The Relationship between Parental Corporal Punishment, Frustration Tolerance, And Cognitive Development

By

William F. Gordon

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

2005

UMI Number: 3187468

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

This manuscript has been read and accepted for the
Graduate Faculty in Clinical Psychology in satisfaction of the
dissertation requirement for the degree of Doctor of Philosophy.

Steve Tuber, Ph.D.

Date | Chair of Examining Committee

Joseph Glick, Ph.D.

Date | Executive Officer

Raymond Poggioli, Ph.D.

Leonard Lewis, Ph. D

Peter Fraenkel, Ph.D.

Anderson Franklin, Ph.D.

Supervision Committee

THE CITY UNIVERSITY OF NEW YORK

Abstract

THE RELATIONSHIP BETWEEN PARENTAL CORPORAL PUNISHMENT, FRUSTRATION TOLERANCE AND COGNITIVE DEVELOPMENT.

By

William F Gordon

Advisor: Steve Tuber, Ph.D.

This study examined the relationship between the level of parental corporal punishment, frustration tolerance and cognitive development in 25 college students of Guyanese decent. General demographic information about each subject was collected along with their history of corporal punishment. Their grade point averages were recorded, their IQ's were assessed using the Wechsler Abbreviated Scale of Intelligence (WASI), their history and range of parenting experiences were recorded using the Parenting Childrearing Style Questionnaire, the Self-Directed Learning Readiness Scale was used to assess their attitude towards learning, the Coping Responses Inventory to measure their frustration tolerance, and they were interviewed about their early child rearing practices surrounding discipline and attitude towards learning. Using a series of linear regressions, frustration tolerance was tested for mediation between corporal punishment and cognitive development, followed by a series of stepwise linear regressions to assess the relationship between all variables being examined.

In order to test frustration tolerance for mediation between the level of corporal punishment and cognitive development, the procedures of Baron and Kenny (1986) was employed, but frustration tolerance was not judged to be a significant mediating variable. For the series of stepwise linear regressions, the level of corporal punishment and frustration tolerance were partially correlated depending on the style each subject used to cope with stress, an approach rather than an avoidance style, which was correlated with grade point average as predicted. Corporal punishment was negatively correlated with attitude towards learning but not at a significant level. Of the possible confounding variables measured in the series of stepwise linear regressions, no significant correlation between socio-economic status and any of the other variables being analyzed was detected. The educational level of the parents was not significantly correlated to any of the variables predicted, except it was positively correlated with matrix reasoning on the WASI. Positive parenting practices were positively correlated with marital status of parents growing up, specifically both parents in the household. Psychological control was positively related with parental rejection at a significant level and single vs. both parents in the household was found to be positively correlated with using an approach strategy for coping with stress.

ACKNOWLEDGEMENTS

I would like to begin by thanking my committee for all of their help and support during this process.

I would also like to thank my family for their support and encouragement through this process, I love you.

Most importantly, I would like to thank my nephews, Alexander Gordon and Daniel Dahari. You were my inspiration throughout the process of completing this dissertation. You have both inspired me with your curiosity, innocence and laughter. You have both taught me what it is like to truly care for someone and want to protect them. You have both reminded me of the pure joy and importance of play. This document was researched and written in the hope that you'll never lose those special qualities and that you may become adults who can inspire the next generation of Gordons to be better parents and better human beings. I believe that it is far easier to build strong children than to repair broken men, and I believe that while children have never been very good at listening to their elders, they never fail to imitate them. It is my deepest hope that you imitate what represents the best of our family and I hope that you never learn fear and self-doubt from those of us who are charged with protecting and nurturing you.

TABLE OF CONTENTS

Page

ABSTRACT OF THE DISSERTATION iv

ACKNOWLEDGMENTS. vi

Chapter

1. INTRODUCTION. 1

2. REVIEW OF LITERATURE. 5

Incidence Rates ….. 5

Corporal Punishment – Why it persists. 9

Behavior and Experiences Associated with Corporal Punishment. 15

Frustration and Impaired Functioning. 27

How Parental Corporal Punishment affects Frustration Tolerance and consequently, Cognitive Abilities 42

3. METHOD. 55

Sample 55

Apparatus 56

4. RESULTS. 63

5. DISCUSSION. 106

Limitations. 116

LIST OF TABLES. . . . . .

Table 1 General Demographic Information 67
2 Cognitive Development 69
3 Coping Response Inventory 71
4 Attitude Towards Learning 73

5	Children's Report of Parental Behavior Inventory	75
6	Analysis of Mediation	78
7	Correlation Matrix for Stepwise Linear Regressions	80
8	Combined Regression Analysis	81
	Tables for Qualitative Analysis	
9	How would you discipline your children?	88
10	Do you have any regrets about how you were raised?	90
11	Why do you think it is important to learn?	92
12	How would you motivate your children to learn?	95
13	How did your parents motivate you to learn?	98
14	Differences between how your parents motivated you and how you would motivate your children?	101
15	Was corporal punishment ever used to motivate you Academically?	103
16	Do you feel like your parents understood you growing up?	105

APPENDICES

A.	Flyer	120
B.	Oral Script	121
C.	Consent Form	123
D.	General Demographic Information/Interview	126
E.	Coping Response Inventory	128
F.	Self Directed Learning Readiness Scale	132
G.	Permission to be contacted	136
H.	Debriefing Script	137

REFERENCES. 139

Chapter 1

Introduction to the Problem:

There are several roots of corporal punishment as a child rearing practice among Guyanese of African decent. Some authors (Arnold, 1982; Carey, 1994) have pointed to the biblical idea of "spare the rod and spoil the child" as one possible source of this practice and its persistence as a legitimate child rearing tool. The Victorian ideals of child rearing inherited through English colonialism, with attitudes such as 'a child should be seen and not heard,' provides another possible source for the widespread acceptance of this practice.

Another possible reason for the acceptance of corporal punishment as a legitimate source of discipline and instruction is the legacy of slavery. Arnold (1982), among others (Payne, 1989; Grant et al, 1983), has supported such an idea in their thinking. When slaves did not comply with their master's wishes they were punished in a variety of ways, most often by being flogged. It can be theorized that because slaves could not direct their rage towards their masters without significant repercussions, they directed it at each other and their children, a phenomena which can be thought of an internalized racism. A similar pattern of abuse is modeled in very much the same way for children who are exposed to corporal punishment but can't redirect their rage towards their parents, but later directs it towards their own children. It is also possible that Blacks felt a need to control their children, hoping to prevent them from 'acting up' or getting out of place during the days of slavery because this might actually result in the family being dispersed or their very lives

might have been endangered. Such patterns of thinking may have been inherited from past generations.

One of the unfortunate results of corporal punishment is that the recipient may be robbed of the "intellectual exercise" of thinking about their actions. Instead, they tend to comply out of fear. I believe this practice undermines cognitive development. The suppression of independent thinking and not the promotion of higher cognitive functioning was part of the master's goal during slavery. Likewise, as with corporal punishment with children, it is possible that *the more a child is forced to do anything without thinking, the less likely that child will become a thinker*. This sentiment captures the core of my thesis as well as the essence of my personal biases with regards to this research project.

Personal Experience:

Throughout my early childhood and early schooling, corporal punishment played a frequent and prominent role in most teaching and disciplinary practices. When I left Guyana and came to the United States of America at age thirteen, where corporal punishment was not as widely accepted, I was exposed to a style of teaching that was strikingly different from my early learning experiences. My attitude towards learning, as well as my grades in school skyrocketed as a result. In America I started getting better grades not out of fear but because I wanted to learn and improve myself which had a significant impact on how academic information was incorporated and used.

Additional inspiration for this project came about approximately five years ago, when my older brother and nephew moved back to Brooklyn from Tennessee to live with my family, after a bitter divorce in which he was awarded full custody. My brother and I have never agreed on the best way to raise my nephew. He opted to use the method we were raised by, which for all intensive purposes worked fairly well, and I chose to use an approach that I believe might promote better intellectual development, and better emotional and mental health. Although my brother believes his disciplinary approach has produced some positive results, I think these results are only temporary and create far more problems than they eliminate. For example, two weeks ago my nephew was in the shower and my brother yelled at him to get out because he was taking too long. My nephew, who in the past might have presented some resistance to complying, quickly hopped out of the shower and reported to his father completely covered in soap, at which point he was criticized for being "stupid." I believe my brother's parenting method is slowly compromising my nephew's ability to think independently and the long-term consequences could be less than optimal.

Of major concern with regards to my nephew is his emerging attitude towards learning. Over the last few years he has become increasingly closed minded and his overall tendency to experiment and try new things has diminished significantly. I believe this is related to the way he is disciplined when he experiments with new things that might get him into trouble (by this I'm referring to my family's definition or more specifically, his father's definition of trouble). I've also observed poor frustration tolerance when my nephew is working on puzzles or homework problems when he is unable to solve them quickly. Over the last few years my nephew's

learning has become more and more conflictual and seems to arouse anxiety rather than the joy he once felt surrounding his academics. I believe that the level of anxiety his father creates around homework and learning eliminates the joy of learning, which is in part reflected in his low frustration tolerance.

Chapter 2

Review of the Literature

Parental corporal punishment has been a source of debate throughout the history of the United States (Grevan, 1991) and for thousands of years (Holden, 2002). Based on this writer's personal experience, no such debate exists in many West Indian and third world countries such as Guyana, since the notion of not using parental corporal punishment is readily dismissed and criticized without any consideration given its alternatives or the possible negative consequences of its use for the child.

Incidence Rates:

Despite strong evidence of negative developmental outcomes resulting from the use of physical punishment with children, its use by parents and other caregivers remains quite common. In one study parents reported rates of hitting, spanking, and slapping ranging from 94% for young children to 32% for adolescence (Graziano et al, 1994; Gershoff, 2002). The National Committee for the Prevention of Child Abuse found that child abuse across the United States exceeded 3.1 million in 1995 (NCPCA, 1996).

The incidence rates of parental corporal punishment have also been examined by Straus and Stewart (1999) who presented data by using a nationally representative sample of 991 American parents interviewed in 1995. They identified six types of corporal punishment: slaps on the hand or leg, spanking on the buttocks, pinching, shaking, hitting on the buttocks with a belt or paddle, and slapping in the face. The

overall prevalence rate (the percentage of parents using any of these types of corporal punishment during the previous year) was 35% for infants and reached a peak of 94% at ages three year old to four years old. Despite a rapid decline after age 5, just over half of American parents hit children at age 12, a third at age 14, and 13% at age 17. Analysis of chronicity found that parents who hit teenage children did so an average of about six times during the year. Severity, as measured by hitting the child with a belt or paddle, was greatest for children age 5-12. Corporal Punishment was more prevalent among African American and low socioeconomic status parents, in the South, for boys, and by mothers.

Graziano et al (1992) showed that the parents interviewed in their study believed that children needed corporal punishment to learn, that physical punishment was not abusive, that children didn't resent corporal punishment nor their parents for its use, and that there was an overall attitude that endorsed the use of corporal punishment. Other similar studies such as Kelly, Weir, & Fearnow (1985) surveyed parents of military dependents and found that 51% of the parents supported the use of corporal punishment in schools, 37% disagreed (77% of these strongly), and 11% had no opinion. 34% of parents believed corporal punishment would improve behavior, and 20% of parents felt that physical punishment would improve their child's academic performance.

Cohen (1995) found that use of corporal punishment is such a widely accepted and pervasive practice of childrearing, that there is even debate about parents' right to use corporal punishment among MDs. This issue was explored in one study conducted by McCormick (1992) on the attitudes of primary care physicians toward

the use of corporal punishment and the frequency with which these physicians offered anticipatory guidance on discipline. This study used self-report surveys which were mailed to study participants, which included 800 family physicians and 400 pediatricians randomly selected from the Ohio State Medical Board's roster of family physicians and pediatricians. Of the 619 physicians (61%) who completed the survey, 70% of the family physicians and 59% of pediatricians supported the use of parental corporal punishment. These percentages clearly show that most family physicians and pediatricians support the use of corporal punishment in spite of evidence (see below) that it is neither effective nor necessary, and can be harmful.

It is very difficult to differentiate between 'acceptable corporal punishment' and what qualifies as child abuse. Whipple and Richey (1997) tried to operationalize the difference between physical discipline, corporal punishment, and physical child abuse based on samples drawn from the United States and used normative data on parental spanking frequencies to operationalize patterns of physical discipline among abusive and non-abusive parents. Aggregated data from non-abusive parents were used to compute a continuum or "normal range" of daily spanking frequencies with an average of 2.5 times in 24 hours compared to abusive parents who spanked their children an average of 3.82 times per 24 hour period. They concluded that while further research is needed to address spanking intensity, severity, and context, their results suggest that "relative exposure" to spanking may be an additional risk marker for abuse when considered with other known indicators or risk factors. This study did not look at parental corporal punishment that went beyond 'spanking' to include more severe forms of widely accepted physical punishment, but one might assume that the

trends in frequency might look the same. This highlights one common problem with defining parental corporal punishment, since different studies use different standards to measure the severity, frequency and consequences of its use.

Another problem frequently documented by opponents of corporal punishment is that the more it is used, the less effective it becomes and when it fails to correct the child's behavior its use is increased over time (Carey, 1994). As the frequency and severity of corporal punishment increases it is more likely to result in abuse.

In Bethea's (1999) review of the 1993 reports from the U.S. Advisory Board on Child Abuse and Neglect, who declared a child protection emergency, it was reported that between 1985 and 1993, there was a 50 percent increase in reported cases of child abuse. An estimated three million cases of child abuse are reported in the United States each year and the treatment of the abuser has had only limited success while child protection agencies remains overwhelmed.

Studies reporting on the incidence rates and acceptance of corporal punishment in the West Indies are sparse, and non-existent in Guyana. However, the literature found seems to hold a view which is consistent with my personal views (Payne, 1989; Gopaul-McNicol,1997). That is, the West Indian child is usually loved by its parents or caretakers, but is frequently subjected to corporal punishment unsuitable to the age and stage of the child's development and excessive in relation to the alleged offense. Arnold (1982) notes that socially and economically disadvantaged parents under stress seem to displace their frustrations and anxieties on the children through corporal punishment, which often assumes ritualized

characteristics. It is the Guyanese ritualized use of corporal punishment that needs to be addressed in this research project as it relates the use of corporal punishment to frustration tolerance and cognitive development.

Parental Corporal Punishment - ***Why it persists.***

Deeply held beliefs and parenting styles:

The main reason corporal punishment remains so widely accepted in our culture, and in countries like Guyana, is because of false parental beliefs about its efficacy and wide spread ignorance about its destructiveness. Dubanoski, Inaba, and Gerkewicz (1983) examined many countries where corporal punishment of school children continues to be an officially or unofficially sanctioned form of "institutional child abuse." They noted that continuing support for the use of corporal punishment is related to the following factors: (1) widely held beliefs regarding the effectiveness of corporal punishment, (2) an unawareness of problems resulting from the use of physical punishment, and (3) a lack of knowledge about effective disciplinary alternatives. Erroneous beliefs such as, "corporal punishment is needed to build character" were widely accepted as truisms with little or no attempt for reexamination.

Tiller's (1995) examination of fathers' parenting attitudes during a child's first year of life used a sample of White, well-educated, stable, upper-middle class fathers from private obstetricians' offices in the southeastern United States. This study revealed similar results. Fathers with age appropriate or inappropriate expectations of

their children's behavior were correlated to the methods of discipline they employed, including corporal punishment.

Gershoff (2002) noted that the age of the parent was also related to the amount of corporal punishment used as a disciplinary practice, with younger or adolescent parents using such methods most often (90% of low income adolescent mothers reported using corporal punishment). She hypothesized that one of the reasons for this trend is that younger parents might have more unrealistic beliefs about how their children should behave, which might be one possible influence on their use of corporal punishment as primary disciplinary tool.

Closely related to parental beliefs are their styles of parenting as outlined by Baumrind (1967). For example, authoritarian parents are more inclined to believe children should follow instructions without question and find any sign of descent or disobedience to be unacceptable. Baumrind (1967) also notes that parental styles tend to encompass a set of practices that might affect the child's behavior, mental health and development. For example, parents who use corporal punishment also tend to use other negative practices such as yelling, therefore some of the negative effects attributed to corporal punishment might be the result of a cluster of behaviors. Wissow (2001) points out that "the use of corporal punishment is negatively correlated to activities such as reading to, playing with and hugging the child," which seems to fit well with the cluster of behaviors to which Baumrind refers.

Parental Stress:

Crouch and Behl (2001) examined the extent to which parental beliefs in the value of corporal punishment moderates the association between level of parenting

stress and physical child abuse potential. Based on existing theory, it was expected that levels of parenting stress would be positively associated with physical child abuse potential among parents who reported high levels of belief in the value of corporal punishment. Using self-report measures, forty-one parents (25 general population and 16 at-risk parents) were assessed for belief in the value of corporal punishment, level of parenting stress, and physical child abuse potential. Based on their responses on the study's measures, respondents were categorized as either high or low on belief in corporal punishment and parenting stress. The results clearly demonstrated that the level of parenting stress was positively associated with physical child abuse potential. As expected, the interaction of parenting stress and belief in the value of corporal punishment was quite significant with parenting stress positively associated with physical child abuse potential among parents who reported high levels of belief in the value of corporal punishment and the opposite for parents who reported low belief in the value of corporal punishment.

Gershoff (2002), who highlighted age as being related to use of corporal punishment, felt that younger mothers who generally had less recourses at their disposal were more prone to stress which contributed to their use of corporal punishment with their children.

Psychological functioning:

Lutenbacher (2001) interviewed parents using the Adult-Adolescent Parenting Inventory (AAPI), a 32-item inventory widely used to identify adolescents and adults at risk for inadequate parenting behaviors. The inventory included four subscales representing the most frequent patterns associated with abusive parenting:

(a) Inappropriate Expectations; (b) Lack of Empathy; (c) Parental Value of Corporal Punishment; and (d) Parent-Child Role Reversal. AAPI scores indicated that these mothers were at high risk for child abuse when compared with normative data for parents with no known history of abuse. Higher risk for abusive parenting was associated with a higher level of depressive symptoms, less education, and unemployment. Gershoff's (2002) meta-analysis on the use of corporal punishment lists several studies that link parental depressive symptomatology with increased use of corporal punishment. Gershoff (2002) also notes that depressive symptoms in parents often cause them to make negative attributions to their child's behavior and caused them to think in parent-centered versus child-centered patterns, which becomes increasing significant when the level of parental stress is increased.

Other studies looking at the psychological state of parents who frequently resorted to corporal punishment found that anxiety (Paquette, et al, 2000), and drug use (Youseff, Attia & Kamel, 1998) were positively correlated with corporal punishment.

Social-Cultural context:

Grasmick, Bursik, & Kimpel (1991) demonstrated that Protestant fundamentalism is closely linked to favorable attitudes toward corporal punishment of children in the home and the school. This relationship persists with controls for socioeconomic and demographic variables. Three explanations of the greater support for corporal punishment among people affiliated with fundamentalist denominations were tested and greater personal religiosity and adherence to a punitive image of God account for very little of this relationship. Instead, the emphasis on biblical

literalness among fundamentalists appeared to be a major source of their advocacy of corporal punishment. Religious beliefs are often closely related to cultural context.

When corporal punishment is accepted and expected from the community at large parents generally view it as normative and are more likely to use it (Gershoff, 2002). Other social/cultural factors such as socioeconomic status (Youseff, et al, 1998), and race-ethnicity (Whaley, 2000) have all been linked to patters of parental corporal punishment. Intergenerational Transmission is also a common factor for the use of parental violence. One of the most commonly reported characteristics of physically abusive parents is a history of maltreatment (Muller, et al, 1995). Brenner and Fox (1998) examined the relationship between parenting practices and behavior problems in very young children using a Parent Behavior Checklist. Their results indicated that parents' use of verbal and corporal punishment was the strongest predictor of reported behavior problems, accounting for 20% of overall variance and 13% of unique variance.

