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APPRAISALS OF CUMULATIVE CHILDHOOD ADVERSITY AND THE IMPORTANCE OF FAMILIAL CHILDHOOD SEXUAL ABUSE

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by

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ABSTRACT

Existing studies of childhood adverse experiences examine the presence of multiple adversities to better understand the effect of individual adverse events and to assess their cumulative impact on mental and physical health. While these studies display the relationship between adverse childhood experiences and physical/mental health, few of these studies consider the respondent's emotional reaction/appraisal of adversities to understand the differential impact adversities may have on the subject. Adversities occur under various circumstances, and the perceived impact of adverse events is highly subjective. Child sexual abuse (CSA) is an adversity uniquely thought of as most negatively impactful. It is important to understand how victims of CSA view and react to their abuse. In this study, the data involves a group of women with substantiated experiences of child sexual abuse and a comparison group. This study examines the quantity, type, and appraisals to different adversities in comparison to CSA. First, results suggest that those who experience child sexual abuse are more likely to experience many and multiple forms of adversity. Second, respondents that experienced childhood sexual abuse label it as their worst adversity only 50 percent of the time. Third, there is notable difference in victims' descriptions of their emotional reactions to adversity, with negative emotions being strongly correlated with child sexual abuse. This study suggests that more research is needed on appraisals of childhood adverse experiences to better understand the lasting impact of different types of adversity.

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Introduction

Childhood adverse experiences include a range of traumatic events and circumstances, such as child maltreatment (e.g., abuse and/or neglect), childhood trauma (e.g., witnessing violence), and childhood stressful events (e.g., divorce/separation, death of family member/friend, economic stress/homelessness) (Burgermeister, 2007). Childhood adversity increases the risk for negative physical and mental health outcomes throughout the life course of the child (Martsolf & Draucker, 2008; Oh et al., 2018). Alarmingly, evidence suggests that those who experienced adversity in childhood were more likely to attempt suicide at some point in their lives (Dube et al., 2001).

Though just one individual adversity may affect the outcome of a child's life, children in many instances experience and must overcome multiple forms of adversity. The commonality of experiencing multiple adversities, or poly-victimization, complicates understanding the impact of any individual adverse experience. The co-occurrence of these adverse experiences can pose a challenge to researchers aiming to understand the distinct impact of each adverse experience. Simply put, when multiple adversities are present, it is more challenging to assess which event is creating the most negative effect.

Adverse childhood experiences are statistically interrelated rather than independent (Dong et al., 2004), which poses a challenge to understanding how a single adverse event impacts health (versus considering the impact of all adverse events simultaneously). Many studies, including adverse childhood experiences studies, attempt to take more than one adversity into account by using various methods. These methods might help to identify how different outcomes are related to the amount of adversity experienced. However, these measures cannot distinguish effects among multiple forms of adversities.

Child sexual abuse (CSA), in particular, often co-occurs with other childhood adversities, including other forms of abuse, parental substance use, mental illness, economic instability, and domestic violence (Dong et al., 2004). Scholars argue that child sexual abuse is one of the more unique adversities a child experiences, suggesting the importance of studying this particular adversity (Noll, 2021). While CSA is a unique adversity, it is necessary to understand its impact and if its uniqueness makes it the worst adversity.

As many studies assessing the impact of child sexual abuse on health consider sexual abuse in addition to other adverse events, scholars are less clear on the unique impact sex abuse has on various outcomes. Not only are outcomes potentially being attributed to the wrong adversity, but these outcome measures may also be less efficacious (Rind & Tromovitch, 1997). Additionally, many scholars attempt to rank respondents' traumatic childhood events, examining physical and mental outcomes that are specific to a respondent's trauma history (Ney et al., 1994). However, this is a limited approach and does not consider the perspectives of the respondent. Because individuals handle adversities differently and adversities may be experienced subsequent to prior adversities, it is difficult for researchers to clearly identify a respondent's most traumatic experience. In this thesis, I argue researchers should turn to respondents themselves for such information about their emotional reactions to, or appraisals of, their adverse experiences.

Using a longitudinal cohort of women, I examine the quantity of, and emotional distress ascribed to, adverse events by respondents themselves. Specifically, I look at how quantity and emotional distress differ between those who have and have not experienced child sexual abuse. Child sexual abuse is often thought of as one of the worst adverse childhood experiences (Jung & Steil, 2013). I conduct analyses to see if this assertion is consistent in a nationally representative dataset of adverse childhood experiences. First, I identify the number of adversities children

experience outside of child sexual abuse compared to those who have not experienced sexual abuse. Second, I investigate how respondents rank and react to their adverse childhood experiences. In doing so, I aim to answer three questions: 1) Do the types and quantity of adverse events differ between women who experienced CSA and women who have not? 2) Do women who experience CSA consistently report CSA as their worst or most traumatic event? 3) Do women describe unique emotional reactions or beliefs about CSA compared to other types of adverse experiences? This study aims to address a gap in the literature by examining how people view and describe the adverse events they experience in childhood. In doing this, we will be able to address children and take their emotional reactions into account when creating programs and coping strategies. This can make societal reactions and responses to children who experience adversity more proactive and less judgmental if we understand the perspective of those who experience more adversity.

Background

Prevalence and Types of Childhood Adversity

While children are a population many aim to protect, they are not always kept out of adversity's reach. Unfortunately, many children experience the trauma and reality of adverse childhood experiences. "Adverse childhood experiences were defined operationally as childhood events, varying in severity and often chronic, occurring in a child's family or social environment that cause harm or distress, thereby disrupting the child's physical or psychological health and development" (Kalmaski & Chandler, 2014). Approximately 62 percent of people experience at least one adverse event in childhood, while around 25 percent experience three or more (Merrick et al., 2018). According to the CDC, a higher percentage of women than men experience four or

more adverse childhood experiences, and approximately 16.3 percent of women experience child sexual abuse. Some childhood adverse experiences require third-party interventions such as child protective services. Approximately 37 percent of children experience some sort of child protective services investigation before the age of 18 (Kim et al., 2017). In a study of people participating in in-patient and out-patient mental health programs, "the most common type of childhood adversity reported was parental separation (57.8%), followed by physical abuse (24.5%), disrupted family arrangements (21.9%), and sexual abuse (15.6%). Death of a biological parent (11.4%) and being placed into care by authorities (5.1%) before age 17 years were the least prevalent types of childhood adversity in the sample" (Ajnakina et al., 2018).

Relative Impacts of Different Forms of Childhood Adversity

Adverse childhood experiences are often accompanied by negative outcomes. Evidence suggests that those who have experienced an adverse event (e.g., sexual assault/abuse, violence, death, homelessness, and natural disasters) suffer from poor mental and physical health outcomes, such as depression or disabilities (Edwards et al., 2003; Emery & Laumann-Billings, 1998; Golding, 1999; Kendall-Tackett et al., 1993). These outcomes are more likely when one or multiple forms of adversity are present. Exposure to multiple adverse childhood experiences is associated with a wide variety of negative outcomes (Petruccelli et al., 2019). Both the frequency of victimization and overlapping risk factors increase the likelihood that children who experience one adverse event in childhood have likely suffered from others (Saunders, 2003). Generally, multiple adversities lead to worse health outcomes for the victim (Scott-Storey, 2011).

Holmes and Rahe's Social Readjustment Rating Scale (Holmes & Rahe, 1967) exposed a clear negative connection between mental health and the amount of adversity experienced by children (Dohrenwend & Dohrenwend, 1974). These mental health outcomes (depression, anxiety,

PTSD) impact the social life and interactions of children who experience childhood adversity. Therefore, the evidence suggests that psychosocial/behavioral outcomes are more prevalent if someone experiences multiple adverse events in childhood (Petruccelli et al., 2019). Cumulative adversity is especially associated with depression, dissociation, and PTSD (Martin et al., 2013). However, challenges in assessing exposure to cumulative adversity (Oh et al., 2018), including a lack of consistent definitions and tools for measuring exposure—especially for young children, can lead to unreliable or incomplete measures.

The cumulative adversity research suggests that adversities generally cluster with each other (Jacobs et al., 2012). Individuals who experience childhood abuse, in particular, are likely to experience other forms of abuse (physical, sexual, and emotional) and to be exposed to violence in the household (Finkelhor et al., 2005; Golding, 1999; Kira et al., 2008). Barret found that adult survivors of CSA were significantly more likely to experience childhood physical abuse and to have witnessed domestic violence during childhood (2009).

