Does childhood trauma impact genders differently in child and adolescent mental health?

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This is Jess, she began her undergraduate degree in 2019 after the completion of her A-levels in Health and Social Care. Jess is extremely passionate about promoting and supporting the voices and mental health of young people. Particularly children and young people who face adversities and trauma in early life which have a detrimental impact upon their mental health. This led her to carrying out her journey in Child and Adolescent Mental Health and Wellbeing. During her studies, Jess became interested in childhood trauma and the effects on children and young people and how this can manifest and impact girls and boys differently which is evident within her dissertation project. Her passion lies within childhood trauma as this is a major public health issue causing a range of mental health difficulties from early childhood into adulthood, Jess believes most children and young people who have suffered trauma are highly misunderstood for experiences that go beyond their control. Offering the correct support and providing positive change for these young people can provide new opportunities to help them overcome their past experiences and thrive in their future. Jess feels that further research is required to enhance the current support in place in preventing and raising awareness around the importance and impact of childhood trauma on young people's mental health.

Abstract

Introduction: Trauma in childhood is a term that captures a distressing or emotionally painful event that is experienced or witnessed by a child or young person (CYP). This can result in long-lasting impacts on their mental health. Trauma is a significant public health issue that has been linked to numerous negative outcomes, including mental health problems. While both boys and girls can be exposed to various forms of trauma, a small but growing body of research has shown that there may be gender differences in trauma and how CYP respond and cope with trauma and how this influences mental health.

Aim: The aim of this review is to investigate if childhood trauma and gender differences can have different implications on children and adolescents' mental health.

Methods: The researcher chose a systematic review to explore if childhood trauma impacts genders differently in child and adolescent mental health as the chosen methodology. This is due to the sensitivity of the topic and the limited amount of research within this area. Conducting a desk base study ensures this type of research can be carried out in an ethical manner.

Results and Discussion: The findings show a clear link between childhood trauma, gender differences, and poor mental health outcomes in children and adolescents. The data from seven relevant articles was evaluated, and three important themes emerged: Trauma Exposure, Mental Health, and Externalising Behaviours. These themes derived from the findings were utilised to critically assess and develop a narrative for the discussion, which confirmed the research aim and objective.

Conclusion- The overall systematic review found the link between gender differences in the types of trauma may be exposed to and how this can influence mental health and behaviours. To effectively address the mental health consequences of childhood trauma, future research should further explore the unique needs and experiences of children and consider the influence of gender. This deeper understanding is crucial for developing interventions and support systems that are tailored to meet the specific requirements of individuals affected by trauma.

Introduction

Childhood Trauma

Trauma in childhood refers to experiences that are emotionally, physically, or psychologically distressing or overwhelming for CYP (Mind, 2020). There are different types of trauma a CYP can experience, acute trauma can be a singular, short term, unexpected event such as rape a car accident, serious injury or death (Rohleder, 2019). In contrast, complex trauma involves exposure to a variety of multiple traumatic events, which are invasive and interpersonal in nature such as ongoing physical, emotional, or sexual abuse (Cloitre et al., 2013). The term Adverse Childhood Experiences (ACEs) is used to define traumatic events that happen between the ages of 0-18 years old. These events can have serious short and long-term consequences on a CYP cognitive, psychological, and physiological functioning (Lawson and Quinn 2013).

There are currently 10 ACEs identified by the Centre of Disease and Control Prevention (CDC) (2021) which includes experiencing domestic violence (DV), child physical abuse (CPA), child emotional abuse (CEA), child sexual abuse (CSA), emotional or physical neglect, bereavement, parental imprisonment, substance abuse within the home, parental separation or divorce and parental mental illness. Yet, child adversity is not limited to the identified ACEs other forms of trauma can include medical illnesses, bullying, war, poverty, and racism (Pearce, Murray, and Larkin, 2019).

The adversities faced in critical development periods in childhood can cause physical, mental health, and behavioural disorders, such as becoming a victim or perpetrator of violence, depression, obesity, drug and alcohol misuse, poor academic achievement, and high-risk sexual behaviour (Dye, 2018). Research by Webster (2022) discovered a 30-fold increase in learning and behavioural issues reported by parents in children with a high ACE score (4 or more) compared to those who have not experienced any ACEs. The original ACE study carried out by Fellitti et al. (1998) highlighted the link between ACEs and the long-lasting impacts of trauma. This study found ACEs had a 12-fold increase in the prevalence of health risks, including alcoholism, diabetes, heart disease, drug use, depression, and suicide attempts. Additionally, In the United States exposure to four or more ACEs is associated with 8 out of 10 leading causes of death (Sanderson et al., 2021).

Childhood trauma is a global public health concern, with over 300 million children aged 2-4 regularly experiencing physical or psychological abuse each year (World Health Organization, 2022). According to Benjet et al. (2016) 70% of people worldwide have been through a traumatic event, leading to severe mental health problems, such as borderline personality disorder, major depressive disorder, anxiety, Post Traumatic Stress Disorder (PTSD) and Complex Post Traumatic Stress disorder (CPTSD). United Nations Children's Fund (UNICEF) (2014) suggest in nations with active armed conflicts, 230 million children are at risk of witnessing violence, death, and experiencing abuse, rape, or kidnapping, causing significant trauma.

According to CDC (2018), each year, 1 billion children aged 2 to 17 experience or witness violence. The social learning theory highlights the consequences linked to witnessing violence. This explores how children observe and mimic behaviours, attitudes, and emotional reactions of others. Both environmental and cognitive factors combine to shape human learning and behaviour (Bandura, 1978). Witnessing DV between parents is the most powerful risk factor for children to continue violent behaviour from generation to generation. Boys who witness DV are twice as likely as adults to become abusive toward their partner (Stiller, Neubert and Krieg, 2022).

Traumatic events can be influenced by a range of characteristics across the world including socioeconomic status, sex, age, religion/culture, and geographical location as well as many other factors (Rasche et al., 2016). Krug et al. (2002) highlights childhood trauma differs across regions and is a reoccurring problem in Low-to-Middle-Income countries. UNICEF (2021) suggest an estimated 365 million children live in extreme poverty increasing the risks of deprivation and exclusion. There is a high risk for those living in poverty to develop numerous ACEs as children are more vulnerable to experiencing trauma as they may face challenges such as inadequate housing, lack of access to food, and increased exposure to violence (Steele et al., 2016). Culture and religion can impact childhood trauma through normalised harmful practices, such as corporal punishment, child marriage, and female genital mutilation. Religious beliefs may promote or condone these practices (Nadan, Spilsbury and Korbin, 2015). Cultural and religious views can also affect how trauma is perceived, treated, and stigmatised, potentially hindering a child's views of trauma and healing process (Pescosolido, 2013).

In the UK, around one-third (31.1%) of CYP experience childhood trauma, increasing their risk of developing mental health disorders (Torjesen, 2019). In addition, 1 in 5 children experience abuse or neglect, known as complex trauma and almost a third of 18-year-olds have been traumatised as children (Lewis et al., 2019; Radford, 2011). Due to the risk of abuse and neglect, this results in many children being cared for by their local authority; in 2019, 49,570 children in England and 4,810 in Wales were placed in care (Office for National Statistics, 2020). Additionally, within England and Wales one or more ACEs was identified in the records of 63% of child deaths (Hughes et al., 2020). To address childhood trauma and respond to poor mental health in CYP, the government proposed to invest £500 million into a 5-year mental health recovery plan in March 2021. Furthermore, £2.5 million is said to have been invested in new approaches for children who have experienced complex trauma (Department of Health and Social Care, 2021).

