Risk and protective factors associated with posttraumatic stress disorder among child victims of sexual abuse

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Abstract

In the current paper, the risk and protective factors associated with the diagnosis of post-traumatic stress disorder after childhood sexual abuse (CSA) among children are critically reviewed. A review of the literature suggests there are several key risk factors that play into the development of post-traumatic stress disorder (PTSD) after CSA among children, including older age, a lack of social support, intellectual disabilities, female sex, prior victimization, poor coping strategies, and lack of disclosure. The literature demonstrates that disclosure may also be a risk factor when disclosure occurs soon after the trauma when there was a lack of social support when disclosing. Further, the literature suggests several prominent protective factors against PTSD among children who experience CSA, including being male, younger age, positive coping strategies, disclosure soon after the assault occurs, and regular social support. However, several limitations exist within this literature, including the potential for selection bias in research involving only substantiated cases of abuse; the examination of a very narrow age bracket of children between the ages of 7-15; and research that includes only females. Thus, this body of research may only be generalizable to certain groups of individuals and not whole populations. More research is needed to validate and substantiate findings regarding moderators in the relationship between PTSD and CSA among children.

Keywords: childhood sexual abuse, post-traumatic stress disorder, risk factors, protective factors

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Although there are many studies examining child sexual assault (CSA) and its effects, little research has focused on the analysis of the risk and protective factors that can lead to a diagnosis of posttraumatic stress disorder (PTSD) after experiencing CSA among children. The last article to be published analyzing the risk and protective factors was conducted a decade ago (Rainville, 2012). Providing information on the risk and protective factors related to the development of PTSD among children who have experienced CSA will inform practitioners of new developments in the field. Therefore, it is important to understand why some CSA victims develop and receive a diagnosis of PTSD and what can mitigate or perpetuate these symptoms. Currently, whereas much research examines risk factors (Boney-McCoy & Finkelhor, 1995; Pijpers et al., 2022), very few investigate specific protective factors (Hyman et al., 1994). Therefore, the purpose of this review will be to increase knowledge and awareness of CSA, along with identifying the risk and protective factors associated with the development of childhood PTSD. This paper will critically review these factors and analyze the gaps in the current literature, with a specific focus on childhood PTSD among CSA victims.

Epidemiology of CSA and PTSD

CSA is more prevalent in society than one would assume based on how little it is talked about. CSA is defined as the involvement of a child (i.e., a person under the age of 18) in sexual activity when the child does not fully comprehend the situation, consent to the situation, or has a diminished capacity to fully consent even if at the age of consent (National Center for Injury Prevention and Control Division of Violence Prevention, 2022). The United States Department of Health and Human Services (2018) estimates that around 63,000 children are sexually

assaulted every year in the United States. This may even be a lower estimate because of the way that studies define sexual assault and limit the answers in which people indicate a history of sexual assault. One example of a definition for sexual abuse is “The term sexual assault refers to sexual contact or behavior that occurs without explicit consent of the victim. Some forms of sexual assault include attempted rape, fondling or unwanted sexual touching, forcing a victim to perform sexual acts, such as oral sex or penetrating the perpetrator’s body, penetration of the victim’s body, also known as rape” (RAINN, 2022, What is sexual assault? section). Another definition used to define sexual assault is, “Sexual assault involves unwanted sexual activity, with perpetrators often using force, making threats, or taking advantage of victims not being able to give consent” (American Psychological Association, 2022, para. 1). While both definitions are similar, the first definition is much more detailed and descriptive, allowing for a wider range of responses if used for a self-report questionnaire, while the second definition could potentially limit responses from those who don’t feel as if they fit the category.

It is estimated that there are approximately three million reports of child abuse every year involving 5.5 million children (PTSD: National Center for PTSD, 2022). Of these cases, only 30% are substantiated; of the 30% of substantiated cases,10% involve allegations of child sexual abuse (PTSD: National Center for PTSD, 2022). The most reliable reports often come from older children. For these reasons, most of the statistics regarding CSA relate to children between the ages of 12-17 years old with 66% of CSA victims falling within this age range (Department of Justice, 1997). Additionally, sexual assault is more prevalent in females rather than males. By the age of 17, the lifetime prevalence of females sexually assaulted by adults is 11.2% and for males it is 0.1% (Finkelhor et al., 2014). While the gap is rather large between the sexes, the number of children overall that experience CSA is significant.

