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Families, Crime and Criminal Justice: Charting the Linkages


Greer Litton Fox

Michael L. Benson

Ryan E. Spohn

University of Nebraska at Omaha, rspohn@unomaha.edu

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Gender Differences in the Effect of Child Maltreatment on
Criminal Activity over the Life Course

Ryan E. Spohn

Gender, Maltreatment, and Crime

Department of Sociology
W140 Seashore Hall
The University of Iowa
Iowa City, IA 52242-1401
(319) 335-2502

ABSTRACT

This paper adds to a growing body of knowledge regarding the criminal consequences of childhood victimization. A prospective research design is used to compare a group of maltreated youth to a matched control group in order to determine the extent to which child abuse and neglect influence both juvenile delinquency and adult crime. Controlling for race and sex, abused and neglected children are more likely to have a juvenile arrest record. In addition, controlling for involvement in juvenile crime, child maltreatment also influences adult criminality. Motivated by the findings of qualitative studies focusing on female offenders, I examine gender differences in these relationships and find substantial differences between the subgroups. For females, both abuse and neglect increase juvenile delinquency. Also, abuse and neglect influence adult criminality both directly and indirectly through involvement in juvenile delinquency. In contrast, only neglect influences the juvenile delinquency of males, and no form of child maltreatment directly effects adult male criminality. Generally, I conclude that child maltreatment is a much more substantial factor in subsequent criminal behavior of females as compared to males.

Past research examining the link between child maltreatment and subsequent juvenile delinquency has provided evidence that juvenile delinquency, though not inevitable, is a common consequence of maltreatment. However, data inadequacies have precluded a careful analysis of the long-term detrimental effects of child maltreatment. In addition, most studies have failed to examine the possibility that the effects of maltreatment may differ for males and females. The present study is an attempt to increase our knowledge of the relationships between gender, maltreatment, and criminality.

REVIEW OF THE LITERATURE

Child Maltreatment and Juvenile Delinquency

A connection between child maltreatment and subsequent juvenile delinquency has been observed in a number of studies. The current quantitative research can be broken down into two broad categories: retrospective longitudinal studies and prospective longitudinal studies.

Retrospective longitudinal studies of the effects of child maltreatment on delinquency attempt to test the hypothesis that juvenile delinquents experience abuse or neglect at a higher rate than their non-delinquent counterparts (Gray 1981). Many retrospective studies have found high rates of child maltreatment among juvenile delinquents (Alfaro 1981; Mouzakis 1981; Wick 1981; Kratcoski 1982). Three additional studies found that delinquents experienced higher rates of abuse than non-delinquent control groups (Glueck and Glueck 1950; Lewis and Shanok 1977; Scudder et al. 1993).

Prospective longitudinal studies investigating the link between maltreatment and delinquency identify samples of maltreated juveniles and attempt to determine the effects of maltreatment on subsequent delinquent activity. Prospective studies that have found notable

amounts of delinquency in maltreated samples include Bolton, Reich, and Gutierrez (1977) and Alfaro (1981). A number of additional prospective studies found support for a relationship between maltreatment and delinquency through comparisons of maltreated youth and control groups that did not experience maltreatment (McCord 1983; Widom 1989c; Widom 1991; Scudder et al. 1993; Smith and Thornberry 1995; Kakar 1996). In contrast, a study by Zingraff et al. (1993) found that, controlling for the number of maltreatment reports, age, gender, race, and family type, the experience of maltreatment was not related to juvenile delinquency.

Child Maltreatment and Adult Criminality

A final study has examined the effects of early childhood maltreatment on adult criminality (Widom 1989b). Widom found that individuals who were abused and/or neglected in their youth were approximately 1.7 times more likely to have an adult record for criminal violence than individuals in the control group (1989b:263). This study suggests that additional research is needed to determine the *long-term* effects of maltreatment on criminal activity.

Widom's research provides an important component of our current knowledge regarding the adverse effect of child maltreatment on criminal outcomes, but the existing research leaves a number of questions unanswered. First, most studies do not distinguish cases of abuse from cases of neglect. Such a distinction is important, as many authors suggest that the effects of abuse will differ from the effects of neglect in relation to juvenile delinquency because the nature of each type of maltreatment is quite different. Whereas neglect is an act of omission (i.e. a failure to adequately care for a child), abuse is an act of commission, in which an inappropriate physical or sexual act is directed toward a child (Conaway and Hansen 1989). As Browne and Finkelhor suggest, it is important that we "disentangle sources of trauma" in dealing with child

maltreatment (1986:177). The unique effects of child neglect and child abuse should be examined separately for two essential reasons. First, being a victim of neglect may lead to increased vulnerability to the adverse effects of child abuse. In order to determine the true, non-spurious effects of abuse, then, it is important to control for the independent effects of neglect. Second, neglect is an important aspect of maltreatment in its own right. Official reports suggest that 52% of all victims of maltreatment suffer from neglect (U.S. Department of Health and Human Services 1998). Moreover, a number of empirical studies provide evidence that neglect is more likely than abuse to result in antisocial behavior and delinquency (Martin and Beezley 1980; Egeland and Sroufe 1981; McCord 1983; Zingraff et al. 1993; Zingraff et al. 1994; Spohn 1998).

A second question left unanswered by existing research is whether juvenile delinquency *mediates* the relationship between child maltreatment and adult criminality. This suggests two possible pathways through which child maltreatment may influence criminality. First, maltreatment in early childhood may influence adult criminality indirectly, through a youth's involvement in juvenile delinquency. Through this "life course" perspective, child maltreatment would increase involvement in juvenile delinquency, and delinquency would have a positive effect on adult criminality. In this fashion, involvement in criminal behavior is perpetuated through the processes of "cumulative continuity" (Caspi, Elder, and Bem 1987; Sampson and Laub 1993; Browning and Laumann 1997). *Cumulative continuity* refers to the process through which the cumulative consequences of maladaptive behaviors (such as delinquency) over time channel individuals into situations that provoke further maladaptive behaviors (Caspi et al. 1987). Thus, according to the life course perspective, maltreatment may increase adult criminality indirectly by increasing involvement in juvenile delinquency. If the delinquent is

labeled by official agents of social control, initial deviance may be replicated in subsequent criminal behavior. As a result, a maltreated youth's involvement in juvenile delinquency may increase the likelihood of involvement in adult criminality. The direct effect between child maltreatment and criminality, however, would be mediated (see Figure 1).

FIGURE 1 ABOUT HERE

Another possible scenario is that maltreatment affects adult criminality directly, in addition to its indirect effect through involvement in juvenile delinquency. In this scenario, cumulative continuity may occur, but the initial impetus for deviant behavior (child maltreatment) continues to impact adult behavior through *interactional continuity*, a process whereby maladaptive behaviors are the result of “an interactional style carried through life that evokes reciprocal, maintaining responses from others in social interaction” (Caspi et al. 1987). Through this “psychogenic” perspective, the psychological state resulting from experiences of victimization may be persist into adulthood and increase one's propensity for criminal involvement independent of earlier involvement in juvenile delinquency (Browning and Laumann 1997). Including juvenile delinquency as a control variable and comparing the life course versus psychogenic perspectives will provide a more adequate understanding of the maltreatment-criminality relationship.

