

## ABSTRACT

### PARENTAL ATTRIBUTES: RISK FACTORS TO CRIMINAL BEHAVIOR

This study investigates the affect that various parental attributes have on a child's risk of delinquency and future criminality. Variables of interest include bonding, involvement, supervision, discipline, and the psychological health of the parents. Using the Cambridge Study in Delinquency Development [Great Britain], 1961-1981 dataset, Spearman's rho correlation, chi-square, and one-way analysis of variance (ANOVA), this paper will discuss the findings and significance of these specific variables and what they mean for future policies and implications.

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PARENTAL ATTRIBUTES: RISK FACTORS TO CRIMINAL  
BEHAVIOR

by  
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## CHAPTER 1: INTRODUCTION

Criminologists have been inconclusive as to the direct causes of criminality and delinquency. And because of this, there are many theories that seek to explain these types of behaviors (Akers & Sellers, 2012). What causes criminal behavior and delinquency? It is unlikely that the direct causes for crime will ever be known. Establishing these theories and finding a conclusion is difficult because human behavior is difficult to predict (Song, Blumm, & Barabasi, 2010). People hold different values and experience different environmental settings (Rhee & Waldman, 2002; Zahn-Waxler & McBride, 1998). Isolating the specific effects of genetic, developmental, cultural, early experiences, parental, and social variables is difficult; making sense of their interactions is probably impossible. Nonetheless, the quest to understand the reasons why some people disobey societal norms and exhibit criminal behavior is important (Fishbein, 1990).

Some studies have established that the main two sources of factors that contribute to criminality are biological and environmental (Falk, 1966; Thomas, Chess, & Birch, 1970). Early and modern biological theories are often ideologically driven, lack empirical evidence, and fail to consider important sociological, environmental, and economic variables (Akers & Sellers, 2012; Fishbein, 1990; Walsh, 2000). Since prior research has typically focused on biological approaches, it is important to consider environmental theories. In regards to this study, the focus will be on the specific aspects of environmental influences and parts of the social bond theory (Hirschi, 1969).

Social Bond Theory (Demuth & Brown, 2004; Hirschi, 1969) examines how environmental factors play a role in both human development and the risk of criminality. One of the bonds, which is focused on in the current study, is

attachment. This refers to the bonding between family and peers (Hagan, 2011; Hirschi, 1969). Hirschi suggested that the absence of social bonds increase the risk of delinquency and criminal behavior (Hirschi, 1969). However, Social Bond theory has been criticized for its lack of empirical support, biology, and self-control (Akers & Sellers, 2012). Despite the controversy, the theories that Hirschi developed were more incomplete than completely wrong (Rankin & Kern, 1994). The attachment to family and the control it establishes will be evaluated for its effect as a parental attribute on a child's subsequent risk of delinquency and early adult criminal behavior.

Even though there are many influences that could lead to delinquency and criminal behavior (Survey, Huizinga, Esbensen, & Weiher, 1991), studies have found that specific environmental factors are important in the development of antisocial behavior (Cloninger, Reich, & Guze, 1978). An individual who is exposed to specific stimuli, such as parental attributes, can experience permanent changes that may increase the risk of developing criminal behavior and delinquency (Fishbein, 1990). Parent-child relationships have been found crucially important, especially for the quality of the relationship and how they assist in development (Hay, 2001; Schaefer & Bell, 1958; Symonds, 1939). Evidence suggests that criminality stems from neglected and isolated children and current research continues to focus on specific familial factors (Weiler & Widom, 1996).

Various familial influences, including structure, relationships, influences, socio-economic status, parents' education and occupation, have been evaluated for their effect on delinquency and criminality (Patterson, DeBaryshe, & Ramsey, 1989). Among some of the variables, parental discipline and parental supervision are common among the risk factors for delinquency (Marshall & Cooke, 1999).

Thus, these two variables will be included in the current analysis. Criminologists have suggested that people who are most likely to engage in delinquency or future criminal behavior lack social bonds (Larson, Lichtenstein, & Andershed, 2006). Parenting and regular caregiving relationships are important in creating bonds and developing a child's ability for empathy and should be the focus of research (Shonkoff & Phillips, 2000). Effective parenting is important for child development and establishes boundaries that decrease the likelihood that the child will participate in delinquent behaviors (Karr-Morse & Wiley, 1997). The current study will attempt to determine whether certain familial factors that involve parental attributes are associated with delinquency and future criminality (as measured by number of convictions).

Historically, it has been difficult to fully study familial influences in relation to delinquency and criminal behavior because they draw from multiple fields such as sociology, developmental psychology, and criminology (Loeber & Stouthamer-Loeber, 1986; Sutherland & Cressey, 1960). The Cambridge Study in Delinquent Development [Great Britain], 1961-1981, bridged this gap. Specific variables in the present study will include parental attributes such as parents' attachment or bond to the child, the father's involvement with the child, parents' disciplinary qualities, parental supervision, and the parents' psychological health. Finding patterns in environmental influences, including parental attributes, on criminal behavior are important to criminology because it would suggest strategies for reducing delinquency and criminality, and have important implications for future social policy (Kirkman, 2002).

The purpose of this study is not to discount the role of biological, social, and psychological factors. Rather, it focuses on how much of an impact parents have on future criminal behavior. Part 1 discusses the prior research as it relates to

each parental attribute under consideration (i.e., bonding, paternal involvement, supervision, discipline, and psychological health). Part 2 will define each variable.

## CHAPTER 2: LITERATURE REVIEW

As mentioned in the introduction of this paper, biological and environmental influences are key factors in human development and criminality (Akers & Sellers, 2012; Karr-Morse & Wiley, 1997). Research is increasingly adapting to find successful influences in child development, which includes risk factors to delinquency during the earliest stages (Gladstone, Boydell, & McKeever, 2006). Research has identified the importance of critical early life experiences including environmental influences and the role of early relationships. These ideas could give support to or may increase the risk of delinquency (Shonkoff & Phillips, 2000). The roles of familial factors have been researched extensively (Rhee & Waldman, 2002); however, through extensive research, many variables still have been studied so insufficiently.

Parents are an important influence in the lives of their children (Henricson & Roker, 2000). For example, lack of parental support has been shown to have a significant relationship to child delinquency (Barnes, Farrell, & Cairns, 1986; Branje, Hale III, & Meeus, 2008). Other research has found an association between poor supervision and the lack of parental monitoring and a risk for (Barber, 1992; Dishion & McMahon 1998; Forehand, Miller, Dutra, & Chance, 1997; Frick, 1993). Robins (1996) found a correlation between the lack of discipline and supervision during early childhood years and a diagnosis of antisocial personality disorder. Other variables that contribute to delinquency include: parental antipathy, parental neglect and indifference, discord or tension in the home, child physical abuse, sexual abuse (Marshall & Cooke, 1999) and family sizes (Fischer, 1984). Karr-Morse and Wiley (1997) found that many children who develop other disorders associated with high risks of delinquency

suffered from trauma, such as neglect and lack of parental attachment. All these variables have been in some way an influence in delinquency.

