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# An exploration of threatened harm as a type of maltreatment and its relation to recurrence of maltreatment

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An Exploration of Threatened Harm as a Type of Maltreatment  
and its Relation to Recurrence of Maltreatment

by

Roxann McNeish

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
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## **ABSTRACT**

There were no studies found in the literature that primarily focused on threatened harm as type of maltreatment. This study utilized Florida's child welfare administrative data to explore threatened harm as a type of maltreatment, particularly as a predictor of recurrence of maltreatment within six and 12 months for children who had a verified report of maltreatment in FY2005-2006. Threatened harm was examined in three ways; when it was reported as the only maltreatment, the initial maltreatment, and in situations where there was a prior report. The most prevalent acts of threatened harm were examined separately. It was examined as a predictor of recurrence of any maltreatment and also as a predictor of recurrence of a different type of maltreatment. The results of bivariate and multivariate Cox regression analysis indicated that children who experienced threatened harm were at increased odds for recurrence of maltreatment overall. The odds were found to be greater within 12 months, for children who had a prior report and for children who experienced a substance related threatened harm. Children with a prior report were also found to be more likely to experience recurrence of a different type of maltreatment. Implications of these findings are discussed.

## **CHAPTER 1:**

### **INTRODUCTION AND STATEMENT OF THE PROBLEM**

#### **Overview**

Child maltreatment is a global concern. Its prevalence and incidence rates trigger alarm and apprehension to those who are aware of the devastating consequences of this phenomenon. Though global estimates are unreliable for a variety of reasons, there is clear acknowledgement that child maltreatment is a pervasive problem (World Health Organization, 2010). The negative consequences of child maltreatment have such a tremendous impact that they “can ultimately slow a country's economic and social development” (World Health Organization, 2010).

In the United States (U.S.), maltreatment is defined as “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*” (Child Abuse Prevention and Treatment Act, 1974). Approximately 10 out of every 1000 children are maltreated yearly and approximately 400,000 children yearly are removed from their home due to maltreatment (U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children’s Bureau, 2011; U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children’s Bureau, 2012). In the most recent national data available, over two-thirds of children who are maltreated experienced neglect by a caregiver and most child victims are under the age of five years. The second most common type of maltreatment was physical abuse, followed by ‘other’ types of

maltreatment. This is the reporting category which includes types of maltreatment such as threatened harm which is the focus of this study. Sexual and emotional abuse was experienced by 9% and 8% of child victims respectively (U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2011).

Child maltreatment has been shown in the literature to be associated with negative short term and long term consequences. Its effect is not just on those directly affected, but can be pervasive across entire families. Overall, children who have experienced maltreatment tend to experience more attachment problems, emotional problems, problems with internalizing and externalizing behaviors, and mental and physical health dysfunction than the general population which can lead to negative behavioral, social, interpersonal, economic and educational outcomes (Anda, Brown, Felitti, Bremner, Dube, & Giles, 2007; Arnow, 2004; Child Welfare Information Gateway, 2008; Currie & Widom, 2010; Molnar, Buka, Kessler, 2001; Thomas, Leicht, Hughes, Madigan & Dowell, 2008). In adulthood, these individuals tend to exhibit increased incidences of mental health problems such as depression, anxiety, panic disorders, substance abuse and also experience adverse physical health outcomes (Arnow, 2004; Molnar, Buka, Kessler, 2001). This can be partially attributed to the fact that these persons may engage in more high risk health behaviors (such as smoking) than persons who have not been maltreated (Arnow, 2004; Edwards, Anda, Gu, Dube, & Felitti, 2007). The adverse effects of maltreatment are more likely in certain cases, such as those where the maltreatment was severe or if there was a recurrence of the maltreatment (Chapman, Dube & Anda, 2007; Turner, Finklehor and Ormaon, 2010).

Though the human cost of experiencing child maltreatment cannot be quantified, the associated direct and indirect financial costs of child maltreatment has been approximated to be

\$24 billion each year (Wang & Holton, 2007). In a more recent study, it was found that the yearly lifetime cost associated with child maltreatment cases and related fatalities was five times more than the previous estimates, closer to \$124 billion (Fang, Brown, Florence, & Mercy, 2012). The significance of the economic burden of child maltreatment is further highlighted when the cost per case is compared to other common public health problems. The cost per child maltreatment case in the US was \$210,000 in 2008 if the case was non-fatal. If the case involved a fatality the amount was estimated to be \$1.2 million per case versus the cost per case. This is striking when compared to the cost per case for stroke, which was \$159,000, and the cost for a case of Type II diabetes which ranged from \$181,000 to \$253,000 (Fang, Brown, Florence, & Mercy, 2012).

A public health approach is useful when addressing child maltreatment due to the associated negative sequelae and the distressing and widespread impact it can have on individuals, families, communities and society (Whitaker, Lutzker & Shelley, 2005). The current policy response has been fairly congruent with research evidence of child maltreatment's deleterious effects and with the global concern about the prevalence and incidence of the problem. Child maltreatment is considered a public health issue and the focus of a Center for Disease Control and Prevention's national prevention efforts where it is included under the auspice of a larger 'Violence Prevention' initiative (Center for Disease Control and Prevention, n.d.). Additionally, the U.S. Department of Health and Human Services (USDHHS) has identified reducing non-fatal child maltreatment and children's exposure to violence as objectives of Healthy People 2020 (US Department of Health and Human Services, 2012).

## **Need/Justification for the Study**

Currently, there is extensive research in the area of child maltreatment. One of the first studies to bring this salient issue to light was written in 1962 by five medical doctors, who labeled child abuse as “The Battered Child Syndrome” (Kempe, Silverman, Steele, Droegeueller, and Silver, 1962). This sentinel piece of child maltreatment literature was the catalyst needed to spark attention about this issue and its effects on children. This article sparked a flurry of legislative activity, though mostly at the state level and by the end of the decade mandatory reporting laws were enacted in all 50 states (Cicchetti and Carlson, 1989).

The federal government also responded, though the response was delayed. The awareness of the plight of these battered children helped to bring about such programs as education and monetary assistance to families and Healthy Start (Cicchetti and Carlson, 1989). Federal policy itself did not fully align with the growing knowledge base until 12 years later in 1974, when the Child Abuse Prevention and Treatment Act (CAPTA) (P.L. 93-274) was enacted. This act has since been amended, being reauthorized as the Keeping Children and Families Safe Act in 2003 (P.L. 108-36) and most recently by The CAPTA Reauthorization Act of 2010 (P.L. 111-320). One of the purposes of the CAPTA (1974) was the establishment of the minimum national standard and definition of child maltreatment (outlined prior on page one). This definition summarily outlines the main constructs of maltreatment to be abuse, neglect and threatened harm.

This national definition of child maltreatment is currently used as the basis for defining maltreatment at the state level, but flexibility is allowed as to the exact definitions, constructs and categorization of acts that may constitute child maltreatment in any particular state. As a result, these constructs are not only defined differently at the state level, but also at the

community level, in the research arena, in the courtroom and in clinical settings (Shaffer, Huston, & Egeland, 2008). For example, though the federal definition includes threatened harm as a separate type of maltreatment, some states include threatened harm as a type of abuse (e.g. Oregon and Hawaii), while others do not mention threatened harm in their definition of child maltreatment (e.g. Connecticut) (Child Welfare Information Gateway, 2011). Additionally, the acts that may constitute threatened harm in one state may be different in another state. This can pose problems in reporting incidence and prevalence of child abuse and is one of the reasons why there can be methodological issues with using child maltreatment data in research.

National data, such as previously cited, are based on data reported from state data collection systems of reported incidents of maltreatment. It is known that many incidents of child maltreatment go unreported every year (Gilbert, Spatz Widom, Browne, Fergusson, Webb, & Janson, 2009), but these state data are used as the official source of information for assessing epidemiological trends. National data collection efforts such as this came about as a result of the CATPA, and have been used and continue to be used as the basis for many child maltreatment related research studies, both at the state and national levels.

The area of child maltreatment research has expanded over the last few decades, but the majority of studies consistently focus on negatively associated outcomes of children who experience abuse and/or neglect. The other type, threatened harm, has not been the focus of much research attention. As a result, very little is known about threatened harm as a type of maltreatment. Some of the studies conducted on the other types of maltreatment do *mention* threatened harm as a type of maltreatment, but no studies were found that *focused* solely or primarily on this type of maltreatment. However, there should be concern about this type of maltreatment because in 2006 and subsequent years, the “other” category in which threatened

harm is reported accounted for the third most prevalent maltreatment type nationally after neglect and physical abuse (U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2012b). Additionally, in 2006 the types of maltreatment included in this “other” category were the most significant predictors of recurrence of maltreatment (USDHHS, ACF, 2008); these data were not included in the report for the subsequent years.

### **Purpose of the Study**

The purpose of this study is to explore threatened harm, a type of maltreatment, in order to ascertain its prevalence and association, with recurrence of maltreatment, when compared to the other types of maltreatment (abuse and neglect). Its association with recurrence will be assessed using recurrence rates within six months and within 12 months of the date of the initial maltreatment report. The six month and 12 month marks are based on federal standards. This study will be focused on the state of Florida (a state that includes threatened harm as a type of maltreatment) and data will be utilized from its child welfare administrative data collection system.

Generally, incidences of child maltreatment are ranked in terms of their severity. Utilizing this type of severity ranking studies have concluded that threatened harm was the least severe type of maltreatment, with abuse being ranked as the most severe (Clark, Yampolskaya & Robst, 2011; Smith & Testa 2002; Yampolskaya, Armstrong, & McNeish, 2011). Threatened harm, as the name suggests, is the only type of maltreatment where the harm to the child is not readily observable and may not have yet occurred. This is one reason why it is considered the least harmful of the maltreatment types; evidenced by its lack of inclusion in research studies. However, research has clearly documented that experiencing any type of child maltreatment is



associated with negative outcomes in the short and long term (Anda, Brown, Felitti, Bremner, Dube, & Giles, 2007; Arnow, 2004; Child Welfare Information Gateway, 2006; Currie & Widom, 2010; Molnar, Buka, Kessler, 2001; Thomas, Leicht, Hughes, Madigan & Dowell, 2008).

There are other factors that could also contribute to the lack of focus on threatened harm as a type of maltreatment in research studies. First, not all states recognize it as a separate type of maltreatment. There are many states that do not even include threatened harm in their definition of child maltreatment and most of the states that do mention threatened harm include it as a type of abuse, not as a separate type of maltreatment. Florida and Michigan are the only two states found that include and define threatened harm as a separate category or type of maltreatment, separate from abuse or neglect. Florida defines threatened harm as: “a situation or circumstance which leads a prudent person to have reasonable cause to suspect abuse or neglect has occurred or may occur in the immediate future if no intervention is provided” (Florida Department of Children and Families, 2008, n.p.). Some of the specific acts that constitute threatened harm as outlined by Florida Department of Children and Families in their Allegation Matrix (1998 and 2008) are family violence, substance exposed child, and inadequate supervision.

Another reason why there may not be a focus on threatened harm is because this type of maltreatment is not reported as a separate category of maltreatment at the national level, but rather in an ‘other’ category that includes other types of non-specific maltreatment (HHS, Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children’s Bureau, 2011). Therefore, it would not be possible to extrapolate this information nationally, at least not from these data sets. These data would likely have to be examined at the state level and there would be difficulty with this

approach also as states also tend to report their data in a manner similar to the national data.

Florida for example, which lists threatened harm as a separate type of maltreatment, often reports threatened harm in an ‘other’ category. Therefore, for research purposes these data would have to be garnered from the original source; the state level child welfare data systems.

Recurrence of maltreatment data, on the other hand is readily available both at the national and state levels. Recurrence of maltreatment generally refers to a subsequent incident of maltreatment after a prior incident. Recurrence is of concern in this study because it can amplify the negative consequences of this already devastating phenomenon. One act of child maltreatment is already devastating and multiple acts increase the likelihood of negative outcomes (English, Graham, Litrownik, Everson & Bangdiwala, 2005). Recurrence of maltreatment also is important because one of the aims of the child welfare system is to prevent maltreatment from happening again and recurrence can be considered an indication of system failure (Fluke, Shusterman, Hollinshead & Yuan, 2005).

Recurrence of maltreatment is a widely studied topic in the field because of its implications to children and families. Yet, despite the fact that the “other” reporting category in which threatened harm is included had the highest rates of recurrence of maltreatment in 2006 (USDHHS, ACF, 2008), there were no studies found that examined threatened harm as a possible significant predictor for recurrence of maltreatment. Therefore, this study aims to explore threatened harm as a predictor of recurrence of maltreatment. This study will be the first to explore this topic.

### **Research Questions**

The study will explore the relationship between threatened harm as a type of maltreatment and recurrence of maltreatment. Specifically, the research questions are as follows:

1. Is threatened harm a significant predictor of recurrence of maltreatment within six months or within 12 months?
2. Is threatened harm a significant predictor of a more serious type of maltreatment recurrence of abuse or neglect within six months or within 12 months?
3. Is threatened harm, with the sub-type of *Family Violence Threatens Child or Substance Exposed Child*, a significant predictor of recurrence of maltreatment within six months or within 12 months compared to other subtypes of threatened harm and other types of maltreatment? These sub-types of threatened harm assessed in the study were the most prevalent subtypes of threatened harm.

## **Summary**

Since the Battered Child Syndrome was identified in 1962, the research and literature base outlining the negative outcomes of child maltreatment has grown tremendously. However, most of that research has been focused on abuse and neglect. Threatened harm, also a type of maltreatment, has not been the primary focus of any studies found in the literature. However, this type of maltreatment should not be ignored as experiencing any type of maltreatment can be associated with negative lifelong outcomes. Such a clear relationship between maltreatment and its likely negative outcomes have been well established in the literature to the extent that measures of maltreatment that wish to establish predictive validity would be deficient if the focus was not on these outcomes (Tajima, Herrenkohl, Huang & Whitney, 2004). It is also possible that threatened harm will be a significant predictor of recurrence of maltreatment based on the acts that constitute threatened harm in Florida (this will be further explored in the review of the literature). These facts warrant further exploration into threatened harm as a type of maltreatment.

## **CHAPTER 2:**

### **LITERATURE REVIEW**

This chapter provides a discussion of the theoretical basis for this study and a review of the pertinent literature. A review of child maltreatment in general is presented to establish its serious negative consequences on children, families and communities. Subsequently, a review of family violence threatens child and substance abuse (maltreatment types of threatened harm in Florida) are also presented.

A thorough review of the literature yielded no studies that focused solely, primarily, or secondarily on threatened harm as a type of maltreatment. The studies found that included threatened harm simply mentioned it as a type of maltreatment and those studies were based on Florida data (Clark, Yampolskaya & Robst, 2011; Lipien & Forthofer, 2004; Yampolskaya, Armstrong, McNeish, 2011). The reasons for this may be varied, but include the perceived severity of threatened harm and data availability. There are many studies that examined family violence and substance exposed children and their relationship to child maltreatment. However, there were no studies found that examined these constructs as threatened harm.

#### **Theoretical Approach: Conflict Theory.**

The general application of conflict theory to situations of violence that pose the threat of harm to a child was the original impetus to utilize the theory. Conflict is inherent in families and problems arise when there is not an effective way to deal with the conflict (White & Klien, 2008; Neuman, 2003). These ineffective coping methods can include the perpetration of violence on family members and the use of substances.

The theory is focused on conflict and its effect on individuals, groups and society; positing that conflict is inherent in the human psyche and is brought out by various forces. Thomas Hobbes, the ‘father’ of this theory believed that conflict is an innate concept because humans are essentially motivated by self-interest (Hobbes, 1947). A product of this self-interest is the inherent desire for self-assertion and self-preservation. The theory assumes that conflict arises as a result of different inequalities in society, primarily those resulting from a lack of economic resources and the competition for those resources, and from an unequal distribution of power and the desire to maintain that power. The theory also assumes that because conflict is inherent in the individual and also inherent in groups, including the family (White & Kline, 2008). Karl Marx and Friedrich Engels, who have also been credited with the early development of the conflict theory, as an extension of Hobbes’ tenet, viewed the family system as a possible source of conflict. They believed that conflict exists in the family because, although there are some shared interests, the individuals who comprise the group attempt to achieve their own interest. Engels, in particular, viewed the family as one of the basic sources of conflict. He believed that the way marriage is structured creates conflict, mostly due to the role of the females in the relationship, which is one of powerlessness (Marx & Engles, 1971).

Common among all conflict theorists is the view that conflict is a normal process, but if it is not controlled it can lead to deviant or maladaptive behaviors, (such as violence), which are not accepted in society (White & Klein, 2008; Neuman, 2003). Violence is a maladaptive coping mechanism that can be used either and/or both to gain or maintain resources (primarily power). Conflict theorists view resources as more than economic means and power but also as any skills, knowledge, and other materials that are at the disposal of the individual or group (White & Klein, 2008; Neuman, 2003). It is believed that this is a result of self-interest that

may incite irrational actions that are at odds with societal norms for acceptable behavior (White & Klein, 2008). The incongruence between the individual's action and the societal mores may lead to conflict (and this conflict may later be appeased by the imposition of sanctions on an individual).

Conflict theory has been used in the literature to examine family violence, but not to the extent expected. There are a plethora of studies of family violence that cite conflict as an ignition for violence, but not nearly as many that actually utilize the conflict theory in the study. The theory is found in general child maltreatment literature specifically, but to a far lesser extent than in the domestic violence literature (Edleson & Tan, 1993; Whitaker, Haileyesus, Swahn & Saltzman, 2007). This may be partially because conflict suggests dual sources of violence which is sometimes not the case in domestic violence situations particularly in situations of intimate partner violence. The theory has been used as a theoretical basis to examine child maltreatment and its contributing factors, as well as a basis for developing tools to assess child maltreatment risk in families experiencing domestic violence. For example, Knudsen (1992) used conflict theory to examine various factors that may contribute to child maltreatment. He focused on poverty, stress and isolation; maltreatment was seen as an extension of these factors and consequence of the conflict that is created from not being able to *ameliorate* these factors. The perpetrators are said to be negatively impacted by these inequalities and to engage in socially unacceptable behavior in an effort to change their status in society (Knudsen, 1992).

Straus' Conflict Tactic Scale (CTS) (1979, 1996) is one of the most widely used applications of conflict theory in child maltreatment (Gutterman, Lee, Taylor, & Rathouz, 2009; Merritt, 2009). The Conflict Tactic Scale (CTS), which is based on the conflict theory, is a widely used tool that is used to identify violence in families. Straus stated that he based the CTS

on conflict theory because it is an inevitable fact that conflict will be a part of all human relationships including that of the family. He viewed violence as an unacceptable means of coping with conflict (Straus, Hamby, Finkelhor, Moore & Runyan, 1998). In a literature search of child maltreatment and conflict theory, most of the results included use of the CTS. The original application of the scale was in the assessment of family violence, but a version of the CTS, the CTS Parent Child (CTSPC), was created to assess the presence of child maltreatment in families (Straus, 2007). This version was developed because a review conducted by Straus and colleagues found many studies where the CTS was utilized in assessing child maltreatment although it was not originally designed for that purpose (Straus, Hamby, Finkelhor, Moore & Runyan, 1998). The CTS and the CTSPC are two of the most reliable measures in the area of family violence (Gutterman, Lee, Taylor, & Rathouz, 2009; Merritt, 2009).

One of the major advantages of the conflict theory is its multi-level applicability. The theory was originally devised as an individual level theory, but over time it has been expanded to being applied at the macro-level; it has been used to examine conflict that exists at the society level, the community level, at the family level and at the individual level (White & Klein, 2008). The theory is well suited for use in the study of family violence, including child maltreatment (violence against a child), primarily because violence is commonly a consequence of conflict. The study of family violence has been stated to be “one of the major empirical areas of the application of conflict theory” (White & Klein, 2008, p.198). However, the theory goes beyond seeing conflict as a result, to posit factors that may also effect conflict and lead to violence. As such, it is a useful tool for explanation and examination of the varied and multi-level factors that may contribute to child maltreatment. It should also be noted that conflict theory emphasizes that conflict is inherent and not in or of itself destructive. There is the potential for positive change as

a result of conflict; conflict can be a medium for social change and its presence can highlight situations of potential danger such as in cases of domestic violence. It is when conflict is used negatively or the response to conflict is maladaptive (e.g. substance use) that conflict becomes a damaging mechanism.

Conflict theory can be used to examine and address multi-level factors that contribute to child maltreatment. These can include times of economic distress or policies that favor certain groups and contribute to unequal distributions of wealth and power at the societal level, disenfranchised communities where there is low social capital and high violence at the community level, violence at the family level, and activities that serve a person's self-interest, such as substance use, at the individual level (Garbarino, 1976; Lynch & Cicchetti, 1998; Katz, Corlyon, La Placa & Hunter, 2007; Wells, 2009; Center for Disease Control, 2009).

