

Florida International University
FIU Digital Commons

FIU Electronic Theses and Dissertations

University Graduate School

12-13-2007

Socioemotional Outcomes of Children Sexually Abused during Early Childhood

Jennifer L. Becker

Florida International University

Follow this and additional works at: <http://digitalcommons.fiu.edu/etd>

 Part of the [Social Work Commons](#)

Recommended Citation

Becker, Jennifer L., "Socioemotional Outcomes of Children Sexually Abused during Early Childhood" (2007). *FIU Electronic Theses and Dissertations*. Paper 11.

<http://digitalcommons.fiu.edu/etd/11>

This work is brought to you for free and open access by the University Graduate School at FIU Digital Commons. It has been accepted for inclusion in FIU Electronic Theses and Dissertations by an authorized administrator of FIU Digital Commons. For more information, please contact dcc@fiu.edu.

FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

SOCIOEMOTIONAL OUTCOMES OF CHILDREN
SEXUALLY ABUSED DURING EARLY CHILDHOOD

A dissertation submitted in partial fulfillment of the

requirements for the degree of

DOCTOR OF PHILOSOPHY

in

SOCIAL WELFARE

by

Jennifer L. Becker

2008

To: Dean Ray Thomlison
College of Social Work, Justice and Public Affairs

This dissertation, written by Jennifer L. Becker, and entitled Socioemotional Outcomes of Children Sexually Abused during Early Childhood, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

Mark Macgowan

Jonathan Tubman

Eric Wagner

Barbara Thomlison, Major Professor

Date of Defense: December 13, 2007

The dissertation of Jennifer L. Becker is approved.

Dean Ray Thomlison
College of Social Work, Justice and Public Affairs

Dean George Walker
University Graduate School

Florida International University, 2008

© Copyright 2008 by Jennifer L. Becker

All rights reserved.

ACKNOWLEDGMENTS

There are so many people who have made this work possible. I would especially like to express gratitude to my mother, whose inspiration and love are endless, and my dear friend Marcelo Lescano, who always believes in me and my intentions. I would like to thank my sister, Lisa Bova and my friend and respected colleague, Jill Levenson for always listening. My Chair, Barbara Thomlison has been a remarkable advisor, mentor, ally and friend. Special thanks to Dr. Wagner for his constant encouragement and advice, and Drs. Tubman and Macgowan for their invaluable insight and guidance. I would also like to acknowledge the Melissa Institute of Miami, Florida for supporting my research. I dedicate this work to young victims of sexual abuse and their families.

ABSTRACT OF THE DISSERTATION
SOCIOEMOTIONAL OUTCOMES OF CHILDREN
SEXUALLY ABUSED DURING EARLY CHILDHOOD

by

Jennifer L. Becker

Florida International University, 2008

Miami, Florida

Professor Barbara Thomlison, Major Professor

This study investigated the nature and impact of the sexual abuse of children ages birth through 6 years. The purpose was to enhance knowledge about this understudied population through examination of: (1) characteristics of the abuse; (2) socioemotional developmental outcomes of young victims; and (3) potential moderating effects of family dynamics. An ecological-developmental theoretical framework was applied. Secondary data analysis was conducted using data collected from the consortium Longitudinal Studies of Child Abuse and Neglect (LONGSCAN). A sample of 250 children was drawn from LONGSCAN data, including children who were sexually abused (n=125) and their nonabused counterparts (n=125), matched on demographic variables.

Results revealed that young victims of sexual abuse were disproportionately female (91 girls; 73%). The sexual abuse committed against these youngsters was severe in nature, with 111 children (89%) experiencing contact offenses ranging from fondling to forcible rape. Sixty-two percent of child victims demonstrated borderline, clinical, or less than adequate functioning on normative, expected socioemotional outcomes. Child victims reported low degrees of perceived competence and satisfaction in the social

environment. When compared with their nonabused counterparts, child victims demonstrated significantly poorer socioemotional functioning, as evidenced by aggressive behaviors, attention and thought problems. Sexually abused youngsters also reported lower self-perceptions of cognitive and physical competence and maternal acceptance. Family dynamic factors did not significantly moderate the relationships between abuse and socioemotional outcomes, with one exception. The caregivers' degree of empathy for their children had a significant moderating effect on the children's social problems.

This study contributes to an otherwise scant body of literature on the sexual abuse of preschoolers. Findings provide implications for social work practice, especially in the development of assessment and prevention strategies.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Current State of the Literature	2
Applying a Developmental Framework.....	6
Purpose of the Study	8
Significance of the Study	9
II. LITERATURE REVIEW	11
The Problem of Child Sexual Abuse	12
The Impact of Child Sexual Abuse.....	18
Perspectives in Early Childhood Development	28
Research Questions and Hypotheses	42
Conceptual Model.....	43
III. METHODS	49
LONGSCAN Design	49
Data Management	51
Protection of Human Subjects	52
Sampling	53
Instrumentation	54
Data Analysis Strategies	60
Summary	63
IV. RESULTS	65
Sample Demographics	65
Descriptive Statistics.....	67
Socioemotional Outcomes of CSA Group.....	69
Multivariate and Univariate Analyses of Variances	71
Analyses of Family Dynamics	73
V. DISCUSSION.....	75
Characteristics and Qualities of the Abuse of Young Children.....	75
Socioemotional Functioning of Young Victims	80
Limitations of the Study.....	86
Implications for Research, Practice and Policy	88
REFERENCES	97
APPENDICES	103
VITA.....	115

LIST OF TABLES

TABLE	PAGE
1. Brief Description of LONGSCAN Samples	103
2. Constructs and Measurement Selection	104
3. Sample Demographic Characteristics	105
4. LONGSCAN Maltreatment Coding Scheme: Sexual Abuse.....	106
5. CSA Group Child Behavior Checklist Scores	107
6. CSA Group Vineland Screener Scores	107
7. CSA Group Loneliness and Social Dissatisfaction Questionnaire Scores.....	107
8. CSA Group Perceived Competence and Social Acceptance Scores.....	108
9. ANOVA Results: Comparisons of CSA group and Nonabused group.....	109
10. Moderating Variables Predicting Aggressive Behavior	110
11. Moderating Variables Predicting Attention Problems	111
12. Moderating Variables Predicting Social Problems	112
13. Moderating Variables Predicting Daily Living Skills	113
14. Moderating Variables Predicting Socialization	114

CHAPTER 1: INTRODUCTION

Sexual victimization of children is not a recent phenomenon, yet it wasn't until the 1970s that child sexual abuse emerged as a serious social concern in the United States. Increasing awareness of the prevalence and deleterious impact of child sexual abuse was in large part due to efforts of the child protection and feminist movements, which prompted research, intervention efforts and policy development (Finkelhor, 1984). As studies revealed that child sexual abuse results in a myriad of social, emotional, and behavioral problems for its victims, an influx of investigations were launched in the 1980s and 1990s. Although over the last 30 years researchers have made substantial contributions to a previously scant body of literature, minimal attention has been given to the youngest victims of sexual abuse.

It is currently estimated that children ages birth through 6 years¹ account for 25 to 35% of sexual abuse victims (Fontanella, Harrington & Zuravin, 2000, citing U.S. General Accounting Office, 1996). However, little is known about how sexual abuse specifically affects these youngsters. There is evidence suggesting that infants, toddlers and preschoolers are especially vulnerable to the negative long-term sequelae of sexual abuse, and that their needs for assessment and intervention are different than older children. Yet, the youngest child victims are rarely the particular subjects of study in sexual abuse research. Their unique developmental needs and the potential for disruption of critical developmental tasks have not been thoroughly explored. As a result, current

¹ In this paper, the terms 'ages birth through 6 years', 'ages 0 to 6 years', 'ages 6 and under' and 'preschool-aged children' are used interchangeably to denote the age range spanning from the child's birth through age 6, inclusive of the child's 6th year.

assessment strategies, intervention approaches and policy development are limited to the information gleaned from studies of older children and adolescents. Currently, the dearth of studies specific to young child victims and their developmental needs following sexual abuse leaves a gap in the sexual abuse literature. The aim of this study was to address these gaps in research by focusing on the impact of sexual abuse on salient tasks of early childhood development and the influence of family contextual factors.

Current State of the Literature

In efforts to understand the consequences of child sexual abuse, investigators have measured a myriad of problems and symptoms experienced by both child victims and adult survivors. A wide range of symptomatology, behavioral and psychological problems have been empirically associated with child sexual abuse, including but certainly not limited to: depression, anxiety, posttraumatic stress disorder (PTSD), nightmares, fear, avoidance, sexualized behaviors, aggression, somatic complaints, eating disorders, dissociation, personality disorders, and suicidal behaviors (see reviews by Kendall-Tackett et al., 1993; Briere & Runtz, 1993). The effects of sexual abuse during childhood are not only evidenced immediately, but also throughout the lifespan. Victims are also at an increased risk of consequential social problems, including substance abuse, domestic violence, poor interpersonal skills, problems with intimate partner relationships, disturbed sexual functioning, and difficulties in the parenting role (Briere & Runtz, 1993; Breire & Elliot, 2003; DiLillo, 2001; Swanston et al., 2003). In essence, virtually every domain of symptomatology has been associated with sexual abuse (Kendall-Tackett et al., 1993).

Establishing a linear connection between the abuse experience and specific outcomes, however, has been elusive (Friedrich, 1998). Studies have generated substantial variability in findings of measurable symptoms, with some studies reporting between 21% and 49% of child victims presenting as asymptomatic (Kendall-Tackett et al., 1993). This variability may be in large part related to the lack of a sound theoretical basis for understanding the consequences of child sexual abuse, as well as a dearth of longitudinal designs (Kendall-Tackett, et al 1993). Originally modeled after research in adult sexual assault, child sexual abuse has widely been conceptualized using a symptom approach, especially the PTSD model, which is focused primarily on the examination of presenting trauma-related symptoms. The PTSD model is considered atheoretical and is based on the diagnostic criteria for PTSD as set forth by the *Diagnostic and Statistical Manual for Mental Disorders* (DSM).

The primary limitation of the PTSD model is that the diagnostic criteria for PTSD, including symptoms such as flashbacks, nightmares, and exaggerated startle response were designed for adult survivors of traumatic incidents, and have inadequate applicability to young children. So, sexual abuse investigators have broadened the PTSD model to explore an extensive range of general symptomatology among child victims. This symptom approach has resulted in a surfeit of indicators and associated factors to consider, yet a limited understanding as to why some victims experience more severe impact than others and how such symptoms impact the child's future development and later adjustment (Cole & Putnam, 1992; Finkelhor, 1995; Finkelhor & Kendall-Tackett, 1997; Schreiber & Lyddon, 1998).

In addition to the lack of a sound theoretical basis and inconsistencies in findings, the current literature provides insufficient information about children who are sexually victimized during early childhood. Though there are a few isolated exceptions (see Fonatella et al., 2000; Gomes-Schwartz, Horowitz & Cardarelli, 1990; Hewitt & Friedrich, 1991; Mian, Marton & LeBaron, 1996), little attention has been paid specifically to the youngest victims of sexual abuse. When young children have been included in studies, the conceptual framework, sampling procedures, and instrumentation are not sensitive to the development stages of early childhood (Kendall-Tackett et al., 1993; Mian et al., 1996; Shipman et al., 2003).

Because developmental frameworks are rarely applied to the study of sexual abuse, most research studies fail to integrate constructs of early childhood development or consider the developmental capacities and needs of young children. In several studies, young children are aggregated into samples with older children and therefore, the same outcome measures are administered, for example to 5-year old victims as 16-year olds. When young children are included in studies, sample sizes are invariably small, further limiting the effect size and generalizability of findings (Kendall-Tackett et al., 1993). As well, longitudinal research designs are virtually nonexistent among studies of the impact of child sexual abuse. The current reliance on non-experimental, one-shot, cross-sectional research designs has limited the depth of understanding of the consequences of child sexual abuse.

Among the available cross-sectional studies, another common methodological problem lies in varying lengths of time between the abuse experience and time of assessment (Fontanella et al., 2000). This lag time not only generates threats to reliability

of findings, but precludes the application of a developmental framework because the measurement may be taken during a developmental stage which is different from the stage during which the abuse occurred. As well, studies including young children have not included meaningful comparison groups (Kendall-Tackett et al., 1993) so causal relationships between abuse and outcomes cannot be inferred. As a result of these theoretical and methodological problems, information about the consequences of sexual victimization to young children is notably sparse.

Despite limitations of the current research, evidence has emerged indicating that sexual abuse does have a significant impact on behavioral, emotional and psychological outcomes in young children. In a review of studies, Kendall-Tackett and colleagues (1993) cite the most common symptoms among preschoolers as “anxiety, nightmares, general PTSD, internalizing, externalizing and inappropriate sexualized behaviors” (p. 167). Studies which have included preschool children report sexual behavior problems, emotional distress, aggression, sleep problems, regression, dissociation, affective deficits and emotional dysregulation among victims (Fonatella et al., 2000; Friedrich, 1993; Gomes-Schwartz et al., 1991; Mian, Marton & LeBaron, 1996). These findings suggest that children who are sexually abused during infancy and toddlerhood manifest behavioral and affective problems which may be indicative of a disruption in adaptive development. The application of a sound theoretical perspective may help put previous findings in context, explain variations in presenting symptomatology among victims and guide effective, meaningful interventions.

Applying a Developmental Framework

Prominent researchers in the field (see Cole & Putnam, 1992; Finkelhor, 1993; Finkelhor & Kendall-Tackett, 1997; Trickett, 1993) have promoted the integration of a child development theoretical perspective into research of the impact of child sexual abuse. Finkelhor (1995) states “developmental effects have broader and more disruptive ramifications that may impair the completion not only of current but of future developmental tasks” (p. 185). It is asserted that examining the effects of child sexual abuse with consideration to developmental stages, needs and processes may fill gaps in knowledge and inform more appropriate and effective assessment and intervention strategies (Cicchetti, 2004; Cole & Putnam, 1992; Trickett & Putnam, 1993). Cole and Putnam (1992) argue for a shift in conceptualizing and measuring outcomes of child sexual abuse. They state, “Measures that are linked to developmental tasks improve the identification of age-related symptoms and the charting of coherent patterns of continuity and discontinuity between early symptoms and later psychopathology” (p. 174).

From a developmental perspective, maltreatment may disrupt salient developmental tasks of early childhood, during which infants and toddlers are presented with challenges that provide a foundation for lifetime socioemotional development and functioning (Sroufe, Egeland, Carlson & Collins, 2005). This theoretical assertion has been widely accepted by researchers and supported by empirical data in numerous studies of other forms of child maltreatment. For example, there is substantial evidence linking child physical abuse, neglect and exposure to domestic violence to serious deficits in both immediate and long-term psychological, socioemotional, behavioral, and neurobiological development (Cicchetti, 1989;1993; DeBellis, 2001; Manly, Kim, Rogosch & Cicchetti,

2001; Sroufe et al., 2005). Specifically, research has consistently demonstrated that abuse or trauma during early childhood has the capacity to influence maladaptive, pathological socioemotional development throughout the lifespan (Sroufe et al., 2005).

Theoretically, it follows that sexual abuse during early childhood may disrupt unique developmental challenges, especially attachment formation, emotional regulation, autonomous functioning, self-development and establishment of peer relationships, which are salient to lifetime socioemotional functioning (Cicchetti & Schneider-Rosen, 1986). The empirical basis for this assumption can be found not only in the literature regarding other forms of child maltreatment, but also in retrospective studies of adolescent and adult survivors of early sexual abuse. Substantial evidence indicates that adults who were sexually abused during childhood exhibit a range of poor socioemotional outcomes, including a myriad of social problems, disturbed interpersonal skills and relational functioning, and difficulties in the parenting role (Briere & Elliot, 2003; Briere & Runtz, 1993; see review by DiLillo, 2001).

Thus, the impact of sexual abuse during early childhood on pathways of social and emotional development warrants empirical investigation. As well, the role of families in alleviating or buffering against probable maladaptive pathways prompted by child sexual abuse should be identified. This study was designed to incorporate the use of an ecological-developmental framework to study the impact of child sexual abuse during early childhood and the influence of family contextual factors on child victims' subsequent development.

Purpose of the Study

The purpose of this study was to explore the nature and impact of the sexual abuse of preschool-aged children. This study has the largest known sample of children allegedly sexually abused from birth through 6 years old. With the integration of an ecological-developmental theoretical framework, this study was designed to identify social and emotional deficits and competencies, and influential family factors among young children who were sexually victimized. This study utilized both normative, expected developmental outcomes as markers, as well as comparisons of sexually abused children with their nonabused counterparts in the sample to identify the particular impact of sexual abuse. The relationship between these outcomes and family dynamic factors, including cohesion, empathy, expressiveness and expectations of the child were also examined.

Due to limitations of current research, this study began with the exploration of demographic characteristics of preschool-aged victims (i.e.: gender, ethnicity socioeconomic background) and qualities of the abuse (i.e.: number of allegations, severity of abuse, co-occurring physical abuse). Then, it was hypothesized that sexually abused youngsters would demonstrate deficits in socioemotional functioning, as measured by developmental instruments normed on general and clinical populations. It was posited that child victims would also demonstrate significant deficits when compared with nonabused counterparts within the study sample. Finally, it was hypothesized that nurturing family dynamics would moderate the relationship between child sexual abuse and maladaptive socioemotional functioning. The ultimate goal of this study was to build on the knowledge base about this population, through the identification of the strengths

and needs of young child victims, as well as family contextual factors that promote resilience in victims. It was expected that examining the impact of sexual abuse from an ecological-developmental perspective would produce relevant findings to inform early detection and assessment strategies for the youngest victims, as well as identify areas for intervention within family contexts.

Significance of the Study

Currently, there is a considerable dearth of research on the sexual abuse of preschool-aged children, despite substantial incident rates. Results of the study not only provide information about this specific population, but will potentially contribute to developmentally-appropriate assessment and intervention strategies. This study has implications for social workers and other social service providers in the detection and assessment of sexual abuse among young children. First, descriptive data of the sample provides relevant information about the nature and characteristics of abuse perpetrated against young children. These results may improve our general understanding of this social phenomenon.

Second, analyses of developmentally-specific outcomes provide insight into the socioemotional developmental status and needs of these youngsters, as compared with expected developmental outcomes. Examining child outcomes within a developmental context may help explain inconsistent findings of previous studies, which focused exclusively on presenting symptomology. By comparing sexually abused children with their nonabused counterparts—controlling for demographic characteristics—the particular impact of sexual abuse can be detected. As well, identifying family dynamic

factors that are correlated with positive outcomes lends further insight into child victims' developmental needs and target areas of family intervention.

Finally, results of this study provide opportunities to inform the development of age-appropriate interventions specific to the needs of young children. Currently, cognitive behavioral interventions designed for older children are adapted to preschoolers. (Cohen and Mannarino, 1996). Although these treatments have demonstrated reduction in behavioral problems among preschool children, sample sizes included in these studies are limited. Moreover, it is posited that interventions targeting behavioral symptomology do not sufficiently address the deeper, more pervasive effects of child maltreatment (Finkelhor, 1995). Results of this study shift the focus from presenting trauma symptoms to developmental needs and the restoration of adaptive developmental pathways. Ultimately, this study's findings inform early detection, assessment and intervention strategies, and policy-driven prevention strategies. .

CHAPTER 2: LITERATURE REVIEW

The past thirty years have brought increasing awareness of the prevalence and deleterious impact of child sexual abuse. While empirical investigations have proliferated, there are very few studies focused specifically on preschool-aged child victims. For the most part, studies have examined the impact of abuse on older children and adolescents or have included a broad age range of subjects. Moreover, the current literature base is challenged by inconsistent and contradictory findings, while a focus on global symptoms and PTSD has precluded meaningful investigations of the consequences to children ages 6 and under. As well, there is a lack of consensus among researchers about a theoretical framework by which to study the initial and long-term effects of child sexual abuse. This study was conceptualized to fill these gaps, by measuring the impact of child sexual abuse on victims ages birth through 6 years, applying an ecological-developmental theoretical framework.

In this chapter, relevant literature is reviewed. First, definitional constructs of child sexual abuse are delineated, followed by prevalence rates and associated risk factors. Next, investigations into the impact of child sexual abuse on children ages 6 and under are reviewed. Factors correlated with the measurable degree of harm to victims, such as severity of abuse and parental factors, are discussed along with research regarding family dynamics of child victims. Leading into the theoretical model of this study, constructs of early child development and developmental theories in child maltreatment are outlined. A brief discussion of evidence from studies of other forms of child maltreatment which empirically support the assumptions of developmental theories is provided.

The following review establishes a basis and rationale for conducting this investigation, as well as applying an ecological-developmental theoretical perspective to the study of child sexual abuse. Subsequently, the research questions are further discussed. The theoretical model is presented and operational constructs used in conceptualizing and measuring socioemotional functioning are outlined in detail.