Many of these variables can be seen as overlapping. During the research for prior studies, it has been suggested that many of the variables are mediating. For example, large family sizes also have been found to decrease child rearing qualities (Fischer, 1984), but family sizes have also been found significant in increasing delinquency (Knight & West, 1975; West & Farrington, 1973). Child-rearing quality alone has been significant to the increased risk of delinquency and future criminal behavior (Simons, Johnson, & Conger, 1994), so this suggests that family sizes could be a mediating variable for the child-rearing qualities on the outcomes of delinquency. As far as these studies show, the data cannot truly differentiate which variables were the casual, but instead suggests that variables serve as mediators (Robins, Wes, & Herjanic, 1975).

The variables of effect and abuse, which will not be covered in depth, also showed a high significant influence for the risk of delinquency. Weiler and Widom (1996) conducted a study to show how abuse and neglect of children increased their risk for psychopathy. As a side note, psychopathy is a personality trait that is often found associated with criminal behavior. Some studies have found that individual variables such as measuring parental supervision and rejection by the father figure were significantly related to traits and behaviors in criminality (Forth & Burke, 1998). Weiler and Widom's study had 652 child participants who experienced some sort of neglect and physical or sexual abuse. They used a control group made up of 489 children who reported no abuse or neglect; however, there was no way to tell if the child had been abused due to no records being filed. The researchers used interviews, IQ, reading comprehension, and the PCL-R (Psychopath Checklist-Revised; Hare & Neumann, 2006), to

measure various variables. The official reports and the self-reporting were used to determine criminality. Their findings supported that all forms of neglect and abuse that occurs during early childhood increases the chances of psychopathic tendencies which may increase the risk and likelihood of criminal behavior.

Demuth and Brown's (2004) study of broken homes found that parental involvement, supervision, and attachment were higher for married and biological parents which decreased the risk of child delinquency. They took the 1995 National Longitudinal Survey of Adolescent Health with a sample of 16,304 adolescents in grades 7 through 12. The adolescents were given in-home surveys to measure variables for the study. The controls for the children were gender, age, and race while the parental controls were income, education, and other adults living in the household. The results showed a significant difference in child delinquency between those who came from a broken home versus those who did not; however, they suggested that it is not sufficient in predicting criminal behavior. Demuth and Brown mentioned that strong controls within the family structure reduced the effect of a broken home on delinquency. Children of single father families are at greater risk for delinquency than are single mother families. They suggested that the influence of a one-parent household increased the risk because one parent might be unable to fully utilize parenting skills such as involvement, supervision, and attachment.

The previous research about the parental attributes of bonding, involvement, discipline, supervision, and psychological healthiness of the parents have been used to determine significance of criminality during the early development stages of childhood. The reason this outlook is important is because there is research that supports that antisocial behavior emerges during the developmental stages early in life through to adulthood. The main influences that

are part of early development are parental based and therefore can be an important factor in finding those that might increase the risk for criminality (Farrington, Ohlin, & Wilson, 1986; Patterson et al., 1989).

### Bonding

Bonding and attachment will be used interchangeably as the effective ties that adolescents form with others (Rankin & Kern, 1994). The first 3 years of life are critical in a child's development (Force, 1994). Schaefer and Bell (1958) found that the most important relationship for the child is the bonding that occurs between the baby and the mother. Early environments are crucial, especially the nurturing relationship between the parents and child (Shonkoff & Phillips, 2000). Attachment, empathy, social skills, handling aggression, controlling emotions, and higher cognitive processing is a result of the interactions with the primary caregiver, typically a mother (Karr-Morse & Wiley, 1997) and could lead to a decrease in the risk of delinquency and criminal behavior. Research has shown that there continues to be some sort of relationship between the bonding of the parents to their children and subsequent risk of delinquency; however, the relationship is moderate (Wells & Rankin, 1988). This suggests that there are more influential or mediating variables playing a role.

Rankin and Kern (1994) used the National Survey of Youth, 1972 consisting of 1,395 interviews to study parent-child attachments. The measures included self-reported delinquent behaviors and the youth's perception of one's relationship with the parents; the adolescent's perception of the parents have been found to be a better predictor in the outcome of their behavior (Parker & Benson, 2004). Control variables were the usual: socioeconomic status, sex, age, and race. Results agreed with past research that parent-child bonds are moderate influences

on delinquency, but still significant. They found that the sex of the parents had no significance on the risk of delinquency; however, the number of attachments affected delinquency the most. They found a significance with a lower risk of delinquency to the adolescents that had strong bonds with two parents rather than just one, but there were specific types of delinquent offenses that were not as affected by single parent households than if there were two parents, as long as they are bonded to one parent. The study found that specific crimes were more associated to the type of family environment and attachment than others. They were limited in knowing, in single-parent households, if the child was close to the other parent and how often the parent would visit the child. That other attachment was not able to be measured and determined if it played a role in the risk of delinquency.

There are other implications of poor attachments between the child and the parents. Sund and Wichstrøm (2002) investigated whether poor and insecure attachments contributed to traits such as a depressive disorder when the children are developing. The participants were ages 12-14 and a sample of 2,360 adolescents. They were measured by given questionnaires, attachment tests, reported stressful events, and other sociodemographic factors. The results showed that adolescents with insecure attachments and bonds were more likely to present depressive symptoms. These findings are important because the study helps suggest that attachments can contribute to adolescent development. Sund and Wichstrøm also mentioned that this study agrees with past literature that suggest secure attachment had a negative relationship with antisocial behavior (Marcus & Betzer, 1996).

Marcus and Betzer (1996) took a sample of 163 girls and boys in grades 6 through 8 and gave them the Inventory of Parent and Peer Attachment test as well

as self-reports to measure antisocial behavior. The results found that there were negative relationships between the attachment and criminal behavior; however, both boys' and girls' attachment to the father was the strongest predictor of behavior. Belknap and Holsinger's (2006) study found no gender differences in the reports on the youths' relationship with the father figure or the mother figure, but boys were more likely to report that their relationship with their mother was great.

Van IJzendoorn (1997) researched and discussed the significance in attachment, moral reasoning and aggression, and how those affect the development of antisocial behavior. Bonding influences the manner in which infants acquire empathetic feelings and an understanding of parental controls (Kagan, 1981). This in turn was good for future attachments to others during adulthood (Karr-Morse & Wiley, 1997). If there was a lack of attachment to others there was an increased risk of criminality and a decreased chance of forming relationships and the continuance of adult criminal behavior.

### Involvement

The focus of involvement in previous research studies have often been on broken homes (Demuth & Brown, 2004) and the involvement of father figures (Harris, Furstenberg, & Marmer, 1998). Cookston and Finlay (2006) found that both mother's and father's involvement were strong predictors of whether the child engaged in delinquent behavior. Farrington's (1987) dataset focused on whether or not the father was interested in the child and involved in their life. In other research, such as Simons et al.'s study (1994), it has been found that the quality of parental involvement was significant to multiple outcomes such as delinquency, aggressiveness, and psychological healthiness of the child. The

paternal interest and involvement have been found to be important in the areas of cognitive learning and social development (De Luccie & Davis, 1991; Dubowitz et al., 2001). Simon et al. (1994) wanted to specifically address this variable because it is often overlooked in other studies and wanted to address the difficulties such as sampling, measurements, and control groups that are often found in this type of research (Aber & Cicchetti, 1984). They used the definition of involvement as how parents engage with their children such as support, warmth, affection, and supervision (Simons et al., 1994). Other studies have used three primary paternal involvement factors: positive activity participation, warming relationships, and control (Pleck, 2010). This section will discuss the past studies and literature that contribute to a better understanding of how the father's interest and involvement in their children may affect child delinquency.