Adversities can be clustered not only by experience but also by characteristics of the victim such as gender. For example, women's experiences of being victimized are often cumulative and heterogeneous (Scott-Storey, 2011). Women who have experienced violence are generally more likely than men to have experienced additional forms of adversity (Follette et al., 1996). While some studies only attribute negative outcomes to one adversity, this is a limitation, as many respondents experienced multiple adversities in childhood. Some comparative studies mostly focused on types of abuse but ignored all the adversities they would have experienced outside of their familial context (Scott-Storey, 2011). Along with difficulties in measuring exposure to adverse experiences, identifying what has the most severe or unique impact with such high rates of cumulative adversity presents a challenge to researchers.

Previous literature examining cumulative adversity has used several imperfect measures to distinguish between different forms of adversity. For example, some scholars use count measures to assess the total impact of adversity prevalence (Dube et al., 2001; Finkelhor et al., 2005; Lloyd & Turner, 2003; Petruccelli et al., 2019). However, these count measures do not consider the fact that some adversities have a greater impact than others. Other studies have used regression and attempted to control for other adversities that are not the focal concern of researchers to isolate the effects of key adverse events. However, regression analyses are arguably not ideal for exploring the linked, related nature, or clustering, of these adverse experiences (Giodarno et al., 2019). Measurement issues of cumulative adversity are not limited to analyses but include the method and specifics of the data collected. A key consideration missing in many of these studies is using children's self-reports to identify the adversity or trauma that has had the most significant impact on their mental and physical health (Giodarno et al., 2019). The self-report method takes into account how all the other adversities the respondent experienced can impact the reaction and experience of the adversity in question.

Prior research suggests that more adverse experiences lead to poorer mental and physical outcomes. However, not all adversities are created equal, and some can have greater deleterious effects than others. To address this gap in the extant literature, I use the ranking/rating of trauma/adversity from the people who experience it first-hand to better understand the impact of childhood adverse events, taking respondents' perspectives of their own trauma into consideration.

Self-Reported Emotional Impact of Adverse Events

If all adversities are not created equal, how they are measured is a key quantitative concern. Studies of childhood adversities rarely rank traumatic events in terms of severity or harm. Historically, scholars have suggested that one adversity may have a worse effect on mental and

physical well-being (Read & Bentall, 2012). The negative impacts of these events are often assessed in terms of quantifiable and measured indicators of mental and physical health. However, it is possible that a significant piece of the puzzle is missing due to the exclusion of victims' perceptions of the impact of their own adverse experiences.

People who experience adversities, especially in childhood, do not commonly have the ability or tools to measure their trauma by mental and physical health. Instead, victims base their ranking on their emotional reactions. These emotional responses or reactions to an adverse event are often referred to as appraisals.

Appraisals are the cognitive processes someone uses to evaluate a situation or event. Appraisals are strongly linked with emotional functioning and are therefore important for mental health assessment (Gusler et al., 2022) and may affect the likelihood that victims seek or receive relevant support and protection from further trauma. Though a worthwhile avenue to explore, there are significant challenges to studying appraisals. There is little consensus on the core dimensions of appraisals, though it is often presented as perceptions of threat, stressfulness, impact, and self-assessment of blame and coping ability (Gusler et al., 2022).

Another factor that impacts appraisals pertains to the amount of time between the event and the appraisal itself, also called primary and secondary appraisals. Lazarus and Folkman (1987) highlight the main differences between primary and secondary appraisals. Primary appraisal is the first and most immediate appraisal. Since this form of appraisal happens immediately, this appraisal is generally categorized by scholars as either positive, negative, or neutral. Secondary appraisals occur after the event has been identified as an adversity. The secondary appraisal involves more emotionality and thought since there has

been time and space for the person to think. The secondary appraisal includes reactions and coping responses developed in response to adverse events or trauma. Examples of secondary appraisals could be guilt or shame. Most studies only look at primary appraisals, with very few studies considering both primary and secondary appraisals (Gusler et al., 2022). While there are challenges to studying cognitive processes, this can be done by asking respondents to retrospectively assess their trauma as well as express the current emotions they feel discussing the adversity/trauma. Another way to ask individuals about a secondary appraisal is by asking them to rank or rate adverse experiences.

When ranking adverse experiences, respondents are often asked to identify the experience they've had that they consider to be their worst experience. To understand the impact or importance of a respondent's worst trauma/adversity, one must establish what worst means. However, the literature is mixed on what the definition of worst is in terms of adverse experiences. Recent research in psychotherapy studies uses the term *index trauma* when considering one's "worst" trauma/adversity. The index trauma aids to identify the trauma that had the most impact on the victim. However, studies of index traumas rarely provide a reliable definition of the term index trauma. Of the seventeen randomized controlled trials using the index trauma, thirteen did not provide definitions of the index (Jung & Steil, 2013). The remaining four gave a narrow definition of "worst event" for the index trauma, without clearly defining "worst." The literature suggests that the definition of "worst" when describing traumatic events remains unclear. "Worst" has been defined in terms of adverse or traumatic childhood events when scholars used descriptions of PTSD symptoms related to specific events from the DSM-IV (American Psychiatric Association, 2000) to identify the worst event (Bovin & Weathers, 2012). While some previous literature expresses the importance of the index or worst event, others express the necessity to look at all

experienced adversity (Priebe et al., 2018). More research is needed to determine what it means for a specific childhood adversity to be identified as worst and the impact it has on the child.

The lack of definition for "worst" has limited researchers' abilities to assess the impact of traumatic childhood events. Many times, researchers identify an adverse event as the "worst" because it produces the most physical and/or mental problems for the victim (Finkelhor et al., 2007; Oh et al., 2018; Read & Bentall, 2012). This categorizing and labeling of worst rarely incorporates how the victims feel about the adverse events they have experienced. I argue that, in addition to examining worst events through the lens of psychological and physiological responses, it is necessary to examine how victims appraise these events themselves. This self-report outcome is less common among childhood adversity literature. By considering respondents' appraisals, researchers will be better able to understand adverse childhood events and the relative importance and impact of those events.

While "worst" experiences are highly individualized, scholars argue that some adverse childhood experiences are inherently worse than others. One such example is childhood sexual abuse. In trials mentioned earlier, index events were identified as either the "worst event" or an event of child sexual abuse. In these studies, worst event and child sexual abuse are put in the same category and presented as equivalent terms (Ehring et al., 2014; Jung & Steil, 2013). This is an example of how research has described CSA as one of the worst adversities a child can experience.

Childhood Sexual Abuse

Childhood sexual abuse is considered to be one of the worst childhood adverse events because of the deleterious mental and physical outcomes it can have for victims. In a study conducted by Campbell and colleagues (Campbell et al., 2008), higher levels of sexual abuse were

found to be detrimental to health above and beyond the sheer cumulative number of types of abuse. This is consistent with findings on post-traumatic stress disorder. Sexually abused females scored higher for PTSD than other females who experienced other forms of adversity/abuse (Trickett et al., 2011). The deleterious effects of child sexual abuse do not only occur when CSA is the only adverse experience. CSA, whether alone or in a larger adversity cluster, is associated with substantial increased risk of subsequent psychopathology (Molnar et al., 2001). Evidence suggests CSA also plays an important role in cumulative adversity. Multiple victimization was associated with most adverse internalizing and externalizing outcomes, especially when sexual abuse was present (Debowska et al., 2017).

Childhood sexual abuse is a strong and unique risk factor in developing unique variations of several forms of psychopathology (Noll, 2021). Sexual abuse encompasses both physical and emotional aspects of the abuse. Sexual abuse most often involves physical action or a display of physical behavior between the offender and victim. This inherently makes the abuse physical. Certain instances of child sexual abuse involve the use of force or violence. These factors illustrate that child sexual abuse includes physical abuse. Sexual abuse also includes a similar feeling of betrayal, in that the child is being hurt by someone they love and who is supposed to take care of them. Physical abuse involves similar betrayal but does not involve the same level of invasion. The intimacy/invasion involved in sexual abuse leaves a lasting emotional impression. Unlike natural disasters or illness, the suffering from sexual abuse is brought on by another person. In these instances, victims of abuse are selected or targeted by the perpetrator, versus the random or indiscriminate nature of illness and/or natural disasters. Because sexual abuse is brought on by another person and victims of abuse are selected or targeted by the perpetrator, the trauma experienced by the victim can be amplified.

