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Predictors of Recurrent Child Maltreatment

Bridget Kielty
Eastern Illinois University
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Predictors of Recurrent Child Maltreatment

BY

## Bridget Kielty

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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Date	Thesis Director
██████████████████	██████████████████
Date	Department/School Head

Predictors of Recurrent Child Maltreatment

Bridget Kielty

Eastern Illinois University

Abstract

The purpose of this study was to clarify the relationship between child maltreatment recurrence and several predictor variables in 7 rural counties in central Illinois, an under-studied population in the child maltreatment literature. Additionally, factors that contributed to the decision by Illinois Department of Child and Family Services (DCFS) to provide post-investigative services were also examined. Data were obtained from an integrated database maintained by Illinois DCFS. All indicated cases of maltreatment occurring between January 1, 2000 and March 31 of 2001 were examined for a 12-month period following the initial indicated report for child revictimization or perpetrator recidivism. The final sample consisted of 347 victims of child maltreatment. Of these initial maltreatment cases, 49 cases were indicated for recurrent abuse or neglect and 51 cases were opened for postinvestigative services. Results indicated that female perpetrators, multiple victims and neglect were associated with recurrent child maltreatment. The findings also suggested that the combination of having multiple victims and a female perpetrator enhanced the risk of reabuse and reneglect. Factors related to the decision to open a case for services were younger female victims, younger perpetrators, female perpetrators, younger female perpetrators, and neglect. Moreover, cases with a combination of multiple perpetrators and female perpetrators enhanced the likelihood that cases would be opened for post-investigative services. A surprising finding was that although cases with multiple victims were at more risk for recurrence, cases with multiple perpetrators were more likely to be opened for post-investigative services. Suggestions for future research as well as further DCFS policy recommendations are discussed.

Dedication

This thesis is dedicated to the memory of my great-grandmother, Stefania Capowski.

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Predictors of Recurrent Child Maltreatment

Child maltreatment is an undeniable societal concern due to its deleterious effects on children. Reece (2000) reports that children who are maltreated are likely to be affected neurologically, cognitively, behaviorally, socially, emotionally, and psychologically. The implications for the significance of identifying risk factors in order to prevent child maltreatment are irrefutable. Investigating these risk factors will assist in the identification and implementation of appropriate interventions in order to reduce recurrent child abuse and neglect. Consequently, there has been much research conducted on child maltreatment and the risk factors that contribute to it.

In child maltreatment research definitions vary with respect to important terms, such as child maltreatment and perpetrator: child maltreatment generally refers to child physical abuse, sexual abuse, and/or neglect, and a perpetrator of child maltreatment is a person who has maltreated a child while in a care-taking relationship to that child (DePanfilis & Zuravin, 1998). In the present study, the terms child maltreatment and child abuse and neglect were used interchangeably as were the terms perpetrator and parent/caregiver.

There is a provision in both Federal and State legislation for the definition of child maltreatment as well as in child protection (civil) statutes and criminal statutes. At the federal level, the Child Abuse Prevention and Treatment Act, originally enacted in 1974 and most recently amended in 1996 (Public Law 104-235), is a civil statute that defines child abuse and neglect as at a minimum:

> any recent act or failure to act on the part of a parent or caretaker, which results in
>
> death, serious physical or emotional harm, sexual abuse or exploitation, or an act

or failure to act which presents an imminent risk of serious harm. The term sexual

abuse includes the employment, use, persuasion, inducement, enticement, or

coercion of any child to engage in, or assist any other person to engage in, any

sexually explicit conduct or simulation of such conduct for the purpose of

producing a visual depiction of such conduct; or the rape, and in cases of

caretaker or inter-familial relationships, statutory rape, molestation, prostitution,

or other form of sexual exploitation of children, or incest with children (42 U.S.C.

§ 5106, 1996).

The federal civil definition is prescribed as the keystone for each individual state's child

protective services interpretation of child maltreatment, however, definitions vary from

state to state (U.S.DHHS, 2002).

The State of Illinois Abused and Neglected Children's Reporting Act ("ANCRA")

expands upon the Federal definition and includes specific examples, which constitute

abuse or neglect (DHHS, 2002). For example, according to ANCRA (1980), the

definition of an abused child includes:

A child whose parent or immediate family member, or any person responsible for

the child's welfare, or any individual residing in the same home as the child, or a

paramour of the child's parent inflicts, causes to be inflicted, or allows to be

inflicted upon such child physical injury, by other than accidental means, which

causes death, disfigurement, impairment of physical or emotional health, or loss

or impairment of any bodily function (DHHS, 2002).

A neglected child, on the other hand, is described as a child who "is not receiving proper

nourishment or medically indicated treatment or other care necessary for child's well

being including food, clothing and shelter or child who is abandoned or child whose urine contains any amount of a controlled substance"(DHHS, 2002).

Regardless of the type of maltreatment, it is the responsibility of Child Protective Services (CPS) division within each state to investigate reports of child maltreatment as well as to determine the appropriate disposition as to whether the report is either indicated or unindicated. In the State of Illinois, reports of child maltreatment are classified as indicated when a child protective service team has determined that there is sufficient credible evidence to determine maltreatment, whereas if there is no evidence to support child maltreatment then the case is classified as unindicated (Illinois Abused and Neglected Child Reporting Act, 2002). The standard of proof to indicate child maltreatment in child protective services is a preponderance of evidence, whereas to determine that someone is criminally guilty of child abuse requires proof beyond a reasonable doubt.

Statistics are kept at both the federal and state level on indicated and unindicated child abuse and neglect reports known to Child Protective Services. The National Child Abuse and Neglect Data System (NCANDS) was developed as a result of a mandate prescribed in The Child Abuse and Prevention Act (U.S Department of Health and Human Services, Child Maltreatment, 2002). This mandate required the U.S. Department of Health and Human Services to establish a national bank of voluntarily reported data on child maltreatment (Child Abuse Prevention and Treatment Act, 1996). As a result, the NCANDS is the primary source of national information on abused and neglected children who have been identified by state CPS agencies. According to NCANDS, approximately three million children nationwide were reported to child protective services (CPS) in the

year 2000. Close to twenty nine percent of these cases were found to be indicated (U.S Department of Health and Human Services, 2000), however, approximately only one-half received some type of intervention.

The Illinois Department of Children and Family Services (IDCFS) also maintains child abuse and neglect statistics. In fiscal year 2000, according to the Illinois Department of Children and Family Services' Child Abuse and Neglect Statistics Annual Report, 103,513 cases were reported to CPS, and of these 32,857 (31.7%) were indicated (IDCFS, 2000). Of the victims, approximately 22% received some type of postinvestigative services (U.S Department of Health and Human Services, 2000). The data do not suggest better child treatment in rural communities as smaller rural counties in central Illinois have disturbingly high rates of child maltreatment reports compared to larger urban communities, while having a lower rate of indicated reports. For example, in Coles County, in the year 2000, there were 608 reports of child maltreatment, the 6th highest rate in Illinois (IDCFS, 2000). Of these children, only 130 cases were indicated (21.4%). In comparison, Cook County (population 5,350,269) had 40,737 child abuse and neglect reports. Of these children, 11,233 were indicated (27.6%)(IDCFS, 2000). It is believed studying child abuse cases in rural counties would be valuable in increasing the understanding of the correlates of recurrent child maltreatment as rural populations have been understudied in the area of child maltreatment. Thus, the current study examined Illinois DCFS administrative data from seven rural counties in central Illinois (Coles, Clark, Cumberland, Douglas, Edgar, Moultrie, and Shelby).

Recurrent child maltreatment

The primary purpose of child welfare agencies is to protect children and to provide services to children and their families in order to prevent future occurrences of child maltreatment, however, the recurrence of child maltreatment persists. Although the reabuse/reneglect of children is not currently reported on a nationwide level by the NCANDS (English, Marshall, Brummel, & Orme, 1997), it has been estimated that the incidence of repeat occurrences ranges from 18 to 60 percent (Inkelas & Halfton, 1997). This large range is due to diverse research attempts to estimate recurrence.

In their review of the literature in this area, Inkelas and Halfton (1997) examined, among other factors, the rate that children return to the child welfare system. Administrative data were obtained from the Emergency Response component of California's child protective service and analyses were conducted on a sample of cases across three different years. The researchers found that approximately 50 percent of the children and their families that were initially reported to child protective services were the focus of subsequent child maltreatment reports. These results imply that many children continue to be at risk for child abuse despite child welfare intervention.