PTSD and CPTSD

Trauma can eventually result in a component of PTSD, whether it is complex or delayed-onset PTSD. PTSD is a mental health condition for people who have experienced a traumatic event that has caused psychiatric distress and has resulted in a variety of psychological and physical symptoms (Palmisano et al., 2023). In order to meet the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria for a PTSD diagnosis, a person must have experienced a traumatic event, such as death, serious injury, or sexual assault (Prins et al., 2016). There are four clusters of symptoms which include a range of different experiences under each cluster, a person must meet one symptom within each cluster to gain a diagnosis these clusters include: intrusive thoughts, avoidance behaviours, negative alterations in mood and cognition, and arousal and reactivity. These symptoms must last for at least a month, be extremely distressing or interfere with key aspects of functioning (American Psychiatric Association, 2013).

Nevertheless, depending on a child's developmental stage PTSD symptoms can be complex to identify and diagnose in CYP (De Young and Landolt, 2018). Conradi, Wherry and Kisiel (2011) suggest children who have trauma can often find it difficult to verbalise and understand the trauma, this can lead to exhibiting a variety of mental and behavioural health issues, such as aggressive behaviour, difficulty controlling emotions, become clingy or avoidant to caregivers and difficulty establishing healthy relationships. Similarly, adolescents may engage

in Impulsive activity, such as dangerous behaviours, violence, aggression, or alcohol and drug misuse as a way of coping with PTSD (Vaughn-Coaxum et al., 2018). In aims to address this gap Van Der Kolk proposed the term "Developmental Trauma Disorder" (DTD) to be added into the DSM-5 after a decade of research on disorder of extreme stress in children.

In order to understand the full impact of trauma through a child lens, DTD is multi-faced specific to children, considering 15 possible symptoms across several domains including, emotion, behaviour, cognition, and relationships (Van Der Kolk, Ford and Spinazzalo, 2019). This disorder was proposed to cover adversity not described by PTSD as it accounts for disruptions in development that result from childhood trauma putting a specific emphasis on disruptions and negative attachments with caregivers (Teaugue, 2013). DTD was introduced to only focus and capture the traumatisation that occurs in early life and attempt to assist in the making of legislation, diagnosis, and treatment pathways creating accessibility for children who have suffered from complex trauma (Van Der Kolk, 2005). However, shortly after it was proposed it was rejected due to a lack of empirical evidence.

The DSM-5 does not account for repeated complex traumas a person can suffer from. More recently, the International Classification of Diseases and Related Health Problems, Eleventh Edition (ICD-11) added C-PTSD to the diagnostic criteria in 2019 which only come into effect in 2022. C-PTSD encompasses the core symptoms of PTSD, meeting all the diagnostic criteria for PTSD, while also including three distinct categories of additional symptoms. These additional categories are challenges in emotional regulation, a compromised sense of self-worth, and interpersonal difficulties. This diagnosis captures repeated chronic trauma in both adults and children (World Health Organization, 2019).

It is important to highlight symptoms of PTSD and CPTSD can be highly co-morbid, clinicians are concerned that many children may be mislabelled, have one or more disorders unrelated to their trauma, potentially receiving non-trauma-informed care or services (Cohen and Scheeringa, 2009). According to Van der Kolk (2005), CYP exposed to trauma are frequently diagnosed with separation anxiety disorder, oppositional defiant disorder (ODD), and attention deficit hyperactivity disorder (ADHD); thus, complex PTSD is not the most common diagnosis for children and adolescents, as clinicians sometimes fail to implement trauma informed screening approaches. In agreement, Ford and Courtois (2014), suggest children may demonstrate symptoms such as hypervigilance, hyperarousal, and aggression, all of which are

hallmarks for ADHD and ODD. Children exhibiting behavioural symptoms are likely to be evaluated for disordered related behaviours rather than PTSD which can result in misdiagnosis. Bailey and Brown (2020) argue misdiagnosing CYP who have PTSD/CPTSD can have major repercussions, such as prolonged psychiatric symptoms and leading to treatments that may not meet their needs and experiences.

Currently both the WHO (2013) and NICE guidelines (2018) recommend two types of treatments for both CYP and adults who suffer from PTSD. These can include Trauma Focused Cognitive Behavioural Therapy (TF-CBT) and Eye Movement Desensitization and Reprocessing (EDMR). Likewise, The American Psychological Association (2017) also recommend CBT approaches such as Cognitive-Processing Therapy and Prolonged Exposure Therapy. They also conditionally recommend other treatments such as EMDR. As CPTSD is a newly defined condition there is yet no clinical trials evaluating interventions for treatments (Franco, 2021). Currently, the same treatments that are recommended for PTSD are recommended for C-PTSD with the exception that a person could need more intensive extended sessions (Cloitre, 2020).

Trauma and Gender Differences

Gender norms are societal expectations regarding how individuals should behave and conform to their gender, while gender stereotypes are oversimplified beliefs about the characteristics and roles associated with a particular gender (Ridgeway and Correll, 2004). Gender norms vary across cultures and time periods, shaping how individuals express their gender identity. Stereotypes reinforce these norms by promoting specific traits or behaviours for each gender (Connell and Pearce, 2014). Both norms and stereotypes limit individual expression and contribute to gender inequalities. Challenging and redefining traditional norms and stereotypes is vital for promoting inclusivity and equal rights for all genders (Mulvey and Killen, 2015).

These stereotypes are influenced by societal norms and can impact how individuals are perceived and treated, including in trauma and mental health contexts (Haines, Deaux and Loafaro, 2016). Breaking societal norms around mental health alone can be quite challenging, as these norms are deeply ingrained in society, cultures and can be reinforced by various institutions and social structures (Corrigan et al., 2012). Stigma and discrimination surrounding

mental illness can create barriers to seeking help and can contribute to negative attitudes and beliefs about mental health (Rancher and Morland 2023). However, with increased awareness and education, progress can be made in challenging and changing these norms.

The beliefs about male and masculinity stem from cultural and societal norms that have been passed down over generations. Historically, males were expected to be dominant and unemotional, while women were seen as nurturing and emotional. Institutions like family, religion, and education reinforced these gender roles (Addis and Mahalik, 2003). Additionally, media and popular culture portrayed males as aggressive, tough and dominant, perpetuating these stereotypes (Murnen et al., 2016). In support of this statement The Good Child Report interviewed boys who reported '*being tough'* is an important value to being a male (Russel, 2022). Although these beliefs are being challenged and redefined, they still impact how males are perceived and treated, especially regarding mental health and trauma.

Examining the influence of socially prescribed roles and behavioural patterns can shed light on how gender shapes the manifestation of psychological distress boys and girls who have experienced childhood trauma (Sileo and Kershaw, 2020). Trauma can appear in multidimensional constructs of internalised symptoms, such as anxiety, depression, physical complaints, withdrawn behaviours and self-harm (Nelson et al., 2008). Anxiety and depression are common psychological responses to trauma. Anxiety may manifest as restlessness, hypervigilance, and intrusive thoughts, while depression can involve persistent feelings of low mood, loss of interest, and changes in appetite or sleep patterns (Hovens et al., 2012).

In a study on childhood psychiatric disorders, 80% of children and young people met the clinical criteria for anxiety and depressive disorders, indicating a high overlap (Wittchen, 2002). This comorbidity increases the risk of substance abuse, suicide attempts, academic difficulties, and worsens symptom severity (Carr et al., 2023). This underscores the need to address trauma-related factors and provide comprehensive support for improved mental health outcomes for CYP. Externalising behaviours can also become present following trauma in which individuals express their emotions through aggressiveness, deviant behaviour, delinquency, criminal behaviour, substance abuse and other types of acting outwards (Gatta et al., 2023).

