
friend childrearing support		**	1.000	.326	.765**	.010	-.060	.024	.064
friend emotional support		**		1.000	.258	-.471*	-.399	-.433	-.432
friend material support		**	**		1.000	-.002	.056	-.048	-.030
total friend interference				*		1.000	.925**	.949**	.760**
friend childrear. interference			.			**	1.000	.900**	.489*
friend emotional interference						**	**	1.000	.586**
friend material interference						**	*	**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 26

Friend Support and Interference Correlations, Hispanic Group (n=31)

	friend network size	total friend support	friend childrearing support	friend emotional support	friend material support	total friend interference	friend childrearing interference	friend emotional interference	friend material interference
friend network size	1.000	.024	.041	-.222	.228	.078	-.108	.207	.215
total friend support		1.000	.844**	.709**	.780**	.456**	.402**	.242	.323
friend childrearing support		**	1.000	.491**	.498**	.421**	.408**	.177	.285
friend emotional support		**	*	1.000	.281	.206	.218	.099	.086
friend material support		**	**		1.000	.420**	.290	.268	.391**
total friend interference		**	*		*	1.000	.828**	.723**	.500**
friend childrearing interference		*	*			**	1.000	.285	.153
friend emotional interference						**		1.000	.323
friend material interference					*	**			1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Intercorrelations between support and interference variables for partners are found in Appendix F. In the case of partners, patterns of support and interference intercorrelations were maintained across ethnicities. Support variables among partners tended to be highly intercorrelated (r= .703-.832), indicating that partners tended to be consistent in their support in all areas. Interference, on the other hand, tended to be more discrete, with few or smaller intercorrelations. Moreover, material interference tended not to correlate with the other two types of interference. Finally, there were no correlations

between partner support variables and partner interference variables, either positive or negative.

For professional support and interference, correlation matrices are presented in Appendix F. Professional support variables were found to correlate with each other in the overall sample, although this was more true of the African-American subsample than the Hispanic. In other words, professional support was more consistent and comprehensive for the African-American participants. For all participants, professional interference levels were quite low overall and when they did occur, only emotional and childrearing interference were intercorrelated. Professional support did not co-occur with professional interference, except for a small, significant correlation in the overall sample between professional emotional interference and professional material support.

In summary, for most networks, the support scales intercorrelated with one another indicating that support tended to occur across areas. This was especially true for support from maternal grandmothers and from partners, where correlations between the support variables were very high. The same was true of interference, although the types of interference tended to be more discrete and less frequently intercorrelated. A consistent finding is that material interference from all network sectors tended to be least related to emotional and childrearing interference. In most cases, there was no significant relationship between support and interference, although a few moderate positive correlations were found. These usually involved a small significant relationship between childrearing assistance and childrearing interference. A few ethnic differences emerge, most notably that for African-Americans, maternal grandmother support tended to co-occur with interference, while this was not true of Hispanic respondents, on average. However, Hispanic respondents were more likely to report the co-occurrence of support and interference in their friend networks. In the African-American subsample, no such relationship was found.

Additional Analyses with the AAPI

An ANOVA comparing the four AAPI scales with each other was significant ($F=10.195$, $df = 3,228$, $p<.01$). Post-hoc Tukey tests revealed that the Inappropriate Expectations subscale mean was significantly higher than those of the other subscales (Table 1). Intercorrelations between the scores are shown in Table 27.

Table 27

Intercorrelations of the AAPI Subscale Means

N=58

	Inappropriate Expectations	Empathy	Corporal Punishment	Role Reversal
AAPI total	.244	.728**	.457**	.600**
Inappropriate Expectations		.139	-.292*	.077
Empathy			.159	.157
Corporal Punishment				-.083

*p<.05

*p<.01

While all but one scale (Inappropriate Expectations) correlated significantly with the total score, the scale means did not correlate with one another, except for one significant negative correlation between Inappropriate Expectations and Corporal Punishment.

Ethnic differences on the AAPI total and subscale scores were explored in a series of t-tests. No significant differences between the two groups were found, although there was a non-significant trend for most scores to be higher for the African-American group.

Correlations between Age, Psychosocial Adjustment, and Parenting Cognitions

Correlations between the background variables hypothesized to affect parenting cognitions were carried out, and these were generally not statistically significant. The TRF had a correlation of -.04 (p=.77) with the AAPI total score and correlations with the

AAPI subscales ranged from -.02 to .09. Age had a correlation of -.06 (p=.66) with the AAPI total score and correlations with three of the subscales ranged form -.06 to .152. A small but significant negative correlation was found between age and the Belief in Corporal Punishment subscale, indicating that older respondents tended to endorse the use of corporal punishment more often.

Further analyses were carried out to determine the relationship between the psychosocial adjustment measure and measures of social support and interference. Results are presented in Table 28.

Table 28

TRF correlations with ISC scores

	TRF
Total Network Size	.078
Supportive percent of network	.105
Conflicted percent of network	.332*
Total family support	.282*
Total family interference	.316*
Total friend support	.326*
Total friend interference	.327*
Total partner support	-.131
Total partner interference	.342**
Total professional support	.204
Total professional interference	.360**
Total MGM support	.304*
Total MGM interference	.144

*p<.05

**p<.01

The total TRF score correlated with most indices of interference: conflicted percentage of network, family interference, friend interference, partner interference, and professional interference. The correlations were small to moderate. A few small unexpected correlations were found between problem behavior and support from family, friends, and the adolescent's mother. In other words, teenagers with higher levels of reported behavior problems were more likely to have conflicted relationships, while having higher levels of support from family and friends.

