

SUBSTANTIATION OF SEXUAL ABUSE ALLEGATIONS AND  
THE EFFECTS ON ADOLESCENT SOCIOEMOTIONAL  
DEVELOPMENT AND COPING BEHAVIORS

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BY  
MICHELLE DEANEE' JOHNSON, B.A., M.A.

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## DEDICATION

To my mother, who was my best friend, guiding light, and biggest cheerleader.  
She taught me the meaning of life.

To my husband and beautiful son, for believing in me and providing me  
with the strength to make this great endeavor possible.

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## ABSTRACT

MICHELLE DEANEE' JOHNSON

### SUBSTANTIATION OF SEXUAL ABUSE ALLEGATIONS AND THE EFFECTS ON ADOLESCENT SOCIOEMOTIONAL DEVELOPMENT AND COPING BEHAVIORS

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The purpose of this study was to explore the impact of substantiated sexual abuse allegations of adolescent children between the ages of 14 and 18 years of age. This study was designed to identify socioemotional differences between adolescent children who had sexual abuse allegations substantiated compared to those children who either did not identify as being a sexual abuse victim or those who did not have their allegations substantiated. An ecological model of development was used to help understand adolescent long-term response, validating the importance of adhering to research based best practices, and guiding effective interventions. This was a quantitative secondary analysis ( $n=183$ ), using data collected for the nationwide Longitudinal Study of Child Abuse and Neglect (LONGSCAN). A MANOVA was used to identify relationships between predictor variables (gender and sexual abuse allegation outcomes) and outcome variables (internalizing, externalizing, total problem scores, total coping scores).

Significant findings were found with respect to sexual abuse allegation outcomes and the effects on socioemotional development, specifically for allegation outcomes identified as “inconclusive” as well as for children who had identified as being sexually

abused, but who did not have official allegations on record. Internalizing, externalizing, and total problem scores revealed significant differences between groups. Significant findings were found for the interaction between gender and sexual abuse allegation outcomes but not with gender alone. There were no significant findings for total coping scores.

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## CHAPTER I

### INTRODUCTION

Over the last several decades, the United States made great strides in combating child sexual abuse. More stringent laws have been passed with harsher penalties associated with them (Child Welfare Information Gateway, 2011). Public dialogue surrounding victims' needs and offender accountability was void during past years. Although public awareness had been elevated, sexual abuse, along with other forms of interpersonal violence, had been, and continues to be, stigmatized and rendered taboo and inappropriate for discussion (Campbell, Greeson, Bybee, & Fehler-Cabral, 2012). Law enforcement, Child Protective Services (CPS), and the courts have been, and are, decision makers that hold a tremendous amount of discretion in how sexual abuse cases are handled. With the added factor of typical adolescent development, professionals in the field should be cognizant of the impact their decisions have on adolescent socioemotional development and coping behaviors.

Sexual abuse has been referred to as a silent epidemic (Freeman-Longo, 1997; Haley, Stein, Dingwell, Golden, & Peterson, 2010; King, 1999; Yahaya, Soares, De Leon, & Macassa, 2012). Due to the nature of the crime and the many stigmas associated with sexual violence, the true number of victims is difficult to identify (Finkelhor, Ormrod, Turner, & Hamby, 2012). In a comparison study of official records and self-reports on childhood adversity, data collected revealed inconsistencies between documented/reported sexual abuse cases and victim self-reports. Participants included

136 adolescents between the ages of 14 and 23, who had substantiated allegations of child maltreatment before the age of 13. According to the researchers' findings, sexual abuse was self-reported by 17% of participants; however, only 8% of participants had official records of their abuse documented (Pinto & Maia, 2013). These findings suggested substantial unreliability in reported numbers of sexual abuse.

For the purpose of this study, sexual abuse was defined by utilizing the definition developed by Barnett, Manly, & Cicchetti (1993) as stated:

Sexual abuse is [coded] when any sexual contact or attempt at sexual contact occurs between a caregiver or other responsible adult and a child for purposes of the caregiver's sexual gratification or financial benefit. In cases of sexual abuse, caregiver or responsible adult refers to any family member or friend who has a relationship with the child or who is in a position of authority over the child. (p. 57).

This definition was selected in order to maintain consistency with data that was used for this research (Knight, Smith, Martin, Lewis, & the LONGSCAN Investigators, 2014).

It had only been since the 1970s that sexual abuse had been viewed as a social problem, primarily due to the feminist movement and an increase in child protection efforts (Finkelhor, 1984). Researchers have been able to identify lifelong negative consequences associated with adverse childhood experiences, which includes all sub-types of child maltreatment (i.e. physical, emotional, and sexual abuse) (Anda & Felitti, 2003). In the nationally recognized work of the Centers for Disease Control and

Prevention (CDC) and Kaiser Permanente's Adverse Childhood Experience study (2005), it was determined that as many as one out of four girls and one out of six boys will be sexually abused before their 18<sup>th</sup> birthday. Similarly, the National Sexual Violence Resource Center (NSVRC) reported the same findings in 2015 (NSVRC, 2015). In 2013, the Children's Bureau (Administration on Children, Youth and Families, Administration for Children and Families) of the U.S. Department of Health and Human Services reported that 3.5 million referrals involving 6.4 million children were made to local child protective agencies. Of those referrals, 2.1 million were screened out. Neglect was the primary form of abuse reported at 79.5%, 18% were physical abuse, and 9% were allegations of sexual abuse. There were another 10% of reports that were categorized as "other" (U.S. Department of Health and Human Services [U.S. DHHS], 2015, p. 23). Being that sexual abuse is cast in secrecy; unfortunately, many cases are never reported (Abel & Harlow, 2001).

Although there is a vast amount of research in the field of child sexual abuse (Walker-Williams, van Eeden, & van der Merwe, 2013), little attention had been made to understand the adolescent child victim. In a national study of adults conducted by Black et al. (2011) for the National Center for Injury Prevention and Control (NCIPC) and Centers for Disease Control and Prevention (CDC), it was reported that 42.2% of female victims of sexual violence were first assaulted before the age of 18. Findings suggested that 27.8% of male victims were sexually violated before the age of 10. A 2011 nationwide survey of high school children found that 11.8% of girls and 4.5% of boys in grades 9-12 reported being sexually assaulted at some point in their lives (Black et al.,

2011). The National Children's Alliance reported that Children's Advocacy Centers (CACs) nationwide had served nearly 295,000 child abuse victims in 2013 and over 315,000 in 2014. Of the 315,000, 205,438 were identified as sexual abuse victims (National Children's Alliance [NCA], 2014). Children's Advocacy Centers are designed to provide a child-friendly, neutral environment for investigating child sexual abuse. Law enforcement, CPS, advocates, mental health providers, and sometimes hospital personnel function as a multidisciplinary team coordinated by CACs in order to increase prosecution rates of offenders (Campbell, et al., 2012). Jones et al. (2010) discovered that investigations and investigation outcomes for adolescent victims as well as the overall process were significantly better when a CAC was used compared to those who did not utilize a CAC. This outcome may be accredited to a CACs ability to organize and provide services through collaborations and may offer intervention by highly trained professionals who understand the complexities of child development.

### **Theoretical Perspective**

Sexual abuse has been classified as a public health issue by The Centers for Disease Control and Prevention and the World Health Organization (Dahlberg & Mercy, 2009; Garcia-Moreno, Guedes, & Knerr, 2012). There are several theoretical perspectives that facilitate an understanding of sexual abuse and the effects on children and their environment; however, researchers have been specific about incorporating developmental, cultural, and ecological perspectives into intervention strategies with children and adolescent trauma survivors (Tishelman & Geffner, 2011).

Bronfenbrenner's Ecological Model of Human Development (1979) guided this research due to its appropriateness for addressing sexual abuse as a public health concern. Although there was an evolution of the ecological model, the four primary systems remained the same: the microsystem, the mesosystem, the exosystem, and the macrosystem (Bronfenbrenner, 1979). As Bronfenbrenner continued to adapt his theory, he later added the chronosystem to address influences of time on development (Bronfenbrenner, 1986). Bronfenbrenner argued that in order to understand fully the child, one must first understand the context in which that child lives. It was his belief that a child's development is affected by a context of nested environments, which influence each other and are subjected to cultural influences.

The *microsystem* is the smallest of layers that encompasses the adolescent's immediate environment, such as his or her home, school, church, or any other setting in which the child had daily interactions (Bronfenbrenner, 1994). Individuals and institutions in which they routinely exposed are a part of the microsystem (i.e. immediate family members, schools, daycare, and peers). It is assumed that the younger the child, the smaller the microsystem. Microsystems develop more as new people are introduced into the child's world. This system is placed within the mesosystem, theorized by Bronfenbrenner to be the relationships between microsystems, and impacts bi-directionally by changes within each layer. The layer outside of the microsystem is the *mesosystem*. Bronfenbrenner (1994) suggested that the mesosystem does not directly involve the child, but more so the interactions between the individuals and institutions within the child's microsystem. In a situation of sexual abuse investigation, this level

would include the interactions between caregivers, family members, CPS, and law enforcement.

The next layer is the *exosystem*. The exosystem refers to the outer layer of the mesosystem that related to interactions between the settings in which the adolescent lives. Similar to the mesosystem, individuals may not have direct contact with components of the exosystem, yet development is affected by it. Individuals in an adolescent's life are affected by the meso- and exosystems; therefore, the adolescent is affected as well. Relevant to sexual abuse cases, the exosystem may include medical personnel, police, social services, neighbors, family friends, and local government.

The next layer is the *macrosystem*. The macrosystem refers to the outer layer of the ecological model, which consists of values and beliefs, attitudes, laws and ideologies embedded within each of the broader systems. Bronfenbrenner (1994) referred to the macrosystem as the "blueprint of society" (p. 40). As changes occur at the macrosystem level, conditions and processes that occur in the microsystem are influenced.

The last system Bronfenbrenner identified was the *chronosystem*. Historically, human development theorists associated stages of development with a person's chronological age (Bronfenbrenner, 1994). Bronfenbrenner's theory expanded the concept of development by acknowledging environmental and other external factors, which influenced development in one's life as well as throughout history.

Events shape the chronosystem, both normative and non-normative, which are measured by the timing of the event, duration, frequency, and the perception of each event's significance to an individual (Bronfenbrenner, 1986). Normative events are

those events that are often predictable and have a shared meaning within a family or cultural group. Non-normative events are those that may not be predictable, so that preparation for such events may be difficult. For example, a normative event may be a planned pregnancy, and a non-normative event may be an accidental death in the family. Understanding the chronosystem of an individual may provide a unique understanding of interactions and developmental processes. This study showed the interconnectedness of all systems but primarily between the meso- and the microsystems. This study focused mainly on the microsystem of the adolescent and how allegations substantiated at the meso- and exosystem layers affected the rest of the adolescent's ecological environment.

The ecological model provides a theoretical perspective that looks at the child as a whole and at the context in which that child lives. Each level affects the other, and it is presumed that the child's development is fluid, and nothing remains static as contexts continually changed. Banyard (2011) suggested using an ecological model to challenge current intervention strategies at the exo- and macrosystem levels.

### **Statement of the Problem**

Over the last few decades, there had been an increase in awareness and education as it related to child sexual abuse (Child Welfare Information Gateway, 2011). Although there are several studies around the topic of sexual abuse, there remains gaps in understanding the significance of substantiated abuse allegations and the effects on adolescent socioemotional development and coping behaviors. This study was designed to narrow the gap and to offer insight into how decisions made at the mesosystem level influenced the microsystem.

Law enforcement and CPS are the primary decision makers at the exosystem that presumed a significant amount of discretion into how far a case is processed in the criminal justice system. Not all cases that are substantiated by CPS will be prosecuted or investigated by law enforcement (Sedlak et al., 2010). Sexual abuse allegations that are investigated by using “best practices” can build stronger cases against offenders, strengthen the investigation, reduce trauma, and increase satisfaction rates of victim and caregivers (Hartley, Mullings, & Marquart, 2013, p. 270). Sadly, not all sexual abuse cases are investigated using recommended best practices (Newlin et al., 2015).

### **Statement of the Purpose**

The purpose of this study was to explore the impact of substantiated sexual abuse allegations on socioemotional development of adolescent children between the ages of 14 and 18 years of age. This study was designed to identify socioemotional differences and influential factors of substantiated allegations of sexual abuse. This study compared normative socioemotional development and adolescent coping behaviors of sexual abuse victims to non-abused adolescents. This study examined the gender as well as abuse allegation victimization status and abuse allegation outcomes (i.e. substantiated/founded or unsubstantiated/unfounded). The ultimate goal of this research was to contribute to the body of literature and to build on the knowledge base of adolescent sexual abuse victims, leading to a better understanding of needs as well as identifying factors contributing to socioemotional development and coping behaviors in adolescent sexual abuse victims. Utilizing the ecological development framework produced findings relevant to improved intervention strategies.