The current literature debates if these experiences can be different amongst boys and girls. Leban and Gibson (2020) found girls were more likely than boys to report substance use in reaction to ACEs, whereas boys were more likely to report delinquency. In contrast, Pierce, and Jones (2022) found ACEs were significantly connected to delinquency in girls but not in boys. Yet, Leban (2021) found ACES to be associated with externalising behaviours in boys but not in girls. Similarly other studies suggest ACEs are associated with more internalising symptoms in girls and externalising symptoms in boys (Lui, 2004; Meeker et al., 2021; Walton and Flouri, 2010).

Further literature highlights that females have a higher cumulative ACEs exposure than males (Baglivio et al., 2014; Felitti et al., 1998). In the original ACE study carried out by Felitti et al. (1998) 8.5% of females experienced four or more ACEs in childhood compared to 3.8% of males. Yet Levison, Wilson and Prescott (2016) suggest because of societal and cultural expectations about vulnerability, sexuality, and masculinity, males are significantly less likely to report ACEs. In agreement, Tollin and Foa (2006) suggest the types of trauma girls and boys may be exposed to can differ with boys are exposed to more CPA and girls experience more CSA. Based on recent meta-analytic data, it is estimated that approximately 7-8% of boys and 18-20% of girls worldwide experience CSA. Yet, figures are likely to be higher due to feelings of shame and guilt many children and adolescents face from abuse (Russell, Higgins and Passo, 2020).

Rationale

Through a brief scope of the literature, the research found an absence on studies that focus on childhood trauma and gender differences. Additionally, most of the research found was carried out with the adult population regarding their experiences of childhood trauma and how this impacts their mental health as adults. Through a further scoping of the literature the research found studies focusing on childhood trauma, gender differences and its impact on children and adolescents' mental health was rarely a studies main theme. This inspired the researcher to gain a wider understanding on the impact of childhood trauma and how gender may impact the mental health of children and adolescents differently. The following systematic review aims to analyse the small amount of relevant information that is currently accessible to highlight the

potential role gender may have when experiencing trauma as a child and the different impacts this can have for boys and girls and provide guidance for future research.

Aim and Research Question

The literature review aims to investigate how childhood trauma and gender differences can impact children and adolescents' mental health through:

- Critically synthesising and evaluating primary and secondary research on trauma in childhood and gender differences and how this can Impact children and adolescents' mental health.

This aims to answer the question *"does childhood trauma impact genders differently in child and adolescent mental health?"*.

Disclaimer

The researcher acknowledges that gender identity is not conformed to male or female. Gender can look different for everybody, and many people may not fit into this category. However, due to the very limited amount of research within this area the researcher has chosen to focus on genders that are male and female.

Methodology

Method

A systematic literature review involves synthesising and summarising studies to answer a research question (Clarke 2022). The process should be structured and transparent, allowing for future replication. This enables the researcher to methodically analyse the data and identify research gaps in a topic of interest (Mallett et al., 2012). Systematic reviews can discover effective interventions, best practises, and opportunities for additional research by synthesising the data. This can then be utilised to influence legislation, support clinical decision-making, and improve overall CYP mental health care (Ridley, 2008). Additionally, systematic reviews can identify methodological flaws and inconsistencies in research, leading to feedback and strengthening subsequent studies (Shea et al., 2007). However, researchers can potentially introduce bias by modifying inclusion, exclusion, and screening procedures to meet their objectives (Pussegoda et al., 2017). The variability in the quality of included studies can also impact the overall strength of the evidence, and results may not be widely applicable as they are often based on specific populations or settings (Bartolucci and Hillegass, 2010).

Discussing the aforementioned benefits and limitations of a systematic literature review, the researcher decided this would be the best method for the research question. Due to the sensitivity and nature of the subject being reviewed, the author chose a desk-based study using secondary literature sources directly from research articles for this type of research to be effective in an ethical way.

Search Strategy

Three attributes are required for an excellent systematic literature review: organisation, accuracy, and transparency (Liberati et al., 2009). A defined search strategy that addresses the research question's initial notions and elements is required to accomplish this. Unstructured search strategies can result in the loss of critical data (Sutton, Papaioannou and Booth, 2016). As a result, researchers must keep precise records of their search approach. After determining the topic, it is critical to assess the search quality for dependability and credibility.

Databases and Sources

The search strategy for this systematic review included a thorough search through the following databases: Science Direct, PubMed and SpringerLink to gather information for these reviews results and discussion. These databases offer a range of high quality, peer-reviewed and credible sources of data, essential for the research aim (Glatthorn and Joyner, 2005). Science Direct was chose as it provides approximately a quarter of the world's peer-reviewed, full-text, scientific, social, and medical primary research information (Tober, 2021). PubMed was a second database used as it provides articles that are retrieval of biomedical and life sciences with the goal of enhancing both individual and global health (Fiorini et al., 2018). Finally, SpringerLink is an integrated full-text database providing access to a range of the most comprehensive online scientific, technological, and medical journals (Walden, 2021). The selected databases chosen are highly likely to provide primary and secondary research that is ethical, reliable, generalisable, and valid for this systematic review.

Search Terms

Correct appropriate search terms are essential to deliver relevant articles to a focused study (Aromataris and Pearson, 2014). Using specific search terms avoids the unintended consequences of using extremely broad terms, which would yield more inclusive and exclusive results that are unapplicable to the study (Fleming and Kowalsky, 2021). The researcher used the following key terms when exploring ScienceDirect, PubMed and SpringerLink. “Childhood trauma OR Adverse Childhood Experiences” AND “Gender Differences” AND “Mental Health”. The selected search terms are connected and related to the particular aim and subject of this literature review, making it easier to answer the research question (Kimberlin and Winterstein, 2008). The Boolean operator OR was employed to accommodate the terms that explain childhood trauma combined with AND to guarantee that a wide range of literature included all the terms associated with the topic. These search terms helped generate an extensive 8,651 articles across the three databases.

Inclusion and Exclusion

A high-quality research design must include both inclusion and exclusion criteria. Exclusion criteria eliminate studies that are not appropriate for the research aim/ question, while inclusion criteria identifies the literature that is significant to the topic under investigation and will then be used in the study (Connelly, 2020). Table 1 provides a clear overview of both inclusion and exclusion criteria.

Table 1. Inclusion and Exclusion Criteria Table:

Inclusion Table	Exclusion
Publish date: 2013-2023	Publish date: 2013 and prior
Language: English	Studies that focus on the adult population
Location: Worldwide	Research that involves participants who are not male or female
Participants: 1. Children and Adolescents between the ages of 0-19 years old of any race or ethnicity. 2. Female or male participants. 3. Parents/guardians reporting on behalf of their child.	Grey Literature that includes: 1. Letters. 2. Newspaper articles. 3. Reviews. 4. Government reports
Qualitative or quantitative research that is primary or secondary	
Access to free full text	
Access to full methods section	

The publication date was restricted to the past ten years along with selecting free full text and in English to guarantee that the studies were translatable, accessible, and relevant to the present state of childhood trauma research (Pieper et al., 2014). To enable comprehensive comparisons, the geographical scope for all databases has been set to worldwide as childhood trauma is a

global concern (World Health Organisation, 2022). This filtered the results from 8,651 to 807 results. The specific age range was set to (0-19). Children and adolescents were included to gain a full overview of childhood trauma on mental health. Childhood represents children ages 0-10 and adolescents is the phase between childhood and adulthood ages 10-19 (World Health Organisation, 2023) This filtered the results to a further 334 articles.