Some of the family factors that have been shown in research to be risk factors for child maltreatment include a family history of violence and substance abuse problems (Center for Disease Control, 2009). The presence of conflict in families increases the risk of violence (Strauss, 2007) and exacerbates the possibility of using negative coping strategies such as using substances. As such, the conflict theory would be applicable to threatened harm, the type of child maltreatment that is the major focus of this study. According to the theory, conflict is inherent in individuals and families and problems arise when there are not effective means of handling this conflict. On this basis, unless an individual is trained (and willing) to appropriately handle this conflict or the behavior that puts a child at risk for harm they may revert to familiar behaviors, which is possible in both situations of family violence and substance use. There may be participation in mandated services not with the motivation of changing, but to avoid harsher sanctions (Ashcroft, Daniels & Hart, 2003).



As an extension, conflict theory relates both to the inherent drive to satisfy one's own self-interest and the added desire to maintain or achieve power. The concept of an unequal distribution of power creating conflict is a primary assumption of the conflict theory and very relevant in family violence cases. Some theorists believe that abuse of this socially legitimized power often leads to family violence (Edelson & Tan, 1993). Power and control is a salient issue in the study of family violence as it is one the primary mechanisms that is used in a type of partner violence. Johnson (2006) terms this type of partner violence "intimate terrorism" and describes it as a situation where the perpetrator is controlling and violent, but the partner does not exhibit these behaviors. He further states that this is the type of partner violence that is most often seen in at agencies, though it does not represent a large amount of the partner violence that occurs. Johnson (2006) found that men are most often the perpetrators and it is more likely to escalate than the other types of partner violence (these will be addressed further in the discussion section).

Power is also garnered from the unequal distribution of economic resources according to the theory, which in and of itself is a source of conflict (White & Klein, 2008). The abuser may be in possession of more resources than the victim, wants to maintain those resources, or be in competition for increased resources outside of the home. Some women in domestic violence situations may stay in these relationships because they do not have the economic means to survive on their own and some women (particularly those with children) leave and return to the perpetrator for economic reasons (United Nation Children's Fund Research Center, 2000). The presence of the perpetrator increases the risk of maltreatment and recurrence of maltreatment.

This study hypothesizes that cases that have an initial report of threatened harm, if there is recurrence, this recurrence was mostly likely to be of a another type of maltreatment such as

abuse or neglect. Conflict theory states that one reason why conflict occurs is due an unequal distribution of power in a system (White & Klein, 2008). If there is a verified report of threatened harm, the child welfare system will likely become involved in the family's life. The child welfare system is one that holds a role of power over this family. This is embedded in its design and function in society, mostly because the system has the ability to propose or impose/mandate remedies to the maltreatment in order to protect children and prevent another maltreatment episode. Professionals often fail to recognize that conflict is inherent, but rather see it as deviant behavior that should be avoided (Straus, 2007). The presence and oversight of the child welfare system increases the odds that families will be re-reported (Barth, Gibbons & Guo, 2006; Connell, Bergeron, Katz, Saunders & Tebes, 2007). Johnson (2006) also proposed that the type of partner violence that often comprise agency samples is the most likely to escalate. Therefore, maltreatment is likely to reoccur in these families and it possible that this subsequent maltreatment will be or be labeled as abuse or neglect. Additionally, there is a very high co-occurrence rate between domestic violence and child maltreatment (Appel & Holden, 1999; Hamby, Finkelhor, Turner, Ormrod, 2010), therefore it is possible that cases that initially had a finding of threatened harm due to family violence will have an abuse or neglect report at a later time.

### **Child Maltreatment**

In the US prior to the 1960's, child maltreatment was seldom recognized as a problem by medical professionals and others who were witnesses to its effects (Kempe, Silverman, Steele, Droegeueller, and Silver, 1962). It took a group of pediatricians to take notice of the increasing number of children who were being seen for intentional injuries for the issue to come to light. In the early years of research into child maltreatment, the field was plagued with stigmatization and

methodological limitations (Cicchetti and Carlson, 1989). The stigma of the “battered child” nomenclature led to a primary treatment focus on caregivers and exclusion of the child. However, the research at the time was greatly lacking conceptually, theoretically, and in uniformity (Aber and Cicchetti, 1984). The result of this could be seen in the data resulting from such studies which often produced conflicting and contradictory profiles of children who had been maltreated. Aber and Cicchetti (1984) give the example of studies that would state that these children were withdrawn where another would find that children who had been abused were hyper-alert. The authors attributed these early variations in outcomes to the lack of a developmental basis in child maltreatment research, without which “it is difficult to make definitive statements about the social, emotional and cognitive consequences of maltreatment” (Cicchetti and Carlson, 1989; p. xvi). However, this field of research has advanced in many areas since the time of these researchers, providing information that has led to advances in policy and practice to more effectively address child maltreatment and its related outcomes.

**Child maltreatment: children under 12 years.**

Most maltreatment is perpetrated on children less than five years of age and this has been the trend for at least the last decade (HHS, Administration for Children and Families, Administration on Children, Youth and Families, Children’s Bureau, 2011). Maltreatment can have pervasive negative effects on later functioning, even when it begins at this early stage. Infants and toddlers are at the stage where they are developing attachments and formulation of a sense of self, two basic functions that can shape experiences in for the rest of one’s life (Bowlby, 1969).

This concept of learning through the environment in which one is surrounded is a proposition of the social learning theory which posits that behavior is observed and modeled

(Bandura, 1971). Giedd, a neuroscientist from the National Institute of Mental Health (NIMH), also posits that the human brain was originally designed to “learn through example”.. This learning by example is very powerful and parents are teaching even when they don’t realize that they are teaching”, includes teaching emotional responses. Giedd further states that “it’s the everyday moments that have the greatest impact on how the brain forms and adapts” (National Institute of Mental Health, 2011, n.p.). This sentiment aptly applies, maybe even more so, to young children who have experienced maltreatment as their everyday lives typically include witnessing or being subjected to unhealthy behaviors. Younger children are at a very vulnerable stage in their development and are unable to effectively process and handle the emotions they may be experiencing (Holt, Buckley & Whelan, 2008). The possible embedding and shaping of these early experiences is evident in the increased incidence of later negative outcomes of childhood maltreatment such as depression, anxiety, personality disorders, post-traumatic stress disorder and substance abuse (Kaplow & Widom, 2007; Putman, 1997; Widdom, 1999).

The age of onset of maltreatment has been a topic of interest for some time in maltreatment research. It had been proposed that the earlier in life that children are maltreated, the greater the risk of psychological problems in adulthood (Cicchetti, 1989; Aber, Allen, Carlson, & Cicchetti, 1989; Egland, Yates, Appleyard, & van Dulmen, 2002). The rationale behind this theory stems from the hypothesis that children who are maltreated at an early age are less likely to achieve other necessary developmental milestones. This becomes a pattern and by adulthood psychological distress ensues as basic mechanisms are missing. The degree to which the negative effects of the maltreatment are manifested therefore depends on the extent to which these developmental tasks were completed (Kaplow & Widom, 2007). In addition, neurobiologist and developmental theorists had produced findings that give support to the

inverse relationship between age of onset of maltreatment and future adverse outcomes (Kaplow & Widom, 2007). There has been evidence that supports the negative effects of early maltreatment on the brain such as having a smaller brain size, different neural pathways than non-abused children and its negative effects on memory and cortisol levels (Cicchetti, Rogosch, Gunnar, & Toth, 2010; De Bellis, 2001; Debellis, et al., 1999).

Conversely, there are other researchers who posit that younger children are less likely to have negative outcomes in adulthood as a result of childhood maltreatment (Kaufman & Widom, 1999; Garbarion, 1989; Maccoby, 1983). These researchers hypothesize that the younger children are at the onset of the maltreatment, the more likely they are to be protected against its distress producing situations as their cognitive abilities are less developed. These younger children are less likely to experience negative emotions as a result of the maltreatment versus adolescent victims. It should be noted here that though this review is sub-divided by age range, this is not to add to the debate of the previously mentioned issue of the effect of age of onset maltreatment outcomes, but rather to discuss its possible effects and outcome at the different stages. The more generally accepted notion has been utilized in this review, which is that the age at which a child is maltreatment can affect their current and future functioning in similar and disparate ways (Widom, 2000; Manly, Kim, Rogosch & Cicchetti, 2001).

Attachment to the caregiver is one of the first responses that is manifested in a child and also one of the first to be negatively affected in children who have experienced maltreatment. Attachment is important because not only does it impact the quality of relationships that will exist within families, but attachment patterns can predict the presence of adverse relationships in families (Corby, 2000). It has been long recognized that insecure attachment or lack of attachment and a disrupted or unstable sense of self can be the result of maltreatment in young

children. Early studies, as well as those more recent, have echoed this finding (Carlson, Cecchetti, Barnett and Braunwald, 1989; Cicchetti 1984; Stronach, Toth, Rogosch, Oshri, Manly & Cicchetti, 2011). In one of the more recent studies by Stronach, et al. (2011), a sample of maltreated (N = 92) and non-maltreated (N = 31) preschool-aged children were examined to assess any difference in attachment. It was found that the preschoolers who experienced maltreatment had significantly lower rates of secure attachment and organized attachment than their non-maltreated counterparts. There is a concern for children who have disorganized attachments as evidence has been found that this type of attachment is associated with negative long-term outcomes (Bernard, Dozier, Bick, Morrarty, Lindhheim & Carlson (2012). These children are more likely to have externalizing behavior problems and are more likely to experience dissociative symptoms in their middle, high school even into young adult years (Carlson, 1998; Fearon, Bakermans-Kranenburg, van Ijzendoorn, Lapsley & Roisman, 2010). Additionally, insecure attachments are concerning because they can have an effect on regulation of emotion which can be lasting (Cicchetti and Barnett, 1991). This effect on emotion regulation has been stated to be a possible explanation for findings that early maltreatment leads to more psychological distress in adulthood (Kapow and Widom, 2007).

Other studies have found additional psychopathological effects of early maltreatment that can persist later in life into adulthood. It has been found that children who are abused at less than 12 years of age had lower self-esteem than their peers. These children were also found to be more likely to exhibit adjustment problems in school, have higher levels of anxiety and have poorer daily living skills in adulthood (Keiley, Howe, Dodge, Bates, & Pettit, 2001; Kaplow, Dodge, Amaya-Jackson & Saxe, 2005; English, Graham, Litrownik, Everson & Bangdiwala, 2005).

A variety of studies have found that different types of maltreatment and gender in younger children are associated with different outcomes. Kaplow and Widom (2007) assessed if an earlier age of onset of maltreatment was predictive of greater psychopathology in adulthood and examined if different categories of age of onset (0-11 years) were also predictive of adult functioning. Though most of their results were not congruent with their hypothesis (that earlier maltreatment would be more predictive of more adverse psychological functioning in adulthood), it was found that when maltreatment occurred before the age of five, it was associated with significantly increased levels of internalizing symptoms, specifically depression and anxiety symptoms. The authors posit that this may be related to type of maltreatment. In particular, they state that neglect is the most prevalent type of maltreatment at this early stage and this may be a possible explanation for the results. This is consistent with other studies which have found that neglect was found to be predictive of internalizing behavior issues in infants and pre-adolescence versus emotional abuse, for example, which was found to be associated with more externalizing behavior problems in the same developmental period (Stronach, Toth, Rogosch, Oshri, Manyl and Cicchetti, 2011). Substance use has also been found to be moderated by gender in adolescents that experienced maltreatment prior to five years old. Lansford, Dodge, Pettit & Bates (2010), in their sample of 582 adolescents found that females who were physically abused as infants had higher incidents of substance use, but this early abuse was not a significant predictor for future male substance use.

### **Child maltreatment in adolescence.**

As noted earlier, relational learning begins at birth. In adolescence, children are still learning to form relationships, including peer relationships which often at this stage are paramount to all others. Gender roles are very pronounced during this time and play a major part

in shaping the ways youth use to fit in with peers (Wolfe, Crooks, Chiodo & Jaffe, 2009). Youth who have been maltreated are at increased risk of having relational problems with peers. These youth often view relationship in terms of victims or victimizers and they tend to act in ways that fulfill one of those roles (Sheild & Cicchetti, 2001). Research has found that this is particularly pronounced in children who are exposed to domestic/family violence (Coid, Petruckevitch, Feder, Chung, Richardson & Moorey, 2001); these children not only replay these roles by the increased tendency to perpetrate violence on peers, but also are more likely to be bullied by their peers (Wolfe, Crooks, Chiodo & Jaffe, 2009; Reitzel-Jaffe & Wolfe, 2001). Wolfe, Crooks, Chiodo & Jaffe (2009) posit that these problematic adolescent relationships evolve into adult problematic relationships via the following course: “bullying transforms into harassment and dating [or martial] violence, such that abuse and coercive forms of control become the critical dynamic by which relationships are defined and maintained” (p. 22). Unfortunately, there are also other negative relational factors more likely to be seen in maltreated youth. Whether it is in peer or dating relationships, these youth tend to experience more mistrust, fear, poorer problem solving and overall lower self-efficacy. These factors themselves put an additional limitation on these youth’s ability to form healthy relationships (Wolfe, Crooks, Chiodo & Jaffe, 2009). Due to their developmental stage, adolescent victims are better able to process and cognitively respond to situations of family violence and are more likely to have or create negative coping strategies as a reaction. These negative coping strategies are likely to lead to behavioral and psychological problems (Kaufman & Widom, 1999; Garbarion, 1989; Maccoby, 1983).

Whether maltreatment begins in or carries over into adolescence, it can have devastating consequences. When maltreatment begins in childhood it affects adolescent behaviors and relationships and these negative effects also tend to pervade into adulthood. The same happens if



the maltreatment begins in adolescence, but the negative effects tend to last longer and be more pronounced (Thornberry, et al, 2001; Ireland, et al., 2002; in Smith, Ireland, Thornberry, 2005). Both studies (Thornberry, et al, 2001; Ireland, et al., 2002) using the same data set, but with different dependent variables, found that adolescent-limited maltreatment (maltreatment beginning in adolescence) is a greater risk for delinquent behavior, substance use, teen pregnancy, internalizing behaviors and a variety of other problem behaviors versus childhood-limited maltreatment. Equally, Stewart, Linvingston & Dennison (2008) found that persistent and adolescent-limited maltreatment is more strongly associated with delinquent behavior. A study by Eckenrode et al., (2001) which examined the effect of the timing of maltreatment on the onset of negative outcomes in a sample of mothers followed for 15 years after the birth of their child, found that an earlier onset of negative behaviors was found in adolescent-limited and persistent maltreatment (maltreatment that extended from childhood into adolescence). Furthermore, the study found no differences in the onset of negative behaviors for those with childhood-limited maltreatment and no maltreatment.

There is much more research conducted on the effects in adolescence of childhood maltreatment and on maltreatment that continues into adolescence, than there is on the effects of maltreatment that begins in this developmental period (Smith, Ireland, Thornberry, 2005). Although there was an increase in the last decade in the amount of maltreatment studies being focused on adolescents that were longitudinal (Trickett, Negriff, Ji & Peckins, 2011), many were started when the participants were children. This has been posited to be so for a variety of reasons including the definition of a *child* as a person less than 18 years and the subsequent effect of the lack of separation of *child* into distinct age groups in most studies. Additionally there may be a “general bias” that the earlier the maltreatment occurs, the greater the negative

consequences and also the belief that younger children are more vulnerable, whereas adolescents are more able to protect themselves against maltreatment and could be the precipitators of the maltreatment (Smith, Ireland, Thornberry, 2005, p. 1101; Finkelhor, 1995).

In a recent study that examined adolescent limited maltreatment (Smith, Ireland, Thornberry, 2005), the authors examined the connection between maltreatment in adolescence and adult outcomes, while controlling for previous offending (n=884). Their results were congruent with their previous study (Thornberry, Ireland & Smith, 2001) which found that when maltreatment begins in adolescence this increases the risk of drug use, violent offending, general offending, internalizing and externalizing problems, and arrest both in the adolescent years and in adulthood.

There are studies that differentiate maltreatment types to ascertain if different types of maltreatment have associated different outcomes. For example, Cicchetti et al., (2010) found that emotional maltreatment is associated with a propensity for suicidal behaviors. Smith, Ireland, Thornberry (2005) found that experiencing neglect in adolescence increases the odds of being arrested, general offending and committing a violent crime; physical abuse increases the risk of violent crime, but not of being arrested or general offending. Kim and Cicchetti (2010) found that emotional maltreatment was related to peer rejection but not physical, sexual abuse or neglect, whereas Egeland, Yates, Appleyard, & Van Dulmen, (2002) found that physical abuse, but not emotional abuse was a predictor of peer alienation. These studies exemplify that although studies have shown that adolescents are more likely to experience symptoms after experiencing certain types of maltreatment, the actual outcomes of abuse during adolescence differs across studies.

However, there has been one congruent finding across these studies; the literature base has consistently supported the fact that children who have experienced multiple maltreatments (recurrence) or types of maltreatment are more likely to have a negative outcome than those who have experienced one type. Hazen, Connelly, Roesch, Hough and Lanndsværk (2009) found in their study of over 1000 youth between the ages of 12 and 18 that those in their two maltreatment profiles (sexual, + physical + emotional maltreatment and physical+ emotional maltreatment) had significantly more problem behaviors associated with depression, anxiety, somatization, social situations, thought, attention and aggression versus those in their low maltreatment group. Other studies have found that youth who have experienced both sexual and physical abuse are more likely to initiate substance use earlier, abuse multiple substances and overall were more likely to engage in substance abuse than those who have experienced either abuse alone (Harrison, Fulkerson, and Beebe, 1997; Bensley, Spieker, et al., 1999; Trickett, Negriff, Ji & Peckins, 2011) . Additionally, these youth are more likely to have eating disorders, exhibit suicidal and anti-social behaviors and have more psychiatric diagnoses than youth who experienced either sexual or physical abuse alone (Ackard et al., 2001; Bensley, Van Eenwyk, et al., 1999; Ackerman, Newton, McPherson, Jones & Dykman, 1998).

Finally, gender differences in outcomes have also been noted in adolescents who have experienced maltreatment. In their study of 1420 adolescents, Costello, Sung, Worthman and Angold (2007) found that the maltreated girls in the study had pubertal maturity an average of eight months earlier than their non-maltreated peers. This, however, was not found to be true for the boys. Similarly, Zabin, Emerson & Rowland (2005) and Foster, Hagan and Brooks-Gunn (2008) found in their studies that menarche happened earlier for girls who had been maltreated, particularly for those who had experienced physical or sexual abuse. Maltreated males have been

found to exhibit more sexual, verbal and physical aggression in their dating relationships than girls who have been maltreated (Wolfe, Scott, Wekerle, & Pittman, 2001).

### **Family Violence**

Children who witness family violence have been referred to as unintended, forgotten and often silent victims (Edleson, 1999). In the last two decades research has produced enough evidence to convince policymakers that exposure to violence warrants attention and intervention. It is included as a type of maltreatment in the majority of states' definition of child maltreatment. Most often, it is classified as a threat of harm but not threatened harm as a type of maltreatment (as in Florida and Michigan). There are a few states (e.g. Arizona, Kansas, New Hampshire, Washington) that classify exposure to violence as a type of neglect (Florida Senate, 2009), and others that include it in their definition of abuse. Florida classifies exposure as a type of threatened harm, specifically as "*Family Violence Threatens Child*" which is defined as "an adult who is a family or household member commits any violent criminal behavior, such as assault or battery, on another adult who is a family or household member, that demonstrates a wanton disregard for the presence of a child and could reasonably result in injury to a child" (Florida Department of Children and Families, 2009, n.p.). Though family violence occurs in families that may have other risk factors for negative outcomes (e.g. single parent household, substance abuse), it has been shown to be a risk factor when other co-occurring risk factors are controlled (Eddleson, 2006)

#### **Family violence: children under 12 years.**

Mills et al. (2000) found domestic violence to be the single most common antecedent to child death in the United States. One of the more conservative estimates by Carlson (2000) has stated that between 10% and 20% of children witness violence in their homes each year.

Previously, it had been estimated that between three and ten million children are exposed to family violence each year (Straus, 1992; Carlson, 1984). Zinzow, et al. (2009) based on the nationally representative probability sample included in their study, estimated that about 9% of adolescents between the ages of 12-17 witness parental violence. This study focused on more serious forms of family violence which was deemed as the reason for the lower estimate compared to other studies. Two predictors of domestic violence are the number of children in the family and younger age of children (Kitzmann, Gaylord, Holt and Kenny, 2003).

Research has clearly demonstrated the negative sequelae associated with children's exposure to violence in the home. There are a few researchers who believe that exposure to violence should not necessarily be considered as a type of maltreatment (Edleson, 2004; Weithorn, 2001), but the majority disagree with this position because of the deleterious effects of this exposure. A meta-analysis conducted by Kitzmann, Gaylord, Holt, & Kenny (2003) of 118 studies that addressed the outcomes of children exposed to violence found that these children tend to have higher incidents of behavioral, psychological, emotional, social and academic problems.