A final concern that has received inadequate attention is whether there are gender differences in the *effects* of child maltreatment on criminality. This question is suggested by many studies of female offenders indicating that victimization is a more common and more substantial impetus for female criminal involvement. Evidence of the dramatic impact of child maltreatment on female victims has become too compelling to ignore.

Maltreatment and the Criminalization of Women

Many researchers have documented gender differences in the relationship between maltreatment and various forms of delinquency. For example, status offenses are an outcome often associated with physical and sexual abuse, especially for females. Runaways often report high level of victimization (Widom and Ames 1994) and this is especially true for female runaways (Rush 1980; Chesney-Lind and Rodriguez 1983; McCormack, Janus, and Burgess 1986; Janus et al. 1995). Studies of prostitutes also disclose high rates of childhood victimization (James 1976; James and Myerding 1976; Silbert and Pines 1981; Burgess, Hartman, and McCormack 1987; Widom and Ames 1994). Similarly, in a study of women street hustlers, Miller (1986) found that sexual abuse was a precipitating factor for both running away and drug use, and had a considerable influence on driving women into street life. Hagan and McCarthy (1997) reported similar findings for both male and female youths in Canada.

Studies of Institutionalized Females

The most compelling evidence of the particularly detrimental effect of child maltreatment in the lives of girls and women has originated from studies of women in juvenile and adult correctional settings. For example, Chesney-Lind and Rodriguez (1983) interviewed 16 women representing three-quarters of the sentenced female felons in the Oahu Community Correctional Facility. Over 60% of these women reported histories of severe child abuse, often resulting from disciplinary spankings that escalated into violent beatings. Although this percentage is alarming, generalizations are limited by the fact that the researchers do not provide control groups of non-institutionalized women, institutionalized men, or non-institutionalized men. Without these

important comparison groups, conclusions relating to gender differences in the relationship between maltreatment and criminality must be made with caution.

Richie (1996) reported similar findings in a study of 37 women incarcerated at Rikers Island Correctional Facility. This study focused on black inmates, but included a control group of white female inmates. Through the use of open-ended interview questions, Richie (1996) found that about 20% of the women experienced physical abuse as children and about 35% experienced sexual abuse. For the white women in her control group, Richie suggests that the physical and sexual abuse was “compounded by serious childhood neglect” (1996:65). Again, control groups of males and non-institutionalized individuals are absent from the study.

Kathleen Daly (1994) makes an important contribution to this literature by comparing incarcerated women in New Haven, Connecticut, to a matched control group of a random sample of incarcerated men. She found that one-third of the women were physically abused by fathers or stepfathers, or witnessed the abuse of their siblings or their mothers¹. Of the male inmates, about 10% grew up in households in which they or their siblings were physically abused or neglected.

Daly (1994) presents paths of female initiation into criminal activity that are remarkably compatible with the life course and psychogenic perspectives presented above. Her first pathway, a route to crime that Daly labels “street women,” includes women who were pushed out of or ran away from an abusive home (1994:47). This pathway is comparable to the life course perspective in which child maltreatment has an indirect effect on adult criminality through involvement in juvenile delinquency. Daly’s second pathway, labeled “harmed and harming,” includes cases in which the trauma of maltreatment leads to violent aggressive attitudes, drug and alcohol addiction, and psychological problems throughout the life course. For

these women, child maltreatment has a direct effect on adult criminality in addition to an indirect effect through juvenile delinquency.

These studies of institutionalized women provide initial evidence that maltreatment may influence subsequent criminal behavior differently for females and males, but their findings are not conclusive for several reasons. First, none of the studies of females in correctional facilities provide comparative rates of victimization for non-institutionalized/ non-convicted individuals, and only one study (Daly 1994) provides a male control group. Second, the samples for these studies are quite small and non-representative of the general population. Third, reports of victimization in these studies most often stem from personal interviews, in which social desirability factors and inaccuracy in reporting may influence their findings (Widom 1989d). Just as subjects tend to overestimate “socially desirable” responses such as church attendance (Hout and Greeley 1998; Presser and Stinson 1998), they tend to underreport undesirable responses such as delinquent behavior or the existence of family conflict in childhood (Henry et al. 1994). As an example, Williams (1995) located over 120 women with documented histories of sexual abuse and interviewed them as adults. About one-third of these women could not remember the abuse, and of those who could, about 20% of them reported that at one time or another in their lives they could not remember the abuse. The occurrence of such high levels of repression calls into question the validity of self-reports of maltreatment.

Levels vs. the Effects of Maltreatment

In addition to studies suggesting that female delinquents experience higher *levels* of abuse than males, one study suggests that abuse may have more detrimental *effects* on females as compared to males. McCormack et al. (1986) found that female runaways who had been sexually abused

were more likely than their non-abused counterparts to commit subsequent delinquency and criminality. Among the males in their sample, however, no relationship was found between abuse and criminal activity. Thus, females may not only suffer from higher rates of victimization, but the effects of this victimization on subsequent criminality may be more substantial for females as compared to males.

Chesney-Lind and Shelden (1998) suggest explanations for why female offenders experience higher *levels* of child maltreatment than their male counterparts. They assert that the victimization of young females and their response to victimization is highly influenced by their status as young women. Girls are much more likely to suffer from sexual abuse due to existing gender and sexual scripts found in patriarchal families. Men in these traditional families are likely to consider daughters and stepdaughters as their sexual property. The vulnerability of girls to both physical and sexual abuse is intensified by traditional norms that keep wives and daughters in the home, where victimizers have greater access to them (Chesney-Lind and Shelden 1998).

Criminologists examining the relationship between gender and crime have also suggested that maltreatment may have stronger *effects* on female criminality. In describing the white women in her study, Richie (1996) states that their gender and class position left them feeling alienated and outside the mainstream of social life. These institutional forces limited their opportunities. As suggested by Messerschmidt (1986), these individuals are marginalized as women in a patriarchal system in which men control both the labor power and sexuality of women. This marginalization interacts with the stigma of abuse and neglect. Moreover, the black women in Richie's (1996) study describe similar constraints that were often exacerbated by their minority status.

These insights are compatible with the assertions of Hagan and his colleagues regarding the control of girls in American society. Whereas boys have had greater control over their actions and relative freedom from adult supervision, girls have faced greater parental control (Hagan, Gillis, and Simpson 1985). As a result, when abuse is present in the household, males are more capable of escaping the abuse, whereas girls are less able to escape the abusive home environment.

Finally, Chesney-Lind and Sheldon (1998) assert that attempts by girls to escape from abusive families (such as running away) have been criminalized. When girls attempt to escape from their abusive homes, parents may encourage agencies of the state to enforce their return to the home. To the detriment of girls, they are more likely than boys to be referred to court by their parents instead of law enforcement agencies (Chesney-Lind and Sheldon 1998). Persistence on the part of the victim leads to arrest and possible incarceration. This argument provides another path through which maltreatment may be more likely to result in an arrest record for girls, as compared to boys.