The rest of the inclusion criteria and exclusion criteria was applied as displayed in Table 1. Any studies that included participants that did not identify as male or female were excluded as the aim of this research was to focus primarily on boys and girls, alongside excluding any grey literature such as, letters, newspaper articles, reviews, and government reports. Parents and caregivers were included to provide information on their child's experiences, this is due to children not being able to remember or comprehend their experiences as well as having limited cognitive or emotional ability to report their experiences (Skar, Jensenand Harpviken, 2021). Both primary and secondary research that is qualitative or quantitative was included to provide a comprehensive understanding of the topic that is generalisable, valid, and reliable (Schmidt et al., 2021). Additionally, rigorous, transparent, and reproducible research is to include a full methods section that enables other researchers to comprehend and replicate findings (Eldawlatly and Meo, 2019).

After all inclusion and exclusions were applied 7 articles were chosen for inclusion in this review. These studies were chosen based on their relevance to the topic of childhood trauma and gender differences and how this can impact children and adolescents' mental health which was highlighted as the studies main aim in 1.5.

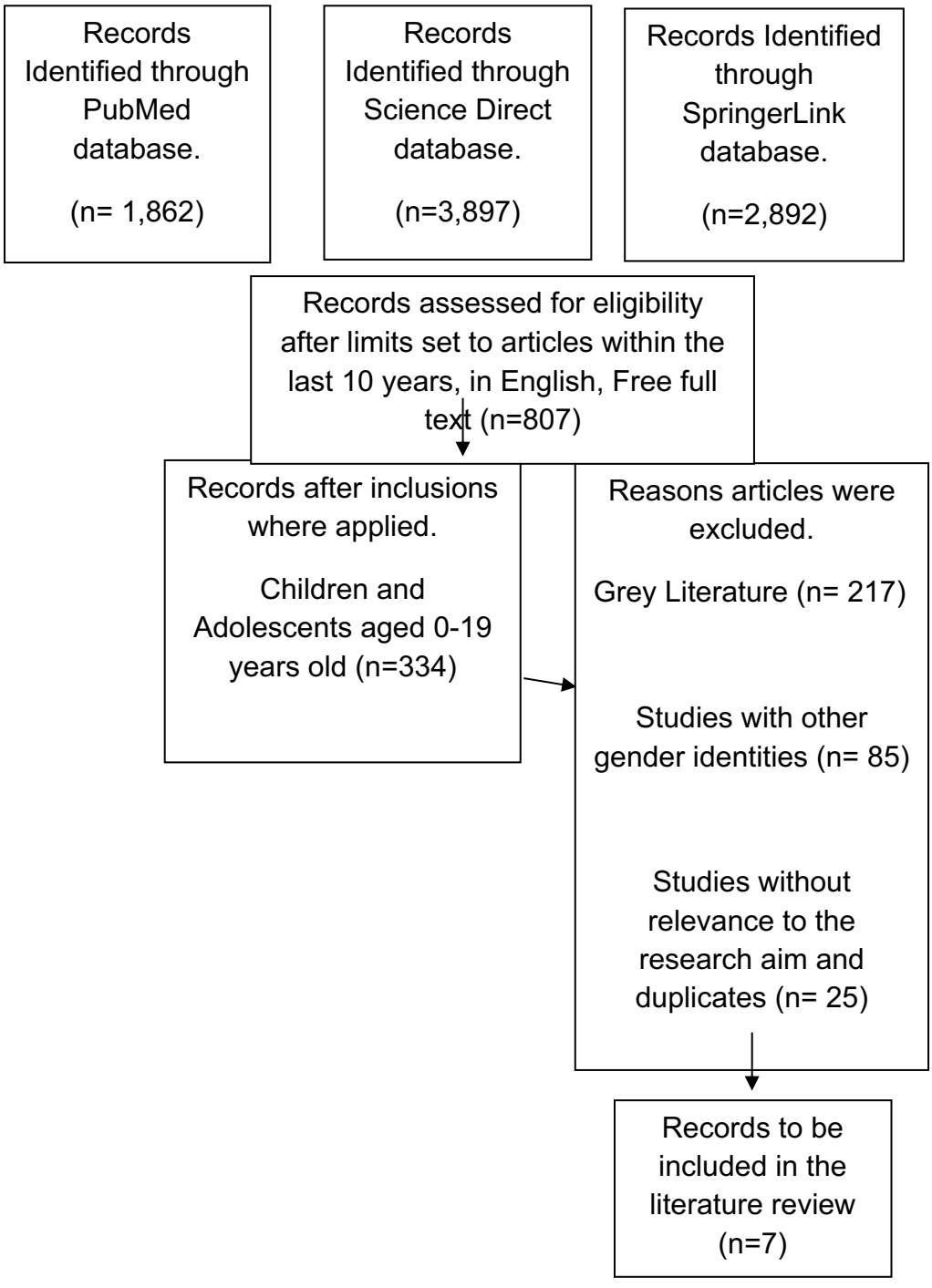
Data Screening

The screening procedure, which is the first step in evaluating a body of literature, is crucial in determining its eligibility to address the research question (Joshua et al., 2019). Even though it takes time, skipping this step could compromise the validity of the entire study by disregarding relevant research (Polanin et al., 2019). Following from the 807 articles, the author further reduced this number to 334 to ensure a comprehensive evaluation, the screening process was implemented across all three databases. This process addresses various factors including grey literature, duplicate entries, articles that lack relevance to the study, as well as those that still contain exclusion criteria. In this particular section, the focus lies on effectively assessing the

relevance of the journal by thoroughly screening a journals title and abstract (Murad et al., 2018).

Subsequently, a thorough examination of the full-text articles is then conducted to determine whether they meet all the inclusion criteria and do not have any of the exclusion criteria outlined in section 2.5. This screening process allows the author to carefully evaluate the article for relevant information that is significant to the specific topic area, as the abstract provides essential details such as the aims, methods, results, and conclusions (Fink, 2020). The full text of the final 7 studies under consideration for review was obtained and analysed to determine their relevance and appropriateness for this review. Because the article selection process was interpretive, the entire text had to be examined to ensure validity and dependability (Waffenschmidt et al., 2019). The procedures followed when reviewing the literature for the screening process are shown in the PRISMA flow diagram below in Figure 1.

Figure 1: PRISMA Flow Diagram



Data Extraction and Analysis

The literature was extracted and analysed upon completion of the inclusion, exclusion, and screening processes to make sure the data is validated and applicable for the review. This phase enables a thorough overview of all literature that, in the form of a narrative synthesis, makes literature comparisons accessible and easy to understand (Owens, 2021). To gather information on childhood trauma, gender differences and the implications this has on child and adolescent mental health, relevant data from the 7 chosen studies was gathered and entered into a table. This included the author, year of publication, title, method, participants, country, and key themes.

Results

7 articles where appraised to identify the link between childhood trauma and gender differences and how this can impact children and adolescents' mental health. The articles were produced in a range of different countries including America (1), Canada (1), Sweden (1), Belgium (1), Denmark (1), and China (2). All articles' participants mean ages where between 1-19 years old who were male or female participants. The results section will include a brief overview of the aims, participants, method, measures, and key findings to emerge from each study.