CSA is a serious crime that can lead to mental health problems in children. Problems like this can manifest with the development of PTSD. The overall rate of PTSD development in children who have been affected by trauma was 15.9%, which varies according to the type of trauma experienced and the sex of the child (Alisic et al., 2014). The range for females that experience at least one traumatic event is 15-45%, and for males, it is 14-43% (PTSD: National Center for PTSD, 2022). The rate of children who have been impacted by trauma developing PTSD is 3-15% of females and 1-6% of males (PTSD: National Center for PTSD, 2022).

Long-term effects of CSA

Due to the number of children that are impacted every year, it is important to understand the downstream consequences of CSA. These long-term effects of CSA on victims are numerous, and include, but are not limited to, depression, anxiety, behavioral problems, sexualized behaviors, and PTSD (Saywitz et al., 2000). The impact of these conditions is long-lasting and damaging. When comparing CSA victims and non-victims, Zinzow (2018) states that there are several mental health concerns that victims are more likely to experience than non-victims. Victims are approximately four times more likely to abuse drugs and develop PTSD as adults and are three times more likely to experience a major depressive disorder compared to those who do not experience CSA. Being a victim of CSA creates a risk for mental health issues later in life (Zinzow et al., 2012).

While children who are victims of CSA are four times more likely to develop PTSD as adults, these victims are also at risk of developing PTSD as children after CSA (Zinzow et al., 2012). It has been noted that PTSD can impact the personality of someone, especially when the trauma has occurred at an early age (Herman, 1992; Van der Kolk & Fisler, 1994; Van der Kolk et al., 1996). Approximately 90% of children who experience CSA develop PTSD as children,

with a large majority going undiagnosed (Rainville, 2012). Although not every CSA victim will develop PTSD, those who experience CSA at the hands of their fathers are the most at risk, and the risk rises as the severity of the offense increases while they are children (Rainville, 2012). In concurrence with this study, more PTSD symptoms were found for victims who have been abused by relatives as well as greater negative effects of sexual assault and disclosure characteristics, such as delayed disclosure, on symptoms for victims abused by relatives. More serious abuse and greater negative social reactions to abuse disclosures, especially in childhood, were discovered for victims of CSA (Ullman, 2008). This is true when the perpetrator was a relative as more severe abuse is typically experienced by victims where the perpetrator was a family member (Ullman, 2008). A large reason for undiagnosed PTSD in CSA victims is because there is a delay in disclosure, although many never disclose at all (Banyard et al., 2001). PTSD in children often goes undiagnosed leading to a lack of treatment (Banyard et al., 2001). Research suggests that the most severe symptoms of PTSD are observed very soon after the trauma occurs (Banyard et al., 2001). This indicates that the most important time to get help and mediate the most severe effects of PTSD should be almost immediately after it happens. Due to the delay in most disclosures, this is difficult, thus leading to long-term effects on the child.

PTSD Presentation in CSA Victims

There are several symptoms related to PTSD in children that have been sexually abused. In preschool-aged children, these include anxiety, general PTSD, internalizing symptoms and behaviors, externalizing symptoms and behaviors, and inappropriate sexual behavior (Kendall-Tacket et al., 1993). In young school-aged children (i.e., 6-12 years), these presenting behaviors are comorbid with PTSD and include fear, aggression, school problems, hyperactivity, and regressive behavior (Kendall-Tacket et al., 1993). For adolescent children, the symptoms are

similar, but more advanced. They include depression, withdrawal, suicidal ideation, self-injurious behaviors, somatic complaints, illegal acts, running away, and substance abuse (Kendall-Tacket et al., 1993). There are also symptoms that run through all age groups including nightmares, depression, withdrawn behavior, mental illness, aggression, and regressive behavior (Kendall-Tacket et al., 1993).