When children under the age of 12 witness family violence, in the short term, this can be confusing and devastating. There is evidence in the literature that domestic violence can negatively impact a woman's parenting ability; her ability to create a sense of security and trust to aid her children's development may be lessened (Holt, Buckley & Whelan, 2008). This would in turn create emotional and developmental problems for the child. The domestic violence is likely to create a sense of extreme burden and subsequent depression as well as a variety of other emotions which is transferred to the child. This unstable environment can in turn impact the attachment that is formed by the child to the parent. Often, a disorganized or insecure attachment

will result as the mother in this situation is the source of both comfort and fear. This type of attachment can be manifested in many areas of the child's life, such as a fear of being alone, sleep disturbances, extreme irritability, as well as delays in language, behavior and toilet training (Levendosky & Graham-Bermann, 2001; Holt, Buckley & Whelan, 2008).

Children in the pre-school years who witness domestic violence, who are still dependent on their caregivers, are likely to have more social problems, behavioral problems, post-traumatic stress symptoms and poor self-esteem than their peers who have not been witnesses of violence. Additionally, due to their developmental stage and their inability to verbalize the feelings that they may be experiencing, these children are likely to manifest their emotions through temper tantrums, aggressiveness, resistance to comfort, and in psychosomatic complaints (such as headaches, nightmares, sleepwalking, enuresis, and stomach aches) (Cunningham & Baker, 2004; Lundy & Grossman, 2005; Martin, 2002; Huth-Bocks, Levendosky & Semel, 2001).

School aged children are in the developmental stage of forming their identity. Those who have been exposed to family violence are more likely to have problems in this area. They also are more likely to have problems forming social relationships. These children are likely to become bullies or be bullied themselves (Wolfe, Crooks, Chiodo & Jaffe, 2009). Studies have found that these children tend to pick up on aggressive cues in their social relationships (at least what they perceive to be aggressive cues) and are more likely to engage in aggressive behaviors and act out in other ways. As an extension, these children are also more likely to have academic problems in school. To compound the problem even further, these problems may lead to depression in this group (Lundy & Grossman, 2005; Martin, 2002; Huth-Bocks, Levendosky & Semel, 2001; Holt, Buckley & Whelan, 2008).

The propensity of these children to engage in more aggressive behaviors has been theorized to be partially attributed to the intergenerational transmission concept, which has its roots in social learning theory (Bandura, 1971; Kalmuss, 1984). The concept postulates that witnessing (and experiencing violence) as a child can lead to the increased use of violence as an adult. The tendency for children who have witnessed violence to be more violent is a not just a short term, but also a long term consequence of this phenomenon (Holt, Buckley & Whelan, 2008). Other long term consequences of exposure to violence include the greater possibility of delinquency, involvement in violent crimes, substance use and general anti-social behavior. These children will also more likely experience violence in their adult relationships (Holt, Buckley & Whelan, 2008). One study by Amato (2000) found that children who were exposed to violence were 189% times more likely than those who had not been exposed to violence to be involved in a relationship where violence was present.

#### **Family violence in adolescence.**

Witnessing family violence can be confusing and devastating; this coupled with the confusion associated with this stage of life can exacerbate the effects of exposure to family violence in adolescence. Meta-analyses that address the outcomes of children (including adolescents) exposed to family violence have all identified higher incidents of behavioral, psychological, emotional, cognitive, social and academic problems for most of these children (Kitzmann, Gaylord, Holt & Kenny 2003; Wolfe, Crooks, Lee, McIntyre-Smith & Jaffe, 2003). These meta-analyses also found that psychological problems in these children manifested as both internalizing and externalizing behaviors and an increase in the presence of post-traumatic stress disorder (PTSD) in this population. Similar findings by Zinzow, et al. (2009) found that children who witnessed family violence, particularly those who were afraid they would be harmed, were

six times more likely to meet the clinical criteria for PTSD and seven times more likely to have major depression. PTSD symptoms in these exposed children have been found to manifest as headaches, nightmares and an exaggerated startle response (Lehmann, 2000; Lundy and Grossmann, 2005). Onyskiw (2003) found that adolescents who witness violence are more likely to be depressed and have low self-esteem. Related to this is the fact that suicide is higher in this population, as well as alcohol and drug abuse (Wolak & Finklehor, 1998; Pilowsky & Wu, 2006).

Adolescents exposed to violence have more problems in school, have problems with social situations and tend to engage in more aggressive behaviors than adolescents who have not been exposed to family violence (Levendosky, Huth-Bocks, & Semel, 2002). Adolescents are still in the process of creating a sense of self and forming their identity. This is important at this stage because it usually helps to determine the type of peer group with which they have relationships. Adolescents who have witnessed family violence are more likely to have problems forming peer and other social relationships (Levendosky, Huth-Bocks, & Semel, 2002). Studies have found that these children tend to pick up on aggressive cues in their social relationships (at least what they perceive to be aggressive cues) and are more likely to engage in aggressive behaviors and act out in other ways. As an extension, they have more academic problems in school and are more likely to be involved with the delinquency system (Martin, 2002; Huth-Bocks, Levendosky & Semel, 2001; Holt, Buckley & Whelan, 2008). This aggressive behavior tends to not just be limited to adolescence, but is likely to continue into adulthood. One study found that the increased risk associated with these children assaulting their partners as adults is as high as 1000% (Straus, Gelles, Stiemetz, 1980).



In families where there is violence, the older children are, the more likely it is that they will intervene by trying to protect the victim. This increases the possibility that they will become the victim of violence themselves (Hester, Pearson, Harwin, 2000; Goldblatt, 2003).

Adolescents may also intervene by providing emotional support to the victim and adopt a care-taking role in the family, which can itself lead to emotional problems (Hester, Pearson, Harwin, 2000; Goldblatt, 2003).

Despite all the evidence on the deleterious effects of exposure to violence, there are children who have been exposed who are reportedly not as severely affected in the short or long term (Hughes, Graham-Bermann, & Gruber, 2001); they do not exhibit more developmental problems and are not at serious risk of harm (Weithorn, 2001). Studies have found no difference between these children and those who were not exposed to violence (Grych, Jouriles, Swank, McDonald, & Norwood, 2000; Graham-Bermann, 2001). However, this is not unlike other areas of maltreatment. Researchers have posited that this is due to a number of factors such as the amount and level of risk and protective factors, whether innate or environmental (Edleson, et al., 2007). Gender, age, the severity of the violence, its chronicity and frequency all have an effect on the way a child is impacted, as does the relationship between the child and the batterer and the child and the victim, and their overall support system (Edleson, 2004).

### **Substance Use**

Substance abuse is term used to identify this sub-type of maltreatment however, the actual definition mentions substance use, therefore this is the term that was utilized in this study. Parental substance use is one of the primary risk factors for child maltreatment and child maltreatment recurrence. Similar to family violence, there is a high concurrence rate between child maltreatment and substance use. It has been estimated that as many as 70%-80% of child

welfare cases involve substance use (Locke & Newcombe, 2003; Jones, 2005). It has been cited by child protection staff as “one of the greatest problems” that their agency faces (Donohue, Romero, & Hill, 2005, p. 628). Though there have been studies that have shown that the linkage between the two can be mediated by other parental factors (Doris, Meguid, Thomas, Blatt & Echenrode, 2006; Smith & Testa, 2002), there is very strong evidence overall that substance use in families produces a variety of serious and sometimes lasting negative effects on children. Children who are exposed to parental substance use problems tend to have more attachment problems, emotional and behavior problems and experience poorer overall health and functioning (Das Eiden, Edwards, & Leonard, 2002; Stanger, Dumenci, Kamon, & Burstein, 2004; Christoffersen & Soothill, 2003).

The estimated proportion of child welfare cases where substance use is involved varied widely depending on the study, with estimates as low as 11% to as high as 80% (Jones, 2005). Young, Boles and Otero (2007) conducted a review of “more rigorous” studies with prevalence data on the amount of families in the child welfare system affected by substance disorders. The review included studies that addressed children already in the child welfare system whose parents were identified with a substance abuse problem, parents who entered a substance abuse treatment program who had children and prenatally exposed children. The review found that the majority of studies that focused on children in the child welfare system were based on those who had been removed from their parents; this is important because children remain in their home in the majority of child welfare cases (about 70%) (U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children’s Bureau, 2011). Estimates of parental substance use based on a sample of children placed in out-of-home cases ranged from 43% in a study sample of 206 cases (Murphy,

et al., 1991), 78% in a random sample of 759 cases from three large states (GAO, 1999) to 79% in a sample of 639 urban children (Besinger, Garland, Litronik and Landsverk, 1999).

One of the few studies the review found of in-home cases was The National Study on Child and Adolescent Well-being (NSCAW), which highlighted that 11% of caregivers in this population, had a substance abuse problem (Gibbons, Barth, & Martin, in press). This number was markedly lower than previous estimates (although these studies were on a smaller scale) which recorded estimates as high as 68% for in-home cases involving substances (Jones, 2005). These differences were attributed to a variety of factors such as population studied, definition of the construct of interest (substance use versus substance abuse) and instrumentation. It was also noted that in the NSCAW study, 61% of parents who reportedly met criteria for substance dependence were not identified by case workers, which would indicate that many of these cases are missed. The study highlighted that workers are even more likely to miss cases where the parents use, but are not dependent on substances (Gibbons et al., in press cited in Young, Boles, Otero, 2007). A similar finding was made in Florida from the in the Child and Family Service Review (CFSR) data from round one (1999-2001) (U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, n.d).. The review found that 36% of cases that involved substance use were missed by workers. This same review but statewide, reporting both in-home and out-of-home cases from 32 states, found that 16% to 61% of cases involved substance use (Young, Gardner, Whitaker, Yeh, & Otero, 2005).

Expectedly, there are less data available on maltreatment among parents who are in treatment for substance abuse, but large scale studies have found that almost 60% of persons in treatment have minor children (Brady & Ashley, 2005; Hser et al, 2003). The Young, Boles &

Otero (2007) review highlighted the Hser et al, (2003) study as being the only one that assessed child welfare involvement. Twenty seven percent of the parents in treatment had their children removed in the study (N= 15,618) and of that 27%, 37% had their rights terminated (Hser et al, 2003). Another finding in this study was a correlation between the ‘seriousness’ of the drug of choice and the possibility of parental rights being terminated. For example, 80% of the parents receiving treatment for narcotic abuse (mostly heroin) had had their rights terminated. A similar outcome was found in the Drug Abuse Treatment Outcome Study (DATOS); when cocaine or heroin was the drug of choice for the sample of mothers receiving treatment from a community based program, they were two times more likely to maltreat their children in comparison to moms who had used other substances (Cash & Wilke, 2003).

In the case of prenatal exposure, the substance use becomes a risk factor to children even before they are born; as such the majority of states consider prenatal exposure to substances a type of maltreatment (Young, Boles, Otero, 2007). This was also an amendment made to the Keeping Children and Families Safe Act in 2003 (P.L. 108-36) which included a new requirement for states to have a system in place where these children are identified. However, there are no states that mandate testing at this point, but rather, testing is included as part of a screening process if warranted (Young, Boles, Otero, 2007). The language included in the Florida statues addressing prenatal screening states: “The department shall also promote the identification and screening of all newborns in this state and their families for environmental risk factors such as low income, poor education, maternal and family stress, emotional instability, substance abuse, and other high-risk conditions associated with increased risk of infant mortality and morbidity to provide early intervention, remediation, and prevention services, including, but

not limited to, parent support and training programs, home visitation, and case management” (Florida Statute, 383.14).

It has been estimated that between 8% and 11% of babies born each year are exposed to substances (alcohol and illegal drugs) prenatally (Young, Boles, Otero, 2007). These estimates are lower than previously reports of as high as 20% (Substance Abuse and Mental Health Services Administration, 2004). Prenatal substance exposure is not tracked nationally in a systematic way, but there are existing efforts in place to monitor use of substance by pregnant women. The available data come from a variety of sources such as surveys that include self-report data (National Survey on Drug Use and Health); state-based systems such as The Pregnancy Risk Assessment Monitoring System (PRAMS) which is used in 32 states and funded by the Centers for Disease Control (CDC); and research studies such as the Infant Development, Environmental and Lifestyle (IDEaL) Study. Young, Boles, Otero, (2007) included these studies in their review, leading to their estimate of the prevalence of prenatally substance exposed children. The authors highlighted that this population of children are important because they are likely to experience “adverse developmental outcomes” and “future abuse” which increases the possibility of them entering the child welfare system (p. 145).

There is congruency in the literature that the overall trend indicates that substance use is highest in the first trimester and significantly declines by the third trimester, with the most common substance being alcohol (OAS, 2005; Arria, Derauf, LaGasse, Grant, Shaa, Smith, et al., 2006). Notably, a distinction should be made as there are children who have had some exposure in utero and children who are born exposed to substances. As research has shown, substance use tapers off in the third trimester and therefore children who were actually exposed may not test positive at birth. Therefore, it is likely that many children who have been exposed

to substances never come to the attention of the child welfare system as there is no demonstrable proof of exposure (such as a positive drug screen) (Smith and Testa, 2002). Specifically, a substance exposed child is defined in Florida as “exposure to a controlled substance as evidenced by 1) use by the mother of a controlled substance during pregnancy when the child, at birth, is demonstrably adversely affected by such usage; or 2) continued chronic and severe use of a controlled substance by a parent when the child is demonstrably adversely affected by such usage” (Florida Department of Children and Families, 1998, n.p.).

There have been many studies conducted on the physical outcomes of children with exposure to substances which have found that these children tend to be born with low birth weight, atypical facial features, sleep problems, motor control problems, irritability and a variety of cognitive impairments (Coles, 1993; Dixon & Bejar, 1988; Zuckerman & Bresnahan, 1991). Additionally, prenatal substance exposure has been linked to emotional and behavioral problems such as impulsivity, academic difficulties, and alcoholism, with many of these effects being long-term and continuing into adulthood (Smith, Johnson, Pears, Fisher & DeGarmo, 2007 8; Baer, Sampson, Barr, Connor, & Streissguth, 2003; Connors, et al, 2004).

There has been some debate in the literature as to whether prenatal exposure to substances is a direct or indirect risk factor for child maltreatment (Baer, Sampson, Barr, Connor, & Streissguth, 2003; Connors, et al, 2004; Smith, Johnson, Pears, Fisher & DeGarmo, 2007). Whereas studies have found a direct link between prenatal substance exposure and child maltreatment (Smith, Johnson, Pears, Fisher & DeGarmo, 2007), there is indication in the literature that this association has posed as many questions as answers as to the exact pathway of the effect. Studies have highlighted that the effect of the prenatal exposure to substances becomes minimal when certain parental characteristics are controlled (Doris, Meguid, Thomas,

Blatt & Echenrode, 2006; Smith & Testa, 2002). Additionally, it has been found that certain characteristics, such as postpartum paternal substance use, exacerbate the risk of child maltreatment in cases of prenatal exposure even more than in cases of postnatal maternal substance use (Smith, Johnson, Pears, Fisher & DeGarmo, 2007). Finally, the presence of certain postnatal parenting skills and environments (such as nurturing, positive, predictable) can serve as a buffer against the negative effects of prenatal substance exposure (Hans & Jeremy, 2001; Jacobson & Jacobson, 2001).

It is clear from the literature why substance use, whether prenatal or postnatal, should be of concern. In addition to the negative effects on children, it is a concern because these families tend to have instances of re-referrals and recurrence of maltreatment. This would indicate that there may be room for improvement in policy and practices in the child welfare system, with these families in particular, as the parents may continue to use substance after their original case closure (McDonald, 1990; Kelly, 2002; English, Marshall & Orme,; Miller, Fisher, Fetrow & Jordan, 2006). This fact has been cited as one of the most salient reasons why substance abuse, but prenatal exposure to substances in particular, should be of concern. A study by Smith and Testa (2002) found that those families in their substance exposed group were almost twice as likely to experience recurrence of maltreatment (when family status and new births were controlled). The authors stated: “even among families involved with child protective services, children in families with identified prenatal substance use face greater subsequent maltreatment risks than children with other types of allegations” (p.99). This finding lends strong support for conducting this study as prenatal exposure to substances can fall within the threat to harm category.

## **Recurrence of Maltreatment**

Recurrence of maltreatment refers to a subsequent incident of maltreatment after a prior incident. The Adoption and Safe Families Act (ASFA) of 1997 outlines federal goals and measures by which states are evaluated on their child welfare systems. One such measure is the rate of recurrence of maltreatment, particularly within six months (Institute for Child and Family Policy, 2003). Recurrence is important because it serves as an indicator for a variety of potential issues. First, it is an indicator that negative outcomes are more likely in a family. Short term and long term negative outcomes are more likely in cases with multiple incidents of maltreatment (DePanfilis & Zuravin, 1999; English, Graham, Litrownik, Everson & Bangdiwala, 2005). Second, it can be an indication of system failure in some respect, as the goal of safety of the child was not achieved (Bae, Solomon, Gelles, 2009; Fluke, Shusterman, Hollinshead, & Yuan, 2005). Third, multiple maltreatment episodes also increase the potential of family disruption and the placement of children in out-of-home care (Proctor, Skinner, Roesch, & Litrownik, 2010).

The risk of recurrence of maltreatment is highest in the time periods closest to a prior incident, with rates varying between 15% and 50%. (DePanfilis & Zuravin, 2001; DePanfilis & Zuravin, 2002). Hindley and colleagues (2006) conducted a review of 16 studies that linked recurrence with substantiated maltreatment. The review found that the period immediately following the first abuse incident is when a child is at the greatest risk of being re-abused. This risk decreased over time. Neglect was the type of maltreatment most associated with subsequent maltreatment, and the number of previous incidents of maltreatment in the family was positively associated with recurrence. Families where parents have mental health problems, where there is conflict, and who have limited social support have been found to have higher rates of recurrence (Hindley, Ramchandani, & Jones 2006). A study that assessed the relationship between



predictor variables and recurrence, conducted using Florida administrative data of 189,375 case histories of children with an initial maltreatment report in 1998 and 1999, found very similar results. The data showed that 26% of children were re-abused, most within the first four months of the initial incident and neglected children had the highest rates of recurrence. Sexual abuse presented the lowest risk of re-abuse, which may be due to the implementation of intensive services or the removal of the child or perpetrator from the home (Lipien & Forthofer, 2004). Such interventions are less likely in cases of neglect, which therefore increase the possibility of subsequent abuse. These interventions would also be less likely in case of threatened harm, increasing the possibility of recurrence of maltreatment.

Recurrence of maltreatment is a widely studied topic in the field because of its obvious implications to children and families and the child welfare system. There are a variety of factors that have been identified as risk factors for recurrence; these include substance use in parents, having many children in the home, and younger age of child (Bae, Solomon, Gelles, 2009; Hindley, Ramchandani, & Jones, 2006). These factors have been found to be common in families in the threatened harm category in Florida; therefore recurrence should be a concern as it is a likely outcome in these cases.

### **Summary**

As mentioned, a thorough literature review yielded no studies that focused solely, primarily, or secondarily on threatened harm as a type of maltreatment. However, as presented, experiencing any type of child maltreatment can have devastating consequences. Additionally, there are many studies available on two of the main constituting acts of threatened harm in Florida, family violence and substance use/exposure. The literature clearly highlights the possible negative outcomes of each, one of which is the high risk of recurrence of maltreatment

in these cases. Recurrence of maltreatment is the outcome of interest in this study because of its implications for children and families in the child welfare system and to the child welfare system itself. Furthermore, the literature has demonstrated its effects on maltreatment outcomes, namely increasing the possibility of negative effects. Overall, the review supports the need for further exploration into threatened harm as a type of maltreatment and its association with recurrence of maltreatment.

## **CHAPTER 3:**

### **METHODS**

#### **Data Source**

The data for this study was obtained from Florida's child welfare data information system HomeSafeNet (HSn) currently called the Florida Safe Families Network (FSFN). This is an administrative database which contains all the child maltreatment reports, initial and subsequent, that were made through the child abuse hotline reporting system in the state of Florida and referred for investigation. The initial reports information was entered into the system by the hotline staff, but the findings (substantiated, some indication of maltreatment, or not substantiated) were entered by the child protective investigators (CPI).

#### **Sample and Study Design**

The study sample included all children who had a report of child maltreatment that was referred to child protective services for investigation. At the time Florida had three options for the findings of a child protection investigation: 1) no indication, 2) some indication, and 3) verified. In this study, children who had a report of maltreatment that was found to be verified or that had some indication were considered children with substantiated reports. Only children that had a substantiated finding of maltreatment were included in the analyses. If a child had a no indication finding, the type of maltreatment for which the child was reported was not included in this data set.