THE CURRENT STUDY

This examination of the child maltreatment/delinquency literature, combined with life course and feminist theoretical perspectives linking child maltreatment to criminality, provides a framework for the development of a number of hypotheses. First, based on previous findings (Spohn 1998), Hypothesis 1 proposes that the lack of parental attachment and supervision suggested by neglect should increase juvenile delinquency. Second, Hypothesis 2 predicts that the strain of experiencing abuse should also increase juvenile delinquency. Third, based on the psychogenic perspective, Hypothesis 3 suggests that the detrimental effects of abuse and neglect should

extend into adulthood, increasing rates of adult criminality. Fourth, from a life course perspective, controlling for involvement in juvenile delinquency should mediate the effects of child maltreatment on adult criminality. Findings inconsistent with hypothesis four will provide support for the psychogenic perspective. In addition to testing these hypotheses, the final segment of the analysis will explore the possibility of gender differences in the effects of child maltreatment on delinquency over the life course through an examination of the male and female subgroups.

METHOD

The data examined in this analysis are drawn from a prospective cohorts research design matched with a control group cohort (Widom 1994). Victims of physical and sexual abuse and neglect were sampled from a metropolitan area in the Midwest. This maltreated sample was matched with a control group cohort on the basis of sex, race, age, and approximate family socioeconomic status (Widom 1989a). The two samples are assumed to differ only in the attribute to be examined (child maltreatment).

The Maltreated Sample

The sample of maltreated youth consists of 908 physically abused, sexually abused, and/or neglected individuals. The subjects consist of any person ages 0 through 11 in 1967-1971 who appeared in the records of the juvenile court and juvenile probation department as victims of abuse and/or neglect. Only children ages 11 or less were included in the study to avoid the possibility that delinquency preceded, or might have caused, the abuse or neglect. Cases were excluded if the maltreatment occurred after age 11, if the child was adopted as an infant, if the

incident involved “involuntary” neglect only, if the incident involved “placement” only, or if the incident was simply a failure to pay child support. Cases were included if they were validated and substantiated by the county juvenile court, juvenile probation department, or adult criminal court (Widom 1989a).

The courts utilized the following definitions of abuse and neglect: (1) *Physical abuse* indicates cases in which an individual had “knowingly and willfully inflicted unnecessarily severe corporal punishment” or “unnecessary physical suffering” upon a child (Widom 1989c:162). (2) *Sexual abuse* refers to a variety of charges, including fondling or touching in an obscene manner, vaginal penetration, sodomy, and evidence of parental incest. (3) *Neglect* refers to instances of physical neglect, medical neglect, educational neglect, inadequate supervision, and abandonment by the mother or father.

The Control Sample

Controls were matched with the maltreated sample on the basis of age, sex, race, and approximate socio-economic background of the family. Any child with an official record of abuse or neglect was eliminated from this sample. Children under school age in the maltreated sample were matched with children of the same sex, race, date of birth (plus or minus one week), and hospitals of birth (Widom 1989a). Children of school age were matched with children of the same sex, race, date of birth (plus or minus six months), and class in elementary school. Because busing did not exist during the period of the study, the elementary schools were found to represent very homogenous neighborhoods, and thus a proxy for socio-economic status. A total of 667 matches are included in the control sample.

Dependent Variables

The first dependent variable for this study consists of official juvenile arrest records. These records include status offenses, property offenses, and violent offenses, but exclude traffic offenses. The final dependent variable reflects an adult arrest record for a criminal offense, excluding traffic offenses. The information on delinquency was retrieved from juvenile probation department records for both the maltreatment and control groups and the adult criminal arrests were retrieved from a criminal record search at the local, state, and federal levels (Widom 1989a). Because subjects could have arrest records in localities not searched by the investigators, the data may not be a complete record of arrests. These official measures of criminal activity are compatible with qualitative studies that focus on the histories of abuse reported by convicted/institutionalized women and men.

Independent Variables

Control variables are included for age, race, and gender. Approximately 99% of the sample was 18 years of age or older at the time of the data collection for juvenile and adult arrest records. As a result, age is not included in the models predicting juvenile delinquency. For the models predicting involvement in adult criminality, age is included as a control for “time-at-risk” for criminality. The variable for abuse represents individuals suffering from officially reported abuse, but not neglect. Similarly, the variable for neglect represents individuals suffering from officially reported neglect, but not abuse. An additional variable is included in the models to represent subjects who suffered from both abuse and neglect.

To a certain extent, these official reports are more reliable than self-reported maltreatment and delinquency, because they avoid the self-report bias associated with sensitive

or stigmatizing survey or interview questions. However, these official reports may be influenced by biases inherent in the child protection and criminal justice systems. To the extent that this is true, the current findings should be most similar to those of Daly (1994) whose measures of maltreatment for institutionalized men and women stem from reports of pre-sentence investigators.

RESULTS

Table 1 provides the coding and descriptive statistics for the variables included in the statistical analyses. Differences in the percentage of individuals involved in both juvenile delinquency and adult criminality vary across the maltreated and control groups. Whereas 26.0% of the maltreated individuals have a juvenile arrest record, only 16.8% of the individuals in the control group have a juvenile arrest record. Similarly, 28.3% of those in the maltreated group have an adult arrest record, whereas only 20.2% of those in the control group have an adult arrest record. The multivariate analysis will examine these relationships controlling for the effects of age, gender, and race.

TABLE 1 ABOUT HERE

Table 1 indicates that the sample is approximately equally divided between males and females. Roughly two-thirds of the sample is white and about one-third of the subjects are African-American or Hispanic. The mean age for the full sample, maltreated group, and control group is approximately 26 years. Concerning the types of maltreatment, the majority of the maltreated youth suffered from neglect (66.5%). An additional 22.1% of the maltreated youth suffered only from abuse, and the remaining 10.7% suffered from both abuse and neglect.

Table 2 includes the bivariate correlation matrix. Of particular interest is the relationship between juvenile delinquency, adult criminality, and abuse. Whereas neglect is positively related to delinquency and adult criminality, abuse and the combination of abuse and neglect are essentially unrelated to delinquency and adult criminality. In addition, being male, older, and of minority racial status are all positively related to delinquency and criminality.

TABLE 2 ABOUT HERE

Main Effects

The logistic regression model in Table 3 allows a test of the first two hypotheses. This model examines the effects of abuse, neglect, and the combination of abuse and neglect on juvenile delinquency, controlling for race and gender. In support of hypothesis 1, experiencing neglect has a significant impact on juvenile delinquency, almost doubling the odds of a juvenile arrest record. Child abuse also has a significant impact on juvenile delinquency, which supports hypothesis 2. Surprisingly, the combination of experiencing both abuse and neglect does not have a significant effect on juvenile delinquency.

TABLE 3 ABOUT HERE

The model in Table 4 allows a test of the third hypothesis. The dependent variable for this model is adult criminality. In support of hypothesis 3, abuse, neglect, and the combination of abuse and neglect all have a significant impact on adult criminality, controlling for age (representing time at risk for an adult criminal record), race, and gender. The

combination of abuse and neglect has the largest effect of the maltreatment variables, more than doubling the odds of an adult arrest record. Another important aspect of this model is the large gender effect. Controlling for the effect of all other independent variables, males are 5 times more likely than females to have an adult arrest record.

TABLE 4 ABOUT HERE

Table 5 presents a model that allows a test of the psychogenic perspective versus the life course perspective. This model includes a control variable representing involvement in juvenile delinquency. The inclusion of this variable does not mediate the effects of any of the maltreatment variables. This finding contradicts hypothesis 4, and provides support for the psychogenic perspective. That is, child maltreatment exerts a significant direct effect on adult criminal behavior, over and beyond the effects of cumulative continuity and the labeling processes that promote a criminal career.