PTSD in Children Six Years and Younger

As defined by the American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013), there are several symptoms that children must experience to be diagnosed with PTSD. The first criteria that must be met is experiencing the trauma itself. The child must experience one of three types of trauma: actual or threatened death, serious injury, or sexual violence, such as CSA. This can be experienced directly, by witnessing it, or by learning that the traumatic event happened to a parent or caregiver.

After the trauma occurs, there must be a series of symptoms present in order to receive a diagnosis of PTSD. In children six years and younger, at least one or more of the following intrusion symptoms must be present: recurrent, distressing memories; recurrent, distressing dreams; dissociative reactions; intense or prolonged psychological distress; and/or marked psychological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event (American Psychiatric Association, 2013). Distressing memories can be described as unwanted and recurrent memories of the traumatic event (Forge Health, 2022). For children under the age of six, this can be seen in repetitive play. Themes or specific events of the trauma may show up in this play so children under the age of six may not appear distressed (American Psychiatric Association, 2013). Distressing dreams can be described as nightmares or

night terrors (American Psychiatric Association, 2013). These nightmares are tied to the traumatic event which causes the mind to replay the trauma and the person to relive the event (Forge Health, 2022). In children under the age of six, these nightmares may just be frightening dreams without any content easily recognized as a part of the trauma. Dissociative reactions can be seen in flashbacks in which the individual feels as if they are reliving the event, though full immersion flashbacks where there is a complete loss of awareness for their present surroundings in rare (American Psychiatric Association, 2013). The most common would be reactions to situations as if the traumatic events are recurring such as in play for children under the age of six (Anxiety & Depression Association of America, 2016) Dissociative symptoms can be in the form of depersonalization or derealization (American Psychiatric Association, 2013). Derealization is when an individual experiences persistent or recurrent feelings of unreality of their surroundings (American Psychiatric Association, 2013). This means that the individual may experience the world in a dreamlike state or feel as if the world around them is unreal (American Psychiatric Association, 2013). Depersonalization is when an individual feels detached from their body, like they are watching themselves from the outside; (American Psychiatric Association, 2013).

Additionally, for children under the age of six to receive a PTSD diagnosis one or more of the following symptoms representing avoidance of stimuli or negative alterations in cognitions must be met (American Psychiatric Association, 2013). Avoiding stimuli is when children go out of their way or alter what would be normal behavior for them to avoid interacting with a type of external reminder. External reminders can be in the form of people, activities, objects, or situations (American Psychiatric Association, 2013). The negative alterations in cognitions involve an increase in a negative emotional state, which can be in the form of increased fear, anger, guilt, or even shame (American Psychiatric Association, 2013). Along with this is the

inability of these children to simply experience positive emotions such as happiness or satisfaction. There is also a decrease in interest or participation in previously important activities. Younger children would display this by no longer playing games they used to find enjoyment in or doing activities they would routinely enjoy, such as reading or playing a sport. You can also see socially withdrawn behavior (American Psychiatric Association, 2013).

There must also be marked alterations in arousal and reactivity associated with the occurrence of the traumatic event (American Psychiatric Association, 2013). Two or more of the following symptoms must be present to meet this aspect of a PTSD diagnosis: irritable behavior and angry outbursts, hypervigilance, exaggerated startle response, problems with concentration, or sleep disturbances (e.g., difficulty falling or staying asleep; American Psychiatric Association, 2013).

In addition to meeting the above symptoms, these symptoms must last for more than one month (American Psychiatric Association, 2013). They must also cause significant distress or impairment in the individual's life (American Psychiatric Association, 2013). This can come in the form of personal, social, or other important areas of functioning (American Psychiatric Association, 2013). These disturbances must also not be attributed to the physiological effects of substances, such as medications or alcohol, or other medical issues (American Psychiatric Association, 2013).

PTSD in Children Older than Six Years

In adolescents and children older than six, the requirements for a PTSD diagnosis are slightly different. This is also the category of children most often investigated in studies and this age range tends to be when CSA is finally disclosed (American Psychiatric Association, 2013).