In view of the fact that children who experience recurrent maltreatment have already been victims, the efforts of child welfare services have not been successful in preventing their subsequent victimization. Recognizing the need to hold child welfare agencies more accountable, the Federal government developed the Child and Family Services Plan Review (Wells & Johnson, 2001). The Child and Family Services State Plan Review implemented guidelines whereby outcome measures are used to assess the performance of state child welfare departments (Wells & Johnson, 2001). Accordingly, the goal of child welfare agencies is to achieve not only child safety and placement

permanency, but also child and family well being. As a result, states are charged with and are held accountable for improving child welfare services to achieve these outcomes.

Wells and Johnson (2001) indicate that one such outcome measure that the Child and Family State Plan review is concerned with is that of recurrent maltreatment. Following a review, those states that have not achieved the requirements in all the areas assessed are obligated to develop and implement program improvement plans addressing those areas needing improvement (United Stated Department of Health and Human Services, 2002). Those states that do not make the necessary improvements can expect to be penalized according to federal regulations.

The understanding of the etiology of recurrent child maltreatment is limited due to the sparse amount of attention given to recurrent child maltreatment in comparison to child abuse and neglect. Consequently, unfortunately, the relationship of risk factors and moderating factors associated with recurrent child maltreatment are perplexing to child welfare services and researchers alike. Thus, a recent research priority identified by the State of Illinois is to investigate factors associated with recurrent child maltreatment (Children and Family Research Center, 1999).

A number of methodological issues arise when investigating recurrent child maltreatment due to the lack of standards for studying the concept. One of the difficulties in researching recurrence is defining the concept in a clear and objective manner. Following a review of 67 studies that explore this issue, DePanfilis and Zuravin (1998) found that there is no uniform definition of recurrent child maltreatment, which in turn makes it difficult to compare research findings.

Developing a clear definition of recurrent child maltreatment is also challenging because of the complexity of the concept. Furthermore, definitions vary according to the diverse purposes of researchers. However, many research definitions incorporate some of the characteristics included in the definition provided by the Child and Family Service State Plan of recurrent maltreatment. According to this definition, recurrent child abuse and/or neglect are any additional indicated reports of maltreatment of the original maltreated child (Child and Family Services State Plan Reviews, 1998). The original maltreated child refers to the actual child in a family who sustained the index or original maltreatment. Therefore, it does not refer to an additional indicated report of abuse of another child within the same family. Additionally, it does not include subsequent reports of child maltreatment that are unindicated.

Nonetheless, it needs to be recognized that previous researchers have included both indicated and unindicated cases in examining the relationship between risk factors and rereferral rates of abuse and neglect (English & Marshall 1999; Inkelas & Halfton 1997; Way et al., 2001). According to English and Marshall (1999), a rereferral was defined as a referral that was accepted for investigation following an initial referral, regardless of the outcome of the investigation, whether it be indicated or unindicated. Other large-scale studies have included only indicated cases as they were interested in examining cases that experienced recurrence during or following intervention (DePanfilis & Zuravin, 1999; Levy et al., 1995).

An additional consideration when conceptualizing recurrent child maltreatment is determining how soon after the initial incident a report can be considered as an instance of recurrent abuse or neglect (Fluke et al., 1999). The beginning and length of the follow-

up process depends on the purpose for conducting research. For example, some have

investigated the recurrence of maltreatment over a five-year follow-up period (DePanfilis

and Zuravin, 1999; Levy et al., 1995). Further, DePanfilis and Zuravin (1999) excluded

duplicate reports of the initial report as recurrent reports within the first 30 days after the

initial report could actually be related to the initial report. In that same manner, Way et al.

(2001) examined recurrence rates over a 4.5-year period, but excluded re-reports made

during the first seven days after the initial report. The Child and Family Services State

Plan has identified recurrence as the percentage of children who have an additional

indicated maltreatment report within a 12 month period (Wells & Johnson, 2001).

However, the plan has no minimum time frame established following the initial report to

control for duplicate reports.

Along with having diverse definitions, investigators utilize different approaches in

studying recurrent maltreatment. Researchers have made a distinction between examining

child-specific data, such as child's age, gender and mental health issue (Inkelas and

Halfton,1997) and perpetrator-specific data, such as perpetrator's age, education, income

(Way et al.,2001) when examining recurrent maltreatment. According to Way et al.

(2001), perpetrator recidivism is important to examine because child welfare

interventions are designed to produce changes in the behavior of the perpetrator rather

than the child.

The preceding section highlights the complex nature of recurrent child

maltreatment. It is also important to identify correlates or predictors of recurrent child

abuse or neglect. Thus, the following section will present an overview of the literature

that pertains to this research.

Predictors of recurrent child maltreatment

Belsky's ecological model of child maltreatment posits that child maltreatment is a social psychological phenomenon embedded in the parent-child relationship (Belsky, 1980). The risk of maltreatment is multiply determined by various characteristics at different levels within the individual, the family, the community, and culture. Within the individual level, the focus is on abusive parental characteristics such as psychological disturbance or exposure to violence. At the family level, dysfunctional familial interaction patterns are examined, such as spousal abuse, family size and abuse-eliciting characteristics in children, e.g., health. Stress-inducing social forces within the community level, such as socioeconomic factors are also considered. Finally, larger cultural factors, such as the support for corporal punishment as a means to control children, contribute to child maltreatment.

Researchers have corroborated that certain ecological factors contribute to a child's increased risk of being abused or neglected (Sidebotham & Golding, 2001). Additionally, the likelihood of recurrent child maltreatment is enhanced by the presence of more than one risk factor (Marshall and English, 1999). Moreover, an increase in the incidence of child maltreatment occurs when stressors exceed supports or if risk factors are not offset by protective factors (Belsky, 1993).

Sidebotham and Golding (2001) conducted a study, which investigated risk factors of initial child abuse and neglect from an ecological perspective. The focus was on the influence of parental characteristics on the risk of child maltreatment. Findings suggested that parents younger than 20 year old, parents with a history of psychiatric

illness, and those with lower educational achievement are all at an increased risk for maltreating children.

Ecological factors have also been found to be associated with recurrent child maltreatment (English et al., 1999). However, findings are inconsistent across studies and there is limited consensus as to the predictors of recurrent child abuse or neglect.

Investigators have identified five clusters of predictor variables: maltreatment type, child characteristics, family characteristics, parent or perpetrator characteristics and intervention characteristics (DePanfilis & Zuravin, 1999). The following section focuses on variables that are most specific to the proposed study; accordingly, only the most relevant research is discussed

Maltreatment Characteristics. Several researchers have attempted to determine the most common form of recurring maltreatment. Levy et al. (1995) conducted a study of 304 children who were diagnosed as maltreated after being admitted to a hospital child abuse assessment unit. These children were then followed across a 5-year period. With respect to a maltreatment type, it was found that neglect was the most frequent form of reabuse, followed by physical abuse and then sexual abuse. These and other findings suggest that neglect is the most frequently recurring type of maltreatment (Fluke et al., 1999; Fuller et al., 2001; Inkelas & Halfton, 1997; Levy et al. 1995; Marshall & English, 1999). This may be because neglect tends to be a more chronic condition in families than physical abuse or sexual abuse. Additionally, intervention services provided in cases of neglect may be inadequate when compared to services provided in cases of physical and sexual abuse (Fluke et al., 1999).

Child Characteristics. Another aspect of child abuse or neglect recurrence that researchers have examined are the characteristics of the child, including demographics and socioeconomic factors, mental health issues, and developmental problems. Findings indicate that Asian and Pacific Islanders have the lowest rate of reabuse and/or reneglect relative to other racial or ethnic groups (English et al, 1999;Fluke et al., 1999). Variables identified as correlates of recurrence have been the child's age, mental health problems, and developmental problems (DePanfilis & Zuravin, 1999, Fluke et al., 1999; Fuller et. al., 2001; Marshall & English, 1999; Reece, 2001).

In a recent study, Fuller, Wells, & Cotton (2001) examined predictors of maltreatment recurrence at two different points in the life of the case: at the initiation of the investigation and after the case was opened for services. Predictors of recurrence for investigation cases were: children under the age of three and children with physical, emotional, and behavioral problems.. An implication of these findings is that vulnerable children may need treatment to address mental health problems and development problems, while interventions may be needed to improve parental coping skills (DePanfilis & Zuravin, 1999).

Another study (Marshall & English, 1999) found that the strongest characteristic that predicts maltreatment recurrence was a history of CPS reports. In addition, they found that the following five risk factors enhanced the likelihood of recurrence: children with developmental problems, families with younger children, families with multiple allegations of child maltreatment, caregiver history of child abuse or neglect, and families with multiple victims. A limitation of this study is that the data that were examined were

not first time reported families, therefore, the family's previous history with child protection services was unknown and may be considerably diverse.