The Problem of Child Sexual Abuse

Definition

Despite significant advances in research of the sexual victimization of children, consensus of an operational definition of child sexual abuse is a fundamental issue that is unresolved (Haugaard, 2000). Child sexual abuse is defined in various ways, within the context of several different realms, including the criminal justice system, child protection services, research, and clinical intervention. Perceptions of what constitutes child sexual abuse also vary among the public (Finkelhor, 1984, Bensley et al., 2004). Finkelhor (1994) contends, child sexual abuse requires at least two elements: (1) sexual activities involving a child, and (2) an 'abusive condition'. Sexual activities are typically categorized as: (1) contact sexual abuse (sexual kissing, touching, fondling, or penetrating child's genitals, vagina, anus, mouth with sexual organ or other object); and (2) noncontact sexual abuse (exhibitionism, voyeurism, involvement in pornography, sexual exploitation, sexual harassment). However, controversy over what is considered sexualized behavior and what constitutes abuse remain. While there is a general consensus among disciplines and the public that adult intercourse, oral and anal sex with a child under age 12 are considered sexually abusive acts, other behaviors are not as

easily identified as sexual in nature, such as when parents bathe or sleep with their children, or expose them to sexualized behaviors (Haugaard, 2000).

The term 'abuse' has also been debated. While child protection agencies define abuse as "any willful act or threatened act that results in any physical, mental, or sexual injury or harm that causes or *is likely to* cause the child's physical, mental or emotional health to be significantly impaired," (Florida Statutes Chapter 39) others have argued the term 'abuse' as used in scientific research, should indicate the *measurable presence of harm* (Rind, Tromonovich & Bauserman, 1998). Rind and colleagues (1998) generated controversy and little support in the field of child sexual abuse when they purported that sexual contact between an adult and a child that does not result in negative consequences for the victim should not be deemed abusive.

In a random-digit-dialed telephone survey of 504 adults, Bensley and colleagues (2004) found high consensus among respondents in defining sexual behaviors with children as abusive. Specifically, 96.1% to 99.8% of respondents defined the following behaviors as child sexual abuse: having sexual intercourse with a child; making a child touch a parent in the genital area; touching a school-age child in the genital area, not for medical reasons; a parent or parent figure kissing a child in a sexual way; looking at pornographic videos or pictures with a child. Over 94% of respondents also identified, 'letting a child watch parents having sex' as an abusive behavior.

Many people assert that child sexual abuse is characterized by the child's inability to consent to the sexual act (Finkelhor, 1994). Consequently, the issue of consent has become a central focus in defining sexual abuse, in both legal and clinical contexts. The child's developmental vulnerability, emotional immaturity, fear, or desire to please or

cooperate with a person in a caretaking or authoritative role have been cited as limiting the child's ability to provide willful consent. "Abusive conditions exist when: the child's partner has a large enough age or maturational advantage over the child; or the child's partner is in a position of authority or in a caretaking relationship with the child; or the activities are carried out against the child using force or trickery" (Finkelhor, 1994, p. 33).

In defining the sexual abuse of children ages birth through 6 years, ambiguities are minimized due to their developmental vulnerabilities and inherent inability to provide consent for sexual behaviors. For purposes of this study, the definition of sexual abuse is adapted from Schecter and Roberge (1976; as cited in Mian, Marton & LeBaron, 1996) as:

The involvement of dependent, developmentally immature children in sexual activities; or the exposure of dependent, developmentally immature children to sexually activities that they do not fully comprehend and to which they are unable to give their informed consent.

Within this operational definition, sexual abuse is not limited by the age or gender of the perpetrator, nor is it limited by the relationship of the perpetrator to the child victim. The offender may be an adult, an older child or adolescent, and may be either within the victim's family (intrafamilial) or unrelated to the victim (extrafamilial).

Incidence and Prevalence

In 2004, over 84,000 children across the United States were verified by child protection agencies as victims of sexual abuse, accounting for approximately 10% of the total number of substantiated cases of child maltreatment (U.S. Department of Health

and Human Services [USDHHS], 2006). However, cases substantiated through the child welfare system are considered an underestimation of actual incidence, as are national crime statistics (Finkelhor, 1995). Establishing concise incidence and prevalence rates of child sexual abuse is confounded by several factors, including low rates of detection and disclosure, and reluctance of family members to report abuse to authorities.

Consistent with previous prevalence estimates, results of a recent retrospective, national telephone survey indicate 32.3% of women and 14.2% of men experienced sexual victimization during childhood (Briere & Elliot, 2003). The mean age of onset of sexual abuse reported by victims was 9 years. In 2005, a national incidence survey of children found that 1 in 12 children between the ages of 2 and 17 reported some type of sexual victimization (including both contact and noncontact offenses by adults or juveniles) during the study year (Finkelhor, Ormond, Turner, & Hamby, 2005). Finkelhor and colleagues (2005) estimated the incidence of sexual victimization in the study year as 82 per 1,000 children, the national annual equivalent of 5,191,000 child victims. It was estimated that 15 per 1,000 children between the ages of 2 and 5 were sexually victimized.

Culture and Socioeconomic Status

Sexual abuse occurs across all racial and ethnic backgrounds, and there is little evidence to suggest one cultural group experiences more sexual abuse than another (Fassler, Amodeo, Griffin, Clay & Ellis, 2005; Finkelhor, 1994). As well, studies have consistently reported that there appears to be no correlation between risk of sexual victimization during childhood and socioeconomic status (Finkelhor, 1994; Putnam, 2003). Although lower-income families are more likely to be reported for sexual abuse,

retrospective studies indicate that individuals who grew up in poverty are no more likely than their more affluent counterparts to be sexually abused (see review by Finkelhor, 1994).

Age and Gender

Although reported cases suggest that risk of child sexual abuse increases with age (Putnam, 2003), researchers have debated whether age is actually a risk factor for sexual abuse. In general, infants and toddlers are at the greatest risk of maltreatment by their caregivers (USDHHS, 2005), yet children over the age of 12 consistently account for the majority of reported sexual abuse victims (Boney-McCoy & Finkelhor, 1995; Finkelhor et al., 1997; Finkelhor et al., 2005). While younger children may be more vulnerable to being abused, pubescent children may be more desirable victims for offenders. Yet some theorists suggest that developmental differences between younger children and teens may account for disproportionate rates of disclosure and detection, rather than actual differences in incidence (Finkelhor & Dziuba-Leatherman, 1994; Finkelhor, 1995).

It is estimated that between 25% and 35% of reported sexual abuse victims are infants through 6 years old (Fontanella et al., 2000, citing U.S. General Accounting Office, 1996), although this is likely a considerable underestimation. Developmental vulnerabilities inherent to very young children contribute to their risk of sexual abuse, including their degree of dependency on caregivers, undeveloped verbal and cognitive skills, limited ability to protect themselves, and minimal contact with social contexts outside of their home where abuse may be detected or disclosed (Brilleslijper-Kater, Friedrich & Corwin, 2004; Finkelhor, 1995; Finkelhor & Kendall-Tackett, 1997; Fontanella et al., 2000). When a young child is sexually victimized, it may easily go

undetected. The child's developmental capacities inhibit their ability to appreciate the wrongness of the abuse and find the words to disclose it (Campis, Hebden-Curtis & Demaso, 1993; Goodman-Brown et al., 2003).

Reported victims of child sexual abuse are at least twice as likely to be female than male, yet retrospective studies of adults suggest that boys are victimized much more often than child protection data suggests (Finkelhor, 1994). It is estimated that boys account for at least 20% to 29% of child victims (Finkelhor, 1994; review by Putnam, 2003). Evidence consistently indicates that males are more likely to delay disclosure than females (Goodman-Brown et al., 2003), primarily due to feelings of shame and fear of stigma (e.g. homosexuality, victim label) (Finkelhor, 1984).

Emerging investigations into the relationship between child's gender and characteristics of the abuse have resulted in some significant findings. Studies indicate that females are more likely to be abused by intrafamilial offenders, while males are more likely to be abused outside of the home by strangers or acquaintances (Finkelhor, Hotaling, Lewis & Smith, 1990). Males are more likely than females to experience more severe forms of abuse, including oral and anal intercourse (Finkelhor, et al., 1990; Finkelhor, 1994). However, gender differences may be less pronounced among younger victims. "It seems plausible that the dependency needs of young boys and girls may equally predispose them to sexual abuse in their own home by someone close to them" (Fontanella et al., 2000).

In a record review of 74 cases of sexually abused children ages 2 to 5, Fontanella and colleagues (2000) found no differences between males and females with regard to mean age of onset of abuse (36.93 months for males, 40.84 months for females) and

relationship to the perpetrator, with most offenders being male relatives (48% of offenders ages 20-50 and 31% under age 13). Both boys and girls were most likely to be abused by someone they knew well (78% of victims) and the majority of abuse occurred in the child's home (60%). Boys experienced more fondling, oral and anal intercourse than girls (41% versus 9.2% respectively), although girls were more likely to experience some form of penetration than boys (64% of girls versus 28% of boys). These findings suggest that young children may be a unique subtype of sexual abuse victims, with less gender variations in abuse experiences than older children.

In summary, challenges defining sexual abuse and low rates of disclosure have precluded the gathering of accurate incidence and prevalence rates. Still, current information about the scope of the problem indicates child sexual abuse affects approximately one in 4 or 5 girls and one in 6 or 7 boys. For certain, the problem of child sexual abuse in America affects children of all ages, ethnic groups, socioeconomic status, and both genders. Although boys and girls ages birth through six years may be especially vulnerable to abuse, there is limited information about the consequences of sexual abuse to these young victims. Available research on this population is outlined below.

The Impact of Child Sexual Abuse

To date, few studies have specifically focused on young children. When children 6 and under have been included in studies, they are typically a small group aggregated within a larger sample of older children. In this section, the current literature regarding young children—albeit limited—is reviewed. First, symptoms commonly associated with child sexual abuse, as derived from a review of studies that used the symptom approach,

are discussed. Next, studies utilizing a developmental perspective in exploring outcomes of child sexual abuse among young children are reviewed.

Associated Symptoms

The list of behavioral, affective, psychological and social problems that have been associated with sexual abuse is extensive. In the most comprehensive review of studies to date, Kendall-Tackett and colleagues (1993) concluded that the consequences of sexual abuse manifested most commonly and with the greatest effect size across all age groups, including young children, were: (1) externalizing behaviors (such as sexualized behaviors and aggression); and (2) internalizing behaviors (such as depression and withdrawal.) Depression, school and learning problems were particularly robust.

Kendall-Tackett and colleagues (1993) found that children ages 6 and under evidenced symptoms of anxiety, nightmares, general posttraumatic stress reactions, internalizing, externalizing, and inappropriate sexualized behaviors. Of four studies that included preschool-aged children, one study reported general behavior problems among 62% of preschoolers and three studies reported aggressive behaviors associated with the sexual abuse of young children. Across studies, school-aged children evidenced significant degrees of fear, aggression, nightmares, school problems and hyperactivity. However, sample sizes of these studies were generally small and few used well-designed comparison groups, which limited the power and reliability of findings (Kendall-Tackett et al., 1993).

Studies of Preschool-Aged Children

After extensive review of the literature, few studies were located in peer-reviewed journals focused on children ages birth through 6 years, and even fewer in which

researchers applied a developmental theory to the study of sexual abuse. The largest sample among studies of children ages birth through 6 years is 111 children, although division of the sample into smaller groups limited the strength of findings (reviewed below). Only one study of sexually abused preschool-aged children was found published after 1996. A few studies investigating the impact of different types of child maltreatment on child development were identified that included sexually abused children in their samples. Unfortunately, the low number of sexual abuse victims within larger samples of maltreated children seriously limited the findings or even precluded the researchers from conducting meaningful data analysis on these subsamples. However limited, the studies reviewed below indicate the potential for young victims to exhibit maladaptive developmental outcomes, =warranting further investigation.

Measuring the developmental status, behavioral adjustment and sexual behavior problems of sexually abused preschoolers, Hewitt and Friedrich (1990) investigated the initial impact of sexual abuse on 111 children ages 1 to 5 years, 64 of whom were “probably abused” and 28 who were categorized as “abuse-uncertain.” The study included a nonabused comparison group of 19 children. The sample was divided into two groups, comprised of children aged 1 to 3 and 4 to 5. Hewitt and Friedrich (1990) found that children ages 1 to 3, who were probably sexually abused demonstrated significantly higher levels of sexual behavior problems and sleep problems than nonabused children. Children ages 1 to 3 identified as abuse-uncertain demonstrated significantly higher levels of internalizing and externalizing behaviors and poorer receptive language, expressive language, gross motor skills, situation comprehension skills, self-help skills, and overall general development than both comparison groups.

Children ages 4 to 5 who were probably abused and those whose abuse was uncertain demonstrated higher levels of sexualized behaviors when compared with their nonabused counterparts. Abuse-uncertain children had significantly higher degrees of internalizing behaviors than nonabused children. For males, there were no significant differences between the 3 groups in other behavioral problems, although the authors cite small group sizes when the data was analyzed by gender. Females ages 4 to 5 whose abuse was uncertain demonstrated higher degrees of anxiety than nonabused girls. Children whose abuse was uncertain had poorer receptive language skills than nonabused children, and lower scores on measures of expressive language and situation comprehension than children who were probably abused. Among the entire sample, the abuse-uncertain group of children was the most compromised with regard to developmental outcomes, behavioral adjustment and sexualized behaviors. Hewitt and Friedrich (1990) indicate that the families of children whose abuse was uncertain were among the most chaotic and problematic, which may further explain their findings. Although the division of the sample by age and gender limited the strength of this study's findings, Hewitt and Friedrich (1990) concluded that sexual abuse is likely to be linked with behavioral problems and developmental maladaptation, as well as age-inappropriate sexualized behaviors.

In the longitudinal Minnesota Parent-Child Interaction research project, 11 children (7 girls; 4 boys) in the study were identified as having been sexually abused during assessments conducted between the ages of 4 to 6 (Erickson et al., 1993). When compared with the control group, children who were sexually abused, “[demonstrated] poor comprehension of day-to-day school tasks, were rated as being more disturbing in

the classroom, less involved, and more likely to make irrelevant responses in class” (p. 674). When compared with controls, children who were sexually abused demonstrated poorer overall social-emotional adjustment and, as a result, demonstrated deficits in school performance and problems with social behaviors. They demonstrated significant problems with attention, nervous and overactive behaviors, obsessive-compulsive behaviors and anxiety. Children who were sexually abused were more likely than their nonabused counterparts to present with internalizing problems, including social withdrawal and less positive affectivity.

Most noted by Erickson and colleagues was the high degree of dependence on adults demonstrated by children who were sexually abused, as evidenced by their needs for closeness, strong needs for approval and frequent help-seeking behaviors. According to Erickson et al., “the passive, dependent nature of their behavior in school seems consistent with their victim role at home” (p. 679). Again, the small sample size of sexually abused children in this study limits the validity and generalizability of the findings, yet the results suggest a connection between sexual victimization and the disruption of socioemotional development during early childhood.

Using developmental constructs in sampling procedures and instrumentation, Mian, Marton and LeBaron (1996) investigated the impact of sexual abuse on girls between the ages of 3 to 5. Mian and colleagues examined language skills, behavioral and affective outcomes of girls who were sexually abused (n= 70) compared with nonabused girls (n= 42), matched on demographic characteristics. They reported significant differences among sexually abused children: (1) receptive vocabulary; (2) internalizing problems; (3) sexual problems; (4) overall social competence; (5) engagement in

activities; and (6) inappropriate play behaviors. Twenty-one percent of sexually abused girls ages 4 to 5 scored in the clinically significant range for internalizing behaviors. Mian and colleagues also found nearly significant differences in somatic complaints among girls who were sexually abused, compared with those who were not. They also found that the nature of the parent-child relationship and family environment were significant predictors of emotional and behavioral outcomes.

Shipman and colleagues (2002) measured the emotional regulation strategies of 22 girls who were sexually abused between preschool or early elementary school years, as compared with 22 nonabused girls. Assessments were conducted between the ages of 6 and 12. The investigators' rationale for examining emotional regulation strategies was based on the theoretical assumption that sexual abuse during early childhood would disrupt this salient developmental task. Shipman et al. (2002) found that the girls who had been sexually abused were more likely to inhibit emotional expression to avoid conflict with their parent, and were less likely to utilize emotional expression to rectify a troubling situation than nonmaltreated girls.

The girls who had been sexually abused expected less support and practical assistance from their parents following displays of anger or sadness than nonabused girls (Shipman et al., 2002). In fact, sexually abused girls expected interpersonal conflict to increase with their mothers and their fathers following emotional expression. The abused girls demonstrated no significant differences in peer relationships. A limitation of this study was not only the small sample size, but also the lag time between the abuse experience and assessment of emotional regulation strategies. The analysis did not include the identification of factors that influenced social competencies despite problems

with emotional regulation, nor did the investigators assess the influence of family dynamics on outcomes.

In conclusion, data on the impact of sexual abuse during early childhood is insufficient. Yet, what is currently available suggests disruptions in socioemotional developmental outcomes. Although the studies reviewed have their limitations, emerging trends justify further investigation of outcomes using a meaningful sample size and well-defined developmental framework. Next, additional research regarding factors related to the impact of child sexual abuse is discussed.

Factors Associated with the Impact of Sexual Abuse

Several factors have been presumed to be associated with the degree of measurable harm experienced by victims of child sexual abuse. Specifically, (1) severity of the abuse experience; (2) age of onset of abuse; and (3) parent-child relationships and parental functioning have been of particular interest to researchers. However, as with much of the literature in sexual abuse, findings have been relatively inconsistent across studies. Problems have arisen as a result of variations in defining certain constructs, as well as general methodological problems, such as wide variations in sampling and data analysis procedures. Trickett and colleagues (1993) note intervening variables are typically investigated individually, rather than assessed for their differential influence on different outcomes. Again, the absence of consensus on a theoretical perspective in studying child sexual abuse has led to limitations in findings. Still, there is meaningful information to be gleaned from the current literature regarding factors associated with the impact of sexual abuse.

Severity of Abuse. Severity of the abuse experience has frequently been evaluated as a potentially influential factor, presumed to predict the degree of measurable consequences of sexual abuse. It has been hypothesized that certain incidents of sexual abuse, such as exposure to sexualized behavior, may be less detrimental than others, like forcible rape. Penetration (e.g. oral, anal or vaginal intercourse) versus noncontact offenses (e.g. exposure to genitalia) has been found to lead to more severe outcomes (Kendall-Tackett et al., 1993). Similarly, many studies show that the use of force or violence in commission of the sexually abusive act also results in more severe outcomes, including increased severity of trauma-related symptoms (Trickett et al., 1997) and behavior problems (Hewitt & Friedrich, 1990). Still, these findings are inconsistent across studies, with some studies finding no relationship between severity of abuse and outcomes (Kendall-Tackett et al., 1993). Inconsistencies in the relationship between severity of abuse and outcomes may also be related to the nature of the abuse experience, relative to the child's developmental stage and physical development.

Age of Onset. The age of onset of sexual abuse is a variable that has produced the most inconsistent findings in explaining variance in symptomology and has been debated in the literature (Gomes-Schwartz et al., 1990; Trickett & Putnam, 1993; Trickett et al., 1997). In most studies, age of onset is a variable controlled for in the data analysis, not necessarily a construct used in sample selection or instrumentation. In fact, most investigations include wide age ranges in sampling, which "is likely to mask some underlying developmental differences" (Friedrich, 1998, p. 527).

In a review of 45 studies, Kendall-Tackett and colleagues (1993) noted that most studies report the child's age at time of *abuse report* or age at time of *assessment*, as opposed to

actual age the abuse began. And, in many studies, there is a wide variance in time span between the onset of abuse and assessment of outcomes.

Some argue that younger children, especially toddlers and preschoolers, are less impacted by sexual abuse, given their limited ability to understand and remember the event. From a developmental perspective however, “incest occurring at this early stage in ego development has a profound and pervasive negative effect on adult personality” (Cole & Putnam, 1992, p. 177). Limited efforts have been made to assess outcomes that might be related to the developmental stage at which the abuse began, or to “encompass an interest in the existence of critical periods, phases of development when reactions to victimization may have some special potential for impact” (Finkelhor & Kendall-Tackett, 1997, p. 6). Again, the lack of consistent application of well-defined, sound theoretical perspective may explain the variance in findings.