The symptoms experienced by younger children are the same for children older than six years old, though there are differences in the diagnostic criteria for children over the age of six (American Psychiatric Association, 2013). These differences include an additional symptom for children over the age of six when talking about marked alterations in arousal and reactivity when compared to children over the age of six. Children over the age of six must have two symptoms present to receive a diagnosis of PTSD, of which those symptoms include: irritability, angry outbursts, hypervigilance, exaggerated startle response, problems with concentration, sleep disturbance, and reckless or self-destructive behavior (American Psychiatric Association, 2013). This last symptom is not present in children under the age of six, the symptoms for the negative alterations in cognition criteria are also different for children over the age of six compared to children under the age of six (American Psychiatric Association, 2013). In children under the age of six, they are required to have one or more of those symptoms together. In children over the age of six, it is required that they have one of the avoidance symptoms along with two of the negative alterations in cognition and mood (American Psychiatric Association, 2013). It is important to be able to identify when these symptoms are occurring, what they mean, and the things that can cause the development of symptoms for a PTSD diagnosis. To do this we can identify the risk factors that cause a higher chance of PTSD development in children after CSA, and protective factors that may help children avoid the development of PTSD after CSA altogether.

Risk and Protective Factors

There are certain events that will lead to a greater chance of someone developing PTSD (PTSD: National Center for PTSD, 2022). One of the biggest risk factors in this category is events that could lead to someone being hurt or killed (PTSD: National Center for PTSD, 2022).

In children, such events can include sexual violence, (i.e., CSA). Along with this, the more traumas that a child experiences, the more likely they are to develop PTSD (PTSD: National Center for PTSD, 2022). It is important to understand what may cause PTSD to develop in children to be able to understand how to help them. Additionally, this can provide information on how to prevent PTSD from occurring and damaging mental and emotional growth.

There are many studies that analyze the risk factors for developing PTSD, especially in adult populations (Boney-McCoy & Finkelhor, 1995; Möller et al., 2014; Pijpers et al., 2022). However, there is only one study that examines PTSD development in children after severe trauma, specifically CSA, and suggests there are several meaningful risk factors to consider in the development of PTSD in children who experience CSA. In a study of 32,238 children between the ages of six to eighteen, Trickey and colleagues (2011) analyzed 25 potential risk factors related to increased risk of PTSD in children. Factors most associated with increased risk of PTSD included a lack of are social support, comorbid diagnoses, and thought suppression (e.g., coping skills; Trickey et al., 2011). More broadly, these risk factors can be categorized as temperamental factors, environmental factors, individual differences, and prior victimization. These results are also consistent with several earlier studies (Foy et al., 1996; Pine & Cohen, 2002). Other factors that influence the development of PTSD in children include sex (i.e., female), intellectual impairment or learning disabilities, pre- and post-trauma life events, pre-trauma psychological problems, and trauma severity (Trickey et al., 2011). Age, although a contributing risk factor, had one of the lowest effects on the development of PTSD. Further, coping strategies, self–blame, older age, and greater familiarity with the perpetrator are risk factors in the development of PTSD after CSA (Filipias, 2006).

Temperamental Factors

When examining risk factors that lead to a greater chance of CSA victims developing PTSD, it is imperative to review temperamental factors. These can include genetic conditions, biological factors, and/or personality traits that lead children to be more susceptive to mental health disorders, such as learning disabilities, age, and sex.

Learning Disabilities

Learning disabilities put children at risk for not only experiencing traumatic events, but also for PTSD after traumatic events (Pijpers et al., 2022). Learning disabilities can be defined as impaired intellectual function or an Intelligence Quotient (IQ) score in the 70-75 range (American Association on Intellectual and Developmental Disabilities, 2022). According to Pijpers and colleagues (2022), children who participated in a test to determine whether they had learning disabilities were more likely to be victims of CSA while also being more likely to have learning disabilities. Learning disabilities lead to a high level of impairment in their daily life. This indicated that elevated distress levels and impairment in daily life are characteristic of PTSD. Daily life impairment is also found in children who have PTSD, regardless of their intellectual status, so those that experience it on a more regular basis are more likely to fall into the diagnostic criteria of PTSD (Mevissen et al., 2016). This risk stems from the chance that children with intellectual disabilities have a greater chance of experiencing traumatic events compared to children without disabilities. This alone increases the risk of PTSD in their daily lives (Hatton & Emerson, 2004). Increased stress levels and high levels of daily impairment are typically seen in children with learning disabilities. This can be indicative of lower social economic status as well (Mevissen et al., 2016). This can lead to an increase in stress levels, and when exposed to a traumatic event such as CSA, a child is put at a higher risk for the

