SJIF Impact Factor: 6.711

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 9
Issue: 8
Page N. 153-159
Year: 2025

Original Article

www.wjahr.com

PREVALENCE OF POST-TRAUMATIC STRESS SYMPTOMS AMONG ADOLESCENTS IN BAGHDAD

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Article Received date: 16 June 2025 **Article Revised date**: 06 July 2025 **Article Accepted date:** 27 July 2025

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ABSTRACT

Background: Post-Traumatic Stress Disorder (PTSD) is a significant mental health issue among adolescents, particularly in regions affected by ongoing conflict and social instability. **Objectives:** This study aimed to assess the prevalence of PTSD symptoms among secondary school adolescents in Baghdad, and to find out if there is any association between demographic factors and PTSD symptoms. **Subjects and Methods:** A cross-sectional study with a convenient sample of 1000 students from public secondary schools in Baghdad was conducted along six months' duration. Data were collected using the Post traumatic scale for children and adolescents to assess PTSD symptoms Results: The prevalence of PTSD symptoms was 59.3%, witnessing community violence (35%), experiencing serious accidents (28%), and the sudden or violent death of a loved one (31%) were most common causes. Conclusions: Adolescents in Baghdad are at high risk for PTSD Factors such as age, gender and residence play significant roles in PTSD prevalence.

KEYWORDS: PTSD, Adolescents, self-report for DSM.

INTRODUCTION

Post-traumatic stress disorder (PTSD) is one of the most commonly reported psychological conditions that individuals experience following exposure to traumatic events. It manifests through a variety of distressing symptoms, including recurrent intrusive thoughts, vivid nightmares, flashbacks, heightened anxiety, and emotional numbness. These symptoms often lead to considerable impairment in social, academic, and personal aspects of life, diminishing overall quality of life and well-being.[1] PTSD typically results from experiencing or witnessing events involving actual or threatened death, serious injury, or sexual violence. Although PTSD can affect individuals of any age, adolescents are particularly vulnerable due to their unique developmental characteristics and the profound influence of trauma on their psychological maturation.[2] Adolescence, generally defined as the period between 10 and 19 years of age, represents a critical phase of transition from childhood to adulthood.[3] During this time, adolescents undergo rapid physical changes, including puberty, alongside cognitive, emotional, and social development. These transformations influence how they perceive, internalize, and respond to external stressors.[4] As their cognitive abilities mature, adolescents begin to process abstract thoughts, develop personal values, and form complex social relationships. These changes make them more aware of their surroundings but also more susceptible to emotional distress when exposed to trauma.[5] Across the globe, various studies have documented wide discrepancies in the prevalence of PTSD, particularly in regions affected by armed conflict and political instability. Such variation highlights the significant role of contextual and environmental factors in shaping mental health outcomes.[6] For example, in Libya, a nation deeply affected by civil unrest and violence, the lifetime prevalence of PTSD is alarmingly high—estimated to be as much as 32%. This can be largely attributed to years of intense conflict, widespread violence, and disruption of social structures.[7] Similarly, the ongoing conflict in eastern Ukraine has led to a surge in PTSD cases, particularly among internally displaced persons (IDPs). Research suggests that approximately 27% of IDPs in Ukraine have experienced PTSD, reflecting the psychological burden of forced migration and

insecurity.[8] In Iraq, the situation is no less severe. The city of Mosul, which endured years of occupation and violent conflict, has witnessed exceptionally high rates of PTSD. Studies have reported that nearly 40% of residents in Mosul meet the diagnostic criteria for PTSD, underscoring the psychological scars left by terrorism and urban warfare.[9] In Baghdad, Iraq's capital, decades of unrest, armed conflict, and terrorism have created a hostile and unstable environment, particularly affecting the younger population. Adolescents living in Baghdad face chronic exposure to violence, loss, and uncertainty, placing them at significant risk for developing PTSD.[10] The variability in PTSD prevalence across different settings can be influenced by numerous factors, including the intensity and duration of traumatic exposure, cultural attitudes toward mental illness, methods of symptom reporting, and access to mental health services. Recognizing these influences is critical for tailoring effective mental health interventions that are culturally sensitive and contextually appropriate.[11] Furthermore, children and adolescents are biologically and psychologically more vulnerable to the effects of trauma due to ongoing neurodevelopmental changes. The plasticity of the adolescent brain, combined with emotional instability and limited coping mechanisms, may amplify trauma's impact. In crisis-affected regions, adolescents are often exposed to layers of adversity, including domestic violence, community conflict, and neglect, all of which contribute to an elevated risk of PTSD.[12]

OBJECTIVES OF THE STUDY

The present study aims to estimate the prevalence of post-traumatic stress disorder (PTSD) among a sample of Iraqi adolescents and to examine potential associations between PTSD and key sociodemographic and contextual variables.