TABLE 5 ABOUT HERE

Gender Differences

The final segment of the analysis examines the possibility of gender differences in the effect of maltreatment on criminal activity. In order to test for gender differences, separate models are presented for the female and male subgroups, allowing a comparison of the corresponding odds-ratios for each maltreatment variable. In addition, Tables 6, 7, and 8 present the relevant z -values² and significant levels testing the null hypothesis of equality of the logistic

regression coefficients across gender. Table 6 shows that all three maltreatment variables have a significant impact on the juvenile delinquency of females. In comparison, only neglect has a significant impact on male delinquency, and neglect has a larger effect on the delinquency of males as compared to females. Of greatest interest in this model, though, is the effect of being both abused and neglected. This type of victimization increases the odds of female delinquency by nearly three times that of the control group. In contrast, the parameter estimate for abuse and neglect in the male sub-group is not significant. The corresponding z -value (2.191, $p < .05$) is significant, indicating that we can reject the null hypothesis of the equality of parameter estimates across gender.

TABLE 6 ABOUT HERE

The logistic regression model in Table 7 compares the differential effects of victimization on the adult criminality of females and males. Similar to the previous model, all three forms of victimization exert a significant effect on the criminality of females, but only neglect exerts a significant effect on males criminality. The coefficients representing maltreatment are larger for females as compared to males for each type of maltreatment, but the relevant z -values indicate that none of the gender differences are significant.

TABLE 7 ABOUT HERE

The final logistic regression models, presented in Table 8, examine gender differences in the effects of maltreatment on adult criminality, controlling for involvement in juvenile

delinquency. Additional gender differences become apparent in these models. The male sub-group is most consistent with the *life course* perspective. The inclusion of juvenile delinquency in this model mediates the effect of neglect on adult criminality. However, involvement in juvenile delinquency increases the odds of an adult criminal record by nearly five times. Thus, none of the maltreatment variables exert a direct effect on adult criminality, but neglect influences this adult outcome indirectly through involvement in juvenile delinquency. Each of the variables representing maltreatment has a stronger effect on female criminality, but the *z*-values show that these are not significant differences between the subgroups. The female model is more compatible with the *psychogenic* perspective of the effects of maltreatment on adult criminality. With the inclusion of juvenile delinquency in the model, neglect and the combination of abuse and neglect maintain significant direct effects on adult criminality.

TABLE 8 ABOUT HERE

The differences between the male and female subgroups in the effects of maltreatment over the life course become most obvious through a comparison of figures combining the models in Tables 6 and 8. These figures include the regression models in Table 6, in which juvenile delinquency is the dependent variable and the regression models in Table 8, in which adult criminality is the dependent variable and delinquency is a control variable. When only significant paths are included in the diagrams in Figures 2 and 3, it is apparent that child maltreatment is a much greater influence on criminal involvement for the female subgroup.

FIGURE 2 ABOUT HERE

FIGURE 3 ABOUT HERE

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to use a prospective research design to model the effects of child maltreatment on criminal involvement over the life course. First, I examined the effects of substantiated child neglect and child abuse on having an official arrest record for juvenile delinquency and/or adult criminality. In addition, I tested for gender differences in this relationship that have been suggested by studies of institutionalized women. An examination of the full sample provided evidence for the first two hypotheses: both abuse and neglect significantly increased the odds of involvement in juvenile delinquency. In support of hypothesis 3 and consistent with Widom's (1989b) study that collapsed abuse and neglect into one measure of maltreatment, the child maltreatment variables also increased rates of adult criminality. In the full sample, support was found for a psychogenic perspective and the assertion that the psychological damage inflicted by child maltreatment continues to influence adult criminality after controlling for involvement in juvenile delinquency and the associated cumulative continuity of negative consequences that results from one's involvement in the criminal justice system.

Through an analysis of the female and male subgroups in the sample, however, important gender differences emerge. When the female and male models are compared, it becomes apparent that maltreatment influences criminality through a greater number of significant paths

for females as compared to males. The combination of abuse and neglect has a particularly detrimental effect on female delinquency, and this effect is significantly larger than the corresponding effect on male delinquency. Thus, this study finds moderate support for the assertion that child maltreatment exerts a stronger influence on the criminality of female victims. Finally, the relationship between the maltreatment of females on their subsequent criminality fits both a life course and a psychogenic perspective. Maltreatment exerts a direct effect on juvenile delinquency as well as a direct effect on adult criminality, controlling for involvement in juvenile delinquency. In addition, both abuse and neglect influence adult criminality indirectly through involvement in juvenile delinquency and association with the criminal justice system. These findings fit nicely with Daly's (1994) conception of "harmed and harming" women for whom the trauma of maltreatment influences participation in criminalized activity throughout the life course. Adult criminality is not simply a result of the stigmatization of involvement in the criminal justice system as a youth. Rather, the psychological impact of maltreatment appears to maintain an influence on the victim's adult behavior through the process of interactional continuity.

A different pattern is observed for the male subgroup. For males, involvement in juvenile delinquency mediates the effects of neglect on adult criminality. Thus, child maltreatment does not exert a significant effect on adult criminality independent of previous involvement in juvenile delinquency. Maltreatment influences adult criminal behavior only through the indirect effect of juvenile delinquency and the effects of labeling resulting from associations with the criminal justice system.

Because maltreatment influences female criminality through multiple pathways (see Figures 2 and 3), this study provides moderate support for the assumption that maltreatment has

a more substantial effect on female, as compared to male criminality. However, these findings suggest additional quantitative and qualitative research is needed to accurately portray the effects of child maltreatment over the life course for females and males. Qualitative studies of female offenders should be complemented by control groups of male offenders and non-institutionalized individuals. Only in this manner can we avoid the dangers of inappropriate generalizations and conclusions. Moreover, additional quantitative research is needed to examine the effects of maltreatment on self-reported delinquency and criminality. Smith and Thornberry (1995) have made an important contribution to this effort, but have not taken gender differences into account.

Conclusions

The empirical analyses provide a number of results that deserve additional theoretical attention. One surprising finding is that the combination of abuse and neglect was not found to have a significant effect on juvenile arrest records for the male subgroup or the full sample. In contrast, the combination of these forms of maltreatment has a strong, significant effect on arrests for the female sample. A possible explanation for this finding may be derived from Chesney-Lind and Sheldon's (1998) examination of the criminalization of women. These authors assert that attempts by girls to escape from abusive families (in the form of drug and alcohol use, running away, etc.) have been criminalized. They suggest that the victimizers of these girls have the ability to invoke official agencies of social control in their efforts to keep the victims in the home. When girls attempted to escape from the abuse, parents historically encouraged agencies of the state to enforce their return to the home. To their detriment, girls were more likely than boys to be referred to court by their parents instead of law enforcement agencies (Chesney-Lind and Sheldon 1998). Once labeled, these girls were at greater risk for subsequent offending.

Based on this scenario, parents may be neglectful of their daughters' needs while simultaneously relying on abuse and official agents of the state to control their daughters. These circumstances would predict the significant effect of a combination of abuse and neglect on girls' juvenile arrest records.

