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# Reported Child Sexual Abuse: Impact of Adaptive Skills and Association with Psychological Adjustment

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REPORTED CHILD SEXUAL ABUSE: IMPACT OF ADAPTIVE SKILLS AND  
ASSOCIATION WITH PSYCHOLOGICAL ADJUSTMENT

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
In partial fulfillment of the  
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in

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by  
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## ABSTRACT

The impact of sexual abuse on children's psychological well-being is well recognized. Considerable research has evaluated the deleterious effects and various protective and risk factors to victimization. Research has shown intense and pervasive psychological symptoms preceding child sexual abuse; however, many studies solely report long-term effects of sexual abuse, or rely on retrospective accounts. Additionally, there is a lack of research on the relationship between psychological adjustment and adaptive skills shortly after child sexual abuse. This study investigated the relationship between psychological problems (i.e. posttraumatic symptomology, internalizing, and externalizing problems) and adaptive skills (i.e. adaptability, social skills, leadership, activities of daily living, and functional communication) in sexually abused children and adolescents. Results revealed that there was a significant association between high levels of adaptive skills and low levels of psychological problems for all ages and genders. Two-way ANOVAs revealed no main effects for psychological problems and age, gender, and the interaction between age and gender. In regards to adaptive skills, there were no significant main effects for gender or age; however, the interaction between age and gender for adaptive skills was statistically significant. Post hoc analysis revealed that young boys exhibited significantly higher adaptive skills than young girls. There were no significant differences between child and adolescent age groups. Strengths, limitations, and directions for future research were addressed.

## INTRODUCTION

Child sexual abuse is frequently defined as forced or coerced sexual activity imposed on a child. In psychological studies, child sexual abuse has been viewed as an umbrella term used to encompass acts ranging from indecent exposure to sexual penetration (Finkelhor, 1994). Johnson (2004) defines child sexual abuse as “any activity with a child before the age of legal consent that is for the sexual gratification of an adult or a substantially older child.” At a federal level, the Child Abuse Prevention and Treatment Act (CAPTA) defines sexual abuse similar to that of Johnson (2004). CAPTA adds to the definition that financial benefit may be associated with a child in a sexual activity and that statutory rape is considered child sexual abuse (Sedlak & Broadhurst, 1996). The definition of child sexual abuse has presented challenges to the judicial system, as federal laws do not typically apply to child sexual abuse cases; therefore, state laws defining child sexual abuse determine prosecution (United States Department of Justice, 2015). For example, many states include sexual exploitation as an element to their definition, but only seven states include human trafficking (Child Welfare Information Gateway, 2014).

Despite increased recognition of the adverse effects of sexual abuse, the prevalence remains very high. Gorey and Leslie (1997) conducted a longitudinal review of child sexual abuse and concluded that the prevalence has not varied significantly in the last three decades. In 1999, 88,000 children were sexually abused (U.S. Department of Health and Human Services, 2001), while 83,800 were sexually abused in 2005 (USDHHS, 2007). Because most victims do not report or disclose their abuse, the prevalence rates are assumed to be much higher (Finkelhor, 1998; Molnar, Buka, & Kessler, 2001).

Reasons vary widely as to why most youth fail to report their sexual abuse. Fear of retaliation or perceived threats from the offender and feelings of guilt, shame, and self-blame

have been shown to inhibit disclosure (Goodman-Brown et al., 2003). When the offender is a relative, disclosure has been shown to be more difficult and complicated. Children who know their abuser typically delay their disclosure (Hershkowitz, Lanes, & Lamb, 2007) and most children never disclose if the offender is a natural parent (Sauzier, 1989). Children may fear anger or disbelief by the non-offending parent or other authoritative figures. Hershkowitz, Lanes, & Lamb (2007) also found that children's willingness to promptly disclose sexual abuse decreased significantly when they expected a negative reaction. In this study, children's assumptions of their parents' reactions were particularly accurate. Lovett (2004) also found that mothers' and other professionals' negative reactions to a child's sexual abuse disclosure may be related to recantation. Sexual abuse recantation also has been associated with younger children and victims whose parent was the accused offender (Malloy, Lyon, & Quas, 2007).

Countless allegations are determined to be inconclusive or dropped due to lack of definitive evidence (Bays & Chadwick, 1993). Because psychological symptoms vary so widely between victims, accuracy of child sexual abuse diagnoses are often difficult to make (London, Bruck, Ceci, & Shuman, 2005). In addition to lack of disclosure, proving allegations of child sexual abuse can be difficult. Child Protection Services (CPS) often determines whether adequate evidence exists for substantiating an allegation. Several factors have been shown to affect the likelihood of child sexual abuse substantiation. For example, the presence of injuries, use of drugs or alcohol, older female victims, and consistency between reporters are associated with increased rates of substantiation (Menard & Ruback, 2003; Stroud, Marten, & Barker, 2000).

Unfortunately, rates of substantiation by CPS are remarkably low. In 2013, approximately one fifth of children investigated for maltreatment were found to be victims

(Child Welfare Information Gateway, 2015). Of the substantiated maltreatment cases, 9%, or approximately 61,000 were substantiated child sexual abuse cases. Consequently, the majority of research on child sexual abuse has been conducted with unsubstantiated cases. Drake and colleagues (2002) found that approximately 75% of children who were referred to CPS two or more times, initially had an unsubstantiated referral. This supports the idea that children involved in unsubstantiated cases may suffer from abuse or neglect, but not necessarily meet CPS criteria to initiate an investigation. Disclosure to trusted adults and subsequent failure to protect the child or remove him or her from the abuse may result in distrust, withdrawal, anger, anxiety, or other psychological problems (Mize et al., 1996; van Loon & Kralik, 2008).

False allegations to CPS vary, with rates ranging from 4% (Faller, 2007) to 12% (Trocmé & Bala, 2005). Although false allegations made by a child are rather uncommon (Trocmé & Bala, 2005), accusations made by parents and child coaching typically result in sexual abuse investigations in addition to clinical and legal issues. Faller (2007) found that allegations made by non-custodial parents were more likely to be false (15%) than custodial parents (2%). In custody and visitation disputes, mothers accuse fathers significantly more often (48%) than fathers accuse mothers (6%; Thoennes & Tjaden, 1990). Bala and Schuman (2000) reported that approximately one third of unsubstantiated child sexual abuse accusations in custody cases were found to be fabricated by a parent. A child's suggestibility may contribute to false allegations influenced by parental coaching. Bruck, Ceci, and Hembrooke (1993) indicated that children's ability to recall autobiographical events are highly accurate, but weaken significantly when asked leading or suggestive questions. The relationship between parental psychopathology (e.g. factitious disorders) and reoccurring, unsubstantiated child sexual abuse cases has also been

recently investigated. Lindahl (2009) expressed concern for victims of reoccurring, unsubstantiated sexual abuse cases and parent manipulation of children's recollections.

Skillful forensic interviewing is crucial when investigating abuse allegations. Interviews are typically conducted by CPS personnel, law enforcement, specialized forensic interviewers, or mental health professionals (American Professional Society on the Abuse of Children, 2002). Techniques such as blind allegation interviews, asking open-ended questions, and cognitive interviewing (i.e. application of memory-based techniques to bring forth details) have been shown to be effective and non-leading with child, adolescent, and adult victims.

