

## Post-Traumatic Stress Disorder (PTSD) And Its Positive Indicators Among Primary School Children in Port-Harcourt

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DOI: 10.56201/ijmepr.v8.no6.2024.pg174.187

### Abstract

*The study was aimed at determining Post-Traumatic Stress Disorder (PTSD) and Its Positive Indicators among Primary School Children in Port-Harcourt. A descriptive survey design was adopted for the study. Simple random sampling technique was used to select 259 primary school children from a population of 1800 primary school children in Port Harcourt, Rivers State. Post-traumatic Stress Disorder Checklist- civilian Version (PCL-C version) was adopted and used to collect data. Statistical Package for Social Science version 22.0 was used to analyze the data. Descriptive statistics of measure of central tendency statistics mean and standard deviation was used to answer the research questions while chi-square statistics was used to test the hypothesis. The findings of the study revealed that 60% of the respondents were male while 40% were females, 25% of the respondents were between the age of 5 - 6 years, 45% were between the age of 7 – 9 years, 20% were between the age of 10 – 12 years while 10% were between the age of 12 years and above. The study further revealed that PTSD prevalence rate of 65% among Primary School Children in Port Harcourt, that the risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt were serious accident, fire or explosion, non-Sexual assault by someone they know (physically attacked/injured) at ( $\bar{x} = 3.05$ ), Sexual assault by a stranger amongst others, that the positive indicators of PTSD were enhanced social support, Posttraumatic Growth, improved coping strategies amongst others at ( $\bar{x} = 2.99$ ), and that active and social coping strategy were interventions and support systems for primary school children experiencing PTSD at ( $\bar{x} = 3.60$  and 3.06). The study conclude that the positive indicators of PTSD were enhanced social support, Posttraumatic Growth, improved coping strategies amongst others. The study therefore, recommend that school-based programs that focus on trauma-related cognitive factors and coping strategies to help mitigate the impact of PTSD in primary school children in Port-Harcourt should be established.*

### INTRODUCTION

Posttraumatic stress disorder (PTSD) is a mental disorder that may develop in some children and adolescents after exposure to a traumatic event. Traumatic events may include incidents that involve serious harm to self or others and include accidents, natural disasters, sexual or physical trauma, natural disasters, and violence (Alisic et al., 2018). Post-traumatic stress disorder (PTSD) first appeared in the DSM-III in 1980. The impetus for the development of this diagnostic category arose primarily from the need to account for the characteristic array of symptoms displayed by Vietnam veterans in the United States, and as such PTSD was conceptualized around traumatized adults (Creech et al., 2019). However, since that time there has been increasing recognition that children, too, can develop severe and debilitating reactions to traumatization (Litman et al., 2018).

Post-traumatic stress disorder (PTSD) often arises after having lived through a severely distressing event including violent crime, sexual abuse, natural disasters, and war (Liu et al., 2019). Symptoms often include the reactivation of reminders of the traumatic experience, over-awareness, negative feelings, and avoidance of events and locations that are reminders of the stressful event (Young et al., 2019). There are several factors that make a child more vulnerable and psychologically distressed. These include poverty, loneliness, a lack of social or parental support, or previous mental health problems they may have had. On the other side, protective factors would be school attendance, family support, social and emotional skills, and peer support. Conversely, protective factors, such as school connectedness, parental support, problem solving, self-regulation skills, peer social support, perceived self-efficacy, and positive mother–child relationships can ameliorate the psychological impact of sudden and large-scale disruptions (Yu et al., 2019).

Posttraumatic Stress Disorder (PTSD) is a significant concern among children, with studies highlighting its prevalence and impact on various aspects of children's lives. Research has shown that parental PTSD severity is associated with increased psychological distress in children (Lambert et al., 2018). Additionally, trauma in early childhood is a critical issue that can lead to PTSD and other negative psychological outcomes (Young et al., 2019). Furthermore, studies have indicated that exposure to traumatic events like natural disasters can result in high levels of anxiety, depression, and PTSD among children (Liu et al., 2019). In the context of PTSD among school-age children in Port Harcourt, Nigeria, it is essential to consider the potential positive indicators alongside the negative outcomes. While PTSD is a common and debilitating disorder in youth (Meiser-Stedman et al., 2017), it is crucial to adopt a broader view that encompasses both negative and positive psychological sequelae following trauma (Alisic et al., 2018). Understanding the full spectrum of posttraumatic stress reactions, including posttraumatic growth and general well-being, is vital in addressing the holistic mental health needs of children affected by trauma. Moreover, the prevalence of PTSD and other mental health disorders among refugee children underscores the importance of considering the diverse range of psychological problems that can arise in the aftermath of traumatic experiences (Çeri et al., 2016). Factors such as peer victimization have also been linked to PTSD among primary school children (Litman et al., 2015), emphasizing the need to address not only individual trauma but also social dynamics that contribute to psychological distress.

