



THE COMORBIDITY OF DEPRESSION AND PTSD IN SEXUALLY ABUSED CHILDREN: A SYSTEMATIC REVIEW

Georgia Konstantopoulou¹ⁱ,
Konstantina Rapatzikou¹,
Panagiotis Karnampatidis²,
Katerina Karaivazoglou³,
Eliza Georgiou^{3,4}

¹Department of Education and Social Work,
School of Humanities and Social Sciences,
University of Patras,
Greece

²Department of Psychology,
European University of Cyprus,
Cyprus

³Department of Psychiatry,
Faculty of Medicine,
University of Patras,
Greece

⁴Dementia Trials Ireland,
Trinity College Dublin,
Ireland

Abstract:

Background and Purpose: In recent years, the incidence of child sexual abuse (CSA) has significantly increased, particularly among younger children. Such traumatic experiences can have profound and long-lasting effects on a child's mental health, often leading to an increased risk of developing disorders such as depression and post-traumatic stress disorder (PTSD). This study aims to investigate the comorbidity of depression and PTSD in children who have experienced sexual abuse. The primary objective is to examine whether these two disorders frequently coexist in children subjected to CSA. **Method:** This study follows the PRISMA 2020 guidelines and employs a systematic review methodology. No statistical analysis methods were utilized. The research sample also included adolescents, providing a broader understanding of the effects of CSA across different age groups. **Results:** The findings revealed a strong correlation between child sexual abuse and the comorbidity of depression and PTSD, indicating that children who have been sexually abused are at a heightened risk of developing both disorders simultaneously. **Conclusion:** Children who have experienced sexual abuse are highly

ⁱ Correspondence: email gkonstantop@upatras.gr

likely to develop both depression and PTSD. However, further research is necessary to deepen our understanding of this comorbidity and to explore effective interventions.

Keywords: child sexual abuse; mental health; depression; post-traumatic stress disorder

1. Introduction

Child sexual abuse is a critical global issue that poses significant public health concerns ([Hailes et al., 2019](#)). Children who experience such trauma often develop mental health disorders, particularly depression and post-traumatic stress disorder (PTSD), both of which can have severe, long-term consequences. The goal of this systematic review is to explore the relationship between child sexual abuse and the development of both depression and PTSD in victims, focusing on the comorbidity of these disorders.

2. Depression in Sexually Abused Children

Depression is one of the most prevalent psychiatric conditions, affecting individuals across various age groups, with a global lifetime prevalence ranging from 5% to 17% ([Bains & Abdijadid, 2024](#)). The World Health Organization (2024) estimates that depression affects approximately 280 million people worldwide, or 3.8% of the global population. ([World health statistics by WHO, 2024](#)). While traditionally considered a disorder that primarily affects adults, increasing numbers of children and adolescents are now being diagnosed with major depressive disorder (MDD), highlighting the expanding recognition of depression in younger populations ([Grover et al., 2019](#)).

Although the prevalence of depression in children aged 6 to 12 remains low, ranging from 0.8% to 1.7% ([Hulvershorn & Leibenluft, 2015](#); [Juul et al., 2021](#)), its impact is nonetheless profound. In children, depression often presents with irritability, mood swings, somatic complaints, and externalizing behaviors, which differ significantly from adult presentations ([Charles & Fazeli, 2017](#)). Symptoms such as anhedonia, sleep disturbances, cognitive impairments, and suicidal ideation complicate both diagnosis and treatment ([Mullen, 2018](#)). The early onset of depression has been shown to significantly hinder academic performance, impair social relationships, and increase the risk of substance abuse and additional mental health disorders later in life. ([Konstantopoulou et al., 2023](#); [Mullen, 2018](#))

Children who have experienced sexual abuse are at an elevated risk for developing depression due to a combination of biological, environmental, and psychological factors ([Benarous et al., 2020](#)). Genetic predisposition, as well as exposure to stressors such as loss, bullying, and abuse, significantly increase the likelihood of depressive disorders in these children ([AlSaad et al., 2023](#)). The chronicity and severity of depression in adulthood have been directly linked to the severity of childhood sexual abuse, indicating a lasting impact of early trauma on mental health ([Bains & Abdijadid, 2024](#)).