JIANG, W., JI, M., CHI, X., and SUN, X., (2022)- 'Relationship between adverse childhood experiences and mental health in Chinese adolescents: Differences among girls and boys.'

Several sources were evaluated throughout the systematic review that explicitly explored the influence of childhood trauma on the mental health of children and adolescents, with a particular emphasis on gender differences. A quantitative cross-sectional study was undertaken by Jiang et al. (2022) to evaluate the prevalence and gender differences of ACEs, as well as their consequences on depression and anxiety symptoms in Chinese adolescents. The study employed stratified random sampling to collect data from 12,421 students ages 10 to 17 from 12 primary schools and 17 middle and high schools in Yizhou District, Guangxi Province, southern China. The Chinese version of the revised ACE Questionnaire (ACEQ-R) was used to assess the types of ACEs and the prevalence of aces, while the Patient Health Questionnaire (PHQ-9) was used to assess depression symptoms and the generalised anxiety disorder scale (GAD-7) was used to assess anxiety symptoms. The Human Research Ethics Committee approved the study after receiving informed consent from both participants and their guardians/parents.

The findings from this study resulted in two key themes. Firstly, the study found that girls had a higher prevalence of ACEs than boys. The sorts of ACEs experienced by girls and boys varied, with girls experiencing more emotional ACEs and boys experiencing physical maltreatment, family dysfunction and violence. Secondly, girls reported higher levels of mental health problems in comparison to boys scoring higher rates on both GAD-7 and PHQ-9. This study validated that gender differences should be considered when addressing the impact of

ACEs on mental health in adolescents, as girls may be more susceptible to ACEs and the negative impact on mental health.

HAAHR-PEDERSEN, I., HYLAND, P., HANSEN, M., PERERA, C., SPITZ, P., BRAMSEN, R.H., and VALLIÈRES, F., 2021. 'Patterns of childhood adversity and their associations with internalizing and externalizing problems among at-risk boys and girls.'

A second study used in this review was carried out by Haahr-Pedersen et al. (2021) who investigated if sex specific adversities exist among at risk CYP. This study used previous data collected from 2,198 CYP aged 1-17 who had been involved with Danish Children's Centres (DCC) between 2016-2018. These children were identified as having experienced or being suspected of CPA, CSA, and emotional abuse. Data was gathered through various interactions with the child/caregiver, case meetings, and existing records from the social sector. The study utilised a set of 12 binary coded items to measure childhood adversity and assess the different forms of abuse. Furthermore, indicators of mental health were evaluated based on clinical assessments conducted by DCC (psychologists and social workers) during individual sessions with each child. Various validated and age-appropriate mental health screening and assessment tools were employed during sessions, including the Beck Youth Inventories-II of Emotional and Social Impairment (BYI-II), the Trauma Symptom Checklist for Children (TSCC), and the Strengths and Difficulties Questionnaire (SDQ).

Descriptive statistics were computed for the variables of childhood adversity, age, and mental health. Additionally, chi-square and independent samples t-tests were conducted to explore potential sex differences in these variables. Latent Class Analysis (LCA) was also used to group adolescents based on their experiences of childhood maltreatment and psychosocial problems. The optimal number of groups was selected using various fit indices. The Lo-Mendell-Rubin adjusted likelihood ratio test was also used to compare models. Once the best fitting models were selected for boys and girls, class probabilities were assigned to each participant. The resultant groups were then compared in relation to age and levels of externalising and internalising problems using analysis of variance ANOVAs.

The study's findings presented girls experienced diverse combinations of adversities, including CSA and CPA, while boys predominantly experienced CPA alongside DV. These findings underscore the importance of recognising and addressing multiple adversities in at-risk populations. Multiple sub-groups with multiple adversities were identified, comprising approximately one third of the sample. The 'high poly adversity' group among girls exhibited the poorest mental health, while the female CSA group demonstrated significant mental health effects, particularly when combined with other adversities. The results collected from the data concluded that girls and boys where likely to be exposed to different types of adversity. In this study, it was found that girls had a higher likelihood of experiencing CSA, with poorer outcomes of overall mental health in comparison to the rest of the groups.

CHUNG, M.C. and CHEN, Z.S. (2020) – 'Gender differences in child abuse, emotional processing difficulties, alexithymia, psychological symptoms and behavioural problems among Chinese adolescents.'

Chung and Chen (2020) aimed to investigate gender differences in a range of mental health and behavioural symptoms following child abuse amongst adolescents ages 13-19 years old. The sample included 432 females and 368 males. The method used to find this information was a quantitative study which used self-reported questionnaires that were distributed to CYP from five local Chinese schools. There were five measures used to collect this information, the Childhood Trauma Questionnaire- Short Form (CTQ) was employed to assesses abuse and neglect. The emotional processing scale-25 (EPS-25) was used detect emotional processing issues. The Toronto Alexithymia Scale- 20 which identifies difficulty of being able to identify feelings, difficulty describing feelings and external oriented thinking. The general health questionnaire GHQ-28 which is designed to assess the probability of adolescents being diagnosed with psychiatric disorders during interviews. The final tool used was the Prediction Test of Problem Children (PPCT) which is a rating scale that is used to measure the overall problematic behaviours of students.

The key findings emerged from male adolescents reporting more emotional and physical neglect and displayed an external thinking style, while female adolescents reported more anxiety symptoms and learning difficulties. The patterns of association between these constructs were generally similar for both genders, except that alexithymia did not mediate

psychological symptoms in female adolescents. Male adolescents demonstrated a pattern where child abuse was associated with emotional processing difficulties, alexithymia, psychological symptoms, and behavioural problems. In contrast, for female adolescents, child abuse was associated with emotional processing difficulties, which were directly related to psychological symptoms. These findings suggest gender-specific variations in the relationships between childhood adversity and psychological outcomes.

WAMSER-NANNEY, R. and CHERRY, K.E., (2018) - 'Children's trauma-related symptoms following complex trauma exposure: Evidence of gender differences.'

Another vital source carried out by Wasmer-nanney, and Cherry (2018) provided insight as to how complex traumas can be displayed differently amongst boys and girls due to a lack of understanding within this area. The study used a cross-sectional design and collected data from a treatment-seeking sample of 167 children aged 3-18 years old and their legal guardians.

The study used three different measures to assess children's symptoms and trauma-related experiences: the Child Behaviour Checklist (CBCL) which is used to assess emotional and behavioural problems, this was completed by caregivers, the TSCYC, also completed by caregivers, and the University of California at Los Angeles Posttraumatic Stress Disorder Index (UPID), a self-report measure which was completed by children. The researchers conducted t-tests and chi-square analyses to compare groups and examine differences in exposure to trauma types and specific aspects of trauma. All statistical analyses were performed using SPSS for Mac, Version 23.

The main results to emerge from this study found gender differences regarding trauma types of exposure with male children were more likely to be exposed to DV, while female children were more likely to have experienced CSA and abuse by a caregiver. Female children exhibited higher levels of depression, dissociation, PTSD hyperarousal symptoms, and total PTSD symptoms, as reported by their caregivers. They also self-reported higher levels of sexual concerns and marginally more re-experiencing and total PTSD symptoms. This concluded females may be more likely to experience higher rates of mental health problems following complex trauma.

GAUTHIER-DUCHESNE, A., HÉBERT, M., and DASPE, M.-È., (2017) - 'Gender as a predictor of posttraumatic stress symptoms and externalizing behaviour problems in sexually abused children.'