## **Research Questions and Hypotheses**

The goal of this study was to gain a better understanding of the impact on an adolescent's socioemotional development when abuse allegations were substantiated. Understanding the child as a whole is extremely important when one individual or agency has the discretion of either substantiating abuse allegations or not. By examining the research questions below, the researcher had the opportunity to contribute to the body of research justifying the need for a greater understanding of child developmental issues and to make further recommendations on improving the quality of intervention services. More importantly, by contributing to the body of research, this study could improve the overall outcome for victims if recommendations are implemented. The following research questions guided this study:

### **Research Question One**

Do adolescent sexual abuse victims have differences in socioemotional development and coping behaviors compared to non-abused adolescent children?

**Hypothesis one.** It was hypothesized that there would be a significant difference in socioemotional development and coping abilities between adolescents who have self-disclosed sexual abuse before the age of 18 and those adolescents who have not made a disclosure of sexual abuse.

**Hypothesis two.** It was hypothesized that adolescents who have self-disclosed sexual abuse would have total competence scores at the lower end of the spectrum.

**Hypothesis three.** It was predicted that internalizing, externalizing, and total problem scores for adolescents who had self-disclosed sexual abuse would be higher than adolescents who had not made an allegation of abuse (control group).

**Hypothesis four.** It was expected for total problem scores of self-disclosed sexually abused adolescents to be higher than those adolescents who had not made a disclosure of sexual abuse.

**Hypothesis five.** It was hypothesized that adolescents who had not made a disclosure of sexual abuse would have higher ACOPE scores than those who have.

## **Research Question Two**

Are there differences in socioemotional development and coping abilities between adolescents who have substantiated abuse allegations and those that do not?

**Hypothesis one.** It was hypothesized that adolescents who made a self-disclosure of sexual abuse and had their claims substantiated would score higher on the ACOPE.

**Hypothesis two.** It was hypothesized that adolescents who had their claims substantiated would have lower scores on internalizing and externalizing and total problem scores.

In order to answer the research questions, the researcher investigated data relevant to socioemotional development and coping behaviors grounded in Bronfenbrenner's ecological model. This investigation studied socioemotional outcomes of both sexually abused and non-sexually abused adolescent children. The researcher used secondary analysis of data collected for Longitudinal Studies of Child Abuse and Neglect (LONGSCAN), a longitudinal study with over 1,300 participants designed to explore a

comprehensive look into child abuse and neglect. Several studies collected data for LONGSCAN, utilizing the ecological theoretical perspective.

### **Definition of Terms**

Adolescent – Children between the ages of 12 and 18 years of age.

Competencies - Fundamental developmental characteristics, such as expectable abilities and milestones (Tishelman & Geffner, 2011).

Sexual abuse - Any sexual contact or attempt at sexual contact occurring between a caregiver or other responsible adult and a child for purposes of the caregiver's sexual gratification or financial benefit (Barnett et al., 1993).

Polyvictimization - More than one form of maltreatment (sexual, physical, emotional, and/or neglect) (Olafson, 2011).

Psychogenic amnesia - Psychogenic amnesia (PA) is defined as an impaired access to episodic memories for a certain time period (or consolidation of these memories) in the context of [psychogenic] stress (Arzy et al., 2011, p. 1422).

Socioemotional development - Refers to a child's developing capacity to experience, manage and express the full range of positive and negative emotions, develop close, satisfying relationships with other children and adults, and to actively explore their environment and learn (Cohen, Onunaku, Clothier, & Poppe, 2005).

Substantiated - An investigation disposition that concludes the allegation of maltreatment or risk of maltreatment was supported or founded by state law or policy (U.S. DHHS, 2015).

Unsubstantiated - An investigation disposition that concludes there was not sufficient evidence under state law to conclude or suspect that the child was maltreated or at-risk of being maltreated (U.S. DHHS, 2015).

Inconclusive - An investigation disposition when the results of an investigation are uncertain or unable to be determined (U.S. DHHS, 2015).

### **Implications**

This research could have implications for exo- level factors, such as social service providers, child protection personnel, law enforcement, and the courts. These findings may contribute to the general understanding of adolescent adaptability and could have the potential for associating case outcomes with victims' level of socioemotional development and coping behaviors. There is notable concern associated with unsubstantiated allegations that are indeed true. False negative findings may cause a child and/or family to lose confidence in the system, thus creating a barrier to future abuse disclosures. There are also concerns for needed therapeutic intervention, as research has discovered a significant correlation between adverse childhood experiences and long-term negative life events (Anda & Felitti, 2003; Arruabarrena & dePaul, 2012).

According to the National Association of Crime Victim Compensation Boards (NACVCB), most jurisdictions required a victim of crime to report the crime promptly to the police. Victims may not report abuse due to the trauma, which could distort their memories of the abuse (Newlin et al., 2015). Other possible reasons for not disclosing could be associated with internalizing, self-blame, and fear. Another common requirement is that victims and caregivers (in cases of minors) must cooperate with law

enforcement in order for victims and supportive family members to qualify for crime victims' compensation services (National Association of Crime Victim Compensation Boards [NACVCB], 2015). Unfortunately, this will often place supportive caregivers in a situation where they may have to pay for services, which can be quite expensive (i.e. therapy and/or medical attention). Another potential negative consequence for not substantiating true allegations of sexual abuse relates to the lack of offender accountability. By not holding offenders accountable, professionals inadvertently may provide future opportunities for offenders to continue to offend, and court ordered interventions such as sex offender management and therapeutic services may not be offered.

### **Limitations**

This study was limited by the data available. Being that this was a secondary analysis of data; the researcher relied on the primary investigators for accuracy and reliability. Five different sites throughout the United States were used in data collection for the LONGSCAN: East, Northwest, Midwest, Southwest, and South. The South and Midwest cohort participants were not scored on one of the primary intended instruments; therefore, the current study drew from data collected at the East, Northwest, and Southwest sites. This was a limitation factor when screening for specific sexual abuse cases as it created an even smaller sample size for analysis.

Finally, it should be noted that the participants in the LONGSCAN were recruited through social service agencies and/or CPS and had been identified as "at risk" youth; therefore, there was an overrepresentation of identified abused children captured in this

data set. One major limitation to this study was with respects to the ratio of cases. Out of 431 cases, only 24 self-disclosed as being a victim of sexual abuse, whereas 336 had no allegations of sexual abuse.

### **Summary**

Although many improvements had been made over the last decade in intervention strategies and how professionals approached sexual abuse allegations, there remains a need to understand how law enforcement and CPS decisions can affect socioemotional outcomes of adolescents. This research study is aimed at analyzing secondary data specific to socioemotional outcomes of adolescent sexual abuse victims in relation to allegation outcomes. Bronfenbrenner's Ecological Model of Human Development (1979) provided the theoretical perspective for this study. Findings may lead to a better understanding of how each ecological system influenced the other, most specifically, the mesosystem's influence on an adolescent's microsystem and socioemotional development.

## CHAPTER II

### LITERATURE REVIEW

Child sexual abuse had received a significant amount of attention over the last decade due to media attention as well as an increase in public awareness campaigns (Mejia, Cheyne, & Dorfman, 2012; Weatherred, 2015). This attention at the macro-system level had brought about change within the chronosystem as the paradigm has shifted slowly from society viewing sexual abuse as taboo to recognizing it as a social health concern (McMahon & Puett, 1999). Primary and secondary prevention programs such as *Tell, Tell, Tell* and *P.S. It's My Body* were developed to educate children on the importance of body safety and telling someone if abuse happened. Programs such as *Darkness to Light* gear curriculum toward adult accountability and place responsibility on adults within each of a child's systems to prevent opportunities for abuse and, at the macro- and exo- levels, to intervene appropriately if abuse occurs. The fundamental premise behind intervention and prevention programs is to prevent sexual abuse from happening and to offer supportive services to victims while researchers become more familiar with the effects of sexual abuse to the entire ecological system.

In order to fully understand the implications associated with substantiating sexual abuse allegations, professionals must obtain a clear picture of what researchers deem to be best practices (Hartley et al., 2013) and must have a clear understanding of the problem of sexual abuse.

## **Addressing Adolescent Sexual Abuse**

Sexual abuse is very complex and disrupts every layer of each victim's ecological system. When sexual abuse occurs, changes within the individual, family, support network, and beyond are taking place to adjust to this non-normative event of violence and mistrust. Sexual abuse affects each victim and family throughout a lifetime. Researchers have been able to draw a correlation between child sexual abuse and other negative lifelong consequences (Chapman et al., 2011; Dube et al., 2001; Dube et al., 2002; Hillis et al., 2004; Roxburgh & Macarthur, 2014). In a famous longitudinal study called the *Adverse Childhood Experience on Adult Health and Well Being (ACE Study)* conducted by Dr. Robert Anda with the Center for Disease Control in Atlanta and Dr. Vincent Felitti with Kaiser Permanente in San Diego (1998), results revealed that 28% of the 17,000 records reviewed reported childhood physical abuse, and 21% reported sexual abuse. Without intervention, these victims may become more susceptible to adult mental health issues and other negative behavioral health problems such as early onset of alcohol use and abuse, increased likelihood of early smoking, prescription drug misuse, illicit drug use, sexual risk-taking behaviors, and increased risk of suicide (Anda et al., 1999; Anda, Brown, Felitti, Dube, & Giles, 2008; Dube et al., 2001; Dube et al., 2002; Hillis et al., 2004).

Adverse childhood experiences were found to change the structure of the brain and to affect the overall development of children. Psychiatric and medical doctors have associated sexual abuse with post-traumatic stress disorder (PTSD), hyper-active biological stress response, and brain abnormalities (DeBellis, Spratt, & Hooper, 2011).



Adverse childhood experiences were identified as factors contributing to an increased risk for physical, cognitive, social and emotional problems. Arruabarrena and dePaul (2012) reviewed several peer articles on the correlation between adverse experiences and interventions and concluded the need for more attention on prevention and intervention of sexual abuse as opposed to the treatment of victims. The recommendation among researchers encourages professionals to act more proactively, rather than reactively.

Research providing understanding of adolescent victimization through a child development lens continues to be an oversight within the research community. Often, adolescents get trapped in a system where improvements have been made to intervene with young children and adults, yet the adolescent child falls somewhere in between. There remains a significant need to develop intervention and supportive strategies for the adolescent victim, especially those who have multiple victimizations (Olafson, 2011). The CDC (2012) reports 29.9% of female sexual abuse victims were first assaulted between the ages of 11 and 17-years of age. A little over twelve percent (12.3%) of female and 27.8% of male victims reported being assaulted before the age of 11. Individuals who had been victimized at a younger age had been found to show disruption in adaptive development with symptoms such as sexual behavior problems, aggression, emotional distress and dissociation (Fontanella, Harrington, & Zuravin, 2000; Mian, Marton, & LeBaron, 1996).

Many adolescents experience polyvictimization (more than one form of maltreatment), both as a younger child and into puberty (Olafson, 2011). Unfortunately, there is a lack of research that examines co-occurrences and the interrelatedness and how

these co-occurrences may affect case outcomes (Sabri, Hong, Campbell, and Cho, 2013). In a comparison study conducted by Pinto and Maia (2013), official records were compared to retrospective self reports of abuse by adolescents. The participants included 136 adolescents aged 14-23 that had been confirmed victims of abuse. There were 72 males and 64 females. Each participant's substantiated abuse allegation happened before the age of 13. The researchers found only 17% of self-reports were consistent with official records, indicating a significant gap in identifying children and adolescents who had experienced polyvictimization. Sexual abuse was not exclusive to the problems of under-reporting. Similarly to other studies, participants reported other adverse childhood experiences and forms of child maltreatment; however, the reports were never documented in official records. Pinto and Maia (2013) recommended practitioners and intervening professionals use caution when interpreting official data and retrospective reports alone.

Being cognizant of the potential for polyvictimization may be beneficial when working with adolescent victims. It is also imperative that professionals understand what may place someone at a higher risk for polyvictimization. Wager (2012) conducted an online study of undergraduate students and staff at a university in South East England to investigate whether the risk of revictimization is both moderated and/or mediated by the experience of psychogenic amnesia from the initial sexual abuse experience. There were a total of 210 participants aged 16 to 65 years old who answered retrospective questions related to past sexual trauma. The majority of participants were female, making up 74.3% of responses. Amnesia was assessed by four questions, the first of which was a forced-

choice question asking, “Have you ever experienced a period of time for which you were unable to remember the incident?” with a response set of “Yes” or “No.” This was followed up by three open-ended questions to gain insight to each person’s process for memory retention and retrieval. Dissociation was measured, using the Dissociative Experiences Scale. Chi-squared analyses revealed that individuals who were sexually abused as a younger child were significantly more likely to be sexually abused during their adolescent years than those who did not experience early abuse. It was found that those who reported psychogenic amnesia of their childhood abuse were at a higher rate for revictimization during adolescence than those who retained memories of their childhood abuse. This poses a problem when intervention and prevention strategies are focused towards victims with the working knowledge of their previous abuse.

This study assumes that the recovery of memories does occur and may occur spontaneously. Although there are limitations to this study, specifically with regards to self-report and lack of memory, it is important to understand the implications of the findings. For example, if the findings are valid, then it can be extrapolated that one in 12 adolescent sexual abuse survivors will likely experience revictimization before the age of 19 and remain unaware of their initial victimization (Wager, 2012).