The study design consisted of a longitudinal analysis of administrative data based on an entry cohort, that is, all children who were reported as being maltreated during fiscal year July 1,

2005 to June 30<sup>th</sup> 2006. This entry cohort of children (i.e.,) was followed for 12 months total study time, through fiscal year July 1, 2006 to June 30<sup>th</sup> 2007, to assess whether they experienced any recurrence of maltreatment. The data were utilized for these years because Florida was in a transition phase from 2007 to 2009 to their current FSFN system and there are incomplete data during this period as well as different identifiers in the new system for existing cases. Therefore, it would be difficult to get accurate longitudinal data from the current system.

### **Data Procedures**

Permission was sought and obtained from the Department of Children and Families to gain access to and utilize the data for this study, after the study was approved by the University of South Florida's Institutional Review Board (IRB). The children in the dataset were uniquely identified by social security numbers and date of birth (DOB). However, the data were de-identified prior to accessing. The DOB was transformed into age in years (at the time the report was received) and the social security numbers were transformed into unique pseudo-identifiers for analytic purposes. The de-identification was done by a research team member who has permission to access the raw dataset, before it was provided for use in this study.

The data included only one child from a family (if there were more than one child included in a report) and this child was chosen randomly. Otherwise, children were not unduplicated across cohorts because the outcome of interest in the study is recurrence of maltreatment, and a subsequent report for the same child could occur at any point within the 12 month timeframe of interest. There were very minimal occurrences of missing data; demographic variables were most often missing and this was less than one percent.

## **Data Analysis**

The Florida Department of Children and Families had four overall categories of child maltreatment and the data were collected and categorized as such. These categories were 1) abuse, 2) neglect, 3) threatened harm and 4) special conditions. In the data set, a reporter was able to document up to eight different types of maltreatment as part of the initial report (maltreatment type one – maltreatment type eight).

### **Inclusion criteria.**

All children who had a report of maltreatment in fiscal year 2005-2006 that was investigated and found to have some indication or verified maltreatment were included in the analysis.

### **Analytic method.**

Child maltreatment involves the occurrence of an event that poses harm or the threat of harm to a child or the failure of an event to occur (in the case of neglect). This definition implies that there is an observation (an act or failure to act) and then an event occurs (maltreatment). There is typically a time factor between an observation and the documenting of an event. In the case of maltreatment, research has shown that these periods of time can vary significantly. These factors make the survival analysis technique applicable to study of child maltreatment in general and it is in fact utilized often in the maltreatment literature and recommended for use, particularly in studies that involve recurrence of maltreatment (DePanfilis & Zuravin 1999; Lipien & Forthofer, 2004; Smith & Testa, 2002; Yampolskaya & Banks, 2006).

This study involved both the time it takes to observe a recurrence of maltreatment episode, as well as the predictive capacity of types of maltreatment, but with an emphasis on threatened harm. The study examined the *time to recurrence* of a maltreatment episode in

threatened harm cases compared to other types of maltreatment. The survival analysis technique was the most appropriate statistical technique to use as the study was concerned with the occurrence and timing of an event.

Survival analysis is a set of statistical procedures where the outcome variable of interest is the time it takes to observe an event (Kleinbaum & Klein, 2005). It is commonly used to estimate or predict the odds of an event happening or being observed depending on certain variables or covariates (Allison, 2010). The time in which there is no event (an outcome of interest e.g. HIV, child maltreatment) is typically referred to as the survival time and when the event occurs this is called a failure or hazard (Kleinbaum & Klein, 2005).

This technique is different from other conventional statistical methods because of certain advantages which have led to it being widely utilized in a variety of fields (Allison, 2010). It is able to handle data where the variable of time is of interest and it is able to retain participant information, even if the event of interest does not occur by the end of a study. This is referred to as censoring. Censoring occurs when there is some information available about the survival time, but the exact time is not known. This can occur, for example, when someone begins a study but does not complete it or the person is lost to follow-up, or when the study is completed there is no event or the event occurs after the end of the study. In the case of this study, censoring occurred when children did not have a recurrence of maltreatment within the study period. Other conventional statistical methods would involve either discarding the censored data which could introduce a variety of problems such as sample size reduction and bias, or setting time limits depending on the outcome of interest, which would also lead to bias in the data; neither scenarios are desirable (Allison, 2010).

Two terms used in survival analysis are the survival function denoted by  $S(t)$  and the hazard function denoted by  $h(t)$ . The survival time represents a given starting time to a given end time where there is no event. The survivor function ( $S$ ) gives the probability that a person will survive longer than a certain period of time ( $t$ ) or that there will not be a failure. It is a representation of the amount of participants in a study who survived up to a given time period or  $t$  (Allison, 2006). In theory, this can range from 0 to infinity, but in practice this is not the case as study periods are usually limited.

Opposite to the survival function which focuses on not failing, the hazard function focuses on failing. The hazard function represents the potential, at a given moment or at a specific point, per unit of time, that an event will occur if a person has survived up the study time (represented by  $t$ ). In other words, it gives the instantaneous likelihood at time  $t$  that an event of interest will occur (Kleinbaum & Klein, 2005); it is aimed at quantifying the instantaneous risk that an event will be observed at a certain time or time  $t$  (Allison, 2010). This is unlike the survivor function, which gives the potential that an event will occur over a specific period of time, rather than at a snapshot in time. One advantage of the hazard function is that it takes into account the time variances of the independent variable (Smith & Testa, 2002).

Prior to 1970, most of the survival analysis procedures were based on estimating the survivor function until Cox (1972) formulated a proportional hazard regression method to handle survival data. This is one of, if not the most widely used survival analysis technique to date (Allison, 2010). This technique, as the name implies, is based on hazard estimation rather than survivor estimation like the previous methods. The Cox regression procedure outputs a log-linear function of predictors which allows for risk estimation within a given time period (Tabachnick & Fidell, 2007). The reasons why the Cox procedure is so popular is because it

makes incorporating covariates<sup>1</sup> that can change in value over the course of the time period of interest (time-dependent covariates) and adjusting for the time when there is no risk of an individual having an event, easier than the other procedures. The procedure also efficiently controls extraneous variables and can accommodate measurements of event times that are either discrete or continuous (Allison, 2010).

Cox regression is a type of semi-parametric event analysis technique, which also makes it more robust than some other survival methods. It is considered semi-parametric because the model makes assumptions about how the hazard function is affected by covariates, but not about its shape in relation to time like in parametric procedures. However, it also includes parametric methods such as the Wald test. It is also assumed that the hazard for each person or group is a fixed proportion of the hazard for any other person or group, in other words, that the hazard is proportional. Another advantage of semi-parametric models is that they can handle multivariate analysis without satisfying the assumptions that parametric procedures usually require (Garson, 2011). This type of regression also refers to the maximum partial likelihood estimation, which does not require intervals between failure times to be known, just their order, when estimating the hazard ratio (Allison, 2010; Garson, 2011).

The hazard ratio is one of the outputs of the Cox regression and is akin to an odds ratio and can be interpreted in the same manner. The hazard ratio, like the odds ratio, predicts the likelihood that a variable or interest will have a certain outcome. It is an estimate of the hazard (risk of event failure) ratio for cases with an event compared to the estimated hazard for those with no event, while other covariates are being controlled (Allison, 2010). Simply stated, the hazard ratio measures the effect size of predictor variables for comparison purposes.

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<sup>1</sup> Independent/predictor variables are called covariates in the Cox regression model.



Coefficients greater than 1.0 suggest increased odds of the event, whereas coefficients less than 1.0 suggest decreased odds of the event.

**Predictor variables.**

The predictor variables or covariates in this study were the types of child maltreatment: threatened harm, abuse, neglect and special conditions (as defined by the Department of Children and Families), demographic characteristics and prior reports.

Demographic variables included were age, gender and non-minority status. Age (measured in years) remained as a continuous variable, but the categorical variables of gender and race were recoded. Gender was coded as females (1) and males (0) and race was coded as minority (0) and non-minority (1). A child was considered a non-minority if their race was reported as white and their ethnicity as other, unknown, or none.

The presence of each type of maltreatment was recorded in the data as a categorical variable and therefore was dichotomized for use in the analyses. One (1) indicated the presence of each type of maltreatment. The types of maltreatment were analyzed in a variety of ways:

1. Children with only one type of maltreatment (i.e. with a report of threatened harm only, abuse only, neglect only or special condition only);
2. Initial maltreatment (i.e. the maltreatment that was recorded as maltreatment Type One for each child. All children had a maltreatment recorded as Type One. This would include children with only one maltreatment type and those with multiple reports).
3. Prior report/s included as a variable (i.e. at least one report of maltreatment prior to the entry fiscal year 2005-2006). Prior report/s was included in the data as a

continuous variable, but it was dichotomized for the purposes of this study; presence of a prior report was coded as one).

4. Children with prior reports (i.e. children who had at least one report of maltreatment prior to the entry fiscal year 2005-2006 for each of the maltreatment type. A single variable representing the maltreatment type and the presence of a prior report was created all children. For example, children who experienced threatened harm and had a previous report of maltreatment as noted in the data were coded as one (1), abuse and a prior report coded as one (1), neglect and a prior report coded as one (1), and special condition and a prior report coded as one (1). These variables were analyzed separately for children with only one type of maltreatment and for all initial maltreatment.

Examining cases of children with only one maltreatment type was done in order to aid in the inference of a more direct link between a specific type of maltreatment and the outcome of interest. This will aid in subsequent interpretation of the data. The maltreatment type recorded as maltreatment Type One is typically the maltreatment for which the child was reported, though this may not always be the case.

### **Outcome variables.**

The outcome variable of interest was recurrence of maltreatment or time to the event of recurrence, specifically within six months and within 12 months. Recurrence in this study was defined as it often is in the literature and at the federal level: as cases that had a substantiated finding of maltreatment in the first report and a substantiated finding of maltreatment in a second report that occurred at least 24 hours after the first report. Another outcome variable for one research question was the recurrence of maltreatment that was abuse or neglect. The Max Value

was be used to capture any recording of abuse or neglect, as recurrence reports could also include up to eight types of maltreatment. Outcome variables were created to represent recurrence of maltreatment that was abuse or neglect within six months and within 12 months.

### **Analytic models.**

The first research question assessed the significance of threatened harm as a predictor of recurrence of maltreatment within a certain period of time. The odds of recurrence for children with a substantiated report of threatened harm were assessed within six months and within 12 months. The hazard function of Cox's regression method was used to examine the odds associated with each maltreatment type and the covariates. Both bivariate and multivariate analyses were conducted to identify which types of maltreatment were significant predictors of recurrence of maltreatment and the subsequent strength of the association. A series of multivariate models were analyzed, where the variables were entered simultaneously to determine the amount of unique variance contributed by each predictor.

The Wald test was examined for each of the variables to assess the significance of each in predicting recurrence of maltreatment. The Wald test follows (approximately) the chi-square distribution and the Wald statistic represents a chi-square value, which is used to assess whether a relationship exists between two categorical variables (Garson, 2011).

All children who had only one type of maltreatment were included in this model (1a); these categorical variables were dichotomized with one representing the presence of a single maltreatment type. First, bivariate analyses were conducted for children with initial reports of threatened harm only, abuse only, neglect only or special condition only separately within six months and within 12 months. All covariates were included in the multivariate model simultaneously; the odds of recurrence for children with one maltreatment type were therefore

compared to children with reports involving multiple (of the same or different) maltreatment types. Demographic variables were also included in this model as well and assessed at both time points. The multivariate analyses were then repeated with the inclusion of one additional predictor variable, prior report. The final multivariate analyses were of the children in this model who had a prior report; they were compared to children who had no report of maltreatment prior to the entry cohort year.

The next set of analyses in this model (1b) were conducted to assess the odds of recurrence for each maltreatment type listed as maltreatment type one. Since this would include all the children, neglect was used as the reference category. The same process as before was repeated in these analyses. Bivariate analyses were conducted first by maltreatment type (threatened harm, abuse, neglect or special condition) within six months and within 12 months. All predictors were included in the multivariate model simultaneously; the odds of recurrence for children with each maltreatment type were compared to children who were neglected. The same multivariate analyses were then repeated with the inclusion of prior reports. The final multivariate analyses were of the children who had a prior report and they were compared to children who had no report of maltreatment prior to the entry cohort year.

The second research question assessed the significance of threatened harm as a predictor of a recurrence that was abuse or neglect within six months and within 12 months. This second model included all children with substantiated maltreatment. First, bivariate analyses were conducted for children with only one type of maltreatment, on the initial maltreatment type, and for children with prior reports, to assess the odds of each in predicting a recurrence of abuse or neglect within six months and within 12 months. Multivariate analyses were conducted for children with one maltreatment type only and all covariates, with the exception of prior reports,

were included in the model simultaneously at first. The model was then repeated with the inclusion of prior report. The final multivariate analyses were of the children with only one maltreatment type only who had a prior report. All analyses were again assessed within six months and within 12 months. These analyses were repeated, as before, for all children assessing the initial maltreatment types, with neglect used as the reference category.

The third research question examined certain subtypes of threatened harm as predictors of recurrence of maltreatment within six month and 12 months. Specifically, threatened harm cases of ‘Family Violence Threatens Child’, ‘Substance Related Reports’, and ‘Substance Exposed Child’ were assessed as predictors of recurrence of any type of maltreatment. This model also included all cases. Two sets of bivariate analyses were conducted in this model. One was limited to only children who experienced threatened harm in order to compare these maltreatment subtypes with other subtypes or threatened harm and the other included all cases. The bivariate analyses included children with one type of maltreatment only (FVTC only, SRR only, SEC only, abuse only, neglect only or special condition only) assessed separately and these as the initial types of maltreatment within six and within 12 months.

All covariates were included in the multivariate model simultaneously and the odds of recurrence for children with one maltreatment type only were therefore compared to children with reports involving multiple (of the same or different) maltreatment. All initial maltreatment types as predictors were also assessed in multivariate analyses with each maltreatment type (FVTC, SRRs, SEC, abuse, or special condition) compared to neglect. The same analyses were repeated subsequently with inclusion of the prior report predictor variable. The final multivariate analyses in this model were of children who had a prior report.

A final set of analyses were conducted to clearly assess differences between children with only one report of each maltreatment type and those with multiple reports (of the same or different maltreatment type) in predicting recurrence of maltreatment. These analyses were bivariate; the data were limited to each type of maltreatment and the variable of that maltreatment type only was compared to all other cases (which would be those with multiple types of maltreatment). For example, the data were limited to all children with threatened harm as the initial type of maltreatment. Reports of threatened harm only were then assessed, comparing the odds of these reports to threatened harm reports involving multiple types of maltreatment.

## CHAPTER 4:

### RESULTS

The purpose of this study was to explore threatened harm and assess this type of maltreatment as a predictor of recurrence of maltreatment within six months and 12 months, compared to the other types of maltreatment (abuse, neglect, special conditions). The survival analysis technique of Cox regression was used to analyze the data. This section first provides a demographic overview of the participants in the study sample and subsequently presents study results by research question.

#### Sample Characteristics

The study sample consisted of 137,852 cases from the entry cohort (FY05-06).

**Table 1.1** *Demographic Characteristics*

Demographic Characteristics	N = 137, 852	
	Frequency (n)	Percent (%)
Gender*: Male	68,530	49.9
Female	68,860	50.1
Race:		
White	93,391	68
African American	40,711	30
Ethnicity:		
Hispanic	19,587	15
Haitian	2,273	2
Other/Unknown/Unable	115,992	83

\*Missing =462

Forty three percent of the children in the sample had substantiated maltreatment (n = 59,054) which were the cases assessed in this study. The proportion of males and females in the entry cohort was almost equal; 39% of the children were ages five and under and 73% were under the age of 13. Racially, 68% percent were identified as White and 30% as Black;

ethnically, 14% were reported to be Hispanic and approximately 2% Haitian and the remaining 83% were of other, unknown or unable to determine ethnicity (Table 1.1).

### **Threatened Harm**

Threatened harm was the most prevalent maltreatment type for all children with substantiated maltreatment. Sixty percent had threatened harm as the initial maltreatment, 19% abuse, 16% neglect and 5% of children had a special condition report. There were up to eight different types of maltreatment that could be recorded in a single report, labeled Maltreatment Type One - Maltreatment Type Eight. Examining all eight incidences of maltreatment reported, threatened harm was listed as a type of maltreatment for 39,291 (66.5%) children. It was listed as maltreatment Type One for almost all these children. Threatened harm was the only maltreatment type reported for 24,910 (42%) children. This would mean that it was the sole maltreatment type for most children (70%) with threatened harm listed as maltreatment Type One.

The prevalence of threatened harm is largely due to the fact that the most prevalent subtype of maltreatment was *Family Violence Threatens Child (FVTC)*. This remained constant for all recorded incidences of maltreatment. FVTC accounted for 23% of subtypes recorded as maltreatment Type One. The second most recorded subtype for maltreatment Type One was *Substance Exposed Child* (22%), which can also be coded as threatened harm. For children that had threatened harm as the only maltreatment type FVTC was the subtype for 54% for these children and *Substance Exposed Child* the subtype recorded for 26%.

### **Recurrence**

When all cases of children with substantiated reports were included, it was found that 29% had re-report of maltreatment within the study period, 14% of re-reports occurred within six



months and 23% within twelve months. However, only about half of the re-reports (48%; which is 6% of all cases in the entry cohort and 14% of substantiated cases) had a substantiated re-report or actual recurrence of maltreatment. Seven and one half percent ( $n = 4,432$ ) of recurrence occurred within six months and 11% ( $n = 6,760$ ) within 12 months. Children with a threatened harm report had the most of all substantiated cases with recurrence of maltreatment (45%). Children reported for neglect accounted for 35% of the recurrence of maltreatment, abuse accounted for 16% and special conditions for 4% of recurrence of maltreatment.

**Research Questions One: *Is threatened harm a significant predictor of recurrence of maltreatment?***

**Bivariate analyses.**

The exploratory nature of this study influenced the decision to perform both bivariate and multivariate analyses to answer this question. Threatened harm and the other types of maltreatment were assessed in two ways: 1) cases with only one type of maltreatment; and 2) initial maltreatment (the maltreatment listed as maltreatment Type One for all cases).

The results of the bivariate analyses revealed that only threatened harm and abuse were significantly associated with recurrence of maltreatment. Having a report of threatened harm only increased a child's risk of having recurrence of maltreatment by 9% ( $p < .01$ ) within six months and 15% ( $p < .001$ ) within 12 months. If threatened harm is listed as the initial maltreatment, children were found to be 16% and 20% ( $p < .01$ ) more likely to experience recurrence within six and 12 months respectively. Abuse was negatively associated with the outcome at both time points ( $OR = .75$ ;  $OR = .77$ ,  $p < .05$ ); 15% less odds of recurrence within six months and 13% less odds of recurrence within 12 months.

Bivariate analyses of the demographic characteristics of age, gender and minority status revealed only two of the three variables were significantly related to recurrence. Non-minority children were 36% ( $p < .01$ ) more likely to experience the outcome, while each year older of age corresponded to a three percent reduction in the risk of recurrence ( $OR = .97$ ,  $p < .01$ ) (Table 1.2). Each year less of age was associated with a two or three percent risk of recurrence for all analyses conducted and gender was non-significant in all analyses conducted. Non-minority status was a significant predictor in all analyses except one.

**Table 1.1** *Bivariate analyses of demographic variables and maltreatment types within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	<i>B</i>	<i>Wald</i> $\chi^2(1)$	<i>OR</i>	95% CI <i>LL</i> <i>UL</i>		<i>B</i>	<i>Wald</i> $\chi^2(1)$	<i>OR</i>	95% CI <i>LL</i> <i>UL</i>	
Age	-.02	49.22	<b>.98**</b>	.97	.99	-.02	69.73	<b>.98**</b>	.98	.99
Gender	.01	.07	1.01	.95	1.07	.00	.04	1.00	.96	1.05
Non-minority status	.31	99.02	<b>1.36**</b>	1.28	1.45	.271	116.80	<b>1.31**</b>	1.25	1.38
Threatened Harm Only	.09	8.73	<b>1.09**</b>	1.03	1.16	.14	31.78	<b>1.15**</b>	1.09	1.20
Threatened Harm Initial	.15	21.96	<b>1.16**</b>	1.09	1.23	.18	50.40	<b>1.20**</b>	1.14	1.26
Abuse only	-.29	23.35	<b>.75**</b>	.67	.84	-.25	28.95	<b>.78**</b>	.71	.85
Abuse Initial	-.26	38.05	<b>.77**</b>	.71	.84	.26	58.55	<b>.77**</b>	.72	.82
Neglect Only	.04	.97	1.05	.96	1.14	.04	.99	1.04	.96	1.24
Neglect Initial	.02	.27	1.02	.94	1.11	-.01	.175	.99	.92	1.05
Special Condition Only	-.02	.05	.98	.86	1.13	.08	1.95	.92	.82	1.03
Special Condition Initial	-.02	.10	.98	.85	1.02	-.09	2.25	.91	.81	1.03

Note. \* $p < .05$ , \*\* $p < .01$

*OR* = odds ratio; *CI* = confidence interval; *LL* = lower limit, *UL* = upper limit.