METHOD

A cross-sectional study with an analytical component was conducted over an 11-month period, from February 1 to December 31, 2024. The study targeted adolescents enrolled in public secondary schools across Baghdad, specifically within the Al-Karkh and Al-Rusafa educational directorates. Twenty public secondary schools were conveniently selected—ten from each directorate—to ensure a diverse geographic and social representation. From each school, 50 students were chosen using a non-random convenience sampling technique, yielding a total sample size of 1,000 students. Each group included 25 students from the 4th grade and 25 from the 5th grade. Eligible participants included students who were present during data collection and agreed to participate. Students with pre-existing diagnoses of psychological disorders such as autism, schizophrenia, depression, or anxiety, as well as those absent at the time of data collection, were excluded. Data collection was carried out by the researcher through direct face-to-face interviews, following parental informed consent. The primary tool for data collection was the **Child PTSD Symptom Scale – Self-Report for DSM-V (CPSS-SR)**.[13] The questionnaire was structured into two main parts. The first included sociodemographic variables: age, gender, place of residence, number of siblings, and family income. The second part consisted of the standardized CPSS-SR, which included four sections: trauma exposure screening, trauma-related context, PTSD symptom severity (20 items scored on a 5-point Likert scale), and functional impairment assessment. PTSD severity was classified into five categories ranging from minimal to very severe. A pilot study involving 20 students (excluded from the main sample) was conducted to evaluate the clarity of the questionnaire, translation accuracy, and average completion time (10–15 minutes). Ethical approval was obtained from the Iraqi Board for Medical Specializations and both Baghdad educational directorates. Confidentiality and voluntary participation were ensured. Data analysis was performed using **SPSS version 29**. Descriptive statistics (frequencies and percentages) and inferential statistics (Chi-square test) were used, with significance set at $p < 0.05$.

RESULTS

Sociodemographic data of parents' and students: A total of 1,000 secondary school students (4th and 5th grades) were enrolled in this study, which was conducted across 20 public secondary schools in Baghdad (from both Al-Karkh/Al-Rusafa Educational Directorates) for nearly 3 months with a balanced representation of gender (50% male and 50% female), aged between 16-18 years (Mean = 16.62; SD =0.68). Socio-demographic factors, such as the place of residence, were evenly distributed between Al-Karkh and Al-Rusafa districts (50% each). Regarding family background, 55.1% of the participants had 3-4 siblings, and 66.6% reported having a monthly income that was enough to meet their needs, as detailed in *(Table 1).*

Table 1: Socio-demographic characteristics of the sample.

Patients' characteristics	No. (1000)	% (100%)
Age		
16 years	497	49.7
17 years	391	39.1
18 years	112	11.2
Gender		
Male	500	50
Female	500	50
Place of residence		
Al-Karkh	500	50
Al-Rusafa	500	50
Number of siblings		
1-2	347	34.7
3-4	551	55.1
≥5	102	10.2
Monthly income		
Enough	666	66.6
Partly enough	252	25.2
Not enough	82	8.2

Participants' responses to a questionnaire on traumatic events were summarized in *(table 2)*. It details various types of traumatic experiences, ranging from natural disasters to violent personal encounters. For each description, the table lists the number and percentage of participants who answered "Yes" or "No," indicating whether they have experienced each type of event.

Table 2: Participant responses to post traumatic events questionnaire.