Trauma can elicit many different responses, and different forms of adversity can have distinct responses unique to the person experiencing traumatic events. While the death of a family member can evoke emotions of grief and sadness, CSA might evoke feelings of shame and fear. However, there is no definitive hierarchy of emotions that suggests experiencing fear is a more negative experience than sadness or vice versa. Certain reactions or appraisals are more specific to sexual abuse. Children who experienced sexual abuse have frequently reported that their family denied, minimized, or blamed the child for the abuse compared to other types of adversity (Dunlap et al., 2003), suggesting that victims of CSA experience the stigma, blame, and revictimization of disclosure. Parents' reactions can greatly influence and create greater emotional distress for the victim (Manion et al., 1996). Parental reactions are not the only reactions that impact the victim. In discussing the dynamics within sexual abuse events, Kennedy and Prock (2016) state:

> "Because these are gendered sexual and intimate crimes that violate social norms about what is appropriate and acceptable, survivors may experience stigma that includes victim-blaming messages from the broader society as well as specific stigmatizing reactions from others in response to disclosure; this stigmatization can be internalized among survivors as self-blame, shame, and anticipatory stigma. Stigma and stigmatization play an important role in shaping survivors' thoughts, feelings, and behaviors as they recover; their risk of revictimization; and their help-seeking and attainment process."

Victims of CSA can experience anticipatory stigma, where they fear the stigma they could receive after disclosing the abuse (Kennedy & Prock, 2016). This keeps victims from discussing the abuse with their parents. This stigmatization and sensitive nature make communication from the adult difficult as well. Of the traumas that children experience, sexual abuse is one that adults do not

like to discuss because of its sensitive nature and association with a loss of innocence. Many people experience shame when discussing sex, let alone sex that involves a minor (Dunlap et al., 2003).

Though sexual abuse is largely viewed as a traumatic event, scholars debate whether sexual abuse should be generally considered the worst or most traumatic childhood adversity. Some evidence points to other factors that often accompany child abuse. One study found that child sexual abuse was heavily confounded with family environment and that family environment was actually more explanative of a person's adjustment (Rind & Tromovitch, 1997). Here, the lack of adjustment had been wrongly attributed to child sexual abuse. While some research points towards other factors creating the harmful impact that is mistakenly attributed to sexual abuse, other evidence shows that other forms of adversity or abuse are more harmful. One study that looks at all forms of abuse found emotional abuse or neglect may in fact be more harmful than CSA (Dye, 2019). Through this we see CSA is socially expected to be extremely harmful and harshly penalized, though this expectation may not align with the lived reality and feelings of CSA victims themselves.

In an empirical study from 2019, the reactions of victims to sexual abuse and sexual encounters with peers were assessed. These reactions were measured as positive or negative looking at victim sex and age difference between victim and perpetrator. The results indicate that girls were more likely to have a negative reaction compared to boys regardless of the age gap. However, when specifically looking at age difference it had no impact on boys' reactions and it only impacted girls if the age gap was greater than eight years (Felson et al., 2019). While we may expect there to be a stronger negative relationship, this study did not find that when asking the victims. Therefore, it is important to understand the victim's perspective and view of the adversities they have experienced.

Though many scholars assign respondents' most traumatic adverse experiences by analyzing mental and physical health outcomes and controlling for all other adversities, I argue researchers should look to the respondents themselves to understand worst experiences. Because of the challenges posed in identifying worse experiences, victims' perspectives could offer helpful insight.

To further our understanding, we must ask not only how respondents rank their own adverse experiences, but also how they appraise or emotionally react to their adversities. People appraise things in a relative sense rather than an absolute sense. Conveying the relativity of appraisals is essential to increasing knowledge of cumulative adversity.

Current Study

In this study, I identify how the effects and rank order of childhood adversities differ for children who experience CSA compared to those who do not experience CSA. While the study covers a wide range of adversities, I specifically examine events that the respondents identify as their "worst" adverse childhood event. To better understand which events respondents describe as their worst or most traumatic event, I investigate the emotional reactions they subsequently ascribe to that event.

Methodology

Data and Sample

The data in this study comes from the Female Growth and Development study (Noll & Putnam, Frank W., 2003). This dataset is an accelerated longitudinal, cross-sequential design

spanning six timepoints. This study began in 1987 and retained approximately 96 percent of respondents. All respondents in this study are females who at their initial participation were between the ages of six and sixteen. Overall, this study contains a sample of women who all have confirmed and substantiated experiences of child sexual abuse and a comparison group of a similar background. The sexual abuse had to involve genital contact and/or penetration and occurred within six months of initial participation in the study. Child protective service agencies in the greater Washington D.C. metropolitan area referred the sample of young, abused females to this study. It was also required that in at least one of the cases of child sexual abuse experienced by the child, the perpetrator was a family member (e.g., parent, stepparent, sibling, uncle, or mother's live-in boyfriend). To participate in the study, a non-abusing parent had to be willing to participate.

Along with the group of abused females is a comparison group. This comparison group was recruited through community advertising. The abuse group and comparison group have similar characteristics in terms of ethnicity, age, socio-economic status, predisclosure, neighborhood of residence, and single or two-parent families. All the families were low to middle in terms of socio-economic status.

There are a total of three generations: the main generation consisting of the women who were abused and the comparison group (G2), their parents (G1), and the children of the focus group/generation (G3). The total sample at time one consists of 187 women. This includes both the group of sexually abused women and the matched comparison group. 80 are from the sexual abuse group and 107 from the comparison group. The six timepoints occur from childhood into early adulthood. The average age for timepoint one is 11. Timepoint two has an average age of 12, and timepoint three has an average age of 13. Timepoints four and five have averages reaching early adulthood. Timepoint four includes ages 10 to 25, and timepoint five is ages 13 to 28.

Measures

Dependent Variables

At time 4, the sexually abused group and the comparison group participated in a part of the check-in called the Comprehensive Trauma Interview. This interview encompasses 19 separate types of adversity. I designed a count variable that sums the number of adversities each child experienced. This variable is labeled *traumacount*. The range for this variable is 0 to 19 since there are a total of 19 adversities the respondents could have experienced that are addressed in the comprehensive trauma interview. This interview provides demographic information about the victim at the time of the incident along with their appraisal of the incident. For the separate events, the appraisal involves a distress rating. This rating is on a scale of one to five with one being not at all distressing and five being extremely distressing.

There is a similar scale dealing specifically with what the interview titles the worst traumatic event. A section of this interview asks respondents to disclose what they identify as their most traumatic event. This section asks them to rate their distress at the time of this event based on the previous scale. This section involves a few other appraisal measures for at the time of the event. Along with distress, they were asked to rate the amount of fear, horror, and helplessness they felt. These measures are both binary and ordinal. Each appraisal contains a measure that establishes if that feeling was felt with 0 being "no" and 1 being "yes". Then if that appraisal was felt (marked "yes"), the respondent was asked how much they felt each specific appraisal. This scale is the same as before with one being "not at all" and five being "extremely". I combine the binary and categorical variable into one variable that ranges from 0 to 5 with zero being they answered "no" to the first question and if they answered yes their response is coded as the answer they gave to the second question.

These appraisal measures all deal with the emotions or reactions at the time of the incident. However, there are various emotions to be felt after an adverse experience has occurred. After discussing what the respondent feels is the most traumatic or worst event they experienced, they are asked if they felt certain emotions while discussing their worst trauma. These emotions span a variety of reactions. These emotions include interest, fear, anxiety, guilt, surprise, sadness, anger, distress, enjoyment, calm, and embarrassment. The emotions are rated in how often the respondent felt them while discussing their worst trauma. This ranges from 1 "not at all", 2 "sometimes", 3 "frequently", 4 "almost constantly". These emotions are also grouped into positive and negative emotions. This study focuses on the more negative appraisals (anxiety, guilt, sadness, anger, distress, and embarrassment).