Therefore, addressing PTSD and its positive indicators among primary school children in Port Harcourt requires a comprehensive approach that considers the various risk factors, protective factors, and potential outcomes associated with trauma. By acknowledging the complexity of children's responses to traumatic events and incorporating a broad perspective on posttraumatic reactions, interventions can be tailored to promote resilience and well-being in this vulnerable population.

### **1.3 Aim and Objectives of the Study**

The study is aimed at investigating Post-Traumatic Stress Disorder (Ptds) And Its Positive Indicators Among Primary School Children In Port-Harcourt. The specific Objectives will be to;

1. assess the prevalence of post-traumatic stress disorder (PTSD) among Primary School Children In Port-Harcourt.
2. investigate the potential risk factors contributing to the development of PTSD among Primary School Children In Port-Harcourt.

### 1.5 Hypothesis

The following hypothesis will be tested in this study;

1. Post-traumatic stress disorder (PTSD) is not significantly prevalent among Primary School Children in Port-Harcourt.
2. There is no significant potential risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt.

### METHODOLOGY

The research design to be used in the study will be the descriptive study design.

The population of the study comprises all primary school children in Port Harcourt Local Government Area. A pilot study revealed that there are 1800 patients in the Local Government Area. The sample size of this study was four hundred (359) primary school children consisting of one hundred and eighty (180) male, and two hundred and twenty (147) female children.

The Taro Yamane formula is given as follows:  $n = N / (1 + Ne^2)$

Where, n = Is the sample size,

N = Is the total population

e = Is the error of tolerance

But, N = 1800, and e = 0.05

$$\begin{aligned}n &= \frac{N}{1 + Ne^2} \\n &= \frac{1800}{1 + 1800 \times 0.05^2} \\n &= \frac{1800}{1 + 1800 \times 0.025} \\n &= \frac{1800}{1 + 4.5} \\n &= \frac{1800}{5.5} \\n &= 327\end{aligned}$$

Adding an attrition of 10, then

$$n = 327 + 10$$

Therefore n = 359

To determine the sample size of the study, the Taro Yamane sample size formular was applied to the population to arrive at 359 sample size. Post-traumatic Stress Disorder Checklist-children Version (PCL-C version) was used to collect data for the study. The instrument will divided into session A and B. While part A featured items based on objectives, section B will provide demographic data about the respondents. In addition, a four-point grading system was used to rate the instrument: Strongly Agree (SA = 4), Agree (A = 3), Disagree (D = 2), and Strongly Disagree (SD = 1). The data collected will be analyzed using mean ( $\bar{x}$ ) and standard deviation (SD) to answer the research questions. The criterion mean will be used in scoring the instrument at 2.50 which signifies ‘Very Severe’ to the item, as items below 2.50 denoted ‘Severe’. This was gotten by summing up the weighted points and divided by 4, thus:  $4+3+2+1/4= 2.50$ . The null hypotheses formulated will be tested using chi-square statistics at 0.05 level of significance.

## Result

This chapter presents analysis of data. The results of the data analysis are presented according to information gotten from the questionnaire.