Description	Yes	No
A severe natural disaster such as a flood, tornado, hurricane, earthquake, or fire	211 (21%)	789 (79%)
Serious accident or injury caused by a car or bike crash, being bitten by a dog, or caused by playing sports	282 (28%)	718 (72%)
Being robbed by threat, force, or weapon	112 (11%)	888 (89%)
Being slapped, punished, or beaten by a relative	207 (21%)	793 (79%)
Being slapped, knifed, or beaten by a stranger	130 (13%)	870 (87)
Seeing a relative get slapped, punished, or beaten	264 (26%)	736 (74%)
Seeing somebody in your community being slapped, punished, or beaten	347 (35%)	653 (65%)
Being touched in your sexual/private parts by an adult/someone older who should not be touching you there	144 (14%)	856 (86%)
Being forced/pressured to have sex at a time when you could not say no	112 (11%)	888 (89%)
A family member or somebody close dying suddenly or in a violent way	312 (31%)	688 (69%)
Being attacked, shot, stabbed, or seriously injured	123 (12%)	877 (88%)
Seeing someone be attacked, shot, stabbed, or seriously injured or killed	217 (22%)	783 (78%)
Having a stressful or frightening medical procedure	223 (22%)	777 (78%)
Being around a war	160 (16%)	840 (84%)
Any other stressful or frightening event	43 (4%)	957 (96%)

Participant responses to PTSD symptoms scale self-report for DSM 5th edition illustrates the distribution of participants with and without PTSD, It categorizes participants into two groups based on the presence or absence of PTSD symptoms, 593(59.3%) of the adolescents exhibited PTSD symptoms, as represented in *(Fig 1)* so the illegible sample was (593) students.

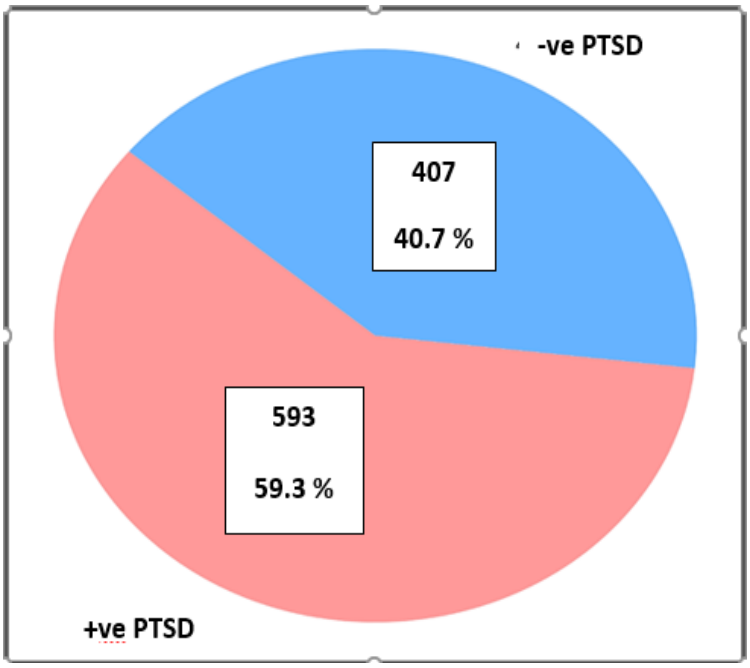

Figure (1): Proportion of study participants exhibiting PTSD symptoms.

(Table 3) presents the distribution of participants' self-reported responses to various PTSD symptoms based on the DSM-5 criteria. The responses are collected using a scale ranging from 0 to 4. It showed a range of PTSD-related experiences, were upsetting thoughts, having trouble paying attention and difficulties with emotions or sleep registered the higher percentages, according to these responses.

Table 3: Participant responses to PTSD symptoms scale self-report for DSM 5th edition (N= 593).