Independent Variables

The independent variables in this study are the adverse experiences of the respondents. The adverse experiences include both manmade events and events beyond anyone's control. An example of a manmade event would be physical abuse and an event beyond one's control would be a natural disaster. The adverse events included in the comprehensive trauma interview are: emotional abuse, physical abuse, sexual abuse, physical neglect, witness CSA, beaten up, mugged, hurt in another way, witnessed someone beaten, witnessed someone shot/stabbed/killed, self-harm, drug/alcohol problem of another person, personal illness/illness of someone else, painful medical procedure, hurt in an accident, someone else hurt in an accident, death of someone close to them, natural disaster, and homelessness. The respondent could express that they have experienced anywhere from none of these events to all of them. These are all binary variables with one being they experienced it and zero being they did not.

When discussing the respondents most traumatic experience, all these individual events are not what is given. Instead, the respondent must choose from between 14 categories. These categories include separation, emotional abuse, physical abuse, sexual abuse, violence toward self/others, abortion/miscarriage, drug/alcohol problem (other), family conflict/divorce, illness/accident to self/other, death of other, natural disaster, peer/relationship problem, other family stressors, and other. This is a categorical variable where the respondents can only choose one answer.

Control Variables

The control variables for this study are limited. The comparison group was chosen since it has characteristics that are similar to the abuse group. For this study, I include two control variables. The first is the race of the respondent. This is measured as a binary variable with one being the respondent is a minority or non-white and zero being white. 54.55 percent of the sample population is white. The other control variable is the age of the respondent at the time of the traumatic or adverse event. Controlling for age is important due to the impact age and mental capacity have on a person's ability to cognitively process traumatic events.

Analytic Strategy

In order to understand both the types and quantity of adverse events experienced by the CSA group and the control group, I compare descriptives of each. To address the quantity or total amount of adversity experienced by both the CSA group and the comparison group, I created a figure that shows the number of adversities experienced by group. I also present the mean and standard error.

To understand the different types of adversities experienced by those who have experienced child sexual abuse and those who have not, I examine the percentages of those who belong to each group within each trauma/adversity type. The adversities addressed in the comprehensive trauma interview are: emotional abuse, physical abuse, sexual abuse, physical neglect, beaten up, mugged, seriously hurt in another way, self-harm, seen someone shot/stabbed/killed, witness a sexual assault/CSA, someone close having a drug or alcohol problem, someone having a serious illness, subject having serious illness, painful medical procedure, hurt in an accident, death of someone, natural disaster, and homelessness. I specifically aim to identify if children who experienced child sexual abuse are more likely to experience other forms of abuse compared to children who did not experience sexual abuse.

After identifying the types and amount of trauma experienced by the CSA and comparison group, I aim to examine what each group establishes as their most traumatic or worst adversity. During their interview, each respondent was asked to identify their worst adversity. However, this list is shorter than the previous list of adversities. Instead, it is more overarching or categorical. This list consists of separation, emotional abuse, physical abuse, sexual abuse, violence toward self or other, abortion/miscarriage, drug/alcohol problem of other, family conflict/divorce, illness/accident, death of someone, natural disaster, peer/relationship problem, other family stressors, and other. While some of these are exactly the same as the previous list, a few are more categorical, and others are entirely different. To address if women who experience CSA consistently report CSA as their worst or most traumatic event, I look at the percentages of those who identified child sexual abuse as their worst trauma from the child sexual abuse group, as well as what the comparison group establishes as their most traumatic event.

The last part of the analyses is examining the appraisals or emotions assigned to their worst adverse event. These appraisals are split into two categories: how they felt at the time of the event and how they felt discussing the event during their interview. The appraisals felt during the event encompass distress, helplessness, fear, and horror. The appraisals the respondents could have felt while discussing the adversity are interested, fear, anxiety, guilt, surprise, sad, anger, distress, enjoyment, calm, and embarrassed. The ones I focus on anger, sadness, fear, distress, embarrassment, guilt, and anxiety. These were gathered through a short questionnaire administered to respondents after the comprehensive trauma interview.

To examine these appraisals, I use regression. For the scales of the appraisals, I use ordinary least squares regression. For helplessness, fear, and horror, the regression includes zero for if they did not feel that emotion at all during the event. The OLS regression is assessing the scale of how much of each emotion they felt.

Due to the small sample size, I combine the categories of worst adverse event. Instead of 14 separate events, there are seven events categorically examined through regression. Table 1 shows the categorization.

Table 1 Worst Adverse Event Categories

Worst Adverse Event						
Separation	***Physical abuse/assault***	***Sex Abuse***	***Family Conflict/Stress***	***Family illness/death***	***peer relations***	***other***
Separation	Physical abuse violence to self/others	sex abuse	family conflict/divorce other family stressors emotional abuse drug/alcohol	death of other illness/accident of self/other	peer/relationship problems	other natural disaster abortion/miscarriage
N=10	N=14	N=39	N=23	N=39	N=11	N=15

Results

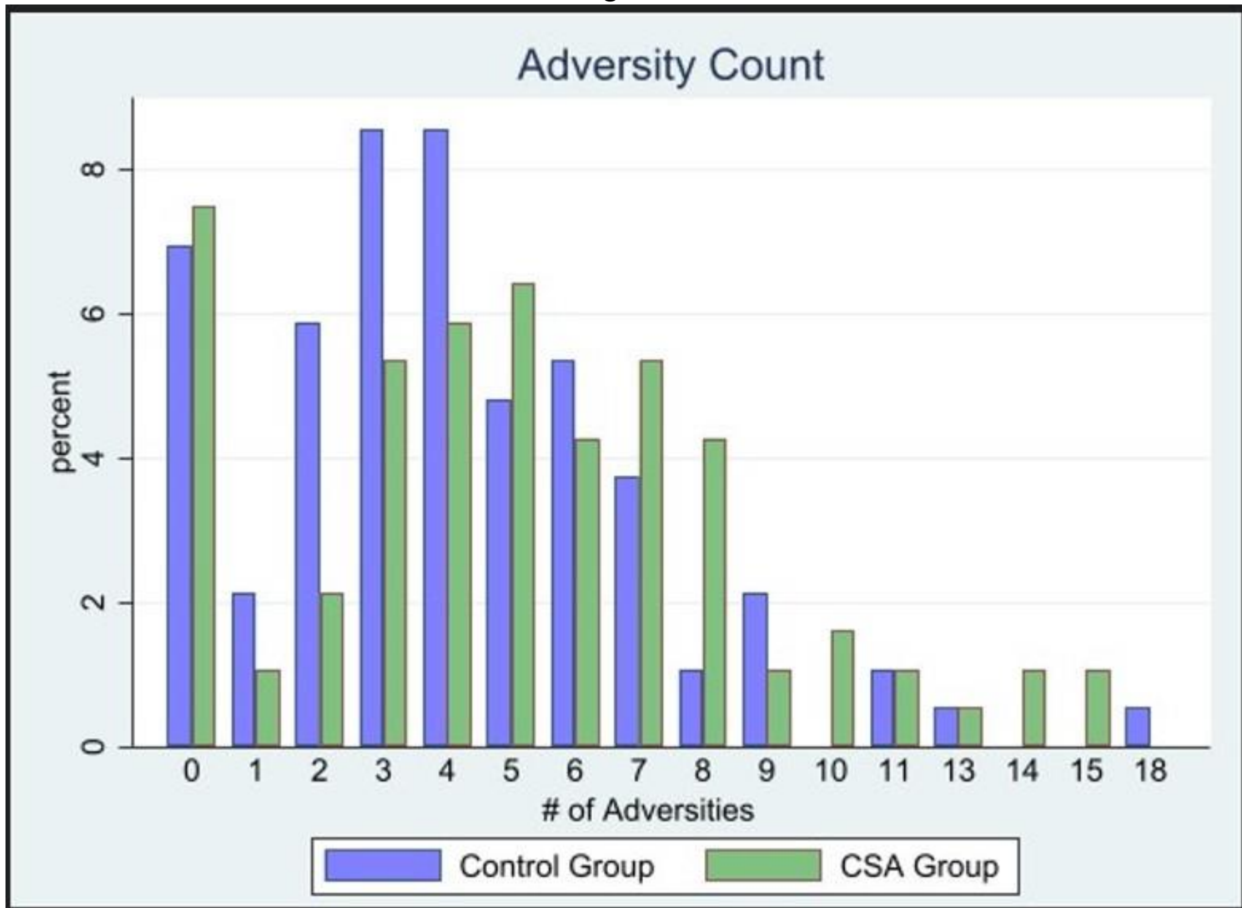
The number of adversities each person experienced within the CSA and comparison group can be seen in Figure 1 and Table 2. Table 2 shows the mean number of adversities experienced by those in the sexual abuse sample is larger than the mean for the comparison group. The mean for the CSA group is 5.620 while the mean for the comparison group is 4.333. The figure displays the highest number of adversities experienced is 18 rather than 19 because child sexual abuse is excluded from the formula to eliminate bias. By excluding CSA, we are able to see the amount of adversity each group experienced without the CSA group having an automatic 1. While it appears, no respondent experienced every single form of adversity, one respondent from the comparison group did experience 18 adversities. Also, the percentage for experiences no adversities outside of child sexual abuse is slightly higher for the sexual abuse group.