Some studies have found a father's involvement to be significant in lowering delinquency and some studies have had some contrary results. Cookston and Finlay (2006) and Goncy and van Dulmen (2010) found that fathers who developed communication and supportive relationships was significant in decreasing delinquent behavior; however, they disagreed on the significance of how often the fathers participated in activities with their children had on decreasing the risk of delinquency. Coley and Medeiros (2007) found evidence that even fathers that were not living with their children, but were involved, predicted a decrease in delinquency. Interestingly enough, when the child had an increase in delinquent behavior, the father's involvement did not change.

Chang, Halpern, and Kaufmann (2007) found that involvement by the father was negatively associated with the child's behavioral problems. They conducted a secondary analysis using the National Longitudinal Survey of Youth that had data from 1992 to 2002. The sample consisted of 6,552 children ranging from 0 to 10

years old. The behavioral problems for the children were measured through the Behavioral Problems Index (BPI) and through the mother's perception of symptoms, such as anxiety, depression, and antisocial behavior. The father's involvement was measured through the perception of the participants; increased scores indicated a more involved father. Similar to this study, it includes a father's interest in the children. The results showed an inverse relationship and a significant predictor to child behavioral problems. This suggests that the more the father is involved and shows interest in their child, the less likely the child will have in demonstrating child problem behaviors. It was also found to be a mediating variable on the effects of maternal depressive symptoms.

However, the fathers' involvement can partially explain an increase in adult criminal behavior. Cobb-Clark and Tekin (2011) found that having a father involved in the child's life is more prone to be a protective factor for males rather than a direct significant link to decreasing the risk of criminality. They also found that no involvement or presence by the father showed adolescent boys behaving in more delinquent activities; however, it was not conclusive in determining a direct effect. Cobb-Clark and Tekin determined, by their research, that increasing father's involvement would work in favor of the child's outcome, but it would not eliminate delinquency all together.

In a more recent study by Tautolo, Schluter, and Paterson (2015), they found that father involvement was significantly related to the child's behavior outcomes; consistent with past research they had mentioned. The sample consisted of 825 fathers and 1,398 children. The data were collected using the Inventory of Father Involvement (IFI) and the Child Behavior Check-list. After running logistic regression, they found that the more the father was involved the less likely the child would exhibit problematic behavior. As mentioned in

previous studies, the problem behaviors are often associated with emotions, anxiety, depression, antisocial, attention abilities, and aggression (Achenbach & Rescorla, 2000).

After an exhaustive search for studies dealing with parental involvement, specifically related to the father's role, there has mostly been a consistency in results. Most, as it can be seen above, agree that there is some significant association between a father's involvement and a child's risk of delinquency and young adulthood criminal behavior. Often these variables were viewed through a child's demonstration of problematic behavior and their father's relationship and interest with the child (Chang et al., 2007; Cobb-Clark & Tekin, 2011; Tautolo et al., 2015). Though there were significant links between the two variables, some studies made it clear that there were other possible factors that may have played a role concurrently, such as a mother's role (Harris et al., 1998), or acting as more of a protective factor (Cobb-Clark & Tekin, 2011).

### Discipline

Prior research contemplates the severity of discipline and how it affects the outcome of the child's behavior. The lines of discipline and reasonable definition disciplines are along grey lines based on the research done for this paper. The section will discuss a little bit of history about the idea of discipline and how it relates to this specific study.

Corporal punishment is often viewed as a disciplinary action that the parents typically use in their child-rearing practices. It is any type of physical punishment that stays within the guidelines of the law and stays within reasonable boundaries for the purpose of correction or control of behavior (Straus, 1994).

Corporal punishment policies were different between 1961 and 1981 and today. Much in 1961, corporal punishment was allowed in the United Kingdom, but has since been banned in most places following the passage of Convention on the Rights of the Child law (Zolotor & Puzia, 2010). The United States in modern times have various U.S. states that still allow corporal punishment (Hicks-Pass, 2009). The question stands to reason that if corporal punishment could increase a child's likelihood of delinquency, how will it affect the measurement in this study? The current study is expected to see a correlation between harsh discipline being present and the increase in the number of convictions. Keep in mind that this does not suggest a guaranteed law-abiding child if discipline is present. The definition of discipline may be interpreted in a different way to the parent and there may be a degree of abuse that may increase the risk of delinquency. The variable being considered in this study is the enforcement of disciplinary rules and to what degree.

According to Gershoff (2002) and the literature review she composed, many studies found that corporal punishment was associated and the best predictor of future violent, antisocial, and criminal behavior. Glueck and Glueck (1950), and McCord (1979) also found, through longitudinal studies, that boys who experienced harsh corporal punishment were more likely to demonstrate criminal behaviors. However, it must be pointed out that those with specific "harsh" punishments are the ones to be more at risk. As Gershoff explained, there is a line that is drawn between corporal punishment and abuse; one could argue that studies of abuse and delinquency are better studies to explain this increased risk. He explains that the worse the corporal punishment is, the closer to abuse, and the higher the risk to delinquency and future criminal behavior. The author also brought up good points about the use of corporal punishment and aggression: are

the parents frustrated with the boys' preexisting aggression and behavioral problem which causes the use of corporal punishment or is the corporal punishment increasing the boys' aggressive tendencies? Longitudinal studies starting from infancy are needed to better measure those types of outcomes.

Earlier during the review of parental involvement, research saw a mediating factor between discipline and parental involvement. The variable is suggested to mediate corporal punishment by the quality of parental involvement. In one study, corporal punishment lost its significance to aggressiveness and criminality in adolescent outcomes once parental involvement was removed (Simons et al., 1994). The argument made was that corporal punishment itself can be directly affected by the quality of parental involvement. The study conducted by Simons et al. took a sample 451 two-parent families, which is important because in other studies one parent families had showed significance in the risk of child delinquency, with children in 7th grade, male and female, in the United States during 1989. After setting the criteria and having complete data, 332 families were used for the study. All families were of white descent, similar to the sample that will be used for this analysis. Data were collected annually by using questionnaires, video interviews, tasks, and self-reports. The methodology measured punishment, involvement, adolescent aggressiveness, delinquency, and psychological health. Results pertaining to discipline and delinquency showed that there was no statistical significance. The study addressed this by showing that another variable may be involved with past research that was not addressed: parental involvement. There was the significance of parental involvement and delinquency, as there was in punishment; however, when parental involvement was controlled, corporal punishment had no significance. Corporal punishment was found to be negatively related to parental involvement.

Depending on the results of the analysis in this study, time may be a sensitive factor for the dataset. The alternative hypothesis is to see harsher quality of discipline, the higher conviction record, and therefore an increase in criminal behavior risk. The United States to this present time, in some states, allows corporal punishment, whereas the United Kingdom does not, but in 1961-1981 did. If this is the case, then we should see similar results in a modern longitudinal study because both the modern United States and past version of the United Kingdom had allowed corporal punishment. Other variables such as frequency, type, and how it is carried out should be considered (Gershoff, 2002); it could cause the significance to change. For example, harsh, severe, frequent hitting may increase criminal behavior whereas if punishment is administered few times appropriately, with light spanks and taps, it may decrease criminal behavior, or it may have no significance at all.