Symptom	0	1	2	3	4
Upsetting thoughts or pictures coming into your head when you didn't want them	121	155	102	94	121
Having bad dreams or nightmares	108	193	142	69	81
Feeling as if the event was happening again (flashbacks)	141	135	117	95	105
Feeling upset when reminded of the event	94	119	125	97	158
Physical reactions when reminded (sweating, heart beating fast)	169	128	110	84	102
Trying not to think about the event	129	135	111	83	135
Avoiding reminders (people, places, conversations)	155	118	108	78	134
Inability to recall important parts of the event	215	142	91	73	72
Negative thoughts about yourself or the world	151	135	95	89	123
Blaming yourself or others for the event	155	138	103	91	106
Strong negative feelings (fear, anger, guilt, shame)	188	117	109	88	91
Loss of interest in activities once enjoyed	149	102	135	94	113
Feeling distant or cut off from others	207	133	85	79	89
Trouble feeling positive emotions or love	219	126	110	60	78
Irritability or anger outbursts	165	112	88	92	136
Engaging in self-destructive behavior (e.g., drinking, drugs)	373	87	58	41	34
Hyper vigilance or being overly alert	171	140	112	78	92
Being jumpy or easily scared (for example, when someone walks up behind you, when you hear a loud noise)	192	129	92	80	100
Having trouble paying attention (for example, losing track of a story on TV, forgetting what you read, unable to pay attention in class)	114	118	122	94	145
Having trouble falling or staying asleep	124	111	109	97	152

The severity of PTSD symptoms was categorized into five levels, most participants had minimal (36%) or mild (29.5%) PTSD, while 11% reported severe symptoms, and 7% were classified as very severe *(Figure 2).*

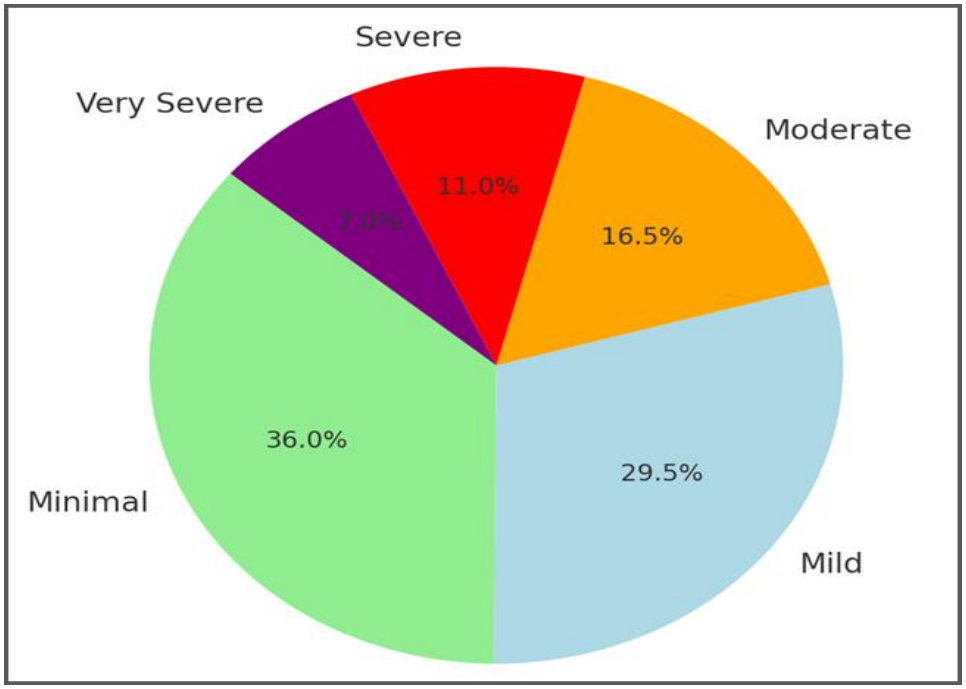

Figure.2: Distribution of PTSD symptom severity levels among participants, (N=593).

There was a significant association between the presence of PTSD symptoms among participants and sociodemographic variables as age, gender, place of residence, number of siblings, and monthly income, (P value: 0.031, 0.041, 0.0001, and 0.034 respectively), however, there was no significant association between PTSD and monthly income (p=0.30), suggesting that this factor did not notably impact the prevalence of PTSD in this cohort. (Table 4).

Table 4: Association between SD variables with the presence of PTSD symptoms.

Variable	Category	Total Number	PTSD Symptoms		Chi-square test	P-value
			Yes	No		
Age	16	497	281	216	6.96	0.031
	17	391	251	140		
	18	112	60	52		
Gender	Male	500	280	220	4.2	0.041
	Female	500	313	187		
Place of Residence	Al-Karkh	500	320	180	0.0001	0.0001
	Al-Rusafa	500	273	227		
Number of Siblings	1-2	347	197	150	0.034	0.034
	3-4	551	326	225		
	≥5	102	70	32		
Monthly Income	Enough	666	393	273	2.42	0.3
	Partly Enough	252	151	101		
	Not Enough	82	49	33		

A positive association was notices between the levels of severity of PTSD were Age, gender, and place of residence show statistically significant associations (*P value: 0.02, 0.0003, 0.034 respectively)*, while the number of siblings and monthly income do not *P value: 0.6, 0.5 respectively) (table 5).*

Table 5: Association of sociodemographic data with the severity of PTSD symptoms.