In contrast to the female sample, the results suggest that neglect alone influences the likelihood of arrest records for males, but neglect combined with abuse does not influence arrest records of males. According to Chesney-Lind and Sheldon's (1998) argument, abusing parents are not as likely to rely on official agents to control their sons. As a result, whereas neglect may free boys to commit delinquency, abuse combined with neglect may serve as a control on boys' deviant behavior. Moreover, even if abuse and neglect does increase delinquency among boys, the criminalization argument is addressing *official* involvement with the criminal justice system, not delinquency per se. Additional research examining both official arrest rates and self-reports of criminal activity would be useful to further illuminate the processes resulting in the criminalization of women. If Chesney-Lind and Sheldon are correct, then the gap between self-reported criminal behavior and arrests for criminal behavior should be narrower for females as compared to males. In other words, if parents assist official agents of social control in exerting greater control over abused girls, then female delinquency will be more likely than male delinquency to result in an arrest.

The finding of a non-significant effect of the combination of abuse and neglect on juvenile delinquency for the full sample and male sub-group is strikingly similar to an earlier research project examining the developmental sequelae of child maltreatment in infancy (Egeland and Sroufe 1981; Egeland, Sroufe, and Erickson 1983). In a prospective study of the antecedents of child maltreatment for high-risk families, these researchers were confronted with

a perplexing finding: multiple forms of maltreatment were *less* detrimental to children's socioemotional well-being than the experience of a single form of maltreatment. For instance, Egeland and Sroufe (1981) found that psychological unavailability (of parents) *alone* had more detrimental consequences on socioemotional well-being than the *combination* of psychological unavailability and physical abuse. Moreover, victims of neglect alone scored high on an anger rating, whereas the neglected and abused group were more likely to express less confrontational frustration and whining. In a follow-up study, Egeland et al. found that neglected children were the least flexible and least creative of all the maltreated groups, lacking the necessary self-esteem and agency "to cope effectively with the environment" (1983:468). Finally, the neglected children that did *not* suffer from physical abuse received the lowest ratings of all maltreated groups in both agency and self-esteem, presented the least positive and most negative affect, were most dependent, and demonstrated the lowest ego control (Egeland et al. 1983:469). In summary, the research of Egeland et al. mirror the current findings suggesting that neglect alone has more substantial negative effects on social outcomes than neglect combined with physical abuse.

Although the authors do not distinguish between boys and girls in their analysis, they provide a possible explanation to this quandary that is applicable to the current findings. Egeland and Sroufe suggest that "the contact that occurred in the form of physical abuse was better than no contact at all" (1981:89). In other words, physical abuse may not exacerbate the negative outcomes of neglect, because the victims prefer the "negative" parent-child interaction of abuse to an alternative of neglectful parenting or an absence of interaction.

The empirical results and the arguments presented thus far provide substantial evidence that neglect should be recognized as a detrimental form of maltreatment that serves as a

precursor for criminal activity. Neglect was found to predict juvenile and adult arrest records for both males and females. In stark contrast, abuse was not associated with juvenile or adult arrests for the male sample. A substantial impact of neglect on delinquency was also found in the research of Zingraff and his colleagues (Zingraff et al. 1994). These authors suggest two reasons for the consistently strong relationship between neglect and delinquency. First, the lack of parental attention and parental control associated with neglect is likely to have an especially adverse effect on a child's cognitive and normative development. Second, neglect is highly associated with racial and economic disadvantage (Zingraff et al. 1994), and neither their data, nor the Widom (1994) data examined in this study provide a satisfactory control for socioeconomic status. Thus, measures of neglect may be reflecting not only the impact of maltreatment but also the relationship between poverty and official arrest rates.

Although the strength of the relationship between neglect and delinquency is of great importance for a complete understanding of the etiology of delinquency and crime, the discovery of gender differences in the relationship between abuse and criminality is the most important contribution of this study. A number of difficulties confront an interpretation of this finding. First, in a previous analysis of this data focusing only on arrests for *violent* offenses, Widom (1989c) reports that more females are sexually abused than males, and that individuals experiencing only sexual abuse have the lowest probability of arrests for violent offenses (even lower than the control group). Similarly, Zingraff et al. (1994) found that sexual abuse did not have an important impact on delinquency in their sample of maltreated youth. If females experience more sexual abuse, and sexual abuse is essentially unrelated to criminality, then a strong relationship between abuse and female arrest rates (such as that found in this study)

should not exist. A more adequate explanation is required to explain our findings of a persistent relationship between females' abuse and criminality.

A return to the findings of Daly's (1994) in-depth study of male and female inmates provides some clues to an explanation of the gender differences in the abuse-crime relationship. Within her category of "harmed and harming women" that suffered from child maltreatment, three subgroups are distinguished based on mediating circumstances that linked the maltreatment to later criminality: women whose violence resulted from alcohol consumption, women whose criminality was necessitated through a need to support drug habits, and women who could not cope with their immediate circumstances as a result of psychological problems (Daly 1994:47-55). Thus, drug, alcohol, and psychological problems support mechanisms of interactional continuity through which early abuse resulted in subsequent criminal activities. Consistent with a psychogenic perspective, adult criminality for these women is not simply a consequence of involvement with juvenile delinquency, but is a symptom of "a lingering psychic disorder whose etiology is traced directly to characteristics of the original (abuse) experience" (Browning and Laumann 1997:541).

In contrast to the female victims of child maltreatment, Daly states that the "harmed and harming men" in her study "were not characterized by family members as 'out of control,' nor did they exemplify alcohol related violence as much as the women did" (1994:71). Daly argues that victimization in the early years of these men's lives did not result in violent or acting out behavior characteristic of harmed and harming women, but resulted instead in a life without purpose and substance use ("retreatism" in Merton's (1938) sense of the word).

More complete explanations of the gender differences in the abuse-criminality relationship should be pursued because the results of Daly's (1994) research and the current

analyses contrast with traditional images of female offending. For instance, Widom argues that, whereas male victims of abuse may express their aggression outwardly, females express subtler manifestations of abuse such as depression (1989b:266). The results of this study and Daly's (1994) research deny the role of a "cycle of violence" for males that links child abuse to their violent criminal behavior. Moreover, Daly's (1994) research concurs that abuse results in "subtler" outcomes such as psychological problems and substance abuse for females, but these outcomes tend to link childhood victimization with serious criminal behaviors in her sample. Additional quantitative and qualitative research is necessary for a more thorough comprehension of the complex relationships between gender roles, childhood victimization, and crime.

Finally, as noted throughout this chapter, interpretations of this research must take into account the fact that the measures of maltreatment and the measures of criminal involvement stem from official sources. Because this data was collected before the passage of "mandatory report" laws, the individuals in the maltreated group may represent victims of the most severe instances of abuse and neglect. In addition, subsequent interactions with the criminal justice system may in part reflect the stigmatization and labeling effects of official court processing associated with the incident of maltreatment. A final limitation of this study is the lack of information regarding the subjects' adult life situations. Measures of life transitions and trajectories in addition to juvenile delinquency would provide a stronger test of the psychogenic perspective versus the life course perspective.

NOTES

1. Evidence of child maltreatment in this study was determined through the examination of pre-sentence investigations, rather than through face-to-face interviews. As a result, the findings of this study may be influenced by the perceptions and biases of the pre-sentence investigators. See Daly (1994) for details.