Outside of this single respondent, a majority of the comparison group is concentrated toward the lower end, meaning the majority experience less adverse events than the CSA group. The CSA group is more consistent throughout all adversity counts. The CSA group has higher percentages than those who did not experience child sexual abuse for counts 5, 7, 8, 10, 14, and 15. With higher percentages for the CSA group at the larger numbers, it shows that those who experience child sexual abuse generally have higher adversity counts than the comparison group.

Table 2: Adversity Count Descriptive Statistics by Group

Adversity Count Descriptive by Group		
	Mean	SD
Full Sample	5.069	3.647
Sexua Abuse Sample	5.62	3.797
Comparison Sample	4.333	3.217

Figure 1



Outside of examining the separate percentages for each count, I used ordinary least squares regression to assess the relationship between experience child sexual abuse and the number of adverse events someone experienced. This analysis is seen in Table 2. In this regression, experiencing child sexual abuse has a strong positive coefficient of 1.417. Experiencing childhood

sexual abuse creates a 1.417 unit increase in adversity count holding age at the time of the adversity minority status constant. The finding is statistically significant. This demonstrates and reiterates the previous finding that experiencing childhood sexual abuse is correlated with the likelihood of experiencing more adverse events. While less significant, having minority status creates a 0.938 unit increase in adversity county holding experiencing CSA and age at the time of the adversity constant. This finding demonstrates that being non-white is correlated with experiencing greater adversity.

Table 3: OLS Adversity Count

OLS Regression Predicting Adversity Count		
Adversity Count		
	Coefficient	SE
CSA group	1.417**	0.488
Age at time of Adversity	0.033	0.059
Minority	0.938*	0.480
Constant	3.956	0.888
N=151		
Pvalue <0.1=* Pvalue<0.05=** Pvalue<0.001=***		

It is not only important to see how CSA impacts the amount of adversity a child experiences but also the types of adversity. These results are in table 4. In this table, there are 12 respondents in the comparison group that experienced child sexual abuse. This table shows their existence within the comparison group. These 12 were recruited with the rest of the comparison group and it was later discovered that they had experienced child sexual abuse.

Looking at Table 4, the most common adversity experienced by the full sample is the death of someone (81%). The least common adversity experienced is someone they know being hurt in

an accident they experienced (5%). The other less experienced adversities are physical neglect, witnessing sexual assault/child sexual abuse, and homelessness (7%).

One finding that is unsurprising is that witnessing child sexual abuse is more common in the child sexual abuse group. The child sexual abuse group also has higher percentages for physical and emotional abuse compared to the comparison group. Another adversity that appears to be more common with the child sexual abuse group is self-harm. The unique factors of blame or shame may play a role in this.

Seeing someone beaten or being mugged is more common in the comparison group along with illness, physical neglect, and natural disaster. Otherwise, the CSA group mostly had larger percentages. This reinforces the frequency and clustering of adversity.

Table 4: Types of Adversity

Type of Adverse Event Experienced						
	Full Sample		Sexual abuse sample		Comparison Sample	
	N	%	N	%	N	%
Adverse Event						
Emotional abuse	52	33%	28	35%	24	22%
Physical abuse	58	36%	28	35%	30	28%
Sexual abuse	91	57%	79	99%	12	11%
Physical Neglect	11	7%	4	5%	7	6%
Beaten up by other kids/gang	19	12%	10	13%	9	8%
Mugged	21	13%	7	9%	14	13%
Hurt in another way	16	10%	7	9%	9	8%
Saw someone beaten	38	24%	13	16%	25	23%
Self harm	27	17%	18	23%	9	8%
Seen shot, stabbed, killed (other)	66	41%	28	35%	38	35%
Witness SA/CSA	11	7%	9	11%	2	2%
Drug/alcohol problem (other)	98	61%	45	57%	53	49%
Illness (other)	105	66%	42	53%	63	58%
Illness (self)	42	26%	17	22%	25	23%
Painful medical procedure	42	26%	18	23%	24	22%
Hurt in accident (self)	14	9%	9	11%	5	5%
Hurt in accident (other)	8	5%	6	8%	2	2%
Death of other	129	81%	53	67%	76	70%
Natural disaster	44	28%	16	20%	28	26%
Homeless (self)	11	7%	7	9%	4	4%

The next focus is what each group identifies as their worst or most traumatic event. Here is where the shift happens from the previous adversity categories to the ones presented when asking the respondents to identify their worst event. These results can be seen in Table 5. In the overall sample, child sexual abuse is the event rated as worst the most (24.38 percent). The next adversity that is commonly identified as worst is the death of another (18.75 percent).

Looking specifically at the CSA group, 50.77 percent named the child sexual abuse they experienced as their worst or most traumatic adverse event. This is interesting that only half of the respondents who experienced CSA label it their worst adversity. The next largest group is death of another, which is the largest for both the full sample and the comparison group. The following largest category for the CSA group is family conflict or divorce. It is important to recognize that these are not mutually exclusive, and the child sexual abuse may play a role in the family conflict. Peer or relationship problems are much more likely to be labeled worst in the comparison group. Half of the respondents in the comparison group that experienced CSA said it was their most traumatic event which is consistent with the percentage shown in the CSA group.

Table 5: Worst Event Type

Worst Event Type by Group						
Worst Event Type	**Full Sample**		**CSA Group**		**Comparison group**	
	N	*%*	*N*	*%*	*N*	*%*
separation	10	6.25	3	4.62	7	7.37
emotional abuse	1	0.63	1	1.54	0	0
physical abuse	8	5	2	3.08	6	6.32
sexual abuse	39	24.38	33	50.77	6	6.32
viol to self, other	6	3.75	2	3.08	4	4.21
abortion, miscarr	3	1.88	0	0	3	3.16
drug, alc prob other	2	1.25	0	0	2	2.11
fam conflict, divorce	16	10	5	7.69	11	11.58
ill, accid self other	9	5.63	2	3.08	7	7.37
death of other	30	18.75	8	12.31	22	23.16
natural disaster	1	0.63	0	0	1	1.05
peer, relship prob	11	6.88	1	1.54	10	10.53
other fam stressors	4	2.5	0	0	4	4.21
other	11	6.88	4	6.15	7	7.37
No trauma disclosed	7	4.38	4	6.15	3	3.62
Type of trauma not disclosed	2	1.25	0	0	2	2.41
Total	160	100	65	100	95	100

Note: The categories for worst event type are different and a separate entity from Table 4: Types of Adversity

Before addressing the regression results for the separate appraisals, we must look at the descriptives for the controls as well as the appraisals. Looking at trauma count we can see that the mean amount of adversity/trauma experienced is between 4 and 5. To understand ages for each appraisal, there is the age at the time of the adversity and the age during the interview at time 4. The average age during the worst adversity is around 12 years old while the average age at the time of the interview is around 18 years old. 45.45% of the respondents are not white.

The appraisals at the time of the worst adversity range from zero to five except for distress which ranges from one to five. This explains some of why the mean for distress is highest with a mean of 4.781. Afraid and helpless have very similar means and standard deviations while horror has the lowest mean for at the time with the largest standard deviation. In terms of the appraisals while discussing the worst adversity most means fall around 1.5-2. The highest mean is for feeling sad during the interview while discussing their worst adversity.