Parent-Child Relationships and Parental Functioning. Despite inconsistent findings produced by research in sexual abuse, there is a high degree of consensus about the role of parents and families of victims. Across studies, parental and family factors have been associated with the measured impact of sexual abuse, as well as predictive of treatment outcomes among sexually abused children. The behaviors of the nonoffending caregiver following the child’s disclosure of abuse are particularly robust predictors of the child’s short- and long-term outcomes (DeJong, 1998; Deblinger, Lippman & Steer, 1999; Heriot, 1996; Lovett, 2004). Children whose parents respond to allegations of sexual abuse with belief, protection and support consistently demonstrate less severe and pervasive symptoms than children whose nonoffending caregivers respond negatively to allegations of abuse (Heriot, 1996). Moreover, mothers who are perceived by their

children as accepting, rather than rejecting, have demonstrated less severe symptoms of depression and PTSD (Deblinger et al., 1999).

Parental support of the child is also associated with treatment outcomes. Among a sample of 43 preschool children (ages 2 years, 11 months to 7 years, 1 month), Cohen and Mannarino (1998) found that parental emotional support of the child was predictive of positive treatment outcomes in the reduction of internalizing and externalizing behaviors. Parental support remained significantly influential of child outcomes at 6- and 12- month follow-ups. Cohen and Mannarino (1998) conclude, “[I]t is our clinical impression that support for the child is especially critical in facilitating symptomatic improvement in very young children, who are particularly dependent on parents for physical and emotional support” (p. 49). These connections between parent-child relationships and outcomes for child victims further indicate the relevance of applying an ecological-developmental framework to studying the impact of child sexual abuse.

Summary

Investigations into the impact of child sexual abuse have resulted in a myriad of associated symptoms, yet findings are often inconsistent and limited by small sample sizes, methodological challenges and the lack of a theoretical context. Internalizing and externalizing behaviors, as well as anxiety, PTSD symptoms and sexualized behaviors are common symptoms evidenced by preschool-aged child victims (Kendall-Tackett, et al., 1993). However, few studies have been specifically focused on this population and even fewer have utilized a developmentally-sensitive approach. It is concluded that the extant research regarding these youngsters is insufficient. Further investigation into the impact of sexual abuse on preschool-aged children is warranted, as is identification of the

role of family dynamics in promoting positive development despite sexual abuse. To do so, it is important to understand the developmental stages of early childhood and corresponding tasks, as well as potential pathways of adaptive and maladaptive development. A brief review of early childhood development, relevant theoretical constructs and related empirical support are outlined in the next section.

Perspectives in Early Childhood Development

Over the past century, significant advances have been made in theories of child development, providing a basis for understanding patterns of physical, psychological, socioemotional, behavioral and neurobiological functioning. Developmental theories are largely based on the premise that human development is an ongoing process of adaptations to physiological, cognitive, emotional, and psychological changes throughout the life span, which are largely influenced not only by the individual self system, but its dynamic interaction within ecological contexts (Bronfenbrenner, 1979; Cicchetti, 1989; Sameroff, 1995).

Proponents of various, interrelated developmental theories conceptualize development as a hierarchical progression of organization and adaptation to physiological and environmental changes and influences, “consisting of a series of age- and stage appropriate tasks that remain critical to adaptation throughout the life span” (Cicchetti, 1993, p. 481). Throughout every realm of development—neurobiological, cognitive, socioemotional—new tasks emerge during each stage, building on and incorporating competencies from the previous stage (Cicchetti, 1993). Furthermore, development is viewed as a dynamic, transactional process in which the developing child’s relationships

and interactions within his or her environment influence adaptation. Bronfenbrenner (1979) asserts,

The ecology of human development involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded (p. 21).

Transactional processes are especially critical during infancy and early childhood, as young children are highly dependent on their caregivers to meet their physical, emotional and cognitive developmental needs. Empirical evidence consistently supports theoretical assertions that the developmental tasks of early childhood are critical to socioemotional development and functioning throughout the lifespan (Crittenden & Ainsworth, 1998; Wolfe & McGee, 1991). In general, the salient socioemotional developmental tasks of early childhood include: (1) establishment of a secure attachment relationship in infancy; (2) the emergence of autonomous functioning and guided self-regulation during toddlerhood; and (3) emotional regulation and negotiation of peer relations in early childhood (Kaufman & Cicchetti, 1989; Sroufe et al., 2005).

During infancy and toddlerhood, the child's transactional relationships with caregivers, family members and an expanding social context, the child is presented with increasing opportunities for autonomy. Toddlers begin exploring their environment and engaging in social interactions, typically with the guidance and protective supervision of caregivers. Consequently, the child's sense of self begins to emerge (Cicchetti, 1989). From a life span development perspective, infants and young children who fail to develop

secure attachments, learn adaptive self-regulation skills, or develop a secure sense of self, experience deficits in the socialization experience that interfere with competencies in later childhood, adolescence and into adulthood (Wolfe & McGee, 1991). In essence, the child's early caregiving relationships set the stage for perhaps the most critical lifetime developmental task of negotiating peer relationships and adapting to expanding—and often unfamiliar—social contexts. A growing body of evidence closely links early experiences within the caregiving environment with interpersonal relationships throughout childhood, adolescence and into adulthood (Ladd, 1992; Sroufe, 2005)

Children's successes in negotiating the developmental challenges of early childhood are inextricably linked to the quality of parent-child-family relationships and interactions. Elicker, Eglund & Sroufe (1992) identify caregivers' roles in their promotion of child competencies throughout the developmental tasks presented during early childhood. During infancy, the caregiver's responsibility in facilitating attachment and emotional regulation requires sensitive, predictable care and responsive availability. "By having their anger, fear, and distress ameliorated by their caregiver, negative affect does not become overwhelming and disregulating but can be regulated increasingly flexibly by the child themselves" (Vondra, Shaw, Swearingen, Cohen & Owens, 2001, p.14)

During the toddler years, parents promote exploration/mastery and individuation through the provision of a secure base and firm support (Elicker et al., 1992). Elicker and colleagues (1992) purport that, during the preschool years, parents who model open communication, acceptance, and supportive monitoring of the child effectively support the child's developmental tasks of self-confidence, peer group membership and close

friendship. “[S]ecure parent-child attachments which may grow out of sensitive-responsive caretaking (Belsky, Rovine & Taylor, 1984), help children to develop the autonomy and confidence needed to explore and develop relationships with others, including peers (Ladd, 1992, p. 9). Hence, abusive or neglectful parent-child relationships may negatively impact early childhood developmental outcomes.

Families of Victims of Child Sexual Abuse

Evidence of the connections between parent-child relationships and child outcomes following sexual abuse support the theoretical underpinnings of ecological-developmental theories. From this perspective, families with higher degrees of functioning, nurturing caregivers, and safe, predictable environments may have the capacity to promote and restore healthy, adaptive development of child victims. Unfortunately however, families of sexually abused children have often been found to experience measurable dysfunction, including family violence, chaotic environments, problematic family structure, parent-child role reversal, substance abuse, mental health problems (Black et al., 2001; Heriot, 1996; Lovett, 2004). Findings in the developmental literature provide further evidence of this assertion, as families of sexually abused children have demonstrated particularly poor abilities to support adaptive child development (Hewitt & Friedrich, 1991; Howes, Cicchetti, Toth & Rogosh, 2000; Pianta, Egeland & Erickson, 1993). These studies are reviewed below.

In an investigation of affective, organizational, and relational characteristics of maltreating families with 3 to 5 year old children, Howes and colleagues (2000) found that families of sexually abused children exhibited “patterns of affect dysregulation, disorganized roles and chaotic interactions, and rigid relationship skills” (p. 104). Howes

and colleagues found that families with child victims of sexual abuse exhibited significantly more anger, poorer skills in managing interactions and less clarity of family roles when compared with families with child victims of physical abuse and neglect, and nonmaltreating families.

In the longitudinal Minnesota Mother-Child Interaction project, families of children who were sexually abused between the ages of 4 to 6 (n=11) displayed significantly high degrees of stress and crises. Families of sexually abused children, “were marked by extreme disorganization and chaos: frequent moves, physical abuse of the mothers by husbands and boyfriends, maternal chemical abuse, extreme dependence by the mothers on husbands and boyfriends; in many cases the children were experiencing other forms of maltreatment” (Pianta, et al., 1993, p. 236).

Investigating the influence of family dynamics on child developmental and behavioral outcomes among a sample of 1 to 5 year old sexually abused children, Hewitt and Friedrich (1991) found that families of children who were “probably” sexually abused, as well as children whose abuse was uncertain were found to be highly distressed, exhibiting high degrees of marital discord, domestic violence, financial problems and physical abuse. Among these children, those with higher functioning families demonstrated more adaptive outcomes than children with more chaotic families. Hewitt and Friedrich concluded that, “The degree to which a child’s autonomy is supported in a family that is cohesive and expressive constituted important ‘buffering’ variables for all three variables for outcome (i.e. Child Sexual Behavior Inventory, Child Behavior Checklist, Internalizing and Externalizing)” (p.67).

In accordance with the assumption that abusive parenting may influence maladaptive development, researchers have begun to apply ecological-developmental theories to the study of various forms of child maltreatment. Empirical data in the fields of physical abuse and neglect have supported theory-building in child development. As a result, several theoretical perspectives have emerged linking child maltreatment with maladaptive development throughout the lifespan. These theoretical perspectives are reviewed below, followed by a section on empirical studies supporting these assumptions.

Developmental Theories and Child Maltreatment

With growing appreciation for the value of successful negotiation of early developmental challenges, developmental theorists are increasingly concerned with the etiology of maladaptive developmental outcomes. In recent years, researchers have begun to identify the types of early childhood experiences that have the capacity to disrupt developmental processes to such a degree that the child's social and emotional functioning are problematic or pathological. Most notably, the foci of many developmental researchers in the study of maladaptive developmental pathways have been on experiences of maltreatment and trauma during childhood.

In efforts to understand the consequences of trauma and maltreatment to the developing child, several interrelated ecological-developmental models have proliferated. Among these perspectives, developmental psychopathology is gaining substantial empirical validation in studies of child maltreatment. The developmental psychopathology perspective conceptualizes abusive childhood conditions as potential catalysts for a maladaptive developmental trajectory. Cicchetti (2004) states,

“Maltreatment sets in motion a probabilistic path of epigenesis for children characterized by failure and disruption in the successful resolution of major stage-salient issues of development that have grave implications for functioning across the lifespan” (p. 731).

According to DeBellis (2001)

Maltreatment in childhood and adolescence may disrupt developmental achievements and may cause delays in, deficits of, or failures of multisystem developmental achievements in motor, emotional, behavioral, language, psychosocial, social and cognitive skills. Trauma in childhood may also impact psychosexual and moral development (p. 544).

Another related theoretical perspective, developmental traumatology has recently emerged from advances in research on brain development. With the goal of identifying the developmental impact of trauma-related symptoms, researchers in the field of developmental traumatology are concerned with the psychiatric and psychobiological impact of interpersonal violence in the life of the developing child (De Bellis, 2001). Developmental traumatology integrates theories of developmental psychopathology, stress and trauma research with technological advances in examining the developing brain. The developmental traumatology perspective integrates the extant knowledge on the effects of trauma within a developmental perspective. A pioneer in the field, De Bellis (2001) states, “The developmental consequences of PTSD and PTSD symptoms can lead to failures in behavioral and emotional regulation as well as cognitive consequences resulting in the comorbid psychopathology commonly seen in maltreated children” (p. 544). Proponents of the developmental traumatology perspective add dimension to the

PTSD model by seeking to understand the ways in which trauma-related symptoms impact daily functioning and developmental trajectories.

Finkelhor and Kendall-Tackett (1997) propose a theoretical perspective overlapping developmental psychopathology and developmental traumatology, labeled developmental victimology. In this view, the interpersonal nature of victimization sets it apart from other stressors and trauma, such as injury or natural disaster. Finkelhor & Kendall-Tackett (1997) assert that qualities of malevolence, betrayal of trust and violation of social norms are important factors that distinguish victimization from trauma. They contend that the effects of victimization should be explored beyond localized symptoms typically associated with traumatic events (e.g., fear and vigilance), and extend to more profound developmental effects, including interpersonal relational styles, morality, attitudes and beliefs. The developmental victimology perspective considers the broad ramifications of victimization, including “impairment of self-esteem, the development of general styles of behavior that are very aggressive or very withdrawn, the inhibition of a whole realm of activity like sexual functioning or academic achievement, the use of drugs or other dysfunctional ways of dealing with anxiety” (p. 23).

It is important to note that developmental psychopathology, developmental traumatology, and developmental victimology are by no means mutually exclusive, but are integrative ecological-developmental life span models. The emergence, support and consequential proliferation of such ecological-developmental models signify a paradigm shift toward a deeper understanding of the developmental impact of child maltreatment, victimization and trauma. These theoretical models have been widely accepted by researchers, social service and treatment providers, and even policymakers in the field of

child neglect. As well, researchers and providers working in the areas of physical abuse and family violence are increasingly utilizing ecological-developmental models in investigations, assessment and intervention planning. However, the field of child sexual abuse has avoided this theoretical evolution, despite solid justifications for a shift. In the following section, empirical support for studying child maltreatment and early trauma using ecological-developmental models is briefly discussed.

Empirical Support for Developmental Models

Over the past thirty years, empirical investigations into the consequences of child maltreatment have consistently produced evidence affirming hypotheses that abuse, neglect and trauma disrupt trajectories of child development. Improved rigor in methodology, especially in the use of longitudinal designs and well-defined normative comparison groups, has resulted in considerable confidence in identifying the developmental sequelae of child maltreatment. In a commentary on three decades of research in developmental psychopathology, Cicchetti (2004) asserts, “Child maltreatment may represent the greatest failure of the environment to provide opportunities for normal development” (p. 734).

A review of the multitude of studies exploring the developmental impact of child abuse is beyond the scope of this paper. However, it is important to note relevant findings consistently validate links between maltreatment during early childhood and maladaptive functioning on stage-salient socioemotional tasks of infancy, toddlerhood, and the school years (see reviews by Cicchetti, 2004 and Cicchetti & Toth, 1995). In a description of the impact of maltreatment during early childhood, Shonk & Cicchetti (2001) state:

Maltreated toddlers, preschoolers and school-age children display excessive dependency, social wariness, and reduced exploration (Aber & Allen, 1987; Erickson et al., 1989) deficits in affect regulation (Cummings, Hennessy, Rabideau & Cicchetti, 1994; Shields & Cicchetti, 1999; Shields, Cicchetti & Ryan, 1994) and impaired autonomous mastery (Egeland & Sroufe, 1981; Koenig, Cicchetti & Rogosch, 2000) (p. 4). Abused toddlers have shown to “react to peer distress with poorly regulated and situationally inappropriate affect and behavior, including anger, fear, and aggression, as opposed to the more normatively expected response of empathy and concern” (Cicchetti & Toth, 1995, p. 6).

Comparing maltreated to nonmaltreated children from an at-risk sample, Erickson and colleagues (1993) found maltreated youngsters were functioning much more poorly on several areas of social and emotional development than their nonabused counterparts. Specifically, toddlers who experienced abuse or neglect demonstrated significantly higher displays of anger, frustration and noncompliant behaviors than toddlers who were not abused. Preschool-aged children were rated by their teachers as displaying more hyperactive, distractible behaviors and lesser degrees of self-control than children nonmaltreated children. Abused preschoolers also evidenced more affective deficits than their nonabused counterparts.

Similar findings have been supported across studies (Cicchetti, 2001). As well, maltreated children have been found to demonstrate poor social skills and problems with peer relationships, specifically physical and verbal aggression, social withdrawal, peer

rejection, poor engagement in play, and limited prosocial behaviors (see reviews by Cicchetti & Toth, 1995; Shonk & Cicchetti, 2001; Kaufman & Cicchetti, 1989.).

The importance of these findings lies not only in their support of a theoretical understanding of the impact of child maltreatment, but also in laying the groundwork for future research, intervention and prevention strategies, and policy development. As ecological-developmental theories gain empirical support, the depth of the knowledge base continues to grow and inform practice in meaningful ways. Yet, research in child sexual abuse remains largely separate from other fields of maltreatment and lacks a sound theoretical basis, thus generating inconsistent findings, gaps in research, and a limited knowledge base. It is asserted that the field of child sexual abuse requires a theoretical shift toward investigating the impact of child sexual abuse from an ecological-developmental perspective.

Toward a Developmental Framework

The preceding literature review has provided: (1) a rationale for studying the impact of child sexual abuse on child victims ages birth through 6 years, and (2) foundation for applying an ecological-developmental model to this study. As well, the current literature, however limited, also provides a basis for hypothesizing about the impact of child sexual abuse on young children's socioemotional development. In addition to our current understanding of the development tasks, challenges and needs of early childhood, the sexual abuse literature may actually provide some insight into the potential developmental trajectories of young victims. Although previous findings in sexual abuse research have not been derived from measurement of developmental outcomes per se, it is possible to examine and evaluate them within a developmental

context in order to devise hypotheses for this study. It is asserted here that behavioral and affective symptoms associated with the sexual abuse of young children may actually be indicative of early disruptions in socioemotional developmental tasks. The basis for this assertion is outlined below.

Among the many global symptoms, internalizing and externalizing behaviors have commonly been observed among victims of child sexual abuse (Hewitt & Friedrich, 1991; Kendall-Tackett, et al., 1993). These symptoms may be indicators of deeper, more pervasive developmental problems. De Bellis (2001) describes internalizing behaviors and externalizing behaviors as indices of the child's failure to develop self-regulation, which is a critical developmental task of early childhood. Similarly, general PTSD symptoms, including dissociation, hyperarousal, and hypervigilance, which have also been associated with sexual abuse (Kendall-Tackett, 1993), can be construed as emotional dysregulation. As well, hyperactivity, aggression, and school problems (Kendall-Tackett et al., 1993) are general indicators of developmental deficiencies, including maladaptive modulation of arousal and problems in the social environment and peer relationships.

Retrospective studies of adults may also provide insight into the socioemotional sequelae of sexual victimization. Problems evidenced during adulthood may signify enduring problems associated with early disruption of socioemotional developmental tasks (Sroufe et al., 2005). While making such inferences has its limitations, there is evidence to suggest that sexual abuse carries social and emotional consequences well into adulthood. A myriad of problems with intrapersonal functioning have been identified among adult survivors of child sexual abuse, including depression, PTSD, anxiety,

anger/hostility, substance abuse, suicidality, eating disorders, obsessive-compulsive disorder and somatic complaints (see reviews by Briere & Runtz, 1993; Neumann, 1996). As with children, these problems are indicative of problems with emotional regulation strategies, social adaptation and interpersonal skills. Briere and Runtz (1993) aptly provide a theoretical linkage between anxiety symptoms and interpersonal functioning:

The conditioned components of adult-specific anxiety reside in the fact that child sexual abuse usually takes place in human relationships where closeness and nurturance are expected, yet intrusion, abandonment, devaluation, and/or pain occur. As a result, a classically conditioned association may form between various social or environmental stimuli and danger, such that a variety of otherwise relatively neutral interpersonal events elicit fear (p. 316).

In fact, retrospective studies of adults consistently report that sexual abuse during childhood predicts a wide range of problems with interpersonal functioning. In a comprehensive review of retrospective studies, DiLillo (2001) concluded, “In spite of methodological limitations, the fairly consistent pattern of difficulties found across various realms of relationship functioning paints a rather disturbing picture of the interpersonal life of women reporting a history of CSA” (p. 568). Across retrospective studies, child sexual abuse was found as a significant predictor of: poor social adjustment, dysfunctional marital and couple relationships, low satisfaction with intimate relationships, difficulties with trust and intimacy, sexual problems and dysfunction, and challenges in the parenting role (DiLillo, 2001). In another systematic review, Davis and Petretic-Jackson (2000) also concluded that interpersonal distress as manifested in intimate and sexual relationships may be the most prominent pattern associated with child

sexual abuse. Again, intrapersonal—and especially *interpersonal* problems evidenced among adult survivors of sexual abuse are likely indicative of disruptions in salient developmental processes during childhood and adolescence. Unfortunately, little attempt has been made to explore developmental pathways from sexual abuse to later socioemotional functioning (DiLillo, 2001).

These findings further substantiate the hypotheses that sexual abuse during early childhood may disrupt salient socioemotional developmental tasks. Investigation into the consequences of child sexual abuse during early childhood may lend insight into how such maladaptive developmental pathways are initiated and how adaptive development might be restored after sexual abuse has occurred. However, research reported in the extant body of sexual abuse literature has failed to integrate developmental constructs. As will be discussed later in this chapter, strides have been made in understanding the impact of others forms of child maltreatment (e.g., neglect and physical abuse) through the application of developmental models.

