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Pathways from Dependency and Neglect to Delinquency: Part Two

A project of the National Institute for Law and Equity (NILE)¹

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Pathways from Dependency and Neglect to Delinquency- Part II

Abstract

Families involved in dependency and neglect cases are thought to provide a looking glass into the future of children who will engage in status offenses and delinquent behavior. In this Mid-South study researchers posed the hypothesis that “there is a direct correlation between maltreatment and delinquency”. Maltreatment is defined as a child, under the age of 18, who is adjudicated under the law as “Dependent and Neglected or in need of Protective Services because of neglect, physical abuse and/or sexual abuse.” Data were collected from official court records on 1,062 children alleged maltreated (Dependency Cohort) and 549 children alleged delinquent (Delinquency Cohort). In the Dependency Cohort, data were collected prospectively from the child’s first maltreatment complaint. The Delinquency Cohort, while not a control group, provided a retrospective look at a child’s history in order to determine if maltreatment was present as a risk factor. Among the questions studied were: 1) What is the relationship, if any, between the frequency, severity and duration of maltreatment and the different types of delinquent offenses?; 2) What is the relationship, if any, between the presence of multiple types of maltreatment and different offending types?; and 3) What is the relationship, if any, between age of onset of delinquent conduct and the frequency and severity of offenses? The basic analytic strategy used OLS regression to examine definitions of crime and delinquency and predictors of it used by Cathy Spatz Widom (1989), Smith and Thornberry (1995) and Zingraff *et al.* (1993). Together they represented a broad analysis across the country of delinquency and early childhood abuse. In both the Dependency and Delinquency samples the highest rates of offending occurred in Low Severity category offenses. Regression analysis predicted that Physical Abuse was the most significant predictor for Low Severity, High Severity and Total delinquency offenses across all models. Results also indicated that children maltreated before age 12 exhibited higher rates of total delinquency and were more likely to engage in High Severity delinquency. Focus groups were conducted with professionals who had contact or worked with children and families. Researchers also conducted focus groups with incarcerated boys, with incarcerated girls and one with parents of incarcerated children. The qualitative findings from the focus groups supported the quantitative findings of the relationship between maltreatment and delinquent conduct.

Pathways from Dependency and Neglect to Delinquency: Part II

Summary

I. Introduction

The conventional wisdom is that there is a greater likelihood that a child who is maltreated will become delinquent and/or engage in future criminal conduct. This theory, studied in many other areas of the country, is recently tested from the case histories of families who come into contact with the Juvenile Court in a major Mid-South county. Phase I of the Pathways study set out the hypothesis that “There is a correlation between dependency and neglect and delinquency”. Maltreatment in this Pathways study is defined as a child, under the age of 18, who is adjudicated “Dependent and Neglected (D&N) or in need of Protective Services because of neglect, physical abuse and/or sexual abuse.” The researchers explored the official records of over 1,500 hundred children. Additionally, focus groups were conducted among professional groups, and in Phase II among incarcerated youth and parents of incarcerated youth to provide a richer context within which to view the relationships between maltreatment and delinquency.

Researchers sought to answer the following questions to better understand the relationship of childhood maltreatment and future delinquent conduct.

- 1) What is the relationship, if any, between the frequency, severity and duration of maltreatment and the different types of delinquent offenses?
- 2) What is the relationship, if any, between the type of maltreatment and severity of delinquent offenses?
- 3) What is the relationship, if any, between the presence of multiple types of maltreatment and different offending types?

- 4) What is the relationship, if any, between a child's order of birth and risk of maltreatment?
- 5) What is the relationship, if any, between the number of out-of-home placements and risk of offending and the types of offending?
- 6) Is referral to juvenile court for maltreatment a spurious factor in delinquent conduct?
- 7) What is the age of onset of delinquent conduct and to what extent does delinquency precede maltreatment?
- 8) What is the relationship, if any, between age of onset of delinquent conduct and frequency and severity of offenses?

II. Research Design

The Pathways research was designed to examine two sets of children—those alleged dependent and neglected (D&N) and those alleged delinquent—in order to better understand the influence of maltreatment on delinquent conduct. The first group of children was selected from the dependency and neglected cases filed with the Juvenile Court in 1984 and 1985. The population of dependent and neglect cases was selected so that the researchers could obtain a picture of children from their first complaint of dependency and neglect to their 18th birthday. This prospective look allowed the researchers to study children who had aged out of the juvenile system and provided the maximum range of dispositions and placements.

The second group was selected from delinquency petitions of children 16 and 17 filed in the years 2000 and 2001. This population, of delinquent children, born in the time frame of the dependency cohort, allowed researchers to take a retrospective look at a child's history in order to determine if dependency and neglect was present as a risk factor.

Among the weaknesses in this research design is the exclusion of unreported maltreatment cases to the juvenile court, the potential for closer institutional and systemic scrutiny of families identified by the first complaint, and no control group of non-maltreated children except to the extent that non-maltreated siblings provide a proxy for such a control group.

Dependency and Neglect group data from 1984 and 1985 were provided in an electronic data file and subjected to power analysis to identify the appropriate sample size. The researchers drew a random sample of 250 cases by case identification number (**Id**) for each of the years 1984 and 1985. In 1984 the total population of dependent and neglect cases was 1,385 and 1,502 for 1985. Only those cases identified as the child's first dependency and neglect complaint were retained from the sample. As a result, the children selected in the Dependency cohort represented 347 separate families. Data were then collected on siblings of children with the first complaint, which then expanded the dependency and neglect cohort to a total of 1,062 children. This cohort then covered a range of years and potential for sibling comparisons.¹

The delinquency cohort was selected from the universe of all children who were 16 and 17 years old coming before the court charged with a delinquent offense in the years 2000 and 2001. It was hypothesized that those children, born during the time frames of the children in the dependency/neglect sample, would also have been the subjects of dependency and neglect. There were 550 juvenile records selected from a random power analysis of 5,506 legal records. One child was also in the dependency and neglect cohort and was eliminated from the delinquency cohort leaving 549 children in the sample.

Preliminary review of case records suggested that 20 occasions would capture most incidents of maltreatment and delinquency. Thus, variables collected included all delinquent

¹ Sibling comparisons were not done in this study.

charges up to 20 occasions, complaints of maltreatment up to 20 separate occurrences, and up to 20 placements and dispositions for each child. This assessment proved to be fairly accurate as less than 1% of cases exceeded 20 referrals.

III. Quantitative Analyses and Results

The researchers used cross tabular and multivariate analyses to answer the questions under study. Multivariate analysis using OLS regression examined definitions of crime and delinquency and the predictors of it used by Cathy Spatz Widom (1989), Smith and Thornberry (1995) and Zingraff et al. (1993). The current Pathways study posed many of the same basic questions about the relationship of maltreatment and the cycle of violence and regression models were developed in order to compare findings with Widom, Smith and Thornberry and Zingraff *et al.* Widom's work was selected as a major piece because of her seminal work in the field and her experimental and control group studies of maltreatment and the cycle of violence. Zingraff was selected because his work produced arguments to the contrary. Thornberry was selected because his work provided the best example of longitudinal studies. Together they represented a broad analysis across the country of delinquency and early childhood abuse.

Since the current study did not have a control group of non-maltreated subjects, the analyses of the dependency cohort focused upon the form and extent of childhood maltreatment, and its relationship to delinquent offending. The analyses of the delinquency cohort asked parallel questions and provided a retrospective test of the link between official delinquency and official maltreatment. Delinquency was analyzed in both samples as Total offenses (all delinquent cases), Low severity offenses (e.g. attempts, petit larceny, disorderly conduct),

Moderate severity offenses (e.g. possession of drug and alcohol, felony property crimes), and High severity offenses (violence, homicide, sales of drugs, weapons charges).

The regression models focused on the relationship between official reports of childhood maltreatment and delinquency. The study explored the heterogeneity within maltreatment in the dependency cohort.

IV. Focus Groups

In Phase I (2002) the researchers conducted 8 focus groups with professionals who had come in contact with or worked with troubled children and families. The participant groups were Public School Employee (teachers and guidance counselors), Juvenile Court Child Protective Service Workers, Juvenile Court Auxiliary Probation Officers, Mental Health, Law Enforcement Officers, Social Workers and Advocates (Administrators), Case worker/Social Workers (frontline), and Medical doctors. There were five basic focus group questions around which discussion centered.

1. What do you think are the main reasons children engage in delinquent and/or criminal conduct? (Risk factors) Consider from the individual, family and neighborhood/community influences.
2. What do you think are the main reasons children do not become delinquent and/or engage in criminal conduct? (Protective factors) Consider individual, family and neighborhood/community influences.
3. What do you think are the main reasons families are referred to Juvenile Court/DCS for allegations of dependency and neglect?

4. What are your top three recommendations for prevention and intervention of dependency and neglect?
5. What are your top three recommendations for prevention and intervention of delinquency, if different from number 4?

The focus group responses and discussion can be divided into 4 subject areas: Parenting Issues, Child Pathologies, Community and School Influence, and Systemic Issues.

Parenting Issues:

The major focus from all group discussions was on poor parenting skills with mention of the pathogenic problems, which include drug/alcohol abuse, and mental health problems. Every group pointed out that a major risk factor was the inability of the parent to provide a family structure, and discipline. The lack of supervision, transient (nomadic) housing patterns, no set time to eat, go to bed, do homework, go to school and for many the belief that all you have to do is clothe and feed your child in order to be a good parent. Drug abuse by parents creates a vicious cycle as the quest for drugs leads to neglect, no financial resources for necessities, ultimate bitterness of the children subjected to the cycle.

Child pathologies:

The focus here was to recognize that there might be individual differences among children that cannot be explained by poor parenting skills and that we needed explanations for children in the same family taking different paths. Children who are bio-chemically loaded at birth, or born with birth defects will present challenges to parents with the best of skills. Other potential risk factors are mental retardation and learning disabilities that raise the level of

frustration when the child is not successful in school or among his peers. On the protective side, some children show great resilience in face of many challenges.

Community and School Influence:

The focus groups' assessments of the impact of community and school could be summed up in one person's comment "The Village doesn't exist anymore". We expect too much from teachers. Socially promoting children compound problems and set them up for failure. Discipline is not only lacking in the home, but in the school and other support service systems. Fear of being sued is one reason given for restrictions in discipline.

The groups noted that community influences are important. Everyone mentioned mentors or that special person who bonds with a child and makes them feel they are important. Children with no picture of the future or who do not see success as obtainable need considerable community support.

Systemic Issues:

All agreed that there are system failures that contribute to the pathways toward delinquency. Some suggested reduced caseloads for human service and caseworkers, universal health care, intensive parenting education. Poverty cannot be ignored as a systemic problem, but no one suggests that all persons in poverty are crimogenic. Economic opportunities and family friendly after school hour programs were some of the suggested solutions.

Race in our community continues to play a large role in how the systemic issues are viewed. It was pointed out that when black children are brought into the system, they are labeled as delinquent. People look for a mental health label to help when white children are brought into the system. Labeling children presents a risk factor that is not solely racial. If a child has a

mental health problem, everyone may agree to a delinquent label in order to obtain necessary services.

Continuity of services and cross discipline collaboration is also important and one suggestion included finding ways to overcome legal and institutional barriers in order that doctors, psychologists and teachers to better communicate for the benefit of children.

Written survey

All focus group participants were asked to fill out a survey prior to their focus group discussions. The survey instrument² asked 35 questions regarding their perceptions of whom, what and why children come into the system as dependent/neglected or delinquent as well as their opinions about the relationship between dependency and neglect and delinquency. The responses were ranked on a scale from 1 to 5 from strongly agree to strongly disagree.

The most interesting response to the hypothesis “there is a correlation between dependency and neglect and delinquency” indicated that 50% Disagreed with the statement “Most children who are dependent or neglected become delinquent”. Ten percent Strongly Agreed, 32.5% Agreed, 7.5% responded Neutral/Don’t Know and No one Strongly Disagreed with the statement. In contrast, there was strong agreement that “Children subject to abuse/neglect are more likely to commit delinquent offenses.” The respondents likely preferred to gauge their opinions in terms of probabilities as in “more likely” rather than agree to the absolute declaration expressed in the term “most”. Three of the respondents mentioned the use of the term “most” but responded to the questions with explanations.