**Fig. 1 Gender of respondents**

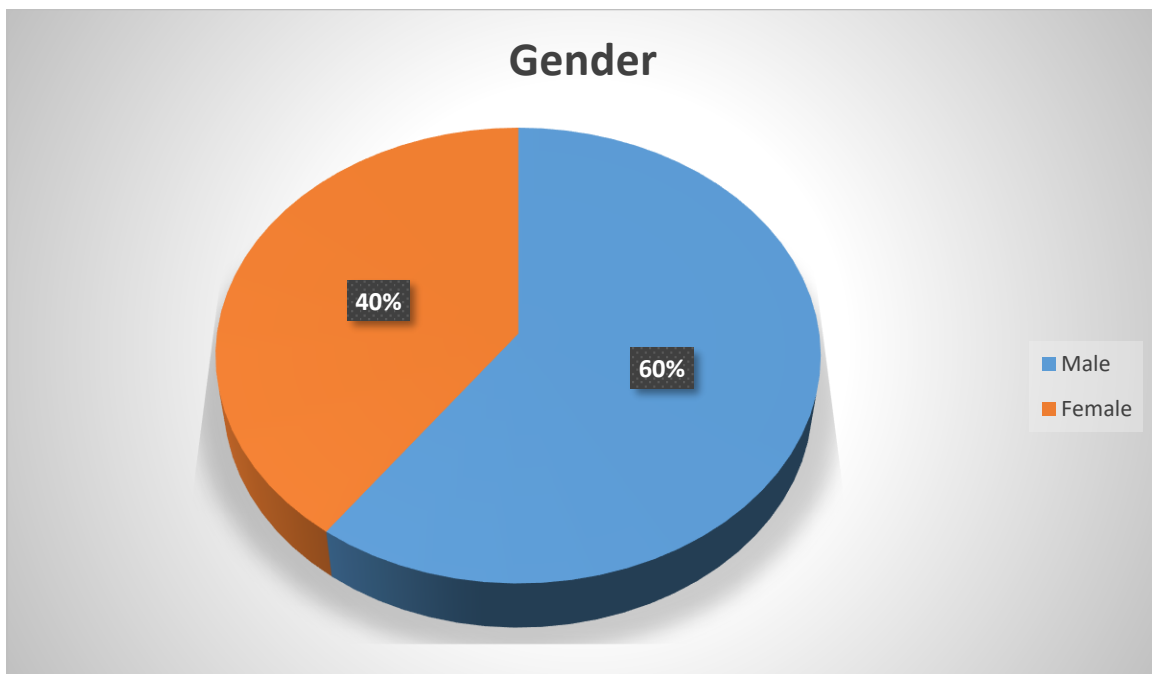


Fig. 4.1 shows that 60% of the respondents were male while 40% were females

Fig. 4.2: Age of Respondents

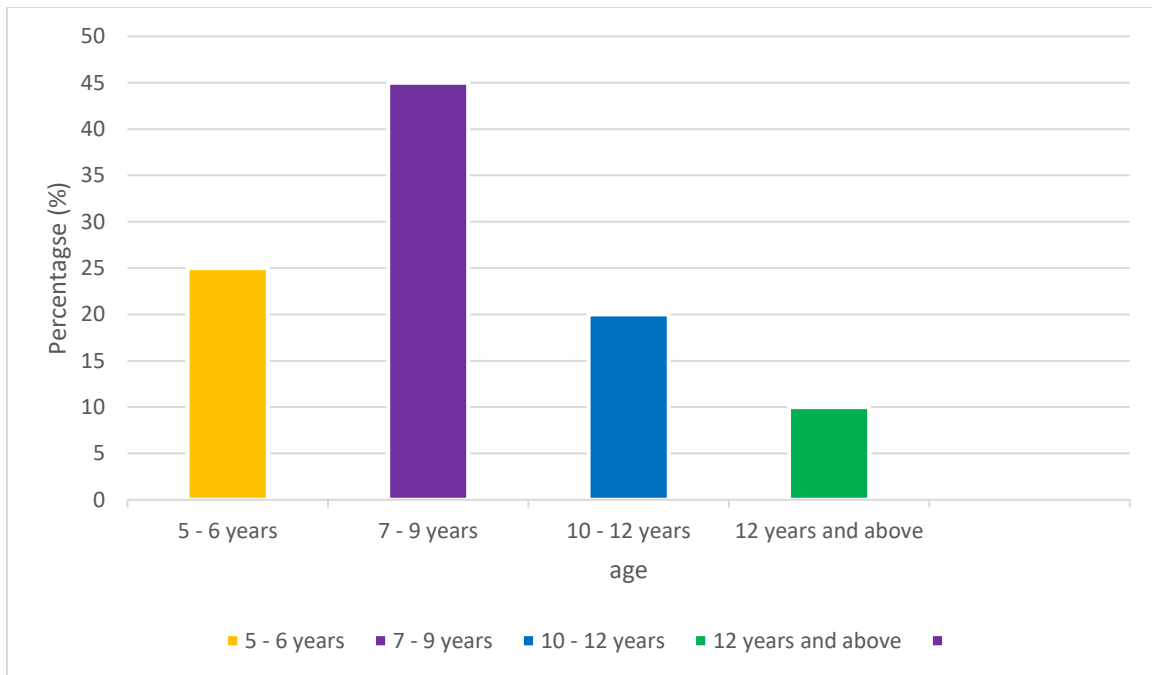
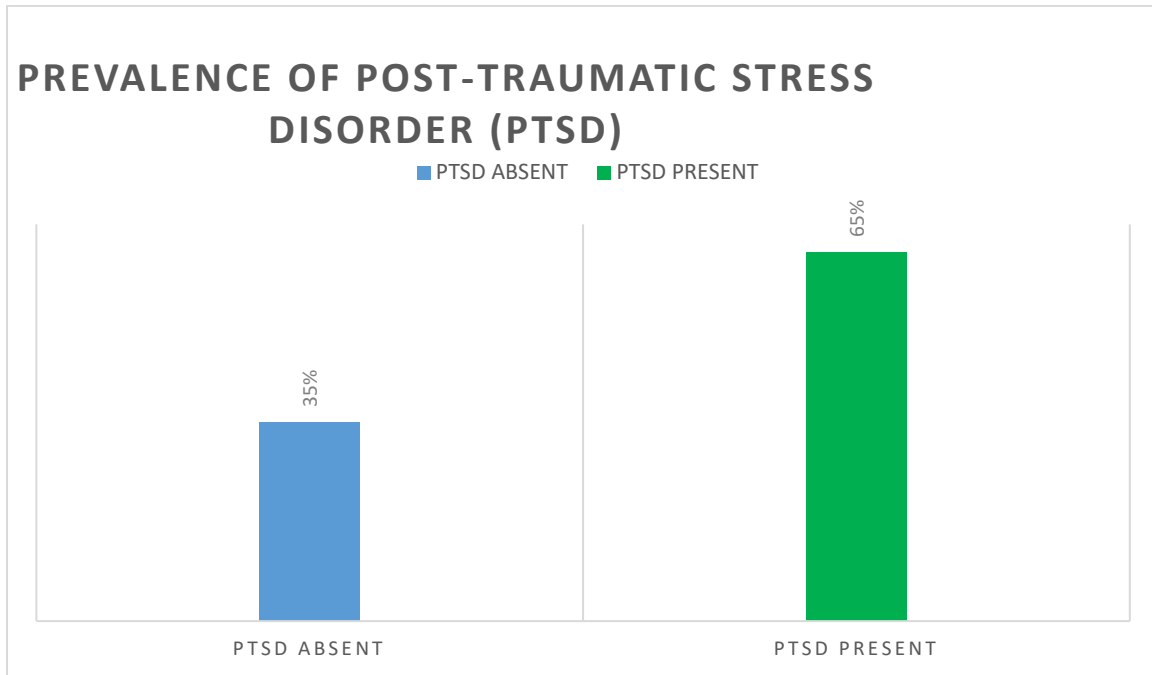