Another important study in this systematic review examined the outcomes of CSA experienced by 447 children (319 girls and 128 boys) ages, and their parental figures focusing on identifying any gender differences in post-traumatic stress symptoms and behavioural problems. Trained research assistants used an adapted version of the History of Victimisation Form (HVF; Parent & Hébert, 2006) to code characteristics of sexual abuse based on information from the child's medical or clinical records. Children completed the Children's Impact of Traumatic Events Scale II (CITES-II; Wolfe, 2002) which assesses re-experiencing symptoms, avoidant behaviours, and hyperarousal problems related to PTSD and a sense of guilt following the abuse. The participants referred to symptoms experienced within the last month in response to the 46 items on the scale. Additionally, parental figures completed the CBCL which assesses internalising and externalising behaviour problems observed within the last two months. The instrument includes 113 items and evaluates symptoms such as anxious/depressed symptoms, withdrawal, somatic complaints, and rule-breaking/aggressive behaviours.

The study revealed gender-based differences in boys, with greater severity of abuse was associated with increased PTSD symptoms. In both genders, the sense of guilt was the most significant predictor of both PTSD symptoms and externalising problems. Yet overall girls had higher global PTSD scores, whereas boys were more likely to exhibit externalising behaviour problems. The study suggested that gender socialisation, abuse severity, and internalised stigma towards same-gender perpetrators may contribute to gender-based differences in SA outcomes.

HAGBORG, J.M., TIDEFORS, I., and FAHLKE, C., (2017) - 'Gender differences in the association between emotional maltreatment with mental, emotional, and behavioural problems in Swedish adolescents.'

A secondary quantitative study carried out by Hagborg, Tiderfors and Fahlke (2017) used data from the Longitudinal research on development in adolescents LoRDIA programme which is a long-term research program that examines how 1520 Swedish adolescents aged 12-18

develop alcohol and drug use and mental health problems. The original study used annual pen and paper surveys in classrooms to collect data from a non-clinical population. The measures assessed various topics, including externalising and internalising symptoms using the Strengths and difficulties questionnaire Swedish version (SDQ-S), psychosomatic symptoms by using the Psychosomatic Problem Scale (PsP), mental well-being was measured using an index created by Boson et al (2016), emotional neglect and emotional abuse which was assessed through the CTQ-SF. This study used data from the first wave of data which was collected in February and march of 2014 and the second wave of data which was collected in October 2014 which included 1134 children ages 12-13 years old.

This study aimed to examine how emotional maltreatment affects psychosocial functioning in early adolescents, specifically focusing on gender differences. The study used a 3x2 ANOVA to analyse the impact of emotional maltreatment on internalising, externalising, psychosomatic symptoms, and mental well-being. One-way ANOVAs were also conducted separately for boys and girls to explore differences in outcome variables between the three severity groups of emotional maltreatment. Effect sizes were calculated using eta square, following Cohen's guidelines, and IBM SPSS Statistical Software Version 21.0 was used for all analyses.

Following this the study revealed gender differences in how emotional maltreatment affects mental health outcomes. Girls reported higher levels of internalising and psychosomatic symptoms and lower levels of mental well-being than boys. Emotional maltreatment exposure intensified these gender differences. For externalising symptoms, there were no gender differences in the group reporting no emotional maltreatment. Emotional maltreatment had a stronger negative impact on mental health and well-being for both girls and boys than emotional abuse. Girls showed more significant increases in internalising symptoms than boys in response to emotional maltreatment. In conclusion, the study emphasises the importance of considering gender differences in assessing the impact of emotional maltreatment on girls' and boys' with slight gender differences in outcome variables of abuse.

VAHL, P., VAN DAMME, L., DORELEIJERS, T., VERMEIREN, R., and COLINS, O., (2016)- 'The unique relation of childhood emotional maltreatment with mental health problems among detained male and female adolescents.'

The final study to be used in this systematic review was conducted from Vahl et al. (2016) who aimed to highlight the link between emotional maltreatment and mental health problems in adolescents drawing particular attention to gender differences. Participants included 341 adolescents aged 12-17 years old (156 boys and 185 girls) who were recruited from Juvenile Detention Centres (JDCs) in Flanders, Belgium. This study used two measures: the Childhood Trauma Questionnaire (CTQ) to assess five types of childhood maltreatment, and the Youth Self-Report (YSR) to assess internalising and externalising mental health problems in adolescents. Throughout the study, it became apparent that gender differences where a prominent theme. The study identified gender differences in maltreatment experiences and mental health problems among detained adolescents. Specifically, girls reported higher levels of maltreatment experiences, and CEA was positively associated with internalising problems in both genders. CSA was more strongly associated with internalising problems in girls, while in boys it was weakly related to externalising problems. This emphasises the link on gender differences following types of trauma and the potential outcomes on girls' and boys' mental health and behaviour.

Discussion

The aim of this discussion is to examine the prominent themes identified from various sources presented in the results section. The results provided three key themes including: Trauma Exposure, Mental Health, and Externalising Behaviours. These themes will be analysed alongside current literature to gain insight into the potential gender differences when being exposed to trauma and its impact upon CYP mental health as well as their behaviour. It will then discuss the limitations and strengths alongside future recommendations from this systematic review.

Trauma Exposure

The first theme to emerge was gender differences and the different types and prevalence of trauma exposure. Dierkhising et al. (2013) and Teague et al. (2008) indicate that boys and girls generally encounter distinct ACEs, with boys tending to face a higher prevalence of CPA, while girls are more likely to experience CSA.

This became clear that trauma differed amongst genders within the results section. A cross sectional study used in this review by Jiang et al. (2022) used a relatively large sample which included 12,421 Chinese adolescents to assess the relationship between ACEs, mental health, and gender differences. In the overall study only 35.09% had experienced at least one type of ACE which is relatively low in comparison to other studies. Wang and Lui (2014) and Lansford et al. (2005) suggest that compared to Western societies, Asian societies are more accepting of strict parental discipline and punishment. This can impact adolescents' perceptions of whether they have experienced maltreatment due to it being accepted in their culture, potentially leading to underreporting of ACEs. Additionally, this survey found girls reported more ACEs in comparison to boys (37.67% vs 32.25%). These gender differences are consistent with previous research which present girls reporting higher aces than boys (Baglivio et al., 2014; Dube et al., 2006; Felitti et al., 1998). In a study carried out by Baglivio et al. (2014) 29% of adolescent girls experienced six or more ACEs compared to 14% of boys. This provides emphasis on the link between gender differences in trauma exposure.

Nonetheless, gender stereotypes within society plays a key role in the disclosure of trauma (Winstok and Weinberg, 2018). Females may be more likely than males to report ACEs possibly due to societal gender roles in which females are encouraged to express their feelings more openly than males (Orille, Marton and Taku, 2022). This may emphasise how socially

mandated roles and behavioural patterns influence how men/boys and girls/women report and express psychological pain (Lawson-Boyd and Meloni, 2021).

Furthermore, Wamser-Nanney and Cherry (2018) used chi-square analyses to examine whether there were differences among groups in terms of their exposure to specific types of trauma and various aspects of the trauma. As anticipated, it was found that girls had a higher likelihood of experiencing CSA, with a statistically significant result of $X2\ (165) = 5.18$, $p = .02$. On the other hand, boys were somewhat more prone to being exposed to DV, with a result of $X2\ (165) = 3.60$, $p = .058$. Similarly, the results from Haahr-Pedersen et al. (2021) found that girls and boys experience different types of adversities, as revealed by LCA. Girls showed greater complexity in adversity exposure, with five identified classes, and were predominantly exposed to combinations of CSA and CPA (80%). On the other hand, boys were exposed to fewer types of adversity, with three identified classes, and were mainly exposed to CPA (90%), with almost universal exposure. Boys were also more likely to experience other adversities such as parental conflict and DV.

