American Journal of Forensic Psychology
ISSN: 0733-1290

https://doi.org/10.61336/AJFP/2026-1-25 https://americanforensicpsychology.org/index.php/ajfp/index

A Systematic Review

Post-Traumatic Stress Disorder Among Sexual Assault Survivors Undergoing Forensic Evaluation: A Systematic Review.

Name of Author:

Manisha Mandloi[1]*, Ankit Raghuwanshi[2], Aditya Guru[3].

Affiliation:

[1]Junior Resident, Department of Psychiatry, Index Medical College Hospital & Research Center, Indore, Madhya Pradesh, India.
[2]Junior Resident, Department of Psychiatry, Index Medical College Hospital & Research Center, Indore, Madhya Pradesh, India.
[3]Junior Resident, Department of Psychiatry, Index Medical College Hospital & Research Center, Indore, Madhya Pradesh, India.

Corresponding Author: Manisha Mandloi.

Received: 23-05-2026
Revised: 04-06-2026
Accepted: 24-06-2026
Published: 07-07-2026

Abstract: ***Background:*** Sexual assault is a severe traumatic event associated with long-term psychological consequences, including post-traumatic stress disorder (PTSD), depression, anxiety, self-harm, substance use, and impaired social functioning. Survivors undergoing forensic evaluation represent a particularly vulnerable group because medico-legal examination may occur soon after the assault and may be accompanied by distress, fear, stigma, shame, and concerns related to legal proceedings. ***Objective:*** This systematic review aimed to evaluate the prevalence and determinants of PTSD among survivors of sexual assault undergoing forensic or medico-legal evaluation. ***Materials and Methods:*** A systematic literature search was conducted using PubMed/MEDLINE, Scopus, Web of Science, Embase, PsycINFO, Google Scholar, and manual reference screening. Studies reporting PTSD, post-traumatic stress symptoms, or trauma-related psychological morbidity among survivors of sexual assault assessed in forensic, medico-legal, emergency, sexual assault referral, or crisis evaluation settings were included. Observational studies, cross-sectional studies, cohort studies, and forensic clinic-based studies were considered. Reviews, editorials, case reports, studies not involving sexual assault survivors, and studies without extractable PTSD-related data were excluded. Data were synthesized descriptively because of heterogeneity in population characteristics, timing of assessment, PTSD instruments, forensic settings, and follow-up periods. ***Results:*** A total of 32 studies involving 8,746 survivors of sexual assault were included. The reported prevalence of PTSD ranged from 21.4% to 68.9%, with a pooled descriptive estimate of 42.7%. PTSD symptoms were more frequently reported when assessment occurred after the acute post-assault period compared with immediate forensic examination. Important determinants included severity of assault, physical injury, perceived threat to life, repeated assault, childhood sexual abuse, prior psychiatric illness, low social support, self-blame, delayed disclosure, substance-facilitated assault, intimate partner or known perpetrator assault, and ongoing legal stress. Survivors undergoing forensic evaluation frequently reported intrusive memories, avoidance, hyperarousal, sleep disturbance, fear, shame, guilt, and functional impairment. ***Conclusion:*** PTSD is highly prevalent among survivors of sexual assault undergoing forensic evaluation. Forensic and medico-legal services should integrate trauma-informed care, early psychological screening, crisis counseling, safety assessment, referral pathways, and follow-up mental health support. Identification of high-risk determinants can help prioritize survivors requiring urgent psychological intervention.

Keywords: sexual assault, rape, forensic evaluation, post-traumatic stress disorder, PTSD, medico-legal examination, trauma-informed care, survivors, systematic review.

INTRODUCTION

Sexual assault is one of the most severe forms of interpersonal violence and has profound physical, psychological, social, and medico-legal consequences. Survivors may present to healthcare facilities for emergency medical care, forensic evidence collection, pregnancy prevention, sexually transmitted infection prophylaxis, injury documentation, and legal reporting. The forensic evaluation process is essential for justice and documentation, but it may also be emotionally distressing because survivors are required to recount traumatic experiences, undergo physical examination, and engage with legal systems soon after the assault.

Post-traumatic stress disorder is one of the most common psychiatric outcomes following sexual assault. PTSD may develop after exposure to threatened death, serious injury, or sexual violence and is characterized by intrusive symptoms, avoidance, negative alterations in cognition and mood, and hyperarousal. Survivors of sexual assault often experience nightmares, flashbacks, exaggerated startle response, emotional numbness, shame, guilt, self-blame, sleep disturbance, irritability, and avoidance of reminders. These symptoms can impair education, employment, relationships, physical health, and legal participation.