Good Intentions and the Road to Hell:

Saadeth, Rizzo and Roberts (2002) highlight several arguments frequently made by those who believe that corporal punishment has its rightful place in parental discipline. In addition, they have posed some useful counterarguments. One such argument is rooted in the idea that many children who were disciplined using corporal punishment grow up to be relatively well adjusted individuals who demonstrate no increased risk for violence or any other destructive pathological behavior. They also point out that the vast majority of Americans support the use of

corporal punishment as a disciplinary practice, including most pediatricians, 59% reported spanking their own children in one study conducted by White (1993). They also cite numerous papers to support this position, such as the Roberts and Power's (1990) article which advocates spanking as a complement to timeout with oppositional children. Two arguments that are generally accepted concerning the use of corporal punishment are that there is usually an immediate reduction in bad behavior by the child, and a reduction in stress for the disciplinarian. They argue that spanking should not be used under certain circumstances, like when the disciplinarian is angry or frustrated, for children under 18 months old or adolescents, and should be limited in its frequency and severity of use. Banks, (2002) another writer who supports the use of corporal punishment notes that discipline should be instructive and age-appropriate and should include positive reinforcement for good behavior. Punishment is only one aspect of discipline and, in order to be effective, it must be prompt, consistent, and fair.

Unfortunately, the moments when most parents resort to corporal punishment is when they are most stressed, angry, and frustrated and least likely to be able to fully control their anger. Since one might assume that parents are not always frustrated, angry or stressed, then it naturally follows that they tend to administer corporal punishment in an inconsistent manner from one situation to the other depending on their own level of frustration. Studies such as Crouch and Behl (2001), and Gershoff (2002), show that corporal punishment is more a function of the parent's level of stress rather than the actual bad behavior. Spanking while stressed and angry is usually done in an impulsive manner with little thought as to whether it

is the most appropriate form of discipline for the situation (Saadeth, Rizzo and Roberts, 2002).

Another problem that must be considered with the use of corporal punishment is that the same level of punishment loses its effectiveness over time which requires the severity of punishment to escalate, which can often result in abuse. Barbour (1944) identifies several reasons why corporal punishment is wrong, for example, the use of corporal punishment does not discover the cause of misbehavior, arouses emotional reactions in the child that blocks growth, arouses hate and fear, and leads to combative and retributive action by the child. In essence, corporal punishment often misses the purpose of discipline. Discipline comes from the root word *disciplinare,* which means to teach or instruct. However, research such as Straus and Paschall (1987) notes that most parents who use physical punishment are less prone to use verbal methods, which in turn means they are less likely to instruct and teach.

Behaviors and Experiences associated with Corporal Punishment

Immediate Compliance

Gershoff (2002) points out that immediate compliance is one of the primary goals when corporal punishment is used. This goal is usually achieved and highlights one of the main reasons why eliminating corporal punishment will be a difficult task since most parents equate such compliance with the success of corporal punishment. However, this positive outcome pales in comparison with the enormous body of negative outcomes highlighted by researchers.

Attachment to parents

Barnett, et al (1998) studied parental correlates of child attachment in a preschool-aged, economically disadvantaged, African American sample using sixty-nine 4 to 5-year-olds and their primary caregivers in the Strange Situation assessment procedure. Sixty-one percent of the children were classified as securely attached, with girls being significantly more likely to be securely attached than boys (74% versus 45%). The majority of the insecure attachments were of the avoidant variety. Consistent with attachment theory, parents of securely attached children were rated as significantly more warm and accepting and less controlling with their children than were parents of insecurely attached preschoolers. Relative to parents of securely attached preschoolers, parents of children judged to be insecurely attached reported being more likely to use corporal punishment and less likely to use verbal reminders when their children misbehaved. Style of parenting was associated with attachment over and above the effects of the child's sex. In essence, the use of corporal punishment is more likely to cause resentment and a desire to defy the parents (Whipple and Richey, 1997)

Moral Internalization

Although parents report experiencing immediate compliance with the use of corporal punishment, they all agree that long term internalization of parental beliefs is the ultimate goal. Moral internalization is defined by Gershoff (2002) as "taking over the values and attitudes of society as one's own so that socially acceptable behaviors are not motivated by external consequences but by intrinsic or internal factors."

Unfortunately, children are more likely to internalize the values of their parents if parental methods deemphasize parental power, promote choice and autonomy, and provide explanations for desirable behaviors, which are less likely to be present when corporal punishment is used (Kuczynski & Hildebrandt, 1997). Children who are subjected to corporal punishment are also more likely to develop an external locus of control and attribute the causes for their behaviors to the environment rather than to intrinsic motivators, which is also correlated with depression (Lepper, 1983).

Behavior Problems

Criminal, Delinquent and Antisocial Behavior

Straus and Mouradian (1998) examined the relation between impulsive corporal punishment by mothers and antisocial behavior and impulsiveness in their children. They hypothesized that corporal punishment, such as spanking or slapping a child for purposes of correcting misbehavior is associated with antisocial behavior and impulsiveness by the child. They obtained data through interviews with a sample of 933 mothers of children age 2-14 in two small American cities. Their analyses of variance found that the more corporal punishment experienced by the child, the greater the tendency for the child to engage in antisocial behavior and to act impulsively. These relationships held even after controlling for family socioeconomic status, the age and sex of the child, nurturance by the mother, and the level of non-corporal interventions used by the mother. There were also significant interaction effects of corporal punishment with impulsiveness by the mother. When corporal punishment was carried out impulsively, it was most strongly related to child

impulsiveness and antisocial behavior. When corporal punishment was done when the mother was under control, the relationship to child behavior problems was reduced but still present. In view of the fact that there is a high risk of losing control when engaged in corporal punishment, even by parents who are not usually impulsive, and the fact that impulsive corporal punishment is so strongly associated with child behavior problems, the results of this study suggest that corporal punishment is an important risk factor for children developing a pattern of impulsive and antisocial behavior which, in turn, may contribute to the level of violence and other crime in society.

Straus et al (1997) examined the causal relationship between corporal punishment and antisocial behavior by considering the level of antisocial behavior of the child at the start of their study. They interviewed a national sample of 807 mothers of children aged 6 to 9 years in the National Longitudinal Survey of Youth-Child Supplement and tested the hypothesis that when parents use corporal punishment to correct antisocial behavior, it increases subsequent antisocial behavior. The analysis controlled for the level of antisocial behavior at the start of the study, family socio-economic status, sex of the child, and the extent to which the home provided emotional support and cognitive stimulation. Their results indicated that forty-four percent of the mothers reported spanking their children during the week prior to the study and they spanked them an average of 2.1 times that week. The more spanking reported at the start of the period, the higher the level of antisocial behavior was observed two years later. The change is unlikely to be due to the child's tendency toward antisocial behavior or to be confounded with demographic

characteristics or with parental deficiency in other key aspects of socialization because those variables were statistically controlled. They were able to conclude that when parents use corporal punishment to reduce antisocial behavior, the long-term effect tends to be the opposite. The findings suggest that if parents replace corporal punishment by nonviolent modes of discipline, it could reduce the risk of antisocial behavior among children and probability reduce the level of violence in American society.

Frazier (1990) has tried to highlight a connection between corporal and capital punishment among juveniles. He believes that both are barometers of acceptable levels of violent punishment and their elimination is a hallmark of a maturing and decent society. Within a majority of the eighteen states where school authorities most frequently strike children are housed 25 of the nation's 28 juvenile death row inmates. On average, the homicide rates of these jurisdictions are two and a half times greater than those that have abolished both state-sanctioned corporal and capital punishment or limit death sentences to those who are eighteen or older at the time of their crime(s).

Aggression

Youssef, et al (1999) examined the relationship between violent behavior among school students and its predictors. Selected children for their study (2170) were requested to complete a self-administered questionnaire. Initiating violent assaults in the 18 months prior to the study was reported by 51.0% of boys and 20.9% of girls. Multivariate logistic regression analysis pointed to 16 predictive variables for violent behavior; few were related to family background whereas the majority was

related to the children themselves. Violent assaults were more likely to be initiated by boys and those who were dangerously daring and risk-takers, often fought verbally, threatened to attack others, were cruel to animals, disrupted class discipline, were truant from school or ran away from home and were disciplined by corporal punishment by their parents and their teachers.

Ani and Grantham-McGregor (1998) tried to identify the family and child determinants of aggressive behavior in Nigerian elementary school boys and to compare the findings with previous ones from Western studies. They used forty-seven aggressive boys from four elementary schools in Nigeria and compared them with 47 matched pro-social boys with teacher ratings and peer nominations used to select subjects. The subjects and their parents were given structured questionnaires to obtain information on possible risk factors for aggression. Their results showed that compared with pro-social boys, the significantly more aggressive boys came from polygamous families and crowded homes, had more siblings, received less parental affection, were more physically punished, less supervised at home, witnessed more domestic conflicts, did poorly at school, had poorer verbal intelligence and attributed malice more readily than pro-social boys. Logistic regression indicated that the independent family predictors of aggression were crowding, little paternal affection, and corporal punishment. The independent child predictors were biased attribution and poor school achievement. Corporal punishment at school was also an independent predictor of aggression. They concluded that the family and child determinants of aggressive behavior in Nigeria are similar to those found in Western

studies except for the small contribution of family instability and overwhelming influence of corporal punishment in their sample.

Temper Tantrums

Needlman, Stevenson, & Zuckerman (1991) were able to identify several psychosocial stressors that were associated with temper tantrums in children. Using a Behavior Screening Questionnaire they identified and analyzed 502 English mothers of 3-year-olds, with tantrums considered present if mothers reported tantrums three or more times a day or lasting 15 minutes or longer. Factors independently associated with tantrums included maternal depression and irritability, poor health of the child and use of corporal punishment.

Mental Health/Emotional Problems

In addition to behavioral problems associated with the use of corporal punishment, a host of mental health issues are correlated with severe corporal punishment (Ateah et al, 2003). In a study conducted by Lau (2003) to understand the associations between adolescent family physical maltreatment and psychiatric morbidity or psychological problems, it was found that those who experienced more severe and frequent forms of physical maltreatment had significant and strong associations with drug abuse problems, self-injurious behaviors and poor perceived parental support. Subjects who had never been beaten to injury scored significantly lower in "physical appearance" and "behavioral conduct." Banks (2002) has also found links between corporal punishment and spouse abused, as well as to future substance use, violent crime, poor self-esteem, and depression.

Lau et al (1999) tried to estimate the prevalence and correlates of physical abuse-related outcomes in the family setting in Hong Kong's adolescent population using a cross-sectional study design. A randomly selected sample of 3,355 secondary school students who had experienced being beaten by parents for no apparent reason, or being beaten to injury by family members in the past three months were surveyed. They were at a significant disadvantage for a wide range of morbidity indicators, including self-perceived bad health, anxiety and stress, somatic illnesses (such as asthma and epigastric pain), injuries and accidents, and hospitalization. They were more likely to have poor familial relations and coping skills, and to take up habits which potentially put their health at risk, such as smoking, alcohol consumption, and fighting with others.

DuRant et al (1995) examined the relationship between exposure to violence and victimization and depression, hopelessness, and the perceived purpose in life among adolescents living in and around public housing. Their study included Black adolescents, (N = 225, males = 44%) ages 11 years to 19 years in a southern city, who were administered an anonymous questionnaire. Depression was correlated with the exposure to violence, family conflict, and corporal punishment scales, perceived probability of being alive at age 25, socioeconomic status of head of household, anticipated socioeconomic status as an adult, and number of sexual partners. Based on multiple regression analysis, corporal punishment, family conflict, educational level of head of household, and perceived probability of being alive at age 25 years explained 18% of the variation in depression. Family conflict, corporal punishment, and unemployed head of household explained 11% of the variation in the

hopelessness scale. Unemployed head of household, the corporal punishment scale, and number of sexual partners explained 9.7% of the variation in purpose in life. Even when accounting for other social factors, exposure to violence in the home was associated with psychological distress in this sample of adolescents. Straus and Kantor (1994) also looked at corporal punishment of adolescents by parents and determined that it was a risk factor in the epidemiology of depression, suicide, alcohol abuse, child abuse, as well as wife beating later in life even after controlling for a number of possible confounding risk factors such as low socioeconomic status. Hällström (1987) examined sixty middle-aged urban women with a major depressive episode diagnosed in a community survey and compared them with 400 participants of the study who had no history of major depression. This retrospective study revealed that the depressed women's parents had contact with psychiatric services twice as often as those who were never depressed, however; the rate of paternal alcoholism was the same in both groups. As compared with the controls, women with major depression reported significantly more often frequent corporal punishment, poor relationship with mother, having been misunderstood by parents, as well as unhappy childhoods.

Medina, et. al (2001) looked at exaggerated startle responses and PTSD symptoms in relation to chronic stressors, which were in part operationally defined as high levels of childhood corporal punishment. The study recruited a sample of 52 women from a metropolitan community and administered several questionnaires assessing experience of corporal punishment in childhood and level of PTSD symptoms. Following the questionnaires, women were presented with eight auditory

startle probes to measure their responses. The results showed that childhood corporal punishment was associated with women's PTSD symptom scores. However, the results suggest that a subgroup of individuals experienced physiological suppression rather than heightened physiological reactivity.

Wakaba (1990) analyzed the process of the onset of stuttering using male children who started to stutter in the first six months of the third year using longitudinal studies to determine which factors played a role. Their developmental levels were tested and neurotic-like behaviors since birth were surveyed via administration of a questionnaire and through family interviews. Developmental history, stuttering history, and child-rearing circumstances were surveyed by interviews with subjects' mothers. In this study a positive effect of corporal punishment on the development/onset of stuttering was observed.

Billig (1941) examined finger nail-biting and tried to determine how and to what extent nail-biting is related to age, sex, siblings, intelligence, fear, sense of guilt, neuroticism, conformity to school situation, infractions, and corporal punishment. Effort was made "to find its duration, the precipitating factors, and opportunity of learning, postures assumed while indulging, and the effect of school examinations on nail-biters." The investigation covered a period of eight years. Nail-biters were found to have slightly lower IQ's than other children and to be somewhat more neurotic. Nail-biting is most likely to have its incipiency between the ages of 8 and 10. Therapy by negative conditioning or any other technique "will be successful only if the individual is favorably disposed toward it and has a desire to desist." "In spite of the nail-biters' apparent conformity, they are non-conformists."

Intellectual Development

Smith and Brooks-Gunn (1997) examined the incidence, predictors, and consequences of harsh discipline in a sample of children from an Infant Health and Development Program which consisted of 715 children who were 3 years of age. The independent measurements of primary interest were the mother's hitting and scolding of her child as a disciplinary practice. A multivariate analysis of variance was used to examine the consequences of the mother's harsh discipline on the child's IQ measured at age 3 years, which was associated with IQ scores 12 points lower than the IQ scores of controls who received low punishment and high warmth. This was observed even after controlling for neonatal health status, birth weight, ethnic group, mother's age, family structure, mother's education and family income.

Consistent findings were observed by Wilson (1984) who reviewed some of the factors involved in educational success, such as the importance in early childhood of a close and affectionate relationship with caring adults, the importance of setting standards of behavior, and the attitude of the caring adults toward achievement in general and school progress in particular. Possible causes of under-functioning in maladjusted children are identified, including anxiety, absence of motivation, and general apathy. She concluded that the influence of the caring adult would be more educationally effective if the adults cared as much about the child's cognitive development as his/her emotional readjustment.

Mohr and Anderson (2002) notes that corporal punishment and other harsh interventions often produce trauma, which is compounded when a child has preexisting learning difficulties that are not appropriately addressed. When schools

respond to these challenges using harsh methods, children can be further traumatized. They also note that childhood neurodevelopment can be affected by exposure to certain noxious sensory experiences which in turn affects children's responses to threat or perceived threat

Cherian (1994) examined the relationship between corporal punishment and academic achievement of Xhosa children using self-report measures. The association of corporal punishment reported by 1021 pupils, between 13 and 17 years old, (369 boys and 652 girls) and their academic achievement using an analysis of variance indicated a significant association between parental punishment and academic achievement.

Zulliger (1940) embarked on a psychoanalytic experience in a public school where attempts were made to analyze and improve his teaching and set down in writing the steps of his development using children's compositions as a means of gaining insight into their problems. He wrote that when discipline and corporal punishment are analyzed students demonstrate tendencies to be "passive or demonstrate open opposition with spite, rage, hate, revenge, and sadism on the one hand, and on the other secretiveness, sanctimoniousness, slyness, cringing, sickening fear, death fantasies and masochism are the fruits of corporal punishment." He further notes that "we resort to floggings and imagine we can force nobility into young manhood. Instead of which, we nourish the beast."

Vondra (1989) looked at maltreated children and found that they were at risk for impaired cognitive and school functioning, both cognitive and physical competence ratings, even after controlling for confounding variables such as SES.

Abused children also significantly overrated their physical competence, and self-ratings of competence and acceptance tended to be higher (and less realistic) than those of their less maltreated peers, clearly indicated that maltreatment may be important in shaping self-concept and motivation, and subsequent cognitive functioning.

Frustration tolerance and impaired functioning:

Self-regulatory processes are believed to be critical to early personality and behavioral adjustment. Such processes can be observed on multiple levels, including the physiological, attentional, emotional, cognitive, and interpersonal domains of functioning. The capacity for regulatory development at the physiological, attentional, and emotional levels are all related to frustration tolerance in one way or another (Calkins, 2002). Frustration occurs whenever an organism meets a more or less insurmountable obstacle or obstruction in its route to the satisfaction of any vital need. And frustration tolerance can be thought of as the capacity to withstand frustration without failure of psychobiological adjustment or resorting to inadequate modes of responding. (Lindzey, 1950). In essence, frustration tolerance is related to ego strength. Pfeiffer, Justus-Liebig, and Giessen (1971) note that frustration may result in constructive effects depending on the individual's level of tolerance. On the other hand, if reactions are inadequate, they may result in aggression, regression, behavioral rigidity, evasion and increased use of defense mechanisms. Britt and Janus (1940) notes that frustration process seems to have aspects of emotion, tension, conflict, inhibition, aggression, withdrawal, and the like surrounding barriers or

obstruction, interference with goal-attainment and of reward-expectation. The factors of failure include changes in tension, cognitive effects, and frustration-tolerance. Reactions to frustration may be aggression, withdrawal, regression, resistance, anger, guilt and remorse, shame and embarrassment.

Mental health:

The ability to tolerate frustration is related to a wide range of psychological disorders and less than optimal modes of functioning. Scorzelli (1976) examined the effects of frustration on the response rate of skid row alcoholics on a performance task and found that what determines change in the response rates after the introduction of a frustration operation was related primarily to low frustration tolerance and the method by which these individuals tend to motivate themselves. Möller and Bothma (2001) tested the hypothesis that the irrational evaluative beliefs, postulated by Rational-Emotive Behavior Therapy, are associated with body dissatisfaction. Using 94 women, consisting of 21 diagnosed with an eating disorder, 38 with high body dissatisfaction but without an eating disorder, and 35 with low body dissatisfaction, the Survey of Personal Beliefs and the Eating Disorders Inventory were completed. While their analysis showed no significant difference in body dissatisfaction between the Eating Disordered and High Body Dissatisfaction subgroups, the High Body Dissatisfaction subgroup had significant correlations between scores on body dissatisfaction and irrational standards and beliefs. Subjects with irrational beliefs showed a significantly greater tendency towards tendencies such as catastrophizing and demonstrated low frustration tolerance.

Greene (1998), an author with years of personal experience working with children who were explosive, inflexible, easily frustrated and who often exhibited severe behaviors that can make life extraordinarily challenging and frustrating for themselves and those who interact with them, describes many ways these children were different from each other and some of their different psychiatric diagnosis's (oppositional-defiant disorder, attention-deficit/hyperactivity disorder, Tourette's disorder, depression, bipolar disorder, and obsessive compulsive disorder), but felt that the difficulties of these children stem from developmental deficits in 2 critical skills: flexibility and frustration tolerance.