Chapter 5: Discussion

This study found a significant relationship between overall levels of family interference and poor parenting cognitions for adolescent mothers. While it was hypothesized that this interference might be related to specific aspects of conflict within the family, it was a more global measure of total interference that was the most significant predictor of parenting attitudes. In this case, the whole was indeed greater than the sum of its parts. While family interference was related to poor psychosocial adjustment, it made a unique contribution to the parenting cognitions of adolescent mothers. That this is so makes theoretical sense and confirms one of the hypotheses. Conflict within the adolescent's family reflects concurrent stress that can affect mental health and parenting attitudes. In addition, conflicted relationships with family members are likely to reflect a history of stressful parent-child interactions and poor parenting of the adolescent mother herself. As the primary socializing agent of the developing child and adolescent, the family models and sanctions parenting attitudes and practices. Disturbances in the parenting within the family of origin are likely to perpetuate themselves in the young mother and her interactions with her own child. This is particularly true of the adolescent mother's approach to the use of corporal punishment, with those having experienced greater levels of family conflict being more prone to endorse the use of physically coercive disciplining techniques. These findings confirm those of other researchers (Corse et al., 1990; Crockenberg, 1987; East & Felice, 1996) who found that conflict with family members contributed to less adaptive and more punitive parenting beliefs. According to this study, the influence of the adolescent mother's family of origin is even stronger than that of the adolescent's other intensely supportive yet stressful relationship, the dyadic relationship with the father of the baby.

That other aspects of the teenager's support system do not predict parenting attitudes was not anticipated, but can be explained. First, the AAPI, designed as a measure to screen for child abuse potential, may be more appropriate for assessing

negative or maladaptive parenting cognitions than appropriate ones. Higher scores reflect rejection of maladaptive parenting cognitions and may not reflect positive childrearing attitudes that could be expected to be influenced by higher levels of support. These results could then mean that of all aspects of the teenage mother's social network, disturbances in the family are most likely to create maladaptive parenting attitudes. However, no conclusions may be drawn about the beneficial effects of support on more competent parenting cognitions.

Some psychometric difficulties were noted with the AAPI that may have affected the results as well. The measure lacked internal consistency, as seen by the weak positive or negative correlations between the subscale scores. This unexpected pattern of intercorrelations between subscales compromises the validity of the measure as a whole. Also, problems with interpreting AAPI questions were noted during the interview. Some participants had difficulty understanding the wording of the items, despite the availability of the investigator to explain difficult items. Some items included ambiguous wording (e.g., "Children under three years should not be expected to feed, bathe and clothe themselves" does not explain whether full performance of all these tasks should not be expected by this age, or whether young children should not be expected to begin to participate in these activities at all). The use of double negative phrases also confused some respondents. At times the investigator could clarify a question through slight rephrasing. However, some misunderstandings may have occurred. Another possibility is that the mere presence of the investigator and the face-to-face nature of the interview may have encouraged the participants to offer more socially desirable respondents. The AAPI-2 has new, reworded items, which may reduce misunderstandings and the need for verbal administration of questions.

Another difficulty found with the AAPI is one mentioned by Holden and Edwards (1989) as inherent in all parenting cognition questionnaires: answers to hypothetical questions do not necessarily reflect actual parenting behavior. For example, a respondent endorsed a parenting statement critical of a certain practice, then added, "I know it's

wrong but I do it anyway." On other occasions, participants were noted to give contradictory answers (e.g., endorsing corporal punishment in one response and rejecting it in another). Perhaps future research with the ISC could use a measure of actual parenting behavior in addition to a parenting cognitions questionnaire.

The AAPI has been revised and re-normed recently with separate norms for adolescent parents and adolescent non-parents and may avoid some of these psychometric problems (AAPI-2; Bavolek, 1999). Items have been reworded to avoid the double-negative formulations that confused some respondents in this study. In addition, the new AAPI is undergoing research to develop new norms for Hispanic and other minority ethnic groups.

Finally, despite the richness of information revealed by the ISC, it may not have been specific enough to tap into the social determinants of parenting cognitions. The childrearing support factor did not discriminate between instrumental help with childrearing and advice, information or guidance regarding raising a child. The study by Cotterell (1986) suggests that informational help in particular is predictive of parenting attitudes. Furthermore, the ISC as modified here included partner support but did not distinguish between the support of the baby's father himself and that of a current boyfriend, another distinction that may have implications for parenting cognitions.

This study also outlines the patterns of support and interference within the social networks of urban, minority adolescent mothers. These findings may serve as a useful guide to professionals working within a school setting, to help identify sources of strength and stress in the relationships between their students and their support networks.

Analyses of patterns of support and interference scores reveal several interesting trends. In providing support, network members tend to specialize. On average, professionals and friends provide more emotional and childrearing support, while family and partners provide more material support. These adolescent mothers saw the LYFE staff and other school staff as the greatest source of support in terms of hands-on childrearing assistance as well as parenting advice. If they needed someone to talk to for

emotional support, they were more likely to turn to professionals or friends than to their own families. This is consistent with the finding that family members and partners are more likely to create emotional distress than are professionals or friends. Yet family members and partners were most likely to provide food, clothing, money, and other tangible necessities. This would suggest that teenage mothers require support from multiple network sectors to meet their various needs. Those with few social contacts outside the immediate family are at psychological risk even if their material needs are met. They are isolated from important sources of emotional support and may be spending more time within the most conflicted relationships in their network. While in this study the emotional and childrearing support that comes from outside the family is unrelated to parenting cognitions, it is interesting to note that in another study such a link was found. Corse, Schmid & Tricket (1990) found that the size of these extrafamilial network sectors (friends and professionals) was related to more adaptive parenting beliefs.

