

The Impact of Childhood Trauma on Adolescent Sexual Health: A Scoping Review

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ABSTRACT

Background: Violence against children is a serious global problem. The United Nations reports that more than one billion children experience violence every year. Childhood trauma resulting from such violence has a significant impact on adolescent sexual health, increasing the risk of early sexual initiation and sexually transmitted infections. This study aimed to identify the nature and scope of available research literature on the impact of childhood trauma on adolescent sexual health.

Subjects and Method: This was a scoping review within the Arkey and O'Maley approach. The framework used in this study employed PCC (population, concept, and context). The population includes adolescents with childhood trauma, the concept focuses on adolescent sexual health, and the context is childhood trauma. The inclusion criteria in this study were primary research articles using English or Indonesian published in the last 10 years (2015 to 2025), full-text articles, and free. Article selection used Rayyan described in the PRISMA Flowchart, and the Critical Appraisal article assessment used Joanna Briggs Institute (JBI).

Results: The results of the study, which included a total of 9 articles, stated that childhood trauma in children can be caused by various forms of violence against children, including physical violence, sexual violence, verbal violence, parental divorce, domestic violence, and neglect. All types of childhood trauma are significantly associated with risky health outcomes such as early sex, unmarried sex, teenage pregnancy, being a teenage parent, consuming illegal drugs and alcohol, and early puberty. Each increase in the type of childhood trauma experiences significantly increases risky sexual health.

Conclusion: Adolescents who have childhood trauma are more at risk of various types of high-risk health behaviors such as early sexual intercourse, casual sex, teenage pregnancy, becoming teenage parents, at risk of Sexually Transmitted Infections (STIs), early puberty, consuming illegal drugs and alcohol, and committing violence.

Keywords: Sexual health, trauma, adolescents, childhood

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BACKGROUND

Sexual violence against children is a critical and under-recognized global issue that constitutes a severe public health. According to

the WHO, sexual violence includes any sexual act directed against a person's will, regardless of the relationship to the victim and setting. It encompasses acts such as sexual

harassment, unwanted touching, and rape (De-Schrijver et al., 2022). This type of violence has devastating impacts on a child's physical, emotional, and psychological development, leading to long-term mental health issues, disrupted social functioning, and inter-generational trauma. The United Nations (UN) reports that 1.00 to 1.25 billion children are subjected to violence each year (Ferrara et al., 2024). The latest report from the United Nations Children's Fund (UNICEF) almost 400 million children under the age of 5 or 6 out of 10 children experience violence in the world: physical, emotional, and sexual violence (Unicef, 2024). UNICEF also stated that violence against children has reached a record high in history. This is because 1 out of 6 children in the world grows up in a conflict zone, which results in them facing various forms of violence: physical, emotional, and sexual (Unicef, 2024). In 2023, the UN recorded 32,990 types of violent violations against 22,557 children in 26 conflict zones (Unicef, 2024). West Asia and Africa are among the countries reporting the highest rates of childhood violence, with 42.8% of children as victims (Whitten et al., 2024).

Childhood trauma significantly impacts adolescent sexual health, leading to increased risky health behaviors, including early sexual initiation, multiple sexual partners, and sexually transmitted infections (STIs) (Wood et al., 2022). Unsafe living conditions result in increased sexual violence against female adolescents, forced prostitution, and children forced to work (Unicef and Welle, 2024). The results of the study (Hughes et al., 2017) state that the more types of childhood trauma a child experiences, the greater the risk of poor health. Several studies have found that the behavior that emerges in adulthood is rooted in the trauma experienced by a person in childhood. Sexual abuse, bullying, or violence from parents are some childhood traumas that cause stress in

children and can have an impact on the child's future in adulthood (Kim et al., 2017).

Prevention of violence against children is now also an international concern. In the UN 2030 agenda, contributing countries are committed to achieving 17 global Sustainable Development Goals (SDGs) by 2030. The 16th goal of peace and justice discusses the focus on handling childhood trauma in children, violence against children and focus on early childhood development as a means to ensure lifelong health and resilience (Hughes et al., 2017). This study aimed to identify the nature and scope of available research literature on the impact of trauma on adolescent sexual health, by considering the impact of physical, sexual and emotional violence experienced by adolescents in childhood. By using the scoping review method, this study will identify and analyze literature that is appropriate and relevant to the research objectives based on the latest evidence-based. The results of this study are expected to contribute to intervention programs and policy development on sexual health, especially for those who have experienced childhood trauma.

SUBJECTS AND METHOD

1. Study Design

This scoping review uses the Arksey and O'Malley Framework (2005), by identifying research questions using the PCC Framework, namely Population, Concept, and Context. Identifying relevant articles applied 3 databases, namely PubMed, WILEY, and Science Direct, and used 1 AI article search, namely Research Rabbit. Furthermore, by identifying questions and objectives of the scoping review, identifying relevant articles, then selecting articles, data carting, compiling, summarizing, and reporting results. The PCC Framework used for the population in this study is adolescents with childhood

trauma, and the Concept is Sexual Health, and the context of childhood trauma.

Researchers identify research questions regarding the impact of childhood trauma on adolescent sexual health used as references in searching for articles. Determining research questions is a stage in conducting qualified research (Widiasih et al., 2020). In this study, researchers identified scoping review questions using the Population, Concept dan Context (PCC) framework.