For the study, the variable of discipline is going to be analyzed by viewing the quality of discipline the parents used. It is important to determine consistency with previous research and what that will mean for future longitudinal studies on delinquency.

### Supervision

Parental supervision is defined as paying attention and tracking the child's whereabouts, activities, and adaptations (Dishion & McMahon, 1998). Much of the previous research abides by that definition and measurement when determining studies involving delinquency and supervision. Other studies sometimes refer to it as parental monitoring and can be used interchangeably with supervision, which is the common term used when studying child delinquency (Craig & Glick, 1968). Interestingly, parental supervision is often viewed as a significant protective factor

for child delinquency. Sometimes it becomes a mediating protective factor when other variables are in place that would increase the risk of delinquency (Dishion & McMahon, 1998).

In the previously mentioned McCord (1979) study, there was a significant association to the number of crimes committed, whether it was property, person, or both, or supervision. The quality of supervision was the most influential factor that played in the role of decreasing the number of crimes committed. A few studies had found when looking at parental supervision that many of the results showed that the variable was lacking or non-existent (Dishion & McMahon, 1998; Patterson, 1982). However, Patterson and Dishion (1985) found that parental supervision was directly related to the risk of delinquency, but did not have any more affect than the other variables they tested; suggesting that other variables are playing as mediating roles or are possible protective factors.

Parker and Benson (2004) found in their study that both parental support and monitoring were significant to the risk of behaviors. They used the adolescent's perception of the parenting and found a higher association with the prediction of behavioral outcomes. They conducted a secondary analysis of the National Educational Longitudinal Study that examined 16, 749 randomly selected adolescents within the 10th grade. The study considered how the adolescents perceived parents' understanding, trust, pride, knowledge about friends, and what activities the children were into. Control variables consisted of gender, race, and socioeconomic status. Results showed that parental support, which is important in parent-child bonding, affected future relationships. They also found that parental support was successful in promoting less risk factors; those who perceived high parental support had less of chance of reporting delinquency, misconduct, and substance abuse. Parental support had the most effect on the adolescent's self-

esteem. All in all, the study provided evidence of the importance of parental support and supervision because the adolescent perception of the parent had a great influence on the outcome of their behavior.

The present study will focus on the use of rules and the degree of vigilance to measure the quality of supervision present. During a lot of the research into previous studies, it has been found that the variables overlap and have some effect on each other, either jeopardizing the risk or becoming a protective factor, which can be seen earlier in the paper. In regards to supervision, there has been evidence that other variables that can cause poor supervision, or other significant variables to decrease in efficiency of supervision, can increase the risk of delinquency (West & Farrington, 1973). This study hopes to determine the true effect and to what strength parental supervision may play a role in the risk of delinquency.

### Psychological Health

The attempt to find previous research on the effect of parental psychological well-being on a child's risk of criminality was difficult. Little research has viewed the mental health of the parents and how it may affect the child's risk of delinquency and early adult criminal behavior directly; however, other studies had looked at parental psychological health and the effects on the development, behavior, and mental health of their children. Some concerns about child misconduct and delinquency stem from poor child-rearing environments (Prochnow & DeFronzo, 1997). When parental mental health problems result in affecting negative environments such as poor parenting, there is an increased risk to the child's "adjustment" which also includes school performance, social relationships, and their own psychological health (Davies & Windle, 1997; Leinonen, Solantaus, & Punamäki, 2003). However, there has not been a

determination of whether specific parental disorders are significantly different and related to specific parenting skills (Johnson, Cohen, Kasen, & Brook, 2008). This section is to show that even if there is no direct link to parental psychological health and criminality risks, there are studies and evidence to show that it affects other important factors that in turn play an important role in behavioral outcomes.

Parents who suffer from poor psychological health often have difficulties parenting (Beardslee, Versage, & Gladstone, 1998), such as giving their children adequate attention and positive responses (Conger et al., 1992). Beardslee et al. (1997) found that depression, an example of poor psychological health, negatively impacts parental responsibilities to nurture their children that would usually increase positive developments. Depression has also been significantly related to delinquency (Kandel, Raveis, & Davies, 1991; Kofler et al., 2011). Since, parental depression has also been found to increase depression risks in youths (Goodman et al., 2011), it could be an indirect, but significant relationship between the parental psychological health, whether it is dealing in depression or other risk mental health disorders and criminal behavior.

Leinonen et al. (2003) stated that there has been previous evidence to suggest that mother's and father's state of mental health have different effects on their children. For example, Chilcoat, Breslau, and Anthony (1996) found that mothers who suffered from depression failed to monitor their children at an adequate level while McLoyd (1989) found that fathers with symptoms of depression often expressed irritability, lacked in nurturing responses, and more punitive. In this study, the analysis will not be able to check those specific results, but it will be able to determine if there is a difference between the mothers' and fathers' psychological health and how much they affect delinquency and criminal behavior.

According to Prochnow and DeFronzo (1997), using Hirschi's (1995) Control theory, the lack of parental capability will contribute to the failure of proper nurturing, socializing, supervising, and protecting children. Given this as the case, the state of having poor psychological health may hinder these abilities and therefore increase the risk of criminality. Prochnow and DeFronzo's study looked at parental mental health and its relationship to delinquency. Their participants consisted of 303 adults ages 35 to 54. Using a general social survey and interviews, they were able to look at multiple variables that were associated with three theories: learning, control, and strain. Under the control theory section, they tested the parents' mental disorders and delinquency. The delinquency, different than this study, was constructed from the reports of the parents on their child's misconducts. The child did not only have to have arrests, but it included those who got into serious trouble at school or substance use. If the parent had answered yes to any of those questions the child was deemed delinquent. The parental psychological health was measured by asking whether the parent had undergone counseling for mental or emotional problems. This is similar to the variables that will be used in this study; however, there is a little more detail and a rating of symptoms. Prochnow and DeFronzo found a significance to the statistical analysis using logistical regression. The study suggests that children who had parents who experienced mental disorders had a risk of being delinquent, specifically in getting arrested and getting into trouble at school. The limitation lies with the parental report of child's delinquency. They confronted this limitation, but justified it with stating that since the parents were aware of their child's misconduct, it would be serious enough to be considered on the extreme side of delinquency. Within the study, the parental mental disorder was second most powerful explanatory variable to delinquency; serious economic problems

came in first. The argument stated that the reason for the significance and why it followed the control theory was because the parental mental disorder made it problematic to have control of the child's behavior and therefore resulted in an increased risk of delinquency. They suggest that the children of an unstable mental disorder environment, since parental mental health disorders have a negative impact on the children, should be removed to a better environment. Arguably, perhaps the parents could also have easier access to mental health care to better control the disorder and provide the environment and control needed to decrease the risk of child delinquency and future adult criminality.

Nigg and Hinshaw (1998) discovered that there is a significant relationship involving mothers suffering from high level anxiety or negative affectivity (neuroticism) and an increase in risk of anti-social behavior in males who also suffer from high neuroticism (Heaven, Newbury, & Mak, 2004). In contrast, one study found that the maternal depressive symptoms were significantly related and best predictors of girls' conduct problems which included delinquency. However, they found no significance between the maternal depressive symptoms and the boys' conduct problems (Davies & Windle, 1997).