Developmental studies tend to incorporate the following methods: (1) sampling within specific ages or developmental periods; (2) developmentally-sensitive instrumentation, which has been normed on general populations; (3) examination of stage-salient developmental outcomes; (4) assessment of factors within the subjects' ecological systems; (5) use of matched controls as comparison samples; and (6) longitudinal design and analysis strategies. Although longitudinal design was not used in this study, many of the other methods typically employed in developmental studies were utilized to investigate: (1) the impact of child sexual abuse on socioemotional functioning

and; (2) potential buffers within the family system. To this end, the specific research questions and conceptual model of this study are outlined in the sections below.

Research Questions and Hypotheses

This study proposed to investigate five primary research questions. Because descriptive data regarding this population is so limited, the initial research questions were exploratory in nature with no a priori hypotheses. First, what are the demographic characteristics of very young children who have been sexually abused, including gender, ethnicity, socioeconomic status? Second, what are the characteristics and qualities of sexual abuse experienced by very young victims, including: age of first sexual abuse allegation, number of sexual abuse allegations, severity of sexual abuse and co-occurring physical abuse?

Third, what is the impact of sexual abuse during early childhood on socioemotional developmental outcomes? It was hypothesized that sexual abuse disrupts socioemotional developmental tasks salient to early childhood, as evidenced by deficits in modulation of arousal, emotional regulation, autonomy and self-development, and establishment of peer relationships (Cicchetti & Schneider-Rosen, 1986). Using developmentally-sensitive measures normed on nonclinical populations, it was hypothesized that children who were sexually abused would exhibit significant deficits.

Fourth, the primary research question was: When compared with their nonabused counterparts, do sexually abused children demonstrate significantly more maladaptive socioemotional outcomes? It was hypothesized that, when controlling for demographic variables, including gender, ethnicity and socioeconomic status, children who have been sexually abused will demonstrate significant deficits in social and emotional adaptive

behaviors compared to their nonabused counterparts. It was hypothesized that sexually abused children would evidence significantly more problems with socioemotional developmental outcomes, including emotional regulation, modulation of arousal, adaptive skills and peer relationships.

The fifth research question was: Do family contextual factors moderate the impact of sexual abuse on socioemotional outcomes? It was hypothesized that nurturing family contexts, as evidenced by high degrees of cohesiveness, expressiveness, empathy and appropriate expectations of the child, will buffer against the negative impact of sexual abuse on young children's socioemotional functioning.

Conceptual Model

To answer the research questions, investigation into the socioemotional developmental outcomes of children sexually abused between birth and age 6 years was designed using an ecological-developmental model. Review of several ecological-developmental theoretical perspectives informed all aspects of this research, as well as provided a context for interpreting the results and synthesizing implications for practice. Socioemotional outcomes were explored with the goal of identifying outcomes relevant to the developmental stages of early childhood. Consistent with the theoretical model, stage-salient outcomes of interest were identified using the taxonomy identified by Cicchetti and Schneider-Rosen (1986), which are reviewed below. Secondary data selected for use in this study were originally collected for LONGSCAN studies, which were also designed within an ecological-developmental conceptual model.

Operational Constructs

Developmental researchers have identified specific behavioral and affective qualities that serve as indices of adaptive or maladaptive functioning related to stage-specific developmental tasks. In the section below, constructs of socioemotional development and corresponding behavioral and affective manifestations are described. These observable indices provide the basis for measurement selection in this study. Cicchetti and Schneider-Rosen (1986) developed a comprehensive model of “*Stage salient issues for conceptualizing the ontogenesis of competence*,” which was used as a guide for conceptualizing and operationalizing socioemotional outcomes of children in this study. Between the ages of infancy and 7 years, Cicchetti and Schneider-Rosen (1986) identify the following stage-salient developmental challenges: (1) Ages 0-12 months: Attachment; (2) Ages 12-30 months: Autonomy and self-development; and (3) Ages 30 months- 7 years: Establishing peer relationships. It is important to emphasize that these developmental stages and tasks are not mutually exclusive, but exist on a hierarchical continuum. Each developmental stage of early childhood and indicators of adaptive or maladaptive development are briefly described below.

Attachment. From birth to 12 months, this stage of development is marked by the following developmental tasks: (1) modulation of arousal, (2) physiological regulation, and (3) formation of secure attachments with the primary caregiver (Cicchetti & Schneider-Rosen, 1986). Essentially, these socioemotional developmental outcomes are most readily observed within interpersonal contexts—the child’s interactions with parents and other adults. Modulation of arousal can be measured by observing the child’s

responses to unfamiliar situations, ability to contain arousal responses, and skills in communicating feelings and needs (Cicchetti, 1989; Crittenden & Ainsworth, 1989).

Autonomy and Self Development. From ages 12 months to 30 months, this developmental period encompasses the following goals: (1) differentiation of persons; (2) awareness of self as distinct entity; (3) exploration of environment; (4) regulation and control of emotional reactions; (5) problem-solving, pride and mastery motivation; (6) capacity to delay gratification; and (7) development of language and communicative skills. Autonomous functioning is observable through the child's self-awareness, problem-solving skills, frustration tolerance, communicative skills (Cicchetti, 1993) and adaptive living skills, such as eating, dressing, toileting (Newborg et al., 1984). Similarly, language and communication skills are early developmental tasks reflective of the child's emerging sense of self. "The ability to talk about the feelings, emotions, and other internal states of self and others is an age-appropriate development of late toddlerhood hypothesized to reflect toddlers emergent self-other understanding and to be fundamental to the regulation of social interaction" (Cicchetti & Toth, 1993, p. 9).

Emotional regulation strategies can be observed through the child's affective presentation, tolerance of frustration, ability to maintain attention, and emotional language skills (Cicchetti, 1993; Dodge & Garber, 1991; Sroufe et al, 2005). Difficulties with modulation of arousal and emotional regulation—emotional dysregulation—are typically marked by problems with impulsivity, distractibility, behavioral excesses, anger and aggression (Dodge & Garber, 1991; Shields & Cicchetti, 1998; Wolfe, 1999). "Aggressive conduct disorders may be thought of as the chronic dysregulation of anger and impulsive desires" (Dodge & Garber, 1991, p. 9). Problems with emotional

regulation may manifest in affective lability, depressive reactions, social withdrawal and socially inappropriate emotional expressions (Dodge & Garber, 1991; Shields & Cicchetti, 1998; Wolfe, 1999).

Establishing Peer Relationships. Beginning around the age of 30 months, through 7 years, the tasks of this development stage are centered around social development and the establishment of peer relationships, including but not limited to: (1) development of self-efficacy and pride; (2) awareness of social roles; (3) development of emotional bonds with peers; (4) empathy and prosocial behaviors; and (5) capacity to take initiative (Cicchetti & Schneider-Rosen, 1986). Perhaps the most pronounced indices of socioemotional development, social and peer competencies are observable through the child's interactions within social contexts, behavioral and affective responses to various social settings, and acceptance by peers (Cicchetti, 1993; Elicker, Egeland & Soufe, 1992). As children enter into social contexts and are faced with new, unfamiliar environments and social situations, their ability to regulate emotional reactions and communicate appropriately becomes increasingly critical to adaptation (Wolfe, 1999). Emergent during early childhood, effective social skills are characterized by successful entry into peer groups, cooperation, reciprocal play, problem solving, empathy, appropriate expression and the development of friendships (Cicchetti, Lynch, Shonk & Manly, 1991).

As social behaviors are reciprocal in nature, the child's peer interactions are directly linked to continuity of ongoing social development, acceptance by peers, self esteem and confidence in negotiating social environments (Cicchetti et al., 1991). "Peer acceptance and reciprocity play a critical role in providing children with the social

experiences and social support they require to learn to adapt successfully to a wide range of situations—not only in the social domain, but in the area of socioemotional and cognitive development as well” (Wolfe, 1999, p. 49). Poor social skills are typically marked by inappropriate emotional and behavioral responses, such as aggression or withdrawal, ineffective communication, failure to effectively read social cues, lack of empathy and understanding of others and defiant behaviors. Maladaptive behaviors in the social environment dictate the quality of peer relationships and the child’s ability to negotiate their expanding social environment. “The salience of the peer system for promoting successful adaptation is apparent. Those children who perform poorly with peers, especially when their total ecology is unsupportive (Bronfenbrenner, 1979), are likely to experience continued incompetence and maladaptation” (Cicchetti & Toth, 1995, p. 10).

Family Dynamics. As discussed throughout the literature review, parent-child interactions and family dynamic factors play a critical role in supporting or hindering adaptive development. Sensitive-responsive caretaking promotes secure attachments, autonomy, self-development and positive peer relationship formation (Belsky et al., 1984; Elicker, 1992; Ladd 1992). Evidence indicates that the child’s transactions within the family environment have the capacity to restore adaptive development, despite exposure to abusive conditions. In this study, sensitive-responsive caregiving was defined by high degrees of family cohesion and empathy. Appropriate expectations of the child and appropriate expressiveness within the family were used as markers of family dynamics that promote healthy socioemotional development.

Summary

An ecological-developmental theoretical framework was used to design this study of the impact of sexual abuse during early childhood. Therefore, the investigation was focused on salient development tasks of early childhood and the role of family dynamics in affecting developmental outcomes. Cicchetti and Schneider-Rosen's (1984) conceptualization of the ontogenesis of competence during early childhood was used as a guide in operationalizing the variables to be examined. As well, the child development literature informed selection of family variables to be analyzed as potential buffers against the negative impact of sexual abuse. In the next chapter, the specific methodology used in sampling, instrumentation and data analysis are outlined.

CHAPTER 3: METHODS

Quantitative secondary data analysis was conducted using data collected by the Consortium for Longitudinal Studies of Child Abuse and Neglect (LONGSCAN). LONGSCAN was chosen for use in the proposed study due to its following strengths: (a) multisite, longitudinal design; (b) incorporation of an ecological-developmental perspective; and (c) developmentally-sensitive outcome measures and ecological constructs. The study design was cross-sectional, with all measurement data collected when the child subjects were age 6 years. Methodology was designed to: (1) explore qualities of the sexual abuse of young children; (2) assess socioemotional functioning of sexually abused children; (3) compare the socioemotional functioning of sexually abused children with nonabused children; and (4) examine correlations between family dynamics and socioemotional functioning for sexually abused children and their nonabused counterparts. This chapter details the specific methods used in this study, including sampling procedures, instrumentation and data analysis strategies.

LONGSCAN Design

The research consortium LONGSCAN was developed between 1989 and 1991, in response to “an urgent need for theory-based, longitudinal research into the antecedents and consequences of child maltreatment,” and by an initiative by the National Center on Child Abuse and Neglect (NCCAN) (Runyan, Curtis, Hunter & Black, 1998, p. 276). LONGSCAN is a research consortium consisting of five independent prospective studies, linked through a coordinating center at the University of North Carolina. The five sites provide diverse geographic representation, including four urban sites in Baltimore, Chicago, Seattle and San Diego and one statewide site in North Carolina comprised of

urban, suburban, and rural communities. At each site, the children recruited for study vary in their risk of and exposure to maltreatment, ranging from at-risk children in the community to children removed from their homes due to substantiated abuse or neglect.

The LONGSCAN sample includes a total of 1,424 children, recruited from the study 5 sites. Eligibility criteria vary by site, with three sites including neighborhood control groups. See Table 1 for a description of LONGSCAN samples. Each longitudinal study begins at age 4 years of age or younger. LONGSCAN researchers at each site follow the cohort of children at regularly scheduled interviews into adulthood, to include brief yearly contacts and more extensive evaluations at ages 4,6,8,12,16, and 20.

LONGSCAN researchers incorporated an ecological-developmental perspective “to define the theoretical domain, to determine the data collection schedule, and to construct age-specific interview protocols” (Runyan et al., 1998, p. 280). The multisite, longitudinal studies examine developmental outcomes and ecological constructs, including the developing child’s interactions within family, social and cultural contexts. Developmental changes, as well as mechanisms of risk and resilience, are emphasized. Data collection procedures and instrumentation were designed with consideration to salient developmental tasks associated with hierarchical stages of child development. All areas of child development (e.g., physical, cognitive, emotional, and sexual) as well as behavioral and affective outcomes are assessed using standardized measurements. Outcome measures are also directed toward parent, family, community and cultural factors. Data is gathered from multiple sources, including the children, parents, teachers, and practitioners, “designed to measure outcome variables as well as intervening

variables that may influence the link between risk status and outcome” (Runyan et al., 1998, p. 279).

Data Management

The first 8 years of LONGSCAN data have been archived and made available by the National Data Archives of Child Abuse and Neglect (NDACAN) free of charge to university faculty, students and other researchers with approval by a qualified Institutional Review Board. An application for access to the LONGSCAN Restricted Data, documentation of IRB approval, and a research proposal were submitted to NDACAN. Dissertation Committee Chairperson, Professor Barbara Thomlison, Ph. D., was listed as the Principal Investigator (PI), per NDACAN requirements that the PI is university faculty. The application included permission for use of LONGSCAN Restricted Data by this doctoral candidate and the Dissertation Committee. Permission for use was received by NDACAN on April 5, 2006. The following individuals were approved as Licensed Users: (1) Principal Investigator, Professor Barbara Thomlison, Ph. D.; (2) Associate Professor Mark Macgowan, Ph. D.; (3) Associate Professor Jonathan Tubman, Ph. D.; (4) Professor Eric Wagner, Ph.D, and (5) Doctoral Candidate, Jennifer Becker, MSW.

Data was provided on CD-ROM in SPSS format, with separate data files for each set of demographic variables and measures. Each subject was assigned a unique identifier to preserve confidentiality. Visit numbers, based on the children’s ages at time of assessment, were provided in each data file to identify the interval at which data was collected. Standardized measures used in the project were scored by LONGSCAN researchers, and both raw and standardized scores were provided in separate data files.

LONGSCAN data was stored on a password-protected personal computer, with access granted only to the doctoral candidate, Principal Investigator and the Ph.D. Committee. All production of hard copies of data was maintained in a locked file cabinet in a locked office, with access granted only to the doctoral student, Principal Investor and the Ph.D. Committee.

Protection of Human Subjects

In original data collection procedures, LONGSCAN administrators and investigators adhered to standards of ensuring informed consent and confidentiality of the subjects, as described below:

Protocols for the protection of human subjects, including referrals for subjects in need of services, have been developed to govern the informed consent and data collection processes and to ensure child well-being and subject confidentiality. All project sites and the coordinating center have approval for their procedures through local Institutional. Reviews Boards and have secured Certificates of Confidentiality from the U.S. Public Health Service to protect the data from subpoena. (Runyan et al., 1998, p. 282).

Data collection in LONGSCAN studies were conducted with adherence to guidelines set forth to protect the confidentiality of data. LONGSCAN Restricted Data was coded by the original investigators to protect the confidentiality of subjects, precluding the identification of any individual child or family. Licensed users do not have access to coding procedures utilized by the original LONGSCAN investigators and, therefore cannot identify individual subjects. Because this study involved secondary data analysis, no subjects were recruited and informed consent was not required. A proposal

for this study was approved by the Florida International University Institutional Review Board (IRB) on March 16, 2006 (Approval #031606-00), with exemption of full committee review.

Sampling

This study's sample included children who were sexually abused during ages birth through age 6 and their nonabused counterparts. The sample was selected from the LONGSCAN sample, beginning with children who had at least one allegation of sexual abuse during ages 0 through 6 years. The decision to include children who had at least one allegation of sexual abuse—as opposed to at least one substantiated case of sexual abuse—was based upon the challenges associated with substantiating sexual abuse allegations. Child victims are the primary sources of testimony during sexual abuse investigations (Coulborn-Faller & Henry, 2000; USDJ, 1997), which often limits the evidence required to officially substantiate sexual abuse. The developmental limitations of young children in providing accurate statements regarding their abuse are well-documented (Coulborn-Faller & Henry, 2000). All children with at least one allegation of sexual abuse had corresponding data indicating the severity of the abuse. This is further indication that, although there was evidence (i.e. severity) of sexual abuse, the case was not actually substantiated in the child protection system or documented in the chart. For purposes of this study, children with at least one allegation of sexual abuse were selected for inclusion in this study. The selected group of allegedly abused children (CSA group) served as a reference point for designing a comparison sample group.

The comparison group was drawn from the LONGSCAN sample based on: (1) no allegations of any type of maltreatment; and (2) demographic characteristics matched

with the sexually abused group. To first explore characteristics of children who were sexually abused (CSA group), children with at least one allegation of sexual abuse were selected from the LONGSCAN sample (n=136). Of these 136 cases, there was a substantial amount of missing data for 11 cases. These 11 cases were excluded from the study because demographic data, as well as data for all of the outcome measures to be used in the study were missing. Exclusion of these cases brought the CSA group size to 125 cases.

In designing a comparison sample of nonabused children (Nonabused group), cases with no record, no allegations, and no substantiation of any type of maltreatment were selected (n=486). For more accurate multivariate analyses, comparison samples should be similar in size, necessitating a reduction in the Nonabused group to 125 cases. Several factors were identified by which to match the CSA group with the Nonabused group, including: (1) region; (2) gender; and (3) ethnicity. Statistical procedures utilized to construct the comparison group are discussed in Chapter 4. The total sample consisted of 250 children, 125 of whom had allegedly been sexually abused and 125 of whom had no allegations of maltreatment. Contingency table analyses (crosstabs) were conducted and a chi-square statistic was calculated to assess for significant differences between groups with regard to demographic characteristics, including gender, ethnicity and income. Last, descriptive analyses of demographic variables were conducted to describe the entire sample. Results are presented in Chapter Four.

Instrumentation

All measurement data utilized were collected during LONGSCAN assessments conducted at age 6. The decision to use only age 6 data was made based on two issues:

(1) assessments were conducted within the developmental stage of interest; and (2) inconsistency of LONGSCAN measures administered at ages 4 and 6 precluded a longitudinal design. Measurement tools were selected from LONGSCAN data in order to effectively assess socioemotional functioning.

Socioemotional developmental outcomes were identified with regard to their relevance to stage-salient tasks of: modulation of arousal, autonomy, self-development, social competence and establishment of peer relationships (Cicchetti & Schneider-Rosen, 1986). Several standardized measures were selected, based on their: (a) sensitivity to developmental stage; (b) observation of salient socioemotional outcomes; (c) having been normed on general/nonclinical populations; and (d) acceptable reliability and validity. Measures were also selected to include multiple informants, with: (a) parent report; (b) clinician observation and administration of instrument; and (c) child self-report. Excessive missing data on measures administered to teachers precluded the inclusion of teacher reports in this study. See Table 2: *Selected Measures*.

The following scales and subscales were selected as dependent variables, to define socioemotional developmental outcomes: (1) Child Behavior Checklist/4-18 (CBCL; Achenbach 1991): Aggression, Attention, Thought Problems, Withdrawn, and Social Problems subscales; (2) Vineland Screener: Daily Living and Socialization subscales (VSC; Sparrow, Carter & Cicchetti, 1993); (3) Loneliness and Social Dissatisfaction Questionnaire (LSDQ, Cassidy & Asher, 1992); and (4) Pictorial Scale for Perceived Competence and Social Acceptance for Young Children: Peer Acceptance and Maternal Acceptance subscales (PCSA; Harter & Pike, 1984). Psychometric properties of these measures are reviewed below.

Child Behavior Checklist/4-18

The Child Behavior Checklist/4-18 (CBCL/4-18; Achenbach, 1991) is a multitaxial, cross-informant set of measures that include parent-report (CBCL), teacher-report (Teacher Report Form, TRF), and self-report (Youth Self-Report Form, YSR) (Hunter et al., 2003). All three measures assess the following constructs: Social Withdrawal, Somatic Complaints, Anxiety/Depression, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. Items can be examined in broad categories of Internalizing Behaviors and Externalizing Behaviors.

The CBCL was normed on a nationally representative sample of 2,368 children from a range of socioeconomic and cultural backgrounds and geographic regions. The CBCL has evidenced high test-retest reliability, with correlation coefficients ranging from .62 to .92 among the subscales (Achenbach, 1991 as cited in Hunter et al., 2003). Overall, the CBCL has demonstrated substantial evidence of content, construct and criterion-related validity, when compared with other measures of behavioral outcomes (Hunter et al., 2003).

In this study, the following CBCL/4-18 subscales were examined: (1) Aggression; (2) Attention; (3) Thought Problems; and (4) Social Problems. Data used was collected during LONGSCAN Age 6 assessments. Unfortunately, the CBCL/4-18 subdomain of Social Competence was not available in LONGSCAN Age 6 data. The CBCL Teacher Report Form was excluded from analysis, due to excessive missing data (38.8%).