In Phase II, (2005) three focus groups were conducted: incarcerated girls, incarcerated boys and parents of incarcerated children. The incarcerated youth were given two fact situations

² See Survey in Data Collection Instruments Folder

to think about as they answered questions about the influencing events leading to delinquent conduct. They were also asked to consider what factors might prevent such conduct and their answers to all of the questions often used examples from their own experiences. When given the opportunity to consider the world under their control, changing the economic conditions of society emerged from most answers.

The responses of both the boys and girls indicated that they understood that neglect and abuse were causative factors in a child's unruly or delinquent behavior. Yet, they also accepted responsibility for their own actions and those that led them to their incarceration. The girls acknowledged the importance of listening to their mommas but perhaps more meaningfully- the majority of the boys did not mention their natural parents. The incarcerated children echoed the same themes as the professional service providers when observing that the children in the fact scenarios had "no love".

The parents group generally did not focus on the part they played in their child's behavior rather it was the child who was "looking for attention" that got them into trouble. The parents of incarcerated children echoed the theme of needing more community resources and assistance for low income working parents. They also acknowledged that they needed support in parenting. Community and school issues, systemic problems and child pathologies formed the other major risk themes.

V. Research Questions and Findings:

1. What is the relationship, if any, between the frequency, severity and duration of maltreatment and the different types of delinquent offenses?

Frequency

Crosstabs of maltreatment and offending for both the dependency cohort and the delinquency cohort revealed that most children who are maltreated do not offend. However, in both the dependency and delinquency cohort the highest rates of offending occurred in Low Severity category offenses. A more detailed analysis was possible on the dependency group. Children in this group showed higher rates of offending if they were either physically or sexually abused.

Duration

Frequency of maltreatment was used as a proxy for duration of maltreatment. Children in the dependency cohort were maltreated longer than in the delinquency cohort. Almost 10% of the children in the dependency cohort were maltreated more than twice in their lives. Only 2.6% of the delinquency cohort was maltreated more than twice. (See Tables 5 and 26)

Severity

Our hierarchal definition of severity of maltreatment would anticipate that children who were ‘Sexually, and Physically Abused and Neglected’ would commit the greatest number and most serious offenses. This was not the case. While the majority of maltreated children did not have a delinquency offense, those who did have delinquent offenses committed more Low Severity category offenses than any other category. (See Table 11) And, those children who were either Physically Abused or Sexually Abused committed the highest number of Low Severity category offenses. The differences among the types of maltreatment and severity of offending is significant based on a chi-squared test ($\chi^2 = 94.467, p < .001$).

The delinquency cohort only examined whether or not there was any official record of maltreatment. Analyses showed that those who were not maltreated had higher rates of offending than those who were maltreated. (See Table 33) Nonetheless, there was a significant relationship between the incidence of maltreatment and commission of Low Severity delinquent offenses. The difference is significant based on a chi-square test ($\chi^2 = 105.1, p < .001$).

2. What is the relationship, if any, between the type of maltreatment and severity of delinquent offenses? (Dependency cohort)

Consistently Physical Abuse was the most significant predictor for Low Severity, High Severity and Total delinquency offenses across all three models (Widom, Smith and Thornberry, and Zingraff *et al.*). (See Tables 12, 13, 15, 16, 17, 19, 20, 21, and 23) The combination of ‘Sexual Abuse, Physical Abuse and Neglect’ was the most significant predictors for Moderate Severity delinquent offenses (See Tables 14, 18, and 22).

The second most significant predictors were also consistent across all three models. The results show that Sexual Abuse was more related to Low Severity offenses (See Tables 13, 17, and 21); Physical Abuse more related to Moderate Severity offenses (See Tables 14, 17, and 22); and for High Severity and Total Delinquency the combination of ‘Sexual Abuse, Physical Abuse and Neglect’ were significant. (See Tables 12, 15, 16, 19, 20, and 23)

Multivariate Analysis Dependency Cohort

Physical Abuse is a significant predictor of Total Delinquency in the Widom, Smith and Thornberry and Zingraff *et al.* models but Neglect is not. (See Tables 12, 16, 20) Physical Abuse and Sexual Abuse are both associated with Low Severity Delinquency in the Widom, the Smith and Thornberry and Zingraff *et al.* models.

Physical Abuse and the combination of ‘Sexual Abuse, Physical Abuse and Neglect’, and were predictors for Moderate Severity Delinquency in the Widom, Smith and Thornberry and Zingraff *et al.* models.

Neglect, Physical Abuse and the combination of ‘Sexual Abuse, Physical Abuse and Neglect’, were predictors for High Severity Delinquency in the Widom model. Physical Abuse was the only predictor for High Severity Delinquency in the Smith and Thornberry model. In the Zingraff *et al.* model Neglect is a marginally significant predictor of High Severity Delinquency complaints ($p < .06$ one-tailed). However, Physical Abuse is highly significant and the combination of ‘Sexual Abuse, Physical Abuse and Neglect’ is somewhat significant predictors of High Severity Delinquency.

Multivariate Analysis Delinquency Cohort

Analysis of maltreatment in the delinquency cohort was limited to maltreatment or no maltreatment. Maltreatment is significantly related to Total Delinquency estimated at about one and one-half additional complaint. Maltreatment was significantly related to all levels of delinquency.

3. What is the relationship, if any, between the presence of multiple types of maltreatment and different offending types?

This question can only be answered for the dependency cohort since the Social Form was not included in the delinquency data collection. Children who experienced ‘Sexual abuse, Physical Abuse and Neglect’ registered more High Severity offenses than the other multiple categories of maltreatment i.e.-‘Sexual abuse and Physical abuse’ or ‘Sexual abuse and Neglect’ or ‘Physical Abuse and Neglect’. (See Tables, 11, 15, 19 and 23)

The presence of multiple types of maltreatment did not appear to pose a greater threat of offending than a single type of maltreatment. In fact, the Physical Abuse only and Sexual Abuse only categories were the greater indicators of offending in all categories- High, Moderate and particularly Low Severity offenses than the multiple maltreatment categories.

4. What is the relationship, if any, between a child's order of birth and risk of maltreatment?

There were no significant findings in this area. Maltreated Twins appeared to be at greater risk for offending than other children.

5. What is the relationship, if any, between the number of out-of-home placements and risk of offending and the types of offending?

There is a significant positive correlation between number of out-of-home placements and total, Low, Moderate, and High Severity offending. (Models not shown)

6. Is referral to juvenile court for maltreatment a spurious factor in delinquent conduct?

While there is a significant relationship between maltreatment and delinquency, the vast majority of children (62.1%) in the dependency cohort did not commit any delinquent offense. Eighty-five percent (85%) of children in the delinquency cohort had no official record of maltreatment in the Juvenile Court. It, therefore, appears that referral to Juvenile Court is a spurious factor in delinquent offending. Future studies may explore other causative factors among this group of offenders. (See Tables 11 and 26)

7. What is the age of onset of delinquent conduct and to what extent does delinquency precede maltreatment?

The age of first delinquency among the dependency cohort was 6 years old. 65% of maltreated children in the dependency cohort experienced their first maltreatment by 5 years old. The age of first delinquency among the delinquency cohort was 5 years old. Age of first

maltreatment was not collected in the delinquency cohort. The analysis of whether delinquency preceded maltreatment was not done; however, it may be safe to assume that a negligible number of children are charged with delinquent offenses before the age of five. (See Tables 3, 4, and 29)

8) What is the relationship, if any, between age of onset of delinquent conduct and frequency and severity of offenses?

Children maltreated before age 12 exhibited higher rates of Total Delinquency and High Severity Delinquency. (See Tables 16, 17, 18, and 35)

VI. Implications and Recommendations

Maltreatment matters. The quantitative findings support the hypothesis that there is a direct (positive) relationship between maltreatment and delinquent offending, adding to the body of research and knowledge in other parts of the country. The qualitative findings support the quantitative findings. Some obvious implications are:

- Future research is needed to explore the strong nexus between changes in placement and offending. The implications for institutional intervention are important given the long periods of time some children remain in state care.
- Need to understand the factors involved in delinquent offending among those children who had no official record of maltreatment. Without control groups, the researchers were unable to test the racial, economic, family structure, and agency court referrals against the sampled cohorts.
- The focus groups of professionals provided a rich context and support for the quantitative data. Additional work can be done with the focus group material collected including hosting future focus group discussions.
- The responses of incarcerated youth and parents of incarcerated youth, while unquantifiable in this study, provided insight into their family troubles of neglect and abuse. Additional focus groups among incarcerated youth populations and family members can build upon the work started in this study.
- Surveying young people in juvenile detention provides an opportunity to understand their family circumstances and evaluate early intervention possibilities. The survey instrument needs refining generally, but specifically to examine the cause of the conduct that brought them to the court.

Some recommendations offered for policy makers and future program designs and expenditures of resources are not new suggestions but the research supports their consideration:

- Expand Parenting education and skills training. This is currently offered to a limited extent and usually through a Court order. Perhaps a train-the-trainer approach to include churches, neighborhoods and civic groups that would raise awareness and reach a broader number of people. The research indicates that while the greatest numbers of people referred to the Court are in poverty, the focus groups suggested there are many more families who keep their problems close but could be reached through other means.
- Empower Churches and neighborhoods. Churches and neighborhood leadership should be empowered through education to help the people closest to them. This is not to take the place of professional help, but rather raise the level of awareness about local community resources and work more toward becoming a ‘village’. Home visits should not be a word associated with just the social worker at the time of crisis.
- Address systemic changes through cross-discipline collaborative. Cross discipline collaboration requires systemic change in order to prevent the first referral or crisis. More effort must be made to create pathways for doctors, therapists, teachers, case workers and others who work with children and families to share information and work as a team before the family crisis leads to court referral.
- Find the will and the money for school-based after hour’s programs for families and children.
- Support a community-wide mentoring program.

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Introduction

Over the years, families that are involved in dependency and neglect cases are thought to provide a looking glass into the future of children who engage in status offenses and delinquent behavior. The conventional wisdom is that there is a greater likelihood that a child who is maltreated will become delinquent and/or engage in future criminal conduct. This theory, studied in many other areas of the country, was recently tested from the case histories of families who come into contact with the Juvenile Court in a major Mid-South county.

Maltreatment in this study is defined as a child, under the age of 18, who is adjudicated Dependent and Neglected (D&N) or in need of Protective Services because of neglect, physical abuse and/or sexual abuse. This research explored the official records of over 1,500 hundred children to draw a clearer understanding of the relationship between maltreatment and delinquency.

I. The Problem

Shelby County in the 1980's was the largest urban area in the state of Tennessee. While the state's population was 80% white and 16% black, forty-five percent (45%) of the state's black population lived in Shelby County. These statewide percentages have not changed appreciably since the 1980 Census. Memphis is the largest urban area in the state and has one of the highest poverty rates of a city its size. According to the 2000 Census Shelby County is 49% black and 48% white. According to the Memphis Shelby County Public Health Department's Bureau of Vital Statistics over 63% of the children born to African American mothers are out of wedlock. Several zip codes in the City have the highest infant mortality rate in the country. According to some charts, Memphis ranks 4th in violent crimes for a city its size and in 2004, 755 juveniles

were charged Part I crimes. There were 16 homicides representing a 78% increase over the previous year.

According to the Tennessee Council of Juvenile and Family Court Judges 2004 Annual Juvenile Court Statistical Report, a total of 88,513 children statewide entered the juvenile court system. Shelby County Juvenile Court alone saw more children (15,987) than any other Region in the state.¹ According to the 2004 Annual Report of the Juvenile Court of Memphis and Shelby County there were 6,117 referrals for Dependency and Neglect (D& N), 5,495 Unruly and 13,312 Delinquency complaints. Twenty years earlier there were 2,174 referrals for dependency and neglect, 1,515 Unruly and 8,526 Delinquency complaints in the Juvenile Court.² As the numbers increase, understanding the problem becomes more important.