development of PTSD (Mevissen et al., 2016). It is also seen that children with intellectual disabilities are at a three times greater risk for CSA than other children (Kim & Lee, 2018). This varies from 25-83%, though it is estimated that more than 90% of these children will experience some form of sexual abuse over the course of their lives (Kim & Lee, 2018). The sheer number of children with disabilities that are affected by CSA increases the likelihood of their development of PTSD greatly just based on statistical chances alone.

Age

Age is a highly debated topic in relation to PTSD in CSA victims. Although there are many studies suggesting that older children are more at risk for the development of PTSD after being exposed to CSA, there are also several articles refuting the claim that it can be empirically supported (Adams et al., 2018; Trickey et al., 2012). Some scholars argue that it is merely an assumption, and that statistics cannot confirm or disconfirm this theory without further testing (Adams et al., 2018). Some argue that age may be a risk factor as younger children may have a harder time processing trauma, especially if the traumatic event is experienced by a whole group of children (e.g., a natural disaster), versus individual trauma (e.g., CSA), then older children (Trickey et al., 2011). In this study, it was also found that there were no significant differences in younger children versus older children in processing trauma and developing PTSD if the event was experienced alone (Trickey et al., 2011). Both age and intellectual impairment are associated with high levels of somatic events (e.g., headaches, abdominal pain, sickness), which in turn, are associated with higher levels of PTSD (Min Bae et al., 2018). Ackerman and colleagues (1993) argue that older children are more negatively affected by CSA than younger children. Younger children may be more susceptible as they have less understanding of right or wrong in sexual and traumatic events compared to older children. Additionally, younger children have a higher

tendency to blame the assault on themselves or internalize what has happened. This can lead to unhealthy coping mechanisms, such as avoidance coping, which has been shown to lead to a higher chance of PTSD in children (Kaplow et al., 2005).

Sex

Sex is often examined in relation to PTSD among those experiencing CSA. Many researchers have found that sex is a significant risk factor for the development of PTSD as a child after CSA. Females are at a higher risk of developing PTSD compared to males after CSA (Andrews & Merry, 1994; Maikovich et al., 2009; Silva et al., 2000; Wolfe et al., 1989). Specifically, females are two to six times more likely to develop PTSD than males are (Kendall-Tacket et at., 1993). It has also been commonly found that females are more at risk for PTSD due to the nature of the expression of symptoms (Kendall-Tacket et at., 1993). While males tend to externalize angst after trauma, such as aggression and hyperactivity which are aversive for others, females tend to internalize sadness, anxiety, and loneliness (Kendall-Tacket et at., 1993). Though it is probable for numbers to be skewed as females are more often CSA victims than males (Kendall-Tacket et at., 1993). This is identified in many readings, but as with age, almost an equal number of sources have found that sex cannot be identified as a high-level risk factor (Maikovich et al., 2009; Walker et al., 2003). For example, there are multiple trauma-related factors, such as age, prior victimization, severity of the abuse, or even type of maltreatment, that are independent of sex which tend to skew results and increase the risk for PTSD more than sex will (Walker et al., 2003).

In general, CSA appears to be more prevalent among females and in turn seems to have a higher attributive risk for subsequent PTSD as a child (Adams et al., 2018; Kendall-Tacker et al., 1993; Walker et al., 2004). Sex results have a high probability of being misleading, indicating

that females are at a far larger risk for PTSD than males, due to the population differences in females versus males who have experienced CSA (Kendall-Tacker et al., 1993; Walker et al., 2003). This may also cause a bias that only the most symptomatic males may end up in research studies. Studies reviewed here have highlighted that rates of PTSD are higher in females with CSA histories and that females are more at risk for the development of PTSD following CSA compared to males.