A note of caution should be mentioned regarding the family support and interference scores, however. Family networks were the largest of the four sectors, and included a variety of relationships, including parents, cousins, and in-laws. Because the scores were averaged over the entire network sector, the support scores probably underestimate the true contribution of those family members who were most supportive, namely, biological adult relatives such as fathers, mothers, aunts, and grandparents. For instance, maternal grandmother support scores were consistently higher than the average for the entire family network. This possibility is supported by the finding that Richardson et al. (1995) reported smaller family networks and slightly higher family support and interference scores. At the same time, it should be noted that network size was not correlated with lower support or interference scores. Larger networks did not necessarily receive lower scores, and despite the effect of averaging scores, family interference scores were still higher than those of other networks. Subdividing the network into more precise definitions of familial relationships is beyond the scope of this study. However, future

research into the contribution of family support and interference to parenting variables would do well to consider such distinctions such as biological relatives vs. in-laws.

Similarly, in interpreting the scores of professional childrearing support, it should be noted that respondents were attending a highly supportive professional program for adolescent mothers including full-time daycare, and that their scores reflected this professional involvement. Furthermore, because this is a voluntary program, the teenagers who elected to participate were those who would welcome a high degree of professional involvement in their daycare, and may be unrepresentative of other teenage parent populations. One of the LYFE social workers commented that some of the teenage parents in her school do not apply for the program because of dislike of professional "meddling" in their parenting or because of a perception that family childrearing is superior. Therefore, results regarding professional support may be somewhat inflated and need to be verified with other populations of adolescent parents.

Network members differ in the stress they provide as well. Partners and families create the highest levels of all types of interference, with partners especially creating childrearing and emotional interference. It is at home or with their partners that the adolescent mother is most likely to encounter arguments, criticism, or the undermining of her parenting values. These networks are also more likely to make demands of the adolescent mother's limited resources. She encounters these higher levels of stress and difficulty from the network members who form the immediate circle around her and her baby. This is not to dismiss the importance of family support, which has been amply documented in other studies (e.g., Stevens and Duffield, 1986), but to underscore the importance of extra-family support to adolescent mothers. Support from professionals is particularly important because they provide high levels of emotional and childrearing support to the adolescent mother while providing relatively low levels of interference. For professionals, unlike family members or even friends, support does not coincide with interference; it comes "with no strings attached." These relationships with professionals, in the words of Richardson, are much more sweet than bittersweet. The implication is that

for teenage mothers, staying in a school environment with adequate professional support has important benefits not only for her future career trajectory but for her immediate mental health and parenting needs as well.

Results also suggest the importance for the adolescent mother of finding supportive individuals in all sectors of her support network. The high intercorrelations between the different types of support show that those who do provide high levels of support tend to do so across areas. This is especially true for partners and maternal grandmothers who tend to give the highest levels of overall support and who provide a combination of emotional, material and childrearing support. While these intimate relationships may prove more stressful than others, they can be significant sources of comprehensive support. Perhaps it is the adolescent mother's recognition that these figures have an impact on so many facets of her life that contributes to her giving them relatively higher stress scores. These are more intense, emotionally-laden relationships, with the potential for comprehensive support or high levels of stress. In the case of the maternal grandmother childrearing support, high levels of support may coincide with stress, proving a mixed emotional experience. For other sectors, support usually did not preclude interference, showing again that the adolescent mother's relationships with those around her usually involves the mixed blessing of a combination of support and interference.

Some interesting ethnic differences in social support networks were found, although these results must be interpreted with caution due to the small sample sizes. Overall, African-Americans in this sample enjoyed larger networks, and more specifically, larger family and friend networks. Moreover, support from friends was higher and did not tend to come together with interference and conflict, as it did for the Hispanic group. One possible explanation for this difference is the immigrant status of the study's Hispanic participants. Wasserman et al. (1994) found that in their sample, African-American mothers reported more social support than did Puerto Ricans, who had greater social support than did Dominicans. Those authors also attribute these differences to length of

residence in mainland United States. While country of origin was not systematically measured here, it was noted during the interviews that more Hispanic participants mentioned that they had emigrated from another country. The lower levels of friend support and smaller family networks reported by Hispanics in this sample would then reflect the fact that their informal support systems had been disrupted and weakened by the immigration experience.

However, there is some indication that family support systems in the Hispanic subsample were in some ways stronger. While these family networks were significantly smaller, they were not less supportive. Furthermore, the Hispanic subsample did not report coinciding levels of support and interference from family or from the maternal grandmother; in fact, when Hispanic family members were supportive, they tended to do so with lower levels of conflict. The results suggest that for the African-American mothers, family support and support of the maternal grandmother in particular tended to be more of a mixed blessing, with high levels of support co-occurring with conflict and interference. This was especially true of childrearing support and interference, where for the African-American group, the extra assistance from family with childrearing tended to come at the price of higher levels of conflict and stress. While the reasons for these ethnic differences are not clear, the data suggests a pattern of stronger peer networks for the African-Americans, who are less likely to create stress in their support. The Hispanic respondents, on the other hand, seemed less conflicted about the help they received from family members, but more likely to find that assistance from friends came at the price of higher levels of conflict. Again, these differences may be related to acculturation or to other differences between the groups, such as the values of filial responsibility versus self-determination in different ethnic minorities. Future research might explore length of residence in the United States as well as cultural norms as variables when analyzing the social support of minority adolescent mothers.

Overall, the parenting cognitions of the adolescents in this study were slightly better than those in the norming sample of the measure, although not as adaptive as those

of the adult population. Moreover, only a small percentage of the responses given indicate a risk for child abuse. Previous research has suggested that the AAPI risk status tends to overestimate the actual incidence of abuse (Fox et al., 1987). These findings support the notion that many teenage mothers hold appropriate parenting beliefs and that the overwhelming majority of babies are not at high risk of abuse or neglect.