2. The formula used to the null hypothesis of equality of regression coefficients across subgroups is given by Clogg, Petkova, and Haritou (1995:1276):

$$z = (\beta_1 - \beta_2) / [s^2(\beta_1) + s^2(\beta_2)]^{1/2}$$
 Absolute values greater than 1.96 represent a significant difference in regression coefficients across subgroups.

3. Values are changes in odds. Only significant paths are included in the diagram. The models also include background variables (not shown). Because the values in Figure 2 and Figure 3 are odds-ratios derived from logistic regression models, it is not possible to compute indirect effects.

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REFERENCES

- Alfaro, Jose D. 1981. "Report on the Relationship between Child Abuse and Neglect and Later Socially Deviant Behavior." Pp. 175-219 in *Exploring the Relationship between Child Abuse and Delinquency*, edited by R. J. Hunner and Y. E. Walker. Montclair, NJ: Allanhel, Osmun.
- Bolton, F. G., John W. Reich, and Sara E. Gutierrez. 1977. "Delinquency Patterns in Maltreated Children and Siblings." *Victimology* 2:349-357.
- Browne, Angela and David Finkelhor. 1986. "Initial and Long-Term Effects: A Review of the Research." Pp. 143-179 in *A Sourcebook on Child Sexual Abuse*, edited by D. Finkelhor. Beverly Hills: Sage.
- Browning, Christopher R. and Edward O. Laumann. 1997. "Sexual Contact Between Children and Adults: A Life Course Perspective." *American Sociological Review* 62:540-560.
- Burgess, Ann W., Carol R. Hartman, and Arlene McCormack. 1987. "Abused to Abuser: Antecedents of Socially Deviant Behaviors." *American Journal of Psychiatry* 144: 1431-1436.
- Caspi, Avshalom, Glen H. Elder, Jr., and Daryl J. Bem. 1987. "Moving against the World: Life-Course Patterns of Explosive Children." *Developmental Psychology* 23:308-13.
- Chesney-Lind, Meda and N. Rodriguez. 1983. "Women under Lock and Key." *The Prison Journal* 63:47-65.
- Chesney-Lind, Meda and Randall G. Sheldon. 1998. *Girls, Delinquency, and Juvenile Justice*. (2nd ed.) Belmont, CA: Wadsworth Publishing.
- Clogg, Clifford C., Eva Potkova, and Adamantios Haritou. 1995. "Statistical Methods for Comparing Regression Coefficients between Models." *American Journal of Sociology* 100: 1261-1293.
- Conaway, Loren P. and David J. Hansen. 1989. "Social Behavior of Physically Abused and Neglected Children: A Critical Review." *Clinical Psychology Review* 9:627-652.
- Daly, Kathleen. 1994. *Gender, Crime, and Punishment*. New Haven, CT: Yale University Press.
- Egeland, Byron and Alan Sroufe. 1981. "Developmental Sequelae of Maltreatment in Infancy." *New Directions for Child Development* 11:77-92.
- Egeland, Byron, L. Alan Sroufe, and Martha Erickson. 1983. "The Developmental Consequence of Different Patterns of Maltreatment." *Child Abuse & Neglect* 7:459-469.

- Glueck, Sheldon and Eleanor Glueck. 1950. *Unraveling Juvenile Delinquency*. Cambridge, MA: Harvard University Press.
- Gray, Ellen. 1981. "The Link Between Child Abuse and Delinquency: What We Know and Recommendations for Policy and Research." Pp. 109-123 in *Family Abuse and Its Consequences: New Directions in Research*, edited by G. T. Hotaling, D. Finkelhor, J. T. Kirkpatrick and M. A. Straus. Newbury Park, CA: Sage.
- Hagan, John, A. R. Gillis, and John Simpson. 1985. "The Class Structure of Gender and Delinquency: Toward a Power-Control Theory of Common Delinquent Behavior." *American Journal of Sociology* 90:1151-1178.
- Hagan, John and Bill McCarthy. 1997. *Mean Streets: Youth Crime and Homelessness*. New York: Cambridge University Press.
- Henry, Bill, Terrie E. Moffitt, Avshalom Caspi, John Langley, and Phil A. Silva. 1994. "On the 'Remembrance of Things Past': A Longitudinal Evaluation of the Retrospective Method." *Psychological Assessment* 6:92-101.
- Hout, Michael and Andrew Greeley. 1998. "What Church Officials' Reports Don't Show: Another Look at Church Attendance Data." *American Sociological Review* 63: 113-119.
- James, Jennifer. 1976. "Motivations for Entrance into Prostitution." Pp. 177-205 in *The Female Offender*, edited by L. Crites. Lexington, MA: Lexington Books.
- James, Jennifer. and J. Myerding. 1977. "Early Sexual Experience and Prostitution." *American Journal of Psychiatry* 134:1382-1385.
- Janus, Mark-David, Francis. X. Archambault, Scott W. Brown, and Lesley A. Welsch. 1995. "Physical Abuse in Canadian Runaway Adolescents." *Child Abuse & Neglect* 19:433-447.
- Kakar, Suman. 1996. *Child Abuse and Delinquency*. Lanham, MD: University Press of America.
- Kratcoski, Peter C. 1982. "Child Abuse and Violence Against the Family." *Child Welfare* 61:435-444.
- Lewis, Dorothy Otnow and Shelley S. Shanok. 1977. "Medical Histories of Delinquent and Nondelinquent Children: An Epidemiological Study." *American Journal of Psychiatry* 134:1020-1025.
- Martin, Harold P. and Patricia Beezley. 1980. "Behavioral Observations of Abused Children." Pp. 435-450 in *Child Abuse: Commission and Omission*, edited by J. V. Cook and R. T. Bowles. Butterworths.

- McCord, Joan. 1983. "A Forty Year Perspective on Effects of Child Abuse and Neglect." *Child Abuse and Neglect* 7:265-270.
- McCormack, Arlene, Mark-David Janus, and Ann Wolbert Burgess. 1986. "Runaway Youths and Sexual Victimization: Gender Differences in an Adolescent Runaway Population." *Child Abuse & Neglect* 10:387-395.
- Merton, Robert K. 1938. "Social Structure and Anomie." *American Sociological Review* 3:672-682.
- Messerschmidt, James W. 1986. *Capitalism, Patriarchy, and Crime: Towards a Socialist Feminist Criminology*. Totowa, NJ: Rowman and Littlefield.
- Miller, Eleanor M. 1986. *Street Woman*. Philadelphia: Temple University Press.
- Mouzakitis, Chris M. 1981. "An Inquiry into the Problem of Child Abuse and Juvenile Delinquency." In R. J. Hunner and Y. E. Walkers (eds.), *Exploring the Relationship Between Child Abuse and Delinquency*. Montclair, NJ: Allenheld, Osmun.
- Pressor, Stanley and Linda Stinson. 1998. "Data Collection Mode and Social Desirability Bias in Self-Reported Religious Attendance." *American Sociological Review* 63: 137-145.
- Richie, Beth E. 1996. *Compelled to Crime: The Gender Entrapment of Battered Black Women*. New York: Routledge.
- Rush, Florence. 1980. *The Best Kept Secret: Sexual Abuse of Children*. New York: McGraw-Hill.
- Sampson, Robert J. and John H. Laub. 1993. *Crime in the Making: Pathways and Turning Points through Life*. Cambridge, MA: Harvard University Press.
- Scudder, Robert G., William R. Blount, Kathleen M. Heide, and Ira J. Silverman. 1993. "Important Links Between Child Abuse, Neglect, and Delinquency." *International Journal of Offender Therapy and Comparative Criminology* 37: 315-323.
- Silbert, Mimi H. and Ayala M. Pines. 1981. "Sexual Child Abuse as an Antecedent to Prostitution." *Child Abuse & Neglect* 5:407-411.
- Smith, Carolyn and Terence P. Thornberry. 1995. "The Relationship Between Childhood Maltreatment and Adolescent Involvement in Delinquency." *Criminology* 33: 451-482.
- Spohn, Ryan E. 1998. "A Theoretical Development and Empirical Assessment of the Effects of Child Abuse and Neglect on Juvenile Delinquency." Unpublished Master's Thesis, Texas A&M University.