Relevant literature was identified through systematic searches in PubMed WILEY and Science Direct and used 1 AI article search, namely research rabbit using Boolean and truncation operators. Search terms included combinations such as: (Adolescen* with childhood trauma OR Teen* with childhood trauma OR Youth with childhood trauma) AND (Adolescen* sexual health OR Teen* sexual health OR Sexual health among adolescent* OR Sexual and reproductive health OR Risky sexual behavior) AND (Childhood trauma OR Adverse childhood experience* OR Early life trauma).

2. Inclusion Criteria

The inclusion criteria for this scoping review comprised primary research articles published within the last 10 years (2015–2025), written in Indonesian or English, available in full text, and discussing the impact of childhood physical, sexual, and emotional violence trauma on adolescent sexual health.

3. Exclusion Criteria

The exclusion criteria included commentaries or editorial articles, non-peer-reviewed literature, general literature reviews lacking empirical data, and articles for which full-text access was unavailable.

4. Operational Definition of Variable

The following definitions are tailored to the specific context of childhood trauma, adolescent sexual health, and sexual risk behavior.

Childhood Trauma: Traumatic experiences that occur in individuals before the age of 18, including physical, emotional, and sexual abuse, neglect, and exposure to domestic violence or violence in the environment. This trauma can contribute to an individual's psychological and behavioral development during adolescence.

Adolescent Sexual Health: The sexual health of adolescents, encompassing physical, emotional, and social aspects, including knowledge about sexuality, healthy sexual practices, contraceptive use, and risks related to sexually transmitted infections and unintended pregnancy.

Sexual Risk Behavior: Behaviors that increase the likelihood of negative sexual health outcomes among adolescents, such as early sexual activity, unprotected sex, multiple sexual partners, or transactional sex.

5. Study Instruments

The researcher employed the PRISMA Flowchart to illustrate the article selection process. The PRISMA Flowchart is an evidence-based tool to enhance transparency and consistency in reporting systematic reviews and meta-analyses. It consists of a set of minimum reporting items that ensure clarity in documenting the selection process. This tool was deemed appropriate for the current study as it improves the quality of reporting in scholarly publications. Once the article selection process was completed, the researcher conducted a feasibility assessment of the chosen articles using the Critical Appraisal method developed by the Joanna Briggs Institute (JBI). The JBI Critical Appraisal Tools are globally recognized instruments designed to evaluate research studies' methodological quality and ensure the evidence's reliability and validity (Porritt et al., 2014).

6. Data Analysis

The concluding phase consists of organizing the review findings into a comprehensive and structured report. This document presents a synthesis of insights drawn from the selected studies, an evaluation of emerging patterns or trends, and proposed recommendations addressing the gaps identified within the current body of literature.

RESULTS

The data analysis was conducted on 9 selected articles to identify key elements of each study, including research objectives, study

design, sample size, and results or findings obtained. Among these articles, all used quantitative research designs, 7 used cross-sectional study designs, and 2 used cohort study designs. Eight articles were from developed countries, and one was from a developing country. After analyzing and evaluating these key elements, the relevant findings for this scoping review are as follows. Figure 1 presents the PRISMA-ScR flow diagram, which illustrates the systematic process undertaken for article identification, screening, eligibility assessment, and final inclusion in this scoping review.