The effects of different types of ACE exposure may manifest and be communicated differently based on gender (Duke et al., 2010; Leban and Gibson, 2020). In support, Banyard, Williams, and Siegel (2004) suggest there are issues with certain types of exposure in ACEs with survivors of CSA experiencing extreme feelings of shame and guilt. This is particularly true when the abuser is someone the victim knows and trusts, such as a family member or close friend. Easton, Saltzman, and Willis (2014) add survivors may believe they were somehow to blame for the abuse, or that they "allowed" it to happen. Shame and guilt can be extremely upsetting, making it difficult for survivors to disclose CSA, research suggests figures of CSA are likely to be much higher but due to the nature and severity, figures are likely to go under reported (McElvaney et al., 2022). Boys may feel more shame as a result of the internalised stigma associated with same gender perpetrators. Males account for the great majority of reported child abusers (Manay and Collin-Vezina, 2021). Higher rates of guilt have been linked to boys due to believing they were unable to protect themselves, which is a defined responsibility for men within gender norms. In fact, these gender norms may strengthen boys' shame, influencing outcomes and delaying disclosure (O'Leary and Barber, 2008)

Jiang et al. (2022) also highlighted a difference in girls' exposure to emotional related aces such as emotional abuse (21.11% vs 19.50%) and emotional neglect (18.29 vs 15.24%) and boys reporting more physical maltreatment and violence related aces. In line with these

findings, research has suggested emotional neglect and abuse may have a greater impact on the development of internalising mental health symptoms than physical maltreatment (Hamilton et al., 2013; Brown, Cohen, Johnson, and Smailes, 1999). Controversially, Chung and Chen (2020) used a quantitative study to assess gender differences in types of child abuse, emotional processing difficulties, psychological symptoms, and behavioural problems amongst 800 adolescents aged 13-19 years old. This study found male adolescents reported significantly higher levels of both emotional and physical neglect in comparison to females. Overall, the evidence correlates that the prevalence of ACEs is generally higher in girls, with both girls and boys being at risk for experiencing distinct ACEs.

Mental Health

Childhood adversity has been extensively linked to an increased risk for a range of mental health problems in CYP (Ogundele, 2018; Greger et al., 2015). Trauma can cause alterations in thoughts, emotion, and behaviours that is connected to distress and impaired functioning ultimately leading to poor mental health (Larson et al., 2017). The results section has consistently shown that regardless of gender CYP who have experienced adversities are at risk for developing PTSD and internalising symptoms such as anxiety and depression. However, significant evidence on gender differences were amplified in these symptoms following traumatic experiences, with girls often being more vulnerable to poorer mental health implications following trauma (Vahl et al., 2016; Wasmer-Nanney and Cherry, 2018; Gauthier-Duchesne, Herbert and Daspe 2018; Chung and Chen, 2020; Haahr-Pedersen et al., 2021; Jing et al., 2022).

PTSD is a mental health condition which can potentially arise from a traumatic event. In 2013, WHO estimated 3.6% of the world's population suffered from PTSD (WHO, 2013). In addition, Alisic et al. (2014) provides statistics that enlightened the potential gender differences in response to PTSD following from a traumatic event, suggesting up to 3% to 15% of girls and 1% to 6% of boys experience PTSD. A study carried out by Guthier-Dushesne, Herbert and Daspe (2018) assessed PTSD using T-tests to identify global PTSD scores in both girls and boys following CSA. These results revealed girls (Mean (M) = 46.09; Standard Deviation (SD) = 17.15) demonstrated higher overall PTSD scores ($t(425) = 3.23$; $p = 0.001$; Cohen's $d = 0.35$) in comparison to boys (M = 39.92; = 19.38). Similarly, Wasmer-nanney and Cherry (2018) assessed complex trauma to assess overall PTSD scores in boys and girls. in relation to post-traumatic stress (PTS), caregivers of female children reported higher levels of arousal

symptoms compared to caregivers of male children. The mean score for males was 60.69 (SD = 12.71), while for females it was 68.41 (SD = 20.31). Additionally, caregivers of female children endorsed higher levels of overall Post traumatic stress symptoms. The mean score for males was 66.90 (SD = 13.95), while for females it was 73.79 (SD = 20.26).

Both studies have found that girls may be more susceptible to the effects of PTSD following trauma. Furthermore, in both studies girls where exposed to higher levels and repeated of CSA which is directly linked to an increase in mental health problems, including PTSD (Briere, 2004; Briere, Kaltman, and Green, 2008). In addition, research Vaughn-Coaxum et al. (2018) suggests that identifying and diagnosing PTSD in CYP is a complex task. This complexity arises because various mental and behavioural health issues can manifest in CYP, such as aggressive behaviour, difficulty regulating emotions, and challenges in establishing healthy relationships (Smith et al., 2013). These issues may not be recognised when screening specifically for PTSD. It is important to consider that different genders may exhibit and cope with PTSD in distinct ways, adding to the complexity of identification and diagnosis (Pineles et al., 2017).

A further five studies identified gender differences in internalising symptoms of trauma which where all higher amongst girls (Jiang et al. 2022; Hagborg, Tidefors and Fahlke, 2017; Val et al. 2016; Chung and Chen, 2020; Haahr-Pedersen, 2021). Both Hagborg, Tidefors, (2017) and (Val et al. 2016) investigated the link between emotional maltreatment, both studies reported an increase in higher internalising symptoms amongst girls than boys. Additionally, Jiang et al. (2022) both found girls reported increased anxiety and depression were positively correlated with the number of ACEs experienced in both genders. In this study, the occurrence of depressive symptoms was reported to be higher among girls compared to boys (22.07% vs 13.19%). Similarly, the incidence of anxiety symptoms was a higher prevalence among girls compared to boys (13.15% vs 7.06%). Yet it was highlighted within this study girls were exposed to higher rates of ACEs which increases the likelihood of experiencing mental health issues. This can be validated through one of the largest ACE studies carried out by Felitti et al. (1998), who found the higher the ACE score the increased impact on this had on mental health with the likelihood of developing depression and anxiety.

Although mental health has been identified as an individual theme, it is critical to recognise the overlap between the issues of trauma. Mental health is a broad topic that will be impacted in a

variety of ways, regardless of trauma, which may play a role in symptomology and gender disparities (Acehnese et al., 2012). When looking at factors that can influence mental health, gender differences, and traumatic experiences, the literature identified other areas to consider, including biological factors (Panomareva and Ressler, 2021; Klabunde et al. 2017), culture (Gray and Rarick, 2018), and timing, development, and accumulation of ACEs (Jones, Pierce, and Shafer, 2022). However, these topics did not appear frequently enough to be considered dominating themes in this review. Yet it is important to identify other topics for future research, such as potential factors influencing the development of mental health disorders following trauma and the potential consequences for gender differences.

External Behaviours

In addition to mental health difficulties following trauma, the final theme that was identified is how this can present in external behaviours. CYP who have suffered trauma may exhibit externalising tendencies due to a lack of coping mechanisms for their psychological suffering. Trauma can cause overwhelming emotions that are difficult to manage without support, resulting to aggressive, hyperactive, impulsive, rule-breaking, and delinquent behaviours (Van Der Kolk, 2005). These behaviours may be the result of problems with self-control, social skills, and emotional management, and they may eventually lead to contact with the justice system (Landolt, Cloitre and Schnyder, 2017). Prior research on adversity and trauma, as well as mental health problems among juvenile justice-involved adolescents, has found greater rates of adversity and trauma for these youth when compared to youth in the general population. This demonstrates the potential impact of adversity and externalising issues with juvenile offenders being four times more likely to report four or more ACEs (50% vs. 13%) (Bagivio and Epps, 2016).