Perpetrator characteristics. Empirical evidence also suggests that certain perpetrator characteristics are predictive of recurrent child maltreatment. Wolock and Magura's (1996) longitudinal study of CPS cases that were closed after the investigation without postinvestigative services support this statement. They hypothesized that closed cases with parental substance abuse would be more likely to have a re-report of child maltreatment than other cases. Data were obtained from CPS case files and interviews with the primary caretaker. Results demonstrated that parental substance abuse increased the likelihood of re-reports of child maltreatment. Still others have found that caregivers with more dependents, a history of spousal abuse, and those economically disadvantaged are more likely to repeatedly maltreat their children (DePanfilis and Zuravin, 1999; Levy et al., 1995, Way et al., 2001).

Levy et al. (1995) examined the association between recurrence and numerous perpetrator demographic and socioeconomic characteristics. Contrary to other findings in which both child and parental variables predict recurrence, only one variable, parents who qualified for and received Medicaid benefits, predicted recurrent maltreatment. The authors' interpretation of this finding is that perhaps these families may be more easily detected, reported and indicated, because they are more visible to social service agencies. However, these results lack generalizibilty as the sample was relatively small and included only children hospitalized for a child abuse assessment, which suggests that these children received services beyond what the average abused child receives (Terling, 1999).

English et al. (1999) investigated risk factors and other characteristics of 12,329 CPS referrals that had a subsequent report of child abuse and neglect. They compared cases that had a rereferral within an 18-month period after the initial report with those that did not. The researchers found that a caregiver's childhood history of abuse or neglect, history of substance abuse and domestic violence increase the possibility of a subsequent reports of child maltreatment. Consistent with these findings, Fuller et al. (2001) found that parents with a substance abuse history and a history of domestic violence were at a higher risk for recurrence. They also found that single parenthood and parental unemployment were correlated with an additional incident of abuse or neglect.

Although there have been investigations of parental characteristics associated with recurrence, there are few studies which have examined the association between recurrence and characteristics of perpetrators who abuse multiple children. Way et al. (2001) argue that basing the incidence of recurrence exclusively on the initial abused child may underestimate the extent that perpetrators reabuse given they may target a different child within the family. As a result, these investigators attempted to identify those parents or caregivers who reabuse the same child or a different child within the same family. Results indicated that female perpetrators and those living in economically disadvantaged areas were more likely to reoffend.

Intervention Characteristics. The provision of interventions to children and perpetrators following an initial abuse or neglect report are often mandated by child protective services (CPS). Investigators from the National Child Abuse and Neglect Data System (NCANDS) examined child protective services decision to provide postinvestigative services to children and families who had incidence of maltreatment

(U.S.DHHS, 2002). In the 45 states studied, on average 55% percent of the maltreatment victims received postinvestigation services. Illinois ranks 41 out of these 45 states in providing postinvestigative services to only 22.5% of the maltreatment victims. NCANDS findings also suggest that cases that were opened for services had younger children, sexual abuse victims and victims of multiple maltreatment, cases reported by medical personnel, and perpetrators who were the natural parent or foster parent. Additional factors identified by DePanfilis and Zuravin (2001) included having an initial report of neglect, multiple children, maternal substance abuse, and a younger mother.

Along with examining the factors related to the decision to provide services, it is also important to examine the impact that interventions have on preventing future maltreatment, however, there is limited research in this area. In a review of recurrent child maltreatment literature, DePanfilis and Zuravin (1998) note that "findings from studies that have used survival analysis techniques seem to indicate that the risk of recurrence declines with intervention" (p. 27).

Inkelas and Halfton (1997) found that 67% of abuse and neglect cases were closed after the investigation and also hypothesized that one reason for recurrent maltreatment may be the inadequate provision of effective postinvestigative services. Likewise, Fuller et al. (2001) yields additional support for the notion that the lack of service provision may be correlated with maltreatment recurrence. They found that families not provided services compared to those families provided at least one service were more likely to encounter maltreatment recurrence.

Fluke et al. (1999) also examined interventions following an indicated child abuse or neglect report. They compared data drawn from the National Child Abuse Neglect

Data System (NCANDS) across seven states. Children who were offered services versus those who were not were analyzed. It was found that for six out of the seven states, children who received services were at greater risk of recurrence. These results are in contrast to other findings. Although, Fluke's (1999) results appear to suggest that the presence of interventions are associated with increased recurrence, it may be that children who receive services are at a higher risk for recurrence to begin with and, therefore, more likely to experience future abuse or neglect. It is also possible that CPS increased surveillance of these cases resulting in a greater number of re-reports.

The present study

There is much interest in investigating the effects of recurrent child maltreatment because of its use as an outcome measure for child welfare services. According to Wells and Johnson (2001), in order to achieve the most successful outcomes, it is important for child welfare workers to utilize the most effective services with families involved with DCFS. Likewise, Levy et al. (1995) stated that "meaningful knowledge of the factors and circumstances that exacerbate or alleviate the likelihood of reabuse would enhance the ability of professionals to make informed decisions about optimal treatment and the ability to keep the family intact" (p.1364). It is apparent then that research should identify and examine the factors that contribute to or moderate child maltreatment recurrence in order to identify the most effective interventions.

The purpose of this study was to examine factors that correlate with or predict recurrent child abuse and neglect. The study also explored factors that influence the decision to open a case for postinvestigative services. Because research is limited in this area, this study clarified and extended understanding of the relationship between the

recurrence of child maltreatment and various predictors, such as demographic characteristics and intervention characteristics.

Moreover, research has insufficiently explored characteristics of perpetrators who re-offend. It is important to identify these repeat perpetrators, because child welfare normally tailors interventions to focus on generating changes in the behavior of the perpetrators and not the child (Way et al., 2001). Therefore, identifying risk factors in perpetrators who repeatedly maltreat children in their care can lead to the implementation of more effective interventions.

Recurrent child maltreatment cases for a two-year period, from seven rural central Illinois counties (Clark, Coles, Cumberland, Douglas, Edgar, Moultrie, and Shelby) were examined. Specifically, data were obtained on such factors as the form of maltreatment, characteristics of the child, perpetrator characteristics, and intervention factors.

Based on the literature, six specific research questions and related hypotheses were identified. However, hypotheses were also limited by the information available in the administrative database.

1)   What is the relationship of child characteristics, perpetrator characteristics, and maltreatment characteristics to recurrent child maltreatment?

Consistent with the research findings, it was hypothesized that specific child factors would be predictive of recurrent child maltreatment. Previous research has identified the following child characteristics that are associated with the recurrence of child maltreatment, e.g., younger children, children with physical, emotional and behavioral problems (DePanfilis and Zuravin, 1999; Fluke et al., 1999, Fuller et al., 2001, & Reece, 2000). Additionally, perpetrator and maltreatment factors were hypothesized to be

associated with recidivism. The following factors were identified in previous research: economically disadvantaged perpetrators, female perpetrators (Way et al., 2001); substance abusing caregivers, (Wolock and Magura, 1996), caregivers with more dependents and a history of spousal abuse (DePanfilis and Zuravin, 1999, Levy et al., 1995, Marshall & English, 1999, Way et al., 2001); single parent households and unemployed parents (Fuller et al., 2001); and neglect (Fluke et al., 1999; Fuller et al., 2001; Inkelas & Halfton, 1997; Levy et al. 1995; Way et al., 2001).

2)   Which *combination* of child, perpetrator, maltreatment factors are most predictive of recurrent child maltreatment?

It was hypothesized that a combination of child, perpetrator, and maltreatment characteristics would best predict maltreatment recurrence. Few studies have examined the cumulative impact of child, perpetrator, and maltreatment variables. Investigators have found that several factors in conjunction were associated with a second occurrence of maltreatment: families with children ages 0-2, single parents living alone with their children, physical abuse and neglect cases, cases referred for services to community services or private agencies, number of caretaker problems (e.g., alcohol/drug dependency, mental illness, domestic violence), number of child problems (e.g., physical health problems, disabilities, behavior disorders and truancy), and an increased number of prior indicated reports on the perpetrator (Fuller et al., 2001).

Knowledge of the set of variables that best predicts recurrence is limited; therefore, this study continued to explore factors that, when combined, best predict recurrent child abuse and neglect.

3)   Are child, perpetrator or maltreatment characteristics related to the

decision to open a case for services?