3. Cognitive Risk Factors

In sexually abused children, cognitive risk factors play a significant role in the development of depression. These children may exhibit a distorted view of their abilities, which can contribute to depressive symptoms. Other contributing factors include sleep disorders, co-existing medical conditions, or mental health disorders, as well as the use of certain medications. Adverse childhood experiences, including sexual abuse, are known to increase the risk of developing MDD in adulthood ([Bains & Abdijadid, 2024](#)). Such traumatic and stressful events can significantly affect a child's emotional world, often leading to the onset of psychiatric disorders later in life.

4. PTSD in Sexually Abused Children

Post-traumatic stress disorder (PTSD) is a chronic and debilitating psychiatric condition that can develop following exposure to traumatic events, such as sexual abuse ([Lupesko-Persky & Brown, 2019](#)). PTSD is characterized by a range of fear-based symptoms, including intrusive memories, emotional dysregulation, hyperarousal, and avoidance behaviors ([American Psychiatric Association, 2013](#)). These symptoms can persist long after the traumatic event, impairing social and occupational functioning ([Merians et al., 2023](#)).

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR), PTSD can occur in children following exposure to events such as serious injury, sexual assault, or threats of death ([American Psychiatric Association, 2013](#)). Children are particularly vulnerable to PTSD after experiencing sexual abuse, and the symptoms may manifest through nightmares, dissociative reactions, hypervigilance, and avoidance behaviors ([Ye et al., 2023](#)). Traumatic experiences like sexual abuse can also lead to long-term psychological issues that extend into adulthood ([Hoogstad et al., 2024](#); [Turgoose et al., 2024](#)).

Research shows that more than 60% of children experience a traumatic event, and approximately half of them develop PTSD symptoms ([University of Miami/Miller School of Medicine and Fielding Graduate University, USA & Field, 2024](#)). Girls are four times more likely than boys to develop PTSD following trauma, including sexual abuse ([Torricco & Mikes, 2024](#)). These findings highlight the significant emotional and psychological burden that sexual abuse places on children, particularly in relation to PTSD development.

5. Comorbidity of Depression and PTSD in Sexually Abused Children

Sexual abuse in childhood significantly increases the risk of both PTSD and depression, often resulting in the comorbidity of these conditions ([Ucuz et al., 2022](#)). Studies show that nearly 48% of individuals who experienced childhood sexual abuse develop both

MDD and PTSD (Bae *et al.*, 2018). The severity, duration, and frequency of the abuse are directly correlated with the likelihood of developing these disorders (Weiss *et al.*, 1999). Depression and PTSD frequently co-occur in sexually abused children, with rates of comorbidity ranging from 45% to 90% in patients diagnosed with PTSD (J. Du *et al.*, 2022). The high rates of comorbidity emphasize the complex and multifaceted impact of childhood sexual abuse on mental health, as traumatic experiences play a central role in triggering both disorders. Understanding the relationship between PTSD and depression in sexually abused children is crucial for developing effective therapeutic interventions and addressing the long-term psychological consequences of trauma (H. Du *et al.*, 2015).

6. Method

The primary research question for this systematic review was whether children who have been sexually abused exhibit comorbidity of depression and PTSD. Although the focus was on the diagnosis and comorbidity of Major Depressive Disorder (MDD) and Post-Traumatic Stress Disorder (PTSD), the research also considered other related disorders. Additionally, some studies included teenagers in their samples. Through this broader investigation, two secondary research questions emerged: (1) Does the comorbidity of MDD and PTSD affect the sexual life of children as they become teenagers? (2) Does the comorbidity of MDD and PTSD impact children as they transition into adulthood?

The research methodology for this systematic review followed the **PRISMA 2020** guidelines, ensuring a transparent and rigorous review process.

6.1 Selection and Exclusion Criteria

To identify relevant studies, the search criteria focused on articles containing the keywords "Depression," "PTSD," "sexual abuse," and "children." Abstracts of the identified studies were then screened for eligibility based on the following inclusion criteria:

- Studies published between 2019 and 2024, as the review aimed to analyze up-to-date research.
- Studies with a sample that included children aged 6 to 12 years.
- Articles specifically addressing the comorbidity of depression and PTSD, as well as related mental health outcomes in sexually abused children.