Fig.4.2 shows that 25% of the respondents were between the age of 5 - 6 years, 45% were between the age of 7 – 9years, 20% were between the age of 10 – 12 years while 10% were between the age of 12 years and above.

**Research Question 1:** What is the prevalence of post-traumatic stress disorder (PTSD) among Primary School Children in Port-Harcourt?



**Fig. 4.3** revealed that 35% of the respondents had no PTSD while 65% had PTSD.

**Research Question 2:** What are the risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt?

**Table 4.1:** mean and standard deviation of the risk factors contributing to the development of PTSD.

S/N	ITEMS	N	Min.	Max.	Mean	Std. Deviation
<b>Potential risk factors contributing to the development of PTSD</b>						
1	Serious accident, fire or explosion	359	2	4	3.02	0.774
2	Natural disaster (flood, fire outbreak)	359	1	4	3.23	0.673
3	Non-Sexual assault by someone you know (physically attacked/injured)	359	1	4	3.98	1.225
4	Non-sexual assault by a stranger	359	1	4	3.13	0.497
5	Sexual assault by a family member or someone you know.	359	1	4	3.96	1.176
6	Sexual assault by a stranger.	359	1	4	2.52	1.628
	Torture	359		4		
7	Life-threatening illness	359	1	4	2.60	1.192
8.	Other traumatic event	359	1	4	2.53	1.837
<b>Average Mean and Standard deviation</b>					<b>3.05</b>	<b>1.08</b>

Table 4.1 shows the mean ratings and standard deviations of the level of the risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt. The mean value ranges from 2.53 to 3.96 with a grand mean value of 3.05 which is above the criterion mean of 2.5 thereby showing that the risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt were serious accident, fire or explosion, non-Sexual assault by someone you know (physically attacked/injured), Sexual assault by a stranger amongst others.

#### 4.2 Test of Hypothesis

**Hypothesis 1:** Post-traumatic stress disorder (PTSD) is not significantly prevalent among Primary School Children in Port-Harcourt.

Table 4.4: chi-square statistics of prevalent among Primary School Children in Port-Harcourt.

ITEMS	Frequency	Percentage	$\chi$
PTSD absent	100	27.9	0.003
PTSD present	259	72.1	0.814

Study findings revealed that Post-traumatic stress disorder (PTSD) was significantly prevalent among Primary School Children in Port-Harcourt at absent ( $p = 0.005$ ) and present ( $p = 0.814$ ).

**Hypothesis 2:** There is no significant risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt.

Table 4.5: chi-square statistics of risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt.

S/N	ITEMS	N	Min.	Max.	Mean	$\chi$
<b>Potential risk factors contributing to the development of PTSD</b>						
1	Serious accident, fire or explosion	359	2	4	3.02	
2	Natural disaster (flood, fire outbreak)	359	1	4	3.23	
3	Non-Sexual assault by someone you know (physically attacked/injured)	359	1	4	3.98	
4	Non-sexual assault by a stranger	359	1	4	3.13	0.8510
5	Sexual assault by a family member or someone you know.	359	1	4	3.96	
6	Sexual assault by a stranger.	359	1	4	2.52	
	Torture	359		4		
7	Life-threatening illness	359	1	4	2.60	
8.	Other traumatic event	359	1	4	2.53	

**Table 4.4** revealed that there are significant risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt ( $\chi^2 = 0.8510$ ,  $p = 0.005$ ).