### **Multivariate analyses.**

#### ***Children with one maltreatment type only***

Threatened harm was found to be the only maltreatment type that was predictive of recurrence within six months. Children with this type of maltreatment were seven percent more likely to have a recurrence ( $OR = 1.07$ ,  $p < .05$ ). Abuse was also significant, but the association was inverse. Specifically, children who were abused were 19% ( $OR = .81$ ,  $p < .05$ ) less likely to

have recurrence of maltreatment. Non-minority children had the greatest likelihood for recurrence within six months (OR = 1.39,  $p < .05$ ) and within 12 months. Odds ratio associated with the within 12 month timeframe revealed a doubling of the odds associated with threatened harm (OR = 1.14,  $p < .001$ ). Children who experienced neglect only also were at greater odds (OR = 1.09,  $p < .05$ ) of having a recurrence episode, but this association was not strong (Table 1.3).

***Children with one maltreatment type only with one additional predictor indicating the presence of a prior report/s.***

Each model was replicated with the additional control variable of prior report/s. The results of this model revealed that the associated odds of recurrence for all significant variables in the first model were increased. Prior report/s was found to be the variable that was the greatest predictor of recurrence of maltreatment at within six and 12 months. This remained constant for all the analyses in which this variable was included. Specifically, having a prior report of maltreatment was associated with a 69% (OR = 1.69,  $p < .01$ ) likelihood of recurrence of maltreatment within six months. Children who experienced threatened harm only were found to have the greatest odds of recurrence within six and 12 months (11%,  $p < .01$ ; 17%,  $p < .01$ ) in comparison with the other maltreatment types. Children who were abused were 14% ( $p < .01$ ) less likely to have a recurrence within six months and the other types of maltreatment were non-significant predictors. However, within 12 months, neglect was the other type of maltreatment that was significantly predictive of recurrence (OR = 1.08;  $p < .05$ ) along with threatened harm (Table 1.4).

### ***Children with one maltreatment type only with a prior report/s.***

Additional analyses were conducted to assess the effect of each maltreatment type on recurrence of maltreatment for children with a prior report/s (i.e., threatened harm cases with prior reports, neglect cases with prior reports, abuse cases with prior reports and special condition cases with prior reports).

Findings from bivariate analysis revealed that children who experienced threatened harm only and had prior reports were 39% (OR = 1.39,  $p < .001$ ) more likely to have a recurrence of maltreatment within six months and 45% ( $p < .001$ ) more likely within 12 months. However, an even stronger relationship was found in the multivariate analysis. Findings revealed that the odds of maltreatment recurrence for children with a report of threatened harm only with a prior report/s were 53% ( $p < .001$ ). Children who were abused and had a prior report/s were 22% more likely ( $p < .05$ ) to experience recurrence of maltreatment. Neglect only cases with prior report/s were 56% more likely ( $p < .001$ ) and special conditions cases with priors were 75% more likely to have a recurrence of maltreatment ( $p < .001$ ) within six months. It was also found that while the odds of recurrence for children who were neglected or had a special condition maltreatment with prior incidences remained about the same or decreased within 12 months, the odds for children who experienced threatened harm increased slightly by six percent ( $p < .001$ ) and abuse by four percent ( $p < .001$ ) (Table 1.5).

### ***Initial maltreatment.***

The second model included all children, but only the maltreatment listed as maltreatment type one was included in the analyses. Children who had multiple reports were included in these analyses, but they will be discussed in more detail later in this section. Neglect was used as the reference category.

The demographic results were similar to those found in the first model. Non-minority children were again at a high risk for recurrence within six months (OR = 1.38,  $p < .01$ ) and each year less in age was associated with a 2% likelihood of recurrence. Abuse was the only type of maltreatment that was significant in this analysis and it was negatively associated with the outcome. Specifically, children who experienced abuse were 17% less likely ( $p < .01$ ) to have a recurrence of maltreatment within six months. Threatened harm was found to be a significant predictor at 12 months. Children with this type of maltreatment were seven percent more likely ( $p = .05$ ) to have maltreatment recur, when compared to children who experienced neglect (Table 1.6).

***Initial maltreatment with an additional predictor of prior report/s.***

Including prior report/s as a variable produced similar results to those obtained in the analysis without this variable. Having a prior report/s was found to increase the odds of recurrence by 69% ( $p < .01$ ) within six months. White children were more likely to experience recurrence, as were younger children, but the only type of maltreatment that was a significant predictor was abuse (OR = .88,  $p < .05$ ) when compared to the cases of neglect. The analysis assessing recurrence within 12 months revealed an additional significant variable; children who experienced threatened harm were now found to be 11% ( $p < .001$ ) more likely to have the outcome than children who were neglected. Prior reports (OR = 1.67,  $p < .001$ ) and non-minority status (OR = 1.29,  $p < .001$ ) preceded threatened harm as the strongest predictors (Table 1.7).

***Initial maltreatment with a prior report/s.***

All initial maltreatment types for children with prior reports were then examined and found to be significant predictors of recurrence within six months. Threatened harm was associated with a 71% ( $p < .001$ ) likelihood of recurrence, but preceded by children with a

special condition maltreatment who were twice as likely to have a recurrence report (OR = 2.04,  $p < .001$ ). The odds of maltreatment recurrence for children who were neglected was roughly the same as that for children who experienced threatened harm (OR = 1.70,  $p < .001$ ) and abuse was associated with a 53% likelihood of recurrence within six months. There was not much change within 12 months except that the odds ratios associated with special condition reports had the largest decline (OR = 1.88,  $p < .001$ ) (Table 1.8).

**Table 1.3** *Multivariate analyses assessing the relationship between cases with one maltreatment type only and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	51.15	<b>.98**</b>	.97	.98	-.02	67.51	<b>.98**</b>	.98	.98
Gender	.01	.06	.99	.94	1.05	-.01	.14	.99	.94	1.04
Non-minority status	.33	108.35	<b>1.39**</b>	1.30	1.47	.29	132.25	<b>1.34**</b>	1.27	1.41
Threatened Harm Only	.07	<b>14.14</b>	<b>1.07*</b>	1.00	1.15	.13	20.53	<b>1.14**</b>	1.08	1.20
Abuse only	-.22	11.71	<b>.81**</b>	.71	.92	-.16	9.61	<b>.85**</b>	.77	.94
Neglect Only	.67	<b>1.79</b>	1.07	.97	1.18	.09	4.77	<b>1.09*</b>	1.01	1.19
Special Condition Only	.06	.64	1.06	.92	1.23	.02	.12	1.02	.90	1.15

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 1.4** *Multivariate analyses including prior report/s assessing the relationship between cases with one maltreatment type only and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.03	132.25	<b>.97**</b>	.96	.97	-.03	184.07	<b>.97**</b>	.96	.97
Gender	-.01	.24	.98	.93	1.04	-.02	.45	.98	.94	1.03
Non-minority status	.30	91.25	<b>1.35**</b>	1.27	1.44	.26	109.55	<b>1.30**</b>	1.24	1.37
Threatened Harm Only	.10	8.51	<b>1.11**</b>	1.03	1.19	.16	31.75	<b>1.17**</b>	1.11	1.24
Abuse only	-.15	5.54	<b>.86*</b>	.76	.97	-.09	3.16	.91	.83	1.01
Neglect Only	.06	1.41	1.06	.96	1.17	.08	4.17	<b>1.09*</b>	1.00	1.18
Special Condition Only	.10	1.83	1.11	.96	1.28	.06	1.01	1.06	.94	1.20
Prior Report/s	.53	266.06	<b>1.69**</b>	1.59	1.80	.52	399.78	<b>1.68**</b>	1.60	1.77

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 1.5** Multivariate analyses assessing the relationship between cases with one maltreatment type only that had a prior report/s and recurrence of maltreatment within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.03	94.84	<b>.97**</b>	.97	.98	-.03	137.94	<b>.97**</b>	.97	.98
Gender	-.01	.090	.99	.93	1.05	-.01	.23	.99	.94	1.04
Non-minority status	.33	107.94	<b>1.38**</b>	1.30	1.47	.29	128.69	<b>1.33**</b>	1.27	1.40
Threatened Harm Only	.43	137.34	<b>1.53**</b>	1.43	1.65	.46	251.63	<b>1.59**</b>	1.50	1.69
Abuse only	.20	5.94	<b>1.22*</b>	1.04	1.43	.23	12.76	<b>1.26**</b>	1.11	1.43
Neglect Only	.44	62.05	<b>1.56**</b>	1.39	1.74	.44	91.08	<b>1.55**</b>	1.42	1.70
Special Condition Only	.56	41.17	<b>1.75**</b>	1.48	2.08	.50	45.94	<b>1.65**</b>	1.43	1.90

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 1.6** Multivariate analyses assessing the relationship between initial maltreatment type and recurrence of maltreatment within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	43.83	<b>.98**</b>	.98	.99	-.02	58.75	<b>.98**</b>	.99	.99
Gender	-.01	.04	.99	.94	1.05	-.01	.12	.99	.95	1.04
Non-minority status	.32	104.00	<b>1.38**</b>	1.29	1.46	.28	122.42	<b>1.32**</b>	1.26	1.39
Threatened Harm	.03	.47	1.03	.95	1.12	.07	4.52	<b>1.07*</b>	1.01	1.15
Abuse	-.17	11.82	<b>.83**</b>	.75	.92	-.16	13.01	<b>.85**</b>	.78	.93
Special Condition	.01	.03	1.01	.87	1.18	-.02	.14	.97	.86	1.11

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

Neglect was used as the reference category

**Table 1.7** Multivariate analyses including prior report/s assessing the relationship between initial maltreatment type and recurrence of maltreatment within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.03	122.29	<b>.97**</b>	.96	.97	-.03	171.03	<b>.97**</b>	.96	.97
Gender	-.01	.19	<b>.99</b>	.93	1.07	-.01	.38	.98	.94	1.03
Non-minority status	.29	86.24	<b>1.34**</b>	1.26	1.42	.25	99.24	<b>1.29**</b>	1.22	1.35
Threatened Harm	.06	2.33	1.07	.98	1.16	.11	9.74	<b>1.11**</b>	1.04	1.19
Abuse	-.12	5.34	<b>.88*</b>	.79	.98	-.10	5.11	<b>.90*</b>	.83	.99
Special Condition	.071	.811	1.07	.92	1.25	.030	.21	1.03	.91	1.17
Prior Report/s	.52	264.32	<b>1.69**</b>	1.58	1.80	.51	392.87	<b>1.67**</b>	1.59	1.76

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 1.8** *Multivariate analyses assessing the relationship between initial maltreatment type with prior report/s and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.03	135.20	<b>.96**</b>	.96	.971	-.03	191.40	<b>.97**</b>	.96	.97
Gender	-.01	.163	.99	.93	1.05	-.01	.34	.99	.94	1.03
Non-minority status	.30	88.6	<b>1.34**</b>	1.26	1.43	.26	102.38	<b>1.29**</b>	1.23	1.36
Threatened Harm	.54	230.87	<b>1.71**</b>	1.60	1.84	.54	364.45	<b>1.72**</b>	1.63	1.82
Abuse	.42	56.76	<b>1.53**</b>	1.37	1.71	.42	83.72	<b>1.52**</b>	1.39	1.66
Neglect	.52	101.65	<b>1.69**</b>	1.52	1.87	.48	125.50	<b>1.62**</b>	1.49	1.76
Special Condition	.71	63.66	<b>2.04**</b>	1.71	2.42	.63	71.18	<b>1.88**</b>	1.62	2.17

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Research Question Two: *Is threatened harm a significant predictor of a more serious type of maltreatment recurrence (i.e. a recurrence of abuse or neglect?)***

Fourteen percent (n = 8,116) of children had a recurrence of maltreatment. Children who experienced recurrence of maltreatment that labeled was abuse or neglect within 12 months, consisted of 44% (n = 3539) of reports.

**Children with one maltreatment type only.**

Both bivariate (OR = .80,  $p < .001$ ; OR = .88,  $p < .001$ ) and multivariate analysis (OR = .84,  $p < .001$ ; OR = .92,  $p = .05$ ) revealed that children who experienced threatened harm were not more likely to have a recurrence of maltreatment that was abuse or neglect within six months or 12 months. Neglect (OR = 1.29,  $p < .001$ ) was the only type of maltreatment that was a significant predictor of a subsequent maltreatment report that included neglect or abuse. The multivariate results also revealed that non-minority status was significantly predictive of having a recurrence of maltreatment that included abuse or neglect within six months (OR = 1.47,  $p < .001$ ) and 12 months (OR = 1.46,  $p < .001$ ) (Table 2.1).



**Children with one maltreatment type only with one additional predictor indicating the presence of a prior report/s.**

Similar to the results found in the previous analysis, having a prior report/s was found to put children at high risk for having a recurrence of maltreatment and it increased the likelihood that cases of threatened harm would have a subsequent substantiated report of abuse or neglect over the previous results, but it still remained negatively associated with the outcome (OR =.86,  $p < .01$ ). Neglect (OR =1.28,  $p < .001$ ) and non-minority status (OR =1.43,  $p < .001$ ) were the other significant predictors of recurrence within six months. Results for the within 12 month period revealed that the risk of threatened harm had increased, but it was no longer significant (Table 2.2).

**Children with one maltreatment type only with a prior report/s.**

When each maltreatment type with prior reports was examined, the odds ratios changed. All predictors in this analysis, with the exception of gender, were significantly associated with a recurrence of abuse or neglect within six months. The types of maltreatment were associated with the greatest odds of recurrence; from the least to the greatest were threatened harm (OR = 1.29,  $p < .001$ ), special conditions (OR = 1.40,  $p < .01$ ), abuse (OR = 1.53,  $p < .001$ ) and neglect (OR = 2.10,  $p < .001$ ). The odds associated with threatened harm reports had increased slightly within 12 months while the likelihood of children with the other types of maltreatment experiencing recurrence declined. At this point the odds associated with threatened harm (OR = 1.37,  $p < .001$ ) was just slightly more than that of special conditions (OR = 1.35,  $p < .001$ ) having the outcome (Table 2.3).

### **Initial maltreatment.**

The initial maltreatment types for all children were then examined to assess their prediction of recurrence maltreatment that included an abuse or neglect report. All the maltreatment types were found to be negatively associated with the outcome when compared to neglect. Children with threatened harm were at a reduced risk for this outcome by 31% within six months ( $p < .001$ ) and 15% within 12 months ( $OR = .85, p < .001$ ). Non-minority status was found to be the most predictive overall of having a recurrence of maltreatment that was abuse or neglect ( $OR = 1.49, p < .001$ ) compared to neglect (Table 2.4).

### **Initial maltreatment with one additional predictor of prior indicating the presence of a prior report/s.**

Including prior report/s in the model did not produce much change associated with each maltreatment type compared to neglect. It was found that all the types of maltreatment remained significantly negatively associated with having a recurrence of maltreatment that included abuse or neglect. A prior report/s ( $OR = 1.73, p < .001$ ) and non-minority status ( $OR = 1.42, p < .001$ ) were the only two variables found to be significantly associated with the outcome within six months and there was not much change within 12 months (Table 2.5).

### **Initial maltreatment with a prior report/s.**

Examining all initial maltreatment types of children with a prior report/s revealed that the types of maltreatment were again associated with the greatest odds of the outcome. Children who experienced threatened harm and had a prior report were 61% more likely to have a recurrence of maltreatment that included abuse or neglect compared to children without prior reports. If a child was neglected and had prior report/s, that child was more than twice as likely to have a recurrence of maltreatment that included neglect or abuse ( $OR = 2.33, p < .001$ ) within

six months. Abuse was associated with a 92% ( $p < .001$ ) odds and special conditions with a 76% ( $p < .001$ ) odds of having a recurrence of maltreatment that was abuse or neglect within six months. The odds associated with threatened harm remained the same within 12 months in this analysis (Table 2.6).

**Table 2.1** *Multivariate analyses assessing the relationship between cases with one maltreatment type only and recurrence of abuse or neglect within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.01	3.80	.99	.98	1.00	-.01	6.81	<b>.99**</b>	.99	1.0
Gender	-.01	.07	.99	.91	1.08	.00	.022	1.00	.94	1.07
Non-minority status	.39	72.13	<b>1.47**</b>	1.35	1.61	.37	112.15	<b>1.46**</b>	1.36	1.56
Threatened Harm Only	-.18	12.16	<b>.84**</b>	.76	.92	-.08	3.95	<b>.92*</b>	.85	1.0
Abuse only	-.08	.96	.92	.79	1.08	-.02	.07	.98	.89	1.11
Neglect Only	.26	15.22	<b>1.29**</b>	1.14	1.47	.25	23.16	<b>1.29**</b>	1.16	1.42
Special Condition Only	-.20	3.01	.82	.65	1.03	-.21	5.16	<b>.81*</b>	.68	.97

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 2.2** *Multivariate analyses including prior report/s, assessing the relationship between cases with one maltreatment type only and recurrence of abuse or neglect within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	28.792	<b>.98**</b>	.97	.99	-.02	47.30	<b>.98**</b>	.97	.98
Gender	-.02	.188	.98	.90	1.07	-.00	.00	1.0	.93	1.07
Non-minority status	.36	61.647	<b>1.43**</b>	1.31	1.57	.35	96.12	<b>1.42**</b>	1.32	1.52
Threatened Harm Only	-.15	8.111	<b>.86**</b>	.78	.95	-.05	1.34	.95	.88	1.03
Abuse only	-.01	.017	.99	.84	1.16	.05	.64	1.05	.93	1.19
Neglect Only	.25	14.122	<b>1.28**</b>	1.12	1.45	.24	21.92	<b>1.28**</b>	1.15	1.41
Special Condition Only	-.16	1.855	.85	.68	1.07	-.17	3.25	.85	.71	1.01
Prior Report/s	.57	147.42	<b>1.76**</b>	1.61	1.93	.55	231.67	<b>1.73**</b>	1.62	1.86

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 2.3** Multivariate analyses assessing the relationship between cases with one maltreatment type only that had prior report/s and recurrence of abuse or neglect within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.01	12.17	<b>.99**</b>	.98	.99	-.01	22.73	<b>.98**</b>	.98	.99
Gender	-.01	.07	.99	.91	1.08	.00	.01	1.00	.94	1.07
Non-minority status	.40	76.08	<b>1.49**</b>	1.36	1.63	.38	115.67	<b>1.46**</b>	1.36	1.57
Threatened Harm Only	.25	20.98	<b>1.29**</b>	1.16	1.43	.32	55.82	<b>1.37**</b>	1.26	1.49
Abuse only	.43	17.63	<b>1.53**</b>	1.26	1.87	.40	24.20	<b>1.49**</b>	1.27	1.74
Neglect Only	.73	107.98	<b>2.08**</b>	1.81	2.39	.68	141.94	<b>1.97**</b>	1.76	2.20
Special Condition Only	.34	6.11	<b>1.40*</b>	1.07	1.84	.30	7.41	<b>1.35**</b>	1.09	1.67

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 2.4** Multivariate analyses assessing the relationship between initial maltreatment type and recurrence of abuse or neglect within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.01	3.15	.99	.985	1.00	-.01	6.30	<b>.99*</b>	.99	1.00
Gender	-.01	.06	.99	.91	1.08	.01	.03	1.01	.94	1.07
Non-minority status	.40	76.13	<b>1.49**</b>	1.36	1.628	.38	114.42	<b>1.46**</b>	1.36	1.56
Threatened Harm	-.37	44.94	<b>.69**</b>	.62	.771	-.25	33.92	<b>.77**</b>	.71	.84
Abuse	-.27	14.82	<b>.77**</b>	.67	.878	-.19	12.57	<b>.82**</b>	.74	.92
Special Condition	-.44	13.56	<b>.64**</b>	.51	.815	-.41	18.66	<b>.66**</b>	.55	.80

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

Neglect was used as the reference category

**Table 2.5** Multivariate analyses including prior report/s assessing the relationship between initial maltreatment type and recurrence of abuse or neglect within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	27.97	<b>.98**</b>	.97	.99	-.02	47.07	<b>.98**</b>	.97	.98
Gender	-.02	.19	.98	.90	1.07	-.00	.00	1.00	.93	1.10
Non-minority status	.37	64.70	<b>1.44**</b>	1.32	1.58	.35	97.17	<b>1.42**</b>	1.32	1.52
Threatened Harm	-.33	35.96	<b>.72**</b>	.64	.80	-.22	24.90	<b>.80**</b>	.74	.87
Abuse	-.20	8.41	<b>.82**</b>	.71	.94	-.13	5.78	<b>.88**</b>	.79	.98
Special Condition	-.38	10.00	<b>.69**</b>	.54	.87	-.35	13.66	<b>.70**</b>	.58	.85
Prior Report/s	.57	148.90	<b>1.77**</b>	1.61	1.94	.55	232.05	<b>1.73**</b>	1.62	1.86

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 2.6** *Multivariate analyses assessing the relationship between initial maltreatment types with prior report/s and recurrence of abuse or neglect within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	29.77	<b>.98**</b>	.97	.98	-.02	49.88	<b>.98**</b>	.97	.98
Gender	-.02	.15	.98	.90	1.07	-.00	.00	1.00	.93	1.07
Non-minority status	.37	65.25	<b>1.45**</b>	1.32	1.58	.35	98.31	<b>1.42**</b>	1.33	1.52
Threatened Harm	.47	78.76	<b>1.60**</b>	1.44	1.77	.48	141.85	<b>1.62**</b>	1.50	1.76
Abuse	.85	157.03	<b>2.33**</b>	2.04	2.66	.75	190.58	<b>2.11**</b>	1.90	2.35
Neglect	.65	76.06	<b>1.92**</b>	1.66	2.23	.61	109.79	<b>1.85**</b>	1.65	2.08
Special Condition	.54	15.03	<b>1.72**</b>	1.31	2.26	.48	18.28	<b>1.61**</b>	1.29	2.00

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Research question Three: Are threatened harm cases with Family Violence Threatens Child or Substance Related Reports a significant predictor of recurrence of maltreatment?**

This analysis involved assessing the types of threatened harm that were of interest in this study and also encompassed the majority of threatened harm reports; *Family Violence Threatens Child (FVTC)* and *Substance Misuse, Substance Exposed Child* or *Alcohol Exposed Child* (referred to from hereon as Substance Related Reports) but ‘*Substance Exposed Child*’ in particular. As mentioned prior, for all children with threatened harm listed as the initial maltreatment, FVTC accounted for 38.5%, and *Substance Exposed Child* for 31% of these cases. Of all substantiated cases in the sample, 23% included a report of Family Violence Threatens Child and 21% included a report of ‘Substance Exposed Child’. These cases consisted 54% of all cases with a report of threatened harm only.