Further analysis revealed significant differences between the subscale scores, with significantly higher scores on the Inappropriate Expectations subscale. It should be noted that Bavolek (1984) found intercorrelations of .54 to .70 between his subscales, although the Inappropriate Expectations construct was found to have the lowest test-retest reliability (.39). The relatively better performance of the adolescent mothers on the Developmental Expectations subscale stands in contrast to the findings of Vukelich and Kliman (1985) who found that teenage mothers tended to overestimate their children's developmental progress. These researchers also found that teenagers tended to rely less on formal or professional sources of parenting advice and to rely more on family and friends. It is possible that in the 15 years since that study, a historical change has taken place and that teenage mothers are now more likely to be influenced through popular books such as What to Expect the First Year (Eisenberg, Murkoff & Hathaway, 1989) and articles in parenting magazines devoted to expectations of milestones, although this explanation would need empirical confirmation. Alternatively, the developmental expectations of this group may be more appropriate because of their ongoing, daily interactions and communications with LYFE staff regarding their child's well-being and development.

The background variables that were hypothesized to affect parenting cognitions were not correlated with the AAPI. Age, ethnicity, and psychosocial adjustment did not correlate with parenting cognitions. The conclusion may be reached that for urban minority adolescent mothers attending high school, their parenting cognitions are homogeneous and not related to age, ethnicity, or underlying symptomatology. However, this conclusion is to be treated with some caution, as small sample sizes and irregular

distributions of the TRF scores may have affected these relationships. Also, problems with the AAPI scores may have attenuated these correlations.

Psychosocial adjustment problems were linked to social support variables, usually serving as a barometer of poor interpersonal relationships as reflected by high interference scores, similar to Barrera's (1981) finding that teenage mothers with more symptomatology reported more dissatisfaction with support. There was also some tendency for higher levels of support to correlate with greater psychopathology, confirming Barrera's (1981) suggestion that teenagers with more stress may seek out and receive more social support, especially from family members.

Finally, there is some indirect evidence of a connection between professional support and more adaptive parenting cognitions, not detected in the regression analyses. The group as a whole enjoyed a high level of professional support; professional childrearing and emotional support scores were higher than those of other sectors. The LYFE students had access to a well-staffed day care program and a designated social worker. Some had regular parenting classes. That this group scored higher than the norms cited in the manual of the AAPI suggests that there was some connection between their greater levels of professional support and their more appropriate parenting cognitions.

Limitations of the Study

A few limitations of the study should be mentioned. It should be noted that the adolescent mothers interviewed for this study were attending school and receiving a package of social services. They may not represent adolescent mothers in general in terms of their support systems or their parenting cognitions. Moreover, this sample had self-selected for the LYFE program, indicating either a greater openness to professional support and involvement in childrearing, weaker family supports, or a combination of both. A comparison between participants receiving these supportive services and adolescent parents who did not receive them might more clearly demonstrate the connection between this enhanced social support and more appropriate parenting

cognitions. Another difficulty with the present study was the over-reliance on a single measure of parenting cognitions, which in this case may not have been the best indicator of true parenting attitudes. The AAPI-2 holds some promise of correcting some difficulties noted with the AAPI, although this measure is new and no empirical studies have been published about it to date. The use of only self-report measures for the main dependent and independent variables is also problematic, despite the inclusion of teacher reports as a control variable. Future research should use more than one parenting cognitions measure, as well as a measure of parenting behaviors to illustrate further the pathways of influence from social networks to parenting cognitions to parenting behavior. Finally, this study suffers from a small sample size for the proposed ethnic comparisons. Future research would benefit from larger samples of different ethnicities, as well as more specific definitions of subcommunities within the Hispanic population, as was done by Wasserman et al., (1994).

Future Research

The finding that family conflict is correlated with maladaptive parenting cognitions, independent of age, ethnicity, or underlying psychosocial adjustment is worth investigating further. The work of East and Felice (1996) indicates that conflict with the maternal grandmother interacts with co-residence to affect parenting outcomes, suggesting that mediating factors such as living arrangements should be considered in future research in this area. Other possible mediating factors include level of family support, age of the adolescent mother, and extra-family support. Studies measuring the effectiveness of professional intervention and prevention programs in influencing parenting attitudes might look at pre-treatment levels of family conflict, to determine whether professional involvement has a compensating effect in cases of high family conflict and whether professional contact directly reduced levels of family conflict and interference.

In this study, partners provided the highest levels of overall support and overall interference. Given the importance of partner support for parenting outcomes in the adult

parenting literature (e.g., Brunelli et al., 1995; Crnic et al., 1984), exploring the contribution of partner support or conflict to adolescent parenting outcomes seems worthwhile. While no relationship between partner variables and cognition was found in this study, it is possible that this relationship is more complex than understood here and requires investigation of other intervening variables. For instance, the mediating effects of partner co-residence, stability of the partner relationship, or the presence of family stress may be important in understanding this pathway.

In this study, the social and physical environment differed from school to school and informal observation indicated that this had an impact on the way that professional support was experienced by the students. In future studies, it would be advisable to measure these variables systematically (such as total school enrollment, school administrative support for the LYFE program, and the physical setup of the LYFE nursery and social worker's office) and incorporate them into an analysis of the effect of professional support. Future research should also measure some demographic variables that are important in this population including SES, country of origin, and length of residency in the United States.

Overall, the ISC (Richardson, 1984) emerges as a promising measure of the varied aspects of social support for adolescent mothers. In this study, it demonstrated how different members of the teenage mother's support group provide assistance or interference in ways that are very different from one another. The independence of the interference and support scores confirms the importance of studying both these aspects of the support system. The present modification to include separate sectors for partners and professionals is supported by the unique contributions of these sectors in specific areas of support and interference. However, it would be helpful to subdivide the area of childrearing support further into instrumental assistance such as babysitting and informational assistance such as parenting advice.