After CSA, sex appears to affect the development of either externalizing or internalizing behaviors (Walker, 2003). In relation to risk for psychopathology following CSA, multiple trauma-related factors (e.g., frequency, nature, relationship to perpetrator, unexpected nature, social network), independent of sex, increases risk for PTSD. This possibility coupled with the biases in sampling needs to be addressed in future work (Walker, 2003). In a self-report study of college students, females tended to report a greater prevalence of CSA and more distress and self-blame post assault (Ullman & Filipias, 2005). This is also true of a greater reliance on avoidance coping strategies that lead to a higher risk of severe PTSD symptomology (Ullman & Filipias, 2005). Male students reported to rely less on these mechanisms. It is also reported that women are more likely to disclose their abuse and PTSD symptoms, though there was no increase in negative reactions in female disclosure than male disclosure (Ullman & Filipias, 2005). The women that delayed their disclosure of events reported higher PTSD symptom severity, though the severity of symptoms did not vary like this for men (Ullman & Filipias, 2005).

Environmental Factors

Environmental factors may also contribute to the risk of developing PTSD (Pijpers et al., 2022). For example, environmental factors such as social support and events that have previously

occurred in their lives (e.g., other forms of abuse) may put children at higher risk of developing PTSD (Pijpers et al., 2022).

Social Support

Social support may be the biggest risk factor associated with PTSD development after CSA. Specifically, a lack of familial support or community support is associated with an increased risk of PTSD after CSA (Bernard-Bonin et al., 2008). Lack of social support can be a risk factor both before trauma and after trauma. Social support plays a critical role in reducing PTSD from traumatic events, even before events such as CSA occur (Bernard-Bonin et al., 2008). While a lack of social support can be detrimental to a child and may put them at higher risk of developing PTSD, it is more often viewed as a mitigating factor, or rather, a protective factor, against developing PTSD after CSA.

Parental support is an important protective factor against PTSD (Bernard-Bonin et al., 2008). Parental support helps the child express their fears and anxious feelings by offering protection against intrusive thoughts and re-experiencing the trauma. This allows the child to be less dependent on avoidant behavior and coping skills, causing less emotional numbness and fewer episodes of hyper-arousal and PTSD symptoms (Bernard-Bonnin et al., 2008). According to Cohen and Wills (1985), social support is also important because it acts as a buffer for high stress levels which can protect individuals from developing maladaptive behaviors and PTSD symptoms. In males, it is specifically important to have social support from friends and families as men tend to externalize and look for support (Evans et al., 2013). It is seen to lower their trauma symptoms across all types of PTSD related to maltreatment. The more important type of support for women is that of friends rather than familial support (Evans et al., 2013). It is also

seen that when the social support from family increased, the severity of the abuse increased in women, buffering the effects of familial support (Evans et al., 2013).

There are many articles that state that there is not enough evidence to say for sure whether social support for children will reduce the risk of PTSD (Murphy, 1998; Salazar et al., 2011; Scarpa et al., 2006). Social support is an important factor that can influence mental health among children in many ways. Even if their social support systems do not prevent CSA or PTSD, it may serve as a mitigating factor in their mental health moving forward (Hyman et al., 2003). There is a need for the child to have the perception that others in their circle them, thus supporting their self-esteem (Hyman et al., 2003). They also need to be able to receive advice when trying to cope with their problems (Hyman et al., 2003). Hyman and colleagues (2003) hypothesized that self-esteem support would be the most valuable type of support after CSA. When a child perceives that others valued them, they were able to contend with the self-blame that is often associated with CSA and long-term adjustment issues (Hyman et al., 2003). Then, when a child feels valued, they can challenge any negative core beliefs (e.g., shame, self-blame, worthlessness), which in turn, is related to healthier adjustment (Hyman et al., 2003). These factors alone may not eliminate the development of PTSD altogether, but can greatly reduce the impact of such symptoms on a child's health (Pijpers et al., 2022).