**Family violence threatens child (FVTC).**

Bivariate analyses comparing children who experienced FVTC only to children who experienced other subtypes of threatened harm revealed that these children were less likely to have recurrence of maltreatment within six and 12 months; 23% ( $p < .001$ ) less likely than other threatened harms subtypes listed as the initial maltreatment within six months and 31% ( $p <$

.001) less than those with only threatened harm within 12 months. Children who experienced FVTC were 12% ( $p < .001$ ) less likely to experience recurrence compared to other all other children with substantiated maltreatment.

Multivariate analysis also revealed that FVTC only was negatively associated with recurrence of maltreatment. The only other significant maltreatment type in this analysis was abuse which was also negatively associated with recurrence within six and 12 months (Table 3.1). Assessing the initial maltreatment type for all children it was found that FVTC remained less likely to predict the outcome of recurrence (Table 3.4). The same was true for the other types of maltreatment, even when the prior report variable was included in the equation (Table 3.2 and 3.5). FVTC was only found to be predictive of recurrence of maltreatment for children who had prior reports.

***Children with one maltreatment type only with a prior report/s.***

In this analysis it was found that FVTC was associated with a 27% ( $p < .001$ ) increased odds of recurrence within six months compared to children with more than one report. This was more than the odds associated with abuse (OR = 1.20,  $p < .05$ ), but special conditions (OR = 1.72,  $p < .001$ ) neglect (OR = 1.53,  $p < .001$ ) and substance related threatened harm (OR = 1.88,  $p < .001$ ) were associated with the greatest odds of recurrence within six months. The likelihood of recurrence for children who experienced FVTC increased within 12 months from 27% to 35% ( $p < .001$ ) (Table 3.3).

***Initial maltreatment with a prior report/s.***

When listed as the initial maltreatment, FVTC with a prior report/s was associated with 36% ( $p < .001$ ) odds of recurrence compared to children who had multiple reports of maltreatment. These children had the smallest odds of recurrence within six months. Special

conditions maltreatment type was the strongest predictor of recurrence of maltreatment (OR = 1.90,  $p < .001$ ) within six months, but was surpassed by substance related threatened harm reports (OR = 1.83,  $p < .001$ ) within 12 months. The within 12 months period saw an increase in the odds of recurrence for children who experienced FVTC (OR = 1.47,  $p < .001$ ) which had slightly surpassed the odds associated with abuse (OR = 1.43,  $p < .001$ ) (Table 3.6).

**Table 3.1** *Multivariate analyses assessing the relationship between FVTC as the only maltreatment type and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI LL UL		B	Wald $\chi^2(1)$	OR	95% CI LL UL	
Age	-.02	55.84	<b>.98**</b>	.97	.98	-.02	72.95	<b>.98**</b>	.98	.98
Gender	-.00	.02	.99	.94	1.06	-.01	.09	.99	.95	1.04
Non-minority status	.29	81.44	<b>1.33*</b>	1.25	1.42	.25	97.78	<b>1.29**</b>	1.22	1.35
FVTC Only	-.13	9.16	<b>.88*</b>	.81	.96	-.04	1.65	.96	.90	1.02
SRRs Only	.36	72.88	<b>1.44*</b>	1.32	1.56	.40	134.31	<b>1.49**</b>	1.40	1.60
Abuse only	-.21	11.99	.81	.71	.91	-.16	10.28	<b>.85**</b>	.77	.94
Neglect Only	.06	1.75	<b>1.07*</b>	.97	1.18	.08	4.42	<b>1.09*</b>	1.01	1.18
Special Condition Only	.06	.61	1.06	.92	1.22	.02	.07	1.02	.90	1.14

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 3.2** *Multivariate analyses including prior report/s assessing the relationship between FVTC as the only maltreatment type and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI LL UL		B	Wald $\chi^2(1)$	OR	95% CI LL UL	
Age	-.03	133.74	<b>.97**</b>	.96	.97	-.03	184.89	<b>.97**</b>	.96	.97
Gender	-.01	.16	.99	.93	1.05	-.01	.35	.99	.94	1.03
Non-minority status	.27	70.30	<b>1.30**</b>	1.23	1.39	.23	83.17	<b>1.26**</b>	1.20	1.33
FVTC only	-.07	2.90	.93	.86	1.01	.01	.13	1.01	.95	1.08
SRRs ONLY	.35	68.28	<b>1.42**</b>	1.31	1.54	.39	127.21	<b>1.48**</b>	1.38	1.58
Abuse only	-.15	6.05	<b>.86*</b>	.76	.97	-.99	3.85	<b>.91*</b>	.82	1.00
Neglect Only	.06	1.29	1.06	.96	1.17	.08	3.67	1.08	1.00	1.17
Special Condition Only	.09	1.65	1.10	.95	1.27	.05	.75	1.05	.93	1.19
Prior Report/s	.50	241.70	<b>1.65**</b>	1.55	1.76	.50	366.31	<b>1.65**</b>	1.57	1.73

Note. \* $p = .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 3.3** Multivariate analyses assessing the relationship between FVTC as the only maltreatment type with prior report/s and recurrence of maltreatment within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.03	91.20	<b>.97**</b>	.97	.98	-.03	131.96	<b>.97**</b>	.97	.98
Gender	-.01	.06	.99	.94	1.05	-.01	.19	.99	.94	1.04
Non-minority status	.31	95.69	<b>1.36**</b>	1.28	1.45	.27	113.27	<b>1.31**</b>	1.25	1.38
FVTC only	.23	18.55	<b>1.26**</b>	1.13	1.39	.30	52.86	<b>1.35**</b>	1.25	1.47
SRRs only	.63	170.64	<b>1.88**</b>	1.71	2.06	.66	285.06	<b>1.94**</b>	1.79	2.09
Abuse only	.18	5.02	<b>1.20*</b>	1.02	1.40	.22	11.18	<b>1.24**</b>	1.10	1.41
Neglect only	.43	58.22	<b>1.53**</b>	1.37	1.71	.43	85.86	<b>1.53**</b>	1.40	1.67
Special Condition	.54	38.72	<b>1.72**</b>	1.45	2.05	.48	43.06	<b>1.62**</b>	1.40	1.87

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 3.4** Multivariate analyses assessing the relationship between FVTC as the initial maltreatment type and recurrence of maltreatment within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	42.94	<b>.98**</b>	.98	.99	-.02	53.94	<b>.98**</b>	.98	.988
Gender	-.00	.03	.99	.94	1.06	-.01	.11	.99	.95	1.04
Non-minority status	.27	71.18	<b>1.31**</b>	1.23	1.39	.23	80.63	<b>1.26**</b>	1.20	1.32
FVTC	-.17	11.40	<b>.84**</b>	.76	.93	-.08	3.53	.93	.85	1.00
SRRs	.19	20.58	<b>1.21**</b>	1.11	1.31	.24	48.53	<b>1.27**</b>	1.18	1.35
Abuse	-.22	19.89	<b>.80**</b>	.73	.88	-.20	23.75	<b>.82**</b>	.76	.89
Neglect	-.03	.43	.97	.88	1.07	-.02	.13	.98	.86	1.11
Special Condition	.01	.01	1.01	.86	1.18	-.03	.61	.97	.89	1.05

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

Neglect was used as the reference category

**Table 3.5** Multivariate analyses including prior report/s assessing the relationship between FVTC as the initial maltreatment type and recurrence of maltreatment within six and 12 months

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.03	116.36	<b>.97**</b>	.96	.97	-.03	157.81	<b>.97**</b>	.96	.97
Gender	-.01	.16	.99	.93	1.05	-.01	.37	.98	.94	1.03
Non-minority status	.25	61.31	<b>1.28**</b>	1.21	1.37	.212	68.13	<b>1.24**</b>	1.18	1.30
FVTC	-.11	5.01	<b>.89*</b>	.81	.99	-.02	.23	.98	.90	1.06
SRRs	.18	19.34	<b>1.20</b>	1.11	1.30	.23	46.13	<b>1.26**</b>	1.18	1.347
Abuse	-.17	12.12	<b>.84**</b>	.76	.93	-.15	13.38	<b>.86**</b>	.79	.93
Neglect	-.05	.86	.95	.87	1.05	-.04	1.18	.96	.88	1.04
Special Condition	.05	.38	1.05	.90	1.2	.017	.07	1.02	.89	1.16
Prior Report/s	.50	243.54	<b>1.66**</b>	1.55	1.76	.500	366.88	<b>1.65**</b>	1.57	1.74

Note. \* $p < .05$ , \*\* $p < .01$



OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 3.6** *Multivariate analyses assessing the relationship between FVTC as the initial maltreatment type with prior report/s and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI LL UL		B	Wald $\chi^2(1)$	OR	95% CI LL UL	
Age	-.03	115.59	<b>.97**</b>	.96	.97	-.03	164.64	<b>.97**</b>	.96	.97
Gender	-.01	.10	.99	.93	1.05	-.01	.24	.99	.942	1.04
Non-minority status	.28	79.49	<b>1.33**</b>	1.25	1.41	.24	91.52	<b>1.28**</b>	1.21	1.34
FVTC	.31	33.03	<b>1.36**</b>	1.23	1.52	.38	77.83	<b>1.46**</b>	1.34	1.58
SRRs	.59	209.09	<b>1.81**</b>	1.68	1.97	.61	329.96	<b>1.83**</b>	1.72	1.96
Abuse	.35	40.96	<b>1.42**</b>	1.28	1.59	.36	63.04	<b>1.43**</b>	1.31	1.56
Neglect	.46	81.78	<b>1.59**</b>	1.43	1.75	.43	102.13	<b>1.53**</b>	1.41	1.66
Special Condition	.64	52.53	<b>1.90**</b>	1.60	2.26	.57	58.90	<b>1.77**</b>	1.53	2.04

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

It should be noted that analyses of initial maltreatment types were also conducted with neglect as a reference category, however, there no major difference in the odds ratios which were the same or had a three percent difference at maximum.

### **Substance related reports (SRR).**

Thirty percent of children with substantiated maltreatment had a report of *Substance Misuse, Substance Exposed Child or Alcohol Exposed Child* (Substance Related Reports). *Physically Drug Dependent New Born* was also included, but there no cases coded as such. Some of these cases were coded as neglect and some as threatened harm; only the cases coded as threatened harm were included in the analysis. Eighty four percent of children who experienced this subtype of maltreatment were listed as experiencing threatened harm.

### **Children with one maltreatment type only.**

Children with Substance Related Reports (SRRs) only were examined to assess its effect on recurrence of maltreatment. In bivariate analysis it was found that these children were 54% ( $p < .001$ ) more likely than other children who experienced threatened harm to have a recurrence of

maltreatment within six months. SRRs were associated with 56% ( $p < .001$ ) odds of recurrence compared to all other substantiated cases within six months.

Multivariate analysis comparing these children to those who experienced multiple reports of maltreatment revealed that SRRs only were the strongest predictor of recurrence (OR = 1.44,  $p < .001$ ) followed by non-minority status (OR = 1.33,  $p < .001$ ) within six months (Table 3.1). Similar results were obtained when analyses examining associations between predictors and recurrence of maltreatment with 12 months were conducted and there was an increase in the odds associated with SSRs (OR = 1.49,  $p < .001$ ) (Table 3.1).

***Children with one maltreatment type only with an additional predictor indicating the presence of a prior report/s.***

Having a prior report/s was the strongest predictor of recurrence when it was included as a variable in previous analyses and there was no exception in this analysis. SRRs had the next largest odds of recurrence (OR = 1.42,  $p < .001$ ), after prior reports (OR = 1.65,  $p < .001$ ) within six months. Children who were abused were found less likely to have a recurrence of maltreatment; abuse was again the only other significant maltreatment type both within six months and within 12 months (OR = .86,  $p < .05$ ; OR = .91,  $p = .05$ ) (Table 3.2).

***Children with one maltreatment type only with a prior report/s.***

When children with a SSR only with prior reports were compared to children with no reports prior to the start of this study, 88% ( $p < .001$ ) odds of recurrence was indicated. This was the largest odds ratio for all predictors, followed by special conditions (OR= 1.72,  $p < .001$ ) and neglect (OR= 1.53,  $p < .001$ ) within six months. Within 12 months, SSR only *with* priors remained the strongest predictor of recurrence of maltreatment; children with this subtype of maltreatment were almost twice as likely (OR= 1.94,  $p < .001$ ) to experience recurrence of

maltreatment and had odds that were 30% greater than the next strongest predictor of special condition only reports (OR= 1.62,  $p < .001$ ) (Table 3.3).

***Initial maltreatment.***

Analysis showed that children who had a SRR listed as the initial maltreatment had increased odds of recurrence. Specifically, these children were 21% ( $p < .001$ ) more likely to experience recurrence compared to children who were neglected within six months. Within 12 months SRRs (OR = 1.27,  $p < .001$ ) and non-minority status (OR = 1.27,  $p < .001$ ) were the strongest predictors of recurrence of maltreatment (Table 3.4).

***Initial maltreatment with one additional predictor indicating the presence of a prior report/s.***

When the prior report/s variable was entered in the multivariate model it was again found to be the strongest predictor of recurrence (OR = 1.65,  $p < .001$ ) and other results were similar to those obtained in earlier analyses. Children with SSRs were 21% ( $p < .001$ ) more likely within six months and 26% ( $p < .001$ ) more likely within 12 months to experience recurrence of maltreatment compared to children who were neglected (Table 3.5)

***Initial maltreatment with a prior report/s.***

The initial type of maltreatment for children with a prior report/s was then examined and as in previous analysis was found to be a strong predictor of recurrence. Children with a SSR were 81% ( $p < .001$ ) more likely to have the outcome, second only to children with special condition reports (OR = 1.90,  $p < .001$ ) within six months. Within 12 months, the odds associated with special condition reports decreased (OR= 1.77,  $p < .001$ ), but the odds associated with SSRs increased slightly (OR = 1.83,  $p < .001$ ), and was the strongest predictor within this time period (Table 3.6).

### **Substance exposed child (SEC) - Threatened harm.**

This type of substance related maltreatment was of most interest in this study; therefore, these cases were analyzed separately from the others. Thirty one percent of threatened harm reports were coded as SEC. There were some SEC reports that were labeled as neglect, but the majority, 84% were recorded as threatened harm. SEC consisted 74% of all substance related threatened harm reports and was the only maltreatment subtype in almost 60% of the cases that included substance related threatened harm. Compared to other threatened harm cases in bivariate analyses, children with a SEC report only were 51% ( $p < .001$ ) more likely to have a recurrence of maltreatment. Recurrence was 41% ( $p < .001$ ) more likely within six months when SEC was listed as the initial maltreatment type.

In multivariate analysis, compared to children with multiple reports, those who experienced SEC only were 40% ( $p < .001$ ) more likely to have recurrence within six months and this was the strongest predictor of all the maltreatment types. Neglect only had an associated odds of 10% of having the outcome or recurrence, while abuse was negatively associated (OR = .83,  $p < .05$ ) with the outcome. The next strongest predictor in this analysis was non-minority status which was associated with 33% odds ( $p < .001$ ) of recurrence. The results of the analysis within 12 months had similar findings and the odds associated with SEC increased by six percent (Table 3.7).

Children with SEC listed as maltreatment type one were 23% ( $p < .001$ ) more likely to experience recurrence within six months and 29% more likely within 12 months compared to children who were neglected and 34% ( $p < .001$ ) more likely to experience recurrence within 12 months compared to children with other types of threatened harm (Table 3.8). Adding the prior reports

variable to the analyses decreased the risk associated with SEC by 5% or less and it was again the strongest predictor in the analyses.

Finally, if SEC was the only maltreatment subtype recorded and that child had a prior report, they were 78% more likely to experience recurrence within six months compared to children with no prior reports. There was an increase in the odds associated with SRRs at 12 months (from 78% to 83%) and it remained the strongest of all predictors in this analysis (Table 3.9).

**Table 3.7** *Multivariate analyses assessing the relationship between SEC as the only maltreatment type and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	46.57	<b>.98**</b>	.97	.99	-.02	63.78	<b>.98**</b>	.98	.99
Gender	-.01	.04	.99	.94	1.05	-.01	.10	.99	.95	1.04
Non-minority status	.31	94.42	<b>1.36**</b>	1.28	1.44	.26	109.71	<b>1.30**</b>	1.24	1.37
SEC Only	.39	83.83	<b>1.48**</b>	1.36	1.61	.40	135.46	<b>1.50**</b>	1.40	1.60
Abuse only	-.19	9.84	<b>.83**</b>	.73	.93	-.16	11.40	<b>.85**</b>	.77	.93
Neglect Only	.09	4.06	<b>1.10*</b>	1.00	1.20	.08	4.85	<b>1.09*</b>	1.01	1.17
Special Condition Only	.08	1.36	1.09	.94	1.25	.01	.05	1.01	.90	1.14

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

**Table 3.8** *Multivariate analyses assessing the relationship between SEC as the initial maltreatment type and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	B	Wald $\chi^2(1)$	OR	95% CI		B	Wald $\chi^2(1)$	OR	95% CI	
				LL	UL				LL	UL
Age	-.02	39.39	<b>.98**</b>	.98	.99	-.02	52.35	<b>.98**</b>	.98	.99
Gender	-.00	.03	.99	.94	1.05	-.01	.09	.99	.95	1.04
Non-minority status	.29	85.99	<b>1.34**</b>	1.26	1.43	.25	97.77	<b>1.29**</b>	1.22	1.35
SEC	.29	56.82	<b>1.34**</b>	1.24	1.45	.30	89.85	<b>1.35**</b>	1.27	1.43
Abuse	-.11	6.26	<b>.89*</b>	.81	.97	-.13	12.62	<b>.88**</b>	.81	.94
Neglect	.07	2.73	1.08	.99	1.17	.03	.670	1.03	.96	1.10
Special Condition	.08	1.30	1.09	.94	1.26	.00	.00	1.00	.89	1.13

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

Neglect was used as the reference category

**Table 3.9** *Multivariate analyses assessing the relationship between SEC as the only maltreatment type with prior report/s and recurrence of maltreatment within six and 12 months*

Predictors	Within Six Months					Within 12 Months				
	<i>B</i>	Wald $\chi^2(1)$	OR	95% CI LL      UL		<i>B</i>	Wald $\chi^2(1)$	OR	95% CI LL      UL	
Age	-.03	78.77	<b>.97**</b>	.97	.98	-.02	110.910	<b>.98**</b>	.97	.98
Gender	-.01	.04	.99	.94	1.05	-.01	.120	.99	.94	1.04
Non-minority status	.31	98.82	<b>1.37**</b>	1.28	1.45	.27	115.671	<b>1.31**</b>	1.25	1.38
SEC	.58	123.87	<b>1.78**</b>	1.61	1.97	.60	205.851	<b>1.83**</b>	1.68	1.98
Abuse	.13	2.68	1.14	.97	1.33	.16	5.917	<b>1.17*</b>	1.03	1.33
Neglect	.38	47.75	<b>1.47**</b>	1.32	1.63	.37	66.818	<b>1.45**</b>	1.33	1.58
Special Condition	.50	32.58	<b>1.64**</b>	1.39	1.95	.42	33.680	<b>1.53**</b>	1.32	1.77

Note. \* $p < .05$ , \*\* $p < .01$

OR = odds ratio; CI = confidence interval; LL = lower limit, UL = upper limit.