II. Literature Review

Studies do not show that maltreatment is the direct cause of delinquency, but rather demonstrate it is a significant risk factor that is linked to adolescent delinquent and criminal conduct. In fact, some researchers are skeptical that there is a strong relationship between maltreatment and delinquency because the majority of maltreated children do not become delinquent.³ Phase I of the Pathways⁴ study showed that there was a weak but significant correlation between maltreatment and delinquency and like Zingraff *et al.* (1993) found a much stronger relationship between maltreatment and status offending and traffic offenses.

¹ Tennessee Council of Juvenile and Family Court Judges 2004 Annual Juvenile Court Statistical Report

² 1984 Annual Report Juvenile Court of Memphis and Shelby County

³ Zingraff M T, Leiter J, Myers K A, Johnsen M C: Child Maltreatment and Youthful Problem Behavior. *Criminology* 31: 173-202 1993.

⁴ Coleman-Davis, Veronica, RFP #01-012-26, Juvenile Delinquency and Criminal Conduct, Shelby County Juvenile Accountability Incentive Block Grant, DoJ OJJDP, 2002

While the literature tells us there is a relationship between maltreatment and delinquency, it also tells us that most children subjected to maltreatment are resilient and do not engage in official delinquent conduct. Nevertheless, this continues to be an important field of study, especially in the Mid-South region of the country.

Cathy Spatz Widom's landmark longitudinal study on the "cycle of violence" continues to lead the field in methodology and guidance in understanding the relationship between childhood maltreatment and delinquency or criminal conduct. Her early findings showed that abused and neglected children have a greater likelihood of arrest for delinquency, adult criminality and violent criminal behavior than the matched control group. Her research design included random samples from official court records of substantiated neglect and abuse of children under the age of 12 from the years 1967 through 1971. She randomly selected a control group from public school records matching for age, gender, and race and eliminated those with an official record of maltreatment. Using logit models, controlling for age, sex, and race, the physical abuse and neglect groups showed a significantly higher likelihood of having an arrest for a violent offense than the control groups. Her research, like many others, also concluded that early child abuse and neglect have long-term consequences for violent criminal behavior.⁵

Zingraff *et al.* used a prospective design using official reports of substantiated incidents of maltreatment with that of non-maltreated school and poor children. They examined the complaints against juveniles for property, violent, and status offenses. They found a statistically significant increased risk of offending among the maltreated children particularly for status offending and no significant difference among impoverished and school children groups for

⁵ Widom, Cathy Spatz, The Cycle of Violence. *Science* 244: 160-166, 1989.

property and violent offending. They suggested that previous research exaggerated the relationship between maltreatment and delinquency.⁶

In 1995 Smith and Thornberry reported in the Rochester Youth Development Study (RYDS) that a history of childhood maltreatment significantly increases the chances of involvement in delinquency. They pointed out that studies which utilized retrospective designs, unrepresentative samples and uncontrolled confounding variables cloud the understanding of relationship between maltreatment and delinquency. The better methodologies incorporate prospective design, control groups, and trace childhood maltreatment victims forward in time to see if maltreatment increases the risks of later delinquency.⁷

Using a multi-wave panel study of adolescent development, official records and self-reporting over a four-year period produced a greater confidence in the relationships between maltreatment and delinquency. They found that maltreatment was a significant predictor of the prevalence of official, moderate, and violent delinquency when race, ethnicity, sex, social class, family structure and mobility are held constant.⁸

Yet, in a later and more recent analysis of the same data collected by Ireland, Smith and Thornberry in the Rochester study, the researcher pondered the question of developmental theories and whether age of first maltreatment made a difference in severity of delinquent/criminal conduct. The secondary analysis contradicted the earlier findings that early childhood maltreatment (under age of 12) posed the greatest risk of delinquency and criminal conduct. (2002).⁹

⁶ *Op cit.* Zingraff, at p.196.

⁷ Smith C, Thornberry T: The Relationship Between Childhood Maltreatment and Adolescent Involvement in Delinquency, *Criminology* 33: 451-477, 1995.

⁸ *Ibid.*

⁹ Ireland T, Smith C, Thornberry T: Developmental Issues in the Impact of Child Maltreatment on Later Delinquency and Drug Use, *Criminology* 40: 359-400, 2002.

Their data allowed them to examine more fully the age of first maltreatment and later delinquent conduct. The research considered two theories: developmental psychopathology versus life-course perspective theories. Ireland *et al.* tested Agnew's theory that "maltreatment that occurs in adolescence may well be more behaviorally disruptive than is the maltreatment experienced in childhood". By separating subjects by age, "under 12" and "13 to 17", Ireland *et al.* found that timing of maltreatment does matter. They discovered that childhood maltreatment was not significantly related to delinquency, but rather adolescence-only and persistent maltreatment are very significantly related to delinquency.¹⁰

Researchers in the past accepted that the "dominant theory", i.e. - the earlier the victimization the greater likelihood for long-term consequences including delinquency, has validity. But, they found that the "life course perspective" theory that looks at current events and situations in adolescence and adulthood were a greater influence on delinquent or criminal behavior than early and distant events from childhood.¹¹

The current Pathways study posed many of the same basic questions about the relationship of maltreatment and the cycle of violence using official records from a juvenile court in the Mid-South region. Regression models were developed in order to compare findings with Widom, Smith and Thornberry and Zingraff *et al.*

III. Pathways Research design and methods

The Pathways research was designed to examine two sets of children-those alleged dependent and neglected (D&N) and those alleged delinquent- in order to better understand the influence of maltreatment on delinquent conduct. The first group of children was selected from

¹⁰ *Ibid*

¹¹ *Ibid*

the dependency and neglected cases filed in the Juvenile Court in 1984 and 1985. The population of dependent and neglect cases were selected so that the researchers could obtain a picture of children from their first complaint of dependency and neglect to their 18th birthday. This prospective look allowed the researchers to study children who had aged out of the juvenile system and provided the maximum range of dispositions and placements. In the years 1984 and 1985 there were 1,385 and 1,502 children, respectively, referred to juvenile court for the first time as dependent and neglected.

The second group was selected from delinquency petitions of children 16 and 17 filed in the years 2000 and 2001. This population of delinquent children allowed researchers to take a retrospective look at a child's history in order to determine if dependency and neglect was present as a risk factor. There were a total of 5,506 children 16 and 17 years old referred to the Court for delinquency in 2000 and 2001.

Among the weaknesses in this research design is the exclusion of unreported maltreatment cases to the juvenile court, the potential for closer institutional and systemic scrutiny of families identified by the first complaint, and no control group of non-maltreated children except to the extent that non-maltreated siblings provide a proxy for such a control group.

A. Juvenile Court Case Filing System

The Court assigns each family a case number that remains constant throughout the history of the family involvement with the Court and is recorded on the file jacket cover. This assignment applies to all dependency and neglect and delinquency cases. The individual children within each family are assigned letters of the alphabet appended to their family case file number which

gives them a separately identifiable **record locator number**.¹² The entire family history, social and legal, is physically located under one file called the **Social File**. This file is confidential and not available to the public without the permission of the Court. Legal proceedings and legal documents are maintained in separate files called the **Legal File** and are either copied into or summarized in the Social File. The legal pleadings and court orders are public information.

The child's record locator number is stored in the Court's data processing system along with information from Social and Legal actions. All complaints brought to the Court are given two numbers in the file and are recorded on the **C & D** (Complaint and Disposition) form: (1) the sequential number of the complaint involving the family and (2) the sequential number of the complaint involving the child. So, in the case of the Doe family, the second Doe family complaint but the first complaint involving baby John, the information will be recorded as Complaint #2 Family Doe, Complaint #1 John. This sequential numbering process allows the caseworker and reader to follow the complaint history of each child and family from complaint to disposition. Behind all C & D records are the **JC121**'s, which record demographic and referral information. In addition to these routine records found in each Social File, and depending upon the nature of the charge/complaint, there are investigative reports, social history information and copies of legal documents.

B. Research Design

Dependency and Neglect group data from 1984 and 1985 were provided in an electronic data file and subjected to power analysis to identify the appropriate sample size. The total population of dependent and neglect cases was 1,385 in 1984 and 1,502 in 1985. The researchers drew a random sample of 250 children's cases by case identification number (**Id**) for each of the years

¹² The researchers used this number as the **Id** for each electronic record.

1984 and 1985. The Court's electronic file coding system allowed the researchers to identify the first dependency and neglect complaint for each child's case drawn in the sample. Only those cases identified as the child's first D & N complaint were retained from the sample. As a result, the children selected in the Dependency study represented 347 families. Siblings of the children selected from the sample were then included in the study group which expanded the dependency and neglect cohort to a total of 1,062 children. This cohort then covered a range of years and potential for sibling comparisons. Many variables were collected on each child including up to 20 complaints, dispositions and placements.

The delinquency cohort was selected from the universe of all children who were 16 and 17 years old coming before the court charged with a delinquent offense in the years 2000 and 2001. It was hypothesized that those children, born during the time frames of the children in the dependency/neglect sample, would also have been the subjects of dependency and neglect. There were 550 juvenile records selected from a random power analysis of 5,506 legal records. One child was also in the dependency and neglect cohort and was eliminated from the delinquency cohort leaving 549 children in the sample. Variables collected included all delinquent charges up to 20 occasions, complaints of maltreatment up to 20 separate occurrences, and up to 20 placements and dispositions for each child.

The data entry was divided into four categories of information: The Facesheet, the Complaint and Disposition Form, the Social Summary, the Relationship Form. These forms were designed in Microsoft Access and data were entered directly into the electronic file. The Facesheet included demographic and referral information such as the nature of the complaint and the referring party. It also included some dispositional information but the Complaint and Disposition form recorded in more detail each complaint, disposition and placement.

Preliminary review of case records suggested that 20 occasions would capture most incidents of maltreatment and delinquency. Thus, variables collected included all delinquent charges up to 20 occasions, complaints of maltreatment up to 20 separate occurrences, and up to 20 placements and dispositions for each child. This assessment proved to be fairly accurate as only a small percentage of cases exceeded 20 referrals.

Thus, the C & D form allowed data for up to 20 individual and family complaints. The complaints included neglect, physical abuse, sexual abuse, status offenses, traffic offenses and delinquency offenses. Information was collected on the placements of the child up to 20 changes in placements. There were a few families and individuals that exceeded 20 complaints and notations were made in the Comment section of the form.

The Social Summary allowed data to be collected from 3 separate complaints from social information contained in the file on such thing as the child's attitudes, expressed problems and family problems such as drug/alcohol use, mental illness, and economic poverty. Information was also collected in the dependency and neglect cohort on whether or not the child had been subjected to neglect, physical or sexual abuse up to 3 incidences. The Relationship form collected demographic information about the child's parents and siblings. It should be noted that data were not available in every category for a variety of reasons, but the researchers made every effort to locate missing information and correct data entry errors.

Inter-rater reliability testing was conducted on a random sample of approximately 10% of the cases in the study. A test re-test methodology was used where the information for the entire file was collected by an alternate reader of the file. The analysis of these files was limited to three variables: identification of neglect, physical, and sexual abuse; number of elements in the case and disposition files; and the number of children in the family.

There was 100% agreement on the classification of abuse or neglect; 100% agreement on the number of charges, and 98% agreement on the number of children in the family. These are extremely high levels of reliability likely because an allegation of abuse or neglect generated multiple items within a case file, and because the case and disposition files are carefully documented by the court for use in their legal proceedings. Considering differences in the counts of the number of children, there were a few instances where a child was mentioned in a report within the file, but not listed on the jacket cover of the family file.