A promising interview procedure is the National Institute of Child Health and Human Development (NICHD) Investigative Interview Protocol and is used by professionals in forensic interviews of suspected child sexual abuse. This protocol was developed based on scientific knowledge of children's communication, memory, and social tendencies and incorporates a rapport-building phase, non-suggestive prompts, and free recall strategies (Lamb et al., 2007).

Current research has suggested the use of structured or extended forensic interviewing, and specifically, the Child Advocacy Center (CAC) model (Cronch, Viljoen, & Hansen, 2006). Child Advocacy Centers employ trained, multidisciplinary teams who provide a range of services to children including forensic interviews, medical examinations, psychological treatment, and victim and family support (Cronch, Viljoen, & Hansen, 2006). Almost 75% of cases at Child Advocacy Centers are sexual abuse, while other cases involve physical abuse, neglect, or exposure to domestic violence (National Children's Alliance, 2003). The CAC model reduces the number of interviews, promotes understanding and utilization of other disciplines, and provides the victim and their family with ongoing support (APSAC, 2002). Child Advocacy

Centers not only ensure protection of the victim, but also help to prevent false allegations and other serious consequences.

### **Demographics of Child Sexual Abuse**

Some youth are at greater risk of being sexual abused than others. Research has indicated that 15-25% of women and 10-15% of men report being sexually abused as children (Douglas & Finkelhor, 2005; Whealin, 2007). Research has consistently shown that girls are sexually abused more often than boys (Martin & Silverstone, 2013; Singh, Parsekar, & Nair, 2014; Stoltenborgh et al., 2011). Stoltenborgh et al. (2011) indicated that girls are two times more likely to be victims of child sexual abuse compared to boys, while Snyder (2000) suggested that 78% to 89% of child sexual abuse victims are females. In addition, boys are significantly less likely to report their sexual abuse than girls (Foster, Boyd, & O'Leary, 2012; O'Leary & Barber, 2008).

There have been inconsistent findings regarding race and ethnicity. Finkelhor, Hammer, and Sedlak, (2004) found the likelihood of being sexually abused was the same for Caucasian and African American children; other researchers have found that African American and Latino children are at increased risk for sexual abuse compared to their Caucasian counterparts (Hanson et al. 2003; Sedlak et al., 2010). Variables such as poor socioeconomic status may confound the association between ethnic minorities and increased risk of child sexual abuse.

A child's age also appears to play a significant role in the prevalence of sexual abuse, as school-age children (ages 9-12) appear to be at greatest risk when compared to other age groups (Finkelhor, 1991). In contrast, other researchers have shown that nearly 30% of child sexual abuse victims in CPS substantiated cases are between the ages of four and seven (Children's Bureau, 2010). Additionally, United States Administration for Children and Families (2005) found that after the age of three, risk is unvarying across children and adolescents. Williams

(1994) suggested underrepresentation of child sexual abuse under the age of four due to underdeveloped memory and suggestibility. Age groups exhibit various symptomology depending of their developmental stage, complicating the detection and evaluation of sexual abuse.

A child's living situation is also associated with risk of being sexually abused. Youth from low socioeconomic background (Krug et al., 2002; Peter, 2009) and who report having neglectful or punitive parents (Finkelhor & Baron, 2011), are at greater risk of sexual abuse when compared to other socioeconomic classes and various parenting styles. Unlike other forms of child maltreatment, sexual abuse was found to be least associated with low socioeconomic status (Douglas & Finkelhor, 2005). Family dynamics have also been shown to contribute to prevalence. Sedlak and colleagues (2010) found that foster children are ten times more likely to be sexually abused than children living with both biological parents.

As for individual characteristics, children who have mental or physical disabilities are more likely to be sexually abused due to their vulnerability and incapability to report abuse (Hershkowitz, Lamb, & Horowitz, 2007; Horner-Johnson & Drum, 2006; Putnam, 2003). Sullivan and Knutzon (2000) discovered that in addition to intellectual disabilities, children with learning disorders and behavior disorders were at significantly greater risk of sexual abuse.

For research purposes, investigations are conducted by third parties. The Department of Child and Family Services (DCFS) database (Negriff et al. 2014), multisite mental health facilities (Walrath et al. 2003), and medical records (Christian et al., 2000) have been used to collect information regarding child sexual abuse and substantiation. Due to difficulty in collecting data from reliable, third party sources, many researchers rely on self-report data

(Fergusson, McLeod, Horwood, 2013; Fisher et al., 2009; Gault-Sherman et al., 2009). Despite the expedience of self-reporting, the lack of abuse substantiation is an important shortcoming.

### **Gender Differences**

Studies have found that child and adolescent boys experience greater hesitation and are less likely to disclose sexual abuse than girls (Paine & Hansen, 2002). Research has speculated that this discrepancy could be due to societal perceptions of homosexuality, as majority of sexual abuse perpetrators are male (Alaggia, 2005; Sorsoli, Kia-Keating, & Grossman, 2008).

Statistics have shown that girls are more likely to be abused by a family member while male victims tend to experience extrafamilial abuse (Cawson et al., 2000; Cutajar et al., 2010; Finkelhor, 1994). This gender difference may play a significant role in symptom presentation. Extrafamilial sexual abuse is distinguishable from intrafamilial in that it occurs outside the home and typically involves a single episode of physical force or abduction (Dube & Hebert, 1988; Pierce & Pierce, 1985). Numerous studies have shown that posttraumatic stress symptoms are more prevalent and severe when physical force is involved in the sexual abuse (Briggs & Joyce, 1997; Filipas & Ullman, 2006; Messman-Moore & Long, 2000). Conversely, Cawson and colleagues (2000) found that girls are twice as likely as boys to experience use of force in penetrative or oral sexual abuse. In addition, Fischer and McDonald (1998) reported that victims of intrafamilial abuse experienced more significant physical and emotional harm. This is likely due to the emotional attachment and sense of betrayal and confusion associated with abuse by family members (Kendall-Tackett, 2001). The results of various studies remain inconsistent and unclear regarding gender differences of extrafamilial versus intrafamilial abuse.

Gender differences in symptomology of extrafamilial and intrafamilial sexual abuse have been examined. Edinburgh, Saewyc, and Levitt (2006) found that girls who were victims of

extrafamilial sexual abuse were more likely to run away from home, be a victim of multiple perpetrators, and exhibit physical evidence of the abuse. In contrast, boys were more likely to be diagnosed with Attention-Deficit Hyperactivity Disorder and less likely to report the abuse at the time of the incident.