Exclusion criteria included:

- Studies lacking sufficient data to address the main research question.
- Studies focusing solely on adult, teenage, or disabled populations, without including children in the sample.
- Articles that did not include diagnoses of depression, PTSD, or sexual abuse as the primary focus.

6.2 Database and Search Strategy

The search was conducted in **PubMed**, a comprehensive database for biomedical literature. The final search was performed on April 24, 2024. The following terms were used: "depression," "post-traumatic stress," and "sexually abused children," limited to articles published between 2019 and 2024. This initial search yielded 636 results. Titles and abstracts were then screened, and further filtering was applied using the criteria "Systematic Review," "Review," "Meta-Analysis," or "Randomized Controlled Trial." This resulted in a total of 32 studies.

To ensure comprehensive coverage, a second search was performed using a more complex query: "post-traumatic stress disorder" AND "depression" AND "sexually abused children." This search also yielded 636 results. After applying the same filtering and selection process, 32 studies were identified.

6.3 Final Selection Process

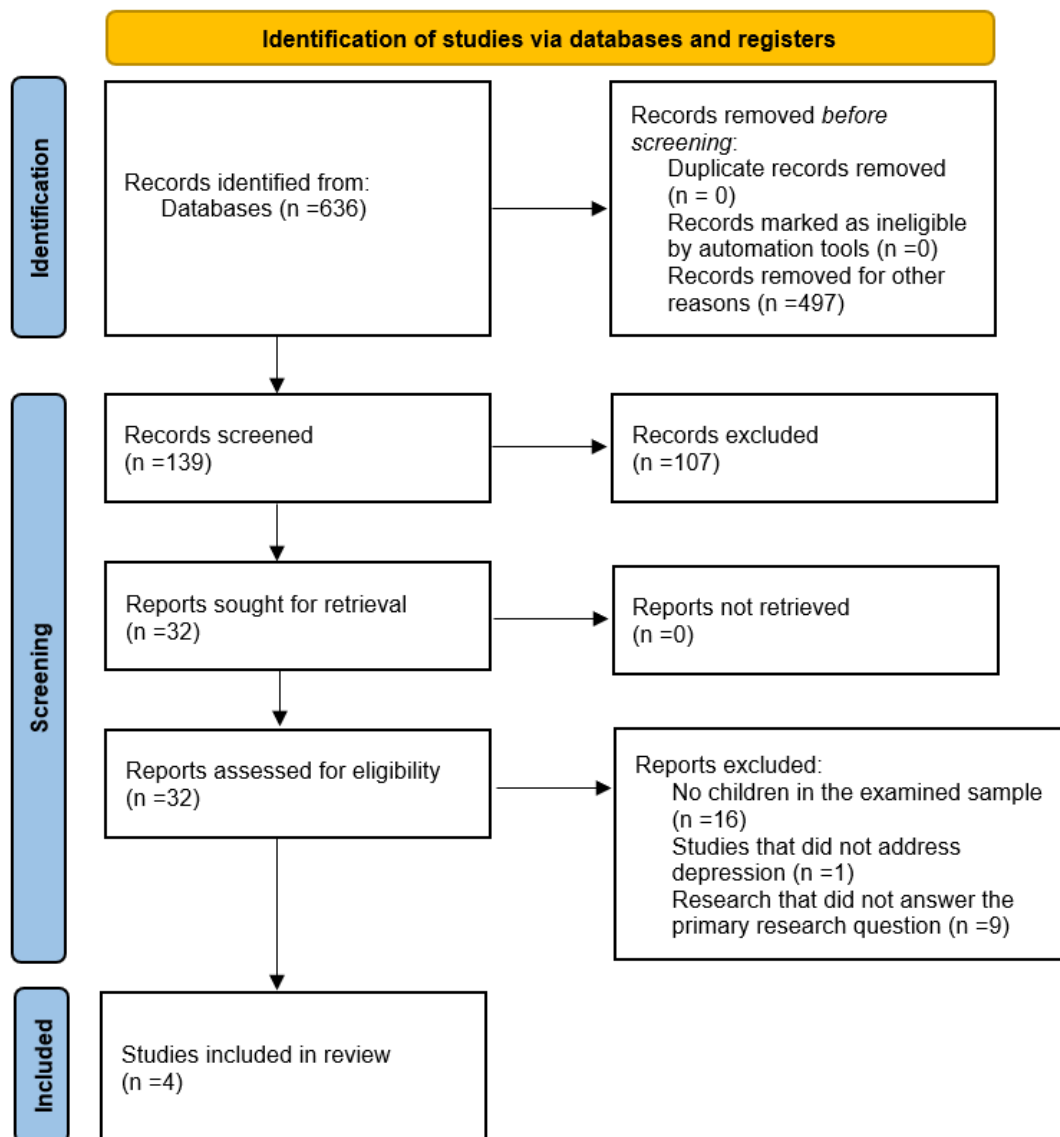
The final step in the selection process involved confirming that all articles met the inclusion criteria:

- Studies must include at least one of the key terms ("depression," "post-traumatic stress," "children," and/or "sexual abuse") in the title.
- The sample must include children, specifically between the ages of 6 and 12, and the study must be relevant to the core research questions.

After this final screening, 4 studies were selected for in-depth analysis. No automation tools or software aids were used in this process.

The detailed process for identifying and selecting studies is illustrated in the PRISMA 2020 flowchart in Figure 1.

Figure 1



7. Results

The first study by Gokten & Uyulan (2021) was conducted at the Pediatric Monitoring Center of the Higher Specialization Hospital for Education and Research in Bursa, Turkey, between October 2012 and October 2014. Following forensic evaluations, the children and adolescents in the study were examined by a specialist psychiatrist using DSM-5 criteria. A random forest algorithm was utilized to construct a prediction model for the development of depression and PTSD. The results indicated that sexually abused children and adolescents had an 82% likelihood of developing major depression and a 72% likelihood of developing PTSD, according to DSM-5 criteria. This research addresses the primary research question and demonstrates a strong connection between sexual abuse and the comorbidity of these two disorders (Gokten & Uyulan, 2021).

The second study, conducted by Palines *et al.* (2020), focused on child and adolescent victims of sex trafficking. High-risk groups, including juvenile offenders, runaways, and foster children, were compared to victims of trafficking in terms of the development of mental health disorders. The study reported a PTSD prevalence of 19.6% in trafficking victims, which the authors considered relatively low, potentially due to misdiagnosis. The researchers speculated that some cases of PTSD may have been mistakenly diagnosed as attention deficit hyperactivity disorder (ADHD), given the common symptom of hyperarousal. However, a high prevalence of depression was observed, reaching 45.5%. This study confirms a link between traumatic experiences such as sex trafficking and the development of depression and PTSD, thus addressing the research question ([Palines *et al.*, 2020](#))

The third study, by Gardner *et al.* (2019), examined the prevalence of mental health disorders across five types of child abuse: sexual, physical, emotional, neglect, and exposure to intimate partner violence. The sample included children and adolescents from various studies, ranging from 103 to 3,000,000 participants. The findings indicated that victims of sexual abuse were more than three times more likely to develop PTSD compared to non-victims. There was also a strong association between sexual abuse and depressive disorders, including both major depressive disorder (MDD) and dysthymia. Gardner *et al.* (2019) noted that in the Global Burden of Disease (GBD) survey, only sexual abuse was specifically listed as a risk factor for both anxiety and depressive disorders, reinforcing the connection between these outcomes and child sexual abuse. ([Gardner *et al.*, 2019](#))

The fourth study, by MacGregor *et al.* (2019), explored the short- and medium-term consequences of sexual assault among individuals aged 10 to 24. The study found that the prevalence of PTSD reached 49%, and depressive disorders occurred in 43% of the participants. PTSD and depression were particularly prevalent among youth who had experienced sexual assault. Notably, even one year after the traumatic event, PTSD rates remained as high as 58-60%, similar to the rates found six weeks after the assault (59%). Additionally, five studies included in this review reported that PTSD rates were as high as 95% one month following the event. However, the review indicated that depressive symptoms tended to decrease over time. ([MacGregor *et al.*, 2019](#))

Both the third and fourth studies highlight the comorbidity of depression and PTSD in children and adolescents who have experienced sexual abuse, whether through sexual exploitation, such as human trafficking ([Gardner *et al.*, 2019](#)), or sexual assault ([MacGregor *et al.*, 2019](#)).