Data collection for the Delinquency cohort included the Facesheet, the Complaint and Disposition Form and a modified Relationship Form. No case history information was collected on siblings of the delinquency cohort.¹³

C. Research Questions:

The present study was designed to test the hypothesis that “there is a direct correlation between dependency and neglect (maltreatment) and delinquency”. Hundreds of variables were collected from children’s cases and preliminary results of data analysis in Phase I indicated a statistically significant relationship. Researchers sought to answer the following questions to better understand the relationship of childhood maltreatment and future delinquent conduct.

- 1) What is the relationship, if any, between the frequency, severity and duration of maltreatment and the different types of delinquent offenses?
- 2) What is the relationship, if any, between the type of maltreatment and severity of delinquent offenses?
- 3) What is the relationship, if any, between the presence of multiple types of maltreatment and different offending types?

¹³ *Op cit.* Coleman-Davis V.

- 4) What is the relationship, if any, between a child's order of birth and risk of maltreatment?
- 5) What is the relationship, if any, between the number of out-of-home placements and risk of offending and the types of offending?
- 6) Is referral to juvenile court for maltreatment a spurious factor in delinquent conduct?
- 7) What is the age of onset of delinquent conduct and to what extent does delinquency precede maltreatment?
- 8) What is the relationship, if any, between age of onset of delinquent conduct and frequency and severity of offenses?

D. Quantitative Analysis

1. Demographic Analyses

This study seeks to further understand the causes and correlates of maltreatment and delinquency. Two samples were analyzed. First, we examined the dependency cohort where one or more children in a family initially came into the juvenile court because of a dependency complaint. Second, we examined a cohort of children selected because they were in court for a delinquency complaint. Each sample was analyzed through frequency distributions and crosstabulation analysis to provide a description of the two populations studied. Tables 1 thru 11 examine the demographics of the Dependency cohort and Tables 24 thru 33 examine the demographics of the Delinquency cohort.

2. Multivariate Analyses

The basic analytic strategy uses OLS regression to examine definitions of crime and delinquency and predictors of it used by Cathy Spatz Widom (1989), Smith and Thornberry

(1995) and Zingraff et al. (1993). Recall that the current study does not have a control group of subjects that have not been subject to maltreatment. Hence, our analyses of a dependency cohort (Tables 12 thru 23) focus upon the form and extent of childhood maltreatment, and our analyses of a delinquency cohort (Tables 34 thru 36) asks parallel questions and provides a retrospective test of the link between official delinquency and official maltreatment. Delinquency is analyzed as ‘Total’ (all delinquent offenses), ‘Low severity’ (e.g. attempts, petit larceny, disorderly conduct), ‘Moderate severity’ (e.g. possession of drug and alcohol, felony property crimes), and ‘High severity’ offenses (violence, homicide, sales of drugs, weapons charges). Pathways researchers chose to use the same variable nomenclature found in the comparison models. For example, Widom describes race as “black”, while Smith, Thornberry and Zingraff *et al.* as “African American”. In order to simplify terminology comparisons with the other research models the researchers chose not to standardize the variable nomenclature.

DEPENDENCY COHORT

Demographic Analysis

Gender

The Dependency (D&N) cohort included 529 males and 530 females. There was insufficient information in 3 case files to determine the gender of the child. (**Table 1**)

Table 1. Gender

		Frequency	Percent	Valid Percent
Valid	1 Male	529	49.8	50.0
	2 Female	530	49.9	50.0
	Total	1059	99.7	100.0
Missing	System	3	.3	
Total		1062	100.0	

Race

There were 808 (76.1%) black children, 212 (20%) white children and 15 other race children.

Race was not recorded for 27 children. (**Table 2**)

Table 2. Race

		Frequency	Percent	Valid Percent
Valid	1 Black	808	76.1	78.1
	2 Hispanic	1	.1	.1
	3 Other	14	1.3	1.4
	4 White	212	20.0	20.5
	Total	1035	97.5	100.0
Missing	System	27	2.5	
Total		1062	100.0	

Age of first maltreatment complaint

The ages of children referred to the court as D&N ranged from one day up to 17 years old. The Court has jurisdiction of minor children in D&N cases and a minor is defined as a child under the age of 18. **Table 3** shows the child’s age at the time of their first maltreatment. Of those adjudicated as maltreated, 38% were two years old or younger; 53% were between the ages of 3 and 11; and 7.3% were over the age of 12.

Table 3. Age in Years at First Maltreatment Complaint

		Frequency	Percent	Valid Percent
Valid	Less than one year old	126	11.9	18.2
	1 year old	74	7.0	10.7
	2 years old	64	6.0	9.3
	3 years old	61	5.7	8.8
	4 years old	63	5.9	9.1
	5 years old	61	5.7	8.8
	6 years old	46	4.3	6.7
	7 years old	35	3.3	5.1
	8 years old	31	2.9	4.5
	9 years old	29	2.7	4.2
	10 years old	21	2.0	3.0
	11 years old	19	1.8	2.7
	12 years old	12	1.1	1.7
	13 years old	14	1.3	2.0
	14 years old	12	1.1	1.7
	15 years old	15	1.4	2.2
	16 years old	2	.2	.3
	17 years old	5	.5	.7
	Over 17 but under 18	1	.1	.1
	Total	691	65.1	100.0
Missing	Missing or Other	371	34.9	
Total		1062	100.0	

Age of first delinquency complaint

Table 4 indicates that four children experienced their first delinquency at six years old. Sixty-four percent of the (64.1%) children experienced their first delinquency between the ages of 12 to 17 years old.

Table 4. Age in Years at First Delinquency Complaint

		Frequency	Percent	Valid Percent
Valid	6 years old	4	.4	1.0
	7 years old	4	.5	1.2
	8 years old	14	1.3	3.4
	9 years old	18	1.7	4.3
	10 years old	20	1.9	4.8
	11 years old	35	3.3	8.4
	12 years old	47	4.4	11.3
	13 years old	64	6.0	15.4
	14 years old	66	6.2	15.9
	15 years old	71	6.7	17.1
	16 years old	44	4.1	10.6
	17 years old	27	2.5	6.5
	18 years old or older	1	.1	.2
	Total	416	39.2	100.0
	Missing	646	60.8	
Total		1062	100.0	

Family Size

The family size ranged from one to 12 children. Ten percent of the children had parents who were married and living together and almost 20% were legally divorced or separated. Fifty-five percent (55%) of children’s parents were not married to each other.

Duration of Maltreatment

Table 5 represents the duration of maltreatment. The number of complaints was used as a proxy for duration as there was no other means of quantifying the length of time a family was under the order of the court. Of the 696 cases adjudicated as maltreatment (sustained), 84% of the children had been maltreated at least once. Of that group 16% maltreated two or more times. The 368 in the ‘Missing or Other’ category, included: children the subject of complaints other than maltreatment; no maltreatment reported; non-sustained complaints; or missing information.

Table 5. Number of Maltreatment Complaints

		Frequency	Percent	Valid Percent
Valid	One complaint	586	55.2	84.2
	Two complaints	92	8.7	13.2
	Three complaints	14	1.3	2.0
	Four complaints	3	.3	.4
	Six complaints	1	.1	.1
	Total	696	65.5	100.0
Missing	Missing or Other	366	34.5	
Total		1062	100.0	

Changes in Placement

Table 6 shows the number of changes in placements for 719 children. Placements changed depending upon the complaint and disposition and they ranged from no change in living arrangements to 15 changes in placement. Of the recorded changes 25.2% of the children had no change from their present living arrangement. Almost 28% of children experienced at least one change in placement. Forty-seven percent (47%) experienced two or more.

Table 6. Number of changes in placement

		Frequency	Percent	Valid Percent
Valid	No changes	181	17.0	25.2
	1	200	18.8	27.8
	2	93	8.8	12.9
	3	61	5.7	8.5
	4	51	4.8	7.1
	5	30	2.8	4.2
	6	28	2.6	3.9
	7	23	2.2	3.2
	8	16	1.5	2.2
	9	6	.6	.8
	10	8	.8	1.1
	11	7	.7	1.0
	12	5	.5	.7
	13	5	.5	.7
	14	2	.2	.3
	15	3	.3	.4
	Total	719	67.7	100.0
Missing	System	343	32.3	
Total		1062	100.0	

Type of Placement

Table 7 represents the type of placements for all children in complaints one through twenty. Thirty-three percent (33.9%) of all placements went to the mother, 11% to the maternal grandmother and 7.4% to the father. Other placements included other grandparents and other relatives (16.5%) and institutional placements (24.8%). Of the institutional placements, the state’s Department of Human Services (DHS) took custody 14% of the time. DHS was the investigating agency in the 80’s and early 90’s for maltreatment and state custody usually meant foster care or some type of supervised placement with relatives or the respondent’s home. The Department of Children Services (DCS) took over responsibilities of DHS in the early 90’s. Other Placement Agency includes private agencies that provide foster homes and adoption services.

Table 7. Types of Placements for Complaints #1-#20

		Frequency	Percent	Valid Percent
Valid	Mother	1486	33.2	33.9
	Father	329	7.4	7.5
	Parents	93	2.1	2.1
	Maternal Grandmother	482	10.8	11.0
	Maternal Grandfather	18	.4	.4
	Maternal Grandparents	58	1.3	1.3
	Paternal Grandfather	16	.4	.4
	Paternal Grandmother	124	2.8	2.8
	Paternal Grandparents	42	.9	1.0
	Great Grandparent	16	.4	.4
	Other relative	489	10.9	11.2
	Non - relative	147	3.3	3.4
	DYD/DCS	52	1.2	1.2
	DHS	619	13.8	14.1
	Other Placement-Agency/Sanction	413	9.2	9.4
	Total	4384	98.0	100.0
	Unknown/Missing	90	2.0	
Total		4474	100.0	

Severity of Delinquent Charges

Delinquent charges were divided into Low Severity Offenses (**Table 8**), Moderate Severity Offenses (**Table 9**) and High Severity Offenses (**Table 10**). Sixty-eight percent of the children did not commit a low severity offense. Approximately one in three children committed at least one low severity offense. Among the Moderate Severity Offenders 11.7% committed just one, but 79.7% did not commit any offense in this category. Ten percent of the children committed only one High Severity Offense and 6% committed two or more. However, 83.8% committed no offense in this category.

Table 8. Number of Low Severity Delinquency Offenses

		Frequency	Percent	Valid Percent
Valid	0	717	67.5	67.5
	1	154	14.5	14.5
	2	70	6.6	6.6
	3	40	3.8	3.8
	4	26	2.4	2.4
	5	21	2.0	2.0
	6	16	1.5	1.5
	7	9	.8	.8
	8	3	.3	.3
	9	3	.3	.3
	11	2	.2	.2
	13	1	.1	.1
	Total	1062	100.0	100.0

Table 9. Number of Moderate Severity Delinquency Offenses

		Frequency	Percent	Valid Percent
Valid	0	846	79.7	79.7
	1	124	11.7	11.7
	2	54	5.1	5.1
	3	19	1.8	1.8
	4	11	1.0	1.0
	5	4	.4	.4
	6	2	.2	.2
	7	2	.2	.2
	Total	1062	100.0	100.0

Table 10. Number of High Severity Delinquency Offenses

		Frequency	Percent	Valid Percent
Valid	0	890	83.8	83.8
	1	109	10.3	10.3
	2	35	3.3	3.3
	3	16	1.5	1.5
	4	8	.8	.8
	5	4	.4	.4
	Total	1062	100.0	100.0

Types of Maltreatment and Severity of Delinquent Offences

Table 11 shows complaints for different maltreatment types and severity of delinquent offenses in a cross tabulation analysis. While the majority of maltreated children did not have a delinquency offense, those who did have delinquent offenses committed more Low Severity category offenses than any other category. Low Severity offenses were the majority of cases among all types of Maltreatment. However, those children who were either physically abused or sexually abused committed more Low Severity delinquent offenses than any other maltreatment type. The second highest number of delinquency cases fell into the Moderate Severity category across the board in all types of Maltreatment. The relationship among the types of maltreatment and severity of offending is significant based on a chi-squared test ($\chi^2 = 94.467, p < .001$).