Disclosure

Disclosure refers to how soon after the child was victimized the child disclosed this information to someone they trust and someone that can help them. Research suggests that the sooner a child discloses their trauma, the less likely they are to experience PTSD (McTavish et al., 2019). Given the stress of withholding disclosure (Sinclair & Gold, 1997), it is not surprising that inability to disclose trauma for longer periods of time may contribute to greater

symptomatology (McTavish et al., 2019) The response given, whether it be support or a negative reaction, is more important than the disclosure itself (McTavish et al., 2019). It is seen that among women with moderate CSA, PTSD symptoms were lowest in nondisclosures, higher in disclosers who experienced a low negative response, and highest for disclosers who experienced a highly negative response (McTavish et al., 2019). It is counterintuitive that a high negative response to disclosure after moderately severe CSA was associated with greater PTSD than among women with severe CSA who disclosed their abuse and received high negative responses. Although disclosure in some instances may help to terminate the abuse, the majority of those who disclose their experience encounter negative reactions (Jonzon & Linblad, 2004), including being blamed or not believed, which further traumatizes them (Ullman, 2007). Deciding not to disclose an abuse incident may therefore be more protective than disclosing it and receiving a negative response. Most children who are sexually abused do not disclose the incident, even years later (Goodman-Brown et al., 2003; Smith et al., 2000). The likelihood of disclosing has been associated with the child's appraisal of how others may respond to disclosure, as well as their perceptions of responsibility for the abuse (Goodman-Brown et al., 2003). Response to the disclosure of abuse is indicative of whether that child is going to receive positive or negative social support. Social support after a disclosure is important on determining if that child is going to cope with the CSA healthily or go into a more avoidant coping strategy (Goodman-Brown et al., 2003; Ullman, 2007)

Individual Differences

Prior Victimization and Revictimization

Prior victimization is found to be a large contributing risk factor to the development of PTSD in child victims (Boney-McCoy & Finkelhor, 1995). Revictimization is the occurrence of

sexual violence during adult life in individuals with a history of CSA (Cividanes et al., 2018). Revictimization is not a rare occurrence. National Violence Against Women Survey (NVAWS) data reported that many women suffer their first experience of violence during childhood with 40% reporting physical abuse and 9%, sexual abuse. Boney-McCoy and Finkelhor (1995) showed that, in addition to being a risk factor for the development of PTSD in these children, prior victimization also exacerbated the symptoms associated with PTSD. This is not only for children that have previously been sexually victimized, but also in other forms of abuse (Boney-McCoy & Finkelhor, 1995). This can include physical assault and indirect victimization where a child's family member has been victimized, though familial victimization does not have the same effect as post-CSA symptomology.

As noted above, chronic or extreme trauma may carry the highest risk for psychopathology when it disrupts social support networks through family displacement or disruption (Pine & Cohen, 2002). It is seen that women with a history not only of CSA, but also multiple victimizations, are a greater risk for reporting adverse outcomes such as the development of PTSD (Pine & Cohen, 2002). Despite that, the results confirmed that there is a cumulative risk of PTSD development after sexual revictimization. Revictimized women have higher odds of developing PTSD symptoms than women who have not experienced CSA (Cividane et al., 2018).

Coping Strategies

The way that children cope with CSA is a huge factor in whether these children develop PTSD. Although some types of coping can be viewed as a risk factor (e.g., avoidance coping), research suggests the way that children cope may be a protective factor (Hayes et al., 2005; Ullman & Filipias, 2005). Research demonstrated that the belief that the world is a bad and

dangerous place would have a negative effect on children's mindsets and cause a higher risk of PTSD (Spaccarelli, 1994). However, children saw the world as a place that caused harm to others. Additionally, knowing that they were not alone in their pain caused comfort for the children as it was reassuring to believe that they were not alone in their experience (Spaccarelli, 1994).