There are many studies that highlight a strong relationship between depressive disorders and lower levels of frustration tolerance. Chang (1996) explored the predictive discriminant validity of the 5 irrational beliefs scales of the Survey of Personal Beliefs in assessing depression and anxiety in 284 undergraduates. Results of the scale that measured low frustration tolerance were a unique predictor of both depression and anxiety symptoms. Sato et al (1997) investigated whether melancholic and non-melancholic Japanese depressive patients differed in regard to interpersonal sensitivity, as measured by the Interpersonal Sensitivity Measure (IPSM). In addition to 154 normal controls, 66 remitted melancholic patients and 55 remitted non-melancholic patients filled out the IPSM and two widely-used comprehensive personality inventories, the Temperament and Character Inventory (TCI) and the Munich Personality Test (MPT). The subdivision of patients was made according to three major symptom-based criteria for melancholia (those of RDC, DSM-III, DSM-IV). Results revealed significant differences among the three groups

in several personality dimensions. While reported scores of both melancholic and non-melancholic patients deviated from normative scores on several personality dimensions, non-melancholic patients reported significantly higher scores on the total IPSM and the 'fragile inner-self' (a sub-score of the IPSM) than did normal controls or melancholic depressives. The principal component analysis isolated two factors related to depressive disorders: one factor corresponding to the five IPSM scores; and the other corresponding to harm avoidance, neuroticism and frustration tolerance. The scores on the former factor differentiated non-melancholic depressives from melancholic depressives and normal controls. The scores on the latter factor differentiated both melancholic and non-melancholic depressives from normal controls.

Reich and Bradford (2001) examined whether patients (aged 18-35 yrs) with borderline personality disorder (BPD) and controls with other personality disorders remember their childhoods differently with respect to separation difficulties, evocative memory, temperamental factors such as frustration tolerance and mood reactivity, and onset of symptoms. 290 patients with BPD (mean age 26.9 yrs) and 72 with other personality disorders (mean age 27.0 yrs) were assessed using the Childhood Development Interview, an instrument used to rate memories of separation difficulties, temperamental problems, and onset of symptoms before age 18. Patients with BPD remembered more difficulties with separation between ages 6 and 17 years, more mood reactivity, and poorer frustration tolerance between ages 6 and 17, and the onset of more symptoms (most prominently sadness, depression, anxiety, and suicidality) before age 18 than did patients with other personality disorders.

Behavioral problems and Criminality:

Nock (2002) identified children and young adolescents who engaged in parent-directed physical aggression from a sample of youths referred for outpatient therapy (N = 606, 151 girls, 455 boys); and examined the frequency, severity, and characteristics of such behavior; and compared aggressive youths with non-aggressive youths across several domains of functioning. Twelve percent of the children and young adolescents in this clinical sample engaged in parent-directed aggression. Aggressive compared to non-aggressive youths, had significantly increased oppositional behavior, lower frustration tolerance, less adaptability to stressful situations, and were more demanding of their parents. Aggressive children had families characterized by significantly greater parental stress, greater use of punitive disciplinary practices, and poorer interpersonal relationships. Moreover, lower frustration tolerance and adaptability were significant predictors of parent-directed aggression after controlling for demographic differences and overall level of oppositionality and aggressiveness, suggesting a more specific functional impairment in such children.

Aspects of the psychology of the criminal offender was examined by McGinnis (1944) who renounced the presence of "criminal types," and noted that for practical purposes it is more important to determine the manner in which individuals differ rather than the degree to which they are similar. He noted that Feeble-mindedness should not be considered one of the major causes of crime. Rather, the emotional characteristics of offenders, the relationships between delinquency and

inferiority, and the importance of frustration and frustration tolerance should be regarded as causative factors. It is neither low intelligence nor gross physical or social circumstances that induce criminality; instead it is the more settled aspects of an individual's emotional life and his desire for personal recognition, his feelings of dejection, unhappiness about family problems, and other affective sources of mental conflict.

Factors affecting rehabilitation of delinquents was examined by Leelavathhi (1969) who investigated seven paroled delinquents who were unable to adjust and 10 paroled delinquents who adjusted well in relation to three areas, personality, intra-familial factors, and the social milieu. Data were obtained by the ratings of (a) the training school superintendent, (b) parents, and (c) the investigator after visits to the homes and neighborhoods of the subjects. Personality traits, e.g., evasiveness, obstructiveness, lacking frustration tolerance, marked interest in opposite sex, and impulsive attempts at injuring self or others, seem to be present more markedly in the non-adjusted group. While cheerfulness, gregariousness, and assertiveness helps to indicate adjustment potential. The non-adjusted delinquent finds parental rejection, inconsistent punishment by mother, a very lenient father, and a family with seven or more children. The adjustable ones seem to markedly feel that they hurt their parents by their behavior.

Field (1986) in an effort to develop a model of the psychological deficits and treatment needs associated with chronic criminality observed that psychological deficits included a need for excessive stimulation, low frustration tolerance, rigid and compartmentalized thinking, and an inability to process affect. These deficits were in

turn related to the interpersonal deficits of intolerance of boredom, impulsivity and impatience, poor decision making, irresponsibility and manipulative coping strategies, lack of trust, and difficulty in expressing and managing feelings.

Katz (1972) suggests that there are four major groups of factors as possible causative agents in juvenile delinquency: (a) environmental factors, (b) superego factors, (c) definite psychiatric syndromes, and (d) brain functioning. Environmental factors include upbringing in a family that is openly criminal, conditions that produce great anger in the child (such as too strict an environment involving parental corporal punishment or excessive sexual stimulation), acting out the unconscious wishes of the family, deprivation, neglect, or cruelty. Superego factors concern the conscience structure which may be too weak, too rigid, or have holes in it. The psychiatric syndromes which contribute to juvenile delinquency may have a neurotic, characterological, or psychotic base (e.g., the obsessive-compulsive youngster who steals cars; the passive-aggressive youngster who "blows up" at a certain point; and the paranoid schizophrenic youngster who kills someone, perhaps because he fears personal harm). The brain functioning factor would involve brain-damaged, epileptic, and mentally deficient youngsters, who might have low frustration tolerance and poor controls.

Lowenstein (1985) examined the characteristics of 32 children who claimed to be bullied and then compared to a control group. Teachers and a psychologist rated the subjects on three aspects: physical characteristics (size and weight for age, attractiveness, physical robustness, appropriateness of dress, odd mannerisms or physical handicaps); personal and psychological characteristics (such as extroversion

vs. introversion, adjustment or frustration tolerance or aggressiveness vs. compliance); and social and family background features (such as balanced or extreme child-rearing practices). Bullied children appeared to have more negative traits than a control group of more popular and non-bullied children. Physical attractiveness, physical capability, and willingness to retaliate significantly differentiated subjects from non-bullied children. Non-bullied Ss showed greater sensitivity to the feelings of others and helped protect others, tended to be less selfish, and better adjusted in their capacity to control their feelings. Non-bullied Ss were also more likely to be taught to consider others and not merely themselves. (CL)

Boettcher (1983) presents a model of violent behavior in which violence is depicted as a means of communicating intense human needs such as self-esteem, autonomy, safety/security, and comfort. The model assumes that violence is one of the possible outcomes following an alteration of a biopsychosocial need, a threat to the self-system, the occurrence of a state of arousal, and the emergence of severe anxiety. He postulates that destructive aggression may occur when this response has been successfully used in the past and when the inhibitions against it and the person's frustration tolerance are low.

Cognitive Functioning:

There are many studies that connect low frustration tolerance in subjects to disruptions in cognitive functioning. Ziegler and Leslie (2003) research based on Ellis's Rational Emotive Behavior Therapy predicted that people who think more irrationally should respond to daily stressors or hassles differently than do people who

think less irrationally. Using 192 college students who were administered the Survey of Personal Beliefs and the Hassles Scale to measure irrational thinking and daily hassles, they found that students who scored higher on overall irrational thinking reported a significantly higher frequency of hassles than did those who scored lower on overall irrational thinking, while students who scored higher on awfulizing and low frustration tolerance reported a significantly greater intensity of hassles than did those who scored lower on awfulizing and low frustration tolerance. In a similar study, Ziegler and Hawley (2001) looked at the relation of irrational thinking and pessimistic explanatory styles using the Survey of Personal Beliefs and the Attributional Style Questionnaires among college students. They found that students who scored higher on Pessimistic Explanatory Style also scored higher on Overall Irrational Thinking and on Low Frustration Tolerance measures than did those who were categorized as having an Optimistic Explanatory Style.

Pinto (2001) examined cognitive distortions and deficiencies associated with the experience and expression of driving anger. Participants were 96 undergraduate students, who were high or low in driving anger as measured by the short-form of the Driving Anger Scale. Articulated Thoughts in Simulated Situations (ATSS) was used to assess the frequency of participants' articulated cognitive distortions and deficiencies in response to imagined neutral and frustrating/aversive driving conditions. In addition, driving behavior was assessed with the Driving Anger Expression Inventory and the Driving Survey. The study found that both high and low driving anger participants experienced anger arousal, as measured by the State Anger Scale, in response to the frustrating/aversive condition. All participants

articulated more irrational beliefs, cognitive distortions, and threats or intentions of aggressive/risky driving behavior during the frustrating/aversive condition than the control condition. In addition, high driving anger participants articulated more low frustration tolerance statements, total irrational beliefs, and selective magnification/minimization distortions and threats or intentions of aggressive/risky driving behavior (than low driving anger participants) during the frustrating/aversive condition. High driving anger participants also articulated fewer anger control statements during the frustrating/aversive condition than during the control condition. Finally, several of the ATSS cognitive variables were associated with driving anger expression, accident-related variables, and driving-related risky and aggressive behavior.

Azoulay (2000) examined cognitive distortions as predictors of the experience and expression of anger as measured by the State Trait Anger Expression Inventory (STAXI). It also compared subjects' self ratings with ratings of the subjects by live-in partners for trait anger (and its subscales of angry temperament and angry reaction), anger-in, anger-out, and anger-control. Using subscales of the Survey of Personal Beliefs and the Common Beliefs Survey III as independent variables, stepwise multiple regressions were performed for each of the anger scales. Results did not support the hypothesis that different cognitive distortions would predict anger-in and anger-out. The cognitive distortions most strongly predictive of all aspects of anger were Low Frustration Tolerance (the belief that difficulties can not be withstood) and Self Downing (self blame for problem situations). The relationship between Low Frustration Tolerance and anger-control was inverse. In addition, results of this study

showed that self ratings and ratings of subjects by live-in partners have moderate to high correlations, with the correlation highest for trait anger and lowest for anger-in. However, scores of the two ratings were significantly different for all the scales, with subjects' self ratings higher for trait anger and anger expression (in and out) and lower for anger control. This study shows that an element of self criticism appears to be associated with self ratings of anger, both in comparison to the ratings by partners and in relation to the cognitive distortions which predict anger scores.

Falat (2000) Investigated how creative thinking can influence the way an individual copes with frustrating situations. Creativity was measured with a nonverbal test and ways of coping were identified using a projective verbal picture frustration tolerance test. The sample consisted of 214 university students. Modified instructions were used in experimental conditions; the students were instructed to give as many responses as they can while utilizing fantasy and humor. The results show that: (1) high creative students utilized significantly more active strategies in coping with frustrating situations; (2) low creative students gave a greater number of withdrawal and aggressive responses; and (3) higher level of creativity had a positive impact on originality and humor of responses.

Academic Performance:

Chen (2001) studied the relationship between school achievement and social behavior in a 21-mo study where 286 4th, 5th, 7th, and 8th graders in Beijing were assessed with the Peer Review Scale and a Teacher-Child Rating Scale. The relationships of the scores demonstrated that there were significant positive

relationships between school achievement and social leadership, frustration tolerance, assertive social skills, positive peer nomination; and that there were negative relationships between school achievement and aggressive behavior, academic maladjustments, and negative peer nomination. The results also indicated that social leadership, aggressive behavior, frustration tolerance, academic maladjustment, assertive social skills, and peer nomination could predict the school achievement level of elementary school students, and for middle school students, the prediction was only associated with aggressive behavior and frustration tolerance.

Rardin (1970) presented 22 male and 22 female undergraduates with an unsolvable finger maze as a measure of frustration tolerance. Simple and multiple correlations of frustration tolerance, School and College Achievement Test (SCAT) scores, and GPA showed frustration tolerance to be a relevant factor in the prediction of college GPA for males but not for females and when in combination with SCAT Quantitative scores for both sexes.

Adams (2000) examined the associations among family processes (cohesion, control, and conflict), school-focused parent-child interactions (support and pressure about achievement), and the child's own characteristics (assertiveness, frustration tolerance, intellectual effectiveness, and self-esteem) as correlates of rule compliance and peer sociability in the classroom. The sample consisted of 161 Grade 4 and 151 Grade 7 children. Family processes and parent-child interactions about school issues were associated with children's personal characteristics, which, in turn, predicted children's rule compliance and peer sociability. Some differences were found

between the 4th- and 7th-grade samples; however, many variables such as the level of frustration tolerance consistently predicted the same outcomes across grades.

Rapport (1986) examined the differential effects of frustration on normal children and those diagnosed as having Attention Deficit Disorder with Hyperactivity. In the study each group consisted of 16 boys between the ages of 6 and 8 years who were pre-matched for age, grade, and classroom placement. All of their subjects completed a series of arithmetic problems in order to earn toy rewards. Using a delay-of-gratification paradigm, children were presented with two choice-of-delay conditions in a randomly assigned, counterbalanced sequence: a free-choice conflict situation involving a long-passive or short-active reward delay, and a short-active delay. Results showed that a significantly greater proportion of hyperactive children chose to complete problems for an immediate reward compared to their normal control counterparts. The researchers interpreted the results in terms of frustration tolerance and cognitive-attentional styles showing that subjects with a higher frustration tolerance were able to tolerate a longer delay of gratification than subjects with a low frustration tolerance. These findings can be applied to the classroom setting where one might expect a child with low frustration tolerance would have more difficulty attempting assignments if immediate rewards are not present.

Task performance and psychological stress:

Wiebe (1991) examined high and low hardy male and female undergraduates using an evaluative threat task that was manipulated to influence appraisals of the

task in a manner consistent with hardiness theory, keeping psychological health under stressful situation for effective performance based on existential personality theory. High hardy subjects displayed higher frustration tolerance, appraised the task as less threatening, and responded to the task with more positive and less negative affect than did low hardy subjects. Although all subjects displayed increased heart rate (HR) in response to the experimental task, high hardy men displayed lower HR elevations during the task than did low hardy men. Manipulations of task appraisal revealed a similar pattern where men in the high hardiness appraisal conditions displayed lower levels of physiological arousal during the task than did men in the low hardiness appraisal conditions.

Spacapan and Cohen (1983) wondered if exposure to a stressor is necessary to produce "stress" effects, or can these effects result from stressor anticipation alone? Their research first explores whether it is possible to obtain "stress responses" during and after the period in which stressor exposure is being anticipated. In the first section of the study, the expectation of submerging one's hand in ice water resulted in decreased frustration tolerance and increased blood pressure when compared with control groups not expecting this stressor. In the second part of their study the results of the first section was replicated and extended the results to show that the expectation of control over the stressor ameliorates the negative impact of stressor expectation. The second part of the study also examined the aftereffects of expectations. It found that despite being relieved of the expectation that they would immerse their hand in ice water, subjects who had expected stressor exposure had decreased frustration tolerance when compared with either subjects who had expected

a non-stressful procedure or those who had expected to have control over stressor termination. A third part of the study, using noise as the expected stressor, replicated both the aftereffect of the anticipation period and the moderation of that effect by perceived control. The findings basically demonstrated that previously observed stressor exposure effects may in fact be post-expectation effects. A similar study was conducted by Klein (1985) who examined residual arousal as an explanation of aftereffects such as frustration tolerance versus response speed. Klein conducted three experiments, with 98 undergraduates, investigating the effects of increasing task difficulty and noise intensity on post-noise persistence on tolerance for frustration puzzles. In experiment I, greater persistence occurred both after exposure to moderate noise levels and an easy perceptual-motor task and after high noise levels and a more difficult task. The same pattern of persistence was obtained in experiment II, with more attempts to solve puzzles occurring after moderate noise and an easy cognitive task and after loud noise and a more difficult cognitive task. In experiment III, a modified task was presented with instructions to determine solvability. A similar U-shaped relationship was obtained, with longer correct response times to unsolvable puzzles following low noise and high noise. Such aftereffect patterns are more easily explained as the result of residual arousal than of frustration tolerance. The studies of Spacapan and Cohen, and Kline might have implications for parents who use corporal punishment as a teaching tool. It is very possible, that even when the stressor is not immediately present for the child in a learning situation, the mere expectation of its arrival might have aversive effects on the learning process.

How parental corporal punishment affects frustration tolerance and consequently, cognitive abilities:

An Integrated Explanation:

The Psychodynamic framework:

In his paper entitled "*the psychoanalytic theory of cognitive development,*" Noy (1979) states that "Freud's revolutionary contribution to psychology was not so much his demonstrating the existence of the unconscious, and perhaps not even his exploration of its content, as his proposition that there are two fundamentally different kinds of mental processes, which he termed primary and secondary." He further notes that the studies of Freud as well as those of psychoanalytically oriented clinical and experimental researchers since Freud have proved repeatedly that the distinction between primary and secondary processes involves practically all areas of cognitive functioning – thinking, perception, communication, and others.

Everything said in the psychoanalytic literature about later cognitive development, the development of reality representation, of language, and even representation of the self, relates only to the development of secondary processes. Thus implying that at some point the secondary process takes over for the primary process which is left in an infantile stage forever. However, Noy asserts that the primary process never ceases to develop but rather it develops alongside secondary processes throughout the individual's life. Each new cognitive skill that appears in its appropriate phase influences both processes to the same degree, and each new stage of refinement of any of these skills is reflected equally in the operations of both.

Noy (1979) points out that in classical psychoanalysis, the primary process was regarded as primitive, infantile, chaotic, unstructured and pleasure oriented, which includes the primitive rock bottom activities, raw strivings and the strange unconscious activities of humans. He further notes that these primary processes includes "pre-logical archaic symbolism,… a tendency to condense several drives into one,… and the absence of logical necessities… as well as the recognition of time and spatial relations." However, unlike previous psychoanalytic thinkers, Noy postulates that as time passes, the primary process continues to grow and becomes more and more specialized to deal efficiently with the expanding self. The development is reflected in the child's growing ability to assimilate complex emotional experiences, master phase appropriate traumas, to accommodate the self to an evermore-demanding environment, and to maintain the integrity of the self. This development of the primary process mode is also employed to safeguard the cohesion, unity and continuity of the self as it gradually begins to differentiate into its dimensions (the actual self, the ideal self, and the social self).

On the other hand, the function of the secondary process is to handle everything related to a reality orientation. For example, the perception and inner representation of reality, the control of reality oriented behavior, an increased capacity to solve problems and the capacity for information exchange through communication. In broad strokes, Noy felt that the primary process is basically *self-centered* and the secondary process was *reality oriented*. He further asserts that normal, mature cognitive functioning in any area depends upon there being a sound balance between primary and secondary process operations, with constant

fluctuations between the two organizational poles in order to cater to changing functional requirements including cognitive operations such as categorization, mental representation, causal reasoning, representation of reality, and representation of the self etc., which can all be affected by the level of frustration tolerance.

The Underlying biology:

Using the work of LeDoux (1996) from his revolutionary book entitled *The Emotional Brain*, we can begin to localize the divide between primary and secondary processes in specific areas of the brain. LeDoux points out that in a new born infant, when sense organs in the body receives information that stimulates fear, that information is sent to the thalamus in the brain (which relays that sensory information to other brain centers that might process and organize it - except for the sense of smell which bypasses the thalamus) directly to the amydala (where the initial evaluation of sensory information is processed to determine its emotional importance followed by a decision to approach or withdraw from the situation). After information leaves the amydala it goes to the hypothalamus (the area responsible for hunger, thirst, emotion, reproduction, and control of the autonomic nervous system – which regulates heart rate, the bladder, stomach and other internal organs) to the adrenal glands (where adrenaline is produced propelling the body into action or inaction). In the infant, this direct link between the sense organs and the adrenal glands are present from birth and correspond to the primary process mode of functioning.

At around the second year of life, after information enters the thalamus, in addition to being sent to the amydala, as was the case since birth, information begins

to be sent to the sensory cortex and other higher areas of the brain as well, that are still in the process of development. This is the area where secondary process thinking begins to occur in the brain. The information being sent to the higher parts of the brain are then organized and analyzed based on previously stored information and sent back down to the amydala, where a better evaluation of sensory information can be processed to determine its true emotional importance, before continuing on to the hypothalamus and adrenal glands. In other words, the higher cortical areas responsible for secondary process thinking allows the child to develop better control of their physical and emotional reactions because information is now being better examined and evaluated to assess a more appropriate biological response rather than relying on an impulsive or reflexive response.