POOLED Severity rating of delinquent offenses for Charge/Complaint #1-#20 * Types of Maltreatment Crosstabulation

			Types of Maltreatment							Total	
			None	Neglect only	Physical abuse only	Physical abuse & Neglect	Sexual abuse only	Sexual abuse & Neglect	Sexual abuse & Physical abuse		Sexual abuse, Physical abuse, & Neglect
Table 11. POOLED Severity rating of delinquent offenses for Charge/Complaint #1-#20	No delinquent charge recorded	Count	290	1682	46	406	16	235	3	265	2943
		% within Types of Maltreatment	58.1%	67.3%	47.4%	72.6%	45.7%	75.3%	100.0%	71.8%	67.3%
	Charge Not Sustain	Count	19	89	4	10	3	6		11	142
		% within Types of Maltreatment	3.8%	3.6%	4.1%	1.8%	8.6%	1.9%		3.0%	3.2%
	Low severity	Count	119	426	25	89	12	47		42	760
		% within Types of Maltreatment	23.8%	17.0%	25.8%	15.9%	34.3%	15.1%		11.4%	17.4%
	Moderate severity	Count	51	166	12	34	3	18		34	318
		% within Types of Maltreatment	10.2%	6.6%	12.4%	6.1%	8.6%	5.8%		9.2%	7.3%
	High severity	Count	20	137	10	20	1	6		17	211
		% within Types of Maltreatment	4.0%	5.5%	10.3%	3.6%	2.9%	1.9%		4.6%	4.8%
	Total	Count	499	2500	97	559	35	312	3	369	4374
		% within Types of Maltreatment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Multivariate Analysis

The study seeks to further understand the causes and correlates of maltreatment and delinquency. We use OLS regression to examine definitions of crime and delinquency and predictors of its relationship to maltreatment. Variables were selected based on our reading of the literature particularly studies by Cathy Spatz Widom (1989), Smith and Thornberry (1995) and Zingraff et al. (1993). While we could also draw from the works of other authors, we selected these three studies because Widom's work is the foundation for research on the cycle of violence, Smith and Thornberry's study provides a compelling argument that it is not so much abuse and neglect as the timing of it, and Zingraff and his colleagues provide a contrary argument on any link between maltreatment and delinquency. Notably, by using definitions from studies that hypothesize a linkage between maltreatment and delinquency and from a study that argues there is no linkage when other factors are considered, we will be better able to compare the results of the current study to previous research.

As we present our multivariate models, recall that the current study does not have a control group of subjects that have not been subject to maltreatment. Hence our analyses of a dependency cohort focus upon the form and extent of child maltreatment. Delinquency is analyzed as total, low severity (e.g. attempts, petit larceny, disorderly conduct), moderate severity (e.g. possession of drug, alcohol, felony property crimes), and high severity offenses (violence, homicide, sales of drugs, weapons charges).

In all of our multivariate analyses of a dependency cohort maltreatment is analyzed by using seven dummy variables derived from an eight category maltreatment classification. No maltreatment is used as the reference category. Neglect, physical abuse, and sexual abuse were

identified as types of maltreatment in each child’s record in the juvenile court. Using these dummy variables, if a child was physically abused and neglected then he would fall in the category of physically abused and neglected. He was not be classified as yes in the dummy variable for (only) physically abused or as yes (only) in the dummy variable for neglected. Tests for multi-collinearity were also conducted for all of the regression analyses by examining tolerance and variance inflation factors. No significant problems of multi-collinearity were found.

Estimating total delinquency (Widom definitions)

Table 12. Regression model predicting total number of delinquency complaints (Widom)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.351	.218		-1.614	.107
Male	1.243	.136	.271	9.118	.000
Black	.916	.169	.166	5.422	.000
Other	.799	.587	.042	1.361	.174
Neglect	.195	.182	.042	1.068	.286
Physical Abuse	2.028	.583	.106	3.480	.001
Physical Abuse & Neglect	.238	.261	.032	.912	.362
Sexual Abuse	1.319	.836	.047	1.578	.115
Sexual Abuse & Neglect	.435	.331	.044	1.317	.188
Sexual & Physical Abuse	-.565	2.178	-.008	-.259	.795
Sexual Abuse, Physical Abuse, & Neglect	.606	.307	.066	1.975	.049

Adjusted r^2 = .101
 N = 1034

Table 12 provides estimates from a regression model predicting the total number of delinquency complaints using a sample of families where one or more children initially came into the juvenile court for a dependency and neglect complaint. Independent variables included

in this analysis are dummy variables (0=no and 1=yes) for sex, race, and types and combinations of abuse and neglect. The tables all show two-tailed tests of significance.

Table 12 shows that gender, and minority race (Black) are significant predictors ($p < .05$) of total delinquency. The unstandardized coefficient for Male indicates that boys are estimated to have about 1.2 more total delinquent offenses than females when all other factors are held constant. Total delinquency is associated with minority race as Black children are estimated as having almost one additional delinquent complaint compared to the reference category (White children).

Looking at types of maltreatment, physical abuse is a significant predictor of total delinquency. Neglect is not a significant predictor for this model. Sexual abuse in combination with physical abuse and neglect is also related to total delinquency. Overall, this model is able to explain about 10.1 percent of the variance in total delinquency

Table 13. Regression model predicting low severity delinquency complaints (Widom)

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	-.210	.159		-1.318	.188
Male	.844	.100	.254	8.472	.000
Black	.603	.123	.150	4.883	.000
Other	.121	.429	.009	.282	.778
Neglect	.111	.133	.033	.836	.403
Physical Abuse	1.304	.426	.094	3.064	.002
Physical Abuse & Neglect	.198	.190	.037	1.038	.299
Sexual Abuse	1.617	.611	.080	2.649	.008
Sexual Abuse & Neglect	.360	.242	.050	1.489	.137
Sexual & Physical Abuse	-.393	1.591	-.007	-.247	.805
Sexual Abuse, Physical Abuse, & Neglect	.204	.224	.031	.910	.363

Adjusted $r^2 = .089$
 N=1034

Tables 13 to 15 estimate low, moderate and high severity delinquency using the same independent variables as in **Table 12**. The definitions of low, moderate and high severity delinquency are shown in **Appendix A**.

For low severity delinquency complaints, the pattern in the estimates in **Table 13** is quite similar to **Table 12**. Being Male and Black are significant predictors of low severity delinquency. Physical abuse and sexual abuse are both related to lower level delinquency. Neglect is not significantly related to low severity complaints.

Table 14. Regression model predicting moderate severity delinquency complaints (Widom)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.060	.087		-.685	.494
Male	.335	.054	.189	6.154	.000
Black	.243	.067	.114	3.610	.000
Other	.398	.234	.054	1.699	.090
Neglect	.035	.073	.020	.482	.630
Physical Abuse	.470	.233	.063	2.020	.044
Physical Abuse & Neglect	.020	.104	.007	.192	.848
Sexual Abuse	.279	.334	.026	.835	.404
Sexual Abuse & Neglect	.070	.132	.018	.530	.596
Sexual & Physical Abuse	-.184	.870	-.006	-.212	.832
Sexual Abuse, Physical Abuse, & Neglect	.376	.123	.106	3.065	.002

Adjusted r^2 = .048
 N = 1034

Table 14 estimates a model for moderate severity delinquency. The pattern in these estimates replicates what was found for total delinquency complaints in gender and race. The adjusted r-squared for this model, however, is only about 4.8 percent of the variation in moderate delinquent complaints compared to the 10.1 percent for total delinquency. The combination of

‘Sexual Abuse, Physical Abuse & Neglect’ is the most significant predictor of moderate severity delinquency.

Table 15. Regression model predicting high severity delinquency complaints (Widom)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.218	.069		-3.134	.002
Male	.378	.043	.260	8.697	.000
Black	.246	.054	.140	4.572	.000
Other	.296	.187	.049	1.583	.114
Neglect	.127	.058	.087	2.183	.029
Physical Abuse	.669	.186	.110	3.602	.000
Physical Abuse & Neglect	.021	.083	.009	.255	.799
Sexual Abuse	-.013	.267	-.001	-.047	.962
Sexual Abuse & Neglect	.048	.105	.015	.460	.646
Sexual & Physical Abuse	-.029	.694	-.001	-.041	.967
Sexual Abuse, Physical Abuse, & Neglect	.210	.098	.072	2.141	.033

Adjusted r^2 = .093
 N = 1034

Table 15 shows estimates for high severity delinquency complaints. These results replicate what would be expected based on Widom’s research on the cycle of violence. Males, minority race (Black and other), neglect, physical abuse, and sexual abuse with physical abuse and neglect were all significant predictors of high severity delinquency. This model is able to explain about ten percent of the variation in high severity delinquency.

Additional regression analyses were also conducted to answer questions 4 and 5 for this study. Birth order and number of out of home placements were added as independent variables.

These models (not shown) indicated that birth order was not significantly related to any of the forms of delinquency. The total number of out-of-home placements, though, was an extremely strong factor in predicting all forms of delinquency. When added to a model, the total out-of-home placements had by far the largest standardized coefficient and there was a substantial increase in explained variation. For example, in estimating a regression model for high severity complaints, the beta standardized beta coefficient was .44 and the adjusted r-squared was about 28 percent.

Estimating total delinquency (Smith and Thornberry definitions)

Table 16. Regression model predicting total delinquency complaints (Smith & Thornberry)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.704	.319		-2.205	.028
Male	1.254	.136	.274	9.235	.000
African-American	.840	.170	.152	4.938	.000
Hispanic	.849	.587	.044	1.447	.148
Yes, child was maltreated at or before age 12 years	.326	.160	.069	2.036	.042
Other Placement/Structure	.456	.277	.087	1.644	.100
Social Agency Placement/Structure	.045	.314	.008	.144	.885
Neglect	.014	.205	.003	.069	.945
Physical Abuse	1.951	.584	.102	3.338	.001
Physical Abuse & Neglect	.060	.276	.008	.217	.829
Sexual Abuse	1.230	.834	.044	1.475	.140
Sexual Abuse & Neglect	.249	.342	.025	.730	.465
Sexual & Physical Abuse	-.592	2.170	-.008	-.273	.785
Sexual Abuse, Physical Abuse, & Neglect	.486	.323	.053	1.504	.133

Adjusted $r^2 = .109$
 N=1034

Table 16 estimates the total number of delinquency complaints replicating definitions of delinquency and independent variables used by Smith and Thornberry. Independent variables included in this analysis include dummy variables (0=no and 1=yes) for sex, and race. The placement of the child used 'living with two parents' as the reference category and dummy variables for social agency placements and other placements. Age of first maltreatment is dummy coded as at or before age 12 years (0=no and 1=yes). Types and combinations of abuse and neglect are also included. Age of the child is again entered as a random effect based on the child's age when appearing in juvenile court.

Table 16 yields results that are quite consistent with the larger literature. Gender and minority race (black) are significant predictors of total delinquency. Boys are estimated to have about 1.3 more complaints in juvenile court than females all other factors held constant. Racial differences indicate Blacks are expected to have almost one additional instance of total delinquency than Whites.

Table 16 shows that type of living arrangement is marginally related to total delinquency. Children in other living arrangements such as living with a single parent were associated with higher total levels of delinquency. If a child was maltreated at or before age 12, this child was estimated as having a higher level of total delinquency. **Table 16** also illustrates that children who were physically abused were significantly more likely to have higher total levels of delinquency.