8. Discussion

This systematic review aimed to explore the comorbidity of Major Depressive Disorder (MDD) and Post-Traumatic Stress Disorder (PTSD) in children and adolescents who have been sexually abused. The review highlights the strong association between sexual abuse

and the development of these psychiatric disorders, underscoring the significant mental health consequences of such traumatic experiences.

The findings from the studies reviewed show considerable variability in the prevalence of MDD and PTSD. Gokten & Uyulan (2021) reported the highest rates of both depression (82%) and PTSD (72%) in sexually abused children, indicating a high level of psychiatric impact among their sample (Gokten & Uyulan, 2021). By contrast, Palines *et al.* (2020) found a lower prevalence of PTSD (19.6%) among children who had been victims of sex trafficking. The researchers suggested that this lower rate might be due to diagnostic confusion between PTSD and ADHD, given the overlapping symptoms of hyperarousal. However, the high rate of depression (45.5%) observed in this group aligns with the broader literature, which consistently identifies depression as a frequent outcome of sexual trauma (Palines *et al.*, 2020).

Gardner *et al.* (2019) reinforced the association between sexual abuse and mental health disorders, showing that children who were sexually abused were more than three times as likely to develop PTSD compared to their peers. Additionally, this study found a strong connection between sexual abuse and depressive disorders, further supporting the evidence of comorbidity between MDD and PTSD in this population (Gardner *et al.*, 2019). MacGregor *et al.* (2019) extended these findings by showing that even years after the traumatic event, the prevalence of PTSD remained high (49%), with depression affecting 43% of the victims (MacGregor *et al.*, 2019).

Across these studies, the common thread is the long-term psychological damage caused by sexual abuse, with both MDD and PTSD frequently co-occurring. These findings are consistent with prior research, emphasizing the need for early interventions and sustained mental health support for children who have experienced sexual trauma. This review has several limitations that should be considered. First, variability in diagnostic criteria and assessment methods across the studies may have influenced the differences in reported prevalence rates. For example, in Palines *et al.* (2020), possible misdiagnosis of PTSD as ADHD highlights challenges in accurately diagnosing psychiatric conditions with overlapping symptoms in children. Additionally, the exclusion of studies focused on adults who were sexually abused as children limits the ability to explore long-term impacts beyond childhood. The relatively small number of studies included ($n = 4$) also limits the generalizability of the findings. Moreover, the studies were conducted in different cultural contexts, which may affect the results due to factors like socioeconomic status, access to mental health care, and cultural attitudes toward mental health. Finally, reliance on self-reported data and clinical diagnoses introduces the potential for bias, and the lack of longitudinal studies limits the understanding of the progression of these disorders over time.

9. Conclusions

Child sexual abuse has profound and lasting impacts on mental health, particularly through the development of Major Depressive Disorder (MDD) and Post-Traumatic

Stress Disorder (PTSD). The reviewed studies demonstrate the frequent comorbidity of these disorders in sexually abused children and adolescents, underscoring the need for early identification, intervention, and long-term support. The persistence of these conditions years after the trauma highlights the severe and enduring psychological toll. Given the variability in the prevalence of MDD and PTSD, accurate diagnosis is critical, and further research, especially longitudinal studies across diverse populations, is needed to improve therapeutic interventions and better address the complex mental health needs of survivors.

Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Author(s)

Dr. Georgia Konstantopoulou is a Clinical Psychologist, Laboratory Teaching Staff, Department of Educational Sciences & Social Work, University of Patras, Greece.

Konstantina Rapatzikou is Social Worker, Researcher, Department of Educational Sciences & Social Work. University of Patras, Greece.

Panagiotis Karnampatidis is Psychologist, Researcher, Department of Psychology, European University of Cyprus, Greece.

Katerina Karaivazoglou, Psychiatrist, Department of Psychiatry, Faculty of Medicine, University of Patras, Greece.