Variable	Category	PTSD Severity (Minimal)	PTSD Severity (Mild)	PTSD Severity (Moderate)	PTSD Severity (Severe)	PTSD Severity (Very Severe)	Chi-square test	P-Value
Age	**16 years**	25	41	108	92	15	21.05	**0.02**
	17 years	26	48	91	65	21		
	18 years	14	8	15	18	5		
Gender	**Male**	47	50	94	72	17	21.05	**0.0003**
	Female	18	48	120	103	24		
Place of Residence	**Al-Karkh**	41	50	114	106	15	10.41	**0.034**
	Al-Rusafa	24	48	100	69	26		
Number of Siblings	**1-2**	4	6	21	9	3	6.36	0.6
	3-4	16	22	49	51	13		
	≥5	45	70	144	115	25		
Monthly Income	**Enough**	46	64	144	121	22	7.32	0.5
	Partly Enough	17	25	50	37	13		
	Not Enough	2	9	20	17	6		

DISCUSSION

Posttraumatic stress disorder (PTSD) is a complex mental health condition that significantly impacts cognitive, emotional, and behavioral functioning, often leading to chronic impairment if left untreated. The present study revealed a notably high prevalence of PTSD symptoms among Iraqi adolescents, reinforcing the profound influence of trauma on youth mental health.[14] Participants' responses to the trauma questionnaire demonstrated substantial exposure to various traumatic events. Notably, over a quarter reported serious accidents or injuries, which is consistent with global and regional data. Anderson et al. highlight that in low- and middle-income countries, factors like inadequate road infrastructure, lack of safety enforcement, and poor health systems contribute to high rates of road traffic-related trauma.[15] This finding mirrors the risks identified in our study. Similarly, McCrory emphasized that increased sports participation without appropriate safety protocols also elevates the risk of trauma-related injuries, particularly among youth.[16] The most frequently reported traumatic event was witnessing community violence, reported by slightly more than a third of participants. This suggests a high degree of societal instability and exposure to daily threats, including crime and conflict. White et al. note that community violence, especially in conflict-affected areas, contributes significantly to chronic stress, anxiety, and PTSD.[17,18] The sudden or violent loss of a loved one was reported by nearly one-third of participants, highlighting the devastating psychological burden of unexpected bereavement. Scott et al. confirm that such experiences often lead to complicated grief and PTSD, with social support playing a crucial mitigating role.[19]

More than half of the participants met the criteria for PTSD symptoms, underscoring the high trauma burden within this population. These findings resonate with those of Aysazci-Cakar et al., who documented PTSD rates exceeding 50% among displaced populations, driven by compounded trauma, displacement, and healthcare barriers.[20] Allan et al. reported similar PTSD rates among healthcare workers during the COVID-19 crisis, pointing to how layered stressors can intensify PTSD risk.[21] When examining individual PTSD symptoms, distress when reminded of the trauma, attention difficulties, and sleep disturbances were among the most severe. Over a quarter of participants rated these symptoms at a severe level. These symptoms are consistent with global findings. Hoppen and Morina reported that about 30% of trauma-exposed individuals experience intense emotional responses to reminders.[22] Buswell et al. found that attention deficits were common in PTSD, especially in individuals with comorbid conditions.[23] Sleep disturbances, such as insomnia, were prevalent in this study and have also been widely documented, with Hiller et al. noting similar findings during the pandemic.[24] Severity levels showed that more than one-third of participants had minimal symptoms, suggesting potential for natural recovery. Diamond et al. observed that mild symptoms often resolve within a year without progressing to chronic PTSD.[24] However, about 5–10% exhibited very severe symptoms, consistent with Hoppen & Morina's global estimates of persistent, high-level PTSD in trauma-exposed populations.[22] Sociodemographic associations revealed that PTSD was more prevalent among younger adolescents, particularly 17-year-olds. Rahman et al. emphasize adolescence as a critical vulnerability period for PTSD, with lasting consequences if unaddressed.[25] Gender analysis indicated higher PTSD prevalence among females, which supports Guina et al.'s findings linking female vulnerability to emotional trauma and avoidance behavior.[26] Geographic differences also emerged; Al-Karkh participants had higher PTSD rates than Al-Rusafa, likely due to disparities in community stability, echoing Wang et al.'s findings on urban violence and mental health.[27] A higher number of siblings was associated with increased PTSD prevalence, possibly due to strained resources, as supported by Fernandez-Rodrigues et al.[28] However, monthly income did not show significant association—though Aquino et al. suggest that economic stress can influence PTSD indirectly by limiting access to care.[29]