Not only is this variable looked at as an influence to a child's delinquency risk, but it is also as having influence of the other variables such as bonding, involvement, discipline, supervision, and the exposure effect on the children. If the parent is suffering from any mental disorder, it may hinder any of the other variables mentioned, and that can indirectly increase the risk of delinquency, as seen in past literature (Prochnow & DeFronzo, 1997). Also, the mere exposure to a parent with a psychological disorder may increase stress levels and strain and therefore may increase the risk of negative behaviors (Stoeckel & Weissbrod, 2015). As mentioned before, there are too many variables in social sciences that

make it difficult to account for all the variables in a setting. However, there is an importance to the significance because it opens more research pathways and allows for protective factors that may decrease the risk of delinquency; there is no guarantee that it would completely assure law-abiding behavior. This study will consider the variables that will determine significance between the parents' psychological health by their involvement in treatment for any psychological diagnosis and their children's conviction records.

Overall, past literature shows some significance in parental attributes and its involvement in delinquency and adult criminality. First, the relationship with parents, both mother and father, have proven to be critical in the development and behavioral outcome of the children (Rankin & Kern, 1994; Shonkoff & Phillips, 2000). Second, the involvement of the parents has been significant in a child's conduct (Cookston & Finlay, 2006); however, studies present different ideas about the paternal involvement. The father's interest has been a direct significant factor as well as a protective factor (Cobb-Clark & Tekin, 2011). Third, the parents' quality of discipline has been viewed in different ways in how it can affect criminal behavior. Some studies say that with a healthy amount of discipline, the risk of delinquent behavior decreases (Gershoff, 2002), while other studies suggest that harsher qualities of discipline could increase a risk of aggressiveness and subsequently, delinquent behavior (Cohen, Brook, Cohen, Velez, & Garcia, 1990; Glueck & Glueck, 1950; McCord, 1979). Furthermore, the factor of supervision has been, for the most part, universal in being an active influence. Most research studies agree that adequate supervision significantly decreases risk (Parker & Benson, 2004; West & Farrington, 1973). It is expected for the current study to have similar results. Lastly, parental psychological health is new in measuring as a direct factor to criminal behavior. However, the studies that have been done,

have seen a significant relationship to criminality and indirectly to features that have been found associated with those behaviors (i.e., depression) (Kandel et al., 1991; Kofler et al., 2011). All in all, determining some of the parental attributes contributing to such behaviors can lead to future and more current research, help determine important risk factors, and change social policy to decrease the potential of delinquency and adult criminal behavior.

## CHAPTER 3: METHODOLOGY

The Cambridge Study in Delinquent Development [Great Britain], 1961-1981, was a study started by Dr. Donald J. West and completed by Dr. David Farrington. The dataset collected is the source for the secondary analysis the Interuniversity Consortium for Political and Social Research (ICPSR) data base. Collection of this data was to determine the causes of delinquency using variables including socioeconomic status, academics records, peer relationships, parent-child relationships, extracurricular activities, criminal records, and psychological evaluations of both the parents and the participants. The current study will focus on six specific variables.

The data were collected using a 20-year longitudinal approach from 1961-1981. The collection was made using a sample of 411 boys of mixed descents from England, Wales, and Scotland between the ages of 8-14. The variables were obtained through surveys, interviews, and tests that were given to the boys by male and female psychologists located at their school. At the ages of 16-24, the boys were given follow-up interviews in a research facility by young male graduates. Throughout the study, the boys were tracked down and interviewed consistently to the end. The parents, teachers, peers, police contact, criminal conviction records, self-reports, and court records were also interviewed and reviewed. The parental interviews and the conviction records of the children will be utilized to determine the influences of parental attributes and criminal behavior. Child delinquency and young adult criminal behavior will be measured by the total number of convictions for the entire collection of the study.

The factors influencing the relationship are gender, race, and socioeconomic status; gender is automatic given that the all participants are male,

of United Kingdom decent, and all from working-class families. The variables chosen for the analysis were based on the closest definition that best matched measurements wanted and at the earliest ages of data collection. The purpose of using data during the earliest ages possible was because, as discussed in the literature portion, the early stages of development are some of the crucial parts in behavior outcomes (Gladstone et al., 2006; Karr-Morse & Wiley, 1997). The bonding variables are measured as the quality of relationship with the parents and were measured during ages 18-19. The measurements of involvement were collected by the reports of the father's interest in the children at ages 8-9. Discipline was divided between the parents individually, father and mother, and measured by quality. This measurement was taken at ages 8-9 of the participants. Supervision was measured as a combined score of the rules and vigilance of the parents during the participants' ages at 10-11. The last variable measuring the psychological health of the parents were also taken at ages 10-11 and measure the father and mother individually. Again, these variables were chosen by definition that best described our target variable and at the earliest age possible when it was originally collected.

H1: Children with poor parental relationships will have more convictions than children with good parental relationships.

H2: Children whose fathers report a greater interest in his child will have fewer convictions than children whose fathers report less interest in his child.

H3: Children who experience greater discipline will have more convictions than children who experience less discipline.

H4: Children who experience less parental supervision will have more convictions than do children with more parental supervision.

H5: Children whose parents suffer from poor psychological health will have more convictions than children whose parents are psychologically healthy.

### Definition of Variables

#### Independent Variables

Bonding is at the top of the list of variables to look at. It is important because it is a crucial part of a child's development (Karr-Morse & Wiley, 1997). Bonding will be defined as parental attachment to the child and the relationship that the participant reports having with their parents.

The Cambridge Study data set was limited on the reports of parental involvement in the child's activities. Past research has different ways of exploring ways parents can be involved with their children. Some studies use specific involvement activities such as the fathers' involvement or interest in the child, academics, and other guardianship or mentor's involvement. To define parental involvement, the paper will focus on the whether the father was interested in the children or not.

The discipline variable for the study will be an interesting one. The timing of the data could play an important role in this variable. Parental discipline will be described as physical discipline such as spankings or slaps, or non-physical punishment such as groundings and extra chores. The data will use these types of factors when determining the quality of discipline. In short, the analysis of this variable will be considered interesting to what it may mean for future research in describing how harsh the parents discipline their child. The main question for this particular study is to seek its significance to the risk of delinquency and young adult criminal behavior.

Parental supervision, as mentioned before, is one of the most common research factors when reviewing the parents' influence on child delinquency (Marshall & Cooke, 1999). The variables in this study will be closely defined as the vigilance of the parents by reporting how much the parents watch the child and seek explanations of the child's activities. The Cambridge Study measured this variable by considering the rules of the parents, the degree of the rules, and the vigilance of the parents, just as discussed. Some previous studies have found parental supervision to be an effective way of decreasing the risk of the child in participating in delinquency (Dishion & McMahon, 1998). Since it was a common factor in parental and child delinquency studies, it made sense to ensure the consistency of the findings by testing similar variables with this data set.

The last variable to define is the psychological health of the parent. The mental health of the parents will be considered when measuring how that might affect a child's risk of delinquency. As it was seen earlier in the paper, there have been few findings to suggest that the mental health of the parents could have effect on their child's development, and consequently their risk of delinquency. Mental illness in parents is not a common factor when considering delinquency, but the current study will consider an overview of whether the parents are being treated for any diagnosed psychological problems. It will cover minor symptoms such as stress, to parents who can function with their symptoms, and more severe symptoms that limits their functioning and often requires treatment. However, the definition will be different with more modern studies, but will still be important to see if there is significance to address further research between the psychological wellness of the parents and their children's criminality risks.