Implications for school psychologists and mental health professionals

The findings of this study have important implications for school psychologists and other professionals working with adolescent mothers. These findings suggest that in screening adolescent parents for potentially maladaptive parenting, an assessment of conflict in the social network is perhaps more important than ascertaining the extent and quality of a teenager's support. School professionals need to be aware that high levels of conflict often are to be found in conjunction with high levels of support, so that even those students who appear to be well-supported may be at risk. This is especially true of the African-American teenage mother and her relationship with her own mother.

This study also confirms the importance of support both inside and outside the immediate family. While support from those closest to the adolescent teen, that is, her mother and the baby of her father, is likely to help her comprehensively, it also tends to come at the cost of high stress. These results underscore the importance of encouraging young mothers to maintain extra-family contacts with friends and professionals because of the lower levels of stress that are in those relationships. Staying in school, community involvement, even a part-time job, while making demands of the adolescent mother's already limited time, are important for the mental health benefit of reduced conflict. Because of the finding that conflict within the family increases the risk of maladaptive parenting cognitions, the encouragement of extra-family contacts seems especially important for those experiencing high levels of family conflict.

Finally, school psychologists and other mental health personnel working with adolescent mothers have a unique opportunity to break the cycle of poor parenting. Through direct interventions with the adolescent and her family or by referring to appropriate community agencies, mental health professionals can focus treatment on conflicted family interactions and consequently improve the adolescent's cognitive readiness for parenting. In this way, school and community personnel can intervene not only to improve the quality of life for the young mother, but also to make a difference in long-term outcomes for their at-risk children. Adolescent parenthood may create risk

factors for multiple generations, but it also creates a chance for professionals working with families to have a multi-generational impact.

Appendices

Appendix A

Sample Items from

the Inventory of Social Contacts (Richardson, 1984)

Source of Support

"Now, thinking about the relative with whom you have contact (either by telephone, through the mail, or in person) can you tell me if there are relatives...to whom you might turn for general help or advice about things like taking care of your child or where to find out information."

Source of Interference

"Now, still thinking of all your friends, can you tell me if there are any whom you sometimes don't get along with?"

Level of Childrearing Support

"Some of the people on your list may help you out by babysitting, helping you out if you or your child are sick, or giving you advice about bringing up a young child... I'd like you to rate each person on your list in terms of how much help they give you in the area of childcare and childrearing."

Level of Emotional Interference

"Now, think about which people sometimes upset you or put you in a bad mood... I'd like you to rate each person on your list in terms of how much emotional difficulty they cause you."

Appendix B

Sample Items from

Adult-Adolescent Parenting Inventory (Bavolek, 1984)

Inappropriate Expectations

"Parents should expect their children to feed themselves by twelve months."

"Parents should expect their children to grow physically at about the same rate."

Empathy

"Parents who are sensitive to their children's feelings and moods often spoil their children."

"Children will quit crying faster if they are ignored."

Corporal Punishment

"Children seldom learn good behavior through the use of physical punishment."

"Children should always 'pay the price' for misbehaving."

Role Reversal

"Young children should be expected to hug their mother when she is sad."

A good child will comfort both of his/her parents after the parents have argued."

Appendix C

Sample Items from the Teacher's Report Form (Achenbach, 1991)

Withdrawn

"Would rather be alone than with others"

"Unhappy, sad or depressed"

Somatic Complaints

"Feels dizzy"

"Physical problems without known medical cause, e.g. aches or pains"

Anxious/Depressed

"Cries a lot"

"Overly anxious to please"

Social Problems

"Doesn't get along with other pupils"

"Clings to adults or too dependent"

Thought Problems

"Can't get her mind of certain thoughts"

"Fears certain animals, situations, or places other than school"

Attention Problems

"Fidgets"

"Stares blankly"

Delinquent Behavior

"Hangs around with others who get in trouble"

"Uses alcohol or drugs for nonmedical purposes"

Aggressive Behavior

"Disrupts class discipline"

"Explosive or unpredictable behavior"

Appendix D

Introduction to Interview

Today I'm going to be asking you some questions about what it's like for you to be a mother. In particular, I'm going to be asking you about who is important for you, who helps you or makes it harder for you as a mother. I'm also going to be asking about your thoughts and feelings about being a parent in general. I am interested in learning more about what it's like to be a teenage mother, and the information that I get from you and other people in the study can help to plan programs for other teenage parents.

Everything that's said here today will be confidential, that is, it's private and will be used only for this study. It will not be shared with your teachers, parents, or counselors. The only exception is that if you tell me about a danger to someone's health or well-being, I am obligated to report it to the proper authorities. I will have the tape recorder running during our talk so that I can make sure I get everything you have to say. I may play the tape back to other people involved with this study, without identifying you by name, to help me understand my results.

Please try to answer the questions as fully and truthfully as you can. Feel free to ask any questions you may have as we go along. If you come to a question that you feel very uncomfortable answering, please let me know. There are no right or wrong answers, only your feelings.

Introduction to ISC

This part of the interview has to do with the people you know — like friends, relatives, and teachers. I am going to ask you to help me make up a list of these people and then I will ask you about how much these people make being a parent easier and more difficult for you. I'd like to point out now that the people we talk about today don't have to be always helpful or pleasant to you. You may also want to talk about people who make things difficult or hassle you.

Appendix E

Introduction to the AAPI

For this part of the interview, I'd like you to answer the questions in this booklet. I will read each statement out loud to you and I want you to tell me for each one whether you agree or not with the statement or if you are uncertain. If you agree with the statement, please tell me whether you think the statement is true most or all of the time, or whether you think it is true some of the time. If you disagree, I'd like to know whether you think the statement is untrue most or all of the time or if you think it is not true some of the time. Remember, there are no right or wrong answers, and try to answer all of the questions by giving the first natural answer that comes to your mind.