### **Age Differences**

Characteristics of the sexual abuse are associated with symptom presentation in different age groups. Dube and Hebert (1988) reported that school-aged children are more likely to be sexually abused by strangers or acquaintances while preschool-aged children are more likely to experience intrafamilial abuse. The age of the child at the time of the sexual abuse is also associated with various outcomes. Toddlers and preschool-aged children (ages 2-5) are a unique age group for clinical presentation of sexual abuse, and alas more difficult to identify due to their lack of communication and understanding of the situation. Literature has shown that preschoolers typically exhibit behavioral and somatic symptoms following abuse (Campis, Hebden-Curtis, & Demaso, 1993). Common symptoms include bedwetting or regressive behavior, sleep disturbances, intense fear reactions, and increased aggression, which are also common in older children (American Humane Association, 2013). School-aged children (ages 6-12) have been shown to exhibit greater shame and poorer peer relations and social skills, while adolescents (ages 13-17) tend to be at greater risk of conduct problems and impulsivity (Cole & Putnam, 1992). Because adolescence is a time of increased normative developmental stressors, the addition of negative life events such as being sexually abused can trigger significant emotional and behavioral disturbances (Fiering, Taska, & Lewis, 1999). Further, adolescents are more likely to exhibit posttraumatic symptoms than younger children (Wolfe, Sas, & Wekerle, 1994).

## **Long-Term Effects of Child Sexual Abuse**

Long-term effects of child sexual abuse are based on retrospective accounts from adults. These effects can include alcohol and substance abuse, depression, and revictimization (Classen, Palesh, & Aggarwal, 2005; Filipas & Ullman, 2006), greater number of sexual partners (Olsson et al., 2000; Wyatt, Guthrie, & Notgrass, 1992), sexual dysfunction (Mullen et al., 1994), and aggression in intimate relationships (Wekerle et al., 2001). Additionally, Roberts and colleagues (2004) revealed adults who reported childhood sexual abuse were more likely to have experienced teen pregnancy and to exhibit negative, punitive parenting practices. In a community sample, men who experienced childhood sexual abuse were ten times more likely to be diagnosed with PTSD than their non-abused counterparts (O'Leary, 2009). Furthermore, Briggs and Joyce (1997) found that severity of posttraumatic symptoms in adulthood were associated with the extent and severity of the sexual abuse (e.g., penetration). In severe cases of childhood sexual and physical abuse, dissociation in adulthood was more often experienced by women compared to men (Fisher et al., 2009). Somatic symptoms are more common in adults who reported being a victim of child sexual abuse than those who had no abuse history. Coles and colleagues (2015), for example, found that women from a community sample who experienced sexual abuse in childhood were more likely to report bodily pain as well as poorer physical and mental health compared to their non-abused counterparts.

Similar to retrospective accounts, longitudinal studies are another method in collecting long-term effects following child sexual abuse. Fergusson, McLeod, Horwood, (2013) conducted a 30-year longitudinal study with 900 individuals within a New Zealand birth cohort. They found that self-reported child sexual abuse was associated with adulthood depression, anxiety, suicide attempts, and substance abuse, with Cohen's D ranging from .14 to .53. At 30 years, sexually

abused individuals experienced higher rates of PTSD symptoms, decreased self-esteem and life satisfaction. Limitations to this study include the lack of information about the childhood consequences of abuse.

Social functioning in adulthood can also be negatively impacted by child sexual abuse. Davis, Petretic-Jackson, & Ling (2001) found that women who experienced multiple types of abuse (i.e. sexual and physical) exhibited greater fear of intimacy than those who experienced one type of abuse or had no abuse history. Conversely, other studies have found that child sexual abuse may only weakly influence social factors. Bhandari and colleagues (2011) indicated that family dysfunction accounted for greater variance of sexual adjustment and attitudes towards sex than child sexual abuse. Adaptive functioning has also been examined as a mediator of child sexual abuse and long-term depressive symptoms. Schilling, Aseltine, and Gore (2007) found that social, educational, and occupational difficulties accounted for over two thirds of the change in depressive symptoms among female college students who experienced child sexual abuse.

Despite the numerous retrospective child sexual abuse studies, there is considerable variability in mental health outcomes in adulthood. Maniglio (2009) reviewed 14 meta-analyses, containing over 500 studies of 270,000 college students. Associations between child sexual abuse and health problems in adulthood were significant, but all effect sizes ranged from small to medium. As expected, clinical samples experienced more significant problems when compared to their nonclinical counterparts. Maniglio (2009) explained that nonclinical individuals may have better developed coping mechanisms that mitigate effects of childhood sexual abuse on adjustment. It was also noted that most of the reviewed studies were methodologically limited. For example, the use of nonstandardized methods of eliciting sexual abuse histories, inadequate

inclusion of male participants, and insufficient control of confounding variables limit the generality of the findings (Maniglio, 2009).

According to the controversial meta-analysis conducted by Rind and colleagues (1998), the long-term effects of child sexual abuse were negligible. It was reported that child sexual abuse victims were slightly less well-adjusted in adulthood when compared to their counterparts, and that family environment accounted for majority of poor long-term adjustment. Several follow up studies reported that the results included significant methodological issues (i.e. sampling bias, lack of operational definition of sexual abuse, poor statistical analyses, and misrepresentation of original data; Dallam et al., 2001; Haugaard, 2000; Lilienfeld, 2002) and resulted in significant legal and political implications, ultimately being condemned by the U.S. House of Representatives (Baird, 2002).

Personal characteristics have been identified as protective factors of long-term, negative sequelae brought on by child sexual abuse. After experiencing a traumatic event, some victims are resilient and their psychological symptoms subside quickly. Bonnano (2008) describes resiliency as the ability to persist through adverse effects while maintaining healthy levels of psychological functioning. Characteristics that have been associated with resiliency ensuing adverse events include high self-esteem (Bonnano, 2005), self-efficacy (Diehl & Prout, 2002), appropriate emotion regulation (Mohammad et al., 2015), and positive coping skills (Wright, Fopma-Loy, & Fischer, 2005). Additionally, Cicchetti and Rogosch (2009) explained that individual factors such as self-regulation, self-esteem, and adaptable personalities are crucial for sufficient coping following maltreatment. Wright and colleagues (2007) found that positive adjustment in adulthood (e.g. marital satisfaction, good physical health, less social isolation) following child sexual abuse was associated with improved relationships, parenting skills, and

spiritual growth among female sexual abuse survivors. Additionally, Wright and colleagues (2007) reported that 87% of participants adapted positively and were able to identify coping behavior related to their post-abuse adjustment. Trajectories of adaptation to child sexual abuse in adulthood also have been examined. Among a college sample, Oaksford and Frude (2004) revealed that child sexual abuse victims reported that they initially engaged in avoidance and escape behavior and later adapted to cognitive appraisal and positive thought restructuring. They found that positive coping strategies can decrease psychological symptoms in the long term. Conversely, adjustment in adulthood can be negatively affected by poor coping skills. A retrospective college sample revealed that maladaptive coping was significantly associated with PTSD severity following child sexual abuse (Ullman & Filipas, 2005). Similarly, a female volunteer sample showed that avoidant coping was significantly associated with more depressive symptoms (Wright et al., 2007). Women who indicated that their abuse was largely unresolved were much more likely to engage in avoidant coping strategies.

Some children are asymptomatic during and after the abuse, but develop symptoms later. Delayed symptom onset is referred to as a “sleeper effect” which makes evaluating and treating abuse-related psychopathology particularly difficult (Putnam, 1996). If the psychological symptoms from the abuse are not effectively treated, long-term problems can persist into adulthood (Green et al., 2010). Research with general population samples found that children who were chronically sexually abused experienced more severe long-term consequences as adults when compared to those who experienced isolated incidents of abuse (Kendall-Tackett, Williams, & Finkelhor, 1993; Molnar, Buka, & Kessler, 2001). Since the majority of chronic child sexual abuse is intrafamilial (Ryan et al., 2001), psychological symptoms may be confounded by this relationship.