### 4.3 Discussion of Findings

#### Prevalence of post-traumatic stress disorder (PTSD) among Primary School Children

The study revealed a PTSD prevalence rate of 65% among Primary School Children in Port Harcourt. The prevalence of post-traumatic stress disorder (PTSD) among primary school children has been a significant concern in various studies. Davidson et al. (1991) found a 58% prevalence of PTSD among school children exposed to a sniper attack. Similarly, Yu et al. (2019) reported a PTSD prevalence of 58.93% in rural Chinese children, higher than urban children. Liu et al. (2011) noted prevalence rates of 11.2% and 13.4% for PTSD among children after the Sichuan earthquake in China. Catani et al. (2009) highlighted a 26% prevalence of probable PTSD in boys compared to 14% in girls in Kabul. The impact of PTSD on school children's daily functioning was emphasized by (Khan et al., 2018), who noted functional impairment in various areas among PTSD-positive school children. Furthermore, Farahat et al. (2014) found a 6.9% prevalence of attention-deficit hyperactivity disorder (ADHD) among primary school children in Egypt, indicating the co-occurrence of different mental health issues in this age group. Interventions and treatments for pediatric PTSD have been a subject of



interest. Adler-Nevo & Manassis (2005) highlighted the scarcity of studies on psychotherapy for children with PTSD following single-incident trauma. Additionally, Sarimin & Tololiu (2017) discussed the effectiveness of cognitive behavior therapy in comparison to CBT-plus play therapy for children with PTSD.

This is consistent with previous findings among trauma survivors in the study of Aluh et al. (2019) who documented a PTSD prevalence rate of 78% among IDPs in Maiduguri, north-eastern Nigeria. Our result also aligns with that of Madoro et al. (2020) who in South Ethiopia reported an estimated PTSD prevalence of 58.4% among IDPs as a result of high internal displacement in 2018. The disparity in PTSD prevalence of 85.05% in our study compared with the 46.1% reported by Tagurum, Chirdan, Obindo, Bello, Afolalaranmi, Hassan, & Yilgwan, (2015) study in Jos, Nigeria could be attributed to methodological and contextual factors. For example, while we assessed PTSD among trauma survivors of herdsman farmers' conflict, respondents in Tagurum et al.'s study were victims of ethno-religious violence in Jos.

### **Potential risk factors contributing to the development of PTSD among Primary School Children**

The findings of the study revealed that the risk factors contributing to the development of PTSD among Primary School Children in Port-Harcourt were serious accident, fire or explosion, non-Sexual assault by someone you know (physically attacked/injured), Sexual assault by a stranger amongst others. Several risk factors have been identified in the literature that contribute to the development of post-traumatic stress disorder (PTSD) among primary school children. Trickey et al. (2012) conducted a meta-analysis that highlighted various risk factors for PTSD in children and adolescents, including exposure to trauma. Pervanidou et al. (2020) discussed how early life stress, such as altered HPA axis functionality, could serve as a pre-trauma risk factor for PTSD, indicating a vulnerable predisposition due to genetic and environmental factors. Additionally, Nooner et al. (2012) emphasized that rates of traumatic exposure peak in adolescence, leading to higher rates of PTSD in this age group compared to adults. Furthermore, maternal factors have been identified as potential risk factors for PTSD in children. For instance, Borgert (2024) discussed how maternal PTSD can be a risk factor for offspring ADHD, highlighting the intergenerational transmission of trauma. Glaus et al. (2021) also explored the associations between maternal PTSD and traumatic events with child psychopathology, indicating the importance of considering maternal mental health in understanding the risk factors for PTSD in children. Moreover, environmental factors play a significant role in the development of PTSD among primary school children. Soliman et al. (2020) found a high statistical significance between childhood psychosocial dysfunction and factors such as family problems, living with a single parent, and major changes in the family. This suggests that the social environment and family dynamics can contribute to the risk of developing PTSD in children.

### **5.2 Conclusion**

The study established a high prevalence of PTSD (65%) among primary school children in Port Harcourt, Rivers State, Nigeria with implications for their mental health and well-being. The study also revealed that the positive indicators of PTSD were enhanced social support, Posttraumatic Growth, improved coping strategies amongst others. Therefore effective

interventions and treatments are crucial in addressing the impact of PTSD on children's daily lives and academic performance.

### 5.3 Recommendations

Recommendations for addressing post-traumatic stress disorder (PTSD) and its positive indicators among primary school children in Port-Harcourt can be informed by evidence-based strategies from relevant studies.