It was hypothesized that the decision to open a case for services would be differentially associated with the initial type of child maltreatment as well as specific child and perpetrator factors. There are contradictory results regarding the type of initial maltreatment that is associated with the provision of services. DePanfilis and Zuravin (2001) found that cases having an initial report of neglect are more likely to have a case opened for services whereas other investigators found that victims of multiple types of maltreatment were more likely to be provided services and sexual abuse victims least likely (U.S.DHHS, 2002). Other predictors of the provision of services are younger children, multiple children in the family, maternal substance abuse, younger mothers, prior indicated child abuse or neglect, reports made by medical personnel, and children who were maltreated by their natural parent or foster parent (DePanfilis and Zuravin, 2001; U.S.DHHS, 2002). The findings of this study clarified the relationship between the provision of interventions to specified case characteristics.

4) What intervention factors are associated with lower rates of recurrent child maltreatment?

The initial hypothesis with respect to this question was that perpetrators and children referred for services would have lower recurrence rates of child maltreatment. However, due to unforeseen constraints in the administrative database, such as missing and unreliable data, this hypothesis could not be investigated.

5) Is there a greater risk of recurrent maltreatment in cases involving multiple victims or multiple perpetrators?

It was hypothesized that multiple victims or multiple perpetrators are more

likely to be provided further services and are at a greater risk of maltreatment recurrence.

Research examining the influence of multiple perpetrators and multiple victims on

recurrent child maltreatment and the decision to provide services is limited. However,

Marshall and English (1999) did investigate the association between multiple victims in a

family and child maltreatment recurrence. They found that multiple victims in

combination with other factors, such as younger children and children with

developmental problems, best predicted recurrent child maltreatment.

<div align="center">METHOD</div>

Databases

In order to examine recurrent child maltreatment, data were obtained from the

Illinois Department of Children and Family Services (IDCFS) Integrated Database, which

includes the Child Abuse and Neglect Tracking System (CANTS) and the Child and

Youth Centered Information System (CYCIS). The CANTS database contains

information on all allegations of child maltreatment reported to and investigated by

DCFS, whereas, CYCIS database contains specific data on families and children who

receive ongoing IDCFS services, including information regarding service provision and

payment records (Poertner & Guarnier, 2002). Often children are re-reported to DCFS, so

the database also contains information pertaining to recurrent child maltreatment (Fluke

et al., 1997). IDCFS cases were selected from seven rural counties in Illinois: Coles,

Douglas, Moultrie, Shelby, Cumberland, Clark and Edgar Counties.

Inclusion criteria. For inclusion in the study, each case met four selection criteria

(see Appendix A). First, cases were included if a report was indicated between January 1,

2000 and March 31, 2001. A report was operationalized as being an indicated report of

physical abuse, risk of harm, sexual abuse, or neglect. Secondly, because the goal of child protective services is to prevent future occurrences of maltreatment, it was important only to investigate cases that were <u>indicated</u> for child abuse and neglect. As a result, this study only included cases that had sufficient evidence to indicate maltreatment. Thirdly, cases were only included in which the perpetrator of child maltreatment was the guardian, including the natural parent, adoptive parent, grandparent or stepparent. Finally, an indicated recurrent child maltreatment report was defined as being new report involving the same child as the index report or of a different child within the family by the original perpetrator, within a 12-month period following the initial report.

Exclusionary criteria. The following exclusionary criteria applied in the selection of cases (see Appendix A). Cases were not considered to be a recurrence of maltreatment if they were a duplicate report of the initial report. A duplicate report is another identical account made of the initial indicated child maltreatment report.

Sample characteristics

The final study sample consisted of 347 victims of child maltreatment that met the aforementioned inclusionary and exclusionary criteria.

Maltreatment Characteristics. There are multiple types of maltreatment for which children are referred to CPS in the State of Illinois. For the purposes of this study, maltreatment was categorized as sexual abuse, physical abuse, neglect, and risk of harm. Examples of sexual abuse include allegations of sexual molestation and sexual exploitations. Examples of physical abuse include allegations of internal injuries or bruises, cuts, and welts. Neglect allegations include a lack of supervision or inadequate food, clothing, or shelter. Risk of harm means that the familial caregiver has created a

real and significant danger to the child such that there is a substantial risk of physical injury (U.S Department of Health and Human Services, Child Maltreatment, 2002).

Table 1 describes the characteristics of the sample by initial maltreatment status. Of the total cases of initial maltreatment, 40% were indicated for risk of harm, 37% for neglect, 12% for physical abuse and 11% for sexual abuse (See Appendix B). With respect to the number of victims, in 60% of the cases there was one victim, while 40% had more than one victim. In three-quarters of the cases, there was only one perpetrator of the maltreatment (74%), whereas approximately one quarter had 2 perpetrators involved (26%). The preponderance of the cases were not opened for further services (85%).

Child Characteristics. 184 of the child victims were female (53%), ranging in age from 0-17 years old ($M = 7.77$, $SD = 5.70$) and 162 were males (46%), ranging in age from 0-16 years old ($M = 5.94$, $SD = 5.06$). Most of the children were Caucasian ($n = 333$; 96%), which is representative of population from which the sample was selected (see Table 1).

Perpetrator Characteristics. IDCFS maintains record of the individuals responsible for perpetrating a child. In this study, for the purpose of analysis, if there was more than one perpetrator responsible for the maltreatment incident, then the identified perpetrator who had committed the most severe type of maltreatment was considered the primary perpetrator.

As indicated in Table 2, perpetrators of maltreatment were primarily Caucasian ($n = 336$, 97%) and slightly more than half of the primary perpetrators were male ($n = 174$, 50%). One hundred seventy three of the perpetrators were female (50%), ranging in

age from 18-61 years old (M = 29.71, SD = 8.57) and 174 were males (50%), ranging in age from 18-84 years old (M = 34.90, SD = 8.95). By and large, natural parents were primarily responsible for perpetrating maltreatment (n = 295,85%).

Perpetrators of sexual abuse were primarily males (n = 37, 96%), while perpetrators of neglect were mostly females (n = 88, 69%). Perpetrators of physical abuse and risk of harm were almost equally distributed between males and females, with more males perpetrating both physical abuse and risk of harm (n = 22, 52% and n = 76 55%, respectively).

Intervention Characteristics. For the purposes of this study, an intervention was defined as opening of a case by DCFS for postinvestigative services. Table 3 presents the case characteristics of cases receiving services following the CPS investigation.

Of the indicated child maltreatment reports (n = 51), 15% were provided services following the investigation. Forty nine percent (n = 25) of the cases that were opened for services were initially indicated for neglect, while 29% (n = 15) were indicated for risk of harm, 14% (n = 7) for physical abuse and 8% (n = 4) for sexual abuse.

Children receiving services ranged in age from 0-16 years old (M = 5.24, SD = 5.37). Twenty six of the 51 children receiving postinvestigative services were female (52%), ranging in age from 0-16 years old (M = 5.26, SD = 5.44) and 24 were males (48%), ranging in age from 0-16 years old (M = 5.21, SD = 5.41).

With respect to offenders in cases for which services were provided, 32 were women and 19 were men. Female offenders whose case were opened for postinvestigative services were younger (M = 26.72, SD = 8.52) than men offenders (M = 34.90, SD = 6.91).

Recurrence Characteristics. Recurrence was conceptualized as cases in which children were revictimized by either the same or different perpetrator from the initial maltreatment. Cases in which the perpetrator reoffended with either the same or different victim were also examined. Distributions of case characteristics across recurrence status are presented in Table 4.

Of the initial 347 indicated cases, there were 49 cases of recurrent child maltreatment. Of these cases, 57% ($n = 28$) involved revictimization of the same child by the same perpetrator, 16% ($n = 8$) involved the same child being revictimized by a different perpetrator, and 27% ($n = 13$) the same perpetrators reoffending a different child. Cases with an initial indicated report of neglect had the highest rate of recurrence, 49% ($n = 24$), followed by risk of harm, 37% ($n = 18$), sexual abuse, 8% ($n = 4$), and lastly physical abuse, 6% ($n = 3$). Table 4 illustrates the above results. Of the 36 children who had been remaltreated, the mean age was 5.53 ($SD = 4.68$). Fifty six percent of the revictimized children were males ($n = 20$) while 44% of the victims were females ($n = 16$).

Of the 41 perpetrators who reoffended, the mean age was 29.98 ($SD = 8.99$) and 73% of the reoffenders were women ($n = 30$). Female reoffenders ranged in age from 28-41 years old ($M = 27.60$, $SD = 7.51$) and male reoffenders ranged in age from 28-41 years old ($M = 36.45$, $SD = 5.03$).