Vineland Screener

The Vineland Screener (VSC; Sparrow, Carter & Cicchetti, 1993) is a rapid assessment measure, modified for research purposes from the Vineland Adaptive

Behavioral Scale (VABS; Sparrow, Balla & Cicchetti, 1991). The VSC is used to assess personal and social competence among children ages birth to 18 years (Hunter et al., 2003). There are four age-specific, developmentally-specific versions of the VSC, for children ages 0 to 2, 3 to 6, 6 to 12, and 12 to 18. Each tool is comprised of 15 items in each of 3 domains of adaptive functioning: (1) Communication; (2) Daily Living Skills; and (3) Socialization. “Although each age-specific version has items unique to its age range, many items are included in more than one of the versions in order to enhance sensitivity to differences in rates of development” (Hunter et al., 2003, p. 566).

The VSC is a manualized semi-structured interview, that has been normed on a representative national sample (n = 3000). The items (with values of 2, 1, or 0) are summed for a raw score domain, which can also be calculated for each individual domain. Raw scores are converted to derived scores based on national norms, which “may be interpreted to include standard scores, percentile ranks and stanines, adaptive levels, age equivalents, and maladaptive levels” (Hunter et al., 2003, p. 568). The VSC has demonstrated high interrater reliability ($\alpha = .98$) and high validity, based on correlations between the VSC and the VABS (Communications $r = .95$; Daily Living Skills $r = .93$; and Socialization $r = .92$) (Sparrow et al., 1993, as cited in Hunter et al., 2003). The VSC was chosen for inclusion in LONGSCAN instrumentation because it is “based upon a developmental rather than a deficit model and the domain structure permits assessment of specific developmental strengths and weaknesses” (Hunter et al., 2003, p. 569). This standardized measure allows the opportunity to compare subjects’ scores to normative developmental outcomes. In LONGSCAN studies, the VSC is completed by the child’s primary maternal caregiver at ages 6, 8, and 12. In this study,

assessment scores from the VSC Daily Living and Socialization subscales collected at age 6 were included in data analysis. The Communication subscale data was not available at Age 6 assessments.

Pictorial Scale of Perceived Competence and Social Acceptance for Young Children

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PCSA; Harter & Pike, 1984) is a 24-item self-report scale used to assess children's (ages 4 to 7 years) feelings of cognitive and physical competence and social acceptance by peers. There are two separate versions, used for children from Preschool—Kindergarten and First—Second Grade. This developmentally-sensitive measure includes pictorial response sets, designed to capture the young child's self-perception of competence and social acceptance. It comprises four subscales: Cognitive Competence, Physical Competence, Peer Acceptance and Maternal Acceptance.

The PCSA was normed on primarily white young children between preschool and second grade. Alpha coefficients for the subscales range from .53 (Physical Competence, grades 1-2) to .83 (Maternal Acceptance preschool-kindergarten). The measure demonstrated good discriminant validity in predicting children expected to score differently in each domain (e.g. children retained in a grade, students new to a school).

Loneliness and Social Dissatisfaction Questionnaire

Loneliness and Social Dissatisfaction Questionnaire (LSDQ, Cassidy & Asher, 1992) is a 24-item self-report measure, designed to assess children's feelings of loneliness and dissatisfaction within the social environment. Children are asked several questions about their interactions with peers (e.g. Do you have lots of friends at school?). Response codes are: 1 (no); 2 (sometimes); and 3 (yes). Items are summed for a total

score. Several of the items are reverse coded so that higher scores represent higher degrees of loneliness and feelings of isolation at school.

This instrument was originally tested on a sample of 452 children in the Midwest, 70% white, 25% Hispanic, and 5% Asian (Cassidy & Asher, 1992, as cited in Hunter et al., 2003). The LDS has demonstrated satisfactory internal consistency reliability (.79) using Cronbach's Alpha. LONGSCAN administered the LSDQ at Age 6 assessments. LONGSCAN reported acceptable internal consistency ranging from .61 to .84 (Hunter et al., 2003). LONGSCAN investigators found a significant correlation (.21, $p < .0001$) between the LSDQ and the Teacher Estimation of Peer Status measure.

Adult-Adolescent Parenting Inventory (AAPI)

The Adult-Adolescent Parenting Inventory (AAPI; Bavolek, 1984) is a 32-item self-report measure of parenting attitudes and beliefs (Hunter, 2003). The AAPI measures 4 parenting constructs: Inappropriate Parental Expectations of the Child, Lack of Empathy Toward Child's Needs, Parental Value of Physical Punishment, and Parent-Child Role Reversal. The AAPI has been normed on general adult populations, as compared with abusive parents (Hunter, 2003). It has demonstrated acceptable internal consistency on each of 4 subscales ($\alpha = .70-.86$) and construct validity "established through inter-item correlations, item-construct correlations and factor analyses" (Hunter, 2003, p. 22).

Self-Report Family Inventory (SFI)

The Self-Report Family Inventory (SFI; Beavers, Hampson & Hulgus, 1990) is a 36-item child self-report measure of the child's perception of his or her family functioning. The measure covers 5 domains of family functioning, including: Family

Health/Competence, Conflict, Cohesion, Expressiveness, and Directive Leadership. Respondents rate statements about their family on a 5-point scale. Lower scores are indicative of greater competence. The SFI was normed on nonclinical, less competent nonclinical, and clinical families (Hunter, 2003). Alpha reliability coefficients for the entire scale reportedly range from .84 to .88, with satisfactory test-retest reliability coefficients on each of the subscales. The SFI was administered to children in LONGSCAN studies at age 6, 8, and 12 assessments.

Data Analysis Strategies

Descriptive Statistics and Socioemotional Outcomes

First, descriptive analyses were conducted for the CSA group to explore qualities of the children's sexual abuse experiences, including: (1) age (range 0-4 or 4-6) at which abuse was alleged; (2) number of sexual abuse allegations; (3) severity of abuse; and (4) co-occurring physical abuse. Second, mean scores, standard deviations, and standardized score ranges of each measure of socioemotional functioning were calculated for the CSA group and Nonabused group. In order to compare children in the CSA group with normative populations, standardized T-scores on the CBCL and VSC were explored. Higher scores on the CBCL scales indicate more frequent and severe problem behaviors and higher scores on the VSC indicate more adaptive functioning in specific developmental realms. Based on CBCL normative data (Achenbach, 1991), categorical variables were computed to identify scores within the normal to clinical ranges (Normal = below 60; Borderline = 60-63; Clinical = Above 63). Categorical variables were also computed based on VSC normative data (Low = 70 and below; Moderately Low = 71-85;

Adequate = 86-114; Moderately High = 115-129; High = 130 and above) (Sparrow et al., 1993). Normative data were not available for the LSDQ or the PCSA.

Multivariate and Univariate Analyses of Variance

In order to test for significant differences in group means on multiple dependent variables, using multivariate analysis of variance (MANOVA) has several advantages. MANOVA accounts for potential correlations between dependent variables. By creating an artificial dependent variable, based on linear combinations of the dependents, MANOVA improves the likelihood of revealing differences between the independent variables (factors). MANOVA reduce the likelihood of Type I error, which might occur if multiple independent ANOVAs were conducted. Since the MANOVA produced a significant effect, each dependent variable was examined separately for univariate effects (ANOVA).

Moderating Hierarchical Linear Regressions

It was hypothesized that a positive family setting would serve as a buffer against the negative impact of sexual abuse for young victims, in that child victims with nurturing parents and cohesive families would demonstrate adaptive functioning despite their victimization experience. Therefore, family factors were conceptualized as potential moderators, or factors which would weaken the causal effect of sexual abuse on socioemotional outcomes. A series of hierarchical linear regressions were conducted to examine the influence of family factors and their potential moderating effect on the impact of sexual abuse on socioemotional functioning. These analyses were limited to include only measures of socioemotional outcomes that were normed on general populations and have standardized scores (CBCL and VSC). Selected measures of

socioemotional functioning included: (1) Aggression; (2) Attention Problems; (3) Social Problems; (4) Socialization; and (5) Daily Living Skills. The family factors examined for their potential moderating influence were: (1) Cohesion; (2) Expressiveness; (3) Appropriate Expectations of Child; and (4) Empathy. To address the problem of collinearity between child sexual abuse and family variables, all family factor variables were mean centered. Moderating regression analyses required the creation of 20 interaction variables (child sexual abuse X family factors).

Twenty hierarchical linear regressions were conducted, with the 5 socioemotional outcomes as dependent variables; child sexual abuse and the 4 family factors as independent variables; and corresponding interaction variables (moderators). Variables were entered in two blocks.

Statistical Power

Achieving appropriate statistical power is critical to avoiding both Type I and Type II error. Power is reliant on the selected alpha level, sample size, and effect size relative to the error variance. For the MANOVA and ANOVAs, it was determined that a high effect size (.95) would be most appropriate, as differences in group means may be attributed to factors other than sexual abuse. Selecting a higher effect size especially minimizes the risk of Type II error, mistakenly rejecting the null hypotheses. The program G*Power 3.0.3 was used to calculate the sample size that would be required to achieve a high effect size on analysis of variance using two comparison groups. Selecting $\alpha = .05$ and power = 0.95, with 2 factors and 11 dependent variables, G*Power recommended a sample size of 112 subjects for the MANOVA and 210 for the

ANOVAs. With a total sample of 250, it was determined that analysis results would achieve high statistical power.

In linear regression analyses of moderating effects, the units of analyses impact the power of the statistical test. In this case, the interaction variables were: (1) a dichotomous variable (child sexual abuse); and (2) several continuous variables (family variables). In order to have reasonable power to detect moderator effects with at least one continuous variable, a sample size of over 200 is recommended (Aguinis, 2004). In this case, a sample of 250 was used, thus achieving sufficient power.

Missing Data

Very little data was missing on the selected dependent variables and family variables. On every measure, there were between 2 and 12 missing scores in each group. The CBCL subscales had the least missing data (scores for 2 subjects, n=250) accounting for less than 1% of data points. The LSDQ had the most missing data (24 missing scores, n=250) accounting for less than 10% of data for that variable. Since the missing data was not substantial, these cases were deleted listwise. Listwise deletion is especially appropriate when the loss of data does not considerably affect the sample size or power, which was the case here.

Summary

This study was designed to answer research questions regarding the impact of sexual abuse during early childhood, with the application of an ecological-developmental framework. LONGSCAN data provided opportunities to examine socioemotional outcomes among a sample of 250 children, including 125 children allegedly sexually abused ages birth through 6 years. A matched comparison group of 125 nonabused

children was selected based on demographic characteristics. LONGSCAN data also provided for well-developed, standardized assessment measures, which were normed on general populations. Data was collected from multiple informants, further strengthening their validity. Data were analyzed using Statistics Package for the Social Sciences (SPSS), version 13.0. Analysis strategies included: (1) exploration of demographic variables and qualities of the reported abuse; (2) examination of distributional properties of child victims' scores on measures of socioemotional outcomes; (3) multivariate and multiple univariate analyses of variances between abused and nonabused children on socioemotional outcome measures; (4) moderating hierarchical linear regression analyses to examine the potential moderation effect of family contextual factors on socioemotional outcomes despite the experience of sexual abuse. Results of these analyses are presented in the next chapter.

CHAPTER 4: RESULTS

Sample Demographics

Comparison Groups

As described in Chapter 3, accurate data analysis necessitated the selection of cases from the LONGSCAN sample to create two groups comprised of abused and nonabused children. The CSA group was comprised of 125 children with at least one allegation of sexual abuse between the ages of 0 and 6 years, inclusive. Several factors were identified by which to match the group of children who were sexually abused with nonabused children, including: (1) region; (2) gender; and (3) ethnicity. Upon exploring these demographic characteristics of the CSA group, it was noted that all three factors were disproportionately represented when compared with children with no allegations of abuse.

It was not possible to create a group matched on region, because there were insufficient numbers of nonabused children represented in the Northwest or Southwest sites. At both of these sites, data was collected from children in the foster care system, and therefore almost all had allegations of maltreatment. Region was therefore excluded as a matching variable. Due to the highly disproportionate representation of girls in the CSA group (91%), gender was prioritized as a matching variable. Whites were underrepresented in the LONGSCAN sample (23.8%), yet were overrepresented among children who were sexually abused (51%). Similarly, black children were overrepresented in the LONGSCAN sample (49.3%), and were underrepresented among children who were sexually abused (22.1%). There was one Native American child and one Asian child represented in the abused group, and none represented in the nonabused

group. Hence, children in the comparison sample were matched primarily based on the categories of white, black and Hispanic, and other.

The following describes the specific steps taken to construct a comparison sample of nonabused children. First, variables denoting each possible combination of gender and ethnicity (e.g., 'white male', 'black female') were computed for both the CSA and Nonabused groups. Native American, Asian, Mixed Race and Other were all recoded as Other. Gender/ethnicity composition of the CSA group was used to calculate the composition of cases to be drawn from the Nonabused group. Second, the Nonabused group was then grouped into separate files for each gender/ethnicity combination. Next, using SPSS Version 13.0, cases were randomly selected from each gender/ethnicity subgroup of Nonabused cases. Among the Nonabused group, the categories of 'Hispanic female' and 'other female' did not allow for extracting the number of cases equal to that of the CSA group. The entire category of 'Nonabused white female' was already included. Therefore, additional black females were selected from the Nonabused group.

Data from the selected subjects of sexually abused and nonabused children were aggregated (N=250). A dichotomous variable was coded (0=nonabused; 1=sexually abused) to define the comparison groups. The following results of data analysis are organized by the research questions.

Demographic Characteristics

The total sample consisted of 250 children, split evenly between the CSA group (n = 125) and the Nonabused group (n = 125). Table 3 provides demographic characteristics of the LONGSCAN master sample, the CSA group and Nonabused group. Contingency table analyses were conducted to ensure there were no significant

differences in group compositions of the CSA and Nonabused groups with regard to demographic variables. Pearson chi square statistics indicated there were no significant differences between the two groups with regard to: (1) gender ($\chi^2 = 0$, $df=1$, $p= 1.00$); (2) ethnicity ($\chi^2 = 5.7$, $df= 6$; $p= .45$); and (3) income ($\chi^2 = 11.7$; $df= 10$; $p= 3.1$). The groups were well-matched on these three demographic variables.

Females comprised the majority of the total sample (91; 73%). Most of the children in the sample were white (42%), with African American children accounting for 26%; Hispanic children 11%; and children of mixed race 19%. There was one Native American child, one Asian child and two children were categorized as 'Other' ethnicity. Overall, the majority of the sample (68%) fell into the three lowest income categories: under \$5,000: 4%; \$5,000 - \$15,000: 40%; \$15,000 - 25,000: 24%. Fifteen percent earned between \$25,000 - 35,000; 8% earned \$35,000 - 45,000; and 9% earned over \$45,000.

Descriptive Statistics

Age of Abuse Report. Among children in the CSA group, 77 (61%) were reportedly abused between the ages of 0 to 4 years; 38 (30%) were abused between 4 to 6 years, and 10 children (8%) had reports of sexual abuse incidents during both age ranges.

Number of Allegations. The majority of children in the sample (77%) had one allegation of sexual abuse between the ages of 0 to 6. Sixteen children had 2 allegations; nine children had 3 allegations; one child had 4; and two children had 5 allegations of sexual abuse.

Severity. To define and rate the severity of maltreatment, LONGSCAN researchers utilized a modified version of the Maltreatment Classification Scheme

(Barnett, Manly & Cicchetti, 1993). Severity ratings were coded from 1 to 5, and defined by: (1) exposure to explicit sexual stimuli; (2) direct requests for sexual contact and/or exposure of genitals; (3) sexual touching; (4) attempt to penetrate or actual penetration; and (5) forced penetration or engagement of child in pornography (English & LONGSCAN Investigators, 1997). Table 4 provides a more detailed description of severity categories. The majority of children in the sample (85%) experienced contact or attempted contact sexual abuse, such as sexual touching or penetration. The maximum severity of sexual abuse reported for children in the sample were: (a) Severity 1: eleven children (8%); (b) Severity 2: two children (2%); (c) Severity 3: fifty-one children (41%); (d) Severity 4: fifty-five children (44%); and (e) Severity 5: five children (4%). There were no significant differences between males and females with regard to severity of abuse.

Co-occurring Physical Abuse. Approximately half of children in the CSA group also had reports of physical abuse. Twenty-five children (20%) had reports of minor abuse, described as ‘dangerous acts, no marks.’ Fourteen children (11%) had ‘minor marks’; 17 (14%) had ‘numerous nonminor marks’; 5 children (4%) required medical treatment; and 2 children were hospitalized for more than 24 hours due to physical abuse. It is possible however, that physical abuse reports were related to the sexual abuse and not separate events of physical abuse.

Child Victims with Adequate Socioemotional Functioning. As a supplemental exploratory analysis, children in the CSA group with no reported socioemotional deficits were examined. Children whose scores fell within the ‘normal’ range on all CBCL subscale and whose scores on VSC subscales were categorized as ‘adequate’ or above,

were selected. Of the 125 children in the CSA group, 48 (38%) children scored within the normal or adequate range on all of the selected measures of socioemotional functioning. Their group mean scores on the LSDQ and PCSA were compared with the CSA group mean scores on these measures. This subset of children who demonstrated higher degrees of socioemotional functioning also had slightly higher group mean scores on the LSDQ ($M = 7.57$); PCSA Cognitive Competence ($M = 3.30$); PCSA Peer Acceptance ($M = 3.30$); and PCSA Physical Competence ($M = 3.52$) than the entire CSA group. However, these children had slightly lower scores than CSA group means on the PCSA Maternal Acceptance subscale ($M = 2.83$).

Socioemotional Outcomes of CSA Group

Table 5 through Table 8 display mean scores and standard deviations of the dependent variables for the CSA group. Data describing the distribution of scores are provided for measures with normative data.

Child Behavior Checklist

There was no missing data for CBCL scores ($n = 125$). Among children in the CSA group, mean standardized scores on nearly all of the CBCL subscales (Attention Problems, Thought Problems and Social Problems) fell within the normal range, with the exception of the mean score for CBCL Aggressive, which was in the borderline range ($M = 60.08$, $SD = 10.62$). Although mean scores were generally normal, many children in the CSA group fell within the Borderline and Clinical ranges on CBCL subscales: Attention Problems ($M = 58.70$; Borderline 4%; Clinical 12%); Thought Problems ($M = 56.34$; Borderline: 9%; Clinical 6%); Social Problems ($M = 57.17$; Borderline 3%; Clinical 18%); Aggressive ($M = 60.08$; Borderline 11%; Clinical 15%).

Children in the CSA Group demonstrated social, emotional and behavioral problems, as evidenced by general problem areas rated by the CBCL: Externalizing ($M = 57.94$; Borderline 6%; Clinical 33%); Internalizing ($M = 52.79$; Borderline 7%; Clinical 14%); and Total Problems ($M = 56.94$; Borderline 9%; Clinical 31%).

Vineland Screener

Standardized scores of the VSC were used in analysis. The CSA group mean scores on the VSC Daily Living ($n = 125$) and Socialization ($n = 124$) subscales fell within the adequate range ($M = 96.19$, $SD = 19.37$ and $M = 91.69$, $SD = 15.62$, respectively). Only 55% of children in the CSA group scored in the adequate range on Daily Living skills. Twenty-one children (17%) scored ‘moderately low’ and 14 (11%) scored ‘low’ on the Daily Living skills subscale. Seventeen (14%) scored ‘moderately high’ and 4 children (3%) scored within the ‘high’ range of functioning on Daily Living. On the Socialization subscale, 76 children (61%) scored in the adequate range, 27 children (21%) scored as ‘moderately low’ and 12 children (10%) scored as ‘low’ in adaptive socialization functioning. Nine children scored above adequate, as ‘moderately high.’ No children were categorized as scoring in the ‘high’ range.

Pictorial Scale of Perceived Competence and Social Acceptance for Young Children

In general, CSA group mean scores on the PCSA subscales were moderate. Maternal Acceptance was the subscale with the lowest mean score. On a 4-point scale, with 4 representing the highest degree of perceived competence and social acceptance, children in the CSA group scored as follows: (a) Cognitive Competence: $M = 3.26$, $SD = 0.71$; (b) Peer Acceptance: $M = 3.20$, $SD = 0.70$; (c) Physical Competence: $M = 3.44$, $SD = 0.53$; and (d) Maternal Acceptance: $M = 2.85$, $SD = 0.77$. The PCSA does not include

standardized scores or normative data. Group mean scores of the CSA group were lower than mean scores calculated by LONGSCAN researchers ($M = 3.0$ to 3.7 on subscales) for the entire LONGSCAN sample ($n = 1136$) (Hunter et. al, 2003).

Loneliness and Social Dissatisfaction Questionnaire

Children in the CSA group had relatively high mean scores on the LSDQ ($M = 8.93$; $SD = 7.24$), indicating high degrees of loneliness and dissatisfaction in the social environment. There are no standardized scores or normative data for this measure. The CSA group mean score was higher than mean scores calculated by LONGSCAN researchers for the entire LONSCAN sample ($n = 1109$; $M = 7.61$, $SD = 6.57$) (Hunter et. al, 2003).