From a biological vantage point, we can think of frustration tolerance as the ability of the higher cortical areas (or secondary process areas) of the brain regulating, or not being overwhelmed, by the lower or primary functions of the brain. Low frustration tolerance would be the opposite, where the lower functions dominate the higher functions of the brain leading to a fight/flight response for the organism before a complete or adequate assessment of the obstacle is completed. The more a child uses or relies on either one of these modes of functioning, the more likely they will develop ingrained neural pathways or "habit groves" (Dale, 1993) that make the frequently used pathway more readily accessible. The more often corporal punishment, particularly severe forms of corporal punishment is used on a child, the more the lower pathways will be utilized and consequently accessed more readily in subsequent encounters with stressful situations. Kolb (1987) proposed that the

excessive stimulation of the central nervous system during trauma may result in permanent neuronal changes that might have a negative effect of learning, habituation and stimulus discrimination. In a similar sentiment, Yehuda (1991) points out that chronic exposure to stress affects both acute and chronic adaptation and can permanently alter how an organism deal with its environment on a day to day basis and interferes with how it copes with subsequent acute stress.

Biology and Classical conditioning:

Classical conditioning can occur at this level of operation for the child as well. Studies looking at the hormonal stress response in animals have found that serotonin levels in the brain decrease under stress (van der kolk, 1994) and decreased serotonin levels are associated with impulsivity and aggression (Green, 1978) both of which are qualities associated with low frustration tolerance. When humans are under severe stress, they also create endogenous stress hormones that affect the strength of memory consolidation (van der kolk, 1991) particularly endorphins, oxytocin and norepinephrine (a processed form of adrenaline). If a child is repeatedly exposed to stress in the form of corporal punishment, the release of these hormones not only undermine memory consolidation and learning at that moment, but is more likely to be released in the future under conditions of stress in a conditioned response. Furthermore, research has shown (van der kolk, 1994) that traumatized people seem to lose the capacity to use affect states as signals, which results in feelings not being used as cues to attend to incoming information causing arousal to precipitate fight or flight responses, thus they often go from stimulus to response without psychologically assessing the meaning of an event. In other words they respond in a conditioned

manner without relying on the operations of the higher cortical areas of the brain. This response pattern represents the essence of low frustration tolerance since the individual with such a developmental deficit springs into a fight or flight mode without enough problem solving or negotiating of the situation before frustration overwhelms.

The meaning attached to everyday words and expressions can also become classically conditioned along the same pathways. The more a child is disciplined or taught using stressful mechanisms such as corporal punishment, the repeated exposure to certain words, phrases and basic forms of expression can become associated with stress (as well as abnormal levels of hormonal and neurotransmitter levels in the brain and body observed under stress). As a result, these words become charged with meaning that makes them overly idiosyncratic (self centered, or primary process oriented), rather than developing a more universal or shared meaning. The ability to filter mental images through one's emotional grid of past experiences and the capacity to represent mental contents with the minimal emotional signs makes the development of all systems used in human communication possible and richer. A necessary condition for the acquisition of language and secondary process thought is the ability to isolate verbal signs from their signified meaning. In order to facilitate this isolation the verbal sign in itself must remain as neutral as possible and arouse minimal emotional response to its very appearance, sound and shade. Because the signs used by the primary process mode of representation are always, by their very self centered nature, related to emotional or other experiential significant meaning,

they can never attain the degree of neutrality requisite for the usage in a socially shared language (Noy, 1979).

In other words, the more emotionally charged information is presented to the child, which is inevitable when corporal punishment is used as a teaching tool, the more emotionally charged that information is likely to be when it is stored, recalled and communicated. While this does not suggest that the recalled information has to be distorted, it is certainly more likely to be distorted or communicated in a manner that warps the intended meaning because of its emotional associations. Wakaba (1990) was able to observe a connection between parental corporal punishment and the onset of stuttering in young children, and suggested that the children in his study style of communication was so colored by anxiety, that they could not get their words out. In a more general sense, even when the child is able to get their words out, the meta-meaning or underlying meaning might be so emotionally charged or distorted so that complete or clear communication with others are compromised. While Wakaba doesn't directly address the issue of frustration tolerance in his discussion, if we accept that his premise is true, one might imagine that a child who stutters a lot is a child who is not only overwhelmed by anxiety but is easily frustrated. Whether a child stutters or not, the mere possibility that their language is emotionally charged undermines their ability for universal and clear communication, which in turn can fuel their pre-existing level of frustration. (A review of Wilson and Weinstein's (1990) paper examining some of the key elements of the internal climate when word meanings, in connection to unconscious fantasies, anxieties and defenses, associated

to both the acquisition and later use of language - provides a more detailed understanding of this point).

An economic point of view:

The economic point of view holds that all psychological behavior hinges on the displacement or redirection of a fixed amount of energy available to the individual (Freud, 1900). We could therefore argue that the use of parental corporal punishment will likely rob the child of energy that might have otherwise been used for higher mental processes such as thinking and mediating frustration. Since the economic point of view holds that if energy is being used for one mental function, in this case dealing with pain, negotiating an escape, and calming the self or containing emotions after arousal, then less is available at that moment for other mental functions, such as clear, unhindered thinking, understanding the message of the parent, assuming there is one, and the useful organization of information upon which later information can be built. van der Kolk (1994) notes that intense emotional reactions make events traumatic by interfering with the integration of experience into existing memory schemes.

During episodes of corporal punishment, the child can respond in a variety of ways but will most likely respond with anger or fear. While a fear response will cause the child to withdraw or quit, an angry response will most likely be useless against the offending parent, which will probably lead to greater anger and additional frustration in a destructive cycle for the child. Either path taken could lead to a disturbance in the balance between the primary and secondary modes of functioning.

Any lasting disturbance in the course of development in one or both modes can cause varying degrees of pathology, (Noy, 1979) and disruptions in the foundation for cognitive processes – thereby making later cognitive processes harder to store or encode. This is consistent with van der Kolk's (1994) assertion that individuals who are overly aroused, in an attempt to compensate, seem to shut down on the behavioral level, by avoiding stimuli reminiscent of the arousal and on a psychobiological level by emotional numbing, which extends to everyday experiences. In an interaction between a child and his parent where overly punitive and destructive measures are being employed, the limit of the energy being diverted to survival processes is likely to result in the shutting down of thinking processes leading to disorganization, frustration and poor cognition.

A structural explanation:

The structural explanation maintains that all human behaviors are controlled and/or motivated by the structures *id, ego* and *superego*. The interplay between these structures can also be applied to the relationship between frustration tolerance, parental corporal punishment and cognitive development. In a nutshell, the id is responsible for one's drives and instinctual impulses, and generally relates to primary process thinking. The ego, on the other hand, mediates between the demands of the id and the superego via intellectual processes called ego functions, by means of perception, memory, searching and problem solving to satisfy both the demands of the id and superego, using secondary process functioning. The superego is the internalized 'watchman' that holds the values of parents and society at large, often in the form of guilt and criticisms for shortcomings for children who are raised by such

punitive means. If parental corporal punishment is used as a teaching tool, the child's developing ego has to simultaneously direct energy to defense mechanisms to manage the incoming physical pain inflicted by the parent, the biological id impulses to avoid such pain, the guilt from the superego for not performing adequately, as well as the presence and intrusion of the punitive parent, all before adequate attention can be directed to actually learning something. When an individual is unable to control his own behavior, when he feels threatened that internal and external stimuli will overwhelm him, he experiences anxiety and/or frustration (Rohner et al, 1996), learning and cognitive development are inhibited by anxiety and frustration (while some anxiety and moderate levels of frustration is needed for optimal development – corporal punishment is likely to produce too much anxiety to maximize the learning experience). Corporal punishment in essence represents an attack on both primary and secondary modes of functioning, which is likely to produce confusion and disorganization for the child depending on their level of frustration tolerance.

As noted above, the developing ego is most directly associated with higher or secondary process thinking. Therefore, the ability to tolerate frustration hinges directly on the functioning and strength of the ego and the ego's capacity to negotiate and overcome obstacles and manipulate the environment in the service of the self, without resorting to primary process modes of functioning.

In most cases where parental corporal punishment is employed as a primary teaching tool, the child has little efficacy in manipulating his environment or modifying his reality (in this case a punitive or abusive parent) to satisfy his needs. Therefore, the child has little impetus to employ secondary process thinking and is

more prone to using self centered or primary process reasoning. The mere physicality of corporal punishment anchors the child in id driven, primary process modes of functioning.

Consequently, the child's representation of causal reasoning is one where he believes that the source of control ultimately lies outside of the self. As a result he is more likely to develop in "external locus of control," which is highly associated with depression, low self esteem, low frustration tolerance and other mental disorders highlighted above.

An existential explanation:

Lichtenberg (as cited in Noy, 1979) says that "the sense of self can be seen as arising during the infantile stage as islands of experience that then, bit by bit, are formed into more ordered groupings of images." Noy (1979) refers to the islands as "ego-nuclei" and it is from such antecedent nuclei that the cohesive whole self is gradually built, in parallel with the realistic sorting out of the variety of part objects, into cohesive wholes. A healthy sense of selfness results from a sound balance and optimal fit between these aspects, in which every self-experience is supported by the appropriate conceptual self-knowledge, and all self-knowledge goes hand in hand with suitable experiences. From an existential vantage point, the self can be compromised in several ways.

First, while it is impossible to fully guess the images the caregiver might have in their mind about the child, we might certainly infer that one possibility in the child's mind is that they are not smart enough to be reasoned with (as inferred by the

actions of the care giver). The internalization of this image for the child is likely to result in a negative self appraisal, for example, I am stupid, which is likely to result in behaviors and academic performance that is consistent with such an appraisal.

Second, the child sees a parent who is essentially demonstrating that their patience and frustration tolerance is at an end, and there is a limit to what they can endure before resorting to action. While this is not necessarily a negative assessment from the child, it could be modeling qualities that are poor for academic functioning and intellectual development, since frustration tolerance, patience and endurance are basic essentials for academic success and intellectual development.

Third, regardless of the messages the parent might want to communicate to the child, the child has to feel misunderstood when he is punished in such a manner. Feeling misunderstood is likely to diminish the child's capacity to understand others. The lack of understanding of both the child and the other, creates a fertile bed for poor communication and frustration.

Fourth, it is very likely that when a child is punished in such a manner, he begins to distrust his own feelings and needs. Since the child learns to not trust his own feelings, he is likely to rely on others for his decision making which might diminish his capacity for good judgment over time. As noted above, relying on others helps to foster an external locus of control and not trusting one's self undermines ego processes, both of which can lead to additional sources of frustration for the child.

Conceptual Hypothesis

Limited literature exists pertaining specifically to the relationship between the corporal punishment and cognitive development. There is also a limited amount of literature examining the relationship between corporal punishment and frustration tolerance. And, there is an absence of literature in which all three variables, (corporal punishment, frustration tolerance and cognitive development) are examined under one statistical method. Based on the personal experience and literature review of this subject matter, it is hypothesized that high rates or levels of parental corporal punishment will result in or be negatively correlated with poor frustration tolerance in children, which in turn will be positively correlated with or result in compromised cognitive development.

Chapter 3

METHOD

Sample:

The original target sample of this study was supposed to have been forty Guyanese students of African decent selected from freshmen undergraduate students at City College enrolled in an Introduction to Psychology class. This approached seemed logical because all undergraduate students are required to take an Introduction to Psychology course, which would have allowed for a sample that provided a cross section of first year students attending City College from different disciplines. However, due to time restraints, the sample was collected from any Guyanese undergraduate student, regardless of year and regardless of race.

Selection Process:

The sample was collected using flyers around campus and by visiting all classes being offered during the summer session of 2004. The original sample of the study was supposed to have been ten subjects for each of the three experimental groups and ten subjects for the control group. However, finding subjects to complete the control group as well as the low and medium corporal punishment groups proved to be more difficult than expected. After going through 77 possible subjects, five qualified for the medium corporal punishment group, two qualified for the low corporal punishment group and eight were selected for the control group. Fifty-two possible subjects were turned away because they only met the criteria for the high corporal punishment group after the initial ten subjects were selected for that group.

Of the fifty-two subjects turned away, nine exceeded the criteria defined by the level of frequency and severity of the high corporal punishment group, which was defined as abuse by the study's parameters.

As a result of the low number of subjects obtained for the low and medium corporal punishment groups, they were collapsed together and re-labeled as the Low Corporal Punishment Group, leaving only three groups for analysis, the control or no corporal punishment group, a low corporal punishment group and a high corporal punishment group. A total of twenty-five subjects were ultimately used in the analysis.

Each volunteer was paid $20.00 for his or her time. It was initially proposed that two subjects from each of the groups being analyzed would be given a hypothesis-generating interview. However, the time needed to complete all of the scales used in the quantitative section permitted an interview for all subjects. A qualitative analysis was conducted using the responses to the interview to help explain or compliment the quantitative results.

Apparatus:

General demographic information about each subject was collected. Information such as: name, age, major, overall and major GPAs, high school GPA, number of children - if any, number of children in household growing up, father's and mother's (or primary caregiver's) educational level(s), family's SES growing up, single family vs. both parents growing up, number of years in US, and frequency/severity of corporal punishment was documented.

History of corporal punishment:

History of corporal punishment (any form of punishment used by a caregiver with the intent of inflicting some measure of pain, but not injury, on the child) was assessed using the following Likert-like scales:

Frequency of corporal punishment used growing up:

1 Every other month/3-4 times a year

2 Once/Twice per month

3 Daily/weekly

Severity or methods of corporal punishment used growing up

1 Hitting with an open hand below the shoulders/pinching or pulling ear

2 slapping the face or hitting around the face and head (with hand)/hitting with a slipper

3 Cuffing or punching/beating or lashing with an object such as a belt, stick, cord, pot spoon, shoe etc/ kicking/throwing things at the child.

The ranking of severity of corporal punishment was obtained from Payne (1989) who surveyed parents and children in the Caribbean for degrees of acceptability of corporal punishment, and then divided into the three groups specified above. (Types of punishment that exceed the criteria for corporal punishment, for example behaviors like scalding or burning that is meant to cause injury, were excluded).

Subjects were initially assigned three experimental groups using a multiplication effect between frequency and severity of corporal punishment specified below.

	Frequency 1	***Frequency 2***	***Frequency 3***
Severity 1	S1,F1	S1,F2	S1,F3
Severity 2	S2,F1	S2,F2	S2,F3
Severity 3	S3,F1	S3,F2	S3,F3

Group 1 – low corporal punishment – S1,F1; S1,F2 and S2,F1.

Group 2 – medium corporal punishment – S3,F1; S2,F2 and S1,F3.

Group 3- high corporal punishment – S3,F2; S2,F3 and S3,F3.

However, for reasons noted above, group 1 and 2 were combined and relabeled as the Low Corporal Punishment Group. This left only two experimental groups, high and low corporal punishment, and the control group. Subjects exceeding the criteria specified above for frequency/severity of corporal punishment were excluded from study before proceeding to the following sections. Subjects who were never or rarely exposed to corporal punishment were assigned to the control group.

Parenting Childrearing Style Questionnaire:

The children's report of parental behavioral inventory (Schaefer, 1965) is a report on parenting behaviors that measured their history and range of parenting experiences. The components of the questionnaire includes three distinct components (acceptance v. rejection, psychological autonomy v. psychological control and firm

control v. lax control – alphas for these subscales range from .67 to .91 (Shulman et al, 1993).

This scale was selected to address possible confounding variables such as the case where a parent might endorse corporal punishment and still practice good parental techniques such as talking to, reasoning with and explaining things to the child (which were things the researcher assumed would be absent for parents who relied on corporal punishment as a primary disciplinary tool).

Self-Directed Learning Readiness Scale:

Subject's attitude towards learning will be assessed using this questionnaire. This is a 58 item scale with a Pearson split-half reliability estimate of .94. (McCune & Guglielmino,1990).

One of the assumptions made by the researcher is that children who are forced to learn, via corporal punishment, will more likely have a negative attitude towards learning, would find it more difficult to motivate themselves to learn and their motivation for learning would be outside of themselves. The inverse was also assumed by the researcher with the expectation that subjects who were taught by less abrasive measures would be more open to learning for the sake of gaining knowledge or for their personal growth, rather than for more concrete objectives such as getting a good job or good grades.

Coping Responses Inventory (measure for frustration tolerance):

The coping responses inventory is a measure of eight different types of coping responses to stressful life circumstances. The eight scales used in the measure are - logical analysis, positive reappraisal, seeking guidance and support, problem solving,

cognitive avoidance, acceptance or resignation, seeking alternative rewards and emotional discharge.

The CRI has been used in numerous studies with substance abusers to ability to function in marriages which supports concurrent, construct and the predictive validity of this instrument. The CRI also has an internal consistency of .61 to .74 alpha.

IQ -- The Wechsler Abbreviated Scale of Intelligence (WASI) – Similarities and Matrix Reasoning:

The Similarities section of the WASI will be used as a test of general intellectual ability, verbal concept formation and abstract verbal reasoning ability and the Matrix reasoning section will be used as a second measure of general intellectual ability but also as a measure of nonverbal fluid reasoning, which is not influenced by an individual's level of education. Looking at non-verbal reasoning will help to control for educational level, which might be a possible confounding variable for this study.

Interview:

Two subjects from each of the above mentioned groups (low, medium and high corporal punishment) will be randomly selected and interviewed. This section will be used as a hypothesis-generating instrument that might fuel further research on this under-explored subject matter. The interview will include the following open-ended questions about learning and corporal punishment:

Open ended questions about learning and discipline:

1) Tell me about your experience in your family before the age of ten.

2) Do you feel like your parents understood you (or didn't understand you) growing up? Explain.

3) Describe some of the values you've gotten from your parents and why they are important to you.

4) Tell me about some of the child rearing practices in your family growing up.

5) What were your parents' disciplinary styles?

6) How would you discipline your child (ren)?

7) Tell me about a time you misbehaved and how it was dealt with as a child.

8) Tell me about one of your experiences surrounding corporal punishment.

9) Do you have any regrets about the way you were raised and/or would you change anything about it? Explain.

10) Why do you think it is important to learn?

11) What motivates you to learn?

12) How would you motivate your child (ren) to learn?

13) How did your parents motivate you to learn?

14) What accounts for the difference between question 12 and 13, if any?

15) Was corporal punishment ever used to motivate you academically? If yes, could you describe how that might typically play out.

Finally, each subject will be debriefed to ensure that none of the interview questions created or aroused feelings that might be upsetting and provided with a list of possible resources that might be used for counseling if necessary.

Chapter 4

RESULTS

This chapter will present the statistics and results used to test the following hypotheses. It was hypothesized that (1) the level of Corporal Punishment would have an inverse relationship with Frustration Tolerance. It was also hypothesized that (2) the level of Frustration Tolerance would have a positive relationship with Cognitive Development. It was also hypothesized that (3) High levels of Corporal Punishment would have a negative impact on Attitude Towards Learning.

In addition to the primary hypotheses outline above, it was expected that a number of factors, or confounding variables, might have an impact on frustration tolerance, cognitive development and attitude towards learning aside from the use of corporal punishment. Unfortunately, as a result of the ratio of number of subjects used in this study compared to the number possible confounding variables, only a limited number of the possible confounding variables could be examined in the statistical analysis. Of these variables, the impact of Single vs. Both parents in the household growing up, Educational level of parents, Socio-economic status, as well as parenting styles such as Positive Parenting Practices, use of Psychological Control and Parental Rejection were examined.

Thus, a series of additional hypotheses were examined in the initial analysis to assess the effects of the possible confounding variables. It was hypothesized that (4) higher Educational Levels of parents would have a positive correlation with Cognitive Development, and a better attitude towards learning, because parents with better educated parents are more likely to emphasize academics in the household

growing up and children are expected to model their parents. Because of the level of stress associated to poverty and the impact of parental stress on the use of corporal punishment, it was also hypothesized that (5) subjects from a lower Socio-economic status would be more likely to sanction corporal punishment, and vise versa, as well as related to the consequences of Corporal Punishment predicted above. It was hypothesized that (6) Positive Parenting practices would be correlated with high frustration tolerance, as well as the correlates of high frustration tolerance predicted above. And, it was hypothesized that (7) high Psychological Control as a parenting practice would correlate with low Frustration Tolerance and negatively impact Cognitive Development.