Procedure

Ethics approval was secured through the Psychology Department Ethics Committee at Eastern Illinois University. Two separate research proposals were submitted to Illinois Department of Children and Family Services (IDCFS) Institutional

Review Board (IRB) requesting permission to access the State of Illinois' child welfare data. The first research proposal requested permission to obtain data from child welfare casefiles as well as to obtain data from the IDCFS Integrated Database. However, in order to complete a casefile review individual informed consents and voluntary assents were required for all cases. Due to time constraints, it was not feasible to obtain the necessary consents and assents for the entire sample. Consequently, a revised proposal was submitted to the IDCFS Institutional Review Board requesting permission to access data from the Integrated Database, which contains child welfare outcome data on investigations and open cases. Approval was granted to access all data in the Integrated Database, only if aggregate data was being used and not personally identifiable information. A research specialist from the Child and Family Research Center, the agency that oversees the Integrated Database, was assigned to collect the data for this project as well as to disseminate it.

<div align="center">Results</div>

The primary outcome variables of interest were (1) the presence or absence of child maltreatment recurrence and (2) the opening of cases for provision of services. Recurrence cases were examined separately for those children who had been revictimized and perpetrators who reoffended. For each hypothesis, groups were analyzed utilizing a variety of statistical methods including t-tests, chi-square tests, and logistic regression analyses.

Predictors of Recurrence

The primary analyses compared cases in which there was recurrent child maltreatment with those in which maltreatment did not recur.

Maltreatment Characteristics. To study the relationship between recurrent maltreatment (for those children who had been revictimized and perpetrators who reoffended) and initial type of maltreatment (i.e., sexual abuse, physical abuse, neglect and risk of harm), a chi square analysis was performed on all cases that had a recurrence. As shown in Table 5, results indicated that the prevalence of child revictimization was significantly greater for neglect cases than non-neglect cases X^2 (1, n = 347) = 8.18, p = 004. Likewise, perpetrator re-offending was also significantly more likely in neglect cases than non-neglect cases X^2 (1, n = 347) = 7.67, p = .01 (see Table 6).   There were no significant findings for sexual abuse, physical abuse and risk of harm.

Child Characteristics. An independent samples *t*-test was conducted with the independent variable being the age of the child and the dependent variable being recurrent child maltreatment, either by the same perpetrator or a different perpetrator. Results indicated that the age of children who had been revictimized (*M* = 5.53) did not differ significantly from those who were not (*M* = 7.05), *t* (345) = -1.58, *p* = .08. Analyses were also conducted on boys and girls separately. Age was not found to be significant for either sample. Girls who had a recurrence of child maltreatment (*M* = 6.06) did not differ significantly in age from girls who did not (*M* = 7.93), *t* (182) = -1.25, *p* = .12. Boys who had a recurrence of child maltreatment (*M* = 5.10) did not differ in age from those boys who did not (*M* = 6.06), *t* (160) = -. 79, *p* = .27.

Chi-square analyses were used to determine whether there were gender differences in occurrence of revictimization. No significant gender differences were observed for children who were remaltreated and those who were not X^2 (1, n = 346) = 1.23, *p* >. 05.

Perpetrator Characteristics. Comparisons between perpetrators who reoffended and those who did not are summarized in Table 4.

A *t*-test for independent means was conducted on the age of perpetrators who had reoffended the same child or a different child. Perpetrators who reoffended did not differ in age (M = 29.98) compared to those who did not reoffend (M = 32.63), t (345) = -1.75, p < .08. A *t*-test for independent means was also conducted on the age of male and female reoffenders separately. Age was not found to be significant for either sample.

The association between perpetrator's gender and maltreatment recurrence was examined using a chi-square test of independence. Women were found to be more likely to reoffend than were men, X^2 (1, n = 347) = 10.11, p = .001.

A chi-square test of independence was also performed to examine the association between the perpetrator's relationship to the victim and the recurrent maltreatment. It was found that there was no difference in recurrence rates between natural parents and other familial caretaker.

Effects of multiple risk factors

Logistic regression allows for the examination of a set of variables that best predict a dichotomous outcome. Therefore, three separate logistic regression analyses were employed to predict the probability of child revictimization, perpetrator recidivism, and the decision to open a case for services. The predictor variables for all were the child and perpetrator's age and gender, perpetrator relationship to the victim, type of initial maltreatment, number of victims involved in initial maltreatment and number of perpetrators involved in initial maltreatment.

Recurrent child maltreatment. Results indicate that the best model to predict both child revictimization and perpetrator recidivism includes the following predictor variables: the number of victims involved in the initial maltreatment and the gender of the perpetrator. The overall models were significant at the .05 level as shown in Tables 7 and 8. Both models indicate that female perpetrators are more likely than male perpetrators to reoffend. Additionally, cases that had multiple victims were more likely to have a recurrence of child maltreatment compared to cases with one victim.

Service Provision. In cases where the best predictors of the decision to open a case for further service were investigated, the final logistic regression model indicated that 2 variables uniquely added to the prediction of service intervention: number of perpetrators involved in the initial offense and the perpetrator's gender (see Table 9). Female perpetrators are more likely to receive services than male perpetrators and cases with multiple perpetrators are more likely to receive services than those with one perpetrator.

Predictors of the provision of postinvestigative services

Maltreatment Characteristics. Chi-square analyses were performed to compare the various maltreatment categories (sexual abuse, physical abuse, neglect and risk of harm) to the decision to open a case for services. The results are presented in Table 10. The prevalence of service provision was significantly greater for neglect cases than non-neglect cases, X^2 (1, n = 347) = 3.98, p = .05. There were no significant findings for sexual abuse, physical abuse and risk of harm.

Child Characteristics. A t-test for independent means was conducted with the independent variable being age of the child victim and the dependent variable being

whether the case was opened or closed after investigation. Results show that children whose cases were opened for services were significantly younger (M = 5.24) than those whose cases were closed (M = 7.18), t (345) = -2.35, p = .02. Analyses were also conducted on male and female children separately. It was found that girls whose cases were opened for services were significantly younger (M = 5.46) than those whose cases were not (M = 8.15), t (182) = -2.25, p = .03. However, boys who had their cases opened for services (M = 5.21) did not differ in age from those whose cases were not opened (M = 6.07), t (160) = -. 77, p = .45.

To study the relationship between a child's gender to the provision of services, a chi-square analysis was performed. It was found that male and female victims were equally likely to have their cases opened for services or closed after intake, X^2 (1, n = 346) = .033, p = .86.

Perpetrator Characteristics. To study the relationship between a perpetrator's age and the decision to open a case for services, a t-test for independent means was conducted. Findings indicate that perpetrators whose cases were opened for postinvestigative services were significantly younger (M = 29.76) than those did not have their cases opened (M = 32.75), t (345) = -2.17, p = .03. A t-test for independent means was also conducted on the age of male and female offenders separately in regards to the provision of services. Females who had their cases opened for further services were significantly younger (M = 26.72) than those who did not have their cases opened (M = 30.39), t (171) = -2.21, p = .03. However, men who had their cases opened for services (M = 34.89) did not differ in age from those who did not have their cases opened (M = 34.90), t (172) = -. 004, p = .997.

The association between perpetrator gender and the decision to open a case for services was examined using a chi-square test of independence. Women were found to be more likely to be provided services than men, X^2 (1, n = 347) = 3.97, p = .05.

A chi-square analysis was also performed on the perpetrator's relationship to the victim and the provision of services. The results of this analysis were not significant X^2 (1, n = 347) = 1.26, p = .26.

Moderating effects of services

Due to limitations in the provided data set, this hypothesis could not be examined. Information regarding the amount of time that children were removed from their home was not provided. Consequently, the impact of separation of perpetrators from their victims, which would prevent the occurrence of future victimization, could not be adequately examined.

Multiple victims and/or multiple perpetrators

In order to study the relationship between multiple victims/perpetrators and recurrent child maltreatment, a chi-square analysis was conducted. As shown in Table 11, child revictimization cases that had multiple victims were significantly more likely to have a recurrence of maltreatment than those with one victim, X^2 (1, n = 347) = 4.02, p =. 05. In contrast, when a chi-square analysis was conducted on the relationship between perpetrator recidivism and multiple victims, there were no significant findings, X^2 (1, n = 347) = 2.41, p = . 12.

As presented in Table 12, a chi square analysis was also conducted on the relationship between multiple perpetrators and child revictimization. The findings suggest there was no significant difference in the number of perpetrators to child

revictimization, X^2 (1, n = 347) = .03, p =. 86. Likewise, a chi square analysis was also performed on the association between multiple perpetrators and perpetrator recidivism. The results indicate that cases with multiple perpetrators were no more likely to reoffend than those with a single perpetrator X^2 (1, n = 347) = .18, p = .67.