Although convenient, obtaining retrospective information is a limited method of data collection. Relying on retrospective accounts leaves opportunity for false or distorted memories of one's feelings, emotions, and behavior during or shortly after the abuse. Hardt and Rutter's (2004) review of retrospective child maltreatment studies found that approximately one third of individuals who experienced substantiated abuse as children did not remember it in adulthood. Mills and colleagues (2016) found similar results in their longitudinal study comparing self-reported and agency-notified child sexual abuse allegations. They discovered an inconsistency where over one third of individuals with agency-reported child sexual abuse did not self-report, which was assumed to be due to a genuine loss or repression of memory. Additionally, most retrospective studies examine only long-term effects of child sexual abuse. It is important to note that short-term effects do not necessarily have the same symptom presentation as long-term effects, which may be due to various demographic factors, such as developmental stage and gender. Long-term effects are not determinants of short-term effects, as there is significant variability between the two.

### **Short-Term Effects of Child Sexual Abuse**

Children who report being sexually abused often experience difficulty sleeping, changes in appetite, diminished concentration, regression in behavior (e.g. bedwetting), and increased anxiety or phobic responses shortly after the abuse occurs (Finkelhor, 1991; Frazier et al., 2009; Wang & Holton, 2007). Based on a meta-analysis on clinical and community samples of children who reported being sexually abused, 20-30% of victims endorsed posttraumatic symptoms (Kendall-Tackett, Williams, & Finkelhor, 1993). These symptoms are often viewed as chronic, despite varying group and individual characteristics (Ackerman et al., 1998; McCrae, Chapman, & Christ, 2006). The severity of the psychological consequences of sexual abuse depends on

factors such as assault type, identification of the offender, and chronicity of the abuse (Banyard, Williams, & Siegel, 2004; Berliner & Elliott, 2002). Extensive literature has shown that exposure to chronic trauma results in pervasive and complex psychological, biological, and behavioral problems in children and adolescents (Streeck-Fischer & Kolk, 2000). A common symptom in young children immediately following sexual abuse is “psychic numbing”, or diminished responsiveness to surrounding people and situations (Ferrara, 2002). Research has also found that boys tend to exhibit more externalizing symptoms whereas girls exhibit internalizing symptoms. For example, sexually abused boys tend to become more aggression, whereas girls experience increased symptoms of anxiety, depression and self-blame (Feiring, Taska, & Lewis, 1999; Filipas & Ullman, 2006). Despite these findings, the impact of gender on psychological adjustment in reported or substantiated cases of sexual abuse has been minimal and inconsistent across studies. A study involving school-aged girls with substantiated child sexual abuse also exhibited significantly more dissociative and posttraumatic symptoms than their non-abused counterparts, by eightfold and fourfold, respectively (Collin-Vézina & Hébert, 2005). However, this study did not include male victims nor did it examine protective factors that may mediate the negative effects of sexual abuse. In a literature review, female children were found to have increased susceptibility to PTSD following sexual abuse (Walker et al., 2004). In contrast, Garnefski and Diekstra (1997) found that sexually abused adolescent boys exhibited significantly greater emotional and behavioral problems, including suicidality, compared to their female counterparts. Other studies found no gender differences in the effects of child sexual abuse (Banyard, Williams, & Siegel, 2004).

Houck and colleagues (2009) collected self-report data from adolescents in therapeutic and alternative schools and discovered that sexually inappropriate behavior and risky sexual

behavior were uniquely associated with child sexual abuse. Additionally, self-report data by adolescents has shown that endorsed sexual trauma and non-clinical psychosis are significantly associated (Lataster et al., 2006). Other severe problems include dissociation or psychogenic amnesia (Freyd, 1994) and suicidal ideation or attempts (Brown et al., 1999).

The clinical symptomology following child sexual abuse is variable and often complex. Negriff and colleagues (2014) sampled 60 children (40 female, 20 male) who experienced sexual abuse from the DCFS database and found there to be no significant gender differences in type of abuse. However, Negriff noted that the small sample size, especially in male victims, may have contributed to the lack of findings. Maiklovich-Fong and Jaffee (2010) also obtained a forensic sample and found that girls were more likely to experience penetrative abuse. Walrath and colleagues (2003) obtained data from a multi-site mental health database comparing 759 abused and 2,722 non-abused children within a clinical sample. They discovered that reported sexual abuse victims were more likely to be female and to report higher rates of depression and anxiety, but lower rates of Attention-Deficit Hyperactivity Disorder, substance use, and conduct problems when compared to their non-abused clinical counterparts.

Overall, research has discussed the pervasive effects of child sexual abuse as development of self-esteem and emotional regulation may be compromised (Fiering, Taska, & Lewis, 1999). It is important to note that the age of sexual abuse onset and duration of time between abuse and disclosure significantly affect symptom presentation. For example, Cutajar and colleagues (2010) conducted a study examining medical records of sexually abused children and discovered that children who were younger at the time of abuse were more likely to develop psychological disorders than their older counterparts. With regard to symptom presentation, Mian, Marton, and LeBaron (1996) found that female preschoolers displayed oversexualized

behavior and internalizing symptoms similar to school-aged children and adolescents who have been sexually abused. Fiering, Taska, and Lewis (1999) examined the differences in age of sexual abuse discovery and associated psychological problems in a forensic sample. They discovered that adolescents endorsed greater depressive and anxiety symptoms, negative reactions from others, and lower social support compared to school-aged children who were victims of substantiated sexual abuse. Despite the benefit of these studies, there are no known studies that examined the influence of age and gender differences on the short-term psychological problems following child sexual abuse.

Not all children who experience sexual abuse evidence negative outcomes, indicating a presence of moderating variables that may ameliorate the risks associated with sexual abuse. Some intrinsic factors have been shown to buffer the negative effects of child sexual abuse. Marriott, Hamilton-Giachritsis, and Harrop (2014) reviewed factors contributing to resiliency following child sexual abuse. They found that positive coping skills, supportive relationships, and community resources were repeatedly associated with resiliency. The authors noted significant methodological concerns with the reviewed articles, including inadequate operational definitions of child sexual abuse and resiliency. Runyon, Deblinger, and Steer (2014) found that maltreated children with low resiliency profiles reported greater depression than their peers. External factors such as social support and strong interpersonal relationships are consistently identified as protective factors in traumatized children. Surprisingly, peer and family support protected against posttraumatic symptoms for physically but not sexually abused children (Wilson and Scarpa, 2014). Malloy and Lyon (2006) found that children's willingness to disclose and psychological recovery from sexually abuse were associated with supportive maternal

behavior after disclosure. Factors influencing the short-term psychological effects are not well known and require further examination.