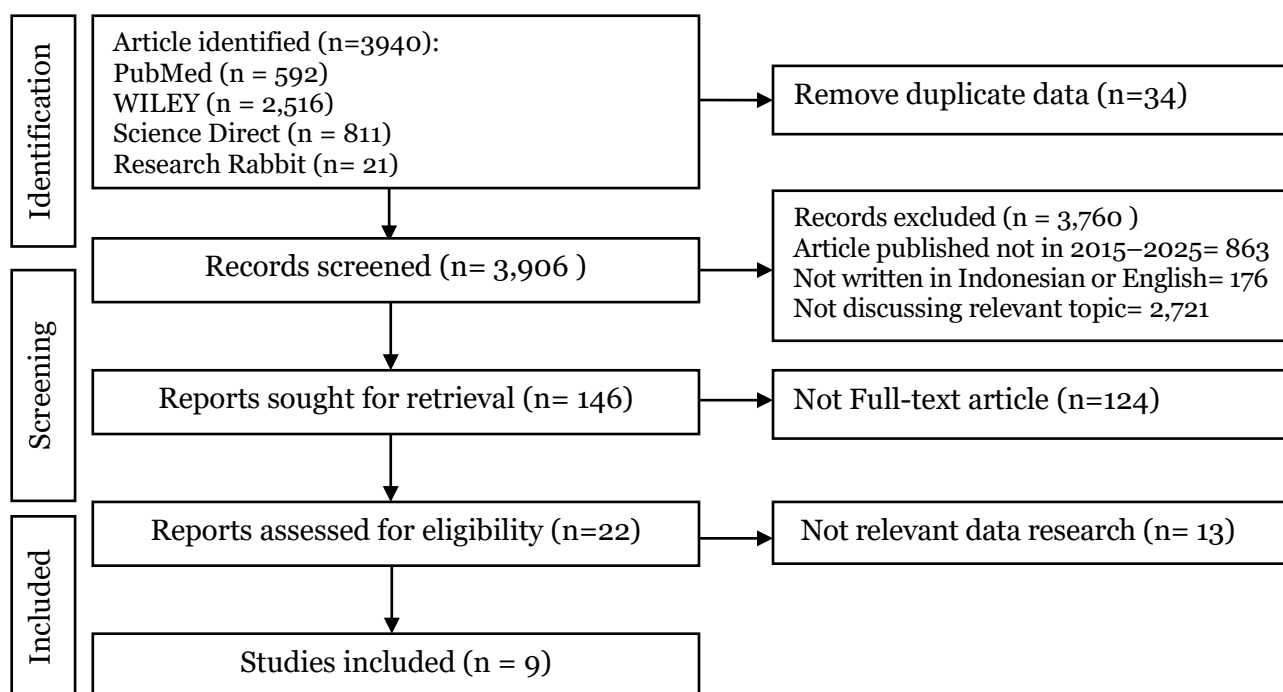


Figure 1. PRISMA-ScR Flow Diagram

After conducting a comprehensive search of various databases, a total of 3,906 records were initially identified as potential sources for this systematic review. After removing 34 duplicate records, the screening process began, in which 3,906 articles were carefully reviewed by title and abstract. As a result, 3,760 records were excluded because they did not meet the inclusion criteria. Next, 146 reports were searched for full-text retrieval to assess their relevance. However, 124 of

these reports were inaccessible, leaving only 22 reports available for eligibility assessment. After a comprehensive evaluation based on the established criteria, 13 reports were excluded due to incorrect or irrelevant data, leaving 9 studies included in the final review.

To ensure transparency and consistency in the selection process, the PRISMA 2020 Flow Diagram was used as a reporting tool. PRISMA, which stands for Preferred Report-

ing Items for Systematic Reviews and Meta-Analyses, provides a structured framework for documenting each stage of a systematic review, including study identification, screening, eligibility assessment, and final inclusion. The use of this evidence-based tool enhances the clarity and credibility of the review process, ensuring methodological rigor. Additionally, a critical appraisal approach was applied to evaluate the methodological quality of the selected studies. Factors such as internal validity, relevance, and generalizability were assessed to determine their contribution to the research topic. This appraisal process strengthens the reliability of the

findings and ensures that only high-quality studies are considered in the review.

Through this rigorous selection process, the nine included studies were analyzed to identify patterns, trends, and gaps in the existing literature. These articles encompassed cross-sectional study and cohort study research designs. Each research design was evaluated using different critical appraisal criteria. The researchers used a rating system categorized into three levels of quality, such as Very Good (Grade A), Good (Grade B), and Fair (Grade C), to assess the eleven articles that passed the critical appraisal stage.

Table1. Critical appraisal of included studies

Author (Year)	Study Design	Score	Max Score	Grade
Wood et al. (2022)	Cross-Sectional Study	32	A (Very Good) = 25-32 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Bellis et al. (2023)	Cross-Sectional Study	32	A (Very Good) = 25-32 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Flaviano and Harville (2021)	Cohort Study	30	A (Very Good) = 25-33 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Tsuyuki et al. (2019)	Cross-Sectional Study	28	A (Very Good) = 25-32 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Musa et al. (2018)	Cross-Sectional Study	28	A (Very Good) = 25-32 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Fang et al. (2016)	Cross-Sectional Study	32	A (Very Good) = 25-32 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Noll et al. (2017)	Cohort Study	33	A (Very Good) = 25-33 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Ding et al. (2018)	Cross-Sectional Study	28	A (Very Good) = 25-32 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A
Azri et al. (2024)	Cross-Sectional Study	28	A (Very Good) = 25-32 B (Fairly Good) = 17-24 C (Moderate) = 9-16 D (Poor) = 0-8	A

Table 2. Summary of Included Studies in the Scoping Review: The Impact of Childhood Trauma

Author (Year)	Country	Study Design	Population (P)	Concept (C)	Context (C)	Key Notes
Wood et al. (2022)	United Kingdom	Cross-sectional study	Adult general populations in different regions of the UK	Adverse childhood experiences (ACEs)	Public health	The number of childhood traumas was significantly associated with sexual health outcomes, with the odds of these outcomes between three and seven times higher for those with 4+ childhood traumas compared to those with no childhood trauma. Trauma-informed interventions in education and healthcare are crucial to mitigating these risks.
Bellis et al. (2023)	United Kingdom (England and Wales)	Cross-sectional study	People aged 18 to 69	Adverse childhood experiences (ACEs)	Public health	This study found that even experiencing one type of ACE can increase the risk of health-damaging behaviors, including substance abuse, mental health disorders, and involvement in violence or criminal behavior. These findings highlight the importance of early intervention and public policies that prevent ACEs from childhood
Flaviano and Harville (2021)	United States	Cohort Study	Reproductive-age women	Relationship between adverse childhood experiences (ACEs) and adolescent reproductive/ pregnancy plans	Women exposed to environmental and social stress	ACEs were linked to higher odds of wanting children in the future, particularly among women with lower educational attainment. ACE exposure was associated with increased adolescent pregnancy risk. Specific types of ACEs (physical, sexual, neglect, and substance abuse) had stronger associations with reproductive outcomes. Findings highlight the importance of social context and trauma-informed care in reproductive health interventions.
Tsuyuki et al. (2019)	United States	Cross-sectional study	Black women aged 18–44 years	Adverse Childhood Experiences (ACEs) and early sexual initiation	Black women at high risk for HIV or STIs	12% of the sample reported very early sexual initiation, and 29% reported early sexual initiation. Each additional reported childhood trauma was associated with greater risk for very early sexual initiation, emotional abuse, physical