Appendix F

Intercorrelations of ISC scores in Total, African-American, and Hispanic Samples

Intercorrelations of MGM support and interference variables, total sample (n=69)

	total mgm support	mgm childrearing support	mgm emotional support	mgm material support	total mgm interference	mgm childrearing interf.	mgm emotional interf.	mgm material inter.
total mgm support	1.000	.930**	.880**	.910**	.112	.208	.139	-.080
mgm childrearing support	**	1.000	.686**	.828**	.205	.330**	.240	-.098
mgm emotional support	**	**	1.000	.629**	-.098	-.008	-.058	-.183
mgm material support	**	**	**	1.000	.198	.237	.199	.036
total mgm interference					1.000	.871**	.868**	.708**
mgm childrearing interf.		*			**	1.000	.687**	.424**
mgm emotional interf.					**	**	1.000	.381**
mgm material inter.					**	**	**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Intercorrelations of family support and interference correlations, Total sample (n=59)

	family network size	total family support	family childrearing support	family emotional support	family material support	total family interference	family childrearing interference	family emotional interference	family material interf.
family network size	1.000 .	.096	-.157	.275*	.093	-.216	-.201	-.230	-.088
total family support		1.000 .	.835*	.829*	.910*	-.135	-.171	-.169	.039
mean family childrearing support		**	1.000 .	.480*	.714*	-.060	-.102	-.088	.068
mean family emotional support	*	**	**	1.000 . .	.621*	-.239	-.261*	-.264*	-.035
family material support		**	**	**	1.000 .	-.040	-.072	-.075	.073
total family interference						1.000 .	.867*	.924*	.693*
family childrear. interference				*		**	1.000 . .	.751*	.352*
family emotional interference				*		**	**	1.000 .	.497*
family material interference						**	**	**	1.000 .

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Intercorrelations of family support and interference, African-American Group, (n=21)

	family network size	total family support	family childrearing support	family emotional support	family material support	total family interference	family childrearing interference	family emotional interference	family material interference
family network size	1.000	-.032	-.261	.223	-.051	-.351	-.382	-.293	-.234
	.								
total family support		1.000	.910**	.890**	.950**	.049	-.071	-.072	.361
		.							
family childrearing support		**	1.000	.678**	.830**	.259	.103	.145	.506*
			.						
family emotional support		**	**	1.000	.774**	-.222	-.285	-.333	.131
				.					
family material support		**	**	**	1.000	.096	-.017	-.012	.356
					.				
total family interference						1.000	.885**	.951**	.748**
						.			
family childrearing interference						**	1.000	.808**	.438*
							.		
family emotional interference						**	**	1.000	.609**
								.	
family material interference			*			**	*	**	1.000
									.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Intercorrelations of family support and interference, Hispanic Group, (n=31)

	family network size	total family support	family childrearing support	family emotional support	family material support	total family interference	family childrearing interference	family emotional interference	family material interference
family network size	1.000	-.164	-.357*	.000	-.084	-.011	-.018	-.092	.111
	.								
total family support		1.000	.807**	.801**	.909**	-.224	-.179	-.163	-.170
		.							
family childrearing support	*	**	1.000	.410*	.630**	-.302	-.229	-.235	-.227
			.						
family emotional support		**	*	1.000	.630**	-.164	-.132	-.135	-.104
				.					
family material support		**	**	**	1.000	-.110	-.098	-.055	-.102
					.				
total family interference						1.000	.819**	.872**	.553**
						.			
family childrearing interference						**	1.000	.639**	.119
							.		
family emotional interference						**	**	1.000	.278
								.	
family material interference						**			1.000
									.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Intercorrelations of friend support and interference variables, Total sample (n=59)

	friend network size	total friend support	mean friend childrearing support	friend emotional support	friend material support	total friend interference	friend childrearing interference	friend emotional interference	friend material interference
friend network size	1.000	.239	.202	-.053	.397**	.157	.033	.088	.340**
total friend support		1.000	.854**	.742**	.851**	.223	.228	.042	.276*
friend childrearing support		**	1.000	.467**	.623**	.290*	.268*	.126	.302*
friend emotional support		**	**	1.000	.410**	-.032	.058	-.148	.020
friend material support	**	**	**	**	1.000	.264*	.223	.104	.329*
total friend interference			*		*	1.000	.840**	.807**	.805**
friend childrearing interference			*			**	1.000	.466**	.298*
friend emotional interference						**	**	1.000	.331*
friend material interference	**	*	*		*	**	*	*	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Intercorrelations of partner support and interference, total sample (n=59)

	total partner support	partner childcare support	partner emotional support	partner material support	total partner interference	partner childrearing interference	partner emotional interference	partner material interference
total partner support	1.000 .	.917**	.898**	.941**	-.133	-.081	-.105	-.141
partner childcare support	**	1.000 .	.703**	.832**	-.093	-.022	-.086	-.128
partner emotional support	**	**	1.000 .	.764**	-.208	-.175	-.210	-.089
partner material support	**	**	**	1.000 .	-.062	-.023	.010	-.172
total partner interference					1.000 .	.846**	.889**	.598**
partner childrearing interference					**	1.000 .	.672**	.236
partner emotional interference					**	**	1.000 .	.341**
partner material interference					**		**	1.000 .