### **Adaptive Skills**

Adaptive skills are desirable and considered to be social, conceptual, and practical competencies used in daily living (AAIDD, 2013; Reynolds, Zupanick, & Dombeck, 2013). These competencies include communication and social skills, self-care and direction, and home and community living (Oakland & Harrison, 2011). Reynolds and Kamphaus (2004) define multiple adaptive skills for children and adolescents. Social skills are necessary for making and keeping friendships and involve communicative skills that are necessary for interacting with peers and adults. Functional communication is a type of social skill that involves the ability to express thoughts, knowledge, and feelings clearly and appropriately. Individuals with leadership skills are thought to be self-starters, exhibit initiative, and possess good decision-making skills. Activities of daily living are independent self-care tasks that individuals should be able to complete in a safe and efficient manner. Finally, adaptability is defined as flexibility to change in expectations or routines, and is crucial for successful adaptation to school and home environments (Huberty et al., 1997; Kamphaus et al., 1999).

Researchers have examined adaptive skills as protective factors in children's exposure to adverse events. Rossman, Bingham, and Emde (1997) found that children who experienced an adverse event (i.e. normative stress, dog attack, or exposure to domestic violence), exhibited fewer posttraumatic symptoms and increased adaptive functioning when they had a positive parental relationship. Adaptive functioning also has been examined with regard to childhood maltreatment. Maschi and colleagues (2010) found that physically abused or neglected children viewed their neighborhood as less safe and exhibited poorer adaptive skills compared to their

nonabused counterparts. Kim and Cicchetti (2010) showed that poor emotional regulation was a risk factor for social skills deficits and negative peer relations in maltreated children identified through the County Department of Social Services. Conversely, Wodarski and colleagues (1990) found that while physically abused and neglected children showed severe academic problems, they exhibited unexpected strengths in adaptive skills such as personal care skills and community orientation. Although these results are beneficial to the field of childhood maltreatment, these studies did not specifically examine child sexual abuse.

There are some studies that have examined the short-term impact of child sexual abuse on social functioning. McLean and colleagues (2013) found that among children who were sexually abused, greater posttraumatic severity was significantly associated with poorer social functioning. Daignault and Hébert (2009) found that over half of school-aged females who were sexually abused exhibited clinical levels of academic, social, or behavioral adaptation issues at school. In a similar study, teacher reports revealed that children who experienced sexual abuse exhibited greater social skills deficits at school and less interpersonal trust in people surrounding them (Blanchard-Dallaire & Hébert, 2014). Contrary to their hypotheses, results also showed that sexually abused children displayed greater trust in their peers compared to their nonabused counterparts. The authors indicated this unexpected finding could be due to feelings of betrayal by adults and sole-reliance on same-aged peers. Another important note is that children's self-reports did not exhibit these difficulties, as they did not differ in feelings of loneliness or being different than their peers when compared to their nonabused counterparts.

Although some studies have investigated the relationship between social functioning and the short-term effects of child sexual abuse, other adaptive skills have yet to be examined. As

explained by Reynolds and Kamphaus (2004), adaptive skills involve several domains of functioning, including social skills, communication, leadership, daily living and self-care.

### **Purpose**

Although the deleterious effects of child sexual abuse have been researched extensively, much of the research was conducted decades ago and was methodologically limited (e.g. insufficient control of confounding variables, sampling biases, and inadequate techniques of obtaining sexual abuse histories). For instance, Tolin and Foa (2006) reported in their meta-analysis that only ten studies have examined sex differences in posttraumatic symptomology in child sexual abuse victims and majority of those studies were methodologically flawed. Most studies did not directly assess PTSD (i.e. examined similar constructs such as anxiety, depression, and self-esteem), sampled only clinical populations, and sampled only male or female participants. Additionally, a vast amount of the older research was conducted with small samples of sexually abused children (less than 30 participants) who were primarily or exclusively female (Fiering, Taska, & Lewis, 1999). More recently, several researchers have noted that little is known about the impact of sexual abuse on male victims (Kendall-Tackett, 2001; Maiklovich-Fong & Jaffee, 2010; Walker et al., 2004). Thus, it is important to examine characteristics of sexually abused children with a large number of male and female participants to determine the relationship between the mental health problems and adaptive skills shortly following the abuse.

The majority of the child sexual abuse studies utilize retrospective data obtained from adults. Although beneficial, the research relies on memory and may overlook vital symptoms and emotions associated with the sexual abuse. More importantly, these retrospective studies typically examine long-term effects of child sexual abuse. Symptom trajectories between short-

term and long-term-effects are variable and can be influenced by different factors (e.g. age, gender). Therefore, it is important to examine psychological effects and influential factors that may mediate the effects shortly after the sexual abuse occurs.

Although short-term mental health problems have been documented in the child sexual abuse literature, less is known about the factors that influence these problems. Malloy and Lyon (2006) found that children's psychological recovery after sexual abuse was associated with maternal supportive behaviors. Intrinsic factors such as self-esteem, organization, and adaptable personalities have also been shown to ameliorate mental health problems following sexual abuse. Adaptive functioning is a promising factor to examine. Adaptive skills are practical and conceptual competencies that typically include social functioning, self-care, and daily living, and have previously been shown to protect from negative sequelae in adverse events (Oakland & Harrison, 2011). In terms of maltreatment, poor adaptive skills were associated with physically abused or neglected children who viewed their neighborhoods as unsafe (Maschi et al., 2010). To date, no known studies have examined the relationship between adaptive skills and short-term mental health problems in a child sexual abuse population. Thus, the current study evaluated adaptive skills (i.e. adaptability, social skills, leadership, activities of daily living, and functional communication) and their relationship with mental health problems (i.e. PTSD symptomology, internalizing, and externalizing problems) among children and adolescents who have been sexually abused.

## **Hypotheses**

1. Adaptive skills have been shown to be a contributing factor to decreased mental health problems after traumatic events (Rossman, Bingham, and Emde, 1997). As such, it is hypothesized that higher adaptive skills (i.e. adaptability, social skills, leadership, activities

of daily living, and functional communication) will be associated with lower psychological problems (i.e. posttraumatic symptomology, internalizing problems, and externalizing problems), for all ages and genders.

2. Previous research has suggested that older children exhibit psychological symptoms more often than younger children after experiencing a traumatic or life-threatening event (Cole & Putnam, 1992; Wolfe, Sas, & Wekerle, 1994). As such, it is hypothesized that adolescents will show greater psychological problems and younger children will show higher levels of adaptive skills.
3. Some researchers have found that girls are more vulnerable to posttraumatic stress after child sexual abuse (Collin-Vézina & Hébert, 2005; Walker et al., 2004). Additionally, research has revealed that girls experience internalizing problems and boys typically experience externalizing problems following sexual abuse (Feiring, Taska, & Lewis, 1999; Filipas & Ullman, 2006). Based on previous research, it is predicted that girls will exhibit greater psychological problems and boys will exhibit greater adaptive skills.
4. Given hypotheses two and three, it is predicted that adolescent girls will experience the greatest level of psychological problems and young boys will experience the greatest level of adaptive skills.