Sexual abuse in all its forms leads to an array of mental health concerns, such as post-traumatic stress disorder, anxiety, depression, and risk-taking behaviors (Olafson, 2011). It is for these reasons that efforts need to be made to substantiate verifiable abuse allegations in order to promote healthy resiliency and positive coping methods in adolescents.

Although studies have been able to identify measurable life-long consequences of adverse childhood experiences, little effort has been made to examine the interconnectedness of sexual abuse case outcomes and effects on adolescent child development. This may be in part due to barriers associated with varying degrees of acceptance of common definitions accepted by professionals and law makers, biases associated with adolescent expectations, and a general misunderstanding of child development issues. Current literature indicates an inconsistency in operationalized terminology, jurisdictional variances in law, policy, and practice with respect to child maltreatment (Sabri et al., 2013).

In addition to inconsistencies within the current literature, there is also a significant gap in research which addresses the adolescent victims' well-being both during and after an investigation. Little is known about the effects of substantiated allegations versus unsubstantiated allegations of abuse on the well-being of adolescent victims. Many studies have combined younger children and adolescent children within the same research framework, limiting the generalizability of the findings (Fontanella et al., 2000). Another common methodological setback in sexual abuse research relates to the time between onset of abuse and assessment. Assessments made during a different developmental stage in a child's life may contribute to unreliable findings. Kendall-Tackett and colleagues (1993) suggest the lack of a sound theoretical framework as well as a scarcity of longitudinal studies contributes to the significant variations in findings related to sexual abuse.

Researchers have not focused much attention on sexual abuse allegation outcomes and the adolescent victim. The body of literature that exists focuses primarily on general prosecution rates, combining both child and adolescent victims in their data collection. There is only one known study today that addresses prosecution rates specifically for adolescent victimizations. Campbell, Greeson, Bybee, and Fehler-Cabral (2012) conducted a regional study to explore stakeholder collaborations and the impact and effectiveness of a multidisciplinary team intervention for adolescent sexual abuse cases.

The most common form of a multidisciplinary team combines a Sexual Assault Nurse Examiner (SANE) program with a Sexual Assault Response Team (SART). These exo level factors may also include multidisciplinary teams from a Children's Advocacy Center. In this study, two SANE-SART programs offered data, which had been collected over a ten year period. Campbell et al. (2012) found that cases were more likely to be prosecuted if the victim was young, had a disability, knew his/her offender, and if law enforcement followed through with submitting DNA evidence for analysis. Only 40.3% of cases involving adolescent victims between the ages of 13 and 17 years were prosecuted with either a trial conviction or a guilty plea, compared to 40-85% successful prosecution for victims under the age of 12. It was found that victims aged 16 to 17 were 73% less likely to have a higher disposition (i.e. guilty plea or conviction) compared to cases involving children aged 13-15. Although cases involving this age group were less likely to be prosecuted, they are most likely to be victimized (CDC, 2012).

Applying a child development theoretical perspective may assist professionals in understanding adolescent response, validating the importance of adhering to research

based best practices, and guiding effective interventions. In order to understand an adolescent's experience, it is important to get a better understanding of what is taking place at both the micro and meso levels as adolescents are highly dependent on peers and other supportive adults (Fehler-Cabral & Campbell, 2013).

Government officials and professionals in the field only recently had focused their attentions on the needs of the child victim, which included the needs of adolescent victims. The U.S. Department of Justice released the findings of a study conducted by the National Task Force on Children Exposed to Violence (Listenbee & Torre, 2012). These findings were a result of collaborative efforts with experts, interviews with advocates and victims, public meetings, and numerous hearings before Congress. Reports indicated that out of the 76 million children in the United States, 46 million will be exposed to violence, crime, and/or abuse on an annual basis.

In a country where the criminal justice system is organized to address adult offenders, it can be argued that we have historically not been prepared to address issues surrounding young victims of crime. In a fairly recent analysis of literature, Snow, Powell, and Sanger (2012) suggest young children and adolescents are at a disadvantage when dealing with the criminal justice system, specifically when taking into consideration factors such as cognitive and linguistic development. They advocate for the integration of speech-language pathology as a part of education, forensics, and human services fields to better understand child and adolescent competencies. Furthermore, special attention should be given to children and adolescents who have disabilities (hidden or identified). Law enforcement and the criminal justice system have historically

focused on suspect apprehension and offender accountability as opposed to victim empathy and the understanding of crime victim response, including child victims and witnesses (Wasserman & Ellis, 2008).

Recently, this gap had been addressed as it related to child victims of crime. In 2012, as a response to the tragedy of the Sandy Hook Elementary School shootings that killed 20 children and 6 adults and other violent acts perpetrated at schools throughout the country, the U.S. Department of Justice and the U.S. Office of Juvenile Justice and Delinquency Prevention partnered with the International Association of Chiefs of Police to enhance law enforcements' response to children exposed to violence. This exposure included witnessing violent crimes, domestic violence, physical, and sexual abuse. This project was designed to help increase the understanding of children's responses to violence and to provide law enforcement with the tools necessary to work with child victims and witnesses (Listenbee & Torre, 2012).

Although there has been a significant increase in the intervention and prevention of sexual abuse, research suggests that many professionals working these cases still hold erroneous beliefs and biased attitudes, which may play a significant role in the decision-making process to move forward in a sexual abuse case (Everson & Sandoval, 2011; Finnila-Tuohimaa et al., 2008; Herman & Freitas, 2010; Mart, 2010). There is a need for greater action and change in attitudes and beliefs of the individuals who have the highest ability to decrease instances of sexual abuse (Abel & Harlow, 2001).

Social competence has been identified as a key to a well-rounded, functioning person's development (Parker, Rubin, Erath, Wojslawowicz & Buskirk, 2006).

Researchers have established a myriad of behaviors that constitute positive socioemotional development. These behaviors may be present in an adolescent child's emotional self-regulating abilities, the process in which a child receives, stores, and processes information about others around him/her; positive communication, and positive relationships, specifically with those in their mesosystem (Bornstein, Hahn, & Haynes, 2010).

Socioemotional development which is hindered or stunted may create negative consequences for adolescents. Coping behaviors, although similar to socioemotional development, are skill sets primarily revolving around impulse control, responsibility, and adherence to rules (Bornstein et al., 2010). This study will look at both the socioemotional development as well as coping behaviors of adolescent sexual abuse victims.

### **Ecology and Sexual Abuse**

Bronfenbrenner's model of development has been used as a theoretical framework for a vast amount of research on child maltreatment. Unfortunately, there are several inconsistencies within the research, as there are jurisdictional variances in the law, inconsistencies in policy and intervention strategies, and discrepancies in terminology (Jack & Gill, 2010; Sabri et al., 2013). Despite inconsistencies, the research supports the use of Bronfenbrenner's ecological model for sexual abuse intervention (Alaggia, 2010; Hardy & Darlington, 2008; Jack & Gill, 2010; Low & Mulford, 2012; Sabri et al., 2013). A comprehensive assessment and screening of the child's ecological system may create the most optimal situation for a child to disclose maltreatment (Low & Mulford, 2012).



Kenny & Wurtele (2012) published a review of literature in *Journal of Child Sexual Abuse* discussing benefits of using Bronfenbrenner's ecological model as the primary theoretical perspective for intervention strategies in child sexual abuse cases. They concluded that new approaches to intervention and prevention in sexual abuse cases are needed and should include changes specifically to the meso- and macrosystem levels. New intervention and prevention strategies with changes at these levels can improve the quality of life for many victims and potential victims and can deter costs associated with the crime, including the cost associated with offender accountability. It is recommended that professionals move beyond educating parents and children about sexual abuse, and include community-based prevention programs in order to address the public's perception of sexual abuse. Kenny and Wurtele also emphasize the important role media outlets play in shaping public opinion, adding the media has the ability to educate and encourage "collective action" to ensure the safety and protection of all children from sexual victimization (p. 366).

Individual safeguards need to be integrated with community oriented practices. There is a need to promote a commitment to developing a professional culture of listening to children and their families who experienced trauma. This includes frontline workers such as law enforcement officers and child protective service investigators. Increased communication between agencies and the sharing of information at the meso- and exosystems can assist in identifying children at risk for being abused (Jack & Gill, 2010).

The meso- and exosystem levels also play a significant role in supporting a child when making a disclosure of sexual abuse. In a 2010 qualitative phenomenological study conducted by Alaggia (2010), individual and environmental factors were examined to identify that factors affected a child's disclosure of sexual abuse as well as contextual factors, which either promoted or impeded on the disclosure process. Through qualitative interviews of adults who had experienced sexual abuse as a child, it was determined that the child's individual characteristics, family environment, community influences, and cultural and societal attitudes and beliefs play a significant role in supporting a child when making a disclosure of abuse (Alaggia, 2010).

In an editorial written by Fullilove (2009) for *American Journal of Psychiatry*, sexual abuse was described as an issue that sets off disturbances in many systems and subsystems. It is never something that happens to a single person, but something that disturbs the entire family system. Being that the family system is a social system and is critical to the safety and well-being of each person in it, having a poorly coordinated systemic response and adding to blame and hostility to the situation may lead to secondary trauma for both the victim and family.

### **Ecological Interconnectedness**

The key component of the ecological model is the understanding of the interconnectedness of each system level. Being able to understand the child through an ecological model and recognize the influences each system has on the other can make a big difference in intervention services. Utilizing a multidisciplinary approach allows for

professionals responsible for investigating, advocating, and treating sexual abuse cases to address multiple system levels at once.

Edwards and Karnilowicz (2012) conducted a phenomenological analysis of qualitative interviews of Australian therapists whose primary practice was to treat children who experienced abuse and/or trauma. They were able to identify three ecological themes, which either impeded or supported the treatment and intervention of their clients. The first theme identified was the “relational context” (p. 324). The relational context refers to the relationship between the child client and the therapist. Included in this relationship are the interactions between the therapist and the primary caregiver(s) and the relational bond between the child and the primary caregiver. Edwards and Karnilowicz state that this relationship may be most important for mitigating the effects of the actual abuse. The next theme identified is “organizational context” (p. 325). This refers to the roles and responsibilities of each community agency. Organizational context played a key role in each therapist’s effectiveness and perception of the field. Finally, “systems context,” which included the family system, the legal system, child protective agencies, and the foster care system, was identified.

Therapists in this study indicated that a comprehensive understanding of each child’s system was fundamental to understanding the impact of trauma on the child being treated. Recommendations were made for continued education and training on these specific kinds of cases. Other suggestions included the opportunity to receive peer feedback along with supportive supervision when treating children who experienced abuse and trauma.

**Experiences within the mesosystem.** The mesosystem is the level just outside the microsystem in Bronfenbrenner's depiction of these nested systems. The mesosystem does not involve the adolescent directly per se but is made up of the interactions between the individuals and institutions within the child's microsystems. In a situation of sexual abuse investigation, this level would include the interactions between caregivers, family members, CPS, and law enforcement.

In an effort to better understand caregiver experiences within the context of child abuse intervention, Hardy and Darlington (2008) conducted interviews of eight parents of abused children in Australia. Of the eight participants that were interviewed, many agreed that intervention on levels other than the microsystem level assisted them with other stressors associated with the abuse (i.e. health, education, and family support). Poor intervention added to the stress of the parental experience. It was determined that supportive parents involved in an investigation of child abuse felt a need for more contact and involvement from decision makers (law enforcement and CPS), especially since these decision makers had a significant influence on their child's life. The recommendations made by Hardy & Darlington (2008) are congruent with Sabri, Hong, Campbell, and Cho (2013), emphasizing the importance of taking a more family focused, holistic approach to intervention by integrating supportive services at all levels of the ecological system.

Children's Advocacy Centers (CACs) have been recommended by child abuse experts and researchers throughout the United States to assist with the investigation of sexual abuse allegations. CACs are known for offering supportive services such as

therapeutic intervention, forensic interviewing, and victim advocacy support to children and supportive caregivers. Jones, Cross, Walsh, and Simone (2007) explain in their research the degree of satisfaction levels of both victim and supportive caregiver as it relates to the investigation process when utilizing a CAC compared to experiences where a CAC was not used. Satisfaction scores were collected from four well-established CACs and compared to satisfaction scores from victim and caregivers who did not receive CAC services.

The researchers used the Investigation Satisfaction Survey and Investigation Satisfaction Survey-Youth (ISS and ISS-Y), a 14-item questionnaire specifically designed for supportive caregivers and sexual abuse victims ages 8 and above to include adolescent youth. The researchers also used interviews to gather data which confirmed that child victims and their supportive caregivers whose cases went through a CAC were significantly more satisfied with the investigation than those cases that did not. It was found that satisfaction levels were significantly higher when allegations of abuse were believed and abuse was substantiated.