- U.S. Department of Health and Human Services. 1998. *Child Maltreatment 1996: Reports from the States to the National Child Abuse and Neglect Data System*. Washington, DC: U.S. Government Printing Office.
- Wick, Steven C. 1981. "Child Abuse as Causation of Juvenile Delinquency in Central Texas." Pp. 233-239 in *Exploring the Relationship between Child Abuse and Delinquency*, edited by R. J. Hunner and Y. E. Walker. Montclair, NJ: Allenheld, Osmun & Co. Press.
- Widom, Cathy Spatz. 1989a. "Child Abuse, Neglect, and Adult Behavior: Research Design and Findings on Criminality, Violence, and Child Abuse" *American Journal of Orthopsychiatry* 59:355-367.
- . 1989b. "Child Abuse, Neglect, and Violent Criminal Behavior." *Criminology* 27: 251-271.
- . 1989c. "The Cycle of Violence." *Science* 244:160-166.
- . 1989d. "Does Violence Beget Violence? A Critical Examination of the Literature." *Psychological Bulletin* 106:3-28.
- . 1991. "Avoidance of Criminality in Abused and Neglected Children." *Psychiatry* 54: 162-174.
- . 1994. *Child Abuse, Neglect, and Violent Criminal Behavior in a Midwest Metropolitan Area of the United States, 1967-1988* [MRDF]. Compiled by the Departments of Criminal Justice and Psychology, Indiana University. ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [producer and distributor].
- Widom, Cathy Spatz and M. Ashley Ames. 1994. "Criminal Consequences of Childhood Sexual Victimization." *Child Abuse & Neglect* 18:303-318.
- Williams, Linda Meyer. 1995. "Recovered Memories of Abuse in Women with Documented Child Sexual Victimization Histories." *Journal of Traumatic Stress* 8:649-673.
- Zingraff, Matthew T., Jeffrey Leiter, Kristen A. Myers and Matthew C. Johnson. 1993. "Child Maltreatment and Youthful Problem Behavior." *Criminology* 31:173-202
- Zingraff, Mathew T., Jeffrey Leiter, Mathew C. Johnson, and Kristen A. Myers. 1994. "The Mediating Effect of Good School Performance on the Maltreatment- Delinquency Relationship." *Journal of Research in Crime and Delinquency* 31:62-91.

Figure 1.

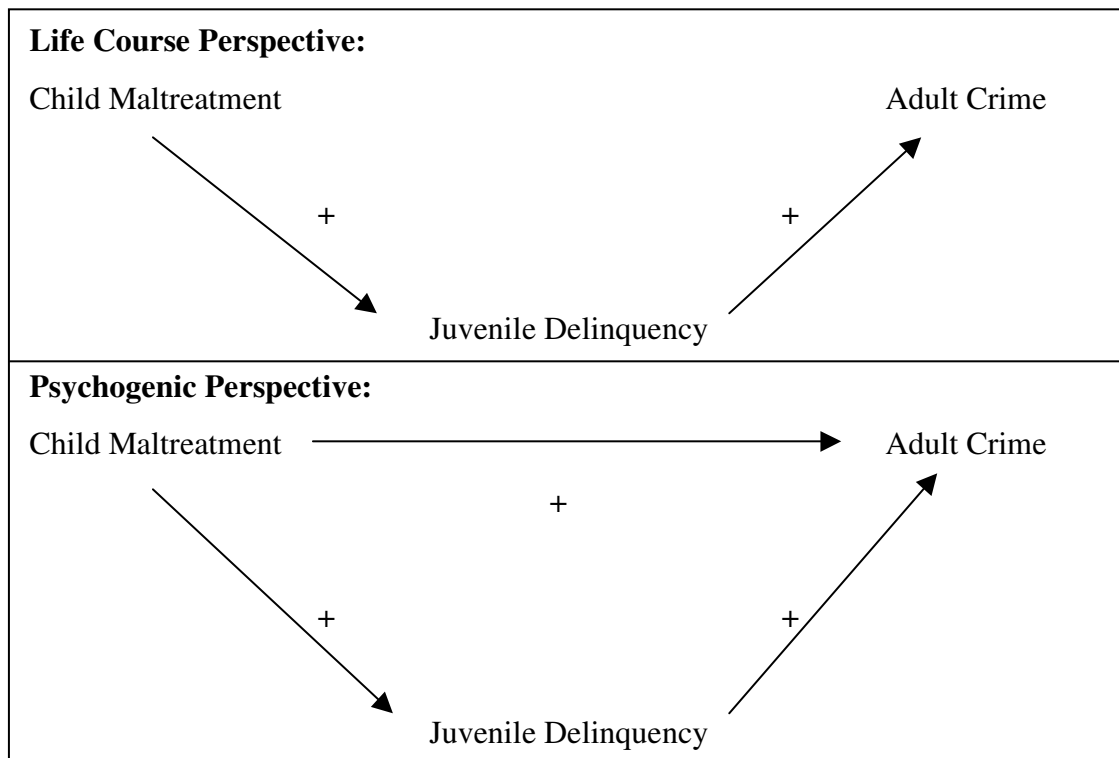


Figure 2.

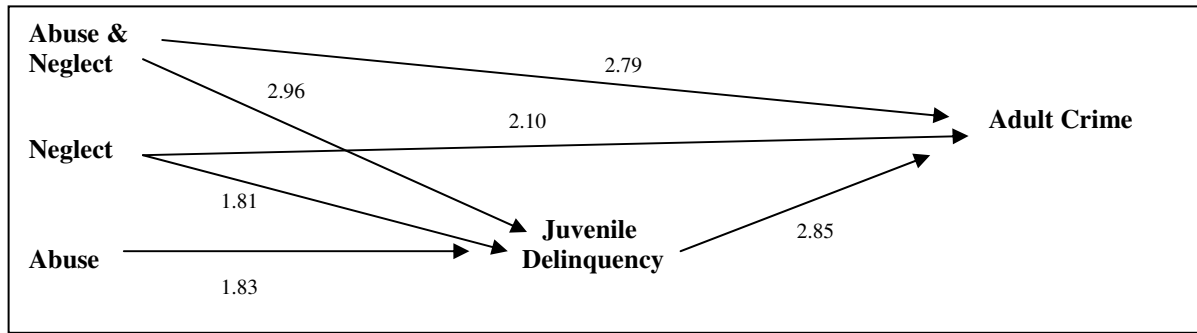


Figure 3.