## METHODS

### **Participants**

Using an existing data set, participants are 133 children and their parent/guardian referred to an advocacy center due to allegations of child sexual abuse. The child participants' ages ranged from six to seventeen years old ( $M = 9.79$ ,  $SD = 2.96$ ); ages 6-11 ( $n=101$ , 75.9%) and ages 12-17 ( $n=32$ , 24.0%). The participants included boys ( $n = 70$ , 52.6%) and girls ( $n = 63$ , 47.4%). Majority of the children were either Caucasian (48.3%) or African American (45.8%). The caregivers are predominately mothers (76.5%), and primarily low income (71.3% report annual family income of \$30,000 or less). The study has been approved by the Institutional Review Board at the university of the researchers.

### **Procedure**

A preexisting database was examined. The participants are youth and their caretakers who were recruited at intake from a child advocacy center. All youth were assessed for child sexual abuse. The children and their caregivers were provided with a verbal description of the study as well as a written description. Child/caregiver dyads were provided with consent and assent for the original study which examined the relationship between child advocacy centers and schools. The dyads completed several questionnaires. If multiple primary caregivers were present, only one caregiver completed the questionnaires. Participating caregivers were provided \$20 compensation.

### **Measures**

*Demographic Questionnaire.* Caregivers completed a brief demographic questionnaire which prompted responses regarding child's age, race, gender as well as parents' marital status,

education, and income. Information was also gathered regarding the assault allegation including assault type and disclosure.

*Behavioral Assessment System for Children, Second Edition (BASC-2; Reynolds & Kamphaus, 2004)*. The BASC-2 is a multi-modal, multi-dimensional assessment used to evaluate behaviors, personality, and cognitions of individuals between the ages of 2 and 25. The BASC-2 is a broadband measure and includes scales such as Externalizing Problems, Internalizing Problems, Behavioral Symptoms Index, and Adaptive Skills. For the purposes of this study, the Adaptive Skills, Externalizing Problems and Internalizing Problems scales will be assessed. The Adaptive Skills subscales include Adaptability, Social Skills, Leadership, Activities of Daily Living, and Functional Communication. The Externalizing Problems subscales include Hyperactivity, Aggression, and Conduct Problems while the Internalizing Problems subscales include Anxiety, Depression, and Somatization. The Self-Report of Personality (SRP) is a 176-item measure of one’s behavior and emotions. Items are either rated as “True” or “False” or on a 4-point Likert scale ranging from 1 (“Never”) to 4 (“Almost Always”). The SRP includes a variety of clinical scales; 16 primary and 5 composite scales while the Parent Rating Scale (PRS) includes 14 primary and 4 composite scales. For the purposes of this study, raw scores from the PRS were analyzed. Classifications of raw scores are included below.

Score Classification	Externalizing Problems	Internalizing Problems	Adaptive Skills
Clinically Significant	≥203	≥198	≤165
At-risk	176-200	173-195	166-209
Average	125-175	128-172	213-290

*Trauma Symptom Checklist for Children (TSCC; Brier, 1996)*. The TSCC is a 54-item self-report measure that assesses posttraumatic symptoms, including effects of child physical and

sexual abuse and neglect for individuals between the ages for 8 and 16. Items are rated on a 4-point Likert scale, ranging from 0 (“Never”) to 3 (“Almost all of the time”). Although the entire questionnaire was administered, the current study will use the ten items, Posttraumatic Stress (PTS) subscale to assess for posttraumatic symptomology. The items included in this scale evaluate memories and nightmares of the event, fear, avoidance, and cognitions such as intrusive thoughts and feelings. Coefficient alpha was strong for both the PTS subscale (.87) and the mean of the total measure (.84; Brier, 1996). Previous research also supported criterion-related validity of the PTS subscale. For instance, Diaz (1994) found that the PTS and Depression (DEP) subscales were the most powerful discriminators of traumatic stress when compared to the other scales in the TSCC, as well as the Child Behavior Checklist (Achenbach & Rescorla, 2001) and the Rosenberg Self-Esteem Scale (Rosenberg et al., 1995).

## RESULTS

A preliminary power analysis was conducted to determine the number of participants required for the present study. In order to determine the minimum number of participants for this study, alpha was set to .05 (two tailed), power was set to Beta = .70, and the effect size was set to a Cohen's D of  $D = .25$  (that is a mean difference of .25 Standard Deviations). The results indicated that a total of 104 child participants were needed in order to have a 70% chance of detecting an effect size of .25 Standard Deviations if it exists in the population.

### **Missing Data**

A total of nine participants were excluded from the analyses due to missing responses on three critical variables of interest (i.e. adaptive skills, internalizing, and externalizing problems) on the BASC-2 rating form. Other missing values were imputed using expectation maximization in the PTSD scale based on 41 out of 133 participants missing PTSD-related responses on the Trauma Symptom Checklist for Children.

## Descriptive Statistics

The table below provides descriptive information regarding the totals of all outcome variables.

Table 1. Means and Standard Deviations for Raw Scores of Variables

		<b>Externalizing</b>	<b>Internalizing</b>	<b>PTS</b>	<b>Adaptive</b>
<b>Gender</b>	Boys	163.0(34.1)	149.6(32.7)	9.2(5.9)	240.5(41.6)
	Girls	174.4(46.2)	161.5(41.4)	9.8(5.3)	223.0(45.4)
	Cohen's D	.281	.319	.107	.402
<b>Age</b>	Young (6-11)	170.4(41.7)	157.0(38.8)	9.3(5.5)	231.8(41.9)
	Old (12-17)	162.3(36.6)	149.7(32.4)	10.0(6.0)	233.5(51.2)
	Cohen's D	.206	.204	.122	.036
<b>Gender x Age</b>	Young boys	162.5(33.8)	150.3(34.0)	8.9(5.4)	244.7(37.1)
	Young girls	178.4(47.4)	163.8(42.4)	9.6(5.5)	218.6(42.9)
	Cohen's D	.386	.351	.128	.651
	Old boys	164.3(35.6)	147.7(29.4)	9.7(7.1)	229.2(51.2)
	Old girls	159.2(39.2)	152.7(37.5)	10.3(4.2)	239.9(52.6)
	Cohen's D	.136	.148	.103	.206
	Total	168.4(40.5)	155.2(37.4)	9.4(5.6)	232.2(44.2)
	Min	108.0	101.0	0	126.0
	Max	321.0	310.0	24.0	343.0

As shown in Table 1, majority of parents and caregivers reported average levels of externalizing problems ( $M = 168.4$ ,  $SD = 40.5$ ), internalizing problems ( $M = 155.2$ ,  $SD = 37.4$ ), and posttraumatic stress symptoms ( $M = 9.4$ ,  $SD = 5.6$ ). Parents and caregivers from the sample reported their children exhibiting relatively moderate levels of adaptive skills ( $M = 232.2$ ,  $SD = 44.2$ ), with a range of 126 to 343. The effect sizes for age and gender were small to moderate, ranging from .036 to .651.

## Hypothesis Testing

*Hypothesis 1:* The first hypothesis stated that greater adaptive skills (i.e. adaptability, social skills, leadership, activities of daily living, and functional communication) would be associated with lower psychological problems (i.e. posttraumatic symptomology, internalizing problems, and externalizing problems) for all ages and genders. To test this hypothesis, bivariate correlations were employed to investigate the relationships among adaptive skills, posttraumatic

stress symptomology, internalizing problems, and externalizing problems among children and adolescents who have been sexually abused. Table 2 presents the correlations among the variables. Adaptive skills were significantly and negatively associated with two outcome variables, externalizing problems ( $r = -.498, p < .01$ ) and internalizing problems ( $r = -.316, p < .01$ ). This suggests that high levels of adaptive skills are strongly related to lower levels of externalizing and internalizing symptoms.