Author (Year)	Country	Study Design	Population (P)	Concept (C)	Context (C)	Key Notes
Musa et al. (2018)	Bosnia and Herzegovina	Cross-sectional study	Young adults aged 18-24	Adverse childhood experiences (ACEs) and health risk behavior	Childhood trauma	abuse, sexual abuse, witnessing maternal violence, and household substance abuse. Adverse Childhood Experiences (ACEs) are associated with a higher likelihood of engaging in risky behaviors such as early sexual activity, alcohol and drug use, and dating violence. Emotional neglect shows a strong correlation with risky behavior. Sexual abuse is associated with early sexual initiation, and parental divorce is closely linked to alcohol abuse. These findings highlight the critical need for trauma-informed care and early intervention strategies to mitigate the long-term negative health impacts arising from childhood adversity.
Fang et al. (2016)	United States	Cross-sectional study	Adults	Adverse childhood experiences (ACEs) and HIV risk behaviors, with gender-specific differences	ACEs, including childhood abuse and household dysfunction	ACEs were positively correlated with HIV risk behaviors, with males showing increased risk even with one ACE, while females showed heightened risk only after experiencing three or more ACEs. These findings highlight the importance of trauma-informed HIV prevention strategies tailored to gender-specific needs.
Noll et al. (2017)	United States	cohort study	Females ages 6-16 abused group and the comparison group	sexual abuse during childhood and early puberty	Puberty	Sexually abused females experienced earlier pubertal onset, with breast development beginning 8 months earlier and pubic hair development 12 months earlier than their non-abused peers. Early puberty in abuse survivors may increase psychosocial difficulties, menstrual and fertility problems, and reproductive cancer risks due to prolonged exposure to sex hormones
Ding et al. (2018)	China	cross-sectional	Sexually active adolescents aged	childhood sexual abuse (CSA) and	CSA and HRSBs among	CSA was significantly associated with increased engagement in HRSBs, including condom non-

Author (Year)	Country	Study Design	Population (P)	Concept (C)	Context (C)	Key Notes
		study	15–24 years	high-risk sexual behaviors (HRSBs)	unmarried adolescents	use, multiple sexual partners, casual sex, commercial sex, and anal intercourse. Males with CSA exposure had a higher risk of engaging in anal sex, while females were more likely to engage in unprotected sex during their most recent sexual encounter. Findings emphasize the importance of improving public awareness, enhancing social assistance systems for victims, and implementing gender-specific interventions for sexual health and CSA prevention.
Azri et al. (2024)	Oman	Cross-sectional study	Adults	Adverse childhood experiences (ACEs) and high-risk behaviors	Childhood trauma affects adult behavioral health	The findings show a strong correlation between ACEs and an increased risk of engaging in high-risk behaviors. Individuals with four or more ACEs had a significantly higher risk for smoking (OR: 2.6), alcohol consumption (OR: 2.9), and risky sexual behaviors (OR: 32). The study highlights the urgent need for public health interventions and trauma-sensitive care to mitigate the long-term impact of childhood difficulties in Oman.

Table 2 presents a comprehensive overview of various studies exploring the childhood trauma, particularly adverse childhood experiences (ACEs) and sexual abuse, has been consistently linked to various high-risk sexual behaviors and negative reproductive outcomes in adolescence and adulthood. Studies conducted across different geographic regions, including the United Kingdom, the United States, China, Bosnia and Herzegovina, and Oman, demonstrate the widespread impact of ACEs on sexual health. Many of these studies emphasize how early exposure to trauma can shape sexual initiation, risky sexual practices, substance use, and reproductive health decisions. For instance, Tsuyuki et al. (2019) explored the relationship between ACEs and early sexual initiation among Black women in the U.S., finding that childhood trauma significantly increased the likelihood of very early sexual activity, which in turn heightened their risk for HIV/STIs. Similarly, Ding et al. (2018) investigated how childhood sexual abuse influences high-risk sexual behaviors (HRSBs) among adolescents in China, illustrating gender-specific patterns where males were more likely to engage in anal sex, while females showed increased unprotected sexual practices.

The cultural and social contexts of childhood trauma also play a pivotal role in determining sexual health outcomes. Musa et al. (2018) examined young adults in post-war Bosnia and Herzegovina, where childhood adversity was found to correlate with early sexual experiences, substance abuse, and dating violence. Meanwhile, Azri et al. (2024) assessed ACEs in Oman, emphasizing the urgent need for trauma-informed public health interventions given the strong associations between childhood adversity and smoking, alcohol use, and risky sexual behavior. Additionally, studies such as Noll et al. (2017) provide insight into biological

consequences, demonstrating that childhood sexual abuse accelerates pubertal onset in females, potentially contributing to fertility issues, menstrual complications, and reproductive cancer risks later in life. These biological impacts reinforce the importance of early screening and psychological support for survivors of childhood trauma. The findings from these various studies collectively emphasize the importance of a trauma-focused approach in health, education, and social services. Given the long-term impact of adverse childhood experiences (ACEs) on adolescent sexual health, early intervention strategies, prevention programs, and support policies are urgently needed to address and mitigate the consequences of childhood trauma on positive outcomes for this vulnerable population.