Eliza Georgiou, Psychiatrist, Department of Psychiatry, Faculty of Medicine, University of Patras, Greece, Dementia Trials Ireland, Trinity College Dublin, Ireland.

References

- AlSaad, H., AlSaad, A., Khalifah, Z., Almogarry, L., & Alsaihaty, E. (2023). Psychological, behavioral, and developmental impact on children of alcoholics. *International Journal of Medicine in Developing Countries*, 930–936. <https://doi.org/10.24911/IJMDC.51-1672650644>
- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition)*. American Psychiatric Association. <https://doi.org/10.1176/appi.books.9780890425596>
- Bae, S. M., Kang, J. M., Chang, H. Y., Han, W., & Lee, S. H. (2018). PTSD correlates with somatization in sexually abused children: Type of abuse moderates the effect of PTSD on somatization. *PLOS ONE*, 13(6), e0199138. <https://doi.org/10.1371/journal.pone.0199138>
- Bains, N., & Abdijadid, S. (2024). Major Depressive Disorder. In StatPearls. StatPearls Publishing. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK559078/>
- Benarous, X., Renaud, J., Breton, J. J., Cohen, D., Labelle, R., & Guilé, J.-M. (2020). Are youths with disruptive mood dysregulation disorder different from youths with

- major depressive disorder or persistent depressive disorder? *Journal of Affective Disorders*, 265, 207–215. <https://doi.org/10.1016/j.jad.2020.01.020>
- Charles, J., & Fazeli, M. (2017). Depression in children. *Australian Family Physician*, 46(12), 901–907.
- Du, H., Li, X., Weinstein, T. L., Chi, P., Zhao, J., & Zhao, G. (2015). Links between teacher assessment and child self—Assessment of mental health and behavior among children affected by HIV/AIDS. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*, 27(7), 876–884. Embase. <https://doi.org/10.1080/09540121.2015.1009360>
- Du, J., Diao, H., Zhou, X., Zhang, C., Chen, Y., Gao, Y., & Wang, Y. (2022). Post-traumatic stress disorder: A psychiatric disorder requiring urgent attention. *Medical Review*, 2(3), 219–243. <https://doi.org/10.1515/mr-2022-0012>
- Gardner, M. J., Thomas, H. J., & Erskine, H. E. (2019). The association between five forms of child maltreatment and depressive and anxiety disorders: A systematic review and meta-analysis. *Child Abuse & Neglect*, 96, 104082. <https://doi.org/10.1016/j.chiabu.2019.104082>
- Gokten, E. S., & Uyulan, C. (2021). Prediction of the development of depression and post-traumatic stress disorder in sexually abused children using a random forest classifier. *Journal of Affective Disorders*, 279, 256–265. <https://doi.org/10.1016/j.jad.2020.10.006>
- Grover, S., Raju V, V., Sharma, A., & Shah, R. (2019). Depression in Children and Adolescents: A Review of Indian studies. *Indian Journal of Psychological Medicine*, 41(3), 216–227. https://doi.org/10.4103/IJPSYM.IJPSYM_5_19
- Hailes, H. P., Yu, R., Danese, A., & Fazel, S. (2019). Long-term outcomes of childhood sexual abuse: An umbrella review. *The Lancet Psychiatry*, 6(10), 830–839. [https://doi.org/10.1016/S2215-0366\(19\)30286-X](https://doi.org/10.1016/S2215-0366(19)30286-X)
- Hoogstad, A., Mevissen, L., & Didden, R. (2024). Posttraumatic Stress Disorder in Children with Severe or Moderate Intellectual Disability: A Study Using the Diagnostic Interview Trauma, Stressors – Severe/Moderate ID. *Journal of Developmental and Physical Disabilities*, 36(4), 697–712. <https://doi.org/10.1007/s10882-023-09928-2>
- Hulvershorn, L. A., & Leibenluft, E. (2015). Childhood Mood Disorders: Major Depressive Disorder, Bipolar Disorder, and Disruptive Mood Dysregulation Disorder. In A. Tasman, J. Kay, J. A. Lieberman, M. B. First, & M. B. Riba (Eds.), *Psychiatry* (1st ed., pp. 981–1006). Wiley. <https://doi.org/10.1002/9781118753378.ch52>
- Juul, E. M. L., Hjemdal, O., & Aune, T. (2021). Prevalence of depressive symptoms among older children and young adolescents: A longitudinal population-based study. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*, 9(1), 64–72. <https://doi.org/10.21307/sjcapp-2021-008>