The quantitative results will be followed by the qualitative analysis of the interview section. Several trends were expected from the qualitative analysis of the interview. It was hypothesized that (8) subjects who were exposed to higher levels of corporal punishment would feel less understood by their parents than subjects who were subjected low levels or no corporal punishment, which in turn, would lead subjects in the high corporal punishment group to have more regrets about how they were raised. And finally, it was hypothesized that (9) subjects who were subjected to high levels of corporal punishment would be more likely to rely on external motivations to learn rather than internal motivations, such as learning for the pure joy of learning rather than to gain employment. The reasoning behind hypotheses 8 and 9 was that it was expected that parents who understood their children and had an understanding of developmentally appropriate behaviors would be less likely to use

corporal punishment and would be more inclined to motivate their children using strategies that would appeal to what the child liked.

Quantitative Results

The mean scores were calculated for all of the quantitative data collected and sorted into the control group, low corporal punishment group and high corporal punishment group. As a result of the low number of subjects (N = 25) and the high number of possible variables collected for observation, only a limited number of variables could be analyzed to help increase the *degrees of freedom* needed to compute statistically valid analyses. The primary variables used in the statistical analyses are level of Corporal punishment, GPA, IQ scores, Levels of frustration tolerance and attitude towards learning. The possible confounding variables that were analyzed are Single versus Both parents in household growing up, Educational Level of Parents, Socioeconomic Status, and the effects of Parenting Practices. (The variables used in the statistical analyses are italicized in the tables 1 through).

The actual mean scores were computed and presented in tables 1 through 5 along with the reports of significance derived by using a one way ANOVA, followed by the results of an analysis for mediation and a series of stepwise linear analyses for each of the confounding variables being examined.

General Demographic Information

There were 8, 7 and 10 subjects assigned to the control, low and high corporal punishment groups respectively with the control group having an average age of 23,

which was three years older than the other two groups. None of the subjects had any children and had all been in the United States for approximately fifteen years. There were no clear differences between groups along racial lines but there were more males in the high corporal punishment group than the other two groups but females were evenly distributed across groups.

Participant Demographic Information

Table 1
General Demographics

	Control Group	Low Corporal Punishment	High Corporal Punishment
# of Subjects	8	7	10
Average Age	23	20	20
# of children	0	0	0
# of children in household growing up	2.38	3.14	3.5
Years in USA	15.1	17.7	14.9
Indian Decent	3	2	4
African Decent	5	5	6
Male	2	1	5
Female	6	6	5
*Parents Education**	*3.6*	*3.2*	*3.5*
*SES***	*2.25*	*1.71*	*1.8*
*Single (vs.) both parents****	*1.8*	*1.29*	*1.6*

Note. * Parent(s) educational level was based on a scale ranging from 1 to 7. (1 – No High School, 2 – High School Graduate, 3 – Some College, 4 – Associates Degree/Technical College, 5 – Bachelors Degree, 6 – Masters Degree, 7 – PhD/MD)
** Family's Socio-economic status was based on the following scale (1 – Low socio-economic status, 2 – Middle Class, 3 – High Class)
*** Marital status of parents was based on the following scale (1 – Single parent household, 2 – Two parent household).

Parents' education, Socioeconomic status and Single vs. Both parents were not significantly different at a .05 level of significance. (based on a one Analysis of Variance).

Cognitive Ability

Grade Point Average: Grade point average as well as IQ scores were used to measure for cognitive development as defined by the parameters of this study.

Grade point averages were collected from prior to Junior High School through college in an effort to identify patterns of academic performance. However, because many subjects could not accurately recall their grades prior to high school and could only estimate their high school grades, they were not used in the statistical analyses but were used to highlight trends in grades over several years. All three groups had a reduction in grades since from prior to junior high school to college, but the high corporal punishment group experienced the highest reduction in grades followed by the control and then the low corporal punishment groups.

The Wechsler Abbreviated Scale of Intelligence (WASI) – Similarities and Matrix Reasoning: The Similarities section of the WASI was used as a test of general intellectual ability, verbal concept formation and abstract verbal reasoning ability. On the other hand, the Matrix reasoning section was used as a second measure of general intellectual ability and also to test for non-verbal fluid reasoning, which is not influenced by an individual's level of education. Looking at non-verbal reasoning will help to control for educational level, which might be a possible confounding variable for this study. It was expected that subjects in the high corporal punishment group would score better on matrix reasoning than on the similarities section because they are were expected use more concrete thinking rather than abstract verbal reasoning.

Table 2

Cognitive Development – (Grade Point Average and IQ scores).

	Control Group	Low Corporal Punishment	High Punishment
Prior to Junior High School	(3.69)	(3.5)	(3.2)
Junior High School	(3.7)	(3.5)	(3.4)
High School	3.18	3.43	3.16
Overall GPA in College	*3.13*	*3.01*	*2.54*
Major GPA	(3.5)	(2.7)	(3.1)
IQ – Similarities	*42*	*50*	*46*
IQ – Matrix Reasoning	*53*	*51.4*	*54.2*

Both GPA and IQ scores were not significant at .05 level of significance. (based on a one Analysis of Variance).

Frustration Tolerance

Coping Responses Inventory:

The Coping Responses Inventory was administered to measure two different types of coping responses to stressful life circumstances. As described in the methods section, each of the two scales is made up of four subscales, with the first two subscales looking at cognitive coping strategies and the last two looking at behavioral strategies. The first scale measures active problem solving strategies or 'approach' coping responses, and is make up of subscales measuring logical analysis, positive reappraisal, seeking guidance and support, and problem solving. The second scale measures avoidance coping responses or a tendency to move away from the stressor as a coping strategy, which is made up of the subscales measuring cognitive avoidance, acceptance or resignation, seeking alternative rewards and emotional discharge.

The Approach Coping responses based on standard scores and profiles of the CRI, with raw scores converted to T scores (M = 50; SD = 10), the High and Low Corporal Punishment groups with T scores of 48 and 51 respectively, were in the average range, 34 to 66 percentile. The Control Group with a T score of 55 was in the somewhat above average range of 67 to 83 percentile.

The Avoidance Coping Responses, also fell into the same categories. The high and low corporal punishment groups were in the average category with the control group in the somewhat above average range.

Table 3
Coping Response Inventory

	Control Group	Low Corporal Punishment	High Punishment
Cognitive			
Logical Analysis	58	50	48
Positive Reappraisal	55	50	47
Behavioral			
Seeking Guidance and Support	53	50	45
Problem Solving	57	53	50
*CRI – Approach Condensed**	*55*	*51*	*48*
Cognitive			
Cognitive Avoidance	59	55	55
Acceptance or Resignation	54	53	51
Behavioral			
Seeking Alternative Rewards	49	49	52
Emotional Discharge	59	61	58
*CRI - Avoidance Condensed **	*55.5*	*54.6*	*53.7*
Total CRI	110.5	105.6	101.7

* CRI Approach was significant at .05 level of significance.
**CRI Avoidance was not significant at .05 level of significance.
(based on a one Analysis of Variance).

Attitude Towards Learning

Self-Directed Learning Readiness Scale (SDLRS):

Each subject's attitude towards learning was assessed using the SDLRS questionnaire. This 58 item scale yielded a mean score of 224 and standard deviation of 21.06 for all 25 subjects. The subjects with high and low levels of corporal punishment scored less on the SDLRS than the control group. As compared to the distribution of the national sample of scores on the SDLRS, both the high and low corporal punishment groups scored in the average range (202 to 226) and the control groups scored in the above average range (227 to 251) as seen in table 4 below.

Table 4

Attitude Towards Learning – SDLRS

	Control Group	Low Corporal Punishment	High Punishment
SDLRS	*230.13*	*224.28*	*220.3*

SDLRS Scores were not significant at .05 level of significance.
(based on a one-way analysis of variance).

Parenting Childrearing Style

The children's report of parental behavioral inventory - CRPBI (Schaefer, 1965) is a report on parenting behaviors, to gauge their history and range of parenting experiences. This scale was selected to address possible confounding variables such as the case where a parent might endorse corporal punishment and still practice good parental techniques such as talking to, reasoning with and explaining things to the child. It was assumed that the presence of positive parental interventions might mitigate the effects of corporal punishment on cognitive development and inversely, a combination of negative parental practices and high corporal punishment will have a negative impact on cognitive development.

Subjects in the control group scored higher on all of the scales related to positive parenting practices as compared to the low and high corporal punishment groups. However, the control group also scored higher on five of the nine scales used to measure parental control and on all of the scales used to measure parental rejection.

Table 5
Children's Report of Parental Behavior Inventory

	Control Group	Low Corporal Punishment	High Corporal Punishment
Acceptance of Individuation – Autonomy	16.13	15.57	12.80
Lax Discipline	12.87	12.24	11.99
Encouraging Sociability	16.5	14.86	14.00
Positive Evaluation	19.75	16.71	16.40
Expression of affection	20.00	15.43	16.00
Encouraging Independent Thinking	19.75	13.71	13.80
Positive Involvement - Emotional Support	21.00	16.00	15.10
Equalitarian Treatment	19.88	16.14	15.70
Intellectual Stimulation	20.00	15.43	16.40
Child-Centeredness	19.88	14.28	15.40
Positive Parenting – condensed*	*18.57*	*15.04*	*14.76*
Possessiveness/Protectiveness	14.25	16.12	14.59
Intrusiveness	18.45	18.81	17.69
Control – Enforcement/Strictness	16.63	18.29	16.10
Punishment	20.13	18.57	16.50
Control Thought Guilt	18.88	18.71	17.10
Control - Parental Direction	18.44	18.67	17.67
Control - Persistent Anxiety (nagging)	18.95	17.43	16.30
Negative Evaluation	22.28	21.09	18.22
Irritability	19.45	17.48	18.75
Psychological Control	*18.60*	*18.35*	*16.99*
Control - Withdrawal of Relationship (rejection)	22.09	19.54	18.30
Neglect	21.03	19.45	20.03
Ignoring	21.00	20.00	19.00
Rejection	*21.37*	*19.67*	*19.11*

Note: * Positive Parenting was significant at .05 level of significance.
Psychological Control and Rejection were not significant at .05 level of significance.
(based on a one Analysis of Variance).

Statistical Analysis

Two separate types of statistical analyses were performed on the data collected, an analysis for mediation followed by a series of stepwise linear regressions.

1) Analysis for Mediation

The analysis for mediation is appropriate when there is a hypothesized causal chain in which one variable affects a second variable that, in turn, affects a third variable, as is the case with the first two hypotheses of this study. It was hypothesized that the level of corporal punishment would impact frustration tolerance, which in turn would have an affect on cognitive development. In other words, frustration tolerance would mediate between corporal punishment and cognitive development.

In order to test for mediation the procedures of Baron and Kenny (1986) were employed using a three step approach using three separate regressions. For step one, a regression analysis was conducted with corporal punishment predicting cognitive development. For step two, a second regression analysis was conducted with corporal punishment predicting frustration tolerance. And finally for step three, a regression analysis was conducted with frustration tolerance predicting cognitive development (See Table 6 below). Using this model, full mediation is only supported if the relationship between corporal punishment and cognitive development is not significant and the relationship between frustration tolerance and cognitive development is significant. Partial mediation would be supported if the level of corporal punishment was significantly related to cognitive development and the

relationship of frustration tolerance and cognitive development was also significant. The mediating variable, frustration tolerance can not be judged to be a significant mediator because its significance was .123 at a .05 level of significance.

In addition to the level of corporal punishment and cognitive development, frustration tolerance was also expected to be a mediator between positive parenting practices and parental psychological control. Because frustration tolerance did not predict the level of cognitive development, mediation was not supported for these hypotheses either.

Table 6
Analysis for Mediation
Results of Regression Analyses for Level of Corporal Punishment, Frustration Tolerance and Cognitive Development.

	Independent Variable	Dependent Variable	B	Beta	t	F	Sig.
Step 1	Level of Corporal Punishment	Cognitive Development	-.290	-.445	-2.383	5.679	.026
Step 2	Level of Corporal Punishment	Frustration Tolerance	-4.031	-.5	-2.772	7.682	.011
Step 3	Frustration Tolerance	Cognitive Development	.026	.317	1.601	2.562	.123
	(CP and FT Combined)	Cognitive Development	2.86 & .010	-.381 & .125	-1.7 & .57	2.92	.075

Note. N = 25 and Level of Significance < .05.

2) Stepwise Linear Regression

A regression is a statistical method used to test the effect of an independent variable on a single dependent variable, or how much of the dependent variable can be predicted from the independent variable. In cases where there are many variables that could have an impact on the dependent variable, it has to be determined which variable(s) has the most significant impact or was the best predictors of the dependent variable. The statistical analysis that best achieves this goal is the stepwise linear regression, which was the second method used to analyze that mean scores of the primary variables as well as the confounding variables.

The stepwise linear regression analysis allows the researcher to add one variable at each step of the analysis and measure if that new variable has a significant impact on, or is a significant predictor of the dependent variable. As variables are added to the regression analysis they are ranked in order of significance from the greatest significance to the least significance. Independent variables that have no significant impact on the dependent variable are eliminated and not featured in the regression. The actual correlations generated from the stepwise linear regression of primary and confounding variables are presented in Table 6 and the results of the series of analyses are recorded in Table 7. (All of the variables that were not statistically significant were excluded from Table 7 for the convenience of reporting).

Table 7
Correlation Matrix and Descriptive Statistics for Primary and Possible Confounding Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Level of Corporal Punishment	1												
Overall GPA	-0.41	1											
IQ - Similarities	0.22	-0.1	1										
IQ - Matrix Reasoning	0.06	0.03	-0.05	1									
Single vs. Both Parents	-0.26	-0.27	0.006	-0.11	1								
Education of Both Parents	0.01	0.15	-0.03	0.45	-0.39	1							
Family's Socio-Economic Status:-0.39	0.09	-0.35	0.27	0.17	0.35	1							
CRI -- Approach Condensed	-0.53	0.32	0.19	0.01	0.53	-0.28	0.104	1					
CRI -- Avoidance Condensed	-0.08	-0.14	0.08	-0.01	0.09	-0.07	-0.19	-0.04	1				
SDLRS-A	-0.19	0.51	0.04	0.02	0.06	0.11	-0.016	0.43	-0.09	1			
Positive Parenting - condensed	-0.49	0.2	-0.19	-0.22	0.41	0.15	0.26	0.22	-0.13	0.23	1		
Psychological Control	-0.19	0.32	-0.04	-0.29	-0.002	0.15	-0.007	-0.03	-0.37	0.098	0.61	1	
Rejection - condensed	-0.35	0.55	-0.27	-0.06	0.03	0.28	0.13	0.22	-0.33	0.42	0.69	0.65	1
Mean	2.12	2.86	46.08	53.04	1.6	6.8	1.92	51.08	54.55	224.56	16.06	17.89	19.99
Std. Deviation	0.88	0.56	9.85	8.37	0.5	2.81	0.57	6.95	6.82	21.3	3.42	2.88	2.69

Note. N = 25. (Variables with a Significant correlation are presented in Table 8).

Table 8
The Combined Multiple Regression Analyses of Level of Corporal Punishment, Cognitive Development, Frustration Tolerance, Attitude Towards Learning, Marital Status and Educational level of Parents, SES, and Parental Child Rearing Practices.

Independent Variable	Dependent Variable	B	Beta	t	R^2	F	Sig.
Level of CP	CRI – Approach	-.067	-.526	-2.965	.276	8.788	.007
	Positive Parenting	-102	-.349	-2.372	.424	8.092	.002
Overall GPA	Rejection	.144	.549	3.146	.301	9.898	.005
IQ – Similarities	----	----	----	----	----	----	----
IQ – Matrix Reason	Parents Educational Level	1.348	.453	2.437	.205	5.941	.023
	Psychological Control	-1.062	-.365	-2.081	.336	5.565	.011
CRI – Approach	Single (vs) Both Parents	7.342	.529	2.986	.279	8.915	.007
	Overall GPA	6.073	.492	3.159	.504	11.189	.000
CRI – Avoidance	----	----	----	----	----	----	----
SDLRS	Overall GPA	19.909	.513	2.863	.263	8.199	.009
S (vs.) B Parents	CRI – Approach	.038	.529	2.986	.279	8.915	.007
	Overall GPA	-.428	-.482	-2.995	.488	10.486	.001
	Positive Parenting	.056	.383	2.764	.625	11.646	.000
Education of Parents	IQ – Matrix Reasoning	.152	.453	2.437	.205	5.941	.023
SES	----	----	----	----	----	----	----
Positive Parenting	Single vs. Both Parents	2.672	.391	3.011	.595	18.643	.000
Psychological Ctrl	Rejection	.700	.655	4.153	.429	17.247	.000
Rejection	Overall GPA	2.055	.429	3.345	.653	20.669	.000

Note. N = 25 and Level of Significance < .05.

Because mediation was not supported, the following results reported are based only the results of the stepwise linear regressions reported in Tables 7 and 8.

Level of Corporal Punishment and Frustration Tolerance

It was hypothesized that High Levels of Corporal Punishment would be correlated with Lower Coping Response Inventory scores and Low Levels of Corporal Punishment would be correlated with Higher Coping Response Inventory scores. This hypothesis was partially true depending on what style was used to cope with stress, an approach response or an avoidance response. Subjects using an approach response or active problem solving style were, negatively correlated to level of corporal punishment, meaning that subjects who where exposed to high levels of corporal punishment scored lower on active, solution focused strategies as a way to deal with frustrations in life as compared to subjects in the control group. This correlation was -.53 at a .007 significance level.

There was no difference between groups of subjects using an avoidance response style to deal with stress.

Frustration Tolerance and Cognitive Development

It was predicted that Lower Frustration Tolerance would be correlated with Low Grade Point Averages and Lowered IQ scores and conversely, Higher Coping Response Inventory scores would be correlated with Higher Grade Point Averages and Higher IQ scores.

As noted above, Frustration Tolerance was broken down into approach or moving towards the problem strategies and avoidance or moving away from the problem strategies. There were no significant differences between groups as it pertains to using an avoidance response as a strategy for coping with stress, however, the control group were more likely to use active problem solving strategies or CRI – Approach, as a coping response than the low and high corporal punishment groups, which was positively (.32), and significantly correlated with GPA at $p<.0001$ level of significance.

These active problem solving approaches were also positively and significantly related to Single vs. Both parents in the household at a .007 level of significance. This means that both parents in the household were significantly correlated to active problem solving approaches to coping with a crisis.

Frustration tolerance, both active and passive problem solving approaches, was not significantly correlated to IQ scores for either similarities or matrix reasoning as predicted.

Level of Corporal Punishment and Attitude Towards Learning

It was also predicted that High levels of Corporal Punishment would be negatively correlated with or have a negative impact on attitude towards learning as measured by the Self Directed Learning Readiness Scale and conversely, low levels of corporal punishment would be correlated with high attitude learning scores. While corporal punishment was negatively correlated with attitude towards learning (r = -

.19), the level of corporal punishment was not significantly correlated to attitude towards learning at a .835 level of significance.

Attitude towards learning and GPA were positively (r = .51) and significantly related at a .009 level, but not linked to level of corporal punishment as predicted.

Possible Confounding Variables

Socio-Economic Status

It was expected that subjects from a lower Socio-economic status would be more likely to use corporal punishment and the opposite for subjects from a high Socio-Economic background. In turn, it was also expected that the consequences of high and low corporal punishment would be related to SES.

The statistical analysis showed no significant correlation between socio-economic status and any of the other variables being analyzed.

Parent's Educational Level

The education of parents was expected to impact the results in several ways. First, it was expected that higher Educational Levels of parents would correlate to higher Overall GPA scores and higher IQ scores. And second, it was expected that subjects' attitude towards learning would be related to the educational level of the parents.

The Educational level of the parents was not significantly correlated to any of the variables predicted, except it was positively correlated to matrix reasoning at .023 significance level.