### Dependent Variable

The dependent variable for this study is measured through the number of convictions. Since the goal of the study is to determine the parental influences that increase the risk of delinquency and young adulthood criminality, the number of convictions will serve as the appropriate record of criminal behavior; which is one way to measure criminality (Walsh, 2011). The longitudinal study covers all convictions starting from 0 to 6 or more, at the time of data collection, during childhood, and early adulthood. The number of convictions and whether or not the participants had been convicted will be vital in finding the significant influences from both parents.

### Descriptive Statistics

Keep in mind that the mean of the amount of convictions was at .86 and 66.8% of the participants had no convictions. The data shows a positive skew given that the median was at .00. However, the study will determine if the 33.2% of the participants who did have a conviction had any significant difference in all the independent variables; 5.8% received 6 or more convictions within their lifetime. The convictions had to be recoded in order to be a scaled measurement. The range is from 0 to 5 with 0 being no convictions and 5 being 6 or more convictions. For the chi-test, the number of convictions was also dichotomized as convictions (33.2%) and no convictions (66.8%). This was to conduct the analysis for significant difference for father's interest in their children and those who do not show interest in their children.

The first independent variable of parental bonding describes the quality of relationship between the participants and their parents. The original coding was recoded to make the scale as poor, average, and good; range of 2 with a minimum of 0 and a maximum of 2. The data showed 22.1% of the participants reported

poor relationships with their parents while 61.7% reported an average relationship and 16.2% reported a good relationship. The mean was at .94 with a standard deviation of .62. The data exhibited a near normal distribution given that the median was .00 and suggests that on average the relationship with parents was close to being average quality. The involvement variable was described by the father's interest in the participants. Fathers who were dead or absent before interviewing were considered as missing data and excluded from the analysis. The majority of the fathers were deemed to have an interest in the boys making up 88.3% of the included participants whereas the remaining 11.7% were reported as not having an interest.

As mentioned before the quality of discipline had been measured independently for the father and the mother. The quality options were as follows: disinterested, harsh, spoiled, or not spoiled, not harsh, nor disinterested. They were recoded to scale with a range of 3; minimum being 0 and the maximum at 3, respective to the qualities mentioned previously. The father's quality of discipline had a negatively skewed distribution with the median being 3.00 and the mean of 2.43 with a standard deviation was 1.00. This suggests that on average the perception of the father saw their quality of discipline as spoiled; however, 71.8% of fathers claimed that they were not spoiled, not harsh, nor, disinterested, 11.2 % stated that their quality of discipline was harsh, 8.8% were disinterested in discipline, and the remaining 8.2% expressed their quality as spoiled. There was little difference when analyzing the mother's quality of discipline. The median was at 3.00 and the mean at 2.60 with a standard deviation of .78. On average mothers perceived their quality of discipline as spoiled. Majority of the mothers, however, perceived their quality as not spoiled, harsh, nor disinterested (75.9%), while only 10.3% saw themselves as spoiled. According to the analysis, there is

little difference between fathers' and mothers' perception of their quality of discipline.

The combined quality of supervision, similar to parental bonding, was recoded and scaled as poor, average, and good; range of 2 with the minimum at 0 and the maximum at 2. The scale demonstrated a near normal distribution. There were 19.3% of the participants who reported that the parental supervision was poor and 80.7% reported an average or good quality of supervision from the parents. The mean was 1.03 with a standard deviation of .65. This suggests that on average the quality of supervision was rated as average.

The last variable was measured as two individual measurements for father and mother. For both, the data were recoded into a scale that described severity of symptoms of psychological distress and is rated as follows: no symptoms, trivial, mild, and severe. The range was 3 with a minimum of 0 and the maximum of 3. The mean for the father's psychological health was .47 with a standard deviation of .97. The data exhibited a positively skewed distribution having a median of .00. On average, the fathers reported no symptoms of psychological distress as well as being the consensus of the majority; 78% of the fathers reported no symptoms. Those who reported showing symptoms were 4.8% trivial, 8.6% mild, and 8.6% severe. In contrast, mothers tended to report, on average, trivial symptoms. The mean was 1.04 with a standard deviation of 1.15. The distribution also showed a positive skew with the median at .00. Majority of the mothers reported no symptoms, 51.6%, but 30.8% showed mild symptoms. The other mothers were 5.2% trivial and 12.4% severe. There were differences in reports between the fathers and mother; fathers were not as symptomatic as much as the mothers (see Table 1 for Mean and Standard Deviation only).

Table 1

*Parental Attributions and Convictions Descriptive Statistics*

Attributes and Convictions	<i>n</i>	Mean	SD
Convictions	397	.86	1.51
Relationship with Parents	389	.94	.62
Father's Interest	366	na	na
Discipline: Father	365	2.43	1.00
Discipline: Mother	377	2.60	.78
Supervision	383	1.04	.65
Psychological Health: Father	326	.48	.00
Psychological Health: Mother	347	1.04	.00

Note: na = not applicable to variable. Convictions range from 0 to 6 or more. Relationship with parents range from 0 (Poor) to 3 (Good). Father's interest range from 0 (No Interest) to 1 (Interested). Quality of discipline range from 0 (Disinterested) to 3 (Not spoiled). Supervision range from 0 (Poor) to 3 (Good). Psychological health range from 0 (No Symptoms) to 3 (Severe).

The next section will describe how the independent variables are defined for the study analysis. Each of the variables' definitions were obtained through previous studies and the descriptions used for the measurements in the data set. All of them have been adapted to give a better explanation of what is being measured and how it may affect the risk of child delinquency.

## CHAPTER 4: RESULTS

The data were found to be substantially non-parametric for most variables; with bonding and supervision excluded. As mentioned before, the tests involved included Spearman's rho correlation, chi-square, and one-way analysis of variance (ANOVA). The secondary analysis assisted in determining the significance and relationship of parental attributes and the contributions they may have in increasing higher conviction rates. The correlation considered the significance in relation between variables and was conducted for relationships with parents, quality of discipline, supervision, and parental psychological health. The chi-square demonstrated the significance between two nominal variables: the father's interest and whether or not the participant had been convicted, and the independent t-test and ANOVA tests were used to find the significance between means among the rankings of relationships with the parents, quality of supervision, discipline, the psychological health of the parents, and the number of convictions.

### Bonding: Relationship with Parents

The correlation between the relationship the participants had with their parents and the number of convictions was found to have a negatively weak relationship,  $r(378) = -.200, p < .05$ . This suggests that as the quality of relationship with the parents decrease, the higher the number of convictions the participants had. There was also a significance to the relationship given that  $p = .00$  (see Table 2).

The ANOVA tests also showed a significant difference between the relationship with the parents and the number of convictions,  $F(2, 377) = 9.96, p < .05$ . The average number of convictions for those who reported a poor

Table 2

*Correlation Between Relationship with Parents and Number of Convictions*

Attribute	<i>df</i>	<i>r</i>	<i>p</i>
Relationship with Parents	378	-.200	.00

relationship with their parents were 1.47. For those who reported an average or good relationship with their parents had a mean of .75 and .48 number of convictions, respectively. The analyses provide some evidence, similar to past literature, that the quality of relationship with parents has some influence in the number of convictions and in turn, child delinquency. The results supported the expectations of the hypothesis (see Table 3).