Multivariate and Univariate Analyses of Variances

The following section details results of comparisons between the CSA group and Nonabused group on socioemotional functioning. In these analyses, the independent variable (or factor) is defined as sexual abuse and the dependent variables are delineated as socioemotional outcomes: CBCL subscales, VSC subscales, PCSA subscales, and LSDQ scores.

Multivariate Analysis of Variance

First, a one-way MANOVA was conducted to test for equality of means across the two groups, accounting for any linear combination of the dependent variables. Significant differences were found among the two groups on the dependent measures, Wilke's $\Lambda = .774$, $F(11, 212) = 5.62$, $p = .00$. The partial eta squared (effect + error variance) based on Wilke's Λ was $\eta_p^2 = .23$, which indicates 23% of the variance of the

dependent variables is associated with assignment to the CSA group. A η_p^2 of .23 is a considerably high effect size. The observed power = 1.00.

Results of the MANOVA supported rejection of the null hypothesis that the socioemotional outcomes were the same for children in each group. Therefore, analyses of variances (ANOVA) on each of the dependent variables were conducted. Because SPSS's MANOVA command excludes data on all dependent variables for a subject if a value is missing on any one dependent variable, separate univariate ANOVAs for each measure were performed.

Analyses of Variance

Table 9 displays the results of the ANOVAs for each measure of socioemotional development. There were significant group differences on the following variables: (a) CBCL Attention Problems: $F(1,246) = 6.85, p = .01$; (b) CBCL Aggression: $F(1,246) = 15.12, p = .00$; (c) CBCL Thought Problems: $F(1,246) = 15.03, p = .00$; (d) LSDQ: $F(1,224) = 7.77, p = .01$; (e) PCSA Cognitive Competence: $F(1,231) = 9.85, p = .00$; (f) PCSA Physical Competence: $F(1,231) = 8.36, p = .004$; and Maternal Acceptance: $F(1, 231) = 15.21, p = .00$.

Based on partial eta squared (η_p^2) values, the effect size on each outcome ranges from .03 (moderately low) to .12 (high). The influence of group assignment on socioemotional functioning was moderately robust for Aggression ($\eta_p^2 = .06$); Thought Problems ($\eta_p^2 = .06$); Perceived Maternal Acceptance ($\eta_p^2 = .06$); and Perceived Physical Competence ($\eta_p^2 = .04$). The partial eta squared for Perceived Cognitive Competence was particularly high ($\eta_p^2 = .12$), indicating that assignment into the CSA group accounted for 12% of the variance for this outcome. There were no significant differences between

groups on the following measures: (a) CBCL Social Problems; (b) VSC Daily Living Skills; (c) VSC Socialization; and (d) PCSA Peer Acceptance.

Analyses of Family Dynamics

Moderating Hierarchical Linear Regression Analyses

Twenty hierarchical linear regressions were conducted to detect potential moderating effects of family variables on the relationship between child sexual abuse and socioemotional functioning. Tables 10 through 14 display results of the regression analyses by socioemotional outcome. Among the 20 regression models, only one indicated that the main effect of child sexual abuse was moderated by a family factor. In this case, appropriate empathy had a significant moderating effect on social problems of child victims, $t(240) = 2.10, p < .05$. Three other analyses were nearly significant, including: (1) expressiveness as a moderator for social problems, $t(243) = 1.74, p = .084$; (2) expressiveness as a moderator for aggression, $t(241) = 1.69, p = .092$; and (3) cohesion as a moderator for attention problems $t(244) = -1.68, p = .095$.

Overall, child sexual abuse was a significant predictor of the majority of variance among socioemotional outcomes. Child sexual abuse was particularly robust in predicting aggressive behavior, especially in conjunction with various family factors, accounting for 8.2 – 14.2% of the variance of aggression. However, family factors did not play a significant role in moderating aggressive behaviors. Sexual abuse was also a significant predictor of attention problems, but not of socialization and daily living skills. Although regression analyses indicated that family factors play a significant role in predicting several socioemotional outcomes both with and without victimization, family dynamics

were not robust moderators of the relationship between sexual abuse and socioemotional functioning.

CHAPTER 5: DISCUSSION

This study was conducted in an effort to fill gaps in the extant literature regarding children who have been sexually abused during early childhood. Given the limited body of research specific to this population, results of this study make a meaningful contribution to the knowledge base. This study integrated constructs from the literature in child development to examine the impact of child sexual abuse from an ecological-developmental perspective, taking into account the role of family interactions. Thus, understanding of the connections between sexual abuse and child development are enhanced, providing new opportunities for early detection, assessment and intervention efforts.

This chapter provides a discussion of this study's findings. It is organized in the following manner. First, answers to the research questions gleaned through data analysis are summarized, including victim demographics, characteristics and qualities of the abuse. Second, the major findings regarding the socioemotional developmental outcomes of preschool-aged victims are discussed, including comparisons with normative populations and comparisons with nonabused children in the sample. Third, findings regarding the role of family dynamic factors are discussed. Limitations of the study are then outlined. Finally, implications of these findings are presented, including implications for research, clinical interventions social work practice and policy. Directions for future research are also suggested.

Characteristics and Qualities of the Abuse of Young Children

This section presents discussion pertaining to research questions about the qualities of the sexual abuse experienced by young children in the sample.

Victim Demographics

Gender. Ninety-one children (73%) in the sample who were allegedly sexually abused were female. This finding is consistent with previous research that indicates girls are more likely to be sexually victimized than boys (Finkelhor, 1994). This finding is also consistent with suggestions that males account for 20-29% of victims (Finkelhor, 1994). However, since prior research indicates that male victims are often underrepresented in samples due to low reporting rates, it may be inferred that males comprise an even higher percentage of victims ages 0 through 6 years.

Race/Ethnicity. The majority of children who were sexually abused were white (41%), although whites were largely underrepresented in the LONGSCAN sample (26%). African American children accounted for 26% of the CSA group, yet comprised 55% of the entire LONGSCAN sample. Although disproportionate representation of ethnicity limits the generalizability of LONGSCAN research, these findings suggest that white children are sexually abused more often than black children. As well, Hispanic children were disproportionately represented in the CSA group than in the LONGSCAN sample (11% versus 8%, respectively). Hence, Hispanic children may also be at elevated risk of sexual abuse during early childhood. Although race/ethnicity has not been identified in the literature as a risk factor for sexual abuse, these findings suggest that race/ ethnicity may be associated with abuse during early childhood. However, sampling bias present in LONGSCAN design precludes definitive inferences about the relationship between race/ethnicity and risk of sexual abuse.

Socioeconomic Status. Families of children in the CSA group reported generally low incomes, with the majority of them (68%) earning below \$25,000. Children who

were allegedly sexually abused had slightly higher family incomes than the entire LONGSCAN sample (with 74% reporting below \$25,000). However, it is important to note that the reported family income may reflect that of a relative caregiver or foster parent, if the child has been removed from his or her family of origin. Also, the mild income discrepancy between groups may be a function of disproportionate minority representation in the LONGSCAN sample over the CSA group.

Abuse Characteristics

Age of Report. Of the 125 children reportedly sexually abused ages 6 and under, twice as many (77 children, 61%) were reported to have been sexually abused between the ages of 0 to 4 years than children reportedly abused between ages 4 to 6 years (38 children, 30%). This finding contradicts previous research indicating that risk of sexual abuse increases with age (Putnam, 2003). Unfortunately, the exact age sexual abuse occurred could not be determined, yet it is surprising that so many more children were victimized ages 4 and under. This finding has implications for prevention efforts, risk assessment and future research discussed later.

Number of Allegations. Ten children (8%) in the CSA group had reports of sexual abuse during both age ranges, 0 to 4 years and 4 to 6 years. This finding raises concern that despite reports of abuse, some children remain at risk of being repeatedly sexually victimized. Additionally, many children in the sample (23%) had more than one report of sexual abuse, indicating that their risk was not reduced following the first report. The investigation of child sexual abuse can be very challenging, especially when the victims are young children who are developmentally limited in providing accurate accounts of the

abuse. However, preschool-aged are also the most vulnerable to maltreatment (USDHHS, 2005).

These findings are indicative of a breakdown in child protection services. Currently, there is no available empirical data about how child protection workers respond to allegations, assess risk and intervene in cases of child sexual abuse of preschool-aged children. There is no investigative protocol, validated risk assessment tool or early intervention policy available to address the sexual victimization of preschool-aged children. While findings of this study may inform assessment and intervention strategies, more information is needed to assist child protection workers and other first responders in effectively responding to suspected child sexual abuse in the community. Further research and subsequent policy development in this area is critical to ensuring the safety of these youngsters and preventing the recurrence of sexual abuse.

Severity of Abuse. The severity of sexual abuse reported for these youngsters cannot be construed as minor in nature. The majority of children (44%) experienced sexual abuse rated as severity level 4 of 5, characterized by physical attempts to penetrate the child or actual penetration of the child sexually, including coitus, oral sex, anal sex, or any other form of sodomy (English & LONGSCAN Investigators, 1997). Forty-one percent of reports were rated with severity level 3, characterized by fondling, mutual sexual touching, or masturbation. Five children (4%) received the highest severity rating of 5, as they were reportedly forced to engage in intercourse through the use of physical restraint, weapons or brutality, or were forced into prostitution or child pornography. Although it is a small percentage of the sample, this does seem to be an alarming number of cases of very severe sexual assault of young children given the overall sample size.

In total, 89% of reported cases of sexual abuse were defined as contact offenses, including a range of offenses from sexual touching to forcible assault. This finding is rather disconcerting, as it suggests that younger children may be at risk of more severe forms of sexual victimization. Or, it may indicate that only the more severe cases of sexual abuse among young children are detected and reported, as children age 6 and under may have more difficulty in verbally disclosing noncontact offenses, such as exposure to pornography. Therefore, cases of sexual abuse considered less severe are likely undetected and unreported. Again, this finding has implications for prevention efforts discussed later.

Gender and severity ratings were not related, indicating that young girls and boys are equally likely to experience the same severity of sexual victimization. This finding corroborates recent hypotheses that gender differences in the rate and severity of sexual abuse may be less pronounced during early childhood (Fontanella et al., 2000). Again, it seems that young children comprise a unique group of sexual abuse victims, with less gender variation in qualities of the abuse experience. This finding also carries implications for assessment, both child protection risk assessments and clinical evaluation. Individuals conducting such assessments, such as social workers, psychologists, forensic medical examiners, should be made aware that preschool-aged boys and girls who have been sexually abused will likely present in similar ways.

Co-occurring Physical Abuse. About half of children who were reportedly sexually abused were also physically abused. This finding indicates that child victims of sexual abuse are at increased risk of other forms of maltreatment. Although the severity rating of physical abuse was very low for most children in the sample, this finding limits

the ability to identify the impact of sexual victimization as unique to other forms of abuse.

Summary. Findings regarding demographic factors and abuse characteristics support the suggestion that very young children may be considered a unique subtype of sexual abuse victims. When compared with other victim age groups, gender disparities may be less pronounced in early childhood, while race may be a more relevant factor. Younger children may at elevated risk of experiencing more severe, contact sexual offenses, especially fondling and penetration. Young victims of sexual abuse are also likely to be physically abused, indicating they are at increased risk of multiple traumatic events. These findings have implications for assessment, service delivery, and policymaking.

Socioemotional Functioning of Young Victims

It was hypothesized that child victims of sexual abuse ages 6 and under would demonstrate significant deficits in socioemotional functioning. Using a taxonomy of socioemotional competence delineated by Cicchetti and Schneider-Rosen (1986), outcomes were defined as: autonomy and self-development, modulation of arousal, peer relationships and social competence. Measures selected for analysis assessed the following related domains: aggression, attention problems, thought problems, social problems, socialization skills, daily living skills, peer acceptance, maternal acceptance, perceived cognitive and physical competence, and social satisfaction. Results are discussed below, beginning with comparisons with normative development, followed by comparisons with nonabused children in the sample.

Comparisons with Normative Socioemotional Development

In general, children who were allegedly sexually abused demonstrated notable deficits in social and emotional functioning at the age of 6 years. Of 125 children in the CSA group, 62% fell below normative, expected outcomes on standardized measures of socioemotional functioning. Children who were reportedly sexually abused evidenced significant degrees of aggression, with group mean scores falling within the borderline clinical range and 15% of children scoring within the clinical range. Sixteen percent had substantial attention problems and 14% evidenced borderline to clinical degrees of thought problems. Nearly 40% of sexually abused children evidenced borderline to clinical externalizing problems and total problems on the CBCL.

On the VSC measure of daily living skills, 38% of sexually abused children fell below the adequate range of expected functioning for their developmental stage. As well, 31% scored below adequate in the VSC measure of socialization skills, as assessed against expected developmental outcomes. These results indicate that, although socioemotional problems may manifest differently for each child, the majority of children who were sexually abused demonstrated measurable deficits in socioemotional functioning.

There was no normative data available for child self-report measures of social competence, peer acceptance and social satisfaction (as measured by the LSDQ and PCSA). Therefore, scores were assessed at face value against LONGSCAN group means and samples from the original studies. Children who were sexually abused reported considerably low feelings of self-competence and acceptance by others in the social environment. Most notably, children who were sexually abused reported remarkably low degrees of maternal acceptance ($M = 2.85$, $SD = 0.77$). Even children who fell within the

normal, adequate and above adequate ranges on normative scales of socioemotional functioning reported very low feelings of acceptance by their mothers ($M = 2.83$, $SD = 0.77$).

Similarly, although some children fared better on parent and clinician reports of socioemotional functioning, the children themselves reported only slightly higher self-assessments of competence than lower functioning children. This finding supports prior research regarding discrepancies between actual competence and perceived competence among maltreated children. Furthermore, this finding indicates that although children who have been sexually abused may appear to function adequately, they may be experiencing feelings of loneliness, social isolation and rejection. These outcomes may be tied to feelings of guilt, shame, and self-blame often experienced by victims of sexual abuse (Browne & Finkelhor, 1986).

Comparisons with Nonabused Children

When compared with their nonabused counterparts in the sample, children in the CSA group evidenced significant deficits in socioemotional functioning. Group means scores on all measures of socioemotional functioning indicated that children who were allegedly sexually abused were, in general, functioning poorer than their nonabused counterparts. Results of a multivariate analysis of variance including all measures indicated that belonging to the CSA group accounted for 24% of the variance in socioemotional functioning. Significant differences between the two groups that were particularly robust were found on measures of: (a) aggressive behavior; (b) thought problems; (c) self-perceived cognitive competence; and (d) self-perceived maternal acceptance. These realms of socioemotional functioning were particularly problematic for

children in the CSA group. There were also significant differences between groups on: (a) attention problems; (b) loneliness and social dissatisfaction; and (c) self-perceived physical competence. There were no significant group differences on measures of daily living skills, socialization, and self-report of peer acceptance.

The main findings of this study supported the hypothesis that child sexual abuse may disrupt salient socioemotional developmental tasks of early childhood. The majority of children in the sample with at least one allegation of sexual abuse presented with maladaptive socioemotional functioning, as evidence by emotional dysregulation, problems in the social environment, and self-perceptions of incompetence and rejection by peers and caregivers. Aggression was a particularly robust outcome for victims, which is indicative of problems with emotional regulation, modulation of arousal, and social interaction. Child victims also demonstrated significant problems with maintaining attention, as well as distorted, delusional or otherwise problematic thought patterns. These outcomes may be related to maladaptive coping mechanisms (e.g. dissociation) and may indicate the onset of problems with cognition. Further investigation into the nature of attention and thought problems among child victims is warranted.

Although just over one-third of the sample were reported by caregivers and practitioners as functioning within normal or adequate ranges of expected development, these children's self-reported perceptions of competence were low. This finding suggests that, while some victims of sexual abuse may appear to be high-functioning, they may actually be experiencing underlying feelings of social rejection, low self-efficacy or dissatisfaction within the social environment. Problems in these areas may further signal

disruptions in the developmental tasks of self-development and social competence, despite parent and practitioner observations.

Differences between child victims and their nonabused counterparts in the sample were less pronounced than comparisons between child victims and normative populations (based on standardized score ranges). Still, there were significant differences on the majority of outcome measures, including aggression, attention, thought problems, loneliness, perceived cognitive and physical competence, maternal acceptance. These findings signal potential disruptions in the socioemotional development of child victims, in that they exhibit: (a) poorer emotional regulation strategies; (b) less social competencies; and (c) more problems with peer relationships. There were no significant differences on measures of daily living skills, socialization and perceived peer acceptance. This finding indicates there were less group differences on measures of autonomous functioning and self-development.

Another interesting finding was regarding the child victims' perceptions of acceptance by their mothers. The majority of children in the CSA group—including children who were reported by their caregivers to be functioning within normal developmental limits—also reported very low degrees of perceived maternal acceptance. This outcome may be indicative of mother-child relationship problems that sometimes follow allegations of sexual abuse (Heriot, 1996). From a developmental perspective, this finding may signify disruptions in parent-child bonding or family environmental stress.

The Role of Family Dynamics

It was hypothesized that positive family dynamics including cohesion, appropriate expressiveness, empathy, and appropriate expectations of the child would buffer against

the negative outcomes associated with child sexual abuse. This hypothesis was not supported, with only one exception. The parents' empathy for child victims moderated the impact of sexual abuse on social problems. This is consistent with previous findings that child victims with supportive parents demonstrate better adjustment following sexual abuse than children whose parents are not supportive (Lovett, 2004). However, results provide little insight into the ways in which parent-child-family transactional relationships might contribute to resilience, or positive development in children despite victimization.

While sexual abuse did significantly influence socioemotional developmental outcomes, especially measures of arousal modulation and emotional regulation (e.g. aggression and attention problems), family factors did not moderate this relationship. Aggression was a particularly robust outcome of sexual abuse. These findings seem to suggest that, regardless of nurturing, positive family dynamics, sexual victimization produces maladaptive socioemotional developmental outcomes for most young victims. Hence, these children are especially vulnerable to developing problems in the social environment, despite responsive parenting. This was unexpected, given the critical role family contexts are known to play in child developmental outcomes. It is possible that sexual victimization during early childhood has a more powerful effect than can be ameliorated by nurturing parenting skills. Perhaps, younger victims require intensive intervention efforts.

There are several other possibilities that may explain these findings. First, the measures of family dynamics have their limitations, in that they are reliant on child self-report and parent self-report. As well, the measures used in the analyses may not fully

capture the nature of nurturing, responsive parenting that promoted development. Finally, a longitudinal study of the relationship between the caregiving environment and socioemotional development following sexual abuse may produce different, perhaps more meaningful findings.

Limitations of the Study

The use of LONGSCAN data in this study had several advantages, most notably a considerable sample size of young children from diverse regions and cultural backgrounds and numerous standardized measures of developmental outcomes. However, secondary data presents unique challenges, including the lack of control over data coding and entry procedures, missing data, and design of the original study. The use of secondary data limits the researcher's ability to direct data collection efforts toward addressing the research questions. Instead, conceptualization and analysis strategies are contingent upon the availability and accuracy of data already collected. For instance, LONGSCAN data available at this time precluded a longitudinal design, which was preferred by the researcher. Also, excessive missing data on several measures (e.g. CBCL Teacher Report Form and Conflict Tactics Scale measure of family conflict and aggression) necessitated the exclusion of these measures from the study. Overall, the strengths of LONGSCAN data outweighed its shortcomings, and the researcher's original conceptual model and general research questions were not substantially compromised.

There were several limitations that affected the generalizability and strength of findings, most of which are common to large research studies. First, randomization improves the representativeness of a sample, thereby improving generalizability of results to larger populations. None of the LONGSCAN study sites employed a random selection

process in their sampling design. Samples at the various sites were intentionally recruited from at-risk populations or from families who were already receiving child protection services. As a result, there is sampling bias at each site. Although the LONGSCAN sample is diverse in its representation of race/ethnicity, socioeconomic status, and region, it is not considered a nationally representative sample. Therefore, the external validity of findings is limited by the sampling procedures.

Internal validity may have also been affected by several threats, which are typically challenging to control. First, data collection and coding procedures may have varied by site, creating inconsistencies which may have led to errors. Administration of measures and data collection by researchers and practitioners may have been influenced by variations in training and researcher/practitioner bias. LONGSCAN data related to maltreatment history was collected via record review, which may have presented problems such as errors in original documentation and interpretation of records. As well, the use of standardized instruments presents inherent threats of measurement error and bias. Although the child self-report measures (PCSA, LSIDS and SFI) were developed using age-appropriate language and concepts, data are still limited by the children's capacities to understand and respond accurately to items.