Positive Parenting Practices

It was expected that Positive Parenting practices would be correlated with high frustration tolerance, as well as the correlates of high frustration tolerance predicted above. This was not the case. Positive parenting practices were only correlated to both parents in the household growing up.

Psychological Control

It was expected that high Psychological Control would be correlated with Lower frustration tolerance and in turn, low GPA, lower IQ scores, as well as a lower attitude towards learning scale score. None of these correlations were significant. Psychological control was only significantly related to Rejection at $p < .0001$ level of significance.

Other Confounding Variables

Two variables that were not predicted to have any specific correlation with any of the other variables were single vs. both parents in the household and parental rejection, but they did.

Single vs. Both parents in the household was found to be positively correlated to CRI – Approach, Overall GPA and Positive Parenting practices at significance levels of .007, .001 and .000 respectively. And parental rejection was significantly correlated with overall GPA at a .000 level of significance.

Qualitative Results

The answers to the interview questions were recorded and sorted into the control, low and high corporal punishment groups. After the responses were sorted into groups, each response was recorded and the frequency noted for redundant statements if more than one subject gave the same response. The statements were then organized or sorted into different themes that best captured the experience being examined by the individual questions.

For example, on questions like, 'why do you think it is important to learn?' the responses were grouped into broad themes endorsing internal versus external motivation for learning. Responses such as "to grow as a person" or to be more open minded" were recorded as internally motivated because they were centered around gaining knowledge for the sake of learning and personal fulfillment. On the other hand, responses like "to get a good job" or "to provide for my kids" were responses emphasizing the utility of knowledge as a tool for future success and was coded under external motivations.

Each response was given a score of one and added to the total number of responses fitting each theme to allow for a more objective analysis of the data.

Due to the fact that there were an uneven number of subjects in each group, a scaled score was calculated and used to provide an unbiased comparison of groups. The scaled scores were calculated by multiplying the control, low and high corporal punishment groups by 10/8, 10/7 and 10/10 respectively so that each group would be weighted equally. Not all of the interview questions were reported in this analysis, only the ones that could be sorted into clear and consistent themes for comparison and

those questions specifically pertaining to disciplinary practices and attitudes towards learning. These scaled scores were not used in any statistical analysis but were used to add some substance to the quantitative analysis reported above. The results of the qualitative analysis were reported in tables 9 through 15 below.

In response the question "how would you discipline your child(ren)?" The subjects in the control group gave twice as many responses supporting a "no hitting or no corporal punishment" stance than the low corporal punishment group, which was twice as many as the high corporal punishment group. Of the responses supporting the use of corporal punishment for their children, all three of the groups were similar in the frequency of their responses. The high corporal punishment had the highest number of responses supporting alternative methods to discipline, followed by the control and low corporal punishment group, which had the least (See Table 9).

Table 9

How would you discipline your child(ren)?

	Control Group	Low Corporal Punishment	High Corporal Punishment
No hitting/No Corporal Punishment	4	2	1
	(5)	(2.8)	(1)
Use Corporal Punishment	1	1	2
Same as parents	3 (2 no cp)	2	4
c/p at a young age, more humane later	1	---	1
Mild Corporal Punishment	---	2	---
CP as a last resort	1	---	1
Total Corporal Punishment	4	5	6
(Scaled Score)	(5)	(7)	(6)
Try to be a friend	1	---	---
Give them rules and guidance	2	---	---
Less verbal abuse/yelling	---	---	1
Grounding for older kids	---	1	---
Talk to them to understand them	1	1	4
Reason as much as I can	1	---	1
Withhold things	---	---	1
Total Alternatives	5	2	7
(Scaled Score)	(6.5)	(2.9)	(7)

Note. *Numbers reported are the frequency of each response recorded on the left, the totals for each category and a weighted or scaled score adjusted for the number of subjects in each group.*

Only one subject in the control reported having regrets about how they were raised, as compared to the low and high corporal punishment groups with 5 and 3 subjects reporting regrets respectively. Conversely, eight subjects in the control group reported that they had no regrets about how they were raised and two and five subjects reported that same for the low and high control groups respectively. (see Table 10).

Table 10

Do you have any regrets about the way you were raised?

	Control Group	Low Corporal Punishment	High Corporal Punishment
Yes	1	5	3
(Scaled)	(1.25)	(7.15)	(3)
No	7	2	5
(Scaled)	(8.75)	(2.86)	(5)

Note. *Numbers reported are the frequency of each response recorded on the left, the totals for each category and a weighted or scaled score adjusted for the number of subjects in each group.*

Subjects in the control group endorsing internal motives for why it is important to learn, gave approximately a third more responses than the high corporal punishment group did. The control and high corporal punishment groups gave almost the same frequency of responses supporting external motivation and the low corporal punishment groups gave almost 1/3 responses supporting external motivations. One subject from the control group and one from the low corporal punishment groups gave responses that didn't fit clearly into the external or internal motivation themes for why it was important to learn (see Table 11).

Table 11

Why do you think it is important to learn?

	CG	LCP	HCP
To understand self	1	---	---
To grow as a person	1	1	---
W/out knowledge you just get stuck as a person	1	---	---
Expand mind	---	1	---
Personal fulfillment and improvement	---	1	---
To better self	2	1	1
I like to learn	---	---	1
For Self respect	---	---	1
Helps you to know who you are	---	---	1
Makes you unique	---	---	1
Make decisions for self	---	1	---
To educate self	---	---	1
Personal Growth	5	5	6
(Scaled Score)	(6.25)	(7.15)	(6)
To understand the world	1	1	---
There is always something new to learn	1	---	---
To be open minded	1	---	---
Keep up with the world	---	1	---
To know about different cultures	1	---	---
Broaden horizons	1	---	---
To understand the world	---	---	1
To not be ignorant	---	---	1
Knowledge of the World	5	2	2
(Scaled Score)	(6.25)	(2.86)	(2)
Internal Motivation	10	7	8
(Scaled Score)	(12.5)	(10.01)	(8)
To get a good job	---	1	1
More success	1	---	---
To create opportunities for self	1	---	---
No one can take your education from you	1	---	---
To meet certain standards in society	2	---	---
To avoid repeating mistakes	1	---	---
To better deal with obstacles in the future	---	1	---
To provide for kids	---	---	1

So no one can take advantage of you	---	---	1
Crates more opportunities for success	---	---	1
To be comfortable in life	---	---	1
Not struggle economically	---	---	1
To have things you need to know	---	---	1
Gives you options	---	---	1
Career	---	---	1
External Motivation	6	2	8
(Scaled Score)	(7.5)	(2.86)	(8)
To propagate what you have learned	1	---	---
Never really thought about it	---	1	---

Note. *Numbers reported are the frequency of each response recorded on the left, the totals for each category and a weighted or scaled score adjusted for the number of subjects in each group.*

In response to the question of how each subject would motivate their children to learn, the control group gave more than twice the number of responses as the high corporal punishment group supporting internal motivation as ideal for teaching their own children. On the other hand, the high corporal punishment group endorsed almost four times as many responses supported external motivations for learning as compared to the control group. (see Table 12).

Table 12

How would you motivate you children to learn?

	CG	LCP	HCP
Give them stories to read	1	---	---
PBS	1	---	---
Tutor them	1	---	---
Tell them not to give up	1	---	---
Rewards, then shift to self fulfillment Who you become is dependent on what you do now	1	---	---
Look at g/father who went back to school to simply learn	1	---	---
By example	1	1	---
Find what interest them and encourage it	---	1	---
Make it interesting	1	---	---
Museums	1	---	---
Make things more hands on (educational toys)	1	2	---
Give them fun things to do	1	---	---
Plenty of encouragement to try new things	---	1	---
By example - showing I am still learning	---	---	1
Teach them their History	---	---	1
Relate something that is important to them to what is being taught	---	---	1
Making them understand the fundamentals of life/value ed. and communication	---	---	1
Introduce them to things, if the like it I'll give them more	---	---	1
Internal/Joy of learning (Scaled Score)	11 (13.75)	5 (7.15)	5 (5)
Incentives-reward them with things I wasn't privileged to have	1	---	---
Positive reinforcement	1	---	---
Little TV.	---	---	2
Give them incentives and show them the benefits later in life	---	1	---
If you want to make it, you have to learn			

to progress - esp. as an AA	---	1	---
tell them that nothing will be given to them	---	---	1
Same ground rules as my parents	---	---	1
More academic activities like homework	---	---	1
Explain what I went through and how hard it was	---	---	1
Show what happens to people who don't learn	---	---	1
Rewards based on their likes and interests	---	---	1
External/Utility of Learning	2	2	8
(Scaled Score)	(2.5)	(1.86)	(8)

Note. *Numbers reported are the frequency of each response recorded on the left, the totals for each category and a weighted or scaled score adjusted for the number of subjects in each group.*

Subjects in the control group reported approximately twice as many internal motivation tools for learning employed by their parents as compared to the high and low corporal punishment groups. Both the control and high corporal punishment groups reported the same external motivations used by parents as learning tools (see table 13).

Table 13

How did your parents motivate you to learn?

	CG	LCP	HCP
Gave me stories to read	1	---	---
PBS	1	---	---
Tutor	1	---	---
Never give up	1	---	---
By example	1	1	---
Rewards, then shift to self fulfillment	1	---	---
Bought me a lot of books	1	1	---
My parents read to me, I followed	---	---	---
then explained	1	---	---
Computer learning programs	1	---	---
Encouraged me to read a lot	---	1	
I did it all on my own	---	1	
Being around positive people	---	---	1
By talking/teaching	---	---	1
Making me understand the			
fundamentals of life	---	---	1
Value education and communication	---	---	1
They didn't really motivate, I just knew			
I could do something w/ self	---	---	1
They never motivated me –			
but gave what I needed	---	---	1
Internal/Joy of learning	9	4	6
(Scaled Score)	(11.25)	(5.72)	(6)
Told me to take advantage of			
opportunities he didn't have	1	---	---
Used other as examples	1	---	---
Mother kept pushing me	1	---	---
Can't be nothing without education	1	---	---
Got into trouble If I didn't do well	---	1	---
If you want to make it, you have to learn	---	---	---
to progress especially as an AA	---	1	---
By seeing how hard they had to work	---	---	1
Strict/extra lessons after school	---	---	1
Mother stressed school	---	---	1
Beatings	---	---	1
$/"do you want to work at McDonalds?"	---	---	1

External/Utility of learning (Scaled Score)	4 (5)	2 (2.86)	5 (5)

Note. *Numbers reported are the frequency of each response recorded on the left, the totals for each category and a weighted or scaled score adjusted for the number of subjects in each group.*

Subjects in the control group reported almost the same amount of responses as the low and high corporal punishment groups when stating that they would raise their children with the same methods used by their parents. The three groups also reported a similar number of responses for if they would use both internal and external motivators as compared to their parents (see Table 14).

Table 14

Difference between the way your parents motivated you to learn and how you would motivate your children to learn.

	CG	LCP	HCP
No Difference	4	3	6
(Scaled Score)	(5)	(4.29)	(6)
Use less fear	1	---	---
Not much, they were good with education	1	---	---
Make school something they did for themselves	1	---	---
Not much- more fun for kid	---	1	---
I know better/more interest and time in their lives	---	1	---
I would be in a better $ position to provide things	---	1	---
Be more hands on	---	---	1
less "put downs"	---	---	1
More Internal Motivation	3	3	2
(Scaled Score)	(3.75)	(4.29)	(2)
Society might make a difference	---	---	1
Yes - more rewards	1	---	---
More External Motivation	1	0	1
(scaled Score)	(1.25)	(0)	(1)

Note. *Numbers reported are the frequency of each response recorded on the left, the totals for each category and a weighted or scaled score adjusted for the number of subjects in each group.*

Subjects in the high corporal punishment reported more than four times the responses of the control group and twice the number of the low corporal punishment group in response to if corporal punishment was ever used to motivate them academically. And conversely, the control group reported twice as many responses as the low corporal punishment group saying corporal punishment was never used to motivate them academically, and six times as many as the high corporal punishment group. (see table 15).

Table 15

Was corporal punishment ever used to motivate you academically?

	Control Group	Low Corporal Punishment	High Corporal Punishment
YES	2	4	9
NO	6	3	1

Note. *Numbers reported are the frequency of each response recorded on the left.*

Two times as many subjects in the high corporal punishment group reported that their parents didn't understand them growing up and an equal number of subjects from the low and control groups were conflicted about the question. There were no other clear patterns reported about feeling understood by one's parents growing up. (see Table 16)

Table 16

Do you feel like your parents understood you growing up?

	Control Group	Low Corporal Punishment	High Corporal Punishment
YES	3	1	4
NO	3	4	6
Yes/No	2	2	----

Note. *Numbers reported are the frequency of each response recorded on the left.*

Chapter 5

Discussion

The purpose of this study was to examine the relationship between parental corporal punishment as a disciplinary and teaching practice, frustration tolerance and cognitive development of subjects who were exposed to corporal punishment.

.

Findings

This study addressed the following hypotheses: (1) high levels of corporal punishment would be correlated with lower frustration tolerance. (2) Lower frustration tolerance would be positively correlated with lower cognitive development. And, (3) High levels of corporal punishment would be negatively correlated or have a negative impact on attitude towards learning.

In order to test for the effects of possible confounding variables, the additional hypotheses examined were: (4) higher Educational Levels of parents would have a positive correlation with Cognitive Development, and a better attitude towards learning. (5) Subjects from lower Socio-economic backgrounds would have parents who would be more likely to sanction corporal punishment. (6) Positive Parenting practices would be positively correlated with high frustration tolerance and Cognitive Development. And, (7) high Psychological Control as a parenting practice would be negatively correlated with low Frustration Tolerance and Cognitive Development.

In addition to the hypotheses outlined above, two hypotheses were examined for the qualitative analysis of the interview section. It was hypothesized that (8) subjects who were exposed to higher levels of corporal punishment would feel less

understood by their parents than subjects who were subjected to low levels or no corporal punishment, which in turn, would lead subjects in the high corporal punishment group to have more regrets about how they were raised. And finally, it was hypothesized that (9) subjects who were subjected to high levels of corporal punishment would be more likely to rely on external motivations to learn rather than internal motivations.

As predicted, the level of corporal punishment did have an inverse relationship with frustration tolerance as measured by the coping response inventory. This was true for both types of analyses used to examine the data, the analysis for mediation as well as the stepwise linear regressions. The measure of frustration tolerance is made up of two major scales defined as avoidance responses and approach responses: only the latter significantly differentiated the groups. The difference in scores were not significant when avoidance coping responses such as cognitive avoidance and, acceptance and resignation were employed as thinking strategies, or when behavioral strategies like seeking alternative rewards or an emotional discharge was used. While the high and low corporal punishment groups scored in the average category on the avoidance coping response scale and the control group scored in the somewhat above average range, the differences were not significant.

However, on the approach coping responses scale, the high and low Corporal Punishment groups were still in the average range and the control group was in the somewhat above average range, but the control group scored higher by a statistically significant margin. The subjects in the control group scored higher on their use of

logical analysis, positive reappraisal, seeking guidance and support, and problem solving. These are exactly the qualities needed for academic success, which was part of the second hypothesis of the study.

However, the second hypothesis was not supported by both statistical analyses used. The analysis for mediation showed no significant relationship between level of frustration tolerance and cognitive development. The implication being that cognitive development, as defined by this study, is not entirely dependent on the level of frustration tolerance. It may be possible that a subset of students who are academically inclined, could breeze through their studies with relatively little frustration. A second possibility, which appears to be the case with this study, is that many factors or confounding variables impact cognitive development, thus making frustration tolerance not a significant mediator between corporal punishment and cognitive development. On the hand, when frustration tolerance was looked at in conjunction with the other confounding variables being analyzed, a significant correlation was observed for subjects who were more inclined to use approach response strategies on the coping response inventory.

Subjects who were more inclined to use approach response strategies for problem solving in this study, did better academically and their overall grade point averages were significantly positively correlated to this problem solving approach. This finding was consistent with previous research using different measures of frustration tolerance and its effects on academic performance (Chen, 2001; Rardin, 1970; and Rapport et al, 1986). On the other hand, the degree of use of avoidance coping responses had no significant correlation to academic success.

These findings appear to be logical and self evident for a variety of different reasons, all of which are consistent with the study's original hypotheses and the researcher's assumptions about the effects of corporal punishment. It was assumed based on the researcher's personal experience and the trends suggested in the literature review, that parents who used corporal punishment as a primary disciplinary tool, were either directly or indirectly not teaching logical analyses as a problem solving tool, particularly at the moment corporal punishment is being utilized. This certainly appears to be the case with all of the other approach responses to frustration as measured by the Coping Response Inventory. Although it is impossible to account for all of the parental teaching practices through instruction or modeling, it seems unlikely that during the administration of corporal punishment that the child is being taught to analyze problems logically, make a positive reappraisal of said problem, seek guidance and support from the very person who is disciplining him or her with corporal punishment at that moment, or being taught any problem solving strategies. If the child learns any of these proactive methods as a way to deal with frustrations and life's challenges, it would be reasonable to assume that they were developed apart from corporal punishment and not during corporal punishment.

It was predicted that frustration tolerance would be positively correlated with cognitive development, which was measured by both grade point average and IQ scores. This hypothesis was not entirely correct, for the reasons mentioned above pertaining to the analysis for mediation, and the fact that both IQ scores and GPA were not positively correlated to frustration tolerance in the stepwise linear regressions. While frustration tolerance was significantly correlated with grade point

average, as outline above, IQ scores were not significantly related to frustration tolerance or level of corporal punishment as predicted. While these findings were not what were predicted, they are certainly understandable since the IQ scales used in the WASI were chosen for their strong association with general intellectual functioning which includes cognitive abilities such as verbal, performance, fluid and crystallized intelligence (WASI, 1999). However, the fact that IQ scores did not differentiate between groups based on level of corporal punishment, lends some additional merit to the anti-corporal punishment argument. One of the questions that needed to be addressed throughout this research project was: Does corporal punishment negatively impact cognitive development, or is the level of corporal punishment being endorsed by parents simply a function of the child's cognitive ability? In other words, is it possible that because a certain group of children are not 'as smart as' there counterparts, their parents are 'forced' to used more physical methods to teach and discipline them because they can't be reasoned with in the same way? However, this 'chicken or the egg' argument may not apply in relation to these findings, because all three groups, control, low and high corporal punishment, were of average intelligence and could not be significantly differentiated from each other using IQ scores. This may suggest that it was not their IQ scores that predicted their academic performance, but rather their ability to endure and overcome the obstacles of higher education and their attitude towards learning that predicted academic performance. However, this assertion should be tempered with the possibility that the IQ scores being observed in young adulthood may not have been the same IQ scores when the subjects were children being exposed to parental corporal punishment.

It was also hypothesized that high levels of corporal punishment would be negatively correlated or have a negative impact on attitude towards learning as measured by the Self Directed Learning Readiness Scale, but this was not the case. The level of corporal punishment was negatively correlated with attitude towards learning, and subjects with high and low levels of corporal punishment scored less on the SDLRS than the control group as predicted, but not at a significant level. This was consistent with themes of the responses to questions in the qualitative interview about why it is important to learn (see Table 11). The three groups all shared similar responses that endorsed personal growth or internal motivation for learning, but the control group had a higher frequency of those responses than the other two groups. The qualitative analysis did not reveal any clear differences in responses between groups with responses endorsing external motivation.

It should be noted, that while all three groups were similar in their appraisal of why it was important to learn, there were clear differences around how their parents motivated them to learn. All three groups gave similar types and number of responses endorsing external motivators for learning, but the control group gave twice as many responses indicating that their parents used internal motivation strategies or promoted the joy of learning as compared to the low and high corporal punishment groups, which were consistent with their SDRLS scores (see Table 12). This suggests that parents, who used internal motivators for their children to learn, had children who were more academically inclined.

It was predicted that higher educational levels of parents would correlate to higher Overall GPA scores, IQ scores, and a better attitude towards learning.