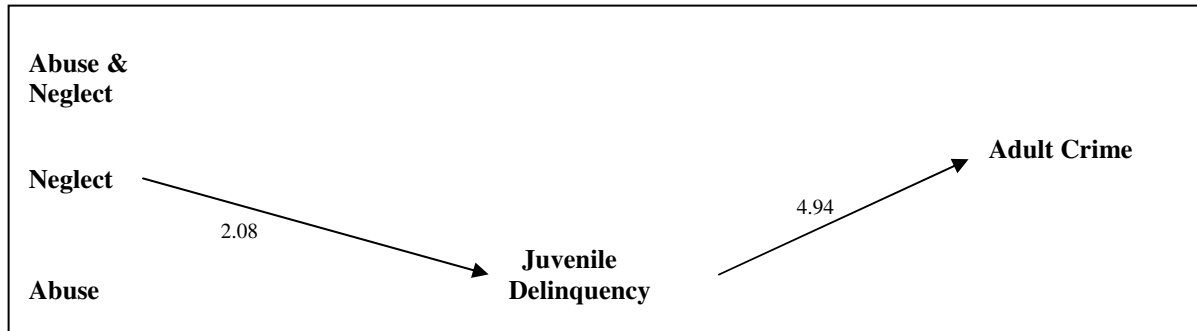


Table 1. Descriptive Statistics

Variables	Coding	Pooled Group		Maltreated Group		Control Group	
		N = 1575		N = 908		N = 667	
		N	%	N	%	N	%
Categorical Variables							
Race ^a	1 = Minority	519	33%	286	31.5%	233	34.9%
	0 = White	1041	66.1%	607	66.9%	434	65.1%
Sex	1 = Male	777	49.3%	443	48.8%	334	49.9%
	0 = Female	798	50.7%	465	51.2%	333	50.1%
Abuse Only	1 = Yes	201	12.8%	201	22.1%		
	0 = No	1374	87.2%	707	77.9%		
Neglect Only	1 = Yes	604	38.3%	604	66.5%		
	0 = No	971	61.7%	304	33.5%		
Abuse & Neglect	1 = Yes	97	6.2%	97	10.7%		
	0 = No	1478	93.8%	811	89.3%		
Juvenile Delinquency	1 = Yes	348	22.1%	236	26.0%	112	16.8%
	0 = No	1227	77.9%	672	74.0%	555	83.2%
Adult Criminality	1 = Yes	392	24.9%	257	28.3%	135	20.2%
	0 = No	1183	75.1%	651	71.7%	532	79.8%
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Continuous Variable							
Age		26.04	3.52	26.01	3.52	26.09	3.53

^a The ethnicity of four of the subjects in the minority group is described as Hispanic. The ethnicity of the remaining minority cases is Black. Information on ethnicity is missing for 15 cases in the maltreated sample.

Table 2. Correlation Matrix for the Maltreated Group

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1) Juvenile Del.	1.000							
2) Adult Criminality	.333*	1.000						
3) Age	.062	.163*	1.000					
4) Minority	.125*	.128*	.039	1.000				
5) Male	.151*	.303*	-.072*	.002	1.000			
6) Abuse	-.006	-.014	.066*	-.049	-.130*	1.000		
7) Neglect	.122*	.095*	-.056*	.066*	.086*	-.303*	1.000	
8) Abuse & Neglect	-.009	.008	.003	-.130*	-.020	-.098*	-.203*	1.000

* $p \leq .05$

Table 3. Logistic Regression Model of the Effects of Child Maltreatment on Juvenile Delinquency

	B	S.E.	Exp(B)
Minority	0.640*	.130	1.897
Male	0.759*	.129	2.135
Neglect	0.677*	.140	1.969
Abuse	0.569*	.208	1.767
Abuse & Neglect	0.495	.279	1.641
Intercept	-2.286	.146	

Model $\chi^2 = 84.69$, $p = .000$

* $p \leq .05$

Table 4. Logistic Regression Model of the Effects of Child Maltreatment on Adult Criminality

	B	S.E.	Exp(B)
Age	0.147*	.020	1.159
Minority	0.688*	.133	1.989
Male	1.610*	.139	5.000
Neglect	0.561*	.142	1.753
Abuse	0.578*	.211	1.782
Abuse & Neglect	0.765*	.271	2.148
Intercept	-6.527	.568	

Model $\chi^2 = 239.03, p = .000$

* $p \leq .05$

Table 5. Logistic Regression Model of the Effects of Child Maltreatment on Adult Criminality, Controlling for Involvement in Juvenile Delinquency

	B	S.E.	Exp(B)
Age	0.146*	.021	1.157
Minority	0.540*	.140	1.715
Male	1.513*	.145	4.539
Neglect	0.394*	.149	1.483
Abuse	0.465*	.220	1.592
Abuse & Neglect	0.714*	.274	2.043
Juv. Delinquency	1.398*	.143	4.047
Intercept	-6.676	.594	

Model $\chi^2 = 334.33, p = .000$

* $p \leq .05$

Table 6. Logistic Regression Models and z-Values for Test of Differences in the Effects of Child Maltreatment on Juvenile Delinquency, Estimated Separately by Gender

Variables	Females			Males			Z-Values
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	
Minority	0.505*	.204	1.656	0.734*	.170	2.082	
Neglect	0.592*	.232	1.807	0.732*	.177	2.080	-0.482
Abuse	0.606*	.286	1.834	0.536	.310	1.709	0.167
Abuse & Neglect	1.085*	.370	2.958	-0.172	.438	0.842	2.191*
Intercept	-2.248	.194		-1.555	.153		
	Model $\chi^2 = 17.02$, p = .002			Model $\chi^2 = 40.14$, p = .000			

* $p \leq .05$

Table 7. Logistic Regression Models and z-Values for Test of Differences in the Effects of Child Maltreatment on Adult Criminality, Estimated Separately by Gender

Variables	Females			Males			Z-Values
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	
Age	0.132*	.034	1.141	0.155*	.024	1.168	
Minority	0.647*	.225	1.909	0.707*	.166	2.028	
Neglect	0.834*	.265	2.302	0.449*	.170	1.567	1.225
Abuse	0.707*	.321	2.028	0.574	.296	1.775	0.305
Abuse & Neglect	1.199*	.419	3.317	0.506	.349	1.658	1.272
Intercept	-6.260	.967		-1.555	.153		
	Model $\chi^2 = 37.83, p = .000$			Model $\chi^2 = 72.99, p = .000$			

* $p \leq .05$

Table 8. Logistic Regression Models and Z-Values for Test of Differences in the Effects of Child Maltreatment on Adult Criminality Controlling for Involvement in Juvenile Delinquency, Estimated Separately by Gender

Variables	Females			Males			z-Values
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	
Juv. Delinquency	1.046*	.246	2.845	1.597*	.182	4.936	-1.809
Age	0.127*	.035	1.136	0.158*	.026	1.171	
Minority	0.552*	.230	1.737	0.530*	.177	1.699	
Neglect	0.744*	.269	2.104	0.229	.181	1.257	1.588
Abuse	0.622	.326	1.862	0.456	.316	1.578	0.365
Abuse & Neglect	1.025*	.427	2.787	0.600	.361	1.822	0.761
Intercept	-6.260	.967		-5.462	.699		
	Model $\chi^2 = 54.63$, p = .000			Model $\chi^2 = 154.58$, p = .000			

* $p \leq .05$