Table 3

*One-Way Analysis of Variance of Relationship with Parents and Number of Convictions*

	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	21.74	9.96	.00
Within groups	377	2.18		
Total	379			

Involvement: Father's Interest

The chi-square test results showed that  $\chi^2(1) = .61, p > .05$ . These results suggest that there was no significant difference between the father's interest or disinterest and those who had convictions or those who did not. Therefore, there is no evidence that the participants' fathers who reported no interest in their children were more likely to have convictions than those who had fathers that reported interest. The results did not support the expected outcome in the stated hypothesis (see Table 4).

Table 4

*Chi-Square Analysis of Father's Interest and Convictions*

Involvement	Convictions			$\chi^2$	$p$
	Yes	No	Total		
Father's Interested	27	16	43	.61	.46
Not Interested	213	97	310		
Total	240	113	353		

Discipline: Father's Quality

The correlation test expressed that there was no significant relationship between the quality of discipline of the father and the participant's number of convictions,  $r(350) = -.05, p > .05$  (see Table 5). The data showed there was no relationship between the two variables. The ANOVA test showed that there was a significant difference between group means,  $F(3, 348) = 3.25, p < .05$ . For the fathers who reported a harsh quality of discipline, the average was 1.50 number of convictions and those who reported not spoiled, not harsh, nor disinterested had an average of .75 number of convictions. This suggests that there is a significant difference between the father's quality of discipline and the number of convictions. Due to the results, the hypothesis was only partially confirmed. There was no inverse relationship, but had a significant difference between means (see Table 6).

Discipline: Mother's Quality

The correlation test done for this variable showed that there was a very weak relationship between the quality of discipline of the mother and the number of convictions. It also reported that there was a negative relationship between the

Table 5

*Correlation Between Quality of Discipline and Number of Convictions*

Attribute	<i>df</i>	<i>r</i>	<i>p</i>
Quality of Discipline			
Father	350	-.05	.32
Mother	363	-.12	.04

Table 6

*One-Way Analysis of Variance of Quality of Discipline and Number of Convictions*

Parent	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Father				
Between groups	3	6.95	3.25	.00
Within groups	348	2.14		
Total	351			
Mother				
Between groups	3	8.45	3.86	.01
Within groups	361	2.19		
Total	364			

variables. The disinterested quality of discipline was associated with a higher number of convictions whereas those who reported a not spoiled, not harsh, nor disinterested quality experienced a lower number of convictions (see Table 5). The results of the ANOVA analysis revealed a significant difference between the quality of discipline of the mother and the number of convictions,  $F(3, 361) = 3.86, p < .05$ . The disinterested group saw, on average, that participants had 1.88 number of convictions. The participants that had harsh quality of disciplines

reported by the mothers had 1.40 number of convictions on average while those who were spoiled as reported by the mothers had on average .82 number of convictions. The participants who had mothers that reported being not spoiled, not harsh, nor disinterested only had .73 number of convictions. Given these results, there is evidence that suggest a significant difference in the means of the number of convictions between the quality of discipline reported by the mother. Given the results, the expected hypothesis was supported (see Table 6).

### Supervision

The supervision was a combined score that included both parents. The correlation test showed a weak, negative, and significant relationship between supervision and the number of convictions,  $r(368) = -.22, p < .05$ . This means that has the quality of supervision decreases as the number of convictions increase (and vice versa); the poor quality of supervision that the participant experienced, the higher their number of convictions (see Table 7).

Table 7

#### *Correlation Between Supervision and Number of Convictions*

Attribute	<i>df</i>	<i>r</i>	<i>p</i>
Supervision	368	-.22	.00

After completing the ANOVA test,  $F(2, 367) = 11.87, p < .05$ , the results showed a statistically significant difference between quality of supervision and the number of convictions. The average number of convictions for participants that had poor supervision was 1.57 and the average number of convictions that had good supervision was .51. The results of the correlation test and the ANOVA test confirmed the hypothesis stated (see Table 8).

Table 8

*One-Way Analysis of Variance of Supervision and the Number of Convictions*

	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	24.44	11.87	.00
Within groups	367	2.06		
Total	369			

Psychological Health: Father's Health

The correlation test found a significantly weak and positive relationship between the father's reported psychological health and the participant's number of convictions,  $r(313) = .24, p < .05$ . This shows that the more severe the father's psychological health was, the higher the number of convictions the participant had or the healthier the father, such as no psychological health symptoms, the lower the number of convictions (see Table 9). As for the ANOVA test, the results showed a significant difference between the father's psychological health and the mean number of convictions,  $F(3, 311) = 8.63, p < .05$ . The average number of convictions was .62 for those whose father reported no symptoms for their psychological health. Those who had fathers showing severe symptoms had an average of 1.89 number of convictions. This, in the end, suggests that a father's psychological health may, in part, influence delinquency (see Table 10).

Psychological Health: Mother's Health

After running a correlation test between the psychological health of the mother and the number of convictions of the participants, the results showed no significant relationship,  $r(333) = .03, p > .05$  (see Table 9). The ANOVA analysis also displayed no significant difference between the mother's psychological health and the participant's mean number of convictions,  $F(3, 331) = 2.26, p > .05$ .

According to the analyses, there was no significant influence by the mother's psychological health on the participant's criminal behavior (see Table 10).

Table 9

*Correlation Between Psychological Health and Number of Convictions*

Attribute	<i>df</i>	<i>r</i>	<i>p</i>
Psychological Health			
Father	313	.24	.00
Mother	333	.03	.54

Table 10

*One-Way Analysis of Variance of Psychological Health and the Number of Convictions*

Parent	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Father				
Between groups	3	17.11	8.63	.00
Within groups	311	1.98		
Total	314			
Mother				
Between groups	3	4.24	2.26	.08
Within groups	331	1.96		
Total	334			

## CHAPTER 5: DISCUSSION

Despite Loeber and Stouthamer-Loeber's (1986) study, these specific familial factors are not strong in relation to child delinquency and later adult criminality. Similar to the results in Wells and Rankin's (1991) study, family structure had significance, though the amount of relationship to delinquency was weak. The findings for the relationship between the parents and the participants and the risk of criminal behavior was consistent with other findings, such as with Heaven et al.'s (2004) study, but was not specific to either mother or father. It was not determined which parents' relationship with the boy was more significant in increasing his risk of criminal behaviors. There continues to be significance in relationships and bonds that proves to help lower the risk of delinquent behavior. However, there was inconsistencies between past studies and the current study considering father's involvement.

The current study found that the father's interest in the children was not significant to the participants' number of convictions. This is inconsistent with most research measuring this type of data. It is possible that there were differences in what was considered as father's involvement. The data collected were unclear on what "interested in children by father" meant; however, it was associated with involvement; if the father is interested in the children's well-being, then they must be involved. Given that the analysis did not agree with other more specific studies and measures mentioned in the literature, the father's interest variable may not have accurately measured involvement.