**. Correlation is significant at the 0.01 level (2-tailed).

Intercorrelations of partner support and interference variables, African-American group, (n=21)

	total partner support	partner childcare support	partner emotional support	partner material support	total partner interference	partner childrearing interference	partner emotional interference	partner material interference
total partner support	1.000	.964**	.970**	.983**	-.138	.035	-.124	-.245
partner childcare support	**	1.000	.888**	.922**	-.072	.120	-.131	-.178
partner emotional support	**	**	1.000	.944**	-.139	.052	-.105	-.286
partner material support	**	**	**	1.000	-.192	-.071	-.125	-.252
total partner interference					1.000	.809**	.841**	.624**
partner childrearing interference					**	1.000	.623**	.169
partner emotional interference					**	**	1.000	.298
partner material interference					**			1.000

**. Correlation is significant at the 0.01 level (2-tailed).

Intercorrelations of partner support and interference, Hispanic group (n=31)

	total partner support	partner childcare support	partner emotional support	partner material support	total partner interference	partner childrearing interference	partner emotional interference	partner material interference
total partner support	1.000	.887**	.879**	.929**	-.040	-.064	-.002	-.053
partner childcare support	**	1.000	.628**	.777**	-.010	-.021	.009	-.026
partner emotional support	**	**	1.000	.725**	-.232	-.322	-.173	-.024
partner material support	**	**	**	1.000	.142	.180	.163	-.092
total partner interference					1.000	.876**	.953**	.584**
partner childrearing interference					**	1.000	.756**	.256
partner emotional interference					**	**	1.000	.487**
partner material interference					**		**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

Intercorrelations of professional support and interference, total sample (n=59)

	professional network size	total professional support	professional childrearing support	professional emotional support	professional material support	total professional interference	professional childrearing interference.	professional emotional interference	professional material interference
professional network size	1.000 .	.113	-.043	.066	.205	.030	-.014	.081	-.025
total professional support		1.000 .	.797**	.856**	.817**	.073	.011	.092	.120
professional childrearing support		**	1.000 .	.681**	.413**	-.082	-.085	-.082	.067
professional emotional support		**	**	1.000 .	.481**	-.040	-.076	-.020	.096
professional material support		**	**	**	1.000 .	.235	.140	.257*	.123
total professional interference						1.000 .	.863**	.842**	.368**
professional childrearing interference						**	1.000 .	.488**	.157
professional emotional interference					*	**	**	1.000 .	.230
professional material interference						**			1.000 .

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Intercorrelations of professional support and interference, African-American group (n=21)

	professional network size	total professional support	professional childrearing support	professional emotional support	professional material support	total professional interference	professional childrearing interference	professional emotional interference	professional material interference
professional network size	1.000	.304	.082	.349	.313	-.184	-.234	-.101	.041
total professional support		1.000	.852**	.932**	.896**	.173	.019	.284	.206
professional childrearing support		**	1.000	.814**	.601**	-.019	-.162	.113	.135
professional emotional support		**	**	1.000	.713**	.140	.039	.191	.128
professional material support		**	**	**	1.000	.263	.096	.323	.262
total professional interference						1.000	.862**	.831**	.390
professional childrearing interference						**	1.000	.480*	.115
professional emotional interference						**	*	1.000	.288
professional material interference									1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Intercorrelations of professional support and interference, Hispanic group, (n=31)

	professional network size	total professional support	professional childrearing support	professional emotional support	professional material support	total professional interference	professional childrearing interference	professional emotional interference	professional material interference
professional network size	1.000	-.098	-.175	-.144	.066	.347	.268	.336	-.061
total professional support		1.000	.769**	.839**	.713**	-.159	-.165	-.123	.061
professional childrearing support		**	1.000	.654**	.217	-.221	-.126	-.259	.076
professional emotional support		**	**	1.000	.335	-.257	-.237	-.244	.229
professional material support		**			1.000	.072	-.033	.166	-.133
total professional interference						1.000	.830**	.874**	.095
professional childrearing interference						**	1.000	.469**	-.015
professional emotional interference						**	**	1.000	.003
professional material interference									1.000

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix G

Consent Form

Important Note: Please return this form in the enclosed envelope whether you choose to participate or not. If you do not want to participate in this study, please circle "no" below. Thank you.

INFORMED CONSENT FORM

My name is Shoshanna Sanders and I am a student working on my doctoral thesis. I am especially interested in young mothers and how they cope with the challenges of raising a child. The purpose of this study is to understand how you think and feel about being a parent, and how the people around you may help you or bother you as a parent. I would like to have permission to interview you about your experiences, thoughts and feelings as well as to learn some more about you from one of your teachers. This study may help plan better programs for young mothers in the future.

The audio-taped interview will last about an hour to an hour and a half, and will be conducted here at school privately. Part of it will include a pen-and-paper questionnaire. I would like permission to record this interview so I can record the details accurately. You may review the audiotape if you like. My notes and the audiotape will only be reviewed by myself, my teachers, and a research assistant. Information gathered will be kept strictly confidential, and will be stored in a locked file cabinet or in my computer, to which only I have access. In addition, I will be asking one of your teachers or counselors to fill out a form about you and your adjustment. This information will also be kept strictly confidential.

Taking part in this study is voluntary. If you choose not to take part, you will still receive the same care and instruction from your teachers and counselors, and it will not affect your grades or progress in school. Some of the questions involve your personal beliefs about being a parent, as well as your feelings about the helpfulness of friends, family and teachers. These are questions that you may feel are very personal. Again, all your responses will be kept confidential. At any time you can refuse to answer any questions or to end this interview, but I hope you will answer as many questions as you can.

I will pay you $15 to participate in this interview and will give you a small gift for you and your child. If you do not complete the full interview, you will receive a pro-rated portion of the money for your participation.

No reports about this study will contain the name of you, your child, or any other volunteer in this study. There are, however, some exceptions to confidentiality. If during the interview you tell me that you or your child are being abused, I will notify the appropriate agencies to provide protection. The same thing would happen if you gave the same information to a teacher, counselor, or social worker in the school. Also, if your teacher reports that you are depressed or in danger of harming yourself, your parents would be notified that further assessments may be warranted.