However, none of these correlations were significant, except for Matrix Reasoning. It was surprising to find that the educational level of parents' had no significant correlation to grade point average since such a relationship had been established in previous research (Lutenbacher, 2001) and made intuitive sense. It was also surprising to find that student's attitudes towards learning also had an insignificant relationship to parents' educational levels. Less surprising was the finding that the IQ similarities score was not significantly related to the educational level, for the same reasons mentioned above, but the significant relationship between the IQ matrix reasoning score and parental education remains a mystery. This interesting finding was not supported in the literature and deserves further exploration.

Another confounding variable examined was socio-economic status. It was expected that parents from a lower socio-economic status would be more likely to endorse corporal punishment as a disciplinary practice (Straus and Stewart ,1999; Youseff, et al, 1998) in part because of the additional stress related to poverty, and the established body of research linking the use of Corporal Punishment to parental stress (Arnold , 1982). However, in this study, there were no significant relationships between any of the other variables being examined. This might be a result of the sampling procedures used for subjects. It was expected that the vast majority of students attending City College, would be from very similar socioeconomic backgrounds, mainly from a middle class, and to a lesser degree, low socio-economic status, thus making socio-economic status a control variable. Of the twenty-five subjects, seventeen defined themselves as middle class, five as low class and only three as upper-class. So while a broader sample of subjects from a wider

socioeconomic range might yield significant differences along socio-economic lines, this study did not.

It was expected that positive parenting practices, such as the expression of affection, encouraging independent thinking and intellectual stimulation, would be correlated with high frustration tolerance and in turn cognitive development. However, there were no significant relationships among these variables. As noted above, frustration tolerance did not predict cognitive development in the analysis for mediation and therefore could not be considered a mediator between positive or negative parental practices and cognitive development. In the stepwise linear regression, positive parenting was only correlated to marital status of the parents at a significant level. This finding was not surprising because one might expect to find that there is more time available for positive parental practices in households where both parents are present. It might be expected that in households where a single parent has to juggle the responsibilities of being the breadwinner for the family, being available as a parent as well as all of the other parenting responsibilities, might have a negative impact on positive parenting practices.

Based on this researcher's personal experience and the research (Baumrind, 1967; Wissow, 2001), it was expected that psychological control on the behalf of parents would be closely related to the use of physical control or corporal punishment, and in turn would diminish frustration tolerance, cognitive development and attitude towards learning. However, the results show that psychological control was only significantly correlated with feelings of rejection (Barnett, et al,1998), which in turn, negatively impacted GPA. This was also consistent with the trends in

the qualitative analysis which revealed that twice as many subjects in the high corporal punishment group felt that their parents didn't understand them growing up as compared to the control group.

While there were no hypotheses about the effect of marital status on cognitive development or frustration tolerance, it proved to be significantly correlated to GPA, frustration and positive parenting practices. It could be reasoned that parents who stay together may have modeled or are modeling approach responses to dealing with life stressors. In households with both parents, the child might have more of an opportunity to witness problems being addressed head on and conflicts being resolved actively. In households where one parent is absent, at the very minimum, the child will have one parent who has modeled an avoidance approach to parenting or marriage, assuming that the absent parent is absent as a result of prior marital conflict rather than some other reason, such as death. This may account for the significant relationship with frustration tolerance in subjects from a two parent versus one parent household, which in turn, would be related to cognitive development for the reasons outlined above. Having both parents present is also more likely to be correlated with positive parenting, because having both parents present might reduce the level of parental stress on the single parent which has been shown to be related to the use of corporal punishment (Crouch and Behl, 2001; Gershoff , 2002),

In addition to the quantitative analysis outlined above, there were some very interesting trends recorded in the qualitative analysis of the interview conducted. Despite the fact that two times as many subjects in the high corporal punishment group reported that their parents didn't understand them growing up (see Table 16),

as compared to the other groups, they were still more likely to endorse corporal punishment. Only one subject in the high corporal punishment group endorsed no hitting as part of their disciplinary practices for their own children (see Table 12). This is disheartening because research trends suggest that the only subject who did not endorse corporal punishment in this group, is likely to change this position after having children. This prediction is based on research that suggests that the strongest predictor of the use of corporal punishment with one's own children is the use of corporal punishment by one's parents (Gershoff, 2002). It was also interesting to find that only three of the ten subjects in the high corporal punishment group had any regrets about how they were raised (see Table 10), and six of the ten reported no difference in how they would motivate their children to learn, almost as much as the other two groups combined (see Table 12). This is especially troubling because nine of the ten subjects in the high corporal punishment group reported that corporal punishment was used to motivate them academically, more than twice that of the low corporal punishment group and four times as many as the control group (see Table 15). If these trends of exposure to corporal punishment predict the use of corporal punishment on their own children, then the prognosis for changing these practices in the future remains pessimistic.

In broad strokes, the qualitative analysis demonstrates that there is a lot of agreement about why it is important to learn and no clear differences surround what motivates each subject to learn, which is consistent with lack of significant differences between groups using the self directed learning readiness scale. However, there were more noticeable differences between how each group was

motivated by their parents, favoring a harsher approach for subjects in the high corporal punishment group. Unfortunately, the trends of how parents motivated each of the subjects to learn along group lines, bears a striking resemblance to how each subject plans to motivate their children to learn (compare Table 12 and 13).

Limitations and Recommendations for Future Research

The largest problems of this study were related to sampling. The participants of this study were limited to a convenience sample drawn primarily from students attending summer classes at City College.

It is possible that the very effects of corporal punishment on cognitive development that this study was intended examined, may have had its effect long before these students advanced to the college level. In other words, the subjects who might have been most adversely affected by corporal punishment had problems related to the their cognitive development earlier in their academic careers and may have dropped out of school before getting to the college level or chose to not attend college based on their cognitive limitations, either perceived or real. In fact, the subjects who were included in this sample were the ones who has shown some measure of resiliency and are living out the community narrative, which holds to the belief that corporal punishment is beneficial to academic performance and promotes maturity or instills values that might be useful for academic success. Therefore, this sample is a skewed sample that doesn't capture any of the possible early victims of corporal punishment, assuming that they exist. However, it should be noted that even among the most resilient of students, the above mentioned correlations to corporal

punishment, frustration tolerance and cognitive development, could still be observed, thus adding weight to the anti-corporal punishment argument.

It is also possible that students who attend summer classes might differ from those who do not, but these differences were not examined in this study. Furthermore, the sample of Guyanese students attending City College would differ in many ways from a Guyanese sample as a whole. Therefore, these finding might not be generalized to the typical Guyanese student attending City College, those beyond City College or those who never advanced to the college level academically. Ideally, future research might sample a larger number of students from a variety of different schools. Or, a similar study might be conducted in Guyana which would help to eliminate the effects of immigration on how subjects viewed their early experiences of discipline surrounding corporal punishment. Using this approach would also allow the researcher to reach a sample of subjects who is likely to view corporal punishment as a legitimate childrearing tool in an atmosphere that supports such an approach to parenting.

Another limitation of this study was the reliance on subjects to recall information from their past that could not be corroborated by outside sources. For future research it would be useful to develop or use instruments that would require input from both the child and parent(s) who endorse corporal to report on frequency and severity measures for a more reliable estimate of level of corporal punishment. It would also be a superior approach to try to use a sample that wasn't years removed from their experiences of corporal punishment, but rather a sample of students who

were still exposed to corporal punishment to better isolate its effect on cognitive functioning.

Another significant limitation of this study is the fact that none of the scales used in this study was normed on a Guyanese population. Scales such as the Child's report of parental behavior inventory was developed and refined on American values. An instrument should be utilized or developed to focus on a Guyanese definition of these values as they are viewed from within that culture. For instance, during the analysis of the data collected, it became clear that several subjects had very different definitions of severity of corporal punishment from the standards employed by this study. For future research on this topic, a pilot study should be conducted in which subjects are asked to report all of the methods of corporal punishment they were subjected to and then rank them by severity. After a predetermined number is reached, a scale of severity could be developed based on a sample of Guyanese subjects' interpretations, which would better capture their experiences surrounding its use.

In addition to how severity of corporal punishment was defined by this research, better definitions of scales like socioeconomic status should have been utilized because broad categories like middle, low and high socioeconomic status has too much range to truly isolated each subject's true level of socio-economic ranking. A more precise series of questions about family income as compared to number of people in the household might be more appropriate. In addition to defining socioeconomic status more precisely, the definitions should be based on a standard suitable for Guyana or the United States, but not both. This design flaw in this

research resulted in confusion for several subjects about which county they should report on but were instructed to report on the country in which they spent most of their childhood. The issue of socioeconomic status may have further implications for this study because many of the immigrants who are able to leave Guyana and come to the United States have to means to do so. In other words, there is a large population of Guyanese who lacks the financial resources to come to the United States, thus making any sample acquired in the United States skewed towards a middle or upper-class background based on Guyanese standards.

The most obvious limitation of this research project, also related to sampling, is the low number of subjects. The low number of subjects has several significant impacts on the results. First, it restricts the generalizability of the results, second, it increases the probability of sampling errors and third, it restricts the number of variables that could be statistically analyzed because of the low ratio of number of possible variables to number of subjects. Future research, especially ones using multiple regressions for analyses, should have a minimum of 200 subjects to facilitate a broader and more accurate analysis of the data.

Appendix A

Are you from

Guyana?

Research Subjects needed for a study on the effects of parental child rearing practices

Earn

$20.00

for your time if you qualify.

For more information please contact William Gordon at 917-324-8439 or Gordon2wil@aol.com.

Appendix B

Oral Script

Thanks for calling to find out more about my research project.

My name is William Gordon, I'm a doctoral student in the Clinical Psychology program at City College and I'm the principal investigator for this study. The purpose of this research project is to identify the relationship between the use of parental corporal punishment during childhood, frustration tolerance and cognitive development.

As part of this study, I will be asking participants to report on the parenting styles they've experienced during childhood, particularly as it pertains to disciplinary practices such as corporal punishment. I will also be asking participants to complete questionnaires to measure their attitude towards learning, level of frustration tolerance and cognitive reasoning ability. Do you think you might be interested in participating in this study?

{If No} – Thank you very much for calling.

{If Yes} – But before enrolling you in this study, we need to determine if you are eligible. So what I would like to do ask you a series of questions about your parent's disciplinary practices during your childhood. There is a possibility that some of these questions might make you uncomfortable or distressed; if so please let me know. You don't have to answer these questions if you don't want to. You also need to understand that all information I receive from you, including your name and any other identifying information, will be kept strictly confidential and stored under lock and key. The purpose of these questions is only to determine if you are eligible for our

larger study. Remember that your participation is voluntary; you do not have to answer these questions and you can stop at any time.

Do I have your permission to ask you these questions?

(The Criteria for participants eligibility was addressed in question #2 of IRB proposal)

Appendix C

Consent From

I have been told that the purpose of this research project is to identify the relationship between the use of parental corporal punishment during childhood and cognitive development. I have been told that this study has a greater than minimal psychological risk because it is possible that emotions surrounding my parent's use of corporal punishment during my childhood might be evoked.

The relationship between parental corporal punishment, frustration tolerance and cognitive development.

The purpose and design of this study was explained to me by the Principal Investigator, Mr. William Gordon, a doctoral student in the Clinical Psychology sub-program at City College. Mr. Gordon explained that the study will compass five sections. The first section will include my general demographic information. The second section will examine my history of corporal punishment. The third section will examine the parenting styles I experienced growing up, my attitude towards learning, and my level of frustration tolerance. And, the fourth section is a test of my reasoning ability. I was told that fifth and final section will be an interview which will not be administered to all subjects but only to eight randomly selected subjects, if I choose to be interviewed I will provide Mr. Gordon with my contact information. It was explained to me that my time commitment will be approximately 1.5 hours and I'll be compensated $20.00 for my involvement.

I was assured that any identifying information recorded, such my name, address, or phone number, will be kept completely confidential and will be stored separately from the other information gathered in this study. I was also assured that any identifying information shared during this study will not be published or be available to anyone other than the principal investigator without my written consent. I was instructed to refer to anyone being discussed in the study by title (for example: my father, my mother, my sister etc.) and not use real names or any other identifying information for my protection. Furthermore, it was explained that all information gathered during this study will be kept under lock and key for five years after the completion of the study and then destroyed.

I am an adult at least 18 years of age and my participation in this study is completely voluntary. I am fully aware that I do not have to answer any question I do not wish to answer. As an adult, I understand that the discussion of the use of corporal punishment during my childhood can be psychologically troubling and I fully acknowledge the personal risks involved in my participation. I also understand that I can stop at any time without penalty. I've been provided with a list of helping programs with their telephone numbers if I feel the need for counseling as a result of my participation.

If I have any questions concerning my rights as a participant in this study I can contact Ms. Ethel A. Breheny, the Institutional Review Board Administrator, at (212) 650-7903 during normal business hours.

If I have any questions about this study or require additional information I may contact Mr. William Gordon, the principal investigator, or Dr. Steven Tuber, the

Director of the Doctoral Program in Clinical Psychology at City College and the faculty advisor for this study. Mr. Gordon can be reached at (917) 324 -8439 or at Gordon2Wil@aol.com and Dr. Tuber can be reached at SBTuber@hotmail.com.

Sign: _____

Print: _____

Date: ___/___/___

Appendix D

General Demographic Information/Interview:

1. Age:
2. Major:
3. Overall GPA:
4. Major GPA:
5. High school GPA:
6. Number of children (if any):
7. Number of children in household growing up:
8. Father's Educational level:
9. Mother's Educational level
10. Primary caregiver's Educational level (if different from father and mother):
11. Family's Socio-Economic Status growing up:
12. Single family vs. both parents growing up:
13. Number of years in US:
14. Describe some of the values you've gotten from your parents and why they are important to you.
15. Do you feel like your parents understood you (or didn't understand you) growing up? Explain.
16. Tell me about some of the child rearing practices in your family growing up.
17. What were your parents' disciplinary styles?

18. How would you discipline your child (ren)?
19. Tell me about a time you misbehaved and how it was dealt with as a child.
20. Tell me about one of your experiences surrounding corporal punishment.
21. How often was corporal punishment used as a disciplinary tool?
    1 Never or rarely – as a last resort
    2 Every other month/3-4 times a year
    3 Once/Twice per month
    4 Daily/weekly
22. When corporal punishment was used, what were typical methods? What was most typical?
23. What was the most severe method of corporal punishment you ever experienced and what were the circumstances surrounding that incident?
24. Do you have any regrets about the way you were raised and/or would you change anything about it? Explain.
25. Why do you think it is important to learn?
26. What motivates you to learn?
27. How would you motivate your child (ren) to learn?
28. How did your parents motivate you to learn?
29. What accounts for the difference between question 27 and 28, if any?
30. Was corporal punishment ever used to motivate you academically? If yes, could you describe how that might typically play out.

Appendix E

Coping Response Inventory

Part 1

Please think about the most important problem you have experienced in the last 12 months, if you have not had a major problem think of a minor problem that you have had to deal with.

Then answer the following questions with Definitely No (DN), Mainly No (MN), Mainly Yes (MY) and Definitively Yes (DY)

1 Have you ever faced a problem like this before?

2 Did you know this problem was going to occur?

3 Did you have enough time to get read to handle the problem?

4 When this problem occurred did you think of it as a threat?

5 When this problem occurred, did you think of it as a challenge?

6 .Was the problem caused by something you did?

7 Was the problem caused by something someone else did?

8 Did anything good come out of dealing with this problem?

9 Has the problem or situation been resolved?

10 If the problem has been worked out, did it turn out all right for you?

Part 2

Read each item carefully and indicate how often you engage in that behavior in connection with the problem you described in Part 1.

Indicate by marking N for no, O for once or twice, S for sometimes, and F for fairly often.

1 Did you think of a different way to deal with your problem?

2 Did you tell yourself things to make yourself feel better?

3 Did you talk with your s[pose or other relatives about the problem?

4 Did you make a plan of action and follow it?

5 Did you try to forget the whole thing?

6 Did you feel that time would make a difference; the only thing to do was wait?

7 Did you try to help others deal with a similar problem?

8 Did you take it out on other people when you felt angry or depressed?

9 Did you try to step back from the situation and become more objective?

10 Did you remind yourself how much worse things could be?

11 Did you talk with a friend about the problem?

12 Did you know what had to be done and tried hard to make things work?

13 Did you try not to think about the problem?

14 Did you realize that you had no control over the problem?

15 Did you get involved in new activities?

16 Did you take a chance to do something risky?

17 Did you go over in your mind what you would say or do?

18 Did you try to see the good side of a situation?

19 Did you talk with a professional person?

20 Did you decide what you wanted and tried hard to get it?

21 Did you daydream and imagine a better time or place than the one you were in?

22 Did you think that the outcome would b decided by fate?

23 Did you try to make new friends?

24 Did you keep away from people in general?

25 Did you try to anticipate how tings would turn out?

26 Did you think about how you were much better off than other people with similar problems?

27 Did you seek help from persons or groups with the same type of problems?

28 Did you try al least two different ways to solve the problem?

29 Did you try to put off thinking about the situation, even though you knew you would have to at some point?

30 Did you accept it; nothing could be done?

31 Did you read more often as a source of enjoyment?

32 Did you yell or should to let off steam?

33 Did you try to find some personal meaning in the situation?

34 Did you try to tell yourself that things would get better?

35 Did you try to find out more about the situation?

36 Did you try to learn to do more things on your own?

37 Did you with the problem would go away or somehow be over with?

38 Did you expect the worse possible outcome?

39 Did you spend more time in recreational activities?

40 Did you cry to let your feelings out?

41 Did you try to anticipate the new demands that would be placed on you?

42 Did you think about how this event could change your life in a positive way?

43 Did you pray for guidance and/or strength?

44 Did you take things a day at a time, one step at a time?

45 Did you try to deny how serious a problem really was?

46 Did you lose hope that things would never be the same?

47 Did you turn to work or other activities to help you manage things?

48 Did you do something that you didn't think would work, but at lease you were doing something?

Appendix F

Self Directed Learning Readiness Scale

This questionnaire is designed to gather data on learning preferences and attitudes towards learning. After each item, please indicate the degree to which you feel that the statement is true for you. (scale -- (1) Almost never true; I hardly ever feel that way (2) Not often true for me; I feel this way less that half the time (3) Sometimes true for me; I feel this way about half the time (4) usually true for me; I feel this way more than half the time and (5) almost always true for me; there are very few time where I don't feel this way.

1 I'm looking forward to learning as long as I live

2 I know what I want t learn

3 When I see something I don't understand, I stay away from it

4 If there is something I want to learn, I can figure out a way to learn it

5 I love to learn

6 It takes me awhile to get started on new projects

7 In the class room I expect teachers to tell all class members what to do all the times.

8 I believe that thinking about who you are, where you are, and where you are going is a major part of every person's education

9 I don't work very well on my own

10 If I discover a need for information that I don't have, I know where to go and get it

11 I can learn things on my own better than most people

12 Even if I have a great idea, I can't seem to develop a plan for making it work

13 In a learning experience, I prefer to take part in what will be learned and how

14 Difficult study doesn't both me if its something I'm interested it

15 No one but me is truly responsible for what I learn

16 I can tell whether I'm learning something well or not

17 There are so many thing I want to learn that I wish they were more hours in the day

18 If there is something I've decided to learn, I can find time for it no matter how busy I am

19 Understanding what I read is a problem for me

20 If I don't learn, it is not my fault

21 I know when I need to learn more about something

22 If I can understand something well enough to get a good grade on a test, if doesn't both me if I still have questions about it.