The quality of discipline factor was consistent with previous studies. The quality discipline for both the father and mother was significant in the number of convictions. This begs the question about corporal punishment. Given the results,

there must have been harsher punishments that may have been too severe that increased the risk of criminality (Gershoff, 2002). The specific types of punishments were not available or accessible for this study; however, given its continuing significant role in criminal behavior, future studies should compare quality of discipline and types of punishment and which is more significant as risk factors. Oddly, the analyses suggest that the mother's quality of discipline had more significance difference between the number of convictions than the father's quality of discipline. This was similar to Feldman and Wentzel's (1995) study that found the correlation between the mother's quality of discipline, specifically harsher relations, affected the child's behavior and closeness. Furthermore, the correlation test for the father's quality of discipline determined no relationship. That suggests that there was no slope in this given data; possibly due to coding.

The quality of supervision also stayed true to its influence on criminal behavior. The combine quality between both parents proved to be significant in affecting the number of convictions for the participants. As expected, good quality supervision decreased the number of convictions and expressed less risk of delinquency and early adult criminality. It also had no more significance than any other variable measured, just as Patterson and Dishion (1985) had found. This suggests the possibility of other mediating variables contributing to the decreased risk of criminality. Quality of supervision may also be serving as more of a protective factor. Other variables must be controlled in future research to determine this idea.

There were no significant findings with maternal psychological health and the effect on the participants' conviction records. The reason could be similar to Davies and Windle's (1997) study as they found no significant relationship between mothers with depressive symptoms and the boys' reports of depression,

conduct problems, or academic difficulties. Their study had only found a significant relationship with the mothers' symptoms and the girls. The results for the psychological health influences suggested that the father's psychological health had a significant impact on criminal behavior risks, but the mother's state of psychological health did not. This is inconsistent with the literature because most suggested both parents had a very significant impact and predictive quality for the risk of delinquency and adult criminal behavior. The lack of significance on the mother's reports may have been an error in participant interpretation, survey error, or the lack of accurate perception of the mother's psychological health. These errors could cause an inaccurate measurement of the psychological health and its effect on criminal behavior.

Despite the magnitude of this data base, there are many limitations as to what it can analyze. First, this data set is old and the sample is from the United Kingdom. If a similar study was to be completed in the same magnitude, in the United States, and in more recent times, it would be more valuable to current policies. Second, a limitation that should be mentioned is that the variable that measures delinquency and young adult criminal behavior is not entirely inclusive. It lacks specifics in types of crime and types of delinquent behavior that may not be considered unlawful, but still delinquent. Also, the reasons for convictions in the United Kingdom at that moment in time might not be the same reasons for convictions in the United States in modern times. Furthermore, the notion that should be considered is the difference in discretion. Similar to the other considerations, the ability and requirements for the use of discretion will be different in both time and place. Therefore, even though this study used the participants' conviction records, it cannot conclude the type of crimes nor whether it would be of criminal behavior in nature here in the United States.

Third, there is uniformity of gender and it does not allow sufficient measurement of how these variables may affect females. However, many studies have found little differences of specific environmental factors between genders of male and female, but because most studies focus on boys rather than girls when considering antisocial behavior, future studies should consider different models, for parental attributes, and in testing the different effects on boys and girls (Lahey, Waldman, & McBurnett, 1999). There may be different variables that affect males and females in various ways. For example, Herrera and McCloskey (2001) found that girls were more likely to commit violent offenses when exposed to child physical abuse. Kofler et al. (2011) expressed that depressive symptoms were significant for increasing the risk of delinquency, girls especially. This study falls short when looking at the affects parental attributes have on female delinquency. There could be different significance of the variables mentioned that might affect girls and due to the lack of research on a longitudinal basis, more research needs to be done and compared to the findings of the effects on boys. These types of inconsistencies need to be addressed.

Fourth, as described before, there has been little research conducted on the parental psychological ailments and the significance that it has had on children's risk of delinquency directly. Using this study, parents were considered using their treatment for any psychological reasons and then analyzed for statistical significance as a risk factor. Despite what was found, there was a severe limitation to the findings. The study did not specify which disorders were being treated such as alcoholism, drug abuse, depression, anxiety, or other personality traits that may influence criminal behavior.

Fifth, earlier in the literature review Parker and Benson (2004) found that the child's perception of the parental attributes is the best predictor of their

behavioral outcome. The data set looks at the parents' perception of their attributes and how they influence their child. The data were limited into comparing both the parents' and the child's perception of the independent variables; more research is needed. Also, the data were limited to the number of variables that we could look at. Other variables, such as parental criminality, are important in predicting criminal behavior (Knight & West, 1975).

Lastly, a major limitation to the study was the data set itself. The collection was used because this is one of the most diverse longitudinal studies available. However, times have changed from 1961-1981 and there may be differences than what would be seen in the United States and the United Kingdom. The argument for why this data should be valued, however, remains that the variables are universal and most are not as time sensitive because the purpose was to take the parental attributes that are available at the time and determine the risk factors of criminal behavior at that time. The limitations of this data should be taken seriously and should be considered for future research.

Policy implications from the results of significance may help raise awareness for parental classes to help increase the chance of successful bonding, positive child-rearing attitudes, and involvement. The discipline analysis may enforce continuous bans on corporal punishment and encourage the use of more non-physical discipline, as long as there is a reasonable form of punishment that will not be positively associated with delinquency; further research would be needed. Other policies might consider implementing programs specifically to increase better outcomes in parental supervision because of its influence and to ensure a standard level of parental monitoring is present (Simons et al., 1994). The psychological aspect of the parents had a significance to child delinquency and criminal behavior. Perhaps policies need to be in place where parents and

children have easier access to treatment, in hopes that during a vital developmental period, the parents can still be sufficient enough in child rearing qualities to decrease the risk of delinquency and young adult criminality.

Strong relationships and statistical significance does not equal causality with any type of factors and variables (Susser, 1973). This is important to remember because the study is to increase awareness and show that more longitudinal studies like this one should be constructed. Also, more structured analysis should be conducted to find mediating and protective factors to decrease risk. In no way, should this analysis be understood as a direct link to solving criminal behavior. Looking at multiple variables, during a primitive time during a developmental phase, is to shine light on important influences. As was read earlier, affectional ties within the family were successful in being protective factors against child delinquency (Werner, 1989),, as well as getting positive support during times of stress (Prochnow & DeFronzo, 1997).

The literature indicates that environmental influences, such as parental attributes, contribute to the risk of child delinquency. Many found that, since the parents are present during a developmental stage (Karr-Morse & Wiley, 1997), there was a significance between many of the variables discussed and child delinquency; the degree of relationships varies. There were notes that suggested that some of the variables may strictly be mediating variables, such as family sizes (Fischer, 1984), and have overlapping definitions; for example, parental involvement and supervision.

As a result of previous studies, it was suggested that there would be an increase in reforms that allow parents to access classes, better information, and treatment, if needed, that might increase the success in creating stronger protective

factors. More research would be needed to see if the reforms and policies would be successful.

All in all, this is not conclusive to the cause of delinquency, far from it. The study does not explain resilient children who live under the same conditions and do not partake in delinquency, aggressive tendencies, and future criminal behavior. Early childhood developments that are affected by parental attributes can be altered by putting in effective interventions that can change the outcomes of adaptive behaviors, such as decreasing the risk of delinquency (Shonkoff & Phillips, 2000). Future research is needed to evaluate other variables that contribute to risk factors of delinquency

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