Perhaps one of the most challenging aspects of identifying the impact of child sexual abuse is "teasing out" the specific outcomes associated with sexual victimization, as opposed to other risk factors. Children in this sample were exposed to numerous risk factors, including poverty, community and family violence, and other types of child maltreatment. While there were significant differences in socioemotional functioning between abused and nonabused children, results of data analyses in this study do not

definitively identify sexual abuse as a causal factor for poor socioemotional functioning. Further exploration of co-occurring maltreatment, family and parental factors, and community risk factors may improve understanding of the relationship between sexual abuse and socioemotional outcomes among young children.

Implications for Research, Practice and Policy

Despite its limitations, findings of this study have meaningful implications for research, practice and policy. This investigation included examination of one of the largest samples of children sexually abused during early childhood. As well, this study is one of few to be conceptualized within an ecological-developmental framework. Implications of this study's findings and future direction for research are discussed in the following sections.

Implications for Research

Although there is growing consensus and empirical support for the application of developmental theories in understanding the impact of child maltreatment, such theoretical perspectives have remained largely absent from studies of child sexual abuse (Kendall-Tackett et al., 1993; Mian et al., 1996; Shipman et al., 2003). Several researchers have contended, and it has been argued in this paper, that the examination of sexual abuse should encompass consideration to developmental stages, needs and processes of child victims (see Cole & Putnam, 1992; Finkelhor, 1993; Finkelhor & Kendall-Tackett, 1997; Trickett, 1993). It is further asserted that a theoretical shift from the otherwise common symptom approach toward developmental models may fill gaps in knowledge and inform more appropriate and effective assessment and intervention strategies (Cicchetti, 2004; Cole & Putnam, 1992; Trickett & Putnam, 1993).

Accordingly, the consistent application of this theoretical framework throughout this study's design and interpretation of results has contributed to the validity of its findings. Using an ecological-developmental model not only provided a sound theoretical basis for understanding the impact of victimization during early childhood, but also lent insight into the deeper, more profound impact sexual abuse may have on lifespan social and emotional development. Since several different indices of socioemotional development—as reported by multiple informants—were identified and examined, differences in the presentation of symptomology among victims are better understood.

Ideally, studies of child developmental outcomes are longitudinal, with measurements of functioning taken over the course of years, throughout and across developmental stages. Longitudinal studies provide better opportunities than cross-sectional designs for examination of developmental pathways and the factors that influence developmental trajectories. Constructing a viable longitudinal design using LONGSCAN data at the time this study was conceptualized presented many challenges. Inconsistent collection of data across sites, missing data, and inaccessibility of additional data collection points precluded analyzing data using, for example, a latent trajectory model. As additional data is released from LONGSCAN studies, a well-designed longitudinal investigation will be possible, and should be pursued.

Still, this study's methodological challenges, as well as its findings may inform the design of future research. Based on the constructs measured here, additional research should be conducted on the socioemotional developmental trajectories of child victims. As well, results regarding the attention and thought problems of young victims warrant further investigation. The cognitive developmental pathways of young children should be

explored. Whenever possible, longitudinal designs should be utilized, and research should encompass ecological influences, including parent-child relationships, family dynamics, and environmental factors. Improved understanding of the role ecological systems play in the developmental pathways of sexual abuse victims will better inform the development of assessment and intervention strategies and policy protocols.

Implications for Clinical Interventions

Currently, intervention strategies in sexual abuse are directed toward treating the child's sexual trauma through cognitive-behavioral strategies designed to help children process the abuse experience. Trauma-focused cognitive behavioral therapy has demonstrated positive results in reducing global symptomatology, including internalizing and externalizing behaviors, depression and anxiety in child victims (Cohen & Mannarino, 1998). It is suggested here, however, that intervention efforts should encompass a range of social and emotional functioning, in order to restore adaptive developmental pathways and prevent the perpetuation of maladaptive social behaviors that may persist into adulthood. This is further discussed below.

Results of this study verify that children who have been sexually abused at a young age may demonstrate maladaptive functioning on indices of socioemotional development, as evidenced by aggression toward peers, poor social skills, feelings of loneliness and perceptions of incompetence. From an ecological-developmental perspective, this early onset of social and emotional problems may initiate a maladaptive trajectory of socioemotional development throughout the lifespan. Because social relationships are based on reciprocal transactions, these child victims may experience a perpetuation of problems in family and social settings. Consequently, child victims may

fail to successfully negotiate stage-salient social and emotional competencies throughout middle childhood and adolescence.

Thus, the disruption of salient socioemotional tasks caused by sexual abuse requires more comprehensive intervention than addressing only traumatic victimization and trauma-related symptoms. The ecological-developmental model creates broader opportunities for intervention that take a holistic approach in restoring adaptive lifespan development (Sroufe et al., 2005). Developmental interventions consider more than the child's symptomology, but their developmental needs and the buffers within their ecological systems that will help promote adaptive development. For instance, given that young children are heavily dependent on relationships with their caregivers to facilitate healthy development and are influenced by transactional processes within their environment (Elicker et al., 1992), involvement of the child's family system in intervention is essential. Parents and caregivers should be trained in specific skills in fostering child development.

Results of this study indicate, however, that nurturing family care may not be sufficient in promoting healthy socioemotional development following sexual abuse. As well, intervention strategies should occur within the school and community settings, where social interactions occur and peer relationships develop. For example, problems with emotional regulation strategies and poor social skills have recently been linked with risk of peer victimization (Hanish, Eisenberg, Fabes, Spinard, Ryan & Schmidt, 2004). Specifically, young children who display problematic externalizing behaviors, anger and aggression, have been found to be at increased risk of being verbally and physically victimized by other children (Hanish et al., 2004). "The salience of the peer system for

promoting successful adaptation is apparent. Those children who perform poorly with peers, especially when their total ecology is unsupportive (Bronfenbrenner, 1979), are likely to experience continued incompetence and maladaptation” (Cicchetti & Toth, 1995, p. 10). Therefore, intervention must successfully address social developmental issues within the school and community systems. Whenever possible, multiple ecological systems should be recruited to support positive social interactions among child victims and their peers.

Finally, interventions should be initiated as soon as there is a suspicion of sexual abuse. Early detection and intervention are key. Sroufe and colleagues (2005) aptly describe the value of intervening as soon as developmental problems are recognized.

Change is easier before a pathway has become entrenched. At any point, a strategy for intervention would be to identify and alter factors maintaining the person on a maladaptive pathway or to identify interventions that would encourage a return to a more serviceable pathway. The strength of this approach is that patterns of maladaptive functioning, probabilistically leading to disturbance, may be corrected even before there is diagnosable pathology (p. 241).

Implications for Social Work Practice, Training and Child Protection Policy

In many capacities and through varied service delivery systems, social workers interface with victims of child sexual abuse and their families. Practitioners in child welfare or child protection services are often charged with investigating cases of alleged child sexual abuse. Social workers, case workers, victim advocates, and other professional in the community are responsible for assessing victims of child sexual abuse and providing community-based services to victims and their families. As well, all social

workers and other human service professionals are mandated to report sexual abuse when it is suspected. Improving social workers' competencies in detection, assessment, and intervention of early child sexual abuse is critical.

Many individuals, including social work professionals, may not even consider that infants, toddlers and preschoolers are sexual targets. However, children ages birth through 6 years account for a substantial proportion (25-35%) of victims—or perhaps more. As well, the majority of these youngsters experience severe forms of abuse, especially contact offenses such as fondling and penetration. It is first important to educate social workers about the prevalence, nature and severity of sexual abuse committed against very young children. Awareness of the scope of the problem will better prepare social workers for early detection and intervention. Second, social workers should be well trained in risk factors and outcomes associated with sexual abuse, as well as relevant parental and family factors. This knowledge will facilitate evidence-based assessment and guide evidence-informed intervention strategies.

All professionals working in the child protection system, including social workers, caseworkers, psychologists, physicians, law enforcement agents and criminal justice specialists should have the knowledge, skills and tools necessary to effectively respond and intervene when sexual abuse is suspected. Unfortunately, findings of this study indicate failures in the child protection system. Nearly one in four children in the sample had more than one alleged incident of sexual abuse documented in child protection records. Although there is no data to indicate whether allegations were made repeatedly against the same offender, it can be assumed that this was the case for many of the allegations. This finding indicates that protective action was not taken as a result of

the first report to the child protection agency. Ten children in the sample had documented allegations of sexual abuse reported between the ages of 0 to 4 and again between 4 and 6 years. Again, this data suggests that, after the first sexual abuse allegation, the children were not protected from the risk of future abuse. These findings signal a breakdown in the child protection system for many young victims of sexual abuse that necessitate further investigation. Ideally, research into systemic problems will generate investigative protocols specific to preschool-aged children.

Additionally, social workers and child protection professionals should be aware of the risks of revictimization of these youngsters. Findings in this study related to the presence of multiple incidents of sexual abuse for many children support previous findings that sexual abuse victims are at increased risk of being sexually victimized again, both later in their childhood and throughout adulthood. In a national random sample of 2,000 children ages 10-16, Boney-McCoy & Finkelhor (1995) found that children who had been previously sexually victimized were at alarmingly increased risk—11.7 times more likely than those not abused—of being sexually abused again before turning 18. This relationship remained statistically significant when children sexually abused by the same perpetrator were excluded from the analysis (Boney-McCoy & Finkelhor, 1995). In a literature review of sexual revictimization, Classen, Paresh, and Aggarwal (2005) reported 35 studies that found child sexual abuse is a risk factor for revictimization and 4 studies that found a causal relationship between child sexual abuse and sexual revictimization.

Understanding this heightened risk of victimization is critical to effective protection of these children. Selected prevention strategies should be targeted toward

victims of early abuse and their families. Social workers and other service providers should educate parents, caregivers and families of victims about their children's risk of revictimization. Additional safety precautions in protecting children from future abuse should also be integrated into investigative protocols and child protection policies.

Directions for Future Research

This study was relatively limited in scope, yet will serve as a launching point for future studies. Once additional LONGSCAN data points have been collected at ages 8 and 10, longitudinal investigations can be designed to more thoroughly explore the developmental pathways of child victims. Investigation of parental, family and environmental factors should be included in such inquiries to identify transactional processes that influence risk and resilience in children.

This study initiated a theoretical shift toward the integration of ecological-developmental constructs in sexual abuse research. Future studies should maintain a focus on specific ages and developmental stages of child victims, and relevant corresponding measures of development. Ideally, even smaller ranges of child age (e.g., 0 to 2 years, 3 to 4 years) should be investigated, which may further explain differential manifestations of socioemotional problems among victims. Longitudinal designs should be used to study the relationship between parent-child-family transactions and child development following abuse. Such prospective studies will likely produce findings useful to the development of more effective family interventions. In general, rigorous assessment and intervention research specific to preschool children should be initiated. This research should be designed to inform and optimize the development of school- and community-based prevention programs, parent education programs, early intervention

strategies, professional training programs, and policy-driven systemic responses. With theoretically sound, evidence-based early intervention efforts, we will begin to make progress in preventing child sexual abuse before it occurs.

REFERENCES

- Becker-Blease, K. & Freyd, J. (2005). Beyond PTSD: An evolving relationship between trauma theory and family violence research. *Journal of Interpersonal Violence, 20*, 403-411.
- Black, D., Heyman, R.E. & Smith-Slep, A. (2001). Risk factors for child sexual abuse. *Aggression and Violent Behavior, 6*, 203-229.
- Briere, J. & Elliot, D. (1993). Sexual abuse, family environment, and psychological symptoms: On the validity of statistical control. *Journal of Consulting and Clinical Psychology, 61*, 284-288.
- Briere, J. & Elliot, D. (2003). Prevalence and psychological sequelae of self-reported childhood physical and sexual abuse in a general population sample of men and women. *Child Abuse and Neglect, 27*, 1205-1222.
- Briere, J. & Runtz, M. (1993). Childhood sexual abuse: Long-term sequelae and implications for psychological assessment. *Journal of Interpersonal Violence, 8*, 312-330.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, Massachusetts: Harvard University Press.
- Campis, L.B., Hebden-Curtis, J. & Demaso, D.R. (1993). Developmental differences in detection and disclosure of sexual abuse. *Journal of the American Academy of Child Psychiatry, 32*, 920-925.
- Cicchetti, D. (2004). An odyssey of discovery: Lessons learned through three decades of research on child maltreatment. *American Psychologist, 731-741*.
- Cicchetti, D. (1993). Developmental psychopathology: Reactions, reflections, projections. *Developmental Review, 13*, 471-502.
- Cicchetti, D. (1989). How research on child maltreatment has informed the study of child development: perspectives from developmental psychopathology. In D. Cicchetti & V. Carlson (Eds.), *Child Maltreatment: Theory and Research on the Causes and Consequences of Child abuse and Neglect* (pp. 377-431). New York: Cambridge University Press.
- Cicchetti, D. & Cohen, D. (1995). Perspectives on developmental psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental Psychopathology (Vol. 1): Theory and Methods* (pp. 3-20). New York: Wiley-Interscience.

- Cicchetti, D. Lynch, M, Shonk, S. & Manly, J.T. (1992). An organizational perspective on peer relations in maltreated children. In R. Parke and G. Ladd (Eds.). *Family-Peer Relationships: Modes of Linkage*. Hillside, NJ: Lawrence Erlbaum Associates.
- Cicchetti, D. & Schnieder-Rosen, K. (1986). An organizational approach to childhood depression. In M. Rutter, C. Izard, & P. Read (Eds.), *Depression in Young People* (pp 71-134). New York: The Guilford Press.
- Cicchetti, D. & Shields, A. (1998). Reactive aggression among maltreated children: The contributions of attention and emotional dysregulation. *Journal of Clinical Child Psychology*, 27, 381-395.
- Cicchetti, D. & Toth, S. (1995). A developmental psychopathology perspective on child abuse and neglect. *Journal of American Academy of Child Adolescent Psychiatry*, 34, 541-566.
- Cohen, J.A. & Mannarino, A. (1998). Factors that mediate treatment outcome of sexually abused preschool children: Six- and 12-month follow-up. *Journal of the Academy of Child and Adolescent Psychiatry*, 37, 44-51.
- Cohen, J.A. & Mannarino, A. (2000). Predictors of treatment outcome in sexually abused children. *Child Abuse & Neglect*, 24, 983-994.
- Cole, P. & Putnam, F. (1992). Effect of incest on self and social functioning: A developmental psychopathology perspective. *Journal of Consulting and Clinical Psychology*, 60, 174-184.
- Crittenden, P. & Ainsworth, M. (1989). In D. Cicchetti & V. Carlson (Eds.). *Child Maltreatment: Theory and Research on the Causes and Consequences of Child abuse and Neglect* (pp. 432-465). New York: Cambridge University Press.
- DiLillo, D. (2001). Interpersonal functioning among women reporting a history of childhood sexual abuse: Empirical findings and methodological issues. *Clinical Psychology Review*, 21, 553-576.
- DeBellis, M. (2001). Developmental traumatology: The psychobiological development of maltreated children and its implications for research, treatment, and policy. *Development and Psychopathology*, 13, 539-564.
- De Bellis, M.D., Keshavan, M.S., Clark, D.B., Casey, B.J, Giedd, L.N., Boring, A.M, Frustaci, K., & Ryan, N.D. (1999). Developmental traumatology part II: Brain development. *Society of Biological Psychiatry*, 45, 1271-1284.
- De Jong, A. (1988). Maternal response to the sexual abuse of their children. *Pediatrics*, 81, 14-21.

- Deblinger, E., Hathaway, C.R., Lippmann, J. & Steer, R. (1993). Psychological characteristics and correlates of symptom distress in nonoffending mothers of sexually abused children. *Journal of Interpersonal Violence, 8*, 155-168.
- Deblinger, E., Steer, R. & Lippman, J. (1999). Two-year follow-up study of cognitive behavioral therapy for sexually abused children suffering from post-traumatic stress symptoms. *Child Abuse & Neglect, 21*, 1371-1378.
- Dodge, K. & Garber, J. (1991). Domains of emotional regulation. In J. Garber & K. Dodge (Eds.). *The Development of Emotional Regulation and Dysregulation*. Cambridge, MA: Cambridge University Press.
- Elicker, J., Eglund, M. & Sroufe, A. (1992). Predicting peer competence and peer relationships in childhood from early parent-child relationships. In R. Parke and G. Ladd (Eds.). *Family-Peer Relationships: Modes of Linkage*. Hillside, NJ: Lawrence Erlbaum Associates.
- English, D.J., Graham, J.C., Litrownick, A.J., Everson, M. & Bangdiwala, S.I. (2005) Defining maltreatment chronicity: Are there difference in child outcomes. *Child Abuse and Neglect, 29*, 575-595.
- English, D.J., Upadhyaya, M., Litrownik, A., Marshall, J., Runyan, D., Graham, C. & Dubowitz, H. (2005). Maltreatment's wake: The relationship of maltreatment dimensions to child outcomes. *Child Abuse and Neglect, 29*, 597-619.
- English, D.J. & the LONGSCAN Investigators (1997). *Modified Maltreatment Classification System (MMCS)*. Retrieved on October 20, 2005 from <http://www.iprc.unc.edu/longscan>.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (in press). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*.
- Finkelhor, D. (1984). *Child sexual abuse: New theory and research*. New York: Free Press
- Finkelhor, D. (1994). Current information on the scope and nature of child sexual abuse. *The Future of Children, 4*, 31-53.
- Finkelhor, D. (1995). The victimization of children: A developmental perspective. *American Journal of Orthopsychiatry, 65*, 177-193.
- Finkelhor, D. Hotaling, G., Lewis, I. & Smith, C. (1990). Sexual abuse in a national survey of adult men and women: Prevalence, characteristics and risk factors. *Child Abuse & Neglect, 14*, 19-28.

- Finkelhor, D. & Kendall-Tackett, K. (1997). A developmental perspective on the childhood impact of crime, abuse, and violent victimization. In D. Cicchetti & S. Toth (Eds.). *Rochester Symposium on Developmental Psychopathology (Vol. 8): Developmental Perspectives on trauma: Theory, Research, and Intervention*. Rochester, NY: University of Rochester Press.
- Finkelhor, D., Ormrod, R., Turner, H. & Hamby, S. (2005). The victimization of children and youth: A comprehensive, national survey. *Child Maltreatment, 10*, 5-25.
- Flores, E., Cicchetti, D. & Rogosch, F.A. (2005). Predictors of resilience in maltreated and nonmaltreated Latino children. *Developmental Psychology, 41*, 338-351.
- Fontanella, C., Harrington, D. & Zuravin, S. (2000). Gender differences in the characteristics and outcomes of sexually abused preschoolers. *Journal of Child Sexual Abuse, 9*, 21-40.
- Friedrich, W. (1998). Behavioral manifestations of child sexual abuse. *Child Abuse and Neglect, 22*, 523-531.
- Goodman-Brown, T.B., Edelstein, R.S., Goodman, G.S., Jones, D.P.H. & Gordon, D.S. (2003). Why children tell: A model of children's disclosure of sexual abuse. *Child Abuse & Neglect, 27*, 525-540.
- Gomes-Schwartz, B., Horowitz, J. & Cardarelli, A. (1990). *Child sexual abuse: The initial effects*. Newbury Park, CA: Sage Publications.
- Hartman, C. & Burgess, A. (1989). Sexual abuse of children: Causes and consequences. In D. Cicchetti & V. Carlson (Eds.). *Child Maltreatment: Theory and Research on the Causes and Consequences of Child abuse and Neglect* (pp. 95-128). New York: Cambridge University Press.
- Heriot, J. (1996). Maternal protectiveness following the disclosure of intrafamilial child sexual abuse. *Journal of Interpersonal Violence, 11*(2), 181-194.
- Hewitt, S.K. & Friedrich, W.N. (1991) Effects of probable sexual abuse on preschool children. In M. Patton (Ed.), *Family Sexual Abuse: Frontline Research and Evaluation* (pp. 57-74). Newbury Park, CA: Sage Publications.
- Howes, P.W., Cicchetti, D., Toth, S.L. & Rogosch, F.A. (2000). Affective, organizational, and relational characteristics of maltreating families: A systems perspective. *Journal of Family Psychology, 14*, 95-110.
- Hunter, W.M., Cox, C.E., Teagle, S., Johnson, R.M., Mathew, R., Knight, E.D. et al. (2003). *Measures for Assessment of Functioning and Outcomes in Longitudinal Research*

on *Child Abuse (Vol. 1: Early Childhood)*. Retrieved on October 12, 2005 from <http://www.iprc.unc.edu/longscan/>.

Hyman, B. & Williams, L. (2001). Resilience among women survivors of child sexual abuse. *Affilia*, 16, 198-219.

Kaufman, J. & Cicchetti, D. (1989). Effects of maltreatment on school-aged children's socioemotional development: Assessments in a day camp setting. *Developmental Psychology*, 25, 516-524.

Kendall-Tackett, K., Williams, L.M. & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. *Psychological Bulletin*, 113, 164-180.