In a separate study conducted by Jones et al. (2010), caregivers' and youths' experiences with professionals responsible for investigating sexual abuse allegations were examined, utilizing data collected in their 2007 study. This analysis of data identified areas of improvement for professionals. This study found the most prevalent complaints of caregivers and adolescent victims to be disappointment in evidence collection, the investigators' lack of effort to find justice, and the investigators'

commitment and skills. Even though these findings were unexpected and carry a negative undertone, participants reported an overall positive experience.

Although these findings are inconsistent with the feminist study conducted by Plummer & Eastin (2007), whose participants only reported high levels of satisfaction with professional's emotional support and interviewing skills, both studies indicate dissatisfaction with respect to the investigator's level of commitment and the lack of communication between the investigator and caregivers. Plummer & Eastin (2007) found that mothers of sexual abuse victims disclosed primarily negative experiences when professionals intervened, stating that they felt judged, critiqued on parenting styles, treated unfairly, and as though they were at the mercy of the courts.

It was suggested that training for investigators on professionalism and empathy was needed. The participants in this study found it difficult to see the system as a positive resource. Some participants stated that they regretted seeking intervention. This type of dissatisfaction at the mesosystem level between caregivers and professionals highly influences decisions made at the microsystem level, creating a barrier for adolescents to feel comfortable with the criminal justice system.

**Experiences within the exosystem.** The micro- and mesosystems are enveloped within the exosystem. Similar to the mesosystem, individuals may not have direct contact with components of the exosystem, which relates to interactions between the settings in which the adolescent lives. Relevant to sexual abuse cases, the exosystem may include interactions between medical personnel, police, social services, media, neighbors, family friends, and local government.

A combined effort of all key members of the adolescent's exosystem is required to combat adolescent sexual abuse. Jack and Gill (2010) argue the need to promote a commitment of developing a professional culture of listening to children and families who have experienced this type of trauma. In an online study conducted by Herman and Freitas (2010), substantiation rates, substantiation thresholds and probability of truth distributions were examined. One hundred and ten professionals in the fields of psychology and social work, and medical personnel who worked specifically with sexual abuse victims answered a series of questions addressing each category.

Substantiation rates were measured by estimated percentages each investigator and/or investigation team classified abuse allegations as "substantiated." Substantiation thresholds were determined based on reported minimum levels of probability that allegations were true in order to classify an allegation of abuse as substantiated. Finally, probability-of-truth was measured by an estimated percentage of cases, which fell into categories of 80-100% true, 60-80% true, 40-60% true, 20-40% true, and 0-20% true. There was an array of responses by participants, indicating varying degrees of discretion. Findings suggested that judgment errors were common among professionals, even within their own team.

These findings were similar to those of Everson & Sandoval (2011) who found that differences in forensic attitudes associated with skepticism and believability contributed to disagreements among professionals. The study consisted of 1,106 participants, including law enforcement, victim advocates, prosecuting attorneys, and child protective service personnel. Interestingly, child protective service personnel and

law enforcement ranked highest on skepticism with respect to believability of sexual abuse disclosures, second to child forensic examiners (psychologists). Professionals with at least 10 years of experience were significantly less skeptical about sexual abuse disclosures than those with less experience. According to the researchers, there was no indication that gender had any effect on skepticism. These findings may suggest that working as a team may assist with limiting these biases as other professionals may act as a checks and balance system to individual biases. It may also be important to note these findings suggest that professional judgments have limited reliability when making judgment calls on whether or not to move forward with a case.

Pinpointing how to improve the quality of work by professionals in this field has proven difficult. In a study conducted by Finnila-Tuohimaa et al. (2008) of Finnish psychologists who encountered sexual abuse cases, four related attitudes and beliefs subscales were identified. The first identified subscale was the “disclosure” subscale held by professionals, favoring disclosures of sexual abuse at any cost. The second identified subscale was the “pro- child” subscale, which was the unconditional belief in a child’s report. The third identified subscale was the “intuition” subscale, favoring an intuitive approach to sexual abuse investigations. Finally, the fourth subscale was identified as the “anti-criminal justice system” subscale in which professionals maintained an overall negative attitude toward the legal system. Their findings suggested that the more training a psychologist had, the more likely they were to hold on to erroneous beliefs associated within each subscale. Their research also suggested that experience in the field did not play a factor into which subscale they identified with the most. These findings go against



the strategy for improving the quality of response within the United States; in that, increased training, experience, and education are emphasized and recommended to lead to better outcomes of sexual abuse investigations (Adams & Hendry, 1996; Price & Roberts, 2011).

***The use of Child Advocacy Centers.*** Most jurisdictions in the United States use Child Advocacy Centers (CAC) to assist with investigations involving sexual abuse and severe physical abuse. CACs have been designated as child friendly locations, independent from law enforcement and CPS, to conduct forensic interviews and coordinate services such as therapy and forensic medical exams. Child Advocacy Centers accredited through the National Children's Alliance (NCA) are mandated to utilize a multidisciplinary approach to the investigation and include professionals from law enforcement, CPS, victim services, mental health professionals, medical personnel and prosecuting attorneys. There are currently 777 CACs throughout the United States. There have been several studies published regarding satisfaction levels of investigations of sexual abuse cases and the use of CACs; however, there is very little information that focuses on the child's perspective of the investigation and the child's perceived outcome.

The research indicates that investigations and investigation outcomes are significantly better when a CAC is used than those when a CAC is not used in the investigation; however, those data are based on the professional's perception, not the child's experience. Several issues may arise when law enforcement departments are conducting their own interviews of children without the proper training, education, and knowledge. Are investigators approaching the children in a non-intimidating, child

friendly manner? Are the investigators trained in eliciting information from children by asking open-ended questions, allowing for a free narrative? Is the interview taking place in a neutral environment? Are resources provided to the child victim and the supportive caregiver to address concerns that may come up after the interview? Are interviews being conducted in a timely manner, before a forensic medical exam?

These are only a few issues that may come up. Developmental considerations should be taken into account when a child victim of sexual abuse makes the choice to disclose. Someone who is familiar with the emotional and social development of a child may find it easier to understand the significant changes that may take place once an allegation of abuse occurs. With a greater understanding of appropriately communicating with children, investigators may be able to gather more evidence for prosecution of the offender. They may be able to explain more easily the justification for recantation or understand the stressors that a disclosure of abuse may place on a child, more specifically on an adolescent sexual abuse victim. Knowledge of child development may also assist in understanding specific behaviors a child or adolescent may be exhibiting after abuse is disclosed, allowing for a more accurate assessment of whether or not those behaviors are consistent with someone who has been sexually abused.

A lack of knowledge and training in child development and childhood trauma may lead professionals to rely more heavily on their own personal biases and assumptions during an investigation rather than believe a child's disclosure, therefore dismissing the child's statements and prematurely closing the case. There is a significant amount of research that has found false allegations of sexual abuse to be rare (Faller,

2007; Lipian, Mills, & Brantman, 2004; Trocme' & Bala, 2005). In an article written by Mart (2010), common errors made by sexual abuse investigators are discussed as well as the consequences of false positives and false negatives due to "sloppy" assessments, furthering the recommendation of utilizing a research based approach to address sexual abuse investigations.

One key component to the structure of a CAC is the use of a multidisciplinary model whereby individuals from various professions come together to share information and assist each other with the criminal investigation as well as connecting victims and families with the supportive services needed for a more positive outcome (Hartley et al., 2013). As Jones et al. (2010) imply, utilizing a CAC and the multidisciplinary approach may increase the quality of the investigation. This is important as satisfaction levels may also dictate if future abuse is ever disclosed. If a child chooses not to disclose abuse due to a lack of confidence in the investigation process, or if a supportive caregiver chooses not to report because of a past experience with the system, practitioners may be inadvertently placing that child in even more harm than before, making intervention near impossible (Jones et al., 2007).

When law enforcement chooses to not utilize a CAC and in turn begins to investigate sexual abuse allegations without the help of a CAC, there is a potential for missed opportunity to connect victims and their supportive family members to other resources that can provide assistance with the healing process. Allowing inexperienced investigators to work complex sexual abuse cases also may jeopardize the integrity of the investigation. In such cases, less acceptable tactics may be used to elicit vital information,

such as threats to a victim for lying (i.e. false allegation charges, disruption of an alleged offender's life), leading questions, or premature judgment calls on the reliability of an adolescent's disclosure.

Children's Advocacy Centers offer services to minimize those potential issues. A forensic interviewer at a CAC has the primary responsibility of gathering information about the abuse (Hartley et al., 2013). Child Protective Services are there to substantiate (or not) the allegations of abuse. Law enforcement detectives are responsible for apprehending the offender. Each party has a vested interest in the case. CAC forensic interviewers are typically the only neutral party responsible for gathering the information around the alleged abuse. These interviews are available for each multidisciplinary team member, thus, alleviating the need for a victim to be questioned multiple times. By subjecting a victim to multiple interviews, a potential for inconsistencies within the disclosure is created. CAC forensic interviewers are highly trained professionals who undergo peer reviews and receive advanced training in child development, trauma, and age appropriate questioning. These are areas where basic law enforcement training is lacking.

### **Summary**

In this chapter, issues surrounding combating adolescent sexual abuse were discussed. There was also an overview of Bronfenbrenner's ecological model of development and what it looks like in the context of sexual abuse. The interconnectedness of systems within the ecological model were addressed, more specifically the experiences within the mesosystem and exosystem. Children's Advocacy

Centers and recommended best practices for the investigation of sexual abuse allegations were discussed as well as the impact of sexual abuse on adolescent children.

## CHAPTER III

### METHODOLOGY

Every day someone in the child protection field must make a decision about findings related to allegations of sexual abuse. These findings may be substantiated, unsubstantiated, or unfounded. These final discretionary decisions may have an impact on an adolescent's development and ecological system. A better understanding of abuse allegation outcomes may provide insight into the continued effects of sexual abuse and may provide professionals a greater ability to prevent negative lifelong consequences for the adolescent victim. This study used quantitative methods in order to gain a comprehensive understanding of sexual abuse allegation outcomes and the effects on adolescent socioemotional development. This chapter is intended to outline the quantitative method used for obtaining secondary data collected for the *Longitudinal Studies of Child Abuse and Neglect* (LONGSCAN), describe the variables to be analyzed, and summarize the intended statistical test for analyzing the data.

#### **Institutional Review Board**

This study was a secondary data analysis of the *Longitudinal Studies of Child Abuse and Neglect* (LONGSCAN) and did not require direct contact with human participants. The researcher was awarded IRB approval as exempt from further review since secondary data were used. Once IRB approval was secured, the researcher analyzed LONGSCAN data from the National Data Archive on Child Abuse and Neglect Dataset

Number #170 (2014) distributed by the Bronfenbrenner Center for Translational Research at Cornell University.

### **Longitudinal Studies of Child Abuse and Neglect (LONGSCAN)**

The LONGSCAN study was a longitudinal study that followed over 1,300 children and their families, until the child turned 18 years of age, to explore a comprehensive assessment of critical child abuse and neglect issues. The dates of data collected analyzed in this study were obtained between January 2004 and January 2012. This study was developed between 1989 and 1991 by the National Center on Child Abuse and Neglect (NCCAN) in a response to address the need for theory based longitudinal studies on child maltreatment (Runyan et al., 1998). The LONGSCAN participants totaled 1,354 from five geographic locations (Midwest, Southwest, Northwest, South, and East) of the United States. Each site represented varying levels of exposure to child maltreatment.

### **Sample/Participants**

Five different sites throughout the United States were used in data collection for the LONGSCAN: Midwest, Southwest, Northwest, South, and East. The Northwest and Midwest cohort participants were not scored on the *Adolescent Coping Orientation for Problem Experiences* (ACOPE), which measured various types of coping behaviors that adolescents and young adults rely on; therefore, this study drew from data collected at the East, Northwest, and Southwest sites. This was a decision made in order to have the same individuals represented in each measurement.

The LONGSCAN participants were chosen carefully at each site in order to get varying degrees of maltreatment levels, ranging from children who had no reports of maltreatment or abuse to children with substantiated allegations of multiple forms of child maltreatment. All children who participated in the LONGSCAN study were followed from their early childhood years all the way into late adolescence, no matter their movement from region to region. Each data collection site was assigned a cohort of children whose birth years ranged from 1986-1994. There were a total of 1,354 participants, 53.3% African American, 26.2% White, 7.2% Hispanic, 11.9% Mixed, and 1.5% Other. Males made up 48.5% of the participants and females made up 51.5%. The control group who had no indication of abuse had made up 16.9% of the total LONGSCAN sample N = 1,354, where 65.3% of all participants had reports of abuse and 17.8% were identified as at risk.

### **Data Collection/Procedure**

#### **LONGSCAN Data Collection Procedure**

Assessments were conducted at ages 4, 6, 8, 12, 14, 16, and 18 years. These assessments included various measurement tools, face-to-face interviews of both caregivers and children, and yearly telephone contact. Periodic CPS narratives and Central Registry records were reviewed. Five different sites throughout the United States were used in order to maintain statistical power sufficiently. All site locations shared in measurements, definitions, training, data collection methods, data entry and management. Each locations' cohort of children being studied was recruited before the age of 5. Researchers maintained contact with participants until each child turned 18. Samples



drawn from the East, Midwest, and Northwest sites were urban. Samples from the Southwest were suburban and Southern samples included participants representative of urban, suburban, and rural communities.