Table 2. Bivariate Correlations of Variables

Variable	Externalizing	Internalizing	PTS	Adaptive
Externalizing	1	.462**	.051	-.498**
Internalizing	---	1	-.204*	-.316**
PTS	---	---	1	-.140

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

Multiple regression analyses were used to evaluate the predictive effect of demographic variables and adaptive skills on internalizing, externalizing, and posttraumatic symptoms.

Demographic variables (i.e. age, gender, and race) did not significantly predict externalizing problems (see Table 3). After controlling for age, gender, and race, adaptive skills significantly and negatively predicted externalizing problems,  $t = -6.129, p < .01$ . This suggests that increased adaptive skills results in decreased externalizing problems.

Table 3. Multiple Regression Assessing the Predictive Ability of Demographic Variables and Adaptive Skills on Externalizing Problems

	<b>R<sup>2</sup></b>	<b>ΔR<sup>2</sup></b>	<b>B</b>	<b>β</b>	<b>t</b>	<b>sig</b>
<b>Step 1</b>	.022					
Age			-.843	-.061	-.653	.515
Gender			10.556	.130	1.415	.160
Race			-1.337	-.029	-.307	.759
<b>Step 2</b>	.263	.237**				
Adaptive Skills			-.455	-.499	-6.129	.000**

\*\* $p < .01$

Demographic variables (i.e. age, gender, and race) did not significantly predict internalizing problems (see Table 4). After controlling for age, gender, and race, adaptive skills significantly and negatively predicted internalizing problems,  $t = -3.518$ ,  $p = .001$ . This suggests that increased adaptive skills results in decreased internalizing problems.

Table 4. Multiple Regression Assessing the Predictive Ability of Demographic Variables and Adaptive Skills on Internalizing Problems

	<b>R<sup>2</sup></b>	<b>ΔR<sup>2</sup></b>	<b>B</b>	<b>β</b>	<b>t</b>	<b>sig</b>
<b>Step1</b>	.021					
Age			-.470	-.036	-.388	.698
Gender			10.442	.138	1.494	.138
Race			-.294	-.007	-.072	.943
<b>Step 2</b>	.116	.085**				
Adaptive Skills			-.268	-.313	-3.518	.001**

\*\* $p < .01$

Demographic variables (i.e. age, gender, and race) did not significantly predict posttraumatic symptoms (see Table 5). After controlling for age, gender, and race, the effect of adaptive skills on posttraumatic symptoms was not significant,  $t = -1.490$ ,  $p = .139$  (Table 5). This suggests that when demographics are accounted for, adaptive skills do not independently predict posttraumatic symptoms.

Table 5. Multiple Regression Assessing the Predictive Ability of Demographic Variables and Adaptive Skills on Posttraumatic Stress Symptoms

	<b>R<sup>2</sup></b>	<b>ΔR<sup>2</sup></b>	<b>B</b>	<b>β</b>	<b>t</b>	<b>sig</b>
<b>Step1</b>	.066					
Age			.062	.032	.341	.734
Gender			.573	.050	.543	.589
Race			.228	.035	.370	.712
<b>Step 2</b>	.152	.023				
Adaptive Skills			-.018	-.140	-1.490	.139

*Hypotheses 2-4:* Hypothesis 2-4 examined the impact of age, gender, and the interaction between age and gender on psychological symptoms following child sexual abuse. Specifically, it was predicted that adolescents (age), girls (gender), and adolescent girls (age x gender) will show greater psychological problems while younger children (age), boys (gender), and young boys

(age x gender) will show higher levels of adaptive skills. Two-by-two analysis of variance (ANOVAs) were used to examine the differences between age groups (children ages 6-11 and adolescents ages 12-17) and gender (male and female) with the four outcome variables (externalizing problems, internalizing problems, posttraumatic symptoms, and adaptive skills).

Table 6. Two-Way ANOVAs of outcome variables

	Gender	Age	Gender x Age
Externalizing	F=.423, p=.517 partial $\eta^2$ = .003	F=1.098, p=.297 partial $\eta^2$ = .008	F=1.609, p=.207 partial $\eta^2$ = .012
Internalizing	F=1.457, p=.230 partial $\eta^2$ = .011	F=.799, p=.373 partial $\eta^2$ = .006	F=.311, .578 partial $\eta^2$ = .002
PTS	F=.277, p=.599 partial $\eta^2$ = .002	F=.399, p=.528 partial $\eta^2$ = .003	F=.004, p=.949 partial $\eta^2$ = .000
Adaptive	F=.747, p=.389 partial $\eta^2$ = .006	F=.106, p=.745 partial $\eta^2$ = .001	F=4.305, p=.040* partial $\eta^2$ = .032

Note: df = 3,129 \* = p<.05

Table 7. Post Hoc Analysis of Adaptive Skills using Bonferroni Adjustment

Age Gender Group (A)	Age Gender Group (B)	Mean Difference (A-B)	SE	P value
Child Male	Child Female	26.029	8.571	.017*
	Adolescent Male	15.491	11.576	1.00
	Adolescent Female	4.767	13.381	1.00
Child Female	Child Male	-26.029	8.571	.017*
	Adolescent Male	-10.539	11.607	1.00
	Adolescent Female	-21.263	13.408	.691
Adolescent Female	Child Male	-4.767	13.381	1.00
	Child Female	21.263	13.408	.691
	Adolescent Male	10.724	15.502	1.00
Adolescent Male	Child Male	-15.491	11.576	1.00
	Child Female	10.539	11.607	1.00
	Adolescent Female	-10.724	15.502	1.00

Note. \*p<.05

There was not a statistically significant main effect for child's age, gender, or the interaction between age and gender when examining psychological problems (i.e. externalizing, internalizing, and posttraumatic symptoms) (see Table 3). In regards to adaptive skills, there were not statistically significant main effects for gender or age. However, the interaction between age and gender for adaptive skills was statistically significant,  $F(3,129) = 4.305, p<.05$

with a small effect size (partial  $\eta^2=.032$ ). Post hoc analysis using the Bonferroni adjustment determined that there was a significant difference between the child female and child male groups (see Table 4). Child male had significantly higher levels of adaptive skills compared to child female. There were no significant differences between the child and adolescent groups.

## DISCUSSION

The aim of the current study was to evaluate adaptive skills and their relationship with mental health problems among children and adolescents who have been sexually abused. It was hypothesized that greater adaptive skills would be associated with lower psychological problems for all ages and genders. As for age groups, it was predicted that adolescents would show greater psychological problems and younger children would show higher levels of adaptive skills. With regard to gender, it was predicted that girls would exhibit greater psychological problems and boys would exhibit higher levels of adaptive skills. Given these predictions, the final hypothesis was that adolescent girls would show greater psychological problems and young boys would show higher adaptive skills.