1. Article Characteristics by Country

Based on the search results from three databases and one artificial intelligence-based article search tool, nine articles were found that met the objectives and inclusion criteria of this scoping review. Of these nine articles, eight were from developed countries, namely the United States (4 studies), the United Kingdom (2 studies), China (1 study), and Oman (1 study). Meanwhile, only one article originated from a developing country, namely Bosnia and Herzegovina (Figure 2).

This distribution indicates a significant geographical imbalance in the available literature, where research is still dominated by high-income countries. This is a critical concern, as the burden of adverse childhood experiences (ACEs) and their impact on sexual and reproductive health may be greater in low- and middle-income countries (LMICs) due to factors such as poverty, limited access to mental health services, and trauma resulting from conflict and social instability. The lack of contextual data from developing countries can hinder

the development of effective and culturally sensitive interventions. Therefore, more research is needed in this area to build an

inclusive and globally relevant evidence base to support equitable and trauma-responsive public health policies and services.

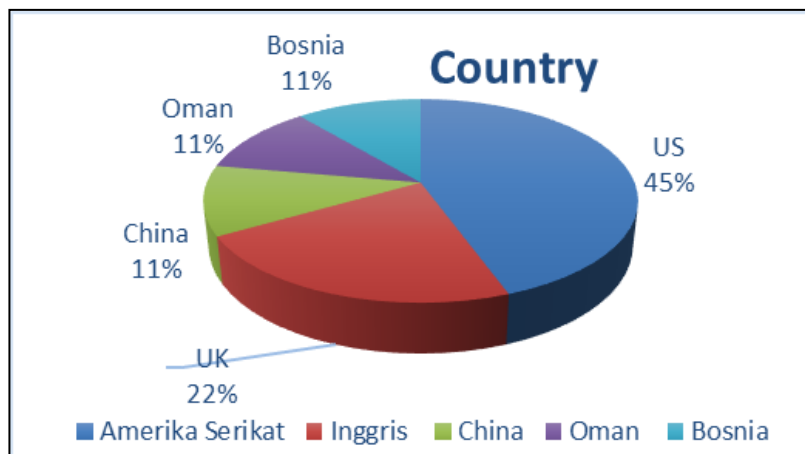


Figure 2. The impact of childhood trauma on adolescent sexual health articles: Characteristics by Country

2. Article Characteristics by Research Method

A total of nine articles included in this study were primary research articles with a quantitative approach. Of these, seven articles used a cross-sectional design, while the other two articles used a cohort design (Figure 3). The selection of these designs indicates that

most of the research is still observational in nature, with data collection at a single point in time, which may limit understanding of the causal relationship between adverse childhood experiences (ACEs) and their long-term impact on sexual and reproductive health (Figure 3).

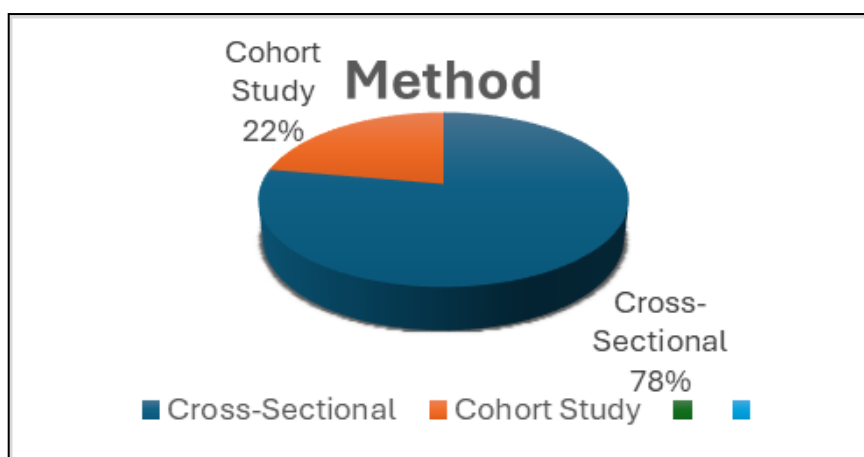


Figure 3. The impact of childhood trauma on adolescent sexual health articles: Characteristics by Method

3. Article Characteristics by Grade

As presented in Figure 4, all 9 selected articles were critically appraised using the

Joanna Briggs Institute (JBI) assessment tool. The results indicate that all articles received a Grade A, signifying high-quality

research. This is a noteworthy strength of the review, as it ensures the reliability and validity of the findings discussed. However, it is important to note that high-quality research is not synonymous with methodo-

logical uniformity. The varied study designs, although of high quality, bring different strengths and limitations to the review's conclusions.