### **Present Study**

All data sets associated with LONGSCAN were reviewed, and it was determined that dataset #170 was the most appropriate for this study's purpose. In order to retrieve data set #170, National Data Archive on Child Abuse and Neglect (NDACAN) at the Bronfenbrenner Center for Translational Research housed at Cornell University in Ithaca, New York had to be contacted, and a request was made to access the data. The next step was to complete the digital *Terms of Use Agreement* in PDF format and to submit it to NDACAN via e-mail. Within one week, NDACAN sent a zip file in SPSS compatible format. All data sets were free of charge; however, usage had to be approved by NDACAN before zip files were e-mailed.

A power analysis through G\*Power was used to determine the needed sample size for this study. The effect size was set as  $f^2(V) = .25$  with  $\alpha \text{ err} = 0.05$  and Power ( $1 - \beta \text{ err prob} = 0.80$ ). According to G\*Power, the total sample size needed was 36. Data were pulled from datasets titled YSRS, which provided subscales to the Youth Self Report-Behavior (YSR-B) and Youth Self Report – Social Competence (YSR-SC). This dataset also provided subscales for the Internalizing and Externalizing Scale and Total Problems Scale. The ACOPE was used to extract total coping scores. Maltreatment classifications and sexual abuse allegation outcomes were extrapolated from the Derived Maltreatment (M\_SDM) dataset. Sexual abuse victimization status data were pulled from the Self

Report of Sexual Abuse (SRSA-18) dataset. Only data collected at the East, Northwest, and Southwest data collection sites were used since the South and Midwest sites did not gather data from participants on the ACOPE. Once all data were merged,  $N = 866$ . All data interpreted for each case were gathered at the age of 18.

In an effort to preserve normal distribution and to error on the side of caution for disproportionate case ratios, the predictor variable sexual abuse victimization status was combined with sexual abuse allegation outcomes, adding to the number of levels for sexual abuse allegation outcomes and labeled as “SxAb No Report,” indicating that these cases had a self-report of victimization; however, they did not have an official documented report associated with the allegation. This new level was coded as 5. This increased the  $N$  for sexual abuse allegation outcome numbers ( $n=92$ ). Data were then sorted in ascending order by sexual abuse allegation outcomes to show cases without sexual abuse self-disclosures (coded as 0). Ninety-two cases were then randomly selected from the first 300 cases without sexual abuse experience and used as the control group. One case was excluded due to being outside the Mahalanobis distance threshold. Once data were cleaned, total  $N = 183$ . This number met the required sample size as indicated by the power analysis. Table 3.1 provides details on sample demographic characteristics.

Table 3.1  
*Summary of Demographic Characteristics of the Sample*

Characteristic	<i>n</i>	%
Gender		
Male	76	41.5
Female	107	58.5
Age		
18	183	100
Race		
White	59	32.2
Black	81	44.3
Hispanic	12	6.6
Native American	1	.5
Mixed Race	29	15.8
Other	1	.5
Collection Site		
East	39	21.3
Northwest	82	44.8
Southwest	62	33.9
Sexual Abuse Allegation Outcome		
Found/Substantiated	19	10.4
Not Found/Unsub.	37	20.2
Inconclusive	27	14.8
SxAb No Report	9	4.9
Control	91	49.7

*Note.* (*n*=183). NotFound/Unsub. = Not found and/or unsubstantiated allegations of sexual abuse. SxAb No Report = Self disclosed sexual abuse experience without official report or record on file.

## Measures

Measurement data that were analyzed for this study were collected during the LONGSCAN assessment at age 18. This approach showed the longitudinal effects of sexual abuse outcomes on socioemotional functioning as measured by the *Youth Self Report-B* (YSR-B) and *Youth Self Report-SC* (YSR-SC) (Achenbach, 1991). The initial measurement subscales, which were proposed to be used as measures for socioemotional development, were total competence scores and syndrome, internalizing and externalizing, and total problem scores. Total competence scores and syndrome were omitted, as over 60% of cases had missing data, too many for SPSS to impute.

Socioemotional development was analyzed using two broader scales of internalizing and externalizing, examining social competence and behavior scales. Internalizing behaviors included depressed mood, anxiety, social withdrawal, and somatic complaints, whereas externalizing behaviors included aggression, hyperactivity, and delinquency. Scales and subscales to define adolescent coping abilities were defined by *Adolescent Coping Orientation for Problem Experiences* (ACOPE) (Patterson & McCubbin, 1987) administered at age 18. The purpose of the ACOPE was to assess adolescent and young adult coping behaviors. Coping behaviors were measured by impulse control, manners, responsibility and the ability to follow rules (Bornstein et al., 2010).

Sexual abuse victimization status was determined from data collected for the *Self Report of Sexual Abuse, Age 18* (SRSA-18) (LONGSCAN, 2000) measure instrument. This was a self-report measure, which assessed an adolescent's lifetime history of sexual

abuse experience. The SRSA-18 was administered at the age of 18. In order to capture all relevant experiences, gender specific questions were developed.

## **Variables**

### **Predictor Variables**

The predictor variables identified for this study were gender, victimization status, and sexual abuse allegation outcomes.

**Gender.** Gender was used as a comparison group to examine whether any significant differences between genders exist as they related to sexual abuse allegation outcomes and socioemotional development. For the purpose of this research, gender is a dichotomous variable (male/female), which was pulled from the master list of valid IDs from the LONGSCAN coded 1 as male and 2 as female.

**Victimization status and sexual abuse allegation outcome.** This was a categorical variable of adolescents who were identified as either being sexually abused or non-abused by self disclosure and/or Child Protective Service records. Self-reported adolescent responses were used to identify any socioemotional developmental differences between the two groups. The researcher used data collected from the SRSA-18 measurement, which was given to participants at the age of 18 at all data collection sites (LONGSCAN, 2000).

*Count of outcomes for sexual abuse allegations for MMCS codes.* The LONGSCAN team coded CPS case narrative records using official CPS allegations and outcomes by using a revised version of Barnett et al., (1993) and National Incidence Study (NISII) definitions to develop the Modified Maltreatment Classification System

(MMCS). This was in an effort to advance definitions within the field of child maltreatment, improve comparability with other large data sets, and to enhance accuracy in coding of each child's actual maltreatment experience. The original coding for sexual abuse allegation outcomes were 1 as no sexual abuse allegation, 2 as founded/substantiated, 3 indicated/suspected, 4 as not founded/unsubstantiated, 5 inconclusive, 6 other forms of maltreatment, and 7 unknown. There were no cases with the coding of 3, 6, or 7; therefore, those levels were removed. New codes were assigned. No sexual abuse allegations was coded as 0. Founded/substantiated was coded as 1. Not founded/unsubstantiated was coded as 2. Inconclusive was coded as 3. Sexual abuse no report was coded as 4.

### **Outcome Variables**

**Socioemotional development.** Data from Achenbach's (1991) *Youth Self Report – Behavior and Youth Self Report – Social Competence* was used to analyze social competence and behavioral problems as identified by participants of the LONGSCAN study at the age of 18. The YSR-B and YSR-SC are well known assessment tools complementary to the *Child Behavior Checklist* and the *Teacher Report Form* (Achenbach, 1991). There are eight core syndrome scales, which make up the problem items including: withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior. Two broader groups may be analyzed by combining the syndrome scales; the internalizing and externalizing scales, and total problem score.

For the purpose of this research, the researcher utilized data from internalizing and externalizing, and total problem scores. Raw scores were used for the two-way MANOVA. Syndrome, internalizing and externalizing, and total problem raw scores were coding items from 0 (not true in the last six months) to 2 (very often or often true in the last six months). Achenbach (1991) reports test-retest reliability of  $r=.68$  for the competency scales and  $r=.65$  for the problem scales ( $p<.05$ ). It was also been reported that criterion validity and content validity were established as YSR items were able to discriminate between referred and non-referred youth controlling for demographic effects. As recommended by Field (2009), each subscale in the present study was tested for Cronbach's alpha scores individually. Reliability statistics were ran for this study on the current sample showing  $\alpha = .65$  for internalizing,  $\alpha = .66$  for externalizing, and  $\alpha = .72$  for total problem scores, indicating adequate reliability.

**Coping mechanisms.** Scores from the *Adolescent Coping Orientation for Problem Experiences* (ACOPE), which measured various types of coping behaviors that adolescents and young adults rely on were used to identify coping mechanisms. This measurement was used by LONGSCAN researchers when participants turned 18. Only three data collection sites administered the ACOPE (East, Northwest, and Southwest). The subscale of total coping scores were used for this analysis. Reliability tests indicated  $\alpha = .73$  for this subscale.

## **Summary**

In this chapter, data which were used for analysis were described. Data were derived from the longitudinal study referred by the LONGSCAN study and were analyzed using SPSS. Various instruments were discussed, which were identified as the most applicable tools used for data analysis. For the purpose of this study, internalizing and externalizing, and total problem scores from the YSR-B and YSR-SC as well as total coping scores collected from participant ACOPE scores, were used. Any cases with missing data were omitted. One case outside the Mahalanobis distance threshold was omitted from the sample as well. In an effort to minimize issues related to case ratio imbalance, only 91 cases without indications of sexual abuse victimization and sexual abuse reports were used as the control group, leaving  $n=183$ . Both predictor and outcome variables were identified.



## CHAPTER IV

### RESULTS

#### **Preliminary Analysis**

One hundred and eighty three cases were pulled from the LONGSCAN dataset #170 for analysis for this study. All data reported and gathered for this study were collected from participants at the age of 18 years from three different data collections sites throughout the United States. There were a total of 76 (41.5%) males and 107 (58.5%) females. Race and ethnicity were not examined in this study.

Although multivariate normality cannot be tested using a simple MANOVA in SPSS, other tests were used to provide information about this assumption (Tabachnick & Fidell, 2007). Prior to running the MANOVA, multicollinearity was checked by running a bivariate analysis on all four outcome variables. Pearson correlations were performed on all depended variables, showing a meaningful pattern of correlation with most of the outcome variables and suggesting MANOVA as an appropriate statistical method of analysis (Meyer, Gampst, & Guarino, 2006). In addition, Box's M value of 118.27 was associated with a *p* value of .069, which was interpreted as non-significant according to Huberty and Petoskey's (2000) guidelines. For the purpose of the MANOVA, it could be assumed the covariance matrices between the groups were equal. Table 4.1 provides detailed information on Pearsons correlations, means, and standard deviations associated with socioemotional developmental subscales.

Table 4.1

*Pearson Correlations, Means and Standard Deviations Associated with Socioemotional Developmental Subscales*

Variables	1.	2.	3.	4.	5.	6.
1. <sup>a</sup> Gender	—		.			
2. <sup>b</sup> Allegation Outcome	.25**	—				
3. Internalizing	.24**	.26**	—			
4. Externalizing	.02	.18*	.61**	—		
5. Total Problem	.14	.25**	.89**	.83**	—	
6. Total Coping	.08	-.10	-.03	-.17*	-.08	—
<i>M</i>	1.58	1.15	8.54	9.41	31.07	166.13
<i>SD</i>	.49	1.31	7.53	6.45	20.34	24.13
<i>Range</i>	1-2	0-4	0-36	0-32	0-100	102-246
. $\alpha$			.65	.66	.72	.73

*Note.* (n=183). <sup>a</sup>Gender: 1 = *Male*, 2 = *Female*. <sup>b</sup>Allegation Outcome: 0 = *No Sexual Abuse Allegations*, 1 = *Found/Substantiated*, 2 = *Not Found/Unsubstantiated*, 3 = *Inconclusive*, 4 = *Sexually Abused without Report*. Correlations greater than .10 are statistically significant. \*\* $p < .01$ . \* $p < .05$ .

Mahalanobis Distance was used to check for outliers, which identified one case outside the recommend value of chi squared distribution of 18.467. P-P Plot of Regression Standardized Residual was analyzed, which indicated multivariate linearity. Skewness and kurtosis were analyzed next. The values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2010). All outcome variables had a kurtosis value within

acceptable range and skewness values of .180. Histograms were evaluated to confirm this finding. Lastly, before the MANOVA was computed, homogeneity results were examined by using a scatterplot. Most data were centrally gathered around zero and was verified by Box's Test of Equality of Covariance Matrices.

### **Primary Analysis**

To answer the research questions, a two-way between subjects MANOVA was used to explore the effects of sexual abuse substantiations on adolescent socioemotional development and coping behaviors. The proposed plan was to conduct a discriminant function analysis if significance was found with the MANOVA; however, discriminant function analysis was not an appropriate post hoc test. According to Tabachnik and Fidell (2007), there should be approximately 20 subjects per predictor variable if a discriminant function analysis were to be used as a post hoc test to MANOVA. This study had two groups within the predictor variables, which have less than the recommended minimum. Therefore, an interpretation of the follow up ANOVAs along with the Contrast Matrix results were used as the post hoc analysis. Table 4.2 provides descriptive statistics for both predictor and outcome variables.