The link between externalising behaviours was found the be a prominent theme across five studies who all agreed that trauma significantly influenced external behaviours within both genders (Vahl et al., 2016; Gauthier-Duchesne, Herbert and Daspe, 2017; Hagborg, Tiderfors and Fahlke 2017; Chung and Chen 2020; and Haahr-Pedersen et al., 2021).

Mixed results were found from this review regarding external behaviours and gender differences, two studies included in this review validated the link between behavioural issues and gender differences following CSA. Vahl et al. (2016) used block wise multiple liner

regression analyses which identified emotional maltreatment was linked to externalising problems in both girls and boys. Interestingly, gender disparities in those who had experienced CSA were identified, which was specifically connected to externalising behaviours in boys but not in girls. Similarly, Gauthier-Duchesne, Herbert and Daspe (2017) presented that reports from parents using the CBCL with boys and girls who had experience CSA, indicating higher overall levels in externalising behaviours in boys such as aggressiveness and delinquency than girls. Overall, 46.8% of participants met the clinical threshold for externalising behaviours. According to the study's findings, boys (with a mean score of 64.71 and a standard deviation of 10.86) are more likely than girls (with a mean score of 60.09 and a standard deviation of 11.84) to have externalising behaviour problems. This distinction was discovered to be statistically significant (t (425) = -3.76, p 0.001), with a moderate effect size (Cohen's d = 0.40).

These findings develop the understanding of the unique relations to CSA for boys, according to the findings, boys may be attributable to differences in coping mechanisms and socialisation patterns (Vahl et al 2016; Guuthier-Duchesne, Herbert and Daspe, 2017). In support of these findings Agnew (1992) general strain theory consists of three main attributes that influence strain and stress which explains without proper coping abilities, stress causes unpleasant feelings such as rage or depression, which can promote externalising behaviours. The theory has relevance to gender differences in response to ACEs suggesting gender differences in the types of emotional responses to strain and stress stating males are likely to act on externalising emotional responses in comparison to females. This theory has been widely supported through the literature on stress and adversity which correlates these findings supporting boys are more likely to act through externalising behaviours following traumatic experiences than girls (Broidy, 2001; Kaufman, 2009; Francis, 2014).

In contradiction of these findings, other studies in this review who found little to no differences on externalising behaviours (Hagbrod, Tidefors and Fahlke, 2017, Chung and Chen, 2020; Haahr-Pedersen et al, 2021). One study carried out by Hagborg, Tidefors and Fahlke (2017) explored the role of emotional maltreatment on adolescent behaviour in response to trauma using the Strengths and difficulties Questionnaire. Surprisingly, no gender differences were reported regarding externalising behaviours. This correlates with research carried out by Bevilacqua et al. (2021) who reported no gender differences in regard to behavioural outcomes following trauma amongst both girls and boys with the impact of trauma having similar effects.

Limitations

Like any other research, this systematic review did not come without limitations. The first limitation presented from this review was the studies included where based on quantitative data or secondary analysis, although this allows objective measures of numerous aspects of trauma and its impact on CYP quantitative measures rely on self-reported information. This can potentially be biased or inaccurate as a result of social desirability or reluctance to share sensitive information, potentially impacting the overall studies reliability (Bentley, Hartley, and Bucci, 2019). For future research, a qualitative approach could offer more in-depth knowledge of the subjective experiences of traumatised CYP. This can provide insights into the complex emotional and psychological impacts of trauma. This would also provide CYP with a voice allowing them to share their experiences and ideas, quantitative measures alone may not convey (Boeije et al., 2013).

The second limitation is regarding the participants. Firstly, the genders included within this study where limited to boys and girls which is not a full representation within the population as many CYP fall outside of this category. Secondly, participants were recruited from Danish Children Centres, a Child Advocacy Centre where children were seeking treatment for complex trauma, and Juvenile Detention Centres. This sample may not provide a full representative of the general population of traumatised CYP. These settings and genders may only capture a subset of traumatised individuals, such as those who have been separated from their homes or have been involved in the legal system (Noble and Smith, 2017). As a result, it may be more appropriate to employ more diverse samples that includes people from various settings to ensure that the findings are more broadly applicable (Polit and Beck, 2010).

Strengths

In conjunction to the limitations, numerous strengths surfaced from this systematic review. The first strength is this study focused primarily on CYP and their experiences of trauma rather than the adult population which seems to be mainly focused on when researching trauma. This encourages raising awareness around the impact's trauma can have on CYP (Pynoos et al., 2008). Raising awareness in this area is essential as it can reenforce preventative measures, provide a clear understanding and reduce stigma around the issues CYP may face through experiencing trauma (Metzler et al., 2017). This review also helps understand trauma through

a more gender focused lens in terms of the types of trauma girls and boys are likely to be exposed to and the impacts this can have on mental health and behaviour. Research that explores this gap can increase the ability to recognise gender specific experiences and responses to trauma which can increase knowledge for assessing, diagnosing, and treating trauma.

Future Recommendations

This systematic review has provided insight to how trauma can have potential different outcomes for boys and girls. To effectively address the mental health consequences of childhood trauma, future research should further explore the unique needs and experiences through a child and gender-lens. Providing education about gender-based differences in trauma responses can be helpful, this can promote more effective interventions and reduce stigma and shame associated with trauma (Dorzek and Drozeok, 2004). This may involve researching and developing interventions that are tailored to different genders, such as creating gender-specific support groups, treatment approaches or counselling sessions (D' Andrea et al., 2012). Yet, a potential concern is that adopting a gender-specific approach to trauma may perpetuate gender stereotypes. This could potentially exclude individuals who do not conform to traditional gender roles and limit their experiences and needs. Therefore, it is important that future research includes and takes a gender-sensitive approach that recognises the diversity of experiences and needs within each gender (Kimerling, Weitlauf and Street, 2021). Furthermore, future research could investigate further longitudinal studies to better understand the long-term impacts of trauma on children and adolescents, as well as any gender differences in these effects. Using Longitudinal studies would provide insights into the enduring effects of trauma over time. By following individuals over an extended period, researchers can observe how trauma influences development, mental health, and overall well-being throughout different stages of life (Alisic et al., 2011). This knowledge can contribute to the development of targeted interventions and support services for individuals who have experienced trauma.

Conclusion

To sum up this review, the study aimed to investigate the gap between childhood trauma and how gender differences can potentially impact the mental health of CYP. This was reflected in a systematic literature review approach. The search strategy included a complete search of three databases, with the use of appropriate search phrases directly linked to the aim of the review, and the combination of inclusion and exclusion criteria to eliminate any undesirable research that were not relevant to the aim of the study. This left the researcher to examine all of the 7 articles that met all of the criteria listed in 2.5. From the results of these 7 articles three key themes emerged to explore gender differences and trauma in light of the impact on CYP mental health. These themes and the current literature confirmed that there is a link regarding gender differences in the experiences of trauma which can impact both mental health and behavioural outcomes. Yet to adequately address the mental health implications of childhood trauma, it is essential for future research to delve deeper into the distinct requirements and experiences of children and genders. Raising awareness about gender-specific differences in trauma responses can contribute to more effective interventions, while also diminishing the stigma and shame associated with trauma.

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