Chi-square analyses were conducted to determine whether there were differences in the number of victims and perpetrators involved in maltreatment cases and the decision to open a case for further services (see Table 13). This test revealed that cases that were opened for services were significantly more likely to have multiple perpetrators, X^2 (1, n = 347) = 10.60, p = .001. In contrast, cases in which there were multiple victims were no more likely to be provided services than cases in which there was a single victim, X^2 (1, n = 347) = .24, p = .63.

Discussion

The current study was undertaken to clarify and extend understanding of the relationship between child maltreatment recurrence and several predictor variables. An additional objective was to examine factors that contribute to the decision by DCFS to open cases for further services in 7 rural counties in central Illinois. Findings are particularly enlightening regarding the risk factors associated with reabuse/reneglect in rural communities (See Appendix C) as well as the provision of postinvestigative services to abused or neglected children and their perpetrators (See Appendix D).

The primary aim of this study was to investigate the effects of child, perpetrator and maltreatment factors on child maltreatment recurrence. With respect to child demographic variables, findings revealed that there was no association between a child's age and gender and subsequent child abuse or neglect. Likewise, the perpetrator's age

and relationship to the victim did not predict recurrence. However, perpetrator gender played a significant role in recidivism in that female perpetrators were more likely to reoffend. Finally, results support the view that neglect is the type of maltreatment most strongly associated with recurrence. These results will be discussed in more detail below.

Consistent with other findings, cases in which there were female perpetrators (Way et al., 2001) and neglect (Fluke et al., 1999; Fuller et al.,2001; Inkelas & Halfton, 1997; Marshall & English, 1999) were associated with recurrent child maltreatment. One rationale for the subsequent occurrence of maltreatment in cases with these characteristics is that women typically have more childcare responsibilities, thus having more stress than their male counterparts, which in turn increases their likelihood to reoffend. Another plausible explanation is that interventions are insufficient to specifically address acts of omission (neglect) when compared to interventions provided to address acts of commission (abuse). Moreover, the more complicated underlying issues, such as poverty or the caregiver's own childhood history of abuse or neglect, may not have been adequately resolved. Also, the perpetrators' cultural mores may interfere with their receptivity to interventions, in that neglect is so embedded in the perpetrators' culture that their ability to respond successfully to services is impaired.

However, in contrast to other findings, younger children were not more likely to be re-victimized. Although it was hypothesized that child factors would be predictive of recurrent child maltreatment, the lack of significant results could be the result of the small sample of child revictimization cases. Another explanation could be that a child's age may not be as strongly linked to recurrence in rural communities, as other

communities because caseworkers in rural area may be more sensitive to a younger

child's risk, and therefore, target these cases with more effective services.

This study delved further into the patterns of recidivism by examining which

combination of factors is most predictive of reabuse or reneglect. It was found that

having multiple victims and a female perpetrator compounds the risk of both child

revictimization and perpetrator recidivism. In other words, a case having both a female

perpetrator and multiple victims substantially increases the risk of an additional

occurrence of abuse or neglect rather than a case possessing only one of the two risk

factors. Additionally, two variables in conjunction best predicted the decision to provide

postinvestigative services. Results show that having a multiple perpetrators and a female

perpetrator increased the likelihood that a case was opened for services following a CPS

investigation. Previous researchers (Fuller et al., 2001; Marshall & English, 1999)

support the findings that recurrent child maltreatment and postinvestigative service

provision are enhanced by a combination of factors.

Although the results from this study reveal that the majority of maltreatment

cases in rural communities were not opened for postinvestigative services, a number of

factors were found that contribute to CPS' decision to provide services. Factors that were

related to the decision to open a case for services were younger female victims; younger

perpetrators, female perpetrators, and younger female perpetrators; and neglect.

However, factors that were not related to provision of services were children's gender

and perpetrator's relationship to the victim.

Previous research has identified similar predictors of service provision including

cases involving younger victims (DePanfilis and Zuravin, 2001; U.S.DHHS, 2002),

younger female perpetrators (DePanfilis & Zuravin, 2001) and cases having an initial report of neglect (DePanfilis & Zuravin, 2001). There were new findings regarding the targeting of younger perpetrators and younger girls with the provision of services. A plausible explanation is that cases in rural areas with these key factors are viewed as being more vulnerable to reabuse or reneglect because younger caregivers may be more immature and less patient or lack coping and parenting skills. However, results do contradict previous findings in which biological parents compared to non-biological were more likely to have their cases opened (U.S.DHHS, 2002). It is conceivable that caseworkers in rural communities believe that natural parents are as adept at caring for and/or protecting their children as other types of caregivers.

It is promising that children and families who have been identified in previous research as being at a higher risk of recurrence are being targeted for services, however, children continue to be at risk. It is conceivable that resources in rural areas are limited. As a result, services which are provided to children and families may not be well suited for their specific needs and as a result are inefficient in preventing future occurrences of maltreatment.

This study probed further into patterns of child revictimization and perpetrator recidivism by examining the effects of having multiple victims and multiple perpetrators on subsequent maltreatment reports. A noteworthy discovery was that multiple victims were significantly more likely to have a recurrence of maltreatment than those with one victim. In contrast, the number of perpetrators involved in the original incident had no bearing on either child revictimization cases or perpetrator recidivism.

There has been limited research on the effects of multiple victims and perpetrators on reabuse or reneglect, however, one previous finding suggests that multiple victims, in combination with other factors, enhances recurrent child maltreatment (Marshall & English, 1999). Similarly, the present findings indicate that multiple victims are at a higher risk of reabuse. One reason for this may be that, for some of these families, a heavy child care burden may strain family resources as well as be overwhelming to caregivers, making parenting more difficult. Moreover, caregivers in this situation may not have the skills to overcome these obstacles.

A surprising finding, given these results, is that although cases with multiple victims were at greater risk for being revictimized, DCFS cases in which there were multiple perpetrators were more likely to be opened for postinvestigative services. A plausible explanation is that DCFS believes that cases with multiple perpetrators are more serious, thereby warranting increased surveillance and intervention, because both caregivers lack the parenting skills needed to meet the needs of their children.

Limitations

As with all research, this study has limitations. Because of constraints in the administrative database, a comprehensive analysis of the risk factors and moderators of recurrent child maltreatment was not possible. Variables that were originally identified for this study were amended due to either missing data or unreliable data. For example, although the administrative database contains numerous codes for the various types of interventions, only interventions related to a child's removal from their home were recorded. Likewise, other identified variables which were included in the database were not coded consistently, therefore could not be used in analysis. Thus, variables of interest,

such as disabilities, mental health problems, and specific interventions, were excluded because of missing information or unreliability. As a result, variables for this study were chosen to some extent on the availability of complete data. Consequently, the hypothesis that specific interventions have a moderating effect on recurrent maltreatment could not be investigated.

Another obstacle was that information which was requested was not provided, which in turn precluded the examination of first time reports as well as the examination of children who were separated from their caretaker for less than 30 days. As a result, the family's previous history with child protection services was unknown and may impact patterns of recurrence. Additionally, child maltreatment cases were not provided when the guardian was a foster parent. The presence of foster parents may have given a new perspective into subsequent maltreatment reports. Furthermore, if the requested case information and the desired variables had been available for this study findings regarding the best predictors of reabuse or reneglect and service provision might have been different.

The results of this study are believed to be representative of rural families in central Illinois where the ethnic makeup is primarily Caucasian. Unfortunately, the ethnic characteristics may not be representative of all rural communities given the lack of other ethnic backgrounds. Consequently this would limit generalizability of the results. Therefore, future research may want to examine more ethnically diverse rural populations.

Another limitation of this study was its use of a relatively short 12-month follow up period for examining cases for subsequent child maltreatment reports. Although the

Child and Family Services State Plan uses the same timeframe, other researchers have extended the duration up to five years. Contrary to previous findings where rates of recurrence range from 18% - 60% (Inkelas & Halfton, 1997), current findings suggest that 14% of indicated cases had a subsequent episode of recurrent child maltreatment. A longer follow up interval may have resulted in an increased number of child revictimization and perpetrator recidivism cases.

Finally, the type of statistical analysis used did not allow for examination of the interaction between predictor variables and the outcome variables. These limitations were due, in part, to reliance on categorical data. Further analysis of the data utilizing loglinear analysis may be useful for obtaining this "interactional" information.

Despite these limitations, this study goes beyond past research to increase understanding of the predictors of recurrent child maltreatment and the provision of postinvestigative services particularly in rural communities. These findings also point to suggestions for DCFS policy and for future research.