Table 4.2

*Gender, Socioemotional Development Variables, Coping Variables, and Sexual Abuse Allegation Outcome Variables: Descriptive Statistics (n = 183)*

Variables	M	SD	Range	$\alpha$
Internalizing	8.54	7.53	0-36	.65
Externalizing	9.41	6.45	0-32	.66
Total Problems	31.07	20.34	0-100	.72
Total Coping	166.13	24.13	102-246	.73
Gender <sup>a</sup>	1.58	.49	1-2	
Abuse Allegation Outcome <sup>b</sup>	1.15	1.31	0-4	

*Note.* (n=183). <sup>a</sup>Gender: 1 = *Male*, 2 = *Female*. <sup>b</sup>Abuse Allegation Outcome: 0 = *No Sexual Abuse Allegations*, 1 = *Found/Substantiated*, 2 = *Not Found/Unsubstantiated*, 3 = *Inconclusive*, 4 = *Sexually Abused without Report*.

### **Research Questions and Hypotheses**

RQ1: Do adolescent sexual abuse victims have differences in socioemotional development and coping behaviors compared to non-abused adolescent children?

**Hypothesis one.** It was hypothesized that there would be a significant difference in socioemotional development and coping abilities between adolescents who have self-disclosed sexual abuse before the age of 18 and those adolescents who have not made a disclosure of sexual abuse. The initial MANOVA revealed significant group differences for sexual abuse allegation outcomes. Using Wilks's statistic, findings indicated a significant main effect for sexual abuse allegation outcomes and the interaction between sexual abuse allegation outcomes and gender. Gender alone did not reveal any statistical

significance. Table 4.3 provides details on multivariate test output with Wilk's lambda values.

Table 4.3

<i>Multivariate Tests</i>					
	Effect	$\Lambda$	<i>F</i>	<i>df1</i>	<i>df2</i>
	Gender	.97	1.12	4	170
	Allegation Outcomes *	.81	2.24	16	520
	Allegation Outcomes x Gender *	.85	1.73	16	520

*Note.* \* = Significant  $p < .05$ .  $\Lambda$  = Wilk's lambda value.

An analysis of compared means indicated that children who were not identified as sexual abuse victims (No SxAb Allegation) scored lower on internalizing ( $M = 6.77$ ), externalizing ( $M = 8.03$ ) and total problem scores ( $M = 26.23$ ) compared to all cases with some form of sexual abuse allegation. Table 4.4 illustrates means of socioemotional development subscales by sexual abuse allegation outcomes.

**Hypothesis two.** It was hypothesized that adolescents who have self-disclosed sexual abuse would have total competence scores at the lower end of the spectrum. Unfortunately, total competence scores were omitted from the study due to missing data.

**Hypothesis three.** It was predicted that internalizing, externalizing, and total problem scores for adolescents who had self-disclosed sexual abuse would be higher than adolescents who had not made an allegation of abuse (control group). This research showed this to be valid. However, it should be noted that males who had their allegations substantiated and/or founded had lower internalizing scores ( $M = 4.71$ ) than both male

and female adolescents who did not identify as being a sexual abuse victim (control group).

Table 4.4

*Means of Socioemotional Development Variables by Sexual Abuse Allegation Outcome*

SE variable	Sexual abuse allegation outcome				
	Found/Sub. <i>n</i> = 19	Not Found/Unsub. <i>n</i> = 37	Inconclusive <i>n</i> = 27	SxAb No Report <i>n</i> = 9	Control <i>n</i> = 91
Internalizing**	12.16	7.73	9.81	18.22	6.77
Externalizing*	13.21	9.14	10.56	13.00	8.03
Total Problem**	41.51	29.16	35.07	53.67	26.23
Total Coping	160.68	162.49	164.41	164.44	169.43

*Note.* (n=183). F tests indicate \*\* $p < .01$ . \* $p < .05$ . SE = Socioemotional. Found/Sub. = Found and/or substantiated allegations of sexual abuse. NotFound/Unsub. = Not found and/or unsubstantiated allegations of sexual abuse. SxAb No Report = Self disclosed sexual abuse experience without official report or record on file.

**Hypothesis four.** It was expected for total problem scores of self-disclosed sexually abused adolescents to be higher than those adolescents who had not made a disclosure of sexual abuse. This study indicated this hypothesis to be true with all sexual abuse outcomes compared to the control group as they related to total problem scores.

**Hypothesis five.** It was hypothesized that adolescents who had not made a disclosure of sexual abuse would have higher ACOPE scores than those who had

disclosed abuse. Since no statistical significance was revealed through MANOVA with respect to total coping scores, univariate analysis for ACOPE was not interpreted.

RQ2: Are there differences in socioemotional development and coping abilities between adolescents who have substantiated abuse allegations and those that do not?

**Hypothesis one.** It was hypothesized that adolescents who made a self-disclosure of sexual abuse and had their claims substantiated would score higher on the ACOPE. This study suggested there were no significant findings with respect to total coping scores.

**Hypothesis two.** It was hypothesized that adolescents who had their claims substantiated would have lower scores on internalizing and externalizing and total problem scores. This research did not support this hypothesis.

Once the MANOVA revealed significance on at least one mean pairing, individual ANOVAs were analyzed to determine where the significance was within the groups. Significance was discovered within multiple outcome variables. There was a statistically significant finding between sexual abuse allegation outcomes and internalizing,  $F(4,173) = 5.82, p < .05, \eta^2 = .119$ . There were also significant main effects for sexual abuse allegation outcomes and externalizing,  $F(4,173) = 2.63, p < .05, \eta^2 = .057$ , as well as total problem scores  $F(4,173) = 4.52, p < .05, \eta^2 = .095$ . No significance was found for allegation outcomes and total coping scores or gender. Coping scores were not interpreted in the ANOVA as it did not indicate any significant findings.

See Table 4.5 for details on significant univariate effects of sexual abuse outcomes on internalizing, externalizing and total problem scores.

Table 4.5

<i>Significant F-tests for Univariate Follow-up Tests</i>					
Outcome Variable	Effect	<i>MS</i>	<i>F</i>	<i>df1</i>	<i>df2</i>
Internalizing**	Allegation Outcome	267.48	5.82	4	173
Externalizing*	Allegation Outcome	103.76	2.63	4	173
Total Problems*	Allegation Outcome	1663.95	4.53	4	173
Internalizing*	Allegation Outcome x Gender	159.06	3.46	4	173

*Note.* \* =  $p < .05$ , \*\* =  $p < .001$ . (all significant at  $p < .05$ ).

Interactions between gender and sexual abuse allegation outcomes only revealed a significant effect for internalizing,  $F(4,173) = 3.462$ ,  $p < .05$ ,  $\eta^2 = .074$ . In order to examine the interactions between gender and sexual abuse outcomes, a split file with independent  $t$  tests was conducted using sexual abuse outcomes as the constant. The independent  $t$  tests revealed significance within the interaction of gender and inconclusive sexual abuse allegation outcomes on internalizing,  $t(25) = 1.155$ ,  $p < .05$ , Cohen's  $d = -0.50$ .

Further examination of the contrast results (K Matrix) also showed significant differences between sexual abuse allegation outcome groups when compared to each other. Significant differences were found across all comparisons with respect to internalizing as well as total problem scores with  $p < .05$ . The groups with the most



differences were no sexual abuse allegations compared to sexual abuse allegations without a report at  $p < .001$  for both internalizing and total problem scores. Although significance was found within the ANOVA for externalizing, the contrast matrix did not reveal any statistical significance for this variable with respect to the compared groups.

### **Summary**

This chapter discussed the different types of analyses that were used to examine the differences between groups of cases with sexual abuse allegation outcomes and the effects on socioemotional development (internalizing, externalizing, and total problem scores) and coping behaviors. Since the follow up ANOVAs did not reveal any significance with respect to coping, there were no further analyses conducted on that variable. The initial MANOVA also excluded gender as being a significant factor in and among itself. However, the interaction of gender with sexual abuse allegation outcomes was identified as significant. This study confirmed that there were statistically significant differences between groups as well as differences within the interaction of gender and sexual abuse outcomes. Power, normality, reliability, multicollinearity, skewness, and kurtosis were all discussed in the preliminary analysis.

## CHAPTER V

### DISCUSSION

Child sexual abuse has been associated with maladaptive socioemotional development and coping behaviors by researchers looking at adult responses to child sexual abuse (Barker-Collo, Read, & Cowie, 2012; Johnson & Lynch, 2013; Marriott, Hamilton-Giachritsis & Harrop, 2014). This study was an attempt to recognize not only the behavioral responses to sexual abuse, but also how those responses were associated with sexual abuse allegation outcomes. The current study examined sexual abuse allegation outcomes and the effects on adolescent socioemotional development and coping behaviors.

This study was guided by Bronfenbrenner's (1979) ecological perspective, acknowledging the interconnectedness of systemic decisions of sexual abuse allegations as they related to child development. Although not all hypotheses were validated in this research, it was found that there was a significant effect of sexual abuse allegation outcomes on socioemotional development. MANOVA revealed gender alone did not have statistical significance on socioemotional development; however, sexual abuse allegation outcomes did,  $F(16,520)=2.238$ ,  $p = .038$ ,  $\eta^2 = .05$ . There was also significant between the interactions between gender and sexual abuse allegations,  $F(16,520) = 1.72$ ,  $p = .03$ ,  $\eta^2 = .04$ . Split file independent t tests were used as the post hoc test on the interactions between sexual abuse allegation and gender, using sexual abuse allegation

outcomes as the constant. Independent t tests suggests significant effects were associated with sexual abuse allegation outcomes, which were inconclusive and the effects on internalizing,  $t(25) = 1.15, p < .05, d = -.05$ .

The highest scores for total problem scores were reported by adolescents who identified as being a victim of sexual abuse, but for whom there was no official record of the abuse on file. Males who have identified as a sexual abuse victim without a report scored highest on internalizing scores ( $M = 29.0$ ). Females who had their abuse allegations substantiated scored second highest on internalizing ( $M = 16.5$ ) Males, on the other hand, who had their abuse allegations substantiated scored lowest on internalizing ( $M = 4.71$ ). There was no significance found for total coping scores, even though research had indicated a relationship between child sexual abuse and maladaptive coping behaviors (Johnson & Lynch, 2013). Similar to the findings of Johnson and Lynch (2013), this study showed an association between child sexual abuse and negative emotional regulation by internalizing behaviors, such as blame or self-guilt.

Although the current study did not support all hypothesis associated with sexual abuse allegation outcomes and the effects on socioemotional behavior, it did reveal significant difference between groups. Of these significant findings adolescent children who have self- identified as being a victim of sexual abuse but did not have an official report (SxAb No Report) scored the highest on subscales internalizing ( $M = 22.93$ ) and total problem scores ( $M = 61.68$ ).

As previously stated, without intervention, these victims may become more susceptible to adult mental health issues. Research confirms untreated sexual

victimization may lead to other negative behavioral health problems such alcohol use and abuse, smoking, prescription drug misuse, illicit drug use, sexual risk-taking behaviors, and increased risk of suicide (Anda et al., 1999; Anda et al., 2008; Dube et al., 2001; Dube et al., 2002; Hillis et al., 2004).

Future research is needed to examine what victims need to feel empowered to disclose sexual abuse. There remains a significant need to develop intervention and supportive strategies for the adolescent victim (Olafson, 2011). These findings validate the need to substantiate verifiable abuse allegations and foster environments supportive of disclosure in order to promote healthy resiliency and socioemotional development in adolescents. This will also assist with gaining a more accurate account of the true number of sexual abuse victims.

Prior to merging the predictor variables of sexual abuse allegation outcomes and sexual abuse experience, it was noted several cases had sexual abuse substantiations on record; however, they did not identify as being a sexual abuse victim on the self-report sexual abuse survey or vice versa. This is consistent with the previous findings of Pinto and Maia (2013) where documented reports of abuse were often inconsistent with self-reported abuse. This is a major issue, which makes it extremely difficult to identify the true number of sexual abuse victims. Those victims who were identified by official records as being an abuse victim but did not disclose on the survey might have been too young at the time of abuse to remember; did not identify their experience as abuse; or perhaps, felt the need to reserve that information and did not disclose from shame, embarrassment, or fear.

## **Limitations**

The current study was designed to contribute the body of literature focused on longitudinal effects of child sexual abuse specifically on adolescent children. This study was limited by the data available. Being that this was a secondary analysis of data, the researcher relied on the primary investigators for accuracy and reliability. Five different sites throughout the United States were used in data collection for the LONGSCAN: East, Northwest, Midwest, Southwest, and South. The South and Midwest cohort participants were not scored on one of the primary intended instruments; therefore, the current study drew from data collected at the East, Northwest, and Southwest sites. This was a limitation factor when screening for specific sexual abuse cases, as it created an even lower sample size for analysis.