1. Implementing trauma-focused cognitive behavioral therapy (TF-CBT) has shown effectiveness in improving PTSD symptoms in children. Therefore, it is recommended to incorporate TF-CBT interventions in school-based mental health programs to provide targeted support for children experiencing PTSD.
2. School-based interventions have been found to be effective in reducing PTSD symptoms among children. Hence, establishing school-based programs that focus on trauma-related cognitive factors and coping strategies can help mitigate the impact of PTSD in primary school children in Port-Harcourt. These programs should emphasize adaptive coping mechanisms and provide a supportive environment for children to express their feelings and experiences.
3. Furthermore, promoting positive coping strategies and enhancing social support networks can be beneficial in addressing PTSD symptoms in children. Encouraging children to engage in proactive coping behaviors and fostering positive relationships within the school and community can contribute to resilience and better mental health outcomes.
4. Early psychological interventions have been shown to prevent long-term problems associated with PTSD in children. Therefore, it is recommended to implement early cognitive-behavioral interventions for children at risk of developing PTSD following traumatic experiences in Port-Harcourt. These interventions should focus on providing psychoeducation, coping skills training, and emotional support to help children process and cope with their traumatic experiences.
5. In addition, creating a trauma-informed school environment that promotes understanding, empathy, and mental health awareness can support children in managing PTSD symptoms (Horowitz et al., 2005). Training teachers and school staff on recognizing signs of trauma and providing appropriate support to affected children can contribute to a more inclusive and supportive school culture.

### REFERENCES

- Aardal-Eriksson E, Eriksson TE, Thorell LH (2018). Salivary cortisol, posttraumatic stress symptoms, and general health in the acute phase and during 9-month follow-up. *Biological Psychiatry*. 50 (12): 986–93.
- Abbey G, Thompson SB, Hickish T, Heathcote D (2015). A meta-analysis of prevalence rates and moderating factors for cancer-related post-traumatic stress disorder. *Psycho-Oncology*. 24 (4): 371–81.
- Adler-Nevo, G. and Manassis, K. (2018). Psychosocial treatment of pediatric posttraumatic stress disorder: the neglected field of single-incident trauma. *Depression and Anxiety*, 22(4), 177-189. <https://doi.org/10.1002/da.20123>

- Alisic, E., Schoot, T., Ginkel, J., & Kleber, R. (2018). Looking beyond posttraumatic stress disorder in children. *The Journal of Clinical Psychiatry*, 69(9), 1455-1461. <https://doi.org/10.4088/jcp.v69n0913>
- Belinskaya, E., Вечерин, А., & Agadullina, E. (2019). The relationship of proactive coping and severity of symptoms of post-traumatic stress disorder. <https://doi.org/10.2991/ispcpep-19.2019.3>
- Berg, L., Charboti, S., Montgomery, E., & Hjern, A. (2019). Parental ptsd and school performance in 16-year-olds – a swedish national cohort study. *Nordic Journal of Psychiatry*, 73(4-5), 264-272. <https://doi.org/10.1080/08039488.2019.1620852>
- Berger W, Mendlowicz MV, Marques-Portella C, Kinrys G, Fontenelle LF, Marmar CR, et al. (2019). "Pharmacologic alternatives to antidepressants in posttraumatic stress disorder: a systematic review". *Progress in Neuro-Psychopharmacology & Biological Psychiatry*. 33 (2): 169–80.
- Berger, R. and Gelkopf, M. (2009). School-based intervention for the treatment of tsunami-related distress in children: a quasi-randomized controlled trial. *iPsychotherapy and Psychosomatics*, 78(6), 364-371. <https://doi.org/10.1159/000235976>
- Berger, R., Pat-Horenczyk, R., & Gelkopf, M. (2007). School-based intervention for prevention and treatment of elementary-students' terror-related distress in israel: a quasi-randomized controlled trial. *Journal of Traumatic Stress*, 20(4), 541-551. <https://doi.org/10.1002/jts.20225>
- Bisson JI, Cosgrove S, Lewis C, Robert NP (2015). Post-traumatic stress disorder. *BMJ*. 351: h6161.
- Bleiberg KL, Markowitz JC (2015). A pilot study of interpersonal psychotherapy for posttraumatic stress disorder. *The American Journal of Psychiatry*. 162 (1): 181–3.
- Borgert, M. (2024). Prenatal maternal ptsd as a risk factor for offspring adhd: a register-based swedish cohort study of 553 766 children and their mothers. *European Psychiatry*, 67(1). <https://doi.org/10.1192/j.eurpsy.2024.21>
- Cahill SP, Foa EB (2017). *Taylor S (ed.). Advances in the Treatment of Posttraumatic Stress Disorder: Cognitive-behavioral perspectives*. New York: Springer. 267–313.
- Catani, C., Schauer, E., Elbert, T., Missmahl, I., Bette, J., & Neuner, F. (2009). War trauma, child labor, and family violence: life adversities and ptsd in a sample of school children in kabul. *Journal of Traumatic Stress*, 22(3), 163-171. <https://doi.org/10.1002/jts.20415>
- Chemtob CM, Gudiño OG, Luthra R, Yehuda R, Schmeidler J, Auslander B, (2016). Child trauma exposure and posttraumatic stress disorder: identification in community mental health clinics. *Evid Based Pract Child Adolescent Mental Health*. 1(2–3):103–15.
- Christiansen DM (2017). Posttraumatic stress disorder in parents following infant death: A systematic review. *Clinical Psychology Review*. 51: 60–74.
- Creech, S. and Misca, G. (2017). Parenting with ptsd: a review of research on the influence of ptsd on parent-child functioning in military and veteran families. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.01101>
- Creech, S., Hadley, W., & Borsari, B. (2019). The impact of military deployment and reintegration on children and parenting: a systematic review.. *Professional*