**Table 17. Regression model predicting low severity delinquency complaints
 (Smith & Thornberry)**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.543	.233		-2.328	.020
Male	.850	.099	.256	8.567	.000
African-American	.546	.124	.136	4.396	.000
Hispanic	.177	.428	.013	.413	.679
Yes, child was maltreated at or before age 12 years	.180	.117	.053	1.536	.125
Other Placement/Structure	.424	.203	.112	2.092	.037
Social Agency Placement/Structure	.120	.229	.028	.523	.601
Neglect	.013	.149	.004	.087	.930
Physical Abuse	1.273	.427	.092	2.983	.003
Physical Abuse & Neglect	.108	.202	.020	.533	.594
Sexual Abuse	1.547	.609	.076	2.541	.011
Sexual Abuse & Neglect	.264	.249	.037	1.058	.290
Sexual & Physical Abuse	-.427	1.585	-.008	-.269	.788
Sexual Abuse, Physical Abuse, & Neglect	.153	.236	.023	.647	.518

Adjusted r^2 = .097
 N = 1034

Tables 17 to 19 elaborate upon the relationships shown in **Table 16** separating total delinquency into low, moderate and high severity delinquency complaints. The purpose of this elaboration is to explore whether the severity of delinquency is related to the history of the onset of abuse and to the types of neglect and abuse.

For low severity delinquency complaints, the pattern in estimates in **Table 17** is quite similar to **Table 16**. Being male and black are significant predictors of low severity delinquency. The effect of child maltreatment prior to age 12 is not evident for low severity delinquency. Children in other living arrangements again are associated with higher levels of delinquent complaints. Physical abuse and sexual abuse are both associated with low severity delinquency.

Table 18. Regression model predicting moderate severity delinquency complaints (Smith & Thornberry)

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	-.135	.128		-1.054	.292
Male	.337	.054	.190	6.189	.000
African-American	.223	.068	.104	3.279	.001
Hispanic	.410	.235	.055	1.744	.082
Yes, child was maltreated at or before age 12 years	.072	.064	.040	1.129	.259
Other Placement/Structure	.101	.111	.050	.907	.365
Social Agency Placement/Structure	-.016	.126	-.007	-.126	.900
Neglect	.001	.082	.001	.012	.990
Physical Abuse	.460	.234	.062	1.966	.050
Physical Abuse & Neglect	-.015	.111	-.005	-.136	.891
Sexual Abuse	.259	.334	.024	.777	.437
Sexual Abuse & Neglect	.031	.137	.008	.227	.821
Sexual & Physical Abuse	-.189	.869	-.007	-.218	.828
Sexual Abuse, Physical Abuse, & Neglect	.358	.129	.101	2.771	.006

Adjusted $r^2 = .050$

N=1034

Table 18 shows the results of the regression model predicting moderate severity delinquency. The pattern in demographic variables is consistent with the total delinquency model as males and minorities (Black and Hispanic) are estimated as having higher levels of moderate delinquency. The child’s living arrangement does not appear to be related to moderate delinquency. Unlike the total model, there is no effect for maltreatment prior to age 12 on moderate delinquency. Of abuse and neglect, physical abuse and the combined report of sexual abuse, physical abuse and neglect were estimated as significantly related to moderate delinquency. This model is able to only explain about five percent of the variation in moderate delinquency.

**Table 19. Regression model predicting high severity delinquency complaints
 (Smith & Thornberry)**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.256	.102		-2.508	.012
Male	.380	.043	.262	8.749	.000
African-American	.232	.054	.132	4.269	.000
Hispanic	.293	.188	.048	1.563	.118
Yes, child was maltreated at or before age 12 years	.108	.051	.072	2.101	.036
Other Placement/Structure	.042	.089	.025	.473	.636
Social Agency Placement/Structure	-.011	.100	-.006	-.108	.914
Neglect	.068	.065	.047	1.044	.297
Physical Abuse	.636	.187	.105	3.407	.001
Physical Abuse & Neglect	-.039	.088	-.017	-.439	.661
Sexual Abuse	-.020	.266	-.002	-.076	.939
Sexual Abuse & Neglect	-.011	.109	-.004	-.105	.917
Sexual & Physical Abuse	-.018	.694	-.001	-.026	.979
Sexual Abuse, Physical Abuse, & Neglect	.157	.103	.054	1.520	.129

Adjusted r^2 = .095
 N = 1034

Table 19 reports estimates of high severity delinquency complaints using the Smith and Thornberry variables. These results replicate what would be expected based on Smith and Thornberry’s study of the impact of child maltreatment and involvement in delinquency. Males and minority race (Black) were significant predictors of high severity delinquency. Early onset of maltreatment is a significant predictor of high severity complaints.

However, neither other living arrangement nor social agency placement are significant predictors of high severity delinquency. Physical abuse is the only aspect of abuse and neglect that are significantly related to high severity delinquency.

Estimating total delinquency (Zingraff, Leiter, Myers and Johnsen definitions)

The following **Tables 20 to 21** provide estimates from the regression models predicting the total number of delinquency complaints and elaborations for low, moderate, and high severity complaints. Independent variables included in this analysis were selected to replicate variables in Zingraff et al. (1993) operationalized as dummy variables (0=no and 1=yes) for male, Black, and other race. Living arrangement was operationalized as dummy variables for single parent household, two parent household, and social agency living arrangement with other living arrangements as the reference category. The types of maltreatment are entered as dummy variables. The extent of maltreatment was operationalized as one time, two or more times, and using none as the reference category.

Table 20. Regression model predicting total delinquency complaints (Zingraff et al.)

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	-.562	.235		-2.392	.017
Male	1.210	.136	.264	8.916	.000
Black	.886	.171	.160	5.169	.000
Other race	.840	.587	.044	1.431	.153
Single Parent	.479	.156	.099	3.064	.002
Both Parents	.374	.378	.030	.990	.323
Social Agency	-.123	.189	-.021	-.650	.516
One maltreatment incident only	.173	.172	.037	1.005	.315
More that one maltreatment incident	.683	.258	.092	2.648	.008
Neglect	.120	.210	.026	.570	.569
Physical Abuse	2.095	.583	.109	3.596	.000
Physical Abuse & Neglect	.147	.279	.020	.526	.599
Sexual Abuse	1.134	.831	.041	1.364	.173
Sexual Abuse & Neglect	.211	.349	.021	.605	.546
Sexual & Physical Abuse	-.324	2.162	-.004	-.150	.881
Sexual Abuse, Physical Abuse, & Neglect	.550	.325	.060	1.689	.091

Adjusted r^2 =.117
 N=1034

Table 20 provides estimates for total delinquency using the variables which were described above. Being Male and minority (Black) were significant predictors of total delinquency. Children in single parent households were estimated as having higher levels of total delinquency.

Looking at the duration and types of maltreatment, having more than one maltreatment incident was significantly related to higher levels of total delinquency. These results indicate that abuse and neglect with a longer duration will result in a higher level of total delinquency. Physical abuse and combined reports of sexual abuse, physical abuse, and neglect were related to total delinquency.

Table 21. Regression model predicting low severity delinquency complaints (Zingraff *et al.*)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.295	.172		-1.715	.087
Male	.823	.099	.248	8.284	.000
Black	.563	.125	.140	4.488	.000
Other race	.178	.430	.013	.413	.680
Single Parent	.253	.115	.072	2.212	.027
Both Parents	.013	.277	.001	.046	.963
Social Agency	-.145	.138	-.034	-1.045	.296
One maltreatment incident only	.121	.126	.036	.962	.336
More that one maltreatment incident	.491	.189	.091	2.600	.009
Neglect	.054	.154	.016	.350	.726
Physical Abuse	1.341	.426	.097	3.144	.002
Physical Abuse & Neglect	.125	.204	.023	.612	.541
Sexual Abuse	1.511	.609	.075	2.482	.013
Sexual Abuse & Neglect	.197	.256	.027	.769	.442
Sexual & Physical Abuse	-.268	1.583	-.005	-1.169	.865
Sexual Abuse, Physical Abuse, & Neglect	.161	.238	.024	.674	.500

Adjusted $r^2 = .100$
 N=1034

Moving to an analysis of low severity complaints, **Table 21** shows a near identical pattern of results when compared to total delinquency in **Table 20**. The difference is that sexual and physical abuse is a predictor of low severity delinquency rather than the combined maltreatment category of sexual and physical abuse and neglect.

Table 22. Regression model predicting moderate severity delinquency complaints (Zingraff *et al.*)

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	-.156	.094		-1.664	.096
Male	.319	.054	.180	5.889	.000
Black	.237	.068	.110	3.463	.001
Other race	.418	.234	.056	1.783	.075
Single Parent	.206	.062	.109	3.295	.001
Both Parents	.160	.151	.033	1.060	.290
Social Agency	-.006	.076	-.003	-.078	.938
One maltreatment incident only	.043	.069	.024	.629	.529
More that one maltreatment incident	.253	.103	.088	2.457	.014
Neglect	.020	.084	.011	.238	.812
Physical Abuse	.504	.233	.068	2.167	.030
Physical Abuse & Neglect	.001	.112	.000	.010	.992
Sexual Abuse	.205	.332	.019	.618	.537
Sexual Abuse & Neglect	-.001	.139	.000	-.004	.997
Sexual & Physical Abuse	-.081	.863	-.003	-.094	.925
Sexual Abuse, Physical Abuse, & Neglect	.363	.130	.102	2.790	.005

Adjusted r^2 = .064
 N = 1034

The pattern in the results predicting moderate delinquency in **Table 22** is again quite similar to that in **Table 20** predicting total delinquency. For example, duration of maltreatment is a significant predictor as is physical abuse in moderate delinquency. The difference is other minority race is significantly related to moderate delinquency and the combination of sexual abuse, physical abuses and neglect is more significant than in low delinquency offending.

**Table 23. Regression model predicting high severity delinquency complaints
 (Zingraff *et al.*)**

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	-.283	.075		-3.754	.000
Male	.371	.044	.255	8.520	.000
Black	.246	.055	.140	4.467	.000
Other race	.293	.188	.048	1.558	.120
Single Parent	.116	.050	.075	2.306	.021
Both Parents	.140	.121	.036	1.155	.248
Social Agency	.015	.061	.008	.242	.808
One maltreatment incident only	.046	.055	.031	.833	.405
More than one maltreatment incident	.116	.083	.049	1.405	.160
Neglect	.109	.067	.074	1.621	.105
Physical Abuse	.679	.187	.112	3.636	.000
Physical Abuse & Neglect	.003	.090	.001	.039	.969
Sexual Abuse	-.050	.267	-.006	-.186	.852
Sexual Abuse & Neglect	.010	.112	.003	.087	.931
Sexual & Physical Abuse	.037	.694	.002	.054	.957
Sexual Abuse, Physical Abuse, & Neglect	.193	.104	.066	1.847	.065

Adjusted r^2 = .096
 N = 1034

Table 23 shows the estimates for predicting high severity delinquency. These results are dissimilar to total delinquency in two areas. First, duration of maltreatment is not related to high severity delinquency. Second, neglect is marginally significant of high severity delinquency complaints ($p < .06$ one-tailed). However, physical abuse is highly significant and the combination of sexual abuse, physical abuse and neglect are somewhat significant predictors in high severity delinquency.

DELINQUENCY COHORT

Demographic analysis

Gender

In the Delinquent group there were 377 (68.7%) males and 172 (31.3%) females. (**Table 24**)

Table 24. Gender

		Frequency	Percent	Valid Percent
Valid	1 Male	377	68.7	68.7
	2 Female	172	31.3	31.3
	Total	549	100.0	100.0

Race

Table 25 shows that of the 549 children in the sample, 73.2% were black, 23.3% white and 3.5% Other.

Table 25. Race

		Frequency	Percent	Valid Percent
Valid	1 Black	402	73.2	73.2
	3 Other	19	3.5	3.5
	4 White	128	23.3	23.3
	Total	549	100.0	100.0

Family Size

Family size ranged from one to nine children. The marital status of parents in this group was largely unknown (44%). Almost 16% of children’s parents were married and living together and 28.2% of parents were not married to each other.

Duration of Maltreatment

Table 26 reflects the duration of maltreatment. Again, the number of maltreatment complaints is used as the proxy for duration of maltreatment. Eighty-five percent (85.1%) of the delinquent cohort had never had a maltreatment complaint. Of the 82 children with recorded cases of maltreatment, 12.4% were maltreated only once and 2.6% maltreated two or more times.