### Multiple reports

The odds of recurrence were calculated for children who had a single maltreatment report versus children with multiple reports. It was found that children with a single report of threatened harm, abuse, or neglect reports within six months did not have a significant likelihood of recurrence when compared to cases with multiple reports. When prior reports were included as a variable in the analyses, the results remained the same. However, when recurrence of maltreatment within 12 months was examined, some differences were noted. Controlling for prior reports, children with threatened harm as the only maltreatment type were found to be 11% ( $p = < .01$ ) more likely to experience recurrence than children with threatened harm as the initial maltreatment with multiple reports. Similarly, children who experienced neglect were found to have increased odds (25%,  $p < .01$ ) of experiencing a recurrence of maltreatment within 12 months compared to children who were neglected and had multiple reports. Children with special conditions were not assessed; it was the only maltreatment type recorded for 99% of the children with this type of maltreatment.

## CHAPTER 5:

### DISCUSSION

The purpose of this study was to explore the relationship between threatened harm as a type of maltreatment and recurrence of maltreatment within six months and within 12 months. This study was conducted to address a gap in the literature; there were no other studies found that focused on threatened harm as a type of maltreatment. Administrative data from Florida's HomeSafeNet (now Florida Safe Families Network [FSFN]) for FY05-06 and FY06-07 was utilized in the analyses to answer each research question. The data set contains reports of child maltreatment made through the state's hotline that were accepted for investigation for that time period. Each maltreatment type was used as a predictor, demographic variables as covariates, and was assessed utilizing bivariate and multivariate Cox regression analyses. Presented below are a discussion of the study findings organized by the research questions, limitations, strengths, implications for public health and conclusions.

**Research Question One: *Is threatened harm a significant predictor of recurrence of maltreatment?***

The results of the analysis revealed that threatened harm was a significant predictor of recurrence of maltreatment within six and 12 months in most analyses conducted. Children who experienced threatened harm as the only maltreatment type were found to be 7% and 14% more likely to experience recurrence within 6 and 12 months, respectively, more so than any other maltreatment type listed as the only type, compared to cases with multiple reports. Initial reports of threatened harm were also found to be predictive of recurrence, but only within 12 months

compared to neglect (which was found to be non-significant when compared to threatened harm). The other types of maltreatment were found to be non-significant or their associated odds were significantly less than that of threatened harm compared to neglect.

The effect of prior reports on maltreatment was examined separately because of the magnitude of effect found to have in the literature. Studies have found that having a prior report of maltreatment (regardless of finding) is one of the strongest predictors of recurrence (English, Marshall & Orme, 1999; DePanfilis & Zuravin, 2001; Swanston, et al., 2002). It actually has been considered the largest factor (English, Marshall & Orme, 1999) that contributes to recurrence and the results of this study supported this finding. Having a prior report was the strongest predictor of recurrence in every analysis that included this variable. If a child experienced any maltreatment type and had a report prior to the beginning of this study, they were at increased odds of having a recurrence of maltreatment within six and 12 months. For example, threatened harm with no prior reports was associated with 14% odds of recurrence while those children who had a prior report were 59% more likely to experience recurrence within 12 months.

Neglect cases with prior reports were found to be associated with high odds of recurrence, but the ratios were similar to that of threatened harm both for children who had only one maltreatment type (53% threatened harm vs. 56% neglect) and those with threatened harm as the initial report (70% threatened harm vs. 71% neglect). Abuse was found to be negatively associated with recurrence in all analyses, except for children who had prior reports and even then it was usually associated with the smallest odds of the maltreatment types. Children who had a special condition as their type of maltreatment and had prior reports were found to be the most likely to have a recurrence of maltreatment.



The finding that threatened harm was a significant predictor of recurrence compared to neglect was divergent from what has been found in the literature. A number of studies have found that neglect was the type of maltreatment most strongly associated with recurrence of maltreatment (DePanfilis & Zuravin, 1999; DePanfilis & Zuravin, 2001; Fuller, Wells & Cotton, 2001; US DHHS, 2003).

There are a variety of factors that could contribute to the different findings in this current study. First, there are the definitional differences because types of maltreatment are defined differently in each state. For example, there are states that consider exposure to family violence as a type of neglect (e.g. Kansas, Washington) and others that define it as a type of physical abuse (West Virginia) or emotional abuse (Puerto Rico). Exposure to substance is also defined differently at the state level (e.g. as neglect in Florida, Louisiana, and Minnesota). Family violence and substance use were the two most prevalent subtypes of maltreatment reported in the data set used for the current study, and with the support of the literature (Locke & Newcombe, 2003; Osofsky, 2003; Jones, 2005), it can be safely assumed that these subtype of maltreatment are also involved in a large proportion of the reports received in other states. Therefore, it is possible that the current study's finding represents the effect of a specific subtype of maltreatment rather than a maltreatment type. Secondly, the studies that have this finding and are often cited tend to compare only children who have been abuse or neglected (DePanfilis & Zuravin, 2001; Fuller, Wells & Cotton, 2001; US DHHS, 2003). The current study also found that neglected children are more likely to experience recurrence of maltreatment than children who have been abused.

A study conducted in Florida utilizing administrative data from 1998-99 (but a different data set than utilized in the current study) by Lipien & Forthofer (2004) was cited as supporting

this finding (neglect being more predictive of recurrence than threatened harm). This study examined neglect, abuse and threatened harm as predictors of maltreatment. Other differences noted in Lipien & Forthofer's (2004) study were the inclusion of all children who were reported as being maltreated regardless of finding and controlling for service disposition. The authors reported that "the odds of maltreatment recurrence were significantly lower for children who experienced physical abuse, sexual abuse or threatened harm as compared to neglect" (p. 961). In the current study, when all types of maltreatment were examined compared to neglect, they were found to be non-significant predictors of recurrence at six months. However, when threatened harm was used as the reference category, neglect was also found to be non-significant at six months and at 12 months. The odds associated with threatened harm within 12 months were significantly higher than that of neglect. The difference in the findings between this and the current study could also be attributed to the inclusion of unsubstantiated cases of neglect. Way et al., (2001) found that rates of recurrence in substantiated and unsubstantiated cases may differ based on maltreatment type.

The current study also consistently found that children who experienced abuse were less likely to be re-maltreated. Similar and disparate results have been found in the literature on the various types of abuse (e.g. physical, sexual, and emotional). However, abuse was assessed as a whole in this study; therefore definitive comparisons cannot be made to others studies that included findings about the different types of abuse. Children who have been sexually abused have been found to be less likely to have a recurrence episode (Jonson-Reid, Drake, Chung & Way, 2003) while another study found that substantiated physical abuse had a high risk of recurrence (Connell, Bergeron, Katz, Saunders & Tebes (2007). Overall, in the majority of studies comparing abuse and neglect, neglect has been found to be more predictive of recurrence

than abuse which is consistent with the findings of the present study (DePanfilis and Zuravin, 1999; Fluke, et al., 1999; Marshall and English, 1999; Fluke, Hollingshead, & McDonald and Associates, 2003).

**Research Question Two: *Is threatened harm a significant predictor of a more serious type of maltreatment recurrence (Abuse or neglect) within six and 12 months***

The theoretical model utilized in this study, the conflict theory, provided the basis for the exploration of the possibility that threatened harm could be a significant predictor of recurrence of a more ‘serious’ type of maltreatment. This is based on the premise that continuous conflict may be perceived as being more serious. It is likely that children who have had a report of threatened harm, particularly those with prior reports, would have increased odds of having a recurrence of maltreatment that was abuse or neglect. The results revealed this premise was correct. If a child experienced threatened harm as the initial maltreatment and they had a prior report, they were almost twice as likely to have a subsequent report of abuse or neglect as children with threatened harm as the only maltreatment with no prior report. Threatened harm, either as the only or the initial maltreatment, was negatively associated with the outcome; these children were found to be up to 31% less likely to have a recurrence report that was abuse or neglect. Overall, the findings indicated that children who have an initial report of a particular maltreatment type (whether it is the only type of maltreatment or there were multiple reports) tend to have a recurrence of the same maltreatment type. Neglect and abuse were the strongest predictors of a recurrence of abuse or neglect. It was also found that if a child had a threatened harm report and there was recurrence of maltreatment, it was most likely to be another report of threatened harm. Other studies have revealed both similar and disparate findings to the current study results that children who experience recurrence are most likely to be re-reported for the

same type of maltreatment. Way et al. (2001) found that children with a neglect report were most likely to have a subsequent report of neglect; however English, Marshall, Brummel & Coughlin (1998) found that children who are reported initially for neglect tend to be re-referred for another type of maltreatment.

As has been noted in the literature (Fluke, Hollingshead, & McDonald and Associates, 2003; Fluke 2008; Hindley, Ramchandani, & Jones, 2006), it is often difficult to make comparisons between different child maltreatment studies primarily because of methodological and definitional differences which contribute to different findings. The difference in findings between this study and the English, Marshall, Brummel & Coughlin (1998) study, for example, may be related to assessing the outcome of recurrence of maltreatment versus re-referral to services.

**Research Question Three: *Are certain types of threatened harm a significant predictor of recurrence of maltreatment within six and 12 months***

**Family violence threatens child (FVTC).**

Family violence threatens child (FVTC) was the most prevalent maltreatment subtype in this study for cases in the entry cohort, as well as for recurrence reports. Previous research has clearly documented the intersection between domestic violence and child maltreatment (Edleson, 1999); therefore it was hypothesized that this maltreatment subtype would encompass a large proportion of maltreatment reports. Based on previous research and the theoretical framework, which posits that social norms, such as gender roles that portray women as lesser than men and the acceptance of violence in the media, tend to lead to the perpetuation of conflict, it was expected that FVTC would be a significant predictor of recurrence. However, it was found that FVTC was not a significant predictor of recurrence; rather, it was negatively associated with

having a recurrence of maltreatment within six and 12 months. The only reports of FVTC that were found to be predictive of recurrence were those with prior reports. Even then, this subtype of maltreatment was associated with lower odds compared to the other maltreatment types with prior reports.

Though threatened harm as a type of maltreatment was found to be a significant predictor of recurrence, the opposite was found for the FVTC, the subtype that comprised the majority of initial threatened harm reports. Further examination of the literature revealed however that this may not be a novel finding. In a report by US DHHS (2005), it was stated that though domestic violence has been shown to predict recurrence, the evidence is “somewhat weaker” (p. 2) than the evidence for other predictors of recurrence such as having a prior report. The report cited five studies that also appear to be the most commonly cited in the literature which mention this finding. One of these studies by DePanfilis & Zuravin, (1999), found that families with partner abuse or “woman abuse” (p. 740) were 1.5 times more likely to experience recurrence, though the authors did clearly outline their methodological limitations. This study only focused on women who were reported by caseworkers as being abused by their partner. FVTC, though it may be primarily comprised of these cases, encompasses any form of family violence. Additionally, most of the studies were conducted in prior years and the knowledge and interventions surrounding family violence have seen changes over time (Edleson, 2006; Florida Senate, 2009). Therefore, it is likely that this may have been an accurate finding in the context of that time, but not at the time of this study. Finally, the authors conducted their study over a five year period; the current study found that FVTC had greater odds of recurrence over time. Therefore it is possible that this result is a function of the shorter time limit of the current study period.

In the current study, data were also examined to aid possible explanations of the previous finding and all children were assessed to see which maltreatment type had the greatest odds of predicting recurrence of FVTC. The results revealed that only FTVC was significantly predictive of having a recurrence of the same maltreatment (by over 200%) within 12 months. There was one additional finding of interest in these analyses; being white (for the first and only time in all the analyses) was not significantly associated with recurrence of FTVC. Therefore, this would be an indication that since non-minority status was not a factor in predicting this outcome, and white children were found to be at increased risk in all other analyses, this finding may have affected the relationship between FVTC and recurrence of maltreatment.

#### **Substance related reports (SRR).**

Substance related reports (SRRs) were found to be strongly associated with recurrence. SRRs were associated with the largest odds for recurrence of the maltreatment types and usually of all the variables, except when prior reports were included as a control variable. Children with a SRR were almost 50% more likely to experience recurrence, even when controlling for prior reports. Children who had a SRR in this study and had a prior report were 83% more likely to experience recurrence of maltreatment within 12 months. Substance use has been indicated as a factor in up to 80% of child welfare reports (Locke & Newcombe, 2003; Jones, 2005) and it has consistently been one of the variables strongly associated with maltreatment and recurrence of maltreatment (Bae, Solomon, Gelles, 2009; Hindley, Ramchandani, & Jones, 2006).

#### **Substance exposed child.**

Because this subtype of maltreatment comprised 74% of all substance related reports it was expected that the results would be similar to those found for all substance related reports and this was in fact the case. Children exposed to substances were at almost a 50% risk of

experiencing recurrence of maltreatment within 12 months and if there were prior reports the risk of recurrence was increased to over 80%.

It was expected that substance related reports would be a strong predictor of recurrence, particularly for children with a prior report/s. The group of particular interest in this study was children exposed in the womb, because there have not been many studies conducted on this group (Smith and Testa, 2002). Unlike fetal alcohol syndrome which can be clearly identified and has been studied more often, prenatal substance exposure as it relates to child maltreatment and recurrence of maltreatment is not a topic found often in the literature. The Florida definition of substance exposed child includes both children exposed in the womb and in the home, but since there is no distinction between the groups in the data it is difficult to say definitively where most risk lies. However, this and other studies have found that younger children are at greater risk for recurrence compared to older children (Herrenkohl, Herrenkohl, Newman, Egolf, 1978; English et al., 1999; Fluke et al., 2001a; Connell, Bergeron, Katz, Saunders & Tebes, 2007). So it can be posited that children exposed in the womb would be the most likely to have maltreatment recur. It has been found that prenatal substance exposure is a risk factor for child maltreatment (Smith, Johnson, Pears, Fisher & DeGarmo, 2007) and recurrence of maltreatment, particularly if there is postnatal paternal substance use (Smith and Testa, 2002).

#### **Children with reports of multiple types of maltreatment.**

Based on the literature which consistently found that children with multiple reports were more likely to experience recurrence than children reported for a single episode (Herrenkohl, Herrenkohl, Newman, Egolf, 1978; Bae, Solomon, Gelles, 2009), a similar finding was expected in these analyses. The current study finding did confirm this finding within six months; threatened harm, abuse or neglect as the only maltreatment type were non-significant predictors

of recurrence compared to cases involving multiple reports. However, within 12 months threatened harm only and neglect only were found to be associated with increased odds of recurrence compared to these maltreatment types with multiple reports.

The finding that children who had a single report and no prior reports were more likely to have a recurrence over time is supported by the literature. Connell, Bergeron, Katz, Saunders & Tebes (2007) found that children with no prior reports were likely to experience recurrence after 140 days, while children who had prior reports came back into the systems sooner. Generally, studies which found that children with multiple reports in the same incident were more likely to experience recurrence (e.g., Herrenkohl, Herrenkohl, Newman, Egolf, 1978; US DHHS 2002) assessed cases with reports of more than one different maltreatment types. However, the current study only assessed cases with more than one report of maltreatment in the same incident, regardless of type.

A finding that was unexpected was that the odds of recurrence in threatened harm cases increased over time. The majority of studies examining recurrence have found that it is most likely to occur within close proximity to the initial maltreatment incident (English, Marshall & Orme, 1999; Fluke, Yuan & Edwards, 1999; Zuravin and DePanfilis, 1996). Zuravin and DePanfilis (1996) found that recurrence was most likely to occur within the first 30 days of the initial report and 50% of families followed over a five year period had experienced recurrence within the first nine months. This study's findings were consistent with what has been previously found; these studies included only abuse and neglect reports which were associated with the most recurrence within six months. The same was expected for threatened harm, but the findings indicated otherwise. For example, when threatened harm only cases were examined for their ability to predict recurrence within six months the odds were 7%, but within 12 month period



this increased to 14%. Further analysis of the literature revealed that studies which examined domestic violence over long periods of time (five or more years) found it to be a significant predictor of recurrence (DePanfilis & Zuravin, 2001; English, et al, 1999; Swanston, et al, 2002). There are different factors that may have contributed to this finding. First, in Florida and in almost all states, domestic violence is a criminal act (Child Welfare Information Gateway (CWIG), 2012). In Florida, if a child is in the home, any levied sanction, such as incarceration time, can be increased 1.5 times (CWIG, 2012). It is actually not defined outside the context of the criminal law, except in child and family operating procedure as FVTC. It is probable that there will be a separation between the victims and the perpetrator after the incident if there is child welfare of law enforcement involvement. Therefore, this finding may be a reflection of an absence of the violence perpetrator after the maltreatment occurs. Second, the violence perpetrator may not immediately re-engage in violent acts after receiving attention from service systems, but may return to being violent after a while if they have not truly changed.

The odds of recurrence were also increased over time in substance related cases. This can be attributed to a number of factors; one being the nature of this type of report. Substance use is often chronic and it is likely that persons will be referred to treatment. This increases the visibility of the family which is likely to affect reporting rates. Substance use may also be associated with criminal penalties directly or from actions resulting from substance use, which would lead to absence of the perpetrator for a period of time. Time also increases the possibility that continued use of substances will have more negative effects which could also result in recurrence of maltreatment. Continued substance use may also reflect (or contribute to) an unwillingness to change or an unwillingness to participate in recovery services. Fluke, Hollingshead, & McDonald and Associates (2003) in their review of factors associated with

recurrence identified eight studies that found that the risk of recurrence is increased in families that exhibit low motivation to change or are uncooperative with services.

### **Implications for Public Health and Behavioral Health**

The findings from this study indicate a variety of public and behavioral health implications and recommendations at the policy, state, and services delivery levels.

After thorough research, no studies were found that focused on threatened harm as a type of maltreatment. One contributing factor may be that the concept of a ‘threat of harm’ is not considered as serious as actual harm that involves the omission or commission of an act.

Although many studies on the acts that can constitute threatened harm in Florida have proven to the contrary, the concept of threats to children is still not viewed as having effects as deleterious as experiencing abuse or neglect. People may have some reaction when they hear that a child has been abused or neglected, but may not have the same reaction when hearing that a child had a threat of harm. This response is what organizational policy efforts should work to change. The study results indicate that threatened harm is a significant predictor of recurrence of maltreatment and therefore supports the importance of incorporating and promoting the concept of threatened harm into larger national, state and community education initiatives about maltreatment.

Child maltreatment is often referred to as child abuse or neglect, which ignores the threats of harm that children experience. At the national level, abuse and neglect is also what is reported and other types of maltreatment, such as threatened harm, are put in an ‘other’ category. In 2006, the last year this ‘other’ category was reported by the US DHHS in the annual Child Maltreatment report, it encompassed the majority of maltreatment reports and was the strongest predictor of recurrence of maltreatment (US DHHS, 2006). Research evidence supports that

many children enter and re-enter the child welfare system because of threats of harm (or exposure); therefore, more attention should be paid to addressing these issues holistically. Efforts within such venues as drug courts and domestic violence intervention programs have had some positive outcomes in Florida and other states (Mitchell, Wilson, Eggers & MacKenzie, 2012; Coulter & Vandeweerd, 2009; Florida Senate, 2009; Green, Furrer, Worcel, Burrus, & Finigan, 2007), so focusing attention on the concept that encompass these acts of family violence and substance use should enhance existing positive outcomes. Increased knowledge of the effects of threatened harm may increase the possibility of earlier identification, more accurate assessments of such situations, and the opportunity for earlier interventions.

The finding of the current study, that families experiencing a recurrence of threatened harm are most often reported for the same type of maltreatment, lends support to the notion that it may be treated as a less serious type of maltreatment. If caseworkers view threats of harm as lesser serious acts than abuse or neglect, they may not provide appropriate services to these families. Families may be referred to short-term programs or support services that may not provide the proper intervention or individualized attention that the family needs, which may increase the possibility of recurrence. It was also indicated in the current study that families who experienced threatened harm had maltreatment report/s prior to the beginning of this study and had a recurrence of maltreatment, were at increased odds of having that recurrence report be abuse or neglect. This indicates that if families are not provided with the proper intervention services when they first come into contact with the system, it is likely that the maltreatment may escalate.

## **Prevention.**

The findings from this study strongly suggest the need for prevention services. Prevention of child maltreatment should be a major focus of public health initiatives. It is interesting that when considering social determinants of health in national prevention initiatives, such as Healthy People 2020 (US DHHS, 2012), child maltreatment is not specifically mentioned. However, research, such as the Adverse Childhood Experiences (ACE) studies (Felitti, et al., 1998), has clearly outlined the negative effects child maltreatment has on physical health and overall quality of life throughout the lifespan. Prevention is also important because it appears from this and other research studies that further maltreatment is positively correlated with having a prior maltreatment report. Intervening with services after a verified report, which is what is typically done for a variety of reasons such as staff limitations, is a necessary step, but it can prove too late for some families. This is particularly true if they had prior contact with the child welfare system.