CONCLUSION

Baghdad's secondary school teens have 59.3% PTSD symptoms, showing a major issue. Witnessing communal violence, terrible accidents or injuries, and the abrupt or violent loss of a loved one were major trauma causes. The highest prevalence of PTSD symptoms was in 17-year-olds, with girls marginally more impacted than boys. PTSD rates were greater in Al-Karkh than Al-Rusafa. Monthly income and siblings did not significantly affect PTSD symptoms. Adolescent-focused mental health policies, trauma screening programs, school-based efforts, and family participation are essential to managing PTSD in this vulnerable age group.

REFERENCES

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5®. 5th ed. Washington (DC): American Psychiatric Association, 2013.
2. Wang Y, Xu J, Lu Y. Associations among trauma exposure, post-traumatic stress disorder, and depression symptoms in adolescent survivors of the 2013 Lushan earthquake. J Affect Disord, 2020; 264: 407–13. doi:10.1016/j.jad.2019.11.067
3. Alkhazrajy LA, Abdulmajeed SN. Factors influencing health and risk behaviors among sample of Iraqi adolescents. Clin Schizophr Relat Psychoses, 2021; 16(1): 1–4. doi:10.3371/CSRP.ALSN.112221
4. American Psychological Association. Adolescence. In: APA Dictionary of Psychology [Internet]. Washington (DC): American Psychological Association; 2021 [cited 2025 Jul 8]. Available from: https://dictionary.apa.org/adolescence
5. Sawyer SM, Azzopardi PS, Wickremarathne D, Patton GC. The age of adolescence. Lancet Child Adolesc Health, 2018; 2(3): 223–8.
6. United Nations Children's Fund (UNICEF). Humanitarian action for children 2022 [Internet]. New York: UNICEF; 2022 [cited 2025 Jul 8]. Available from: https://www.unicef.org/reports/humanitarian-action-children-2022
7. Altare C, Kahi V, Almeda N, Acharya S, Bakhouche H, Ben Farhat J. Prevalence of PTSD among conflict-affected populations in Libya. J Anxiety Disord, 2020; 61(3): 102267.
8. Zasiekina L, Zasiekin S, Kuperman V. Post-traumatic stress disorder and moral injury among Ukrainian civilians during the ongoing war. J Community Health, 2023; 48(5): 784–92. doi:10.1007/s10900-023-01225-5
9. Al-Hemiary NJ, Hashim MT, Al-Shawi AF, Al-Diwan JK. Effect of post traumatic stress disorder on school achievement among secondary school students in Baghdad, Iraq. J Fac Med Baghdad, 2016; 58(2): 228. doi: 10.32007/jfacmedbagdad.582228.
10. Hadi ZA, Al-Shatari SA. Knowledge, attitude and practice of secondary school teachers toward psychological support to their students: Sample from Baghdad. Iraqi Postgrad Med J., 2023; 22(1): 180592. doi: 10.52573/IPMJ.2023.180592.
11. Patel V, Saxena S, Lund C, Thorneycroft G, Baingana F, Bolton P, et al. The Lancet Commission on global mental health and sustainable development. Lancet, 2019; 392(10157): 1553–98.
12. Stupar D, Stevanović D, Vostanis P, Atilola O, Moreira P, Dodig-Ćurković K, et al. Posttraumatic stress disorder symptoms among trauma-exposed