Table 26. Total number of Maltreatment Complaints

		Frequency	Percent	Valid Percent
Valid	No complaint	467	85.1	85.1
	One complaint	68	12.4	12.4
	Two complaints	11	2.0	2.0
	Three complaints	2	.4	.4
	Four complaints	1	.2	.2
	Total	549	100.0	100.0

Change in Placement

Table 27 shows the number of changes in placements 364 children. Placements changed depending upon the complaint and disposition and ranged from no change in living arrangement to eleven placements. Of the recorded changes 52.2% of the children had no change from their present living arrangement. Twenty-one percent (21.2%) of the children’s placement was changed at least once. Twenty-seven percent experienced two or more changes in their placement.

Table 27. Number of changes in Placement

		Frequency	Percent	Valid Percent
Valid	0	190	34.6	52.2
	1	77	14.0	21.2
	2	37	6.7	10.2
	3	27	4.9	7.4
	4	16	2.9	4.4
	5	11	2.0	3.0
	6	1	.2	.3
	8	2	.4	.5
	9	1	.2	.3
	11	2	.4	.5
	Total	364	66.3	100.0
Missing	System	185	33.7	
Total		549	100.0	

Type of Placement

Type of Placement was pooled for all complaints. Of all children placed, 65% were placed with their mother; 8.5% placed with their father; 10% with grandparents or other relatives; 13% institutional placements. (**Table 28**)

Table 28. Type of Placement - Complaints #1-#20

		Frequency	Percent	Valid Percent
Valid	Mother	1245	60.0	60.5
	Father	175	8.4	8.5
	Parents	138	6.6	6.7
	Maternal Grandmother	86	4.1	4.2
	Maternal Grandfather	3	.1	.1
	Maternal Grandparents	6	.3	.3
	Paternal Grandmother	28	1.3	1.4
	Paternal Grandparents	1	.0	.0
	Great Grandparent	9	.4	.4
	Other relative	78	3.8	3.8
	Non - relative	19	.9	.9
	YSB	125	6.0	6.1
	DYD/DCS	27	1.3	1.3
	DHS	89	4.3	4.3
	Other Placement/sanction	30	1.4	1.5
	Total	2059	99.2	100.0
Missing	Missing / Unknown	17	.8	
Total		2076	100.0	

Age of First Offense

Table 29 shows that more children committed their first offense when they were 15, 16, 14 and 13 in that order of frequency. Eighteen percent (15.4%) of all offenders were between the ages of 5 and 12 when they committed their first offense.

Table 29. Age in Years at First Delinquency Complaint

		Frequency	Percent	Valid Percent
Valid	5 years old	1	.2	.2
	6 years old	1	.2	.2
	7 years old	5	.9	1.0
	8 years old	2	.4	.4
	9 years old	7	1.3	1.4
	10 years old	14	2.6	2.8
	11 years old	21	3.8	4.2
	12 years old	26	4.7	5.2
	13 years old	55	10.0	11.0
	14 years old	84	15.3	16.8
	15 years old	132	24.0	26.4
	16 years old	100	18.2	20.0
	17 years old	52	9.5	10.4
	Total	500	91.1	100.0
Missing	System	49	8.9	
Total		549	100.0	

Severity of Offense

Tables 30, 31, and 32 depict the number of offenses by severity category. Not unexpectedly, the data showed that the types of offenses committed by the delinquent group were more frequent and severe than the maltreated cohort. Forty percent (40.1%) committed at least one Low Severity Offense compared to 14.6% of the dependency cohort in **Table 8**. Among the Moderate Severity cases 28.4% committed at least one moderate offense compared to 11.7% of

the dependency cohort in **Table 9**.(p.22) In the High Severity category 21.3% committed at least one high severity offense compared to 10.3% of the dependency cohort in **Table 10**.(p.22)

Table 30.
Total Number of Low Severity Delinquency Offenses

		Frequency	Percent	Valid Percent
Valid	0	160	29.1	29.1
	1	220	40.1	40.1
	2	88	16.0	16.0
	3	35	6.4	6.4
	4	20	3.6	3.6
	5	14	2.6	2.6
	6	4	.7	.7
	7	4	.7	.7
	9	2	.4	.4
	11	1	.2	.2
	12	1	.2	.2
	Total	549	100.0	100.0

Table 31.
Total Number of Moderate Severity Delinquency Offenses

		Frequency	Percent	Valid Percent
Valid	0	336	61.2	61.2
	1	156	28.4	28.4
	2	37	6.7	6.7
	3	15	2.7	2.7
	4	3	.5	.5
	5	2	.4	.4
	Total	549	100.0	100.0

Table 32.
Total number of High Severity Delinquency Offenses

	Frequency	Percent	Valid Percent
Valid 0	392	71.4	71.4
1	118	21.5	21.5
2	30	5.5	5.5
3	5	.9	.9
4	3	.5	.5
5	1	.2	.2
Total	549	100.0	100.0

Severity of Offense and Maltreatment

Table 33 displays a crosstabular comparison between the severity of offenses and whether the juvenile was ever maltreated. Children who were maltreated committed fewer offenses overall than those not maltreated. However, Low Severity offenses were more common than other types of offenses among the children who were maltreated. This difference is significant based on a chi-squared test ($\chi^2 = 105.1, p < .001$).

Table 33. POOLED Severity rating of delinquent offenses for Charge/Complaint #1-#20 * Has the juvenile ever been maltreated? Crosstabulation

Count		Has the juvenile ever been maltreated?		
		No	Yes	Total
POOLED Severity rating of delinquent offenses for Charge/Complaint #1-#20	Other offense	387	328	715
	Unsustained Delinquency	70	28	98
	Low severity	572	172	744
	Moderate severity	227	70	297
	High severity	165	57	222
Total		1421	655	2076

$\chi^2=105.1, p<.001$

Multivariate Analysis

Similar to our earlier analysis of a crime and delinquency in a dependency cohort, we use definitions of crime and delinquency from Widom (1989), Smith and Thornberry (1995) and Zingraff and associates (1993) in OLS regression models to estimate predictors of delinquency. Abuse and neglect in this dataset is limited to a dummy variable (no=0; yes=1) without additional information on the type of abuse or neglect. This definition was used because of time constraints on our access to the juvenile court records.

Estimating delinquency (Widom definitions)

Table 34 provides estimates from a regression model predicting the total number of delinquency complaints using a sample of children brought into court for a delinquent complaint in 2000 or 2001. Abuse and neglect in this dataset is limited to a dummy variable (no=0; yes=1) without additional information on the type of abuse or neglect. Independent variables included in this analysis include dummy variables (0=no and 1=yes) for sex, race, and abuse or neglect. The tables are shown as two-tailed tests of significance.

Table 34. Regression model predicting total number of delinquency complaints (Widom)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.000	.219		4.572	.000
Male	.945	.188	.203	5.024	.000
Black	.568	.209	.117	2.723	.007
Other race	-.241	.501	-.020	-.481	.631
Maltreated	1.443	.246	.239	5.867	.000

Adjusted r^2 = .113
 N = 546

Table 34 shows that gender, and minority race (Black) are significant predictors of total delinquency. Examination of the unstandardized coefficients shows that boys are estimated to have almost one more total delinquent complaint than females when all other factors are held constant. Racial differences are estimated for blacks as about one-half additional delinquent complaint compared to other races. Maltreatment is significantly related to total delinquency estimated as about one and one-half additional complaints.

An elaboration of **Table 34** broken into low, moderate, and high level delinquency was conducted. Briefly, being male was a significant factor related to delinquency complaints in all analyses. Being a minority (Black) was significantly related to low severity complaints but not for moderate or high. Maltreatment was significantly related to all levels of delinquency.

Estimating delinquency (Smith and Thornberry definitions)

Table 35 provides estimates the total number of delinquency complaints for the delinquency cohort using variables identified by Smith and Thornberry. The results indicate that Males and minority status (African American) are significant related to total delinquency.

**Table 35. Regression model predicting total delinquency complaints
 (Smith & Thornberry)**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.057	.309		3.425	.001
Male	.909	.188	.195	4.834	.000
African-American	.621	.199	.128	3.121	.002
Yes for maltreatment	.430	.437	.071	.986	.325
Yes, child was maltreated at or before age 12 years	1.443	.477	.217	3.026	.003
Other Placement/Structure	-.066	.278	-.011	-.236	.813
Social Agency Placement/Structure	-.749	.501	-.071	-1.493	.136

Adjusted r^2 = .129
 N = 542

Duration of maltreatment is found to be significant rather than maltreatment alone. Family living arrangement and social agency placement were not related to total delinquency.

We separated delinquency as low, moderate and high and regressed these same predictor variables. The results of these analyses are highly similar to what is shown in **Table 35** with the following exceptions. First, social agency structure is inversely related to low serious delinquency and directly related to high level delinquent complaints. Second, minority race (African-American) is associated with low level delinquency but not with moderate or high level delinquency complaints when all other factors are held constant.

Estimating delinquency (Zingraff, Leiter, Myers and Johnsen definitions)

Tables 36 presents estimates predicting the total number of delinquency complaints for the delinquent cohort that replicate variables from Zingraff et al. (1993). Recall, other living

arrangements is a reference category. For maltreatment, no maltreatment is the reference category with duration of maltreatment operationalized as one time, and two or more times.

Table 36.
Regression model predicting total delinquency complaints (Zingraff *et al.*)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.203	.391		.518	.605
Male	.930	.186	.200	5.001	.000
Black	.618	.209	.127	2.962	.003
Other race	-.195	.497	-.017	-.393	.695
Single Parent	.819	.325	.167	2.521	.012
Both Parents	.870	.414	.128	2.103	.036
Social Agency	.148	.495	.014	.300	.764
One maltreatment incident only	1.521	.306	.233	4.980	.000
More than one maltreatment incident	3.413	.558	.250	6.114	.000

Adjusted r^2 = .138
 N = 546

The results of the regression model indicate that being Male and Black are significant predictors of total delinquency. Living arrangement is also related to total delinquency with children in single parent households estimated as having higher levels of total delinquency compared to other living arrangements. Two parent families are also estimated as having higher levels of total delinquency. The duration of maltreatment is also significantly related to total delinquency. No maltreatment is the reference category. Children with one maltreatment are estimated as having 1.5 more total delinquent complaints and children with more than one maltreatment incident are estimated as about 3.4 additional complaints of total delinquency.

Separation of this model into low, moderate and high delinquency complaints yield results that are very similar. Low level delinquency has an identical pattern of results. Moderate and

high level delinquency differ in that race is not a significant factor in either model. High level delinquency also differs as multiple maltreatment incidents are not associated with it.

Multivariate Analysis Summary

Dependency Cohort:

This study explores the heterogeneity within maltreatment in the dependency cohort. The regression models presented in this section focus on the relationship between official reports of child maltreatment and delinquency.

The results are fairly consistent in showing that physical abuse is a significant risk factor for delinquency. Sexual abuse reported along with physical abuse and neglect was also a significant risk factor for delinquency in most of the models. In these models, neglect tended not to be found as a significant factor. However, bear in mind that within the dependency cohort these models are testing for heterogeneity in maltreatment rather than exposure to maltreatment since by definition nearly all of these children were evaluated by the juvenile court because of a dependent and neglected complaint.

The issue of onset and duration of dependency clearly show that early child maltreatment (prior to age 12) poses a significant risk factor for total delinquency and high severity delinquency. The results evaluating family structure and form and extent of maltreatment were consistent in showing that physical abuse is a risk factor for delinquency. Results were mixed in showing that duration of maltreatment (more than one incident) was a risk factor for low and moderate severity but not for high severity delinquency. Family structure (single parent) was a risk factor for all forms of delinquency. Analysis which included birth order as a variable showed that it was not related to any of the forms of delinquency.

Models with total changes in placement as a predictor showed that it was significantly related to all forms of delinquency. In fact, in the multivariate models, it was the strongest single predictor of all forms of delinquency.