If you have any questions about this research, you can call my advisors, Dr. Marian Fish Dr. Helen Johnson, or myself. If you have any questions about your rights as a research volunteer, you may call Hilry Fisher, Sponsored Research, Graduate School/City University of New York.*

Thank you.

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*Contact phone numbers were provided in the consent form.

If you agree to participate as I've described above, please sign below. If you are under age 18, please ask your parent or guardian read and sign the agreement as well. If you are over 18, please ask you parent or guardian to read this letter and the agreement, but he/she does not have to sign. If you choose not to participate, no signature is needed. If you agree to be audiotaped, please sign that as well.

I agree to participate (circle one) Yes No

I agree to be taped (circle one) Yes No

_____ _____

Participant's signature Date Parent/Guardian's signature Date

(For students under age 18)

Appendix H

Letters of Approval for Use of Human Subjects

BOARD OF EDUCATION OF THE CITY OF NEW YORK
RUDOLPH F. CREW, Ed. D., Chancellor
OFFICE OF THE CHANCELLOR
110 Livingston Street - Brooklyn, NY 11201

February 10, 1999

Shoshanna Sanders
550-J Grand Street #5F
New York, NY 10002

Dear Ms. Sanders:

I am happy to inform you that your research study, Social Support and Parenting Cognitions in Adolescent Mothers, has been approved by the Proposal Review Committee of the Division of Assessment and Accountability with the following conditions:

1. Approval by this office does not guarantee access to any particular school or individual. It is your responsibility to make appropriate contacts and get the required permissions and consents before initiating the study. Participation in your research must be strictly voluntary. The following written consents are required.

   a. Principals who agree to participate must sign the enclosed Approval to Conduct Research form. In some districts, the superintendent must also sign. You should check with each principal to determine if the superintendent's signature is also required in that district. The signed form(s) should be returned to this office prior to beginning your research. A Proposal Summary form is enclosed to provide an indication of your data collection requirements to school administrators.

   b. In addition to the above written consent, all participants (e.g., administrators, teachers, parents, students) must be informed that they are not required to participate in the study, and that there are no consequences for non-participation.

   c. Before involving any child in your study or collecting student data, written parental consent is required.

2. Student interviews should be scheduled at the discretion of the principal. It is suggested that these be held before or after school or during the student's study hall period.

3. Your report of the study should not include the identification of any school, student, or staff member. A coding system should be used if necessary.

4. All researchers visiting schools will need to have their fingerprints on file at the Board of Education prior to the start of field work. This rule includes all research in schools conducted with students and/or staff. Researchers should be aware that the cost is $80.00, payable in a money order to the New York City Board of Education. Contact Dr. Irene Strum at (718) 935-4497 or Ms. Alba Langenthal or myself at (718) 935-3782 to obtain information about the procedure.

Please send an abstract of your final report to the Chair of the Proposal Review Committee in room 734 at 110 Livingston Street, Brooklyn, NY 11201; we are most interested in the results of your research.

When requesting permission to conduct research, please submit the Approval to Conduct Research form, a copy of the Proposal Summary form, and this letter to the superintendent and/or principal.

The Approval to Conduct Research forms must be returned to Dr. Irene Strum, Proposal Review Committee, room 734, 110 Livingston Street, Brooklyn, NY 11201 prior to beginning research. If you have any questions about implementing your research, please call her at (718) 935-4497.

Sincerely,

Henry Solomon, Ph.D.
Chair, Proposal Review Committee
Division of Assessment & Accountability

Office of the Vice President for Research and Sponsored Programs
Committee on the Protection of Human Subjects

The Graduate School and University Center
The City University of New York
[illegible]
[illegible]
[illegible]

Date: November 16, 2000

TO: Sanders, Shoshanna
(Educational Psychology)

STUDY: 6-15-10-00 • "Social Support and Parenting Cognitions in Adolescent Mothers" Continuing

The Institutional Review Board (IRB) of The Graduate Center of the City University of New York has approved the above study involving humans as research subjects. This study was approved through expedited review based on 45CFR46.110(a)9

IRB Number: *(IRB#6-15-10-00)* This number is an IRB number at The Graduate Center which should be used on all consent forms and correspondence.

Approval Date: *November 2, 2000* **Expiration Date:** *November 1, 2001*

This approval is for a one-year period. You should receive a courtesy renewal notice approximately four weeks before the expiration of this project's approval. However, it is your responsibility to insure that an application for continuing review approval has been submitted by the required time. In addition, you are required to submit a final report of findings at the completion of the project.

Consent Form: The approved and stamped consent form must be used by all subjects. You are responsible for maintaining signed consent forms for a period of at least three years after study completion.

Reporting: The principal investigator must report to the IRB any serious problem, adverse effect, or outcome that occurs with frequency or degree of severity greater than that anticipated. In addition the principal investigator must report any event or series of events that prompt the temporary or permanent suspension of a research project involving human subjects.

Modifications: All modifications of protocols involving subjects must have prior approval except those involving the prevention of immediate harm to a subject which need to be reported within 24 hours to the IRB.

If you have any questions, please do not hesitate to contact me through the IRB Office at 817-7525.

Sincerely,

Richard G. Schwartz, Ph.D.
Chairperson, IRB

c: Marian Fish

Please return one copy of this letter to the attention of Kay Powell at the above address.

Verification: By signing below, I acknowledge that I have received this letter and am aware of and agree to abide by all of its stipulations in order to maintain active approval status, including prompt reporting of adverse events/serious problems and annual continuing review. I am aware that it is my responsibility to be knowledgeable of all federal and state regulations including CUNY's Multiple Project Assurance (MPA) with the Department of Health and Human Services.

Shoshanna Sanders 12/11/00

Signature of Principal Investigator Date

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