Table 6: Descriptive Statistics of Controls and Appraisals

Descriptive Statistics		
Variable	**Mean/%**	**SD**
Trauma count	4.596	3.415
Age at Time 4	18.051	3.417
Age at Time of Adversity	11.859	3.231
Minority	45.45	
Apprasails at the time of worst adversity		
Distress	4.781	0.642
Afraid	3.388	1.809
Helpless	3.526	1.852
Horror	2.079	2.161
Appraisals while discussing worst adversity		
Fear	1.587	0.820
Anxious	1.994	0.915
Guilt	1.561	0.822
Sad	2.606	1.066
Anger	2.148	1.068
Distress	2.019	0.915
Embarrassed	1.684	0.896

With the knowledge of what each group assessed as worst, I continue my analyses by looking at the appraisals or emotional reactions attributed to the worst adverse event respondents experienced. These appraisals are split into two categories based on their proximity to the event. The first category is retrospective, assessing how the respondent felt during the adverse event. These appraisals were distress, helpless, fear, and horror.

Table 6 has the results for the OLS regression of distress at the time. (The expansion of the trauma categories is in Table 1.) In the regression, the trauma categories are treated as binary variables compared to a base category. The adverse experience of child sexual abuse is the base

category. The only significant results for distress are the number of adversities experienced by the respondent and age at the time of the adversity. For every unit increase in adversity count, distress appraisal at the time of the adversity increases by .029, holding all other variables constant. This means that the more adversity one experiences the more distress they felt during the worst adverse event. For every unit increase in age at the time of the adversity, distress appraisal at the time of the adversity increases by .022, holding all other variables constant. This demonstrates that the older a respondent was the more distress they felt.

Table 7: Distress Appraisal Rating at the Time of the Adversity

OLS Regression of Distress at the time of the Adversity		
	Distress	
Adversity Category	Coefficient	SE
CSA Base Category		
Separation	0.085	0.200
Physical abuse/assault	0.017	0.178
Family conflict/stress	-0.185	0.156
Family illness/death	0.107	0.128
Peer relations	0.043	0.199
Other	-0.232	0.178
Adversity Count	0.029*	0.015
Age at trauma	0.022*	0.012
Minority	0.080	0.094
constant	4.306	0.186
N=149		
Pvalue <0.1=* Pvalue<0.05=** Pvalue<0.001=***		

Table 8 contains the rest of the appraisals at the time: helpless, afraid, and horror. These were separated into a dichotomous (yes/no) and scale response for those who said yes. Responses

have been combined into one variable for each appraisal that is analyzed using ordinary least squares regression.

Looking at all appraisals in Table 8, we see that all adversity categories are negatively related to each appraisal when compared to child sexual abuse. This means that experiencing any of these appraisals was less likely for all other forms of adversity compared to child sexual abuse. Some of the most significant findings are for helplessness and fear. Experiencing physical abuse/assault as the worst adversity compared to CSA, feeling helpless has a 1.049 unit decrease, holding all other variables constant. Feeling helpless during the worst adversity is significantly lower for those who experienced physical abuse/assault, family conflict/stress, family illness/death, peer relations, or an adversity in the other category. Experiencing family conflict/stress as the worst adversity compared to CSA, feeling helpless has a 2.129 unit decrease, holding all other variables constant. Experiencing family illness/death as the worst adversity compared to CSA, feeling helpless has a 1.009 unit decrease, holding all other variables constant. Experiencing peer relations as the worst adversity compared to CSA, feeling helpless has a 2.175 unit decrease, holding all other variables constant. Experiencing an adversity in the other category as the worst adversity compared to CSA, feeling helpless has a 1.395 unit decrease, holding all other variables constant.

The controls of adversity count and age at the time of the adversity have a positive impact on feeling helpless at the time. For each unit increase in adversity count there is a 0.145 unit increase in feeling helpless at the time, holding all other variables constant. With each year increase in age at the time there is a 0.116 unit increase in feeling helpless at the time holding all other variables constant. This means that the older the respondent was at the time of their worst adversity the more helpless they felt.

There are a few different categories that were significant for feeling afraid compared to feeling helpless. Feeling afraid during the worst adversity is significantly lower for those who experienced separation, family conflict/stress, family illness/death, peer relations or an adversity in the other category. Experiencing separation as the worst adversity compared to CSA, feeling afraid has a 1.776 unit decrease, holding all other variables constant. Experiencing family conflict/stress as the worst adversity compared to CSA, feeling afraid has a 1.494 unit decrease, holding all other variables constant. Experiencing family illness/death as the worst adversity compared to CSA, feeling afraid has a 1.256 unit decrease, holding all other variables constant. Experiencing peer relations as the worst adversity compared to CSA, feeling afraid has a 2.841 unit decrease, holding all other variables constant. Experiencing an adversity in the other category as the worst adversity compared to CSA, feeling afraid has a 1.483 unit decrease, holding all other variables constant.

Adversity count and age at the time of the adversity have a positive impact on feeling afraid at the time. For each unit increase in adversity count there is a 0.1046 unit increase in feeling afraid at the time, holding all other variables constant. With each year increase in age at the time there is a 0.063 unit increase in feeling afraid at the time holding all other variables constant. This means that the older the respondent was at the time of their worst adversity the more fear they experienced.

The horror appraisal had the lowest number of significant results. Feeling horror during the worst adversity is significantly lower for those who experienced family conflict/stress, family illness/death, or an adversity in the other category. Experiencing family illness/death as the worst adversity compared to CSA, feeling horror has a 1.015 unit decrease, holding all other variables constant. Experiencing family conflict/stress as the worst adversity compared to CSA, feeling

horror has a 2.035 unit decrease, holding all other variables constant. Experiencing an "other" adversity as the worst adversity compared to CSA, feeling horror has a 2.241 unit decrease, holding all other variables constant. This means the respondents felt significantly less horror if their worst adversity was family conflict/stress, family illness/death, or an adversity in the other category.

Table 8: OLS Regression of Appraisals at the time of the Adversity

OLS Regression of Appraisals at the time of the Adversity						
	Helpless		Afraid		Horror	
Adversity Category	Coefficient	SE	Coefficient	SE	Coefficient	SE
CSA Base Category						
Separation	-0.187	0.591	-1.776**	0.583	-1.131	0.742
Physical abuse/assault	-1.049**	0.530	-0.351	0.523	-0.504	0.666
Family conflict/stress	-2.129***	0.454	-1.494***	0.449	-2.035***	0.571
Family illness/death	-1.009**	0.377	-1.256***	0.373	-1.015**	0.474
Peer relations	-2.175***	0.587	-2.841***	0.580	-1.145	0.738
Other	-1.395**	0.522	-1.483**	0.516	-2.241***	0.657
Adversity Count	0.145**	0.047	0.1046**	0.046	0.064	0.059
Age at trauma	0.116***	0.035	0.063*	0.035	0.084*	0.044
Minority	-0.103	0.280	0.0548	0.277	0.271	0.353
constant	2.309	0.528	3.048	0.522	1.541	0.664
	N=149		N=149		N=149	
Pvalue <0.1=* Pvalue<0.05=** Pvalue<0.001=***						

While the data includes distress, helplessness, fear, and horror for at the time appraisals, there are a few more appraisals that address how the respondent felt during their discussion of their worst adverse event. Distress and fear are included along with anger, sadness, embarrassment,

guilt, and anxiety. The results of the ordinary least squares regression are presented in Tables 9-1 and 9-2.

Respondents who discussed family conflict/stress or illness/death, or peer relations are significantly less likely to feel anxious discussing these matters compared to those who discussed childhood sexual abuse. Experiencing family conflict/stress as the worst adversity compared to CSA, feeling anxious when discussing the adversity has a 0.060 unit decrease, holding all other variables constant. Experiencing family illness/death as the worst adversity compared to CSA, results in a 0.525 unit decrease of feeling anxious when discussing the adversity, holding all other variables constant. Experiencing peer relations as the worst adversity compared to CSA, feeling anxious when discussing the adversity has a 0.595 unit decrease, holding all other variables constant.