Kaplow and colleagues (2005) suggest that sexually abused children that exhibit symptoms of avoidance, anxiety, arousal, or dissociation after CSA are at an increased risk of developing PTSD. This illustrates the importance of diagnosing or intervening as soon as possible. Other factors impacted the development of PTSD after CSA, such as coping strategies used by CSA victims, have been shown to be related to the severity of the PTSD (Chaffin et al., 1997, Kendall-Tackett et al., 1993; Spaccarelli, 1994). It is important to identify how coping strategies among children experiencing CSA impact their recovery or lack thereof. Two main strategies relate to how coping influences PTSD in CSA survivors: approach and avoidance. The approach strategy allows children to gather mental information about the event to allow them to make appropriate decisions on what actions to take and to make a situation more controllable (Bernard-Bonnin, 2008). Avoidance, on the other hand, may protect the child from becoming emotionally overwhelmed and dysfunctional (Bernard-Bonnin, 2008). While this may be helpful now, it can also interfere with their information-gathering process which would lead to productive and beneficial actions. This has to do with their ability to process the CSA and understand what has happened to them. Without this, there is a delay in appropriate actions to take like disclosing their sexual assault. There are also negative side effects of an avoidance approach such as emotional numbness, intrusion of threatening material, disruptive avoidance behaviors, and lack of awareness of the relationship of symptoms to trauma (Bernard-Bonnin,

2008). This may lead to more behavioral difficulties and delayed processing of the situation causing a higher chance of more intense and longer-lasting-lasting PTSD symptoms (Bernard-Bonnin, 2008). A relationship between CSA duration, coping mechanisms (e.g., avoidance), and PTSD symptoms have been found (Batchelder et al., 2018). Avoidance coping strategies, such as ignoring triggers and feelings about the traumatic event, partially accounts for the relationship between PTSD symptom severity and CSA. Engagement-focused coping, including behavioral activation, may be helpful in reducing adult PTSD symptomology (Batchelder et al., 2018).

Conclusion

Many factors are associated with an increased risk of PTSD among children who experience CSA. For instance, learning disabilities, older age, a lack of social support, intellectual disabilities, female sex, prior victimization, poor coping strategies, and disclosure may serve to increase the risk of PTSD among these children. Though disclosure is a risk factor both if it is delayed and if a child discloses their sexual abuse and receives negative reactions, this is in conjunction with a lack of social support. However, protective factors may serve to reduce the risk of PTSD among these children, including being male, younger age, positive coping strategies, disclosure soon after the assault occurs, and regular social support.

Limitations

This body of research is known to have limitations. One limitation is that studies like that of Pijpers and colleagues (2022) have a selective group of individuals that participate in studies. Selective groups may be found when people are categorized in one way, such as those that actively seek help from the same organization. Within this research, it is common to see selective groups, such as only substantiated cases of abuse, very narrow age brackets generalizing children

around the ages of 7-15, and groups populated with only females. This research may only be generalizable to certain groups of individuals and not whole populations. Another limitation in this body of research that limits the generalizability of these findings is that only those who disclose abuse are accounted for; because so many children may not disclose their abuse, they are ineligible for such research, and therefore, such findings may not generalize to children who do not disclose their abuse. This research is only founded on children who have disclosed their abuse, meaning there are more children out there that have not disclosed their abuse and therefore cannot be taken into consideration when research is done. Results may vary within studies if those that do not disclose their abuse fall outside of any empirical studies.

More research is needed to validate and substantiate findings regarding moderators in the relationship between CSA and PTSD among children. Many protective factors are hypothesized to be helpful in the prevention of PTSD development among CSA victims, but many of these factors cannot be substantiated. For instance, there are conflicting findings regarding the moderating effects of sex, age, and disclosure (Adams et al., 2018; Goodman-Brown et al., 2003; Maikovich et al., 2009; Trickey et al., 2012; Walker et al., 2003;) Those risk factors that were commonly found to be reliable in determining the risk of PTSD development or in having moderating effects after CSA were coping strategies, prior victimization, social support, and learning disabilities. More research is needed that examines the risk or protective factors associated with PTSD among those who experienced CSA.

Future research must examine children from a broader age range and must be more inclusive of the different sexes. These two risk factors are seen to have the most controversial data within research. More data and empirical research are needed to better understand the risk or protective factors of PTSD among children who experience CSA.

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