adolescents from low- and middle-income countries. Child Adolesc Psychiatry Ment Health., 2021; 15(1): 18.
13. Foa EB, Asnaani A, Zang Y, Capaldi S, Yeh R. Psychometrics of the Child PTSD Symptom Scale for DSM-5 for trauma-exposed children and adolescents. J Clin Child Adolesc Psychol, 2018; 47(1): 38–46. doi:10.1080/15374416.2017.1350962
14. Mann SK, Marwaha R, Torrico TJ. Posttraumatic stress disorder. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2025 Jul 8]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK559129/
15. Anderson J, Warner HW, Henriksson P, et al. The proportions of severe and less severe bicycle crashes and how to avoid them. Accid Anal Prev., 2024; 185: 106972. doi:10.1016/j.aap.2024.106972
16. McCrory P, Meeuwisse WH, Dvorak J, Aubry M, Bailes J, Broglio S, et al. Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016. Br J Sports Med., 2019; 53(4): 213–25. doi:10.1136/bjsports-2017-097699
17. White SJ, Sin J, Sweeney A, et al. Global prevalence and mental health outcomes of intimate partner violence among women: a systematic review and meta-analysis. Trauma Violence Abuse, 2024. doi:10.1177/15248380231155529
18. Institute for Health Metrics and Evaluation (IHME). Global burden of disease study results. Lancet, 2020. doi:10.1016/S0140-6736(20)30925-9
19. Scott HR, Pitman A, Kozhuharova P, Lloyd-Evans B. A systematic review of studies describing the influence of informal social support on psychological wellbeing in people bereaved by sudden or violent causes of death. BMC Psychiatry, 2020; 20(1): 265. doi:10.1186/s12888-020-02639-4
20. Aysazci-Cakar F, Schroder T, Hunt N. A systematic review of prevalence and correlates of PTSD, depression, and anxiety in displaced Syrian populations. J Affect Disord Rep., 2022; 307: 29–42. doi:10.1016/j.jadr.2022.100397
21. Allan SM, Bealey R, Birch J, Cushing T, et al. The prevalence of stress-related mental health disorders in healthcare workers in pandemic-affected hospitals. Eur J Psychotraumatol, 2020; 11(1): 1810903. doi:10.1080/20008198.2020.1810903
22. Hoppen TH, Morina N. The prevalence of PTSD and major depression in the global population of adult war survivors: a meta-analytically informed estimate in absolute numbers. Eur J Psychotraumatol, 2019; 10(1): 1578637. doi:10.1080/20008198.2019.1578637
23. Buswell G, Haime Z, Lloyd-Evans B, Billings J. A systematic review of PTSD related to the experience of psychosis: prevalence and associated factors. BMC Psychiatry, 2021; 21(1): 133. doi:10.1186/s12888-020-02999-x
24. Diamond PR, Hiller R, Airdrie JN, Fraser A, et al. Change in prevalence of post-traumatic stress disorder in the two years following trauma: a meta-analytic study. Eur J Psychotraumatol, 2022; 13(1): 2066456. doi:10.1080/20008198.2022.2066456
25. Rahman F, Webb RT, Kwiatkowski A. Risk factors for self-harm repetition in adolescents: a systematic review. Clin Psychol Rev., 2021; 87: 102048. doi:10.1016/j.cpr.2021.102048
26. Guina J, Nahhas R, Kawalec K, Farnsworth S. Are gender differences in DSM-5 PTSD symptomatology explained by sexual trauma? J Interpers Violence, 2019; 34(22): 4713–40. doi:10.1177/0886260516677290
27. Wang Y, Kala MP, Jaafar TH. Psychological distress during the COVID-19 pandemic in the general population: a systematic review and meta-analysis. PLoS One., 2020; 15(12): e0244630. doi:10.1371/journal.pone.0244630
28. Fernandez-Rodrigues V, Sanchez-Carro Y, et al. Risk factors for suicidal behavior in late-life depression: a systematic review. World J Psychiatry, 2022; 12(1): 187–203. doi:10.5498/wjp.v12.i1.187
29. Aquino IMM, Geli RIA, Juangco JR. Risk factors of PTSD, depression, and anxiety in patients with previous COVID-19 infection: a systematic review and meta-analysis. Health Sci J., 2022. doi:10.366961492