Another limitation discovered while conducting this study was the amount of inconsistent and/or lack of data for many of the participants in the LONGSCAN study, specifically with respect to answers pertaining to the total competency scale. Over 60% of the cases studied had data missing for this subscale. There does not seem to be a logical explanation for this other than there is a natural deterioration of participants in longitudinal studies. However, this adds to the lack of relevant data on child sexual abuse victims. Marriott, Hamilton-Giachritsis, and Harrop (2014) examined 123 peer reviewed articles on the topic of child sexual abuse between 1991 and 2010 and discovered only 8 actually used longitudinal designs in the research reported.

Finally, it should be noted that the participants in the LONGSCAN were recruited through social service agencies and/or CPS and were identified as “at risk” youth;

therefore, there was an overrepresentation of identified abused children captured in this dataset.

## **Implications**

### **Recommendations**

Child sexual abuse victims need to have confidence in the system, which is in place to provide protection and justice. The findings in this study conclude that there are significant implications associated with sexual abuse allegation outcomes. In order to promote positive socioemotional development and coping behaviors, it is imperative that sexual abuse allegations are investigated to the best of the investigating agency's ability.

More research is needed to understand the full scope of how CPS and law enforcement findings effect the child's development. Future research is needed on understanding the relationship between sexual abuse allegation outcomes and adolescent children's socioemotional development and coping behaviors. Longitudinal studies are key in gaining a better understanding of the long-term effects of these decisions rather than just focusing on the actual effects of the abuse. Utilizing an ecological model to understand the interconnectedness between systems is an appropriate beginning to recognizing that child sexual abuse victims may first be victimized by their perpetrator and secondly by the system if efforts are not made to diligently investigate, support and close a case of sexual abuse with an accurate finding.

Most importantly, professionals and society need to create an environment supportive enough to encourage disclosure of sexual abuse. This study's findings suggest adolescent children who self-identify as being a victim of sexual abuse but who do not

have any official record of their abuse are most effected with respect to their socioemotional development with mean scores almost double for total problem subscales compared to the control group. Sexual abuse continues to be an issue that primarily impacts the victim at the micro level; however, as this research suggests, implications within each individual layer of the ecological system affects the other. With mental health concerns on the rise, it can be concluded that sexual victimization is a vicious cycle which follows an individual throughout a lifetime. Systemic issues at the exosystem level inadvertently effect the response at the meso- and macro- levels, which ultimately, effect the socioemotional development of the child victim.

### **Conclusion**

Many improvements were made over the last decade in the response to child sexual abuse. This research study that analyzed secondary data specific to socioemotional outcomes of adolescent sexual abuse victims in relation to allegation outcomes indicated a connection between sexual abuse allegation outcomes and socioemotional development. Bronfenbrenner's Ecological Model of Human Development provides an appropriate theoretical lens to help understand how each ecological system influences each other when an adolescent child is exposed to a sexual abuse investigation.

This research shines light on the importance of conducting thorough investigations and the need to classify sexual abuse allegation outcomes correctly, as there are significant findings for various categories of outcome types. The most important conclusion drawn from the data analysis is the need to providing encouragement and support to victims and suspected victims in order to foster an environment safe for

disclosure. Adolescents who have identified as sexual abuse victims without any formal reports made scored significantly higher on total problem scores as well as internalizing and externalizing subscales. Intervention for these children should remain priority.



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## APPENDIX A

### Youth Self-Report Form - Behavior



Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
ID	Char	LONGSCAN Subject ID	
CENTER	Char	LONGSCAN Field Center	EA = East MW = Midwest SO = South SW = Southwest NW = Northwest
VISIT	Num	Visit Number	EA = 18 MW = 18 SO = 18 SW = 18 NW = 18
YBPA1	Num	I act too young for my age.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA2	Num	I have an allergy. (describe)	
YBPA2A	Char	Description of allergy.	Text
YBPA3	Num	I argue a lot.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA4	Num	I have asthma.	
YBPA5	Num	I act like the opposite sex.	
YBPA6	Num	I like animals.	
YBPA7	Num	I brag.	
YBPA8	Num	I have trouble concentrating or paying attention.	
YBPA9	Num	I can't get my mind of certain thoughts. (describe)	
YBPA9A	Char	Description of thoughts.	Text

Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
YBPA10	Num	I have trouble sitting still.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA11	Num	I'm too dependent on adults.	
YBPA12	Num	I feel lonely.	
YBPA13	Num	I feel confused or in a fog.	
YBPA14	Num	I cry a lot.	
YBPA15	Num	I am pretty honest.	
YBPA16	Num	I am mean to others.	
YBPA17	Num	I daydream a lot.	
YBPA18	Num	I deliberately try to hurt or kill myself.	
YBPA19	Num	I try to get a lot of attention.	
YBPA20	Num	I destroy my own things.	
YBPA21	Num	I destroy things belonging to others.	
YBPA22	Num	I disobey my parents.	
YBPA23	Num	I disobey at school.	
YBPA24	Num	I don't eat as well as I should.	
YBPA25	Num	I don't get along with other kids.	
YBPA26	Num	I don't feel guilty after doing something I shouldn't do.	
YBPA27	Num	I am jealous of others.	
YBPA28	Num	I am willing to help others when they need me.	
YBPA29	Num	I am afraid of certain animals, situations, or places, other than school. (describe)	

Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
YBPA29A	Char	Description of animals, or places, situations, or places other than school.	Text
YBPA30	Num	I am afraid of going to school.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA31	Num	I am afraid I might think or do something bad.	
YBPA32	Num	I feel that I have to be perfect..	
YBPA33	Num	I feel that no one loves me.	
YBPA34	Num	I feel that others are out to get me.	
YBPA35	Num	I feel worthless or inferior.	
YBPA36	Num	I accidentally get hurt a lot.	
YBPA37	Num	I get in many fights.	
YBPA38	Num	I get teased a lot.	
YBPA39	Num	I hang around with kids who get in trouble.	
YBPA40	Num	I hear sounds or voices that other people think aren't there. (describe)	
YBPA40A	Char	Description of sounds or voices that other people think aren't there.	Text
YBPA41	Num	I act without stopping to think.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA42	Num	I would rather be alone than with others.	
YBPA43	Num	I lie or cheat.	
YBPA44	Num	I bite my fingernails.	
YBPA45	Num	I am nervous or tense.	
YBPA46	Num	Parts of my body twitch or make nervous movements. (describe)	
YBPA46A	Char	Description of twitching or nervous movements.	Text

Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
YBPA47	Num	I have nightmares.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA48	Num	I am not liked by other kids.	
YBPA49	Num	I can do certain things better than most kids.	
YBPA50	Num	I am too fearful or anxious.	
YBPA51	Num	I feel dizzy.	
YBPA52	Num	I feel too guilty.	
YBPA53	Num	I eat too much.	
YBPA54	Num	I feel overtired.	
YBPA55	Num	I am overweight.	
<b>Physical problems without known medical cause:</b>			
YBPA56A	Num	Aches or pains (not stomach or headaches.)	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA56B	Num	Headaches.	
YBPA56C	Num	Nausea, feel sick.	
YBPA56D	Num	Problems with eyes. (not if corrected by glasses) (describe)	
YBPA56D1	Char	Description of eye problem.	Text
YBPA56E	Num	Rashes or other skin problems.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA56F	Num	Stomachaches or cramps.	
YBPA56G	Num	Vomiting, throwing up.	
YBPA56H	Num	Other. (describe)	
YBPA56H1	Char	Description of physical problem.	Text

Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
YBPA57	Num	I physically attack people.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA58	Num	I pick my skin or other parts of my body. (describe)	
YBPA58A	Char	Description of picking of skin or other parts of body.	
YBPA59	Num	I can be pretty friendly.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA60	Num	I like to try new things.	
YBPA61	Num	My schoolwork is poor.	
YBPA62	Num	I am poorly coordinated or clumsy.	
YBPA63	Num	I would rather be with older kids than with kids my own age.	
YBPA64	Num	I would rather be with younger kids than with kids my own age.	
YBPA65	Num	I refuse to talk.	
YBPA66	Num	I repeat certain acts over and over. (describe)	Text
YBPA66A	Char	Description of repeating certain acts over and over.	
YBPA67	Num	I run away from home.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA68	Num	I scream a lot.	
YBPA69	Num	I am secretive or keep things to myself.	
YBPA70	Num	I see things that other people think aren't there (describe):	
YBPA70A	Char	Description of things seen that other people think aren't there.	Text

Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
YBPA71	Num	I am self conscious or easily embarrassed.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA72	Num	I set fires.	
YBPA73	Num	I can work well with my hands.	
YBPA74	Num	I show off or clown.	
YBPA75	Num	I am shy.	
YBPA76	Num	I sleep less than most kids.	
YBPA77	Num	I sleep more than most kids during day and/or night (describe):	
YBPA77A	Char	Description of sleeping less than most kids during day and/or night.	Text
YBPA78	Num	I have a good imagination.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA79	Num	I have a speech problem. (describe)	
YBPA79A	Char	Description of speech pattern.	Text
YBPA80	Num	I stand up for my rights.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA81	Num	I steal at home.	
YBPA82	Num	I steal from places other than my home.	
YBPA83	Num	I store up things I don't need.	
YBPA83A	Char	Description of storing up unneeded things.	Text

Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
YBPA84	Num	I do things other people think are strange. (describe)	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA84A	Char	Description of things that other people think are strange.	Text
YBPA85	Num	I have thoughts that other people would think are strange. (describe)	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA85A	Char	Describe strange ideas.	Text
YBPA86	Num	I am stubborn.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA87	Num	My moods or feelings change suddenly.	
YBPA88	Num	I enjoy being with other people.	
YBPA89	Num	I am suspicious.	
YBPA90	Num	I swear or use dirty language.	
YBPA91	Num	I think about killing myself.	
YBPA92	Num	I like to make others laugh.	
YBPA93	Num	I talk too much.	
YBPA94	Num	I tease others a lot.	
YBPA95	Num	I have a hot temper.	
YBPA96	Num	I think about sex too much.	

Youth Self-Report Form: Behavior – YBPA			
Variable Name	Format	Variable Description	Coding if Categorical
YBPA97	Num	I threaten to hurt people.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA98	Num	I like to help others.	
YBPA99	Num	I am concerned about being neat or clean.	
YBPA100	Num	I have trouble sleeping. (describe)	
YBPA100A	Char	Description of sleeping trouble.	Text
YBPA101	Num	I cut classes or skip school.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA102	Num	I don't have much energy.	
YBPA103	Num	I am unhappy, sad, or depressed.	
YBPA104	Num	I am louder than most kids.	
YBPA105	Num	I use alcohol or drugs for nonmedical purposes. (describe)	
YBPA105A	Char	Description of use of alcohol or drugs for nonmedical purposes.	Text
YBPA106	Num	I try to be fair to others.	0 = Not true 1 = Somewhat or sometimes true 2 = Very true or often true
YBPA107	Num	I enjoy a good joke.	
YBPA108	Num	I like to take life easy.	
YBPA109	Num	I try to help other people when I can.	
YBPA110	Num	I wish I were of the opposite sex.	
YBPA111	Num	I keep from getting involved with others.	
YBPA112	Num	I worry a lot.	



## APPENDIX B

### Self-Report for Sexual Abuse

SAS Dataset	Measure
<b>SALS</b>	<b>Self Report for Sexual Abuse</b>

**Please Note:** The scores below were created using the item-level data in the SALA. These scoring algorithms were approved by the Coordinating Center. Depending on the research question and/or individual preferences, additional scores can be created using the item-level data. More specifically, if there is a lead organizer of a paper that wants the measure scored differently for a future specific MPF; then additional scores can be requested through the CSCC to meet the needs of the new analyses being proposed.