Policy and Research Implications

Analysis of maltreated children in rural areas introduces a new perspective on child maltreatment, as little research has investigated the ecological factors associated with recurrent child maltreatment in rural communities and factors associated with service provision in rural areas is limited. Implications of the findings suggest that families from rural communities known to CPS continue to be at risk, especially if they have multiple victims, female perpetrators, and incidents of neglect. Overall, results emphasize the need for prevention efforts to focus more on improving parenting and coping skills of female and neglectful offenders in order to address acts of omission (i.e.,

neglect) and stressful family environments (multiple children). Moreover, CPS workers should be more concerned about the possibility of remaltreatment when both multiple victims and female perpetrators are involved.

Results also provided insight into the decision of DCFS to open cases for the provision of post-investigative services to rural families. It is interesting to note the lack of service provision to families with multiple victims given that families with multiple victims are likely in need of increased involvement by DCFS. Even more concerning is the finding that, although the incidence of indicated reports is higher in the 7 counties studied, the provision of post-investigative services was significantly lower than the state average. Smaller rural communities may lack the resources compared to larger urban areas and, therefore, postinvestigative services are not provided. Moreover, of concern is that families with multiple victims have not been distinguished as being at an increased risk for reabuse or reneglect. It is imperative that cases with multiple victims undergo greater scrutiny and be provided with interventions to prevent future occurrences of child abuse or neglect. This underscores the need for ongoing research examining the moderating effect of service provision on recurrent maltreatment.

A challenge of conducting this study was the utilization of an incomplete administrative database. Because the goal of child welfare agencies is to achieve child safety, and states are being held more accountable for improving child welfare services to achieve this outcome, it is important for child welfare agencies to improve their data collection process in order to facilitate more effective research in the area of recurrent child maltreatment. However, findings from this study do have a significant impact for

CPS practice as results may help workers in their decision-making process in providing interventions to at risk rural families.

In summary, although researchers have found correlates of recurrent child maltreatment and service provision in DCFS cases, the disparities across studies emphasizes the importance of continuing research efforts. Future research efforts should concentrate on investigating the moderating effects of specific interventions as well as the risk of having multiple victims on recurrent child maltreatment. Moreover, it is important to understand the differential effects of interventions on acts of omission and commission. Further research on the correlates and moderators of a recurrence will hopefully lead to the implementation of more effective interventions, which in turn will reduce rates of recurrent child maltreatment. Finally, in light of the State of Illinois' recent call to identify factors associated with recurrent child maltreatment, this study has expanded knowledge on key risk factors in rural areas which is crucial in the implementation of effective intervention strategies to prevent subsequent occurrences of child maltreatment.

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Appendix A

Inclusion Criteria and Exclusion Criteria

The following inclusion criteria were used to select cases for this study:

1. Cases were included if an initial report was indicated between January 1, 2000 and March 31, 2001 in seven rural Illinois counties: Clark, Coles, Cumberland, Douglas, Edgar, Moultrie, Shelby.

2. Only include cases that were indicated as physical abuse, sexual abuse, risk of harm, and/or neglect at the initial report.

3. Only include cases where the perpetrator of child maltreatment was the biological parent, adoptive parent, grandparent or stepparent.

4. Only include cases as indicated recurrent child maltreatment reports if they were a new report regarding the same child as the initial report or of a different child within the family by the original perpetrator, within a 12-month period following the initial report

The following exclusion criteria were used to exclude cases from this study:

1. Exclude cases as a recurrence if they were a duplicate report of the initial report.

Appendix B

Initial Types of Maltreatment
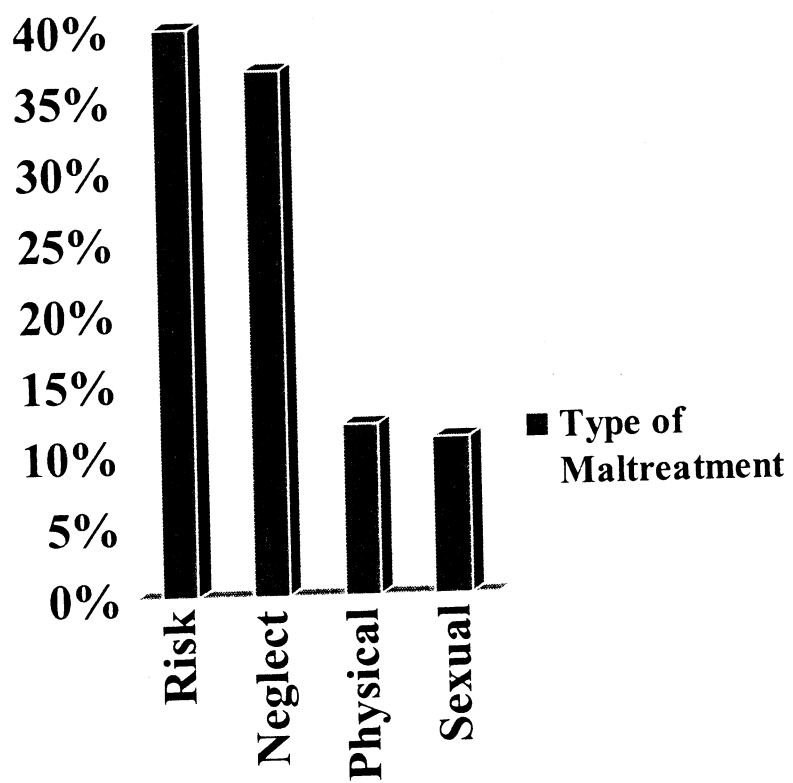
Appendix C

Factors associated with recurrence

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                    ┌─────────────────────────────┐
                    │         Recurrence          │
                    └─────────────────────────────┘
┌──────────────────┐┌──────────────────┐┌──────────────────┐┌──────────────────────┐
│Maltreatment Char.││Child Characteristics││Perp Characteristics││Combination of Factors│
│     Neglect      ││       None       ││      Female      ││  Female Perpetrators │
│ Multiple Victims ││                  ││                  ││    Multiple Victims  │
└──────────────────┘└──────────────────┘└──────────────────┘└──────────────────────┘
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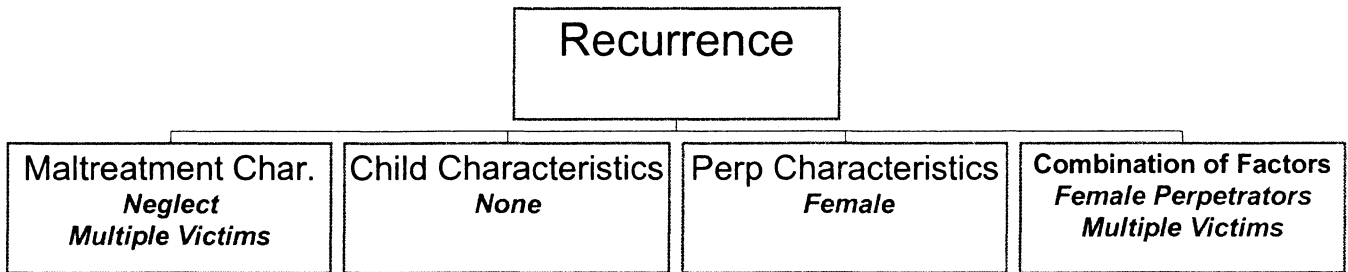
Appendix D