- Psychology Research and Practice*, 45(6), 452-464.  
<https://doi.org/10.1037/a0035055>
- Davidson, J., Hughes, D., Blazer, D., & George, L. (1991). Post-traumatic stress disorder in the community: an epidemiological study. *Psychological Medicine*, 21(3), 713-721.  
<https://doi.org/10.1017/s0033291700022352>
- Dorsey, S., Briggs, E., & Woods, B. (2011). Cognitive-behavioral treatment for posttraumatic stress disorder in children and adolescents. *Child and Adolescent Psychiatric Clinics of North America*, 20(2), 255-269. <https://doi.org/10.1016/j.chc.2011.01.006>
- Etkin A, Wager TD (2017). Functional neuroimaging of anxiety: a meta-analysis of emotional processing in PTSD, social anxiety disorder, and specific phobia. *The American Journal of Psychiatry*. 164 (10): 1476–88.
- Farahat, T., Alkot, M., Rajab, A., & Anbar, R. (2018). Attention-deficit hyperactive disorder among primary school children in menoufia governorate, egypt. *International Journal of Family Medicine*, 1-7. <https://doi.org/10.1155/2014/257369>
- Kaplan HI, Sadock BJ (2018). *Grebb JA (ed.). Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences, clinical psychiatry (7th ed.). Baltimore: Williams & Williams. pp. 606–609.*
- Kessler RC, Aguilar-Gaxiola S, Alonso J, Benjet C, Bromet EJ, Cardoso G, et al. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology*. 8 (sup5): 1353383.
- Khan, A., Ullah, O., Nawaz, K., & Ahmad, I. (2018). Post traumatic stress disorder among school children of army public school peshawar after six month of terrorists attack. *Pakistan Journal of Medical Sciences*, 34(3).  
<https://doi.org/10.12669/pjms.343.14885>
- Kramer, D. and Landolt, M. (2014). Early psychological intervention in accidentally injured children ages 2–16: a randomized controlled trial. *European Journal of Psychotraumatology*, 5(1). <https://doi.org/10.3402/ejpt.v5.24402>
- Lai J., Ma S., Wang Y., Cai Z., Hu J., Wei N., (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Netw. Open* 3:e203976. 10.1001
- Lambert, J., Holzer, J., & Hasbun, A. (2018). Association between parents' ptsd severity and children's psychological distress: a meta-analysis. *Journal of Traumatic Stress*, 27(1), 9-17. <https://doi.org/10.1002/jts.21891>
- Liberzon I, Sripada CS (2018). The functional neuroanatomy of PTSD: A critical review". *Stress Hormones and Post Traumatic Stress Disorder Basic Studies and Clinical Perspectives. Progress in Brain Research*. 167. pp. 151–69.
- Litman, L., Costantino, G., Waxman, R., Sanabria-Velez, C., Rodríguez-Guzmán, V., Lampon-Velez, A., ... & Cruz, T. (2018). Relationship between peer victimization and posttraumatic stress among primary school children. *Journal of Traumatic Stress*, 28(4), 348-354. <https://doi.org/10.1002/jts.22031>
- Liu, M., Wang, L., Shi, Z., Zhang, Z., Zhang, K., & Shen, J. (2019). Mental health problems among children one-year after sichuan earthquake in china: a follow-up study. *Plos One*, 6(2), e14706. <https://doi.org/10.1371/journal.pone.0014706>