Variable	Label	Range
ID	LONGSCAN ID	
CENTER	LONGSCAN Field Center	EA = East MW = Midwest SO = South SW = Southwest NW = Northwest
VISIT	Visit Number	EA = 18 MW = 18 SO = 18 SW = 18 NW = 18
NCON1818_S	Non-Contact Sexual Abuse Score	0-4
NCON18_I	Indicator of Non-Contact Sexual Abuse	0-1
NPEN18_S	Sexual Contact, Non-Penetration Score	0-4
NPEN18_I	Indicator of Sexual Contact, Non-Penetration	0-1
PEN18_S	Sexual Contact, Penetration Score	0-2
PEN18_I	Indicator of Sexual Contact, Penetration	0-1
SEXABU18_S	Sexual Abuse Score	0-11
SEXABU18_I	Indicator of Sexual Abuse	0-1
<b>Abuse SUM Scores</b>		
<p>The SALA includes follow-up dichotomous items that are tied specifically to an epoch from combining stem items. Epochs include: 5 years old or younger; 6 to 12 years old; 13 to 16 years old; and 17 years or older. Using the dichotomous indicators (i.e., items - 12a-d, 18a-d, 24a-d, 30a-d, 36a-d, &amp; 42a-d) sum scores were created, as well as whether or not the adolescent reported experiencing any physical abuse behaviors, separately for each epoch.</p>		

Variable	Label	Range
SEX_5_S	Sexual Abuse SUM Score (<= age 5)	0-6
SEX_5_I	Indicator of Sexual Abuse (<= age 5)	0-1
SEX_612_S	Sexual Abuse SUM Score (6-12 yrs)	0-6
SEX_612_I	Indicator of Sexual Abuse (6-12 yrs)	0-1
SEX_1316_S	Sexual Abuse SUM Score (13-16 yrs)	0-6
SEX_1316_I	Indicator of Sexual Abuse (13-16 yrs)	0-1
SEX_17_S	Sexual Abuse SUM Score (>= 17 yrs)	0-6
SEX_17_I	Indicator of Sexual Abuse (>= 17 yrs)	0-1
<b>Abuse Frequency Scores</b>  Frequency items (i.e., items – 13a-d, 19a-d, 25a-d, 31a-d, 37a-d, & 43a-d) were also included on the SALA for each of the four epochs. Frequency options included: '1 or 2 times', '3 to 10 times' and 'More than 10 times'. Using the frequency items, scores were created separately for each epoch (as well as for 'ever occurred', i.e., 0-18).		
SEX_5_F	Sexual Abuse Freq Score (<= age 5)	0-18
SEX_612_F	Sexual Abuse Freq Score (6-12 yrs)	0-18
SEX_1316_F	Sexual Abuse Freq Score (13-16 yrs)	0-18
SEX_17_F	Sexual Abuse Freq Score (>= 17 yrs)	0-18
SEX_F18	Sexual Abuse Freq Score (ever occurred)	0-18
<b>Perpetrators of Abuse</b>  The SALA includes items for each epoch regarding who perpetrated the Sexual abuse (for each epoch). There were 11 perpetrator checkboxes per epoch (i.e., items 14a-k through items 47a-k) and they include: mother, father, stepmother, stepfather, foster mother, foster father, parent's girlfriend, parent's boyfriend, another family member or relative, teacher/coach/ minister/or someone like that, and someone else. Indicators were created for 11 perpetrators (i.e., mother, father, stepmother, stepfather, foster mother, foster father, parent's girlfriend, parent's boyfriend, another family member or relative, teacher/coach/ minister/or someone like that, and someone else) and separately for family and non-family (for each epoch).		
S_MOM5	Indicator of Sexual Abuse by Mother (<= 5 yrs)	0-1
S_MOM612	Indicator of Sexual Abuse by Mother (6 – 12 yrs)	0-1
S_MOM1316	Indicator of Sexual Abuse by Mother (13 – 16 yrs)	0-1
S_MOM17	Indicator of Sexual Abuse by Mother (>= 17 yrs)	0-1

Variable	Label	Range
S_MOM18	Indicator of Sexual Abuse by Mother (ever occurred)	0-1
S_SMOM5	Indicator of Sexual Abuse by Step Mother (<= 5 yrs)	0-1
S_SMOM612	Indicator of Sexual Abuse by Step Mother (6 – 12 yrs)	0-1
S_SMOM1316	Indicator of Sexual Abuse by Step Mother (13 – 16 yrs)	0-1
S_SMOM17	Indicator of Sexual Abuse by Step Mother (>= 17 yrs)	0-1
S_SMOM18	Indicator of Sexual Abuse by Step Mother (ever occurred)	0-1
S_FMOM5	Indicator of Sexual Abuse by Foster Mother (<= 5 yrs)	0-1
S_FMOM612	Indicator of Sexual Abuse by Foster Mother (6 – 12 yrs)	0-1
S_FMOM1316	Indicator of Sexual Abuse by Foster Mother (13 – 16 yrs)	0-1
S_FMOM17	Indicator of Sexual Abuse by Foster Mother (>= 17 yrs)	0-1
S_FMOM18	Indicator of Sexual Abuse by Foster Mother (ever occurred)	0-1
S_GF5	Indicator of Sexual Abuse by Parents Girlfriend (<= 5 yrs)	0-1
S_GF612	Indicator of Sexual Abuse by Parents Girlfriend (6 – 12 yrs)	0-1
S_GF1316	Indicator of Sexual Abuse by Parents Girlfriend (13 – 16 yrs)	0-1
S_GF17	Indicator of Sexual Abuse by Parents Girlfriend (>= 17 yrs)	0-1
S_GF18	Indicator of Sexual Abuse by Parents Girlfriend (ever occurred)	0-1
S_DAD5	Indicator of Sexual Abuse by Father (<= 5 yrs)	0-1
S_DAD612	Indicator of Sexual Abuse by Father (6 – 12 yrs)	0-1
S_DAD1316	Indicator of Sexual Abuse by Father (13 – 16 yrs)	0-1
S_DAD17	Indicator of Sexual Abuse by Father (>= 17 yrs)	0-1
S_DAD18	Indicator of Sexual Abuse by Father (ever occurred)	0-1
S_SDAD5	Indicator of Sexual Abuse by Step Father (<= 5 yrs)	0-1
S_SDAD612	Indicator of Sexual Abuse by Step Father (6 – 12 yrs)	0-1
S_SDAD1316	Indicator of Sexual Abuse by Step Father (13 – 16 yrs)	0-1
S_SDAD17	Indicator of Sexual Abuse by Step Father (>= 17 yrs)	0-1
S_SDAD18	Indicator of Sexual Abuse by Step Father (ever occurred)	0-1
S_FDAD5	Indicator of Sexual Abuse by Foster Father (<= 5 yrs)	0-1
S_FDAD612	Indicator of Sexual Abuse by Foster Father (6 – 12 yrs)	0-1
S_FDAD1316	Indicator of Sexual Abuse by Foster Father (13 – 16 yrs)	0-1

Variable	Label	Range
S_FDAD17	Indicator of Sexual Abuse by Foster Father ( $\geq 17$ yrs)	0-1
S_FDAD18	Indicator of Sexual Abuse by Foster Father (ever occurred)	0-1
S_BF5	Indicator of Sexual Abuse by Parents Boyfriend ( $\leq 5$ yrs)	0-1
S_BF612	Indicator of Sexual Abuse by Parents Boyfriend (6 – 12 yrs)	0-1
S_BF1316	Indicator of Sexual Abuse by Parents Boyfriend (13 – 16 yrs)	0-1
S_BF17	Indicator of Sexual Abuse by Parents Boyfriend ( $\geq 17$ yrs)	0-1
S_BF18	Indicator of Sexual Abuse by Parents Boyfriend (ever occurred)	0-1
S_OFAM5	Indicator of Sexual Abuse by Other Family Member ( $\leq 5$ yrs)	0-1
S_OFAM 612	Indicator of Sexual Abuse by Other Family Member (6 – 12 yrs)	0-1
S_OFAM 1316	Indicator of Sexual Abuse by Other Family Member (13 – 16 yrs)	0-1
S_OFAM 17	Indicator of Sexual Abuse by Other Family Member ( $\geq 17$ yrs)	0-1
S_OFAM18	Indicator of Sexual Abuse by Other Family Member (ever occurred)	0-1
S_SE5	Indicator of Sexual Abuse by Someone Else ( $\leq 5$ yrs)	0-1
S_SE612	Indicator of Sexual Abuse by Someone Else (6 – 12 yrs)	0-1
S_SE1316	Indicator of Sexual Abuse by Someone Else (13 – 16 yrs)	0-1
S_SE 17	Indicator of Sexual Abuse by Someone Else ( $\geq 17$ yrs)	0-1
S_SE18	Indicator of Sexual Abuse by Someone Else (ever occurred)	0-1
S_FAMILY5	Indicator of Sexual Abuse by Family Member ( $\leq 5$ yrs)	0-1
S_FAMILY612	Indicator of Sexual Abuse by Family Member (6-12 yrs)	0-1
S_FAMILY1316	Indicator of Sexual Abuse by Family Member (13- 16 yrs)	0-1
S_FAMILY17	Indicator of Sexual Abuse by Family Member ( $\geq 17$ yrs)	0-1
S_FAMILY18	Indicator of Sexual Abuse by Family Member (ever occurred)	0-1
S_NFAM5	Indicator of Sexual Abuse by Non-Family ( $\leq 5$ yrs)	0-1
S_NFAM612	Indicator of Sexual Abuse by Non-Family (6-12 yrs)	0-1
S_NFAM1316	Indicator of Sexual Abuse by Non-Family (13-16 yrs)	0-1
S_NFAM17	Indicator of Sexual Abuse by Non-Family ( $\geq 17$ yrs)	0-1
S_NFAM18	Indicator of Sexual Abuse by Non-Family (ever occurred)	0-1

Variable	Label	Range
<b>Impact &amp; Attribution Scores</b>  The SALA also includes items specific to the levels of attribution and impact of the Sexual abuse that each perpetrator has caused. Two scores are created for BOTH impact and attribution: a 'maximum' score across all 11 perpetrators (i.e., the highest score endorsed for any perpetrator for items); and a mean score across all 11 perpetrators.		
S_IMP_MAX18	Sexual Abuse Maximum Impact Score	0-3
S_IMP_MN18	Sexual Abuse Mean Impact Score	0-3
S_ATT_MAX18	Sexual Abuse Maximum Attribution Score	0-2
S_ATT_MN18	Sexual Abuse Mean Attribution Score	0-2

## APPENDIX C

### Adolescent Coping Orientation for Problem Experiences

ACOPE – COPA			
Variable Name	Format	Variable Description	Coding if Categorical
ID	Char	LONGSCAN Subject ID	
CENTER	Char	LONGSCAN Field Center	EA = East SO = South SW = Southwest
VISIT	Num	Visit Number	EA = 18 SO = 18 SW = 18
When you face difficulties or feel tense, how often do you...			
COPA1	Num	Go along with parents' requests and rules?	1 = Never 2 = Hardly ever 3 = Sometimes 4 = Often 5 = Most of the time
COPA2	Num	Read?	
COPA3	Num	Try to be funny and make light of it all?	
COPA4	Num	Apologize to people?	
COPA5	Num	Listen to music – stereo, radio, etc.?	
COPA6	Num	Talk to a teacher, school counsellor, or work supervisor about what bothers you?	
COPA7	Num	Eat food?	
COPA8	Num	Try to stay away from home as much as possible?	
COPA9	Num	Use drugs prescribed by a doctor?	
COPA10	Num	Get more involved in activities at school or in your community?	
COPA11	Num	Go shopping; buy things you like?	
COPA12	Num	Try to reason with parents and talk things out; compromise?	
COPA13	Num	Try to improve yourself (get body in shape, get better grades, etc.)?	
COPA14	Num	Cry?	
COPA15	Num	Try to think of the good things in your life?	
COPA16	Num	Be with a boyfriend or girlfriend?	
COPA17	Num	Say nice things to others?	
COPA18	Num	Say nice things to others?	
COPA19	Num	Get angry and yell at people?	
COPA20	Num	Joke and keep a sense of humour?	
COPA21	Num	Talk to a minister, priest, or rabbi?	



ACOPE – COPA			
Variable Name	Format	Variable Description	Coding if Categorical
COPA22	Num	Let off steam by complaining to family members?	1 = Never 2 = Hardly ever 3 = Sometimes 4 = Often 5 = Most of the time
COPA23	Num	Go to church or other religious place?	
COPA24	Num	Use drugs (not prescribed by a doctor)?	
COPA25	Num	Organize your life and what you have to do?	
COPA26	Num	Swear?	
COPA27	Num	Work hard on schoolwork or other projects?	
COPA28	Num	Blame others for what's going wrong?	
COPA29	Num	Be close with someone you care about?	
COPA30	Num	Try to help other people solve their problems?	
COPA31	Num	Talk to your mother or a mother figure about what bothers you?	
COPA32	Num	Try, on your own, to figure out how to deal with your problems or tension?	
COPA33	Num	Work on a hobby you have (doing hair, making music, etc.)?	
COPA34	Num	Get professional counselling (not from a school teacher or school counsellor)?	
COPA35	Num	Try to keep up friendships or make new friends?	
COPA36	Num	Tell yourself the problem is not important?	
COPA37	Num	Go to a movie?	
COPA38	Num	Daydream about how you would like things to be?	
COPA39	Num	Talk to a brother or sister about how you feel?	
COPA40	Num	Get a job or work harder at one?	
COPA41	Num	Do things with your family?	
COPA42	Num	Smoke?	
COPA43	Num	Watch T.V.?	
COPA44	Num	Pray?	
COPA45	Num	Try to see the good things in a difficult situation?	
COPA46	Num	Drink beer, wine, or liquor?	
COPA47	Num	Try to make your own decisions?	
COPA48	Num	Sleep?	
COPA49	Num	Say mean things to people; be sarcastic?	

<b>ACOPE – COPA</b>			
<b>Variable Name</b>	<b>Format</b>	<b>Variable Description</b>	<b>Coding if Categorical</b>
COPA50	Num	Talk to your father or a father figure about what bothers you?	1 = Never 2 = Hardly ever 3 = Sometimes 4 = Often 5 = Most of the time
COPA51	Num	Let off steam by complaining to your friends?	
COPA52	Num	Talk to a friend about how you feel?	
COPA53	Num	Play video games, computer games, pool, pinball, etc.?	
COPA54	Num	Do a strenuous physical activity (jogging, biking, etc.)?	