The only time separation has a significant relationship with an appraisal is with guilt. An interesting result is that separation is significantly more likely to produce feelings of guilt when talking about it compared to childhood sexual abuse. Experiencing separation as the worst adversity compared to CSA, results in a 0.783 unit increase in feeling guilt when discussing the adversity, holding all other variables constant. Feeling distress when talking about family death/illness, family illness/death, or peer relational problems are significantly less likely than when discussing child sexual abuse. Experiencing family conflict/stress as the worst adversity compared to CSA, results in a 0.447 unit decrease in feeling distress when discussing the adversity, holding all other variables constant. Experiencing family illness/death as the worst adversity compared to CSA, results in a 0.643 unit decrease in feeling distress when discussing the adversity, holding all other variables constant. Experiencing peer relations as the worst adversity compared

to CSA, results in a 0.852 unit decrease in feeling distress when discussing the adversity, holding all other variables constant.

All trauma categories are negatively related to feeling embarrassed when talking about it compared to childhood sexual abuse. However, separation and other are not statistically significant. Experiencing physical abuse/assault as the worst adversity compared to CSA, results in a 0.571 unit decrease in feeling embarrassment when discussing the adversity, holding all other variables constant. Experiencing family conflict/stress as the worst adversity compared to CSA results in a 0.441 unit decrease in feeling embarrassment when discussing the adversity, holding all other variables constant. Experiencing family illness/death as the worst adversity compared to CSA, results in a 0.821 unit decrease in feeling embarrassment when discussing the adversity, holding all other variables constant. Experiencing peer relations as the worst adversity compared to CSA, results in a 0.714 unit decrease in feeling embarrassment when discussing the adversity, holding all other variables constant.

While all adversity types are negatively related to anger compared to CSA, but only family illness/death and peer relations are significant. Experiencing family illness/death as the worst adversity compared to CSA, results in a 0.343 unit decrease in feeling anger when discussing the adversity, holding all other variables constant. Experiencing peer relations as the worst adversity compared to CSA, results in a 0.653 unit decrease in feeling anger when discussing the adversity, holding all other variables constant. No adversity types were significantly different for fear compared to CSA.

All adversity types other than physical abuse/assault are negatively related to sadness, with family illness/death and other being significant. Experiencing family illness/death as the worst adversity compared to CSA, results in a 0.738 unit decrease in feeling sadness when discussing

the adversity, holding all other variables constant. Experiencing an adversity in the other category as the worst adversity compared to CSA, results in a 0.611 unit decrease in feeling sadness when discussing the adversity, holding all other variables constant.

Experiencing more adversity relates to significantly increased guilt, anxiety, fear, sadness, and distress when discussing the worst of them. With each adversity count increase there is a 0.060 unit increase in feeling anxious when discussing the worst adverse event, holding all other variables constant. With each adversity count increase there is a 0.045 unit increase in feeling guilt when discussing the worst adverse event, holding all other variables constant. With each adversity count increase there is a 0.061 unit increase in feeling distress when discussing the worst adverse event, holding all other variables constant. With each adversity count increase there is a 0.061 unit increase in feeling fear when discussing the worst adverse event, holding all other variables constant. With each adversity count increase there is a 0.104 unit increase in feeling sad when discussing the worst adverse event, holding all other variables constant.

Minority status is only significant for feeling anxiety, guilt, or distress. However, anxiety and distress are negatively related while guilt is positively correlated. Being a minority is related to a 0.257 unit decrease in feeling anxious when discussing their worst adversity, holding all other variables constant. Being a minority is related to a 0.266 unit decrease in feeling distress when discussing their worst adversity, holding all other variables constant. Being a minority is related to a 0.328 unit increase in feeling guilt when discussing their worst adversity, holding all other variables constant.

Table 9-1: OLS Regression of Appraisals from Short Questionnaire

OLS Regression of Appraisals Experienced While discussing Worst Adversity								
	Anxious		**Guilt**		**Distress**		**Embarassed**	
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Adversity Category								
Separation	0.192	0.316	0.783**	0.287	-0.162	0.310	-0.205	0.311
Physical abuse/assault	-0.359	0.281	-0.027	0.255	-0.199	0.276	-0.571**	0.277
Family conflict/stress	-0.606**	0.241	-0.035	0.219	-0.447*	0.237	-0.441*	0.237
Family illness/death	-0.525**	0.203	0.059	0.184	-0.643**	0.199	-0.821***	0.199
Peer relations	-0.595*	0.314	0.151	0.285	-0.852**	0.308	-0.714**	0.309
Other	-0.200	0.280	0.357	0.254	-0.069	0.275	-0.283	0.275
Adversity Count	0.060**	0.024	0.045**	0.022	0.061**	0.024	0.008	0.024
Age at trauma	-0.006	0.019	-0.011	0.017	0.004	0.018	-0.013	0.018
Minority	-0.257*	0.149	0.328**	0.135	-0.266*	0.146	0.098	0.146
constant	2.146	0.291	1.177	0.264	2.062	0.286	2.194	0.286
N=150								
Pvalue <0.1=* Pvalue<0.05=** Pvalue<0.001=***								

Table 9-2: OLS Regression of Appraisals from Short Questionnaire

OLS Regression of Appraisals Experienced While discussing Worst Adversity						
	Anger		**Fear**		**Sad**	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Adversity Category						
Separation	-0.339	0.295	0.269	0.377	-0.572	0.347
Physical abuse/assault	-0.310	0.263	-0.213	0.336	0.009	0.309
Family conflict/stress	-0.261	0.225	-0.348	0.288	-0.306	0.265
Family illness/death	-0.343*	0.189	0.188	0.242	-0.738**	0.223
Peer relations	-0.653**	0.293	-0.148	0.374	-0.129	0.344
Other	-0.334	0.262	-0.164	0.334	-0.611**	0.308
Adversity Count	0.045	0.022	0.061**	0.029	0.104***	0.026
Age at trauma	-0.010	0.017	-0.024	0.022	-0.003	0.020
Minority	-0.067	0.139	-0.077	0.177	0.092	0.163
constant	1.738	0.272	2.642	0.347	1.875	0.320
N=150						
Pvalue <0.1=* Pvalue<0.05=** Pvalue<0.001=***						

Summary & Discussion

The major objective of this study is to understand the role experiencing childhood sexual abuse plays in both the types and quantity of adversity along with the impact on emotional reactions to adversity. The interviews of the respondents give the opportunity to look at these issues in depth and involve the respondents' thoughts on the event. The respondent's personal reactions are a key piece in understanding the impact of these adversities.

Overall, we can see that there are differences in the amount of adversity and the emotional distress between those who experienced child sexual abuse and those who did not. Children who experienced CSA were more likely to experience a higher number of different adversities. One reason for this could be the clustering of different types of adversities. This is seen in previous

literature as well these results (Lacey et al., 2022). In the current study, certain types of adversity, such as self-harm, are much higher for the CSA group than the comparison, demonstrating a clustering effect. The sexual abuse group includes increased levels of witnessing CSA and experiencing other forms of abuse (i.e., physical and emotional). It makes sense that instability in the home would lead to the clustering of these adverse experiences (Rind & Tromovitch, 1997). However, it is important to distinguish what other adversities may be aggravated by CSA. For example, self-harm may be a consequence of CSA while observing sexual assault is more of a co-occurrence.

While this study finds that both the types and quantity of adverse events differ between women who experienced CSA and women who have not, that is not the whole story. The ways in which these women view the trauma they experienced demonstrates the need for further research. Even though CSA is generally thought of as one of the worst adversities a child experiences, only a little over half of women who experience CSA consistently report CSA as their worst or most traumatic event. This could mean that child sexual abuse impacts the victims differently than we previously thought. This finding could explain how victims view CSA or how they view other serious adversities. With death of a loved one being the next adversity rated highest it could display how people view loss. Ultimately, while CSA is identified as the worst for only 50% of those who experience it, it is still the largest percentage by far compared to every other category. What respondents identify as worst is not the only way in which we can discover victims reactions.

The different forms of reactions or appraisals both at the time and looking back display the impact CSA has in comparison to other adversities. Within the appraisal analyses, one can see that each category being compared to CSA is consistently negatively related to each appraisal type. This means that respondents are less likely to feel each specific appraisal for all types of traumas

compared to sexual abuse. All of the appraisals evaluated in this study are negative emotions. Therefore, women have more negative emotional reactions to childhood sexual abuse than any other form of adversity even if they identify it as their worst adversity. One can conclude that CSA predicts a greater or more negative impact emotionally on victims. However, we cannot assume causation, but can identify that the results display that women describe unique emotional reactions or beliefs about CSA compared to other types of adverse experiences.