Factors associated with postinvestigative services

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                    ┌─────────────────────────────────┐
                    │ Postinvestigative Services      │
                    │                                 │
                    └─────────────────────────────────┘
          ┌──────────────┬────────────┴─────┬──────────────────┐
┌──────────────────┐ ┌──────────────────┐ ┌──────────────────┐ ┌──────────────────────┐
│ Maltreatment Char.│ │Child Characteristics│ │Perp Characteristics│ │Combination of Factors│
│    Neglect        │ │ Younger Children │ │    Younger       │ │ Female Perpetrators  │
│Multiple Perpetrators│ │  Younger Girls  │ │    Female        │ │Multiple Perpetrators │
│                   │ │                  │ │ Younger Females  │ │                      │
└──────────────────┘ └──────────────────┘ └──────────────────┘ └──────────────────────┘
```
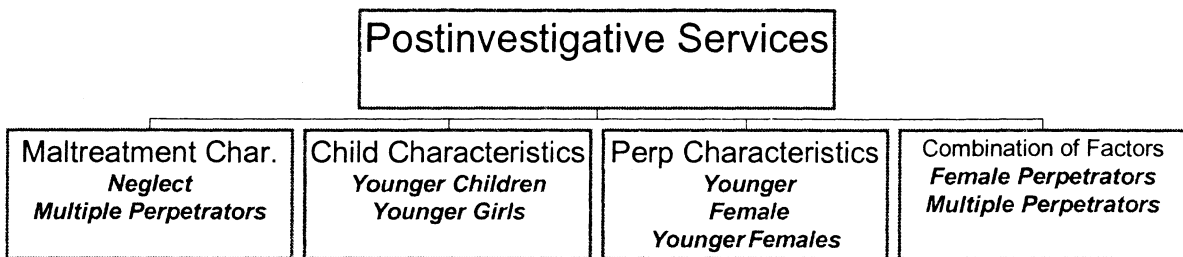
Table 1

Child Characteristics by Initial Maltreatment Status

		Types of Initial Maltreatment			
		Sexual Abuse n = 39 (11%)	Physical Abuse n = 42 (12%)	Neglect n = 127 (37%)	Risk of Harm n = 139 (40%)
Sample n = 347					
Child Characteristics					
Age	(overall)	11.90	9.69	5.03	6.34
	Female	12.19	10.88	4.86	7.00
	Male	10.57	7.84	5.25	5.67
Gender	Female n = 184	32 (82%)	25 (60%)	57 (45%)	70 (50%)
	Male n =162	7 (18%)	17 (40%)	69 (55%)	69 (50%)
Ethnicity	Caucasian n = 333	39 (100%)	40 (95%)	118 (93%)	136 (98%)
	African-American n = 6	0 (0%)	2 (5%)	3 (2%)	1 (1%)
	Hispanic n = 3	0 (0%)	0 (0%)	1(1%)	2 (1%)
	Other n = 5	0 (0%)	0 (0%)	5 (4%)	0 (0%)
Number Victims	One n = 208	24 (62%)	35 (83%)	75 (59%)	74 (53%)
	Two n = 139	15 (38%)	7 (17%)	52 (41%)	65 (47%)

Table 2

Perpetrator and Intervention Characteristics by Initial Maltreatment Status

		Types of Initial Maltreatment			
		Sexual Abuse n = 39 (11%)	Physical Abuse n = 42 (12%)	Neglect n = 127 (37%)	Risk of Harm n = 139 (40%)
Sample n = 347					
Perpetrator Characteristics					
Age	(overall)	40.08	33.74	30.57	31.30
	Female	26.50	32.45	29.74	28.90
	Male	40.81	34.91	32.44	33.29
Gender					
	Female n = 173	2 (5%)	20 (48%)	88 (69%)	63 (45%)
	Male n =174	37 (95%)	22 (52%)	39 (31%)	76 (55%)
Ethnicity	Caucasian n = 333	38 (97%)	41 (98%)	123 (97%)	134 (96%)
	African-American n = 6	1(3%)	1 (2%)	3 (2%)	1 (1%)
	Hispanic n = 3	0 (0%)	0 (0%)	0 (0%)	3 (2%)
	Other n = 5	0 (0%)	0 (0%)	1 (1%)	1 (1%)
Relationship to Victim					
	Natural Parent n = 29	24(62%)	31 (74%)	118 (93%)	122 (88%)
	Adoptive parent n = 3	2 (5%)	0 (0%)	0 (0%)	1 (1%)
	Stepparent n = 37	9 (23%)	10 (24%)	3 (2%)	15 (11%)
	Grandparent n = 12	4 (10%)	1 (2%)	6 (5%)	1 (1%)
Number of Perpetrators					
	One n = 255	32 (76%)	37 (95%)	91 (72%)	95 (68%)
	Two n = 92	10 (24%)	2 (5%)	36 (28%)	44 (32%)
Intervention Characteristics					
	Case Opened n = 51	4 (8%)	7 (14%)	25 (72%)	15 (29%)
	Case Closed n = 296	35(12%)	35 (12%)	102 (34%)	124 (42%)

Table 3
Sample Characteristics of Opened v. Closed cases

		Service Provision	
		Opened n = 51 (15%)	Closed n =296 (85%)
Sample Characteristics			
Child Characteristics			
Age	(overall)	5.24	7.18
	Female	5.46	8.15
	Male	5.21	6.07
Gender			
	Female	24 (48%)	158 (53%)
	Male	26 (52%)	138 (47%)
Perpetrator Characteristics			
Age	(overall)	29.76	32.75
	Female	26.72	30.39
	Male	34.89	34.90
Gender			
	Female	32(63%)	141 (48%)
	Male	19 (37%)	155 (52%)
Relationship to Victim			
	Natural Parent	46 (90%)	249 (84%)
	Adoptive Parent	0 (0%)	3 (1%)
	Stepparent	4 (8%)	33 (11%)
	Grandparent	1 (2%)	11 (4%)
Number of Victims			
	One	29 (57%)	179 (60%)
	Multiple	22 (43%)	117 (40%)
Number of Perpetrators			
	One	23 (45%)	227 (77%)
	Multiple	28 (55%)	69 (23%)

Table 4

Distribution of case characteristics across recurrence status

| | | Recurrence | | | |
		Same child same perp n = 28	Same child different perp n = 8	Same Perp different child n = 13	No recurrence n = 298
Sample Characteristics					
Child Characteristics					
Age	(overall)	4.75	8.25	7.38	7.03
	Female	5.08	9.00	9.60	7.88
	Male	4.50	7.50	6.00	6.06
Gender					
	Female	43%	50%	38%	55%
	Male	57%	50%	62%	45%
Perpetrator Characteristics					
Age	(overall)	29.71	38.00	30.54	32.48
	Female	28.67	31.75	23.33	30.11
	Male	36.00	44.25	36.71	34.56
Gender					
	Female	86%	50%	46%	47%
	Male	14%	50%	54%	53%
Relationship to Victim					
	Natural Parent	93%	88%	92%	84%
	Adoptive Parent	0%	0%	0%	1%
	Stepparent	5%	0%	8%	12%
	Grandparent	4%	13%	0%	3%

Table 5

Prevalence (%) of Child Revictimization amongst Initial Types of Maltreatment

	Recurrence (n = 36)	No recurrence (n = 311)	X^2	p
Sexual Abuse	1	38	2.88	.10
Physical Abuse	2	40	1.62	.28
Neglect	21	106	8.20	.004
Risk of Harm	12	127	.76	.38

Table 6

Prevalence (%) of Perpetrator Recidivism amongst Initial Types of Maltreatment

	Recurrence (n = 41)	No recurrence (n = 306)	$X^2(1)$	p
Sexual Abuse	3	36	.72	.60
Physical Abuse	2	40	2.28	.20
Neglect	23	104	7.62	.006
Risk of Harm	13	126	1.35	.25

Table 7

Summary of Logistic regression Analysis Predicting Child Revictimization

Variable	B	SE	Odds Ratio
Perpetrator Gender	1.61**	.43	4.99
Number of Victims	-1.01*	.37	.37

*p < .05. **p < .001

Table 8

Summary of Logistic regression Analysis Predicting Perpetrator Recidivism

Variable	B	SE	Odds Ratio
Perpetrator Gender	1.30**	.38	3.65
Number of Victims	-.76*	.35	.47

*p < .05. **p < .001

Table 9

Summary of Logistic regression Analysis Predicting Service Provision

Variable	B	SE	Odds ratio
Perpetrator Gender	.65*	.32	1.91
Number of Perpetrators	-.99*	.32	.37

*p < .05.

Table 10

Prevalence (%) of Open Case amongst Initial Types of Maltreatment

	Case Opened (n=51)	Case Closed (n=296)	$X2(1)$	p
Sexual abuse	4	35	.70	.41
Physical Abuse	7	35	.15	.70
Neglect	25	102	3.98	.05
Risk of harm	15	124	2.8	.09

Table 11

Prevalence (%) of Child Revictimization amongst number of victims and number of perpetrators

	Recurrence n = 36	Non recurrence n = 311	$X2(1)$	p
Number of Victims			4.02	.05
One	16	192		
Multiple	20	119		
Number of Perpetrators			.03	.86
One	26	229		
Two	10	82		

Table 12

Prevalence (%) of Perpetrator Recidivism amongst number of victims and number of perpetrators

	Recurrence n = 41	Non recurrence n = 306	$X2(1)$	p
Number of Victims			2.42	.12
One	20	188		
Multiple	21	118		
Number of Perpetrators			.18	.67
One	29	226		
Two	12	80		

Table 13

Prevalence (%) of Open Cases amongst number of victims and number of perpetrators

	Case Opened n = 51	Case Closed n = 296	$X2(1)$	p
Number of Victims			2.35	.63
One	29	179		
Multiple	22	117		
Number of Perpetrators			10.60	.001
One	28	227		
Two	23	69		