Delinquency Cohort:

Analysis of the delinquency cohort yielded evidence that maltreatment is related to delinquency in all of the models. The results reported here do not allow a separation of the forms of maltreatment since the social files were not examined. The results are very clear though in showing that maltreatment is a risk factor for delinquency and further in showing that early exposure to maltreatment and multiple exposure to maltreatment are risk factors.

VII. Focus Groups

In Phase I (2002) the researchers conducted 8 focus groups with professionals who have come in contact with or worked with troubled children and families. A total of 41 persons participated in the focus group sessions, which lasted from 1 to 1 ½ hours. The participant groups were Public School Employee (teachers and guidance counselors), Juvenile Court Child Protective Service Workers, Juvenile Court Auxiliary Probation Officers, Mental Health, Law Enforcement Officers, Social Workers and Advocates (Administrators), Case worker/Social Workers (frontline), and Medical doctors. Sixty percent of the respondents had over 10 years work experience in their profession. There were 26 women and 13 men, 21 African Americans and 20 Caucasians. Their experiences ranged from public and governmental agency employment, to private mental health agencies and practices. Among them were child psychologists, medical doctors, social workers, teachers, police officers, sheriff's deputies who worked in the school systems, probation officers, child advocates and family and child caseworkers. They came into contact with a diverse socio-economic population in Memphis and Shelby County.

All of the focus group participants filled out a survey prior to their focus group discussions. The Project Director briefly discussed the purpose of the research and then introduced the facilitator and recorder. Each session began with roundtable introductions and general format for the focus group session. There were five basic focus group questions around which discussion centered.

1. What do you think are the main reasons children engage in delinquent and/or criminal conduct? (Risk factors) Consider from the individual, family and neighborhood/community influences.

2. What do you think are the main reasons children do not become delinquent and/or engage in criminal conduct? (Protective factors) Consider individual, family and neighborhood/community influences.
3. What do you think are the main reasons families are referred to Juvenile Court/DCS for allegations of dependency and neglect?
4. What are your top three recommendations for prevention and intervention of dependency and neglect?
5. What are your top three recommendations for prevention and intervention of delinquency, if different from number 4?

The disciplines represented provided a holistic perspective of the maltreatment of children and the potential for the prevention of serious delinquent behavior that only scratched the surface within the time frames given. Their wealth of experience and knowledge presented many views that suggested the need for more in depth discussion and study. Many indicated the need for cross-discipline collaboration that could address the core issues of child maltreatment as well as the barriers presented by the competition for funding in a limited resource environment. There were many themes discussed by all of the groups as they considered the risk and protective factors involved in pathways to delinquency but four major themes emerged: parenting issues, community and school influence, systemic responses, and individual pathologies of the child. A variety of recommendations emerged from discussion of risk and protective factors. Most of the ideas were not new to the field, but the level of frustration was palpable because most believed that these social issues could be solved if there was a collective societal will to pull together the resources and do it.

Parenting Issues:

The major focus from all group discussions was on poor parenting skills with mention of the pathogenic problems, which include drug/alcohol abuse, and mental health problems. Every group pointed out that a major risk factor was the inability of the parent to provide a family structure, and discipline. The lack of supervision, transient (nomadic) housing patterns, no set time to eat, go to bed, do homework, go to school and for many the belief that all you have to do is clothe and feed your child in order to be a good parent. The lack of parental bonding and involvement in the child's life expresses itself when child gravitates toward gangs, or shares feelings with teachers and other relative strangers in looking for love and acceptance. Some children exhibit hostility or act out in school and other inappropriate ways while some hide their anger. Drug abuse by parents creates a vicious cycle as the quest for drugs leads to neglect, no financial resources for necessities, ultimate bitterness of the children subjected to the cycle.

If the child is difficult because of biogenetic issues such as hyperactivity, mental retardation, or other learning disability, persons with limited parenting skills are severely challenged. Some parents are afraid of their children, and some get fed up with their kids and take them to juvenile court. This is true even for two parent families. Many of the at risk families have no father in the home or a constantly changing father figure, as in the case of mother having children with multiple men. Too often, the child's interest and needs are secondary to the parents and the child comes to believe he is the problem. One example given was that of the mother who won't allow the child to visit his father because he has a girlfriend and in the reverse the father who withholds financial support because the mother won't let him visit with his child. Domestic violence and divorced relationships present situations that parents handle poorly. Their lack of control

presents poor role modeling that ultimately leave the child angry, feeling insecure, unsafe and likely to repeat those behaviors in adulthood.

Recommendations for parent education and training were universally agreed upon but, as some pointed out, it is unreasonable to expect the current 8 weeks or even the 12-month programs to change 20 years of bad habits. Other suggestions included home based intervention, drug addiction treatment, employment for parents, utilize schools for after school programs and mentors for parents.

Child pathologies:

Separating biological and environmental influences in the growth and development of *Homo sapiens* is the subject of the ages and of many scholarly tomes. The focus here was to recognize that there might be individual differences among children that cannot be explained by poor parenting skills and that we needed explanations for children in the same family taking different paths. There are some identifiable individual behavioral characteristics that are difficult to control even in the best of circumstances and require the skill not only of the parents but also of the services available in a community. Children who are bio-chemically loaded at birth, or born with birth defects will present challenges to parents with the best of skills. One person noted however, that most delinquent children do not have ADD/ADHD or physical disabilities. Other potential risk factors are mental retardation and learning disabilities that raise the level of frustration when the child is not successful in school or among his peers. Some children present early problems such as developmental delays, problems with bonding, and demand for instant gratification. Whether these are biological or environmental behaviors that can be controlled, they must be considered as risk factors for deviant behavior if coupled with other risk factors

such as parent skill, poverty and availability of services. On the protective side, some children show great resilience in face of many challenges.

Community and School Influence:

The focus groups' assessments of the impact of community and school could be summed up in one person's comment "The Village doesn't exist anymore". Others stated that we do not demonstrate by our actions that we value children, even though we say we do. We expect too much from teachers in addition to the belief that they are not adequately compensated. Socially promoting children overlook and compound problems and set them up for failure. Discipline is not only lacking in the home, but in the school and other support service systems. Fear of being sued is one reason given for restrictions in discipline. However, for some children their school is their refuge from family problems. It was also noted that some churches have become so large that they have lost the personal touch and that other churches although willing, do not know how to address problems. We provide substantial resources for sports and athletics and little by comparison for academics. Activities for children and families have become so expensive that many can't afford them because they have multiple children. Many felt that the media played the role of reinforcing negative behaviors and the availability of firearms contributes to at risk behaviors.

Some participants noted that family and community response to a child in need varies by geographical location. For example, in some communities it is not common for family members to refer a member to juvenile court. They tend to band together and hide family problems. In those situations, a neighbor is the most likely person to report abuse or neglect. One participant noted that when a call is made in the City the response is to send the police. If the call is made in

the suburb, tell your father. Legal liability and fear of lawsuits prevent some from reporting abuse and neglect.

The groups noted that community influences are important. There are many good programs but much more is needed. Everyone mentioned mentors or that special person who bonds with a child and makes them feel they are important. Some suggestions included starting or expanding a city-wide mentoring program, tutors, in school visitor reading program, education and training of church leaders, special group in schools to assist guidance counselors, after school programs for children and parents, school based programs that are family focused and parent friendly, longer term home visitation program. They suggested that neighborhoods needed to develop the responsibility and will to help families and that we should find ways to empower neighborhoods with resources. Children with no picture of the future or who do not see success as obtainable need considerable community support.

Systemic Issues:

Whether the focus group participants worked in public or private jobs they all agreed that there are system failures that contribute to the pathways toward delinquency. Whether it is the inappropriate placement of children in foster care, the failure to address root causes of runaways, lack of available mental health and social services, lack of employment opportunities, or social school promotions there are some systemic issues that need to be addressed. Some suggested reduced caseloads for human service and caseworkers, universal health care, intensive parenting education. Poverty cannot be ignored as a systemic problem for a too many of the citizens in Shelby County but no one suggests that all persons in poverty are crimogenic. Economic

opportunities and family friendly after school hour programs were some of the suggested solutions.

Race in our community continues to play a large role in how the systemic issues are viewed. It was pointed out that when black children are brought into the system, they are labeled as delinquent. People look for a mental health label to help when white children are brought into the system. Labeling children presents a risk factor that is not solely racial. In order for a child to obtain service they must have a label. If a child has a mental health problem, everyone may agree to a delinquent label in order to obtain necessary services. Labels, however, are generally based upon negative behaviors rather than based upon the assets presented by the individual. These labels follow them for the rest of their lives. Once in the system, families are bombarded by services, and for example, can have as many as four different case managers that can overwhelm the caregiver. Some pointed out that ‘the system’ wants a resource, even if it is a bad one and therefore, the need for program evaluation is critical.

Continuity of services and cross discipline collaboration is also important and one suggestion included finding a ways to overcome legal and institutional barriers in order that doctors, psychologists and teachers to better communicate for the benefit of children. The time limitations for the group discussions were challenging but provided much greater insight into individual, family, community and system influence on dependency/neglect and pathways to delinquency.

Written Survey Results

As stated previously each of the focus group participants was asked to fill out a Survey on Dependency and Neglect and the Pathways to Delinquency prior to the focus group session.

Forty (40) of the 41 participants responded. The survey instrument (See Appendix ???) asked 35 questions regarding their perceptions of whom, what and why children come into the system as dependent/neglected or delinquent as well as their opinions about the relationship between dependency and neglect and delinquency. The responses were ranked on a scale from 1 to 5 from strongly agree to strongly disagree. The top Survey Question (Q) responses that were most strongly agreed upon were¹⁴:

Q. 3. Some children are engaged in delinquent conduct, but are not referred to Juvenile Court. (90%)

Q. 16. Most children become delinquent because parents do not pay enough attention to their children's needs. (90%)

Q. 14. Some children are engaged in delinquent conduct, but are not referred to law enforcement. (87.5%)

Q. 34. Families and children are not referred soon enough to state authorities when there are allegations of dependency, abuse, or neglect. (82.5%)

Q. 19. Some children are engaged in delinquent conduct and are taken for mental health counseling. (82.5%)

Q. 7. I have referred a child/children to DCS (82.5%)

Q. 30. Children subject to abuse/neglect are more likely to commit delinquent offenses. (77.5%)

Q. 32. Some families of abused/neglected children are more likely than others to be referred to state authorities. (77.5%)

The top responses most strongly disagreed upon were¹⁵:

Q. 4. Most families are referred to DCS by law enforcement. (65%)

¹⁴ Combined percentages of Strongly Agreed and Agree

¹⁵ Combined percentages of Disagree and Strongly Disagree

Q. 8. Most children with delinquency problems are African American children. (72.5%)

Q. 11. Most children drop out of school because they prefer to spend time with their peers.
(77.5%)

Q. 12. Poverty is the main reason for becoming delinquent. (72.5%)

Q. 20. Caucasian children are taken to Juvenile Court as often as African American children.
(60%)

Q. 28. Once a child is referred to Juvenile Court for protection from abuse or neglect, they are more likely to become delinquent in the future. (65%)

Q. 29. Referral to state programs, such as DCS or Juvenile Court, generally guarantees future state services and interventions into adulthood. (62.5%)

The most interesting response to the hypothesis indicated that 50% Disagreed with the statement “Most children who are dependent or neglected become delinquent”. Ten percent Strongly Agreed, 32.5% Agreed, 7.5% responded Neutral/Don’t Know and No one Strongly Disagreed with the statement. In contrast, there was strong agreement that “Children subject to abuse/neglect are more likely to commit delinquent offenses.” The respondents likely preferred to gauge their opinions in terms of probabilities as in “more likely” rather than agree to the absolute declaration expressed in the term “most”. Three of the respondents mentioned the use of the term “most” but responded to the questions with explanations.

While the reasons for delinquency are complex, many beliefs about the causes are simplified without basis in fact. The respondents’ considerable experiences with troubled children and families made it clear that even the experts don’t agree. For example, 40% did not agree that most children who drop out of school become delinquent, but 40% agreed that they did. And, 50% did not agree that most children with delinquency problems are from economically deprived