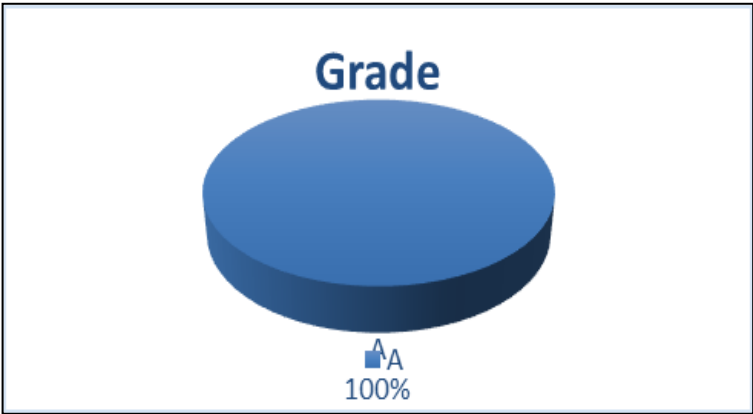


Figure 3. The impact of childhood trauma on adolescent sexual health articles: Characteristics Grade

4. Themes Identified

Based on the 9 articles reviewed, the researcher conducted a thematic analysis by coding, determining themes and subthemes. Three

main themes were obtained in this scoping review, the three themes are described in Table 3.

Table 3. Thematic mapping in the scoping review: the impact of childhood trauma on adolescent sexual health

Themes	Sub-Themes	Articles
Types of violence against children	Physical violence	(Bellis et al., 2023; Fang et al., 2016; Flaviano and Harville, 2021; Musa et al., 2018; Tsuyuki et al., 2019)
	Sexual violence	(Bellis et al., 2023; Ding et al., 2018; Fang et al., 2016; Flaviano and Harville, 2021; Musa et al., 2018; Noll et al., 2017; Tsuyuki et al., 2019).
	Verbal abuse	(Bellis et al., 2023; Fang et al., 2016; Flaviano and Harville, 2021; Musa et al., 2018; Tsuyuki et al., 2019)
	Parental divorce	(Bellis et al., 2023; Fang et al., 2016; Musa et al., 2018; Tsuyuki et al., 2019)
	Domestic violence	(Bellis et al., 2023; Musa et al., 2018)
The impact of childhood trauma on health	Neglect	(Flaviano and Harville, 2021; Musa et al., 2018)
	Early sex and casual sex	(Azri et al., 2024; Ding et al., 2018; Tsuyuki et al., 2019; Wood et al., 2022)
	Teenage pregnancy	(Bellis et al., 2023; Flaviano and Harville, 2021; Wood et al., 2022)
	Teenage parenthood	(Bellis et al., 2023; Wood et al., 2022)
	Sexually transmitted infections (STIs)	(Bellis et al., 2023; Fang et al., 2016; Wood et al., 2022)
	Drug and alcohol use	(Azri et al., 2024; Bellis et al., 2023; Fang et al., 2016; Musa et al., 2018; Tsuyuki et al., 2019)
	Decreased mental health	(Bellis et al., 2023)
Risk factors	Early puberty	(Noll et al., 2017)
	Being born to teenage parents	(Wood et al., 2022)

Themes	Sub-Themes	Articles
for risky sexual behavior	Parental care	(Wood et al., 2022)
	Low economic conditions	(Bellis et al., 2023; Tsuyuki et al., 2019; Wood et al., 2022)
	Having a partner 3 years older	(Tsuyuki et al., 2019)
	Pressure and force to have early sex	(Tsuyuki et al., 2019)

DISCUSSION

1. Theme 1: Types of Violence Against Children

Physical violence against children will have a negative impact on their growth and life as adults, physical violence significantly affects the use of illegal drugs, alcohol consumption, imprisonment, contracting sexually transmitted infections (STIs), and being at risk of committing violence (Bellis et al., 2023). Children who experience physical trauma are at risk of teenage pregnancy (Flaviano and Harville, 2021). Women who experience physical violence are at risk of having early sexual intercourse before the age of 18 (Tsuyuki et al., 2019). Physical violence is the third most frequently reported form of violence against women (Musa et al., 2018). Another study stated that those who had physical trauma were also 1.94 times more likely to be at risk of HIV (Fang et al., 2016).

Teenagers who have experienced childhood trauma of physical violence are twice as likely to have STIs, teenage pregnancy, and imprisonment. Physical violence experienced by children at home by family members is strongly associated with alcohol problems or alcohol addiction (Bellis et al., 2023). Physical violence in childhood may also lead to an increased risk of intimate partner violence among women (Flaviano and Harville, 2021).

Sexual violence against children is associated with their first sexual experience and is carried out through intimidation, with many respondents experiencing sex before the age of 19 (Musa et al., 2018). Sexual

violence is significantly associated with obesity, drug use, sexually transmitted infections (STIs), teenage pregnancy and poor mental health (Bellis et al., 2023). Women who experience sexual trauma tend not to have a clear reproductive plan (Flaviano and Harville, 2021). In another study, it was found that sexual violence increases early sexual initiation, casual sex and commercial sex, this is more often reported by women (Ding et al., 2018; Musa et al., 2018; Tsuyuki et al., 2019). Both men and women who experience sexual violence are at risk of contracting HIV (Fang et al., 2016). In women who experience sexual violence, pubic hair growth is 1 year faster and breast growth is 8 months faster (Noll et al., 2017). In men who experience sexual violence, the likelihood of having anal sex is higher (Ding et al., 2018).