Kinard, M. (2004). Methodological issues in assessing the effects of maltreatment characteristics on behavioral adjustment in maltreated children. *Journal of Family Violence*, 19, 303-318.

Koverola, C., Papas, M.A, Pitts, S., Murtaugh, C., Black, M. & Dubowitz, H. (2005). Longitudinal investigation of the relationship among maternal victimization, depressive symptoms, social support and children's behavior and development. *Journal of Interpersonal Violence*, 20, 1523-1546.

Ladd, G. (1992). Themes and theories: perspectives on processes in family-peer relationships. In R. Parke and G. Ladd (Eds.). *Family-Peer Relationships: Modes of Linkage*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Lovett, B. (2004). Child sexual abuse disclosure: Maternal response and other variables impacting the victim. *Child and Adolescent Social Work Journal*, 21(4), 355-371.

Luthar, S.S. & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology*, 12, 857-885.

Margolin, G. (2005). Children's exposure to violence: Exploring developmental pathways to diverse outcomes. *Journal of Interpersonal Violence*, 20, 72-81.

Mian, M., Marton, P. & LeBaron, D. (1996). The effects of sexual abuse on 3- to 5-year-old girls. *Child Abuse and Neglect*, 20, 731-745.

Muthén, B.O. & Khoo, S. (1998). Longitudinal studies of achievement growth using latent variable modeling. *Learning and Individual Differences*, 10, 73-101.

Putnam, F. (2003). Ten year research update review: Child sexual abuse. *Journal of the American Academy of Child Psychiatry*, 42, 269-278.

Sameroff, A. (1995). General systems theory and developmental psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental Psychopathology (Vol. 1): Theory and Methods* (pp. 3-20). New York: Wiley-Interscience.

Sameroff, A. & MacKenzie, M.J. (2003). Research strategies for capturing transactional models of development: The limits of the possible. *Development and Psychopathology*, *15*, 613-640.

Schreiber, R. & Lyddon, W. (1998). Parental bonding and current psychological functioning among childhood sexual abuse survivors. *Journal of Counseling Psychology*, *45*, 358-362.

Shipman, K., Zeman, J., Fitzgerald, M. & Swisher, L.M. (2003). Regulating emotion in parent-child and peer relationships: A comparison of sexually maltreated and nonmaltreated girls. *Child Maltreatment*, *8*, 163-172.

Sroufe, A., Egeland, B., Carlson, E. & Collins, A. (2005). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. New York: The Guilford Press.

Starr, R., MacLean, D. & Keating, D. (1991). Life-span developmental outcomes of child maltreatment. In R. Starr & D. Wolfe (Eds.), *The Effects of Child Abuse and Neglect: Issues and Research* (pp. 1-32). New York: The Guilford Press.

Swanston, H., Plunkett, A., O'Toole, B., Shrimpton, S., Parkinson, P. & Oates, K. (2003). Nine years after child sexual abuse. *Child Abuse & Neglect*, *27*, 967-984.

Trickett, P. & Putnam, F. (1998). Developmental consequences of child sexual abuse. In P. Trickett & C. Schellenbach (Eds.), *Violence Against Children in the Family and the Community* (pp. 39-56). Washington, D.C.: American Psychological Association.

Trickett, P. & Putnam, F. (1993). Impact of child sexual abuse on females: Toward a developmental, psychobiological integration. *Psychological Science*, *4*, 81-87.

Trickett, P., Reiffman, A., Horowitz, L. & Putnam, F. (1997). In D. Cicchetti & S. Toth (Eds.), *Rochester Symposium on Developmental Psychopathology (Vol.8) Developmental Perspectives on Trauma: Theory, Research, and Intervention* (pp. 289-310). Rochester, NY: University of Rochester Press.

U.S. Department of Health and Human Services, Administration on Children, Youth and Families. (2005). *Child Maltreatment 2003*. Washington, D.C.: U.S. Government Printing Office.

Vigil, J.M., Gray, D.C. & Byrd-Craven, J. (2005). A life history assessment of early childhood sexual abuse in women. *Developmental Psychology*, *41*, 553-561.

Table 1: Brief Description of LONGSCAN Samples

Site (N)	Cohort birth year	Ethnicity	Geographic Location	Risk Groups	Comparison Group(s)
San Diego (320)	1989-91	Af Am 36% White 31% Hisp 17% Mixed 12% Other 4%	Urban 100%	Early foster care (n = 320)	(Half the foster children have returned home by age 4 years)
Seattle (260)	1988-94	Af Am 20% White 50% Hisp 2% Mixed 24% Other 4%	Urban 90% Rural 10%	CPS report/moderate risk & substantiated (n = 159)	CPS report/moderate risk & <i>NOT</i> substantiated (n = 102)
Chicago (320)	1991-94	Af Am 47% White 15% Hisp 14% Mixed 22% Other 1%	Urban 100%	Family reported to CPS & (1) 6 mo family intervention (n = 100) <i>or</i> (2) usual CPS care (n = 100)	Neighborhood controls (n = 100)
North Carolina (221)	1986-87	Af Am 62% White 37% Hisp 14% Mixed 1%	Urban 53% Suburb 24% Rural 23%	Reported to CPS by age 4 years (n = 74)	<i>Not</i> reported to CPS (n = 147)
Baltimore (322)	1998-91	Af Am 93% White 5% Mixed 1% Other 1%	Urban 100%	(1) Failing-to-thrive <2 yrs of age (n = 123) <i>or</i> (2) Prenatal drug use or HIV infected mom (n = 83)	Same pediatric clinic, adequate growth, no special risk factors (n = 116)

(Runyan et al., 1998, p. 279)

Table 2: Constructs and Measurement Selection

Constructs	Measures	Domains	Informant
Modulation of Arousal	Child Behavior Checklist (Achenbach, 1991)	Aggressive Behavior Attention Problems Thought Problems Social problems	Parent or Caregiver
Autonomy and Self-Development	Vineland Screener (Sparrow et al., 1993)	Daily Living Skills Socialization	Clinician
Peer Relationships	Perceived Competence and Social Acceptance (Harter & Pike, 1984)	Cognitive Competence Physical Competence Peer Acceptance Maternal Acceptance	Child Self-Report
Social Competence	Loneliness and Social Dissatisfaction (Cassidy & Asher, 1992)		Child Self-Report

Table 3: Sample Demographic Characteristics

<i>Sample Demographics</i>	LONSCAN Sample N=1354	CSA Group n=125	Nonabused Group n=125
<i>Gender</i>			
Male	598 (44%)	34 (27%)	34 (27%)
Female	627 (46%)	91 (73%)	91 (73%)
<i>Race/Ethnicity</i>			
White	322 (26%)	51 (41%)	54 (43%)
Black	668 (55%)	30 (24%)	36 (29%)
Hispanic	92 (8%)	16 (13%)	12 (10%)
Native American	4 (1%)	1 (1%)	0 (0%)
Asian	2 (1%)	1 (1%)	0 (0%)
Mixed Race	127 (10%)	26 (21%)	21 (17%)
Other	9 (1%)	0 (0%)	2 (2%)
<i>Household Income</i>			
< \$5,000	150 (13%)	2 (2%)	7 (6%)
\$5 - \$15,000	489 (41%)	46 (37%)	53 (42%)
\$15 - \$25,000	242 (20%)	32 (26%)	27 (22%)
\$25 - \$35,000	1129 (11%)	17 (14%)	19 (15%)
\$35 - \$45,000	93 (9%)	11 (9%)	9 (7%)
> \$45,000	96 (8%)	12 (10%)	10 (8%)

¹ Missing data on 129-155 cases on demographic variables LONGSCAN Sample

² Missing income data on 5 CSA group cases.

³ Percentages are rounded up.

Table 4: LONGSCAN Maltreatment Coding Scheme: Sexual Abuse

Severity Rating	Abuse Type	Examples
1	Caregiver <i>exposes the child to explicit sexual stimuli</i> or activities, although the child is not directly involved.	<ul style="list-style-type: none"> • Exposes the child to pornography • Makes no attempt to prevent exposure to sexual activity • Discusses sex explicitly in front of the child in non-educational discussion
2	Caregiver makes direct <i>requests for sexual contact</i> with the child. Caregiver <i>exposes his or her genitals</i> to the child for the purposes of adult sexual gratification or in an attempt to sexually stimulate the child.	<ul style="list-style-type: none"> • Asks child to engage in sexual relations, but no physical contact involved • Invites child to watch him/her masturbate
3	Caregiver engages child in mutual <i>sexual touching</i> , or has child touch caregiver for sexual gratification.	<ul style="list-style-type: none"> • Fondles child for sexual gratification • Engages in mutual masturbation with child
4	Caregiver <i>physically attempts to penetrate</i> the child or actually penetrates the child sexually, including coitus, oral sex, anal sex, or any other form of sodomy.	<ul style="list-style-type: none"> • Molests child • Engages or attempts intercourse • Child has venereal disease, no info regarding sexual contact known • Mother has oral sex with son
5	Caregiver has <i>forced intercourse</i> or other forms of penetration, including manual or mechanical restraint, use of weapons, brutality, physically overpowering the child. Caregiver <i>prostitutes the child</i> , including using child for pornography, allowing, encouraging, forcing child into sex with others.	<ul style="list-style-type: none"> • Ties the child to the bed and rapes the child. • Sodomy at gunpoint • Forces child to participate in filming of pornography. • Invites one or more other partners to have sexual relations with the child • Any mention of the word rape.

Source: (English & LONGSCAN Investigators, 1997)

Table 5: CSA Group Child Behavior Checklist Scores

<i>CBCL Subscale</i>	Mean	Std Dev	Normal	Borderline	Clinical
Social Problems	57.17	8.93	99 (79%)	4 (3.2%)	22 (18%)
Thought Problems	56.34	7.398	107 (86%)	11 (9%)	7 (6%)
Attention Problems	58.7	8.81	105 (84%)	5 (4%)	15 (12%)
Aggressive	60.08	10.62	93 (74%)	14 (11%)	18 (15%)
Internalizing	52.79	10.44	98 (78%)	9 (7%)	18 (14%)
Externalizing	57.94	11.26	76 (61%)	7 (6%)	42 (33%)
Total Problems	56.94	11.25	76 (61%)	11 (9%)	38 (31%)

Table 6: CSA Group Vineland Screener Scores

<i>VSC Subscale</i>	Mean	Std Dev	Low	Mod Low	Adequate	Mod High	High
Daily Living	93.0	15.64	14 (11%)	21 (17%)	69 (55%)	17 (14%)	4 (3%)
Socialization	91.70	15.08	12 (10%)	27 (21%)	76 (61%)	9 (7%)	0

Table 7: CSA Group Loneliness and Social Dissatisfaction Questionnaire Scores

<i>LSDQ</i>	n	Mean	Std Dev
	115	9.30	15.64

Table 8: CSA Group Perceived Competence and Social Acceptance Scores

<i>PCSA Subscale</i>	n	Mean	Std Dev
Cognitive Competence	119	3.26	0.71
Peer Acceptance	119	3.20	0.70
Physical Competence	119	3.44	0.53
Maternal Acceptance	119	2.85	0.77

Table 9: ANOVA Results: Comparisons of CSA group and Nonabused group

Source	df1	df2	F	η_p^2
CBCL Attention Problems	1	246	6.847*	.027 ^a
CBCL Aggressive	1	246	15.115*	.058 ^b
CBCL Social Problems	1	246	2.399	.010
CBCL Thought Problems	1	246	15.03*	.058 ^b
VSC Daily Living Skills	1	248	2.054	.008
VSC Socialization	1	248	.000	.000
Loneliness & Social Dissatisfaction	1	224	7.770*	.034 ^a
PCSA Cognitive Competence	1	231	9.845*	.120 ^c
PCSA Peer Acceptance	1	231	2.217	.010
PCSA Physical Competence	1	231	8.361*	.035 ^a
PCSA Maternal Acceptance	1	231	15.210*	.062 ^b

* $p < .01$

^a Small effect size

^b Medium effect size

^c Large effect size

Table 10: Moderating Variables Predicting Aggressive Behavior

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R Square Change
	B	SE	β			
Step 1						
Child Sexual Abuse	4.33	1.09	0.24	3.99	.000***	--
Family Cohesion	0.65	0.47	0.28	1.37	.000***	.142***
Step 2						
CSA X Cohesion	0.04	0.30	0.03	0.13	.894	.000
Step 1						
Child Sexual Abuse	5.10	1.08	0.28	4.72	.000***	--
Family Expressiveness	0.79	0.15	0.32	5.42	.000***	.163***
Step 2						
CSA X Expressiveness	0.50	0.29	.031	1.69	.092	.010
Step 1						
Child Sexual Abuse	4.74	1.13	0.26	4.19	.000***	--
Appropriate Expectations	-0.53	0.17	-0.19	-3.17	.000***	.099***
Step 2						
CSA X Expectations	-0.42	.337	-0.26	-1.25	.212	.006
Step 1						
Child Sexual Abuse	4.88	1.15	0.27	4.25	.000***	--
Appropriate Empathy	-0.27	0.12	-0.14	-2.29	.023**	.082***
Step 2						
CSA X Empathy	-0.16	.236	-.014	-.069	.945	.000

Notes. Continuous predictor variables (all family variables) are mean centered. Lower scores on Family Cohesion and Family Expressiveness represent greater competence.

* $p < .05$

** $p < .01$

*** $p < .001$

Table 11: Moderating Variables Predicting Attention Problems

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R Square Change
	B	SE	β			
Step 1						
Child Sexual Abuse	2.54	1.05	.153	2.43	.016*	--
Family Cohesion	0.33	0.14	0.14	2.29	.023*	.046**
Step 2						
CSA X Cohesion	-0.48	0.29	-0.33	-1.68	.095	.011
Step 1						
Child Sexual Abuse	2.90	1.04	0.17	2.79	.006*	--
Family Expressiveness	0.47	0.01	0.21	3.35	.001*	.067***
Step 2						
CSA X Expressiveness	-0.12	0.28	-0.80	-0.41	.677	.001
Step 1						
Child Sexual Abuse	2.99	1.05	0.18	2.86	.005*	--
Appropriate Expectations	-0.45	0.52	-0.18	-0.88	.381	.060**
Step 2						
CSA X Expectations	0.13	0.31	0.01	0.04	.966	.000
Step 1						
Child Sexual Abuse	3.19	1.06	0.19	3.02	.003*	--
Appropriate Empathy	-0.28	0.11	-0.17	-2.61	.010*	.056**
Step 2						
CSA X Empathy	0.18	0.22	0.17	0.84	.401	.003

Notes. Continuous predictor variables (all family variables) are mean centered. Lower scores on Family Cohesion and Family Expressiveness represent greater competence.

* $p < .05$

** $p < .01$

*** $p < .001$

Table 12: Moderating Variables Predicting Social Problems

Variable	Unstandardized Coefficients		Standardize	t	Sig.	R Square Change
	B	SE	d Coefficients β			
Step 1						
Child Sexual Abuse	1.61	1.03	0.09	1.57	.117	--
Family Cohesion	0.40	0.14	0.18	2.87	.004**	.044**
Step 2						
CSA X Cohesion	-0.11	0.28	-0.74	-0.37	.710	.001
Step 1						
Child Sexual Abuse	2.14	1.01	0.13	2.11	.036**	--
Family Expressiveness	0.58	0.14	0.26	4.18	.000***	.078***
Step 2						
CSA X Expressiveness	0.48	0.28	0.33	1.74	.084	.011
Step 1						
Child Sexual Abuse	1.89	1.04	0.12	1.82	.070	--
Appropriate Expectations	-0.49	0.15	-0.20	-3.17	.002**	.051**
Step 2						
CSA X Expectations	0.38	0.31	0.26	1.22	.224	.006
Step 1						
Child Sexual Abuse	2.14	1.05	0.13	2.05	.042*	--
Appropriate Empathy	-0.34	0.11	-2.03	-3.19	.002**	.051**
Step 2						
CSA X Empathy	0.45	0.21	0.43	2.10	.036*	.017*

Notes. Continuous predictor variables (all family variables) are mean centered. Lower scores on Family Cohesion and Family Expressiveness represent greater competence.

* $p < .05$

** $p < .01$

*** $p < .001$

Table 13: Moderating Variables Predicting Daily Living Skills

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R Square Change
	B	SE	β			
Step 1						
Child Sexual Abuse	3.22	2.22	0.09	1.45	.149	--
Family Cohesion	-0.68	0.31	-0.14	-2.24	.026*	.027*
Step 2						
CSA X Cohesion	0.35	0.61	0.12	0.58	.565	.001
Step 1						
Child Sexual Abuse	3.06	2.24	0.09	1.36	.174	--
Family Expressiveness	-0.55	0.31	-0.12	-1.81	.071	.023
Step 2						
CSA X Expressiveness	-0.48	0.62	-0.15	-0.77	.440	.002
Step 1						
Child Sexual Abuse	3.16	2.25	0.09	1.41	.161	--
Appropriate Expectations	0.49	0.33	0.95	1.48	.141	.018
Step 2						
CSA X Expectations	0.22	0.68	0.07	0.33	.743	.000
Step 1						
Child Sexual Abuse	2.97	2.27	0.09	1.31	.191	--
Appropriate Empathy	0.29	0.23	0.08	1.25	.213	.016
Step 2						
CSA X Empathy	0.46	0.47	0.21	0.98	.330	.004

Notes. Continuous predictor variables (all family variables) are mean centered. Lower scores on Family Cohesion and Family Expressiveness represent greater competence.

* $p < .05$

** $p < .01$

*** $p < .001$

Table 14: Moderating Variables Predicting Socialization

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R Square Change
	B	SE	β			
Step 1						
Child Sexual Abuse	-0.06	1.94	-.002	-.029	.977	--
Family Cohesion	-0.76	0.27	-0.18	-2.85	.005**	.033*
Step 2						
CSA X Cohesion	0.43	0.53	0.16	0.81	.420	.003
Step 1						
Child Sexual Abuse	-0.80	1.92	-0.03	-0.42	.678	--
Family Expressiveness	-1.04	0.26	-0.25	-3.96	.000***	.061**
Step 2						
CSA X Expressiveness	-0.77	0.53	-0.28	-1.47	.143	.008
Step 1						
Child Sexual Abuse	-0.38	1.94	-0.01	-0.20	.845	--
Appropriate Expectations	0.78	0.29	0.17	2.70	.008**	.030*
Step 2						
CSA X Expectations	0.17	0.58	0.06	0.29	.772	.000
Step 1						
Child Sexual Abuse	-0.88	1.95	-0.03	-0.45	.653	--
Appropriate Empathy	0.61	0.20	0.19	3.04	.003**	.037*
Step 2						
CSA X Empathy	-0.49	0.40	-0.25	-1.21	.228	.006

Notes. Continuous predictor variables (all family variables) are mean centered. Results of analyses with variable inflation factors (VIF) greater than 10 indicate high collinearity and should be interpreted with caution (Stevens, 1996).

* $p < .05$

** $p < .01$

*** $p < .001$

VITA

JENNIFER L. BECKER

CURRENT ACADEMIC POSITION

Visiting Instructor and Program Coordinator
School of Social Work Title IV-E Child Welfare Education Program
Florida International University

EDUCATION

2007 Doctoral Candidate in Social Welfare Florida International University; Miami, FL
2001 Master of Social Work Florida International University; Miami, FL
1998 Bachelor of Social Work San Francisco State University; San Francisco, CA

AWARDS AND SCHOLARSHIP

2007 The Melissa Institute Dissertation Award
2006 Charles E. Perry Scholarship
2006 Summer Research Institute, *National Data Archives of Child Abuse and Neglect*
2006 Excellence in Teaching Award, *Florida International University*
2004 – 2006 Graduate Assistantship, *Florida International University*

SCHOLARSHIP

Becker, J. & Thomlison, B. (2006). Assessment and treatment of child sexual abuse: A forensic social work perspective. In A. R. Roberts & D. Springer (Eds.). *Forensic social work in juvenile and criminal justice: Assessment, treatment, and research*. Chicago, IL: Charles C. Thomas, Publisher.

Becker, J. (2006). Jacques family: A case study. In B. Thomlison (Ed.). *Family assessment handbook: An introductory practice guide to family assessment and intervention (2nd ed.)*. Pacific Grove, CA: Brooks/Cole Wadsworth.

Levenson, J.S., Becker, J., & Morin, J. W. (2008). The relationship between victim age and gender crossover among sex offenders. *Sexual Abuse: Journal of Research and Treatment*.

Thomlison, B., Jacobs, R. J., & Becker, J. (2008). Identifying evidence-based practice for co-occurring conditions. In B. Thomlison and K. Corcoran (Eds.). *Evidence-based practice: A student manual for criminal justice and social work internships*. New York: NY: Oxford University Press.