- Konstantopoulou, G., Vangeli, E., Polyzou, E., & Mavroeidi, E. (2023). Sexual Abuse In Childhood: Relationship With Post-Traumatic Stress Disorder. *European Journal of Public Health Studies*, 6(2). <https://doi.org/10.46827/ejphs.v6i2.159>
- Lupesko-Persky, O., & Brown, L. M. (2019). Trauma and Stressor-Related Disorders. In D. L. Segal (Ed.), *Diagnostic Interviewing* (pp. 179–211). Springer US. https://doi.org/10.1007/978-1-4939-9127-3_8
- MacGregor, K. E., Villalta, L., Clarke, V., Viner, R., Kramer, T., & Khadr, S. N. (2019). A systematic review of short and medium-term mental health outcomes in young people following sexual assault. *Journal of Child & Adolescent Mental Health*, 31(3), 161–181. <https://doi.org/10.2989/17280583.2019.1665533>
- Merians, A. N., Spiller, T., Harpaz-Rotem, I., Krystal, J. H., & Pietrzak, R. H. (2023). Post-traumatic Stress Disorder. *Medical Clinics of North America*, 107(1), 85–99. <https://doi.org/10.1016/j.mcna.2022.04.003>
- Mullen, S. (2018). Major depressive disorder in children and adolescents. *Mental Health Clinician*, 8(6), 275–283. <https://doi.org/10.9740/mhc.2018.11.275>
- Palines, P. A., Rabbitt, A. L., Pan, A. Y., Nugent, M. L., & Ehrman, W. G. (2020). Comparing mental health disorders among sex trafficked children and three groups of youth at high-risk for trafficking: A dual retrospective cohort and scoping review. *Child Abuse & Neglect*, 100, 104196. <https://doi.org/10.1016/j.chiabu.2019.104196>
- Torrico, T. J., & Mikes, B. A. (2024). Posttraumatic Stress Disorder in Children. In StatPearls. StatPearls Publishing. <http://www.ncbi.nlm.nih.gov/books/NBK559140/>
- Turgoose, D., Wilkinson, S., Shevlin, M., & Karatzias, T. (2024). Cumulative risk exposure is associated with increased risk for PTSD but not depression or anxiety. Results from a UK clinical sample of children and adolescents. *Developmental Child Welfare*, 6(2), 79–90. <https://doi.org/10.1177/25161032241230980>
- Ucuz, I., Ari, A., Ozcan, O. O., Topaktas, O., Sarraf, M., & Dogan, O. (2022). Estimation of the Development of Depression and PTSD in Children Exposed to Sexual Abuse and Development of Decision Support Systems by Using Artificial Intelligence. *Journal of Child Sexual Abuse*, 31(1), 73–85. <https://doi.org/10.1080/10538712.2020.1841350>
- University of Miami/Miller School of Medicine and Fielding Graduate University, USA, & Field, T. (2024). Posttraumatic Stress Disorder in Children: A Narrative Review. *Journal of Clinical Psychology and Neurology*, 1–10. <https://doi.org/10.61440/JCPN.2024.v2.24>
- Weiss, E. L., Longhurst, J. G., & Mazure, C. M. (1999). Childhood Sexual Abuse as a Risk Factor for Depression in Women: Psychosocial and Neurobiological Correlates. *American Journal of Psychiatry*, 156(6), 816–828. <https://doi.org/10.1176/ajp.156.6.816>
- World health statistics by WHO. (2024). World health statistics 2024: Monitoring health for the SDGs, sustainable development goals (ISBN: 978-92-4-009470-3; p. 86).

Ye, Y., Li, Y., Jin, S., Huang, J., Ma, R., Wang, X., & Zhou, X. (2023). Family Function and Post-Traumatic Stress Disorder in Children and Adolescents: A Meta-Analysis. *Trauma, Violence, & Abuse*, 24(5), 3151–3169. <https://doi.org/10.1177/15248380221126182>

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Social Sciences Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)