Teenagers who experience sexual violence as children tend to be unsure about their reproductive plans, this is also influenced by educational factors. Women who experience sexual violence are more likely to not continue their education and experience mental health disorders that affect their career abilities, which ultimately lead them to take care of their children or become housewives (Flaviano and Harville, 2021).

Adolescents exposed to verbal violence in childhood are significantly affected by the prevalence of alcohol consumption, mental health disorders (Bellis et al., 2023; Musa et al., 2018). Women who experience verbal violence tend not to have reproductive plans (Flaviano and Harville, 2021). Those who experienced verbal violence significantly

experienced early sexual initiation (Tsuyuki et al., 2019). Verbal violence is the most frequently reported violence and is the most frequently experienced violence by children with a prevalence of 62% (Musa et al., 2018). Those who experience verbal abuse are also at risk of contracting HIV (Fang et al., 2016). Negative childhood environments can have damaging psychological impacts, such as hopelessness, which is associated with a greater desire for pregnancy among female adolescents (Flaviano and Harville, 2021).

Parental divorce was significantly associated with the risk of smoking (24.2%), excessive alcohol consumption, illicit drug use (16.1%), sexually transmitted infections, teenage pregnancy (9.1%), dating violence and imprisonment (Bellis et al., 2023; Musa et al., 2018). Parental divorce is the second most frequently reported trauma or violence (Musa et al., 2018; Tsuyuki et al., 2019). In other studies, parental divorce or separation can also increase HIV-risk behavior in men. Parental divorce is usually associated with other types of trauma such as Domestic Violence (DV), use of illegal drugs (Fang et al., 2016).

Domestic Violence is significantly associated with drug use, teenage pregnancy and violent acts (Bellis et al., 2023). International studies have shown that experiences of violence in childhood are associated with participation in risky lifestyles and poor health outcomes later in life. Domestic violence is the most frequently reported form of violence by women, with 15% of respondents having experienced or witnessed domestic violence. In the United States, reports of domestic violence are increasing by 16% (Musa et al., 2018).

Children who experience neglect are less likely to have reproductive plans and are at greater risk of teenage pregnancy (Flaviano and Harville, 2021). Child neglect is an underreported form of violence and is

significantly more frequently reported against women (Musa et al., 2018). Respondents who experienced neglect or abandonment were twice as likely to use alcohol, use drugs, and commit violence. Women who experienced neglect had a greater desire to start a family and provide their children with a better and safer life, in contrast to their own childhood experiences (Flaviano and Harville, 2021).

Childhood trauma is significantly related to sexual health; those who have 4 or more childhood traumas are four to seven times more likely to engage in early sexual intercourse. Boys are more likely to engage in early sexual intercourse than girls (Wood et al., 2022). Another study stated that half of the respondents had early sexual intercourse or very early sexual intercourse. Those who had 1 childhood trauma were also at high risk of experiencing early sex (Tsuyuki et al., 2019). Those who have childhood trauma are significantly associated with risky sexual behavior such as free sex, early sex, and commercial sex (Azri et al., 2024; Ding et al., 2018).

Significantly, adolescents with childhood trauma were significantly more likely to experience unintended pregnancy than those without childhood trauma (Bellis et al., 2023; Flaviano and Harville, 2021; Wood et al., 2022). The risk of teenage pregnancy increases with the amount of childhood trauma experienced. International findings also highlight that childhood trauma significantly increases the risk of teenage pregnancy. Toxic stress from exposure to childhood trauma without the care of family or adults can affect the child's neurological and biological functions, which can affect the child's perception, thoughts and behavior (Wood et al., 2022).

Adolescents who experienced childhood trauma were three times more likely to become parents as teenagers (13.4% vs.

3.9%, $p < 0.001$). Becoming teenage parents was more common among women (Bellis et al., 2023; Wood et al., 2022). Teenage parents need support to make the right choices or decisions as teenage parents, support young parents during pregnancy, and support during the parenting process to improve parenting skills (Wood et al., 2022).

Teenagers who experienced childhood trauma have a six times greater risk of contracting STIs (Bellis et al., 2023; Wood et al., 2022). Any type of childhood trauma in adolescents significantly increases the risk of HIV-risky sexual behavior, growing up in a family that uses drugs and having a mental illness increases the risk of HIV-risky sexual behavior (Fang et al., 2016). HIV risk behaviors were increased in men with all types of childhood trauma. In women, HIV risk behaviors were increased in those with three childhood traumas (Fang et al., 2016). Traditional gender perspectives assume that women rely on emotions to cope with problems and men focus on rational strategies. These different coping strategies have been linked to trauma exposure and HIV risk behaviors, with emotion-focused coping strategies resulting in positive adaptation compared to rational strategies (Fang et al., 2016).