The appraisals themselves are not the only result that point toward the unique association of sexual abuse. The timing of the appraisals provides even more evidence. While appraisals come in many forms, the combination of emotional reactions at different time intervals along with identifying one as the worst provides a more in-depth picture. Despite what the literature would suggest (Ney et al., 1994), only about 50 percent of those that experienced CSA labeled it as their worst adversity. This result is particularly interesting, in that one would assume most would rate their CSA as their worst experience especially with the perpetrators being other family members (Ullman, 2007). Even only half those in the comparison group that experienced CSA reported it as their worst event. Fully understanding the implications of this discovery can be hard since worst can be a subjective term. With the physical and emotional nature of child sexual abuse, people might think it would be the worst. Respondents may not identify it as the worst due to the confusing nature of their relationship with the perpetrator. However, describing an adverse event as the worst is not the only form of appraisal.

Having appraisals both at the time and during the interview gives the ability to address both primary and secondary appraisals. A majority of these appraisals had consistent positive or negative differences when comparing other adversities to sexual abuse. Frequently all coefficients

were either positive or negative. While this does not solidify childhood sexual abuse as the worst adversity a child experiences, it does emphasize the uniqueness of childhood sexual abuse.

The first section of appraisals looks specifically at how the respondent felt at the time of the adversity. Distress is the appraisal recorded for each adversity experienced as well as at the time and while discussing the adversity. While the distress at the time did not prove to be significantly different for other adversities compared to CSA. However, distress while discussing the event is less likely for other adversities compared to child sexual abuse. This shows a potentially lasting impact of child sexual abuse. Even years later, those who discussed their sexual abuse experienced more distress.

Fear had almost a reverse association. Feeling afraid during the worst adverse experience is significantly less likely at the time compared to CSA. This significance fades as fear while talking about the adversity is no longer significantly less likely. This could mean that fear from CSA is much stronger at the time and lessens as time goes on.

In looking at the differences between these appraisals at the two timepoints, it is important to keep in mind that program or therapy could have an unmeasured impact. Additionally, it is possible that victims are more likely to seek help for the event they identify as the most traumatic or as having the greatest impact on their life. Another study found that therapy did not influence their view of their abuse. This could be because 42 percent did not even disclose their abuse to their therapist (McMilien & Zuravin, 1998). If sexual abuse truly was their worst event or index experience, it makes sense that treatment did not have a large effect.

Identifying the amount and types of adversity experienced by those who experience sexual abuse in childhood is important but does not give the whole picture. With the clustering of

adversities, it is difficult to establish how individual adversities affect an individual. It is for this reason that an individual's appraisal of the event is so important to capture.

An interesting finding is that the age at the time of the worst adverse event is significant for feeling helpless, afraid, and horror at the time of the worst event. While its significance is not particularly interesting, the direction is worth noting. The positive coefficient demonstrates that these emotions were more likely to be felt for children who were older at the time of the adversity. This is contrary to prior literature in that those who are younger have less coping abilities and therefore feel these negative appraisals to a greater degree (Gusler et al., 2022). However, here we see that these appraisals are more likely with older ages. This could be due to older children being more aware of the adversity that was occurring. Parents or guardians may attempt to protect younger children, while older children may understand the greater extent of the adversity.

Some appraisals appear specific to certain adversities. Guilt is more likely for those who experienced separation rather than sexual abuse. This is interesting in that a unique aspect of sexual abuse is the potential guilt and shame felt from this adversity. However, this analysis shows that separation carries more guilt.

This study brings individuals' appraisals into the conversation of how adversity impacts children. This is an understudied area and often focuses on physical or mental outcomes. This study can address this gap in the literature and provide directions for further research. The addition of respondent input specifically dealing with appraisals helps to identify that victims of sexual abuse are more likely to have stronger negative emotions connected to the CSA than other adversities, even ones they may identify as more traumatic. This exemplifies the need to include more respondents input like appraisals or views about their own experiences in the research. While this study brought the respondent into the conversation and furthered research, this could be done

better with more open-ended appraisal measures rather than focusing on specific reactions. Further exploration in how appraisals of adversity may change over time would give greater knowledge into how secondary appraisals may have stages rather than remaining consistent.

Limitations

While this study helps to fill a gap in the literature there are several limitations. The first few limitations deal with the population of the study. This study uses a population of only women. While this could be seen as a weakness, it gives the opportunity to look at how CSA impacts girls specifically. When looking at the appraisals themselves, they are self-reported and may be more of what the respondent wants to portray rather than how they actually feel. One limitation here is that the primary appraisal is a reflective measure and not a measure gathered at the time the adversity occurred. In terms of addressing any change from the primary and secondary appraisal, distress and fear are the only ones consistently measured for each time.

Another major limitation in this study is the sample size. While this is a large sample for qualitative analyses, it makes quantitative measurements difficult. Being able to understand the appraisal of each adversity and not just the ones for the worst would be helpful. However, the samples for each adversity are small and the depth of appraisals measured is limited. Only distress was measured. The descriptives for the measures of distress for each adversity are in the appendix. The way in which the adversities are organized limits the study. While many adversities are asked about within the interview, the categories of worst adversities do not directly match. Therefore, understanding the relationship between them is difficult.

Conclusion

In conclusion, studies on childhood adversity give a needed window into factors that have lifelong impacts. If a person's life can be impacted by a single adversity, one can imagine the impact of multiple adversities could have. While all adversities are important to study, they are not created equal, and some may have a greater effect on a person's life. One of these unique adversities is childhood sexual abuse. The quantity and clustering of adversities, along with specific emotional responses like guilt or shame, make child sexual abuse an important reference point and adversity to study and expand upon.

Appendix

Supplementary Analysis of Distress for Each Adversity

Descriptives of the distress rating of each adversity by group						
	Full Sample		Sexual abuse sample		Comparison Sample	
Type of Event	Mean/SD of distress rate	% most distressed	Mean/SD of distress rate	% most distressed	Mean/SD of distress rate	% most distressed
Emotional abuse	4.2/1.212	56.00	4.22/1.25	59.26	4.17/1.19	55.00
Physical abuse	3.96/1.255	55.70	4.35/0.94	60.00	3.59/1.42	50.00
Sexual abuse	4.51/0.92	72.09	4.71/0.78	83.93	4.13/1.04	50.00
Physical Neglect	3.44/1.94	57.14	3.8/1.79	60.00	3/2.31	50.00
Beaten up by other kids/gang	3.61/1.42	38.89	3.8/1.39	40.00	3.38/1.51	20.00
Mugged	3.95/1.47	60.00	3.57/1.51	42.86	4.15/1.46	70.00
Hurt in another way	4.47/0.83	66.67	4.14/1.07	57.00	4.75/0.46	71.00
Saw someone beaten	3.73/1.46	45.45	4.05/1.45	62.50	3.44/1.43	25.00
Self harm	4.16/1.21	52.00	4.06/1.44	56.25	4.33/0.71	66.67
Seen shot, stabbed, killed (other)	4.09/1.19	54.84	3.79/1.45	50.00	4.35/0.88	58.82
Witness SA/CSA	5/0.0	100.00	5/0.0	100.00	5	100.00
Drug/alcohol problem (other)	3.66/1.43	40.66	3.74/1,47	47.62	3.59/1.41	34.88
llness (other)	4.18/1.1	54.16	4.23/1.06	53.85	4.14/1.12	51.05
Illness (self)	3.81/1.28	41.67	4.21/1.05	57.14	3.55/1.56	33.33
Painful medical procedure	3.39/1.53	34.15	3.18/1.51	29.41	3.54/1.56	45.00
Hurt in accident	3.46/1.56	39.13	3.4/1.6	40.00	3.5/1.56	30.00
Death of other	4.42/.096	66.10	4.42/0.99	68.75	4.43/0.94	68.33
Natural disaster	2.76/1.57	21.45	2.68/1.45	12.50	2.81/1.67	26.09
Homeless (self)	3.6/1.51	40.00	4/1.26	50.00	3/1.83	25.00

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