There are some important considerations to take into account when interpreting the findings of this study. Data was only collected at the time of a forensic interview following an allegation of child sexual abuse. Therefore, there was no baseline data to examine psychological functioning and adaptive skills of participants prior to the sexual abuse allegation. Additionally, the sample population consisted only of children and adolescents who reported being sexually abused. Therefore, the results of this study are unable to compare psychological functioning and adaptive skills between abused and non-abused children.

The results found evidence to somewhat support the first hypothesis. The findings concluded that high adaptive skills were significantly related to low internalizing and externalizing problems, but not to PTSD symptomology. Hypotheses two and three predicted girls and adolescents would show greater psychological problems, while boys and children would show higher levels of adaptive skills. The results did not find evidence to fully support hypotheses two and three because there were no significant main effects for psychological

problems or adaptive skills with age or gender. These findings suggest that adolescents and girls were not any more likely to exhibit greater psychological problems, and younger children and boys were not any more likely to possess greater adaptive skills among a sexually abused population. Given hypotheses two and three, hypothesis four predicted that adolescent girls would exhibit greater psychological problems and young boys would exhibit higher levels of adaptive skills. This hypothesis was partially supported, as young boys had significantly higher adaptive scores compared to young girls. There were no significant differences between young boys and their adolescent counterparts. Results showed that young boys exhibited higher mean adaptive scores than adolescent boys and adolescent girls, but the between group differences were not statistically significant.

Although the hypotheses were not fully supported, the results were not entirely unforeseen. Previous findings from trauma research found unsubstantial gender differences (Banyard, Williams, & Siegel, 2004; Negriff et al., 2014) and age differences (Bergen et al., 2004) in the psychological effects of child sexual abuse. Although there were not substantial age or gender differences, the findings exhibited a strong relationship between high adaptive skills and lower psychological problems following child sexual abuse. One explanation for the lack of age and gender difference in the current study could be explained by the level of adaptive skills. The results showed that the participants exhibited average adaptive skills, which could have buffered the severity of psychological symptoms similarly for all genders and ages. This finding is consistent with Wodarski and colleagues (1990) who found that physically abused and neglected children exhibited unexpected strengths in adaptive skills such as personal care and community orientation.

The current study revealed that young boys had significantly greater adaptive skills, only when compared to young girls in a sexually abused population. This was somewhat of an unexpected finding, as it was hypothesized that young boys would exhibit greater adaptive skills, while adolescent girls would exhibit greater psychological problems. Because there were no significant differences in psychological problems between groups, it is difficult to determine if the adaptive skills the young boys possess buffered the impact of psychological problems. Future research should examine gender differences in types of adaptive skills (i.e. adaptability, social skills, leadership, activities of daily living, and functional communication) to determine if males are more likely to exhibit specific adaptive traits that are associated with better outcomes following trauma compared to their female counterparts.

The current study has a number of strengths to note. The data was collected at a child advocacy center where the participants underwent a forensic interview for a sexual abuse allegation. As previous research has shown, many sexual abuse researchers have had to rely solely on retroactive data collected in adulthood. Retroactive research relies on memory and may overlook more short-term symptoms and emotions associated with the abuse. Additionally, the current study had approximately the same number of boys and girls in the data sample. Researchers have noted that little is known about the impact of sexual abuse on male victims (Kendall-Tackett, 2001; Maiklovich-Fong & Jaffee, 2010; Walker et al., 2004). Additionally, Tolin and Foa's (2006) meta-analysis concluded that majority of the studies examining gender differences in posttraumatic symptomology of child sexual abuse victims sampled only male or female participants. The current study was able to examine 133 participants with 51.6% being male participants, which provides a more representative population sample when evaluating gender differences.

Although the current study has a number of strengths, several limitations should be considered. This study implemented correlational relationships between psychological symptoms and adaptive skills. Though correlations provide beneficial information, causal conclusions cannot be inferred between these relationships. Also, the study was based solely on parent-report data. Though parent-report seemed to be the most reliable way to assess the child participants' adaptive skills and symptomology following sexual abuse, it also allowed for under-detection of symptoms (e.g. internalizing problems) and socially desired responding. These two factors could have contributed to the relatively low levels of posttraumatic symptoms, as well as internalizing and externalizing problems. Another limitation to note is the underrepresentation of adolescent participants (n=32) compared to child participants (n=101). The number of adolescents was made even smaller when examining between group difference (i.e. 13 adolescent females; 19 adolescent males). The small group number could have contributed to the lack of significant differences between children and adolescents. Future studies can expand and improve upon the information resulted from the current study by recruiting a larger adolescent population. It is also suggested that future studies incorporate self-report measures of psychological problems in addition to caregiver-report measures.

There is not a precise explanation as to why the sample population of child sexual abuse victims exhibited relatively low levels of psychological symptomatology. The current study did not include details of the sexual abuse. More specifically, it is unknown if the sample population experienced an isolated sexual abuse incident or if it was a chronic occurrence. The type of sexual abuse (i.e. extrafamilial or intrafamilial), the severity of abuse, and the presence of other abuse or traumas are also unknown. These factors could potentially impact the symptoms endorsed by the caregiver. For example, research has consistently shown that chronic sexual

abuse contributes to more severe psychopathology when compared to an isolated incident (Kendall-Tackett, Williams, Finkelhor, 1993; Molnar, Buka, & Kessler, 2001). Conversely, the participants in this study may possess characteristics that contribute to better outcomes following child sexual abuse. For example, Elliott and Carnes (2001) found that support from the non-offending parent or caregiver was often associated with the adjustment of children who were sexually abused.

This study confirmed that adaptive skills may serve as significant protective factors of psychological symptoms for children and adolescents who recently experienced sexual abuse. Children in the study who possessed higher levels of adaptive skills such as adaptability, social skills, leadership, activities of daily living, and functional communication were shown to have decreased internalizing and externalizing problems. Given the lack of research regarding adaptive skills and trauma, future research may consider utilizing longitudinal data and investigating which types of adaptive skills are associated with the best outcomes following various types of trauma (e.g. physical and sexual abuse, natural disasters, exposure to violence, etc.).

The results from this study could assist medical and mental health professionals in better understanding the effects of child sexual abuse across various demographics. Equally important, understanding the impact of adaptive skills on child sexual abuse can assist mental health professionals with individualizing interventions. For example, strengthening specific adaptive skills may help improve psychological functioning after abuse. Ultimately, we would hope that if these short-term factors are targeted early enough, individuals with histories of child sexual abuse would go on to experience minimal mental health problems and function effectively in adulthood.

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## VITA

Séandra J. Walker was born in Sacramento, California, but raised in Aurora, Colorado. She attended Colorado State University where she received her Bachelor of Science degree in psychology in May 2011. In August 2012, Séandra began her doctoral training in clinical child psychology under the supervision of Mary Lou Kelley, Ph.D. at Louisiana State University. From 2016-2017, Séandra completed her predoctoral internship at Child and Adolescent Behavioral Health in Canton, Ohio under the direction of Tracie Baker, Ph.D. Séandra will receive the degree of Doctor of Philosophy in clinical psychology in December 2017. She will complete her postdoctoral fellowship at Child and Adolescent Behavioral Health, where she will continue assess and treat trauma-related disorders within a diverse and underserved population.