Drug use and alcohol consumption are strongly associated with all types of childhood trauma. There is no significant difference between boys and girls who experienced childhood trauma with regard to drug use and alcohol consumption (Azri et al., 2024; Bellis et al., 2023; Musa et al., 2018; Tsuyuki et al., 2019). In another study, it was stated that every childhood trauma was related to lifetime drug use, each trauma had a 50% increase, and childhood trauma was also related to cocaine use but the results of cocaine use would decrease with age (Scheidell et al., 2019)

Those who experience childhood trauma are also at risk for mental health, which results in a decline in mental health (Bellis et al., 2023). Receiving support from friends, family and community is a major protective mechanism against psychological distress and sexual risk. Women have more resources and social support than men to cope with their psychological problems (Bellis et al., 2023). In another study, it was stated that childhood trauma was significantly related to levels of depression, anxiety, and post-traumatic stress. This study also stated that participants who had childhood trauma were more susceptible to experiencing mental health difficulties during the COVID-19 pandemic (Xia et al., 2023).

Girls who experience sexual abuse enter puberty about 1 year earlier for pubic hair development and 8 months earlier for breast development (Noll et al., 2017). A recent review in the United States suggests that accelerated puberty in girls may signal an increasing trend in reproductive cancers, with prolonged estrogen exposure being a major mechanism (Noll et al., 2017). Some have suggested that the effects of early sexual contact or sexual intercourse in the context of child sexual abuse may stimulate hypothalamic-pituitary-egonadal activity, which in turn stimulates the growth of secondary sexual characteristics (Noll et al., 2017).

2. Risk factors for risky sexual behavior

Being born to teenage parents in several studies has long-term impacts on early sexual behavior, experiencing teenage pregnancy and becoming parents at a teenage age with a presentation that is twice as high (Wood et al., 2022). Having a teenage mother is associated with a number of poorer health outcomes for the child in the short term, including preterm birth, low birth weight and neonatal death, as well as an increased risk

of developmental and behavioral problems that can affect sexual behavior (Wood et al., 2022).

Exposure to childhood trauma can also indicate a lack of parental control, supervision, or knowledge of a child's whereabouts in everyday life, which can increase the likelihood of risky sexual behavior in adolescence. Risky sexual behavior can also arise because children who do not have supportive and loving relationships at home seek to achieve them elsewhere (Wood et al., 2022). Another study stated that teenagers who have poor relationships with their parents or low levels of communication between parents tend to engage in sexual relations without condoms (Godinez, 2018).

Men who live in poor areas are 2 times more likely to have early sex, 4.5 times more likely to become teenage parents, while women who live in poor areas are 1.8 times more likely to experience unwanted pregnancy and 6 times more likely to become teenage parents or have children in their teens (Wood et al., 2022). Women living in unstable housing have a higher risk of early or very early sexual initiation (Tsuyuki et al., 2019). Other studies have found that negative childhood experiences increase the urge to reproduce early and reduce healthy life expectancy in low-income groups (Bellis et al., 2023).

Having a partner 3 years older has a 74% chance of having early sex (Tsuyuki et al., 2019). Those who have a partner 3 years older and the partner actively uses alcohol and consumes illegal drugs will significantly affect risky sexual relationships. Other studies have stated that having an older partner has a risk of risky sexual behavior. This is because older partners have a strong influence in decision making, including the decision to use condoms (Godinez, 2018)

Of 74% of women who experience very early sexual initiation do so because they are

pressured or forced, and most of them are not partners (Tsuyuki et al., 2019). Risky sexual behavior is initiated by intimidation or pressure from adults, resulting in many cases of early or very early sex. Women have a relatively greater risk of experiencing early and very early sexual initiation and being forced by adults. 1 out of 5 young women stated that they were often pressured and forced to perform sexual acts by men who had power, such as bosses or teachers (Morrison and Grove, 2018)

Childhood trauma is violence received by children before the age of 13. Childhood trauma comes from various forms of violence, including physical, verbal, and sexual violence, parental divorce, domestic violence, and neglect. In various studies, it is stated that childhood trauma has a long-term impact that will affect health in adolescence. Adolescents who have childhood trauma are more at risk of various types of high-risk health behaviors such as early sexual intercourse, casual sex, teenage pregnancy, becoming teenage parents, at risk of Sexually Transmitted Infections (STIs), early puberty, consuming illegal drugs and alcohol, and committing violence. Risk factors for risky sexual behavior are also associated with those who are born to teenage parents, have older partners, parental care and are pressured or forced to have early sex. Significantly physical, sexual and emotional violence are associated with adolescent sexual health.

This scoping review has several methodological limitations, although the search for articles is extensive and includes several databases, this study only retrieves articles in English and Indonesian which allows the exclusion of relevant studies published in other languages. This study focuses on primary research, this can limit or exclude understanding from the wider book. In this study the researcher also used free text

articles which allowed the exclusion of relevant articles because they could not be accessed.

AUTHOR CONTRIBUTION

Yuni Fitriya contributed to the formulation of research ideas and objectives, protocol preparation, literature search and selection, data extraction, thematic analysis, as well as the writing and editing of the manuscript. Dewi Rokhanawati played a role in scientific supervision, validation of results, editing of academic content, and providing methodological input at all stages of the scoping review. Askuri contributed to the preparation of the conceptual framework, critical analysis of the findings, and final review of the manuscript for accuracy and coherence. All authors read and approved the final version of the manuscript.

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CONFLICT OF INTEREST

The authors declare that the study was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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