Since child welfare is administered at the state or local level, it would be more feasible for primary prevention initiatives to be conducted at this level to be more responsive to the needs of families. However, this should be done by community partners that collaborate with local child welfare agencies but not provide direct child protection services. Primary prevention, such as education, can be provided by child welfare agencies, but the nature of their services and organizational limitations may lend themselves more to (limited) secondary and tertiary prevention efforts.

The study finding that children who experienced a first threatened harm episode are less likely to have a recurrence of maltreatment than those with previous reports indicates a need for tertiary prevention initiatives. This is further supported by the finding that having a substantiated

report of maltreatment with no prior report is associated with smaller odds of recurrence. Additionally, certain subtypes of maltreatment, such as FVTC, with no prior reports were not predictive of recurrence. Prevention efforts should be targeted to at-risk families who have not had contact with the child welfare system to reduce the risk of possible maltreatment.

There should be a shift in organizational practice where prevention services are introduced at first contact, regardless of finding. This can include investing in accurate safety assessment instruments, such as The Initial Family (Household) Risk Assessment of Child Abuse/Neglect Tool (Casey Family Program, 2013) or the Structured Decision Making Model (Carnochan, Rizik-Baer & Austin, 2013) and evidence-based initiatives such as home visitation programs that have been found to be effective (Center for Disease Control and Prevention, 2003; National Alliance of Children's Trust and Prevention Funds, 2009).

### **Interventions.**

The extent to which the child welfare system of care can employ tertiary prevention efforts that reduce recurrence of maltreatment may have the greatest impact on reducing recurrence of child maltreatment. When a child comes into contact with the child welfare system, it is likely that the situation in which they were involved has escalated and some damage has already been done. Programs that provide identification of at risk families (such as Federal Family Violence Option as part of its State Temporary Assistance for Needy Families program) can be instituted. Families who had their first report of maltreatment should also be provided with intensive, individualized, family centered, evidenced-based interventions and support services that will reduce the risk of another maltreatment episode (CWIG, 2009). Since younger children were found to be at the most risk, intervention services should be provided early in a child's life and continue as needed. It is a federal requirement that states provide early

intervention services for children less than three years who have experienced substantiated maltreatment. This legislation falls under Part C of the Individuals with Disabilities Education Improvement Act (IDEA). This program provides the funding opportunity for the implementation of evidence-based initiatives that can create a system of care for these families (CWIG, 2009). States should ensure that any implemented programs are sustainable especially if they have proven positive outcomes. Interventions can include a variety of services, but it should be ensured that these services are evidence-based and are staffed by professionals trained in child welfare and trauma focused care.

***Home visitation programs.***

Home visitation programs targeted to new mothers, such as Healthy Families, were found to be an effective prevention program and intervention in reducing maltreatment in at-risk families (National Alliance of Children's Trust and Prevention Funds, 2009). Other Home visitation programs, such as Project Safecare (Gershater-Molko, Lutzker & Wesch, 2002; Edwards & Lutzker, 2008), have also been found to be effective in helping to reduce incidences of child maltreatment. However, the literature has found that not all home visitation programs have the same outcomes (MacMillan et al., 2005), particularly in tertiary prevention initiatives such as preventing recurrence of maltreatment. MacMillan et al. (2005), in a randomized controlled study of 163 families that experienced abuse and neglect, found that a home visitation program which utilized nurses as the home visitors was no more effective in reducing recurrence of maltreatment than the services provided by the child welfare agency. The authors did caution there may have been some surveillance bias that influenced the results; nevertheless, this should be a point of note and caution for public health programs which often try to integrate within physical/primary health workers or initiatives within other programs. Interventions that are most

effective with families experiencing maltreatment are more targeted to the emotional and instrumental needs of these families.

***Family violence.***

There are a variety of promising practices and evidence-based interventions that may result in positive outcomes in families experiencing family violence. These include collaboration between the child welfare and family violence service systems, co-locating services within child welfare agencies, cross training workers in these systems and instituting Dependency Court Intervention Program for Family Violence statewide (CWIG, 2009a). Interventions for perpetrators of domestic violence historically have included batterers intervention programs (BIPs). Overall, there is wide variation in the literature on the effectiveness of such programs (BIPs) in general (Carter, 2009). However, it has been indicated in the literature that these programs can be more improved/effective if they target a certain type of batterer (Babcock, Green, Robie, 2004) or a “single factor” (Coulter and Vandeweerd, 2009, p. 140); if they are a part of a community response program that is coordinated (Adams, 2003) where all the players are involved in monitoring and enforcement (Babcock, Green, Robie, 2004); and/or address co-occurring factors (such as mental health problems, substance use) (Coulter and Vandeweerd, 2009). There are programs targeted to children and families that have provided evidence of efficacy in addressing trauma, reducing the incidence of violence and increasing resilience. These include Kids Club – Moms Empowerment program that includes a support group for children and an educational, small group support program for mothers who experienced family violence and therapeutic interventions such as Alternative for Families- Cognitive Behavioral Therapy , Child Parent Psychotherapy for parents and young children under six years and Functional Family Therapy (US Department of Justice, DHHS, 2010).

### ***Substance use.***

The National Center for Substance Abuse and Child Welfare provides technical assistance to states on the implementation of a variety of evidence-based initiatives that have been effective with these families. It is recommended that states and communities establish goals, such as collaboration between service systems and joint accountability when providing services to families with SRRs (SAMHSA, 2013). As noted earlier, families with a SRR are more likely to experience recurrence. This may be attributed in part to increased visibility when families are in treatment or involved in some other program (Barth, Gibbons & Guo, 2006; Connell, Bergeron, Katz, Saunders & Tebes, 2007). This finding would support the need for more accurate assessment tools that reflect a true safety risk rather than increased surveillance or monitoring.

The findings from this study also support the need for targeted service intervention to families that experience prenatal and/or early substance exposure. It has been highlighted in other research that these families are at an increased risk for recurrence of maltreatment (Smith and Testa, 2002). Interventions can include promising programs such as the Parent Child Assistance Program (PCAP) from Washington State that serve at risk mothers with known prenatal substance use during pregnancy until the child is three years or the Sobriety Treatment and Recovery Teams (START), a nationally recognized collaboration and coaching model that serves families with children from birth to five years (Casey Family Programs, 2013). The Child Abuse Prevention and Treatment Act (CAPTA), the law that defines child maltreatment, also mandates that states have a reporting system for infants identified as being exposed to substances (CWIG 2012). Though it is not a national requirement that this is considered a type of maltreatment, Florida and 11 other states include prenatal substance exposure as a type of



maltreatment. The presence of a reporting system of these families provides the opportunity for implementation of early intervention and targeted prevention initiatives. It also provides the opportunity for further research in this area, as there were not many studies found that focused on children exposed (not addicted) to substances.

### **Length of services.**

There has been contradicting findings in the literature on the effect of service length on recurrence. Earlier studies found that families who received services for a longer period of time were less likely to experience recurrence of maltreatment (Berkeley Planning Associates, 1983; Johnson & L'Esperence, 1984), while others found no effect on recurrence due to service length (Littell, 1997; Johnson and Clancy, 1990). However, these studies did not assess the differences by maltreatment type. The finding from the current study that the risk of threatened harm increases over time supports the need for long term services to these families, while cases with reports of abuse or neglect would need more services within the six month period when the odds of recurrence is the highest. Overall, it is recommended that services that start early in the child's life should continue for least the highest period of vulnerability for children, which is about five years (Connell, Bergeron, Katz, Saunders & Tebes, 2007). This is especially true if a child enters the system as an infant; younger children were found to have the highest odds of recurrence. It has been found that within a five year period, the risk for family violence is still strong (DePanfilis & Zuravin, 1999; McGuigan & Pratt, 2001), therefore families who experience FVTC should be provided services for at least this length of time.

### **Mental health and trauma-focused care.**

Study findings support the assessment of the need for early intervention of mental health services. Threats of harm can be traumatic events for a child, particularly if the threats are

pervasive. The child welfare system should ensure that children and families are provided with the opportunity to access mental health services that will be helpful in coping with any trauma associated with their maltreatment. There has been therapeutic advancement in treating trauma (in general and trauma as a result of maltreatment) in recent years; these include Trauma-focused Cognitive Behavior Therapy and Parent Child Interaction Therapy (California Evidenced-based Clearinghouse, 2013). There are a variety of resources available to states, agencies, and families that can provide resources to help children. These include the National Child Traumatic Stress Network (NCTSN, 2013) which provides recovery, intervention and other resources to help children handle many different kinds of trauma including maltreatment and the Child Trauma Academy (Child Trauma Academy, 2013), which provides educational resources and training to professionals.

The conflict theory was useful in studying this topic of threatened harm because it provided a good basis by which to assess this type of maltreatment and its subtypes. It also provided possible explanations of the underlying factors that could contribute to the resulting acts of maltreatment. It is important that as much attention be paid to addressing the mental health need of the perpetrator of the maltreatment as is paid to the victim to effectively decrease to risk of recurrence of maltreatment. It is important to utilize assessments that can identify co-occurring mental health needs in families where there is substance use. Many people who use substances do so as a negative coping response to a trauma in efforts of self-preservation according to the theory. Therefore, the response of the child welfare system should include addressing the trauma that may have been experienced by that caregiver.

## **Training.**

### ***Staff training.***

Prevention and intervention services are only effective if there are utilized. Utilization is often dependent upon knowledge and/or awareness. Staff (and parent) training and knowledge transfer therefore should be essential components of the child welfare service system. Personnel who are well-trained in assessment, prevention, intervention tools, strategies and/or program availability are better able to serve families appropriately and effectively. Staff training is an important aspect of the child welfare service system since it affects the outcome of families. It has been found that training affects staff retention and agencies with lower turnover rates tend to have families with less recurrence of maltreatment (Children's Defense Fund & Children's Rights, 2006). Increased training has been found to have more of a positive effect on staff retention than increased salaries or caseload reduction alone (Children's Defense Fund & Children's Rights, 2006). However, there are systemic and other barriers to training provision including balancing workload and training time, non-standardized training requirements, and limited opportunities for training across child and family serving systems and translation of training into practice. Nevertheless, it is imperative that organizations invest in professional training and strategies that promote an environment that encourage and facilitate worker training. There are organizations (such as the National Child Welfare Resource Center for Organizational Improvement (<http://muskie.usm.maine.edu/helpkids/>), National Child Welfare Workforce Institute (<http://www.ncwwi.org/>), and ACTION for Child Protection (<http://action4cp.org>)) that provide a variety of training and staff resources and technical assistance to states, localities and child serving organizations. A study by the National Council on Crime and Delinquency (2006) found that agencies that they classified as "low functioning" had almost twice as many families

experiencing recurrence of maltreatment than “high functioning” agencies. One of the measures that was used to assess agency function was training days; “high functioning” agencies had one and a half times as many training days as “moderate functioning” agencies and three times as many training days as “low functioning” agencies while other measures, such as average caseload and flex time allowed, was not very different among the three. Finally and arguably most importantly, proper training improves staff’s overall competency which positively impacts their knowledge and abilities when providing services to families. Competency promotes the use of good professional judgment which is always necessary in child welfare with or without the use of standardized assessments, particularly in situations that may require complex solutions and critical thinking (Pecora, Chahine & Graham, 2012). Professional judgment has been stated to “transcend the use of specific tools” (Pecora, Chahine & Graham, 2012, p. 154) and it can mean the difference between life and death for a child.

### ***Parent training.***

Parent training should be an essential component of any child welfare service system. There are behavior and skill-based parent training programs that had a positive impact on at-risk families (Gershater-Molko, Lutzker, & Wesch, 2002) and it has also been found that parent training in home visitation programs had a significantly positive impact on the reduction of child maltreatment occurrences (CDC, 2003). It has been suggested that parent training should be a prevention measure that is marketed to all parents, and not just those receiving child welfare services, as this would help in stigma reduction (Whitaker, Lutzker & Shelley, 2005).

There are varieties of parent training programs in general and evidence-based parent training programs available; however, not all have been tested with families involved on the child welfare system (Barth, et. al., 2005). Therefore, careful assessment should be made when

choosing such programs to implement and it should be ensured they will be effective for families experiencing child maltreatment. Examples of such evidence-based parent training programs include Parent Child Interaction Therapy (highly supported and empirically tested with child welfare populations), the Triple P program and Guiding Good Choices (FRIENDS National Resource Center for Community-Based Child Abuse Prevention, 2009). There are also a variety of resources available to assist states and communities with information, planning and implementation of such evidence-based and promising practices such as the Child Welfare Information Gateway ([www.childwelfare.gov](http://www.childwelfare.gov)) and National Child Welfare Resource Center for Organizational Improvement (<http://muskie.usm.maine.edu/helpkids/>).

#### **Methodological considerations.**

The methodological limitations of maltreatment data have been a long standing issue and this study supports an assessment of current policies to ensure that the data available is accurately reflecting the children who are in need of intervention services. The CDC also acknowledges that definitional uniformity is necessary for improvement in the child maltreatment research and practice (Whitaker, Lutzker & Shelley, 2005). Currently, analysis has to be conducted at the state level to effectively garner the most accurate data and as practical and efficacious as this may be, it impedes the development of broad reaching measures.

Because of the differing definitions of maltreatment at the state level, research should begin to focus more on the different acts that constitute the type of maltreatment rather than the larger categories of maltreatment.

Careful consideration should be given to each state's definition of child maltreatment, both to the acts that constitute the different types of maltreatment and also how it is reported at the national level. Exposure to family violence or substances in the home may be most

accurately defined as threatened harm because it does not involve the omission (in the case of neglect) or commission (in the case of abuse) of an act. Defining these acts as neglect may diminish the complexity of these situations because of the connotation of the label, particularly in the cases of family violence. The label on the maltreatment may deflect the focus from the behavior that resulted in the maltreatment. For example, a definition of abuse (apart from emotional abuse) could mask the complexity of cases of family violence or substance use and possibly increase the belief these cases are lesser types of maltreatment as they would be compared with acts in the same category that include visible harm. Thoughtful, clear and accurate definitions would also allow for the institution of differential response or other targeted response programs that aim at tailoring service response to the needs of the family (U.S. DHHS, 2008; Casey Family Programs, 2007; Carnochan, Rizik-Baer & Austin, 2013), which is also supported by the findings of this study.

### **Limitations**

There were some limitations in this study, not uncommon to other studies utilizing child maltreatment data. First, the study is based on Florida child welfare administrative data and since definitions of child maltreatment differ at the state level, generalizability is limited. Florida also has a fully privatized child welfare system which may be operationally different than state operated child welfare systems.

The second limitation is the use of administrative data. Though this is considered one of the best sources of child maltreatment data (Fluke, Edwards, Kuttzler, Kuna & Tooman, 2000; Panandi & Banks, 2003), it is not representative of all reports of maltreatment and is an under-estimation of actual prevalence. There are many cases of child maltreatment that are unreported, though the degree to which this occurs is unknown (Lipien & Forthofer, 2004; Whitaker, Lutzker

& Shelley, 2005; Runyan et. al., 2005). The data available in administrative data sets are subject to the reporter and as such there is the possibility of incomplete and inaccurate data. These data can also be affected by policy changes which would influence the way cases are investigated and substantiated; these factors influence reporting trends and can limit the generalization of results over time.

Third, this study limited the data to substantiated reports of maltreatment, but studies have found that unsubstantiated cases have similar risk of re-referral (Connell, Bergeron, Katz, Saunders & Tebes, 2007; Drake, 2003). Additionally, the data does not include an incident date which is important for the most accurate assessment of recurrence. This increases the possibility that what is found to be recurrence of maltreatment is actually the revelation of past maltreatment.

It has been suggested that although differences in the risk of recurrence have been found among different groups, it is possible that some attribution is affected by the size of the sample or other statistical methods. Therefore, other data sources should be used in conjunction with this study, particularly for the purposes of policy and practice (Lipien & Forthofer, 2004).

### **Contribution**

This study, despite the limitations, had a number of strengths and unique contributions. This is the first known study that focused primarily on threatened harm as a type of maltreatment, though other studies have looked at categories that include family violence and substance use. The study also included a large data set of children which were followed longitudinally. The study also assessed recurrence within the time periods associated with federal measures. Other studies assessing this outcome have used varied lengths of time, from 1 month to six years (Hindley, Ramchandani, & Jones 2006; Lipien & Forthofer, 2004). This was

also the first study found that utilized conflict theory as a basis for assessing recurrence of maltreatment.

### **Future Directions**

The current study produced findings that have not been previously recorded in the literature. For example, it was found that unlike other types of maltreatment, the risk of recurrence increases over time for threatened harm cases. One of the first steps that could be taken in the future would be to replicate this study utilizing Florida child welfare data from other fiscal years. Evidentiary exploration would be strengthened if this study were also replicated utilizing data from Michigan, the only other state found that included threatened harm as a separate type of maltreatment with similar definitions to Florida. Study replication could also be a first step to promoting the concept of threatened harm to the national agenda. State level data usage could be a first step in replication, with the exploration (and hopefully utilization) of a national data set as a source for further examination of factors associated with threatened harm. Another promotion step could include the dissemination of study results and information in both the academic and practice arenas (journal, conferences, etc). This could be done for information provision, but also for discourse, new ideas and solution generation, as well as provide further evidence for resource allocation to continue research into threatened harm.

Future research should assess the importance of time in predicting recurrence in cases involving family violence and substance exposure. The use a longitudinal study design in child maltreatment research is increasing and this trend should continue when assessing recurrence of maltreatment. Future research should also assess any effects of length of service provision on rates of recurrence, utilizing more recent data. Studies conducted by Berkeley Planning Associates, 1983; Johnson & L'Esperence, 1984; Littell, 1997; Johnson and Clancy, 1990) have



found contradicting results, but this is an important factor and should be assessed further.

Future studies should also assess if there are differences in length of service outcomes by type of maltreatment (threats of harms versus abuse or neglect and/or family violence and substance exposure, in particular). In relation, future studies should further examine the services received in order to assess whether there is a correlation between receipt of certain services (e.g. different types of batterers intervention programs) and recurrence of maltreatment.

Other research has indicated that recurrence may be a function of family visibility by the service system (Barth, Gibbons & Guo, 2006). It would be of interest to incorporate family visibility as a control measure to identify families that would be at risk of recurrence, regardless of visibility. Future research should also include cases with both substantiated and unsubstantiated initial maltreatment.

The findings of this study highlight the need for more research in the area of family violence as it relates to child maltreatment. Therefore, there should be exploration and development of an instrument that accurately assesses the various type of intimate partner and other types of violence that may exist in the home. This would ideally also serve as a preventive measure to identify families at risk for child maltreatment, but would also be utilized by child protection agencies. This would be a first step in addressing what the CDC has outlined as a priority, which is developing “interventions that can affect the precipitating factors and negative consequences of both [child maltreatment and family violence]” (Whitaker, Lutzker & Shelley, 2005; p. 248).

Johnson (2006) proposes there are four types of partner violence. He labels these as “intimate terrorism, violent resistance, situational couple’s violence and mutual violent control” (p. 1003). He found that intimate terrorism is primarily the type of partner violence that make up

agency samples, but situational couple's violence was found to be more common in the general population. Exploring family violence as a dynamic and differential concept, rather than as one-size-fits-all phenomena, may provide more insight into the issue overall and may contribute to further explanation of some of the findings of this study. It may be that instances of situational couple's violence are being treated as intimate terrorism and addressed by the child welfare system, while being more suitable for another service system or diversion services. It may also be that the appropriate services are not being provided to effectively address the circumstances under which the violence occurred, therefore, the families keep coming into contact with the child welfare system. The response of the perpetrator and the victim is different in each of the types of partner violence. Johnson (2006) proposes that the response should also be different. He further proposes that effective interventions and policy are dependent upon making these distinctions in research (Johnson, 2006) and this research supports the possible usefulness of such distinctions at the agency level in the provision of services. This assessment instrument could be separate and/or included as part of the family function assessment process. Accurate assessments aid in accurate problem identification and service provision.

## **Conclusion**

The purpose of this study was to assess threatened harm as a type of maltreatment as this was a gap in the child maltreatment literature. This type of maltreatment was found to be predictive of recurrence, particularly over time. Although the acts that constitute threatened harm in Florida have been widely studied, this research has not been done under the auspice of threats of harm. The study findings indicate that this type of maltreatment should be of as much concern as other types of maltreatment, because the possible negative outcomes are no different. A large amount of child maltreatment reports involve these acts of maltreatment; therefore it is

necessary to focus on reduction efforts that provide education and bring awareness to the concept of threats of harm as a type of maltreatment.

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