23 I think libraries are boring places

24 The people I admire most are always learning new things

25 I can think of many different ways to learn about new topic

26 I try to relate what I'm learning to my long term goals

27 I m capable of learning for my self everything I need to know

28 I really enjoy tracking down the answer to questions

29 I don't like dealing with questions where there is not one right answer

30 I have a lot of curiosity about things

31 I'll be glad when I'm finished learning

32 I'm not as interested in learning as some other people seem to be

33 I don't have any problems with basic study skills

34 I like to try new things even if I'm not sure how they will turn out

35 I don't like it when people who really know what they are doing point out mistakes that I'm making

36 I'm good at thinking of unusual ways to do things

37 I like to think about the future

38 I'm better than most people at trying to find out the things I want to know

39 I think of problems as challenges, not stop signs

40 I can make myself do what I think I should

41 I'm happy with the way I investigate problems

42 I become a leader in group learning situations

43 I enjoy discussing ideas

44 I don't like challenging leaning situations

45 I have a strong desire to learn new things

46 The more I learn, the more exciting the world becomes

47 Learning is fun

48 It's better to stick with the learning methods we know will work rather than always trying new ones

49 I want to learn so I keep growing as a person

50 I'm responsible for my learning, no one else is

51 Learning how to learn is important to me

52 I will never be too old to learn new things

53 Constant learning is a bore

54 Learning is a tool for life

55 I learn several things on my own each year

56 Learning doesn't make any difference in my life

57 I'm an effective learner in the class room and on my own

58 Learners are leaders

Appendix G

Permission to be contacted

I hereby grant Mr. William Gordon permission to contact me in one week to discuss any emotional reactions I might have as a result of my participation in the research project on the relationship between parental corporal punishment and cognitive development. I understand that I am not obligated to have Mr. Gordon call me and that the phone call has nothing to do with the research being conducted, but only to provide counseling if I've been negatively affected by my participation. I also understand that I can contact Mr. Gordon to discuss my feelings about this process at any time before or after he calls me in a week and I've been presented with his contact information.

The following number is the best way for me to be reached to discuss any emotional material in confidence: ( ) _____ - _____

Sign: _____

Print: _____

Date: ____/____/____.

Appendix H

Debriefing Script

Thank you for participating in this study. As a doctoral student in the Clinical Psychology program at City College with years of experience working with trauma victims, I fully appreciate how difficult it might have been for you to participate in this process and I realize that some of the questions in this study might have raised some emotionally troubling feelings from your past. I've provided you with a list of treatment facilities you might contact should the need for counseling arise in the future, but I would like to take a moment to discuss any disturbing feelings you might have at this point. I feel I am well qualified to talk to you about any of the sensitive, buried feelings that might have been aroused by your participation in this research project.

(If subject wants to talk about the process at this point we will proceed with our discussion before asking for permission to follow up with them in a week. If subjects don't feel the need to discuss any troubling feelings at this point, I will go ahead and ask permission to contact them in a week).

If it's OK, I would like to call you in a week to see how you are doing. I've attached a sheet giving me permission to contact you but you can feel free to call me at any time to discuss any feelings you might have about any aspect of this process. I can be reached 917-324-8439, which is on your copy of the consent form you signed earlier. Before I present you with the permission sheet, I'd like to make it clear that you should not feel obligated to have me call you. The follow-up phone call has nothing to do with the research being conducted but will only be used to see how you are

feeling about the process and to give you an opportunity to talk about any of those feelings that might have been aroused.

References

Adams, G (2000) Rule Compliance and Peer Sociability: a study of family processes, school-focused parent-child interactions, and children's classroom behavior. *Journal of Family Psychology*, Jun; Vol. 14 (2), pp. 237-50.

Ani, C. & Grantham-McGregor, S. (1998) Family and personal characteristics of aggressive Nigerian boys: differences from and similarities with Western findings. *Journal of adolescent health*. Nov: 23 (5), pp. 311-7.

Arnold, Elaine (1982). The use of corporal punishment in child rearing in the West Indies. *Child Abuse & Neglect*, Vol 6(2),. pp. 141-145.

Ateah, C., Secco, M. & Woodgate, R. (2003). The risks and alternatives to physical punishment use with children. *Journal of pediatric health care.* May-Jun; 17 (3), pp. 126-32.

Azoulay, D (2000) Cognitive distortions in the experience and expression of anger. *Dissertation Abstracts International: Section B: The Sciences & Engineering*, Vol 60(8-B), pp. 4200.

Banks, J. (2002) Childhood discipline: challenges for clinicians and parents. *American family physician.* Oct 15; 66 (8), pp. 1447-52.

Barbour, R. (1944). What's wrong with corporal punishment? *Nation's Schools*, 33, No. 6, 1944. pp. 25-26.

Baron, R & Kenny, D. (1986) The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology.* Vol. 51, No. 5. pp 1173-1182.

Barnett, D., Kidwell, S. & Leung, K. (1998). Parenting and preschooler attachment among low-income urban African American families. *Child development* Dec. 69 (6), pp. 1657-71.

Baumrind, D (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs*, 75, 43-88.

Baumrind, D., Larzelere, R., & Cowan, P (2002) Ordinary physical punishment: is it

Bethea, L (1999) Primary prevention of child abuse. *American family physician* Mar 15; 59 (6), pp. 1577-85, 1591-2.

Billig, A. (1941) Finger nail-biting: its incipiency, incidence, and amelioration. *Genetic Psychology Monographs*, 24, 1941. pp. 123-218.

Boettcher, EG (1983) Preventing Violent Behavior, An Integrated Theoretical Model for Nursing. Apr-Jun; Vol. 21 (2), pp. 54-8.

Brenner, V. & Fox, R. (1998) Parental discipline and behavior problems in young children. *Journal of genetic psychology.* June 159 (2), pp. 251-6.

Britt, S. & Janus, S. (1940). Criteria For Frustration. *Psychological Review.* Vol. 47. pp. 451-469.

Calkins, S., Dedmon, S., Gill, K., Lomax, L., & Johnson, L. (2002). Frustration in infancy: Implications for emotion regulation, physiological processes, and temperament. *Infancy,* Vol 3(2), May pp. 175-197.

Carey, T (1994). Spare the rod and spoil the child. Is this a sensible justification for the use of punishment in child rearing? *Child abuse & neglect*. Dec; Vol. 18 (12), pp. 1005-10.

Carol, R. (2003). Research, Policy, and the Federal Role in Prevention Initiatives for Children. *American Psychologist.* Vol. 58 (6/7) June/July, pp. 482-490.

Cavara, M & Ogren, C. (1983) Protocol to investigate child abuse in foster care. *Child Abuse & Neglect.* Vol. 7 (3), pp. 287-95.

Cherian, V. (1994). Self-reports of corporal punishment by Xhosa children from broken and intact families and their academic achievement. *Psychological Reports.* June: 74 (3 Pt 1), pp. 867-74.

Cohen, L (1995). Debate about parents' right to spank causes divisions among MDs. *Canadian Medical Association journal.* Jul 1; 153 (1), pp. 73-5.

Crouch, J., & Behl, L. (2001) Relationships among parental beliefs in corporal punishment, reported stress, and physical child abuse potential. *Child abuse & Neglect*. Mar; 25 (3), pp. 413-9.

Dale, S (1993) Spanking is an addiction. *Mothering*. Winter Issue 69, p31, 6p, 4bw

Dubanoski, R., Inaba, M., & Gerkewicz, K (1983). Corporal punishment in schools: myths, problems and alternatives. *Child abuse & neglect.* Vol. 7 (3), pp. 271-8.

DuRant, R., Getts, A., Cadenhead, C., Emans, S. & Woods, E. (1995). Exposure to violence and victimization and depression, hopelessness, and purpose in life among adolescents living in and around public housing. *Journal of developmental and behavioral pediatrics*. Aug: 16 (4), pp. 233-7.

Edward, C. (1996) Cultural Differences in Optimism, Pessimism, and Coping: Predictors of Subsequent Adjustment in Asian American and Caucasian American College Students. *Journal of Counseling Psychology*. Vol. 43 (1) January 1996, pp. 113-123.

Field, G (1986) The Psychological Deficits and Treatment needs of Chronic Criminality. *Federal Probation*, Vol 50(4), Dec. pp. 60-66.

Frazier, H. (1990). Corporal and capital punishment of juveniles. *Medicine and law*. 9 (3), pp. 996-1004.

Gershoff, E (2002). Corporal punishment by parents and associated child behaviors and experiences: a meta-analytic and theoretical review. *Psychological bulletin* Jul; 128 (4), pp. 539-79.

Gopaul-McNicol, S., (1997). Cultural issues in the treatment of anxiety. Friedman, Steven (Ed); pp. 81-98. New York, NY, US: Guilford Press, xviii, 261 pp.

Grant, D (1983) Life Style Study: Children of the Lesser World in the English Speaking Caribbean. Volume V. *Bernard Van Leer Foundation for Early Childhood Education* (CECE), Kingston, Jamaica.

Graziano, A (1994). Why we should study sub-abusive violence against children. *Journal of Interpersonal Violence*, Vol 9(3), Sep. pp. 412-419.

Graziano, Anthony M. (1992) Physical Punishment in Childhood and Current Attitudes: An Exploratory Comparison of College Students in the United States and India. *Journal of Interpersonal Violence* v7 n2 p147-55

Green, A (1978) Self destructive behavior in battered children. *American journal of psychiatry* 135:579-82

Grevan, P (1991) *Spare The Child.* New York: Knopf.

Hällström, T. (1987). Major depression, parental mental disorder and early family relationships. *Acta psychiatrica Scandinavica.* Mar: 75 (3), pp. 259-63.

Holden, G. (2002). Perspectives on the effects of corporal punishment: comment on Gershoff (2002). *Psychological bulletin* Jul; 128 (4), pp. 590-5; discussion 602- 11.

Kantor, G., Jasinski., J. & Aldarondo, E. (1994). Sociocultural status and incidence of marital violence in Hispanic families. *Violence and victims*. Fall; Vol. 9 (3), pp. 207-22.

Katz, R. (1972). Effects of punishment on behavior in concurrent VI schedules as a function of relative reinforcement density. D*issertation Abstracts International*, Vol. 32(10-B), Apr 1972. pp. 6051.

Kelly, P, Weir, M & Fearnow, R. (1985). A survey of parental opinions on corporal punishment in schools. *Journal of developmental and behavioral pediatrics* Jun; 6 (3), pp. 143-5.

Kline, R., Lachar, D. & Sprague, D. (1985). The personality inventory for children (PIC): an unbiased predictor of cognitive and academic status. *Journal of pediatric psychology*. Dec; Vol. 10 (4), pp. 461-77.

Kolb, L (1987) Neurophysiological hypothesis explaining traumatic stress disorder. American journal of psychiatry Volume 144 pp. 989-95.

Lau, J., Chan, K., Lam, P., Choi, P. & Lai, K. (2003) Psychological correlates of physical abuse in Hong Kong Chinese adolescents. *Child abuse & neglect.* Jan; 27 (1), pp. 63-75.

Lau, J., Liu, J., Cheung, J., Yu, A. & Wong, C. (1999). Prevalence and correlates of physical abuse in Hong Kong Chinese adolescents: a population-based approach. *Child abuse & neglect.* Jun: 23 (6), pp. 549-57.

Leelavavathhi, K. & Murphy, H (1969). Factors Affecting Rehabilitation of Delinquents. *Transactions of All-India Institute of Mental Health.* Vol. 9, pp. 75-79.

Lepper, M (1983). Dissonance, self perception and honesty in children. *Journal of Personality and Social Psychology,* 25, 65-74.

LeDoux, J. (1996) The emotional brain: The mysterious underpinnings of emotional life. New York, NY, US: Simon & Schuster, 384 pp.

Lindsey, G. (1950). Frustration tolerance, frustration susceptibility, and overt disturbance. *Psychiatry*. May; Vol. 13 (2), pp. 205-11.

Lollis, S & Kuczynski, L (1997). Beyond one hand clapping: Seeing Bi-directionality in parent-child relations. *Journal of Social & Personal Relationships,* Vol. 14(4), Aug 1997. pp. 441-461.

Lowenstein, L (1985). A sensible approach to corporal punishment. *Education Today*, Vol 34(3), 1985. pp. 33-42.

Lutenbacher, M (2001) Psychometric assessment of the Adult-Adolescent Parenting Inventory in a sample of low-income single mothers. *Journal of nursing measurement* Winter; 9 (3), pp. 291-308.

Magnuson, E (1983). Child abuse: the ultimate betrayal. *Time*. Sep 5; Vol. 122 (10), pp. 20-2.

McCormick, K (1992). Attitudes of primary care physicians toward corporal punishment. *The journal of the American Medical Association* Jun 17; 267 (23), pp. 3161-5.

McGinnis, J. (1944). Some aspects of the psychology of the offender. *Federal Probation*, 8, 1944. pp. 20-23.

Medina, A., Mejia, V., Schell, A., Dawson, M. & Margolin, G. (2001). Startle reactivity and PTSD symptoms in a community sample of women. *Psychiatry research.* Mar 25: 101 (2), pp. 157-69.

Mohr, W. & Anderson, J. (2002). Reconsidering punitive and harsh discipline. *Journal of school nursing*. Dec; 18 (6), pp. 346-52.

Muller, R., Hunter, J. & Stollak G. (1995) The intergenerational transmission of corporal punishment: a comparison of social learning and temperament models. *Child abuse & neglect.* Nov; 19 (11), pp. 1323-35.

National Committee for the Prevention of Child Abuse (1996). Currents trends in child abuse reporting and fatalities: The results of the 1995 annual survey. Chicago, IL.

Needlman, R. Stevenson, J. & Zuckerman, B. (1991). Psychosocial correlates of severe temper tantrums. *Journal of developmental and behavioral pediatrics.* Apr: 12 (2), pp. 77-83.

Nock, M (2002) Parent Directed Physical Aggression by Clinic Referred Youths. *Journal of Clinical Child and Adolescent Psychology*, Jun; Vol. 31 (2), pp. 193-205.

Noy, P. (1979) The psychoanalytic theory of cognitive development *Psychoanalytic Study of Children*, 1979; Vol. 34, pp. 169-216

Paquette, D., Bolte, C., Tucotte, G., DuBeau, D. & Bouchard, C. (2000). A new topology of fathering: Defining and associated variables. *Infant and Child Development*, 9, 213-230.

Payne, M. (1989) Use and abuse of corporal punishment: a Caribbean view. *Child Abuse & Neglect.* Vol. 13 (3), pp. 389-401.

Pinto, D (2001). Driving Anger, Articulated Cognitive Distortions, Cognitive

Deficiencies, and Aggression. *Dissertation Abstracts International: Section B: The Sciences & Engineering*, Vol 62(1-B), Jul. pp. 560.

Pfeiffer, H., Justus-Liebig, U., & Giessen, W. (1971). Motivational and behavioral aspects of frustration. *Heilpädagogik*, Vol. 40(3), Sep 1971. pp. 180-183.

Rapport, M (1986). Hyperactivity and frustration: the influence of control over and size of rewards in delaying gratification. *Journal of Abnormal Child Psychology,* Jun; Vol. 14 (2), pp. 191-204.

Rardin, D. & Moan, C. (1970) Frustration tolerance and college grade point average. *Perceptual and motor skills*. Dec; Vol. 31 (3), pp. 1003-6.

Reich, B. (2001). Developmental Aspects of Borderline Personality Disorder. *Harvard Review of Psychiatry*. Nov, Vol. 9 Issue 6, p294, 8p

Reich, D. & Bradford, G (2001). Developmental Aspects of Borderline Personality Disorder. *Harvard Review of Psychiatry*, Vol 9(6), Nov 2001. pp. 294-301

Roberts, M. & Powers, S (1990). Adjusting chair timeout enforcement procedures for oppositional children. *Behavior Therapy*, Vol 21(3), Sum. pp. 257-271.

Rohner, R., Bourque, S. & Elordi, C. (1996). Children's Perception of Corporal Punishment, Caretaker Acceptance, and Psychological Adjustment in a Poor Biracial Southern Community. *Journal of Marriage & the Family*; Nov. Vol. 58 Issue 4, p842.

Saadeh, W., Rizzo, C., & Roberts, D. (2002) Spanking *Clinical Pediatrics,* Vol 41(2), Mar 2002. pp. 87-88.

Sato, S (1987). Differences between melancholic and non-melancholic and their measures of Sensitivity. *Journal of Social Psychology*, Dec; Vol. 45 (6), pp. 1243-54

Scorzelli, J. & Reinke-Scorzelli, M. (1976). Effects of Frustration on the Response Rate of Skid Row Alcoholics on a Performance Task. *Rehabilitation Counseling Bulletin* 20, 2, 137-140, Dec

Smith, J. & Brooks-Gunn, J. (1997). Correlates and consequences of harsh discipline for young children. *Archives of pediatrics & adolescent medicine.* Aug: 151 (8), pp. 777-86.

Spacapan, S (1983). The Effects and After Effects of Stressor Expectations. *Journal of Social Psychology*, Dec; Vol. 45 (6), pp. 1243-54

Straus, M. & Mouradian, V. (1998). Impulsive corporal punishment by mothers and

antisocial behavior and impulsiveness of children. *Behavioral sciences & the law*. Summer: 16 (3), pp. 353-74.

Straus, M and Pascal, C. (1987). Brain Development and its relationship to paenting styles surrouding verbal communication. *Journal of obstetric, gynecologic, and neonatal nursing.* Jul-Aug; 23 (5), pp. 408-14.

Straus, M & Stewart, J (1999). Corporal punishment by American parents: national data on prevalence, chronicity, severity, and duration, in relation to child and family characteristics. *Clinical child and family psychology review.* Jun; 2 (2), pp. 55- 70.

Straus, M., Sugarman, D. & Giles-Sims, J. (1997). Spanking by parents and subsequent antisocial behavior of children. *Archives of pediatrics & adolescent medicine*. Aug: 151 (8), pp. 761-7.

Tiller, C. (1995). Father's parenting attitudes during a child's first year. *Journal of obstetric, gynecologic, and neonatal nursing.* Jul-Aug; 24 (6), pp. 508-14.

van der Kolk, BA, & van der Hart, O. (1991) The intrusive past: the flexibility of memory and the engraving of trauma. *American Imago*. Vol 48. p 425-54.

van der Kolk, B., Hostetler, A., Herron, N. & Fisler, R. (1994) Trauma and the development of borderline personality disorder. *The Psychiatric clinics of North America*. Dec; Vol. 17 (4), pp. 715-30.

Vondra, J. & Toth, S. (1989). Ecological Perspectives on Child Maltreatment: Research and Intervention. *Early Child Development and Care* v42 p11-29

WASI, 1999 –Wechsler Abbreviated Scale of Intelligence. The Psychological corporation. Hardcourt Brace & Company.

Wakaba, Y (1990). The process of onset of stuttering: A survey of male children who started to stutter in the first six months of the third year. *RIEEC Report*, Vol 39, pp. 35-41.

Whaley, A (2000). Sociocultural differences in the developmental differences in the developmental consequences of the use of physical discipline during childhood for African Americans. *Cultural diversity and Ethnic Minority Psychology*, 6, 5-12.

Whipple, E. & Richey, C (1997). Crossing the line from physical discipline to child abuse: how much is too much? *Child abuse & neglect* May; 21 (5), pp. 431-44.

Wiebe, D (1991) Hardiness and Stress Moderation: A test of proposed mechanisms.

Journal of Personality and Social Psychology. Vol. 60 (1) January 1991, pp. 89-99

Wilson, M. (1984). Why don't they learn? Some thoughts on the relationship between maladjustment and learning difficulties. *Maladjustment & Therapeutic Education*, Vol 2(2), Fall: pp. 4-11.

Wilson, A. & Weinstein, L. (1990). Language, thought, and interiorization: A Vygotskian and psychoanalytic perspective. *Contemporary Psychoanalysis*, Vol 26(1), Jan 1990. pp. 24-40.

Wissow, L. (2001). Ethnicity, Income, and Parenting Contexts of Physical Punishment in a National Sample of Families With Young Children. *Child Maltreatment*; May, Vol. 6 Issue 2, p118.

Yehuda, R, Giller E., Southwick, S., Lowry, M., & Mason J., (1991) Hypothalmic-pituitary-adrenal dysfunction in PTSD. Biological psychiatry 30:1031-48

Youssef, R., Attia, M., & Kamel, M. (1998). Children experiencing violence. I: Parental use of corporal punishment. *Child abuse & neglect* Oct; 22 (10), pp. 959-73.

Youssef, R., Attia, M. & Kamel, M. (1999) Violence among schoolchildren in Alexandria. *Eastern Mediterranean health journal* Mar; 5 (2), pp. 282-98.

Zigler and Leslie (2003) Cognitive distortions in the experience and expression of anger. *Maladjustment & Therapeutic Education*, Vol 2(2), Fall: pp. 4-11.

Zulliger, H. (1940). Psychoanalytic experiences in public school practice. *American Journal of Orthopsychiatry*, 10, 1940. pp. 370-386.