- Lohr JB, Palmer BW, Eidt CA, Ailaboyina S, Mausbach BT, Wolkowitz OM, (2018). Is post-traumatic stress disorder associated with premature senescence? A review of the literature HHS public access. *Am J Geriatr Psychiatry*. 23(7):709–25.
- Mathew S., Jose G. P. K., Balakrishnan P. K. (2021). Clinical presentation of patients with pituitary tumour and its correlation to magnetic resonance imaging: an observational study. *Int. J. Anat. Radiol. Surg*. 10 SO11–SO14.
- Meiser-Stedman, R., Smith, P., Yule, W., Glucksman, E., & Dalgleish, T. (2017). Posttraumatic stress disorder in young children 3 years posttrauma. *The Journal of Clinical Psychiatry*, 78(3), 334-339. <https://doi.org/10.4088/jcp.15m10002>
- Meiser-Stedman, R., Smith, P., Yule, W., Glucksman, E., & Dalgleish, T. (2017). Posttraumatic stress disorder in young children 3 years posttrauma. *The Journal of Clinical Psychiatry*, 78(3), 334-339. <https://doi.org/10.4088/jcp.15m10002>
- Mitchell JM, Bogenschutz M, Lilienstein A, Harrison C, Kleiman S, Parker-Guilbert K, et al. (2021). MDMA-assisted therapy for severe PTSD: a randomized, double-blind, placebo-controlled phase 3 study. *Nature Medicine*. 27 (6): 1025–1033.
- Mollica R, Caspi-Yavin Y, Bollini P, Truong T, Tor S, Lavelle J. (2019). The Harvard Trauma Questionnaire. Validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indo-Chinese refugees. *J Nerv Ment Dis*. 180(2):111–116.
- Nooner, K., Linares, L., Batinjane, J., Kramer, R., Silva, R., & Cloitre, M. (2019). Factors related to posttraumatic stress disorder in adolescence. *Trauma Violence & Abuse*, 13(3), 153-166. <https://doi.org/10.1177/1524838012447698>
- Oquendo MA, Friend JM, Halberstam B, Brodsky BS, Burke AK, Grunebaum MF, Malone KM, Mann JJ. Association of comorbid posttraumatic stress disorder and major depression with greater risk for suicidal behavior. *Am J Psychiat*. 160(3):580–2
- Ovuga E, Boardman J, Wasserman D. (2015). Prevalence of depression in two districts in Uganda. *Soc Psychiatr Psychiatric Epidemiol*. 40(6):439–445.
- Pan, C. and Gong, Y. (2022). Association among postpartum posttraumatic stress disorder, family coping, neurodevelopment, and language development in high-risk infants: a retrospective study. *Translational Pediatrics*, 11(5), 728-737. <https://doi.org/10.21037/tp-22-128>
- Pedersen D, Tremblay J, Errázuriz C, Gamarra J (2018). The sequelae of political violence: assessing trauma, suffering and dislocation in the Peruvian highlands. *Social Science & Medicine*. 67 (2): 205–217.
- Pervanidou, P., Makris, G., Chrousos, G., & Agorastos, A. (2020). Early life stress and pediatric posttraumatic stress disorder. *Brain Sciences*, 10(3), 169. <https://doi.org/10.3390/brainsci10030169>
- Porter M, Haslam N (2018). Forced displacement in Yugoslavia: a meta-analysis of psychological consequences and their moderators. *Journal of Traumatic Stress*. 14 (4): 817–34.
- Roberts B, Kaducu F, Browne J, Oyok T, Sondorp E. (2018). Factors associated with post-traumatic stress disorder and depression amongst internally displaced persons in northern Uganda. *BMC Psychiatry*. 19; 8:38–44.



- Roberts NP, Kitchiner NJ, Kenardy J, Robertson L, Lewis C, Bisson JI (2019). Multiple session early psychological interventions for the prevention of post-traumatic stress disorder. *The Cochrane Database of Systematic Reviews*. 8 (8): CD006869
- Rolfsnes, E. and Idsøe, T. (2018). School-based intervention programs for ptsd symptoms: a review and meta-analysis. *Journal of Traumatic Stress*, 24(2), 155-165. <https://doi.org/10.1002/jts.20622>
- Ryan MA, Smith TC, Smith B, Amoroso P, Boyko EJ, Gray GC, Gackstetter GD, Riddle JR, Wells TS, Gumbus G, (2016). Millennium cohort: enrollment begins a 21-year contribution to understanding the impact of military service. *J Clin Epidemiol*. 60(2):181–91.
- Sarimin, D. and Tololiu, T. (2017). Effectiveness of cognitive behavior therapy in comparison to cbt- plus play therapy among children with post-traumatic stress disorder in manado, indonesia. *International Journal of Research in Medical Sciences*, 5(4), 1589. <https://doi.org/10.18203/2320-6012.ijrms20171270>
- Scheeringa MS (2015). "Untangling Psychiatric Comorbidity in Young Children Who Experienced Single, Repeated, or Hurricane Katrina Traumatic Events. *Child and Youth Care Forum*. 44 (4): 475–492.
- Selimbašić, Z., Sinanović, O., & Avdibegović, E. (2018). Psychosocial problems among children of parents with posttraumatic stress disorder. *Medical Archives*, 66(5), 304. <https://doi.org/10.5455/medarh.2012.66.304-308>