Sexual assault differs from many other traumatic exposures because it is commonly associated with violation of bodily autonomy, stigma, fear of disbelief, social judgment, and difficulty in disclosure. The psychological impact may be intensified when the perpetrator is known to the survivor, when there is physical injury, when the survivor experiences threat to life, when assault is repeated, or when there is poor social support. Survivors undergoing forensic evaluation may also face additional stressors including police procedures, repeated questioning, court processes, fear of retaliation, and uncertainty regarding legal outcomes.

Understanding PTSD prevalence among survivors undergoing forensic evaluation is important for several reasons. First, the forensic encounter may be the first opportunity for psychological screening and crisis intervention. Second, early identification of PTSD symptoms and risk factors can guide referral to mental health services. Third, trauma-informed forensic care may reduce secondary victimization and improve survivor engagement with healthcare and legal systems. Fourth, psychiatric morbidity may influence follow-up compliance, legal testimony, and long-term recovery.

Although several studies have examined mental health outcomes after sexual assault, estimates of PTSD vary widely because of differences in study population, timing of assessment, diagnostic tools, definitions of sexual assault, and forensic care models. A systematic review focused on survivors undergoing forensic or medico-legal evaluation is therefore necessary.

This systematic review was conducted to evaluate the prevalence and determinants of PTSD among survivors of sexual assault undergoing forensic evaluation.

MATERIALS AND METHODS

Study Design

This study was designed as a systematic review of observational evidence evaluating PTSD and post-traumatic stress symptoms among survivors of sexual assault undergoing forensic, medico-legal, emergency, sexual assault referral, or crisis evaluation.

Research Question

The review was guided by the following research question:

What is the prevalence of PTSD among survivors of sexual assault undergoing forensic evaluation, and what demographic, assault-related, psychosocial, and medico-legal determinants are associated with PTSD?

Literature Search Strategy

A systematic literature search was conducted using PubMed/MEDLINE, Scopus, Web of Science, Embase, PsycINFO, Google Scholar, and manual screening of reference lists. The following keywords and search terms were used in different combinations:
"sexual assault," "rape," "sexual violence," "forensic examination," "forensic evaluation," "medico-legal examination," "sexual assault referral centre," "sexual assault nurse examiner," "post-traumatic stress disorder," "PTSD," "post-traumatic stress symptoms," "trauma," "survivors," "mental health," "psychological morbidity," "determinants," and "risk factors."
Boolean combinations included:

- "sexual assault" AND "PTSD"
- "rape survivors" AND "post-traumatic stress disorder"
- "sexual assault" AND "forensic examination" AND "mental health"
- "medico-legal examination" AND "sexual violence" AND "PTSD"
- "sexual assault referral centre" AND "post-traumatic stress symptoms"
- "sexual assault survivors" AND "risk factors" AND "PTSD"

Only full-text articles published in English and involving human participants were considered.

Eligibility Criteria

Inclusion Criteria

Studies were included if they fulfilled the following criteria:

1. Included survivors of sexual assault, rape, or sexual violence.

2. Included participants undergoing forensic evaluation, medico-legal examination, sexual assault referral service assessment, emergency post-assault evaluation, crisis center evaluation, or comparable clinical-forensic assessment.
3. Reported PTSD, post-traumatic stress symptoms, trauma-related psychological morbidity, or validated PTSD screening outcomes.
4. Reported prevalence, frequency, severity, or determinants of PTSD symptoms.
5. Observational studies including cross-sectional, prospective cohort, retrospective cohort, or clinic-based studies.
6. Adult or adolescent survivors, or mixed samples with extractable data.
7. Full-text articles available in English.

Exclusion Criteria

Studies were excluded if they met any of the following criteria:

1. Did not involve sexual assault or sexual violence survivors.
2. Did not report PTSD or post-traumatic stress-related outcomes.
3. Did not involve forensic, medico-legal, emergency, or crisis evaluation settings.
4. Case reports, editorials, commentaries, opinion articles, and narrative reviews.
5. Studies focused only on physical injuries without psychological outcomes.
6. Studies involving intimate partner violence without separate sexual assault data.
7. Animal studies or non-clinical theoretical papers.
8. Duplicate or overlapping datasets.
9. Full text unavailable.

Study Selection Process

All records retrieved from database searches were imported into a reference management system. Duplicate records were removed. Titles and abstracts were screened for relevance, followed by full-text assessment according to eligibility criteria.

A total of 914 records were identified through database and manual searching. After removal of 238 duplicate records, 676 records were screened by title and abstract. Of these, 561 records were excluded. A total of 115 full-text articles were assessed for eligibility, and 83 articles were excluded for defined reasons. Finally, 32 studies were included in the systematic review.

Table 1. PRISMA Study Selection Summary

Study selection stage	Number
Records identified through database and manual searching	914
Duplicate records removed	238
Records screened by title and abstract	676
Records excluded after screening	561
Full-text articles assessed for eligibility	115
Full-text articles excluded	83
Studies included in systematic review	32

Figure 1. PRISMA 2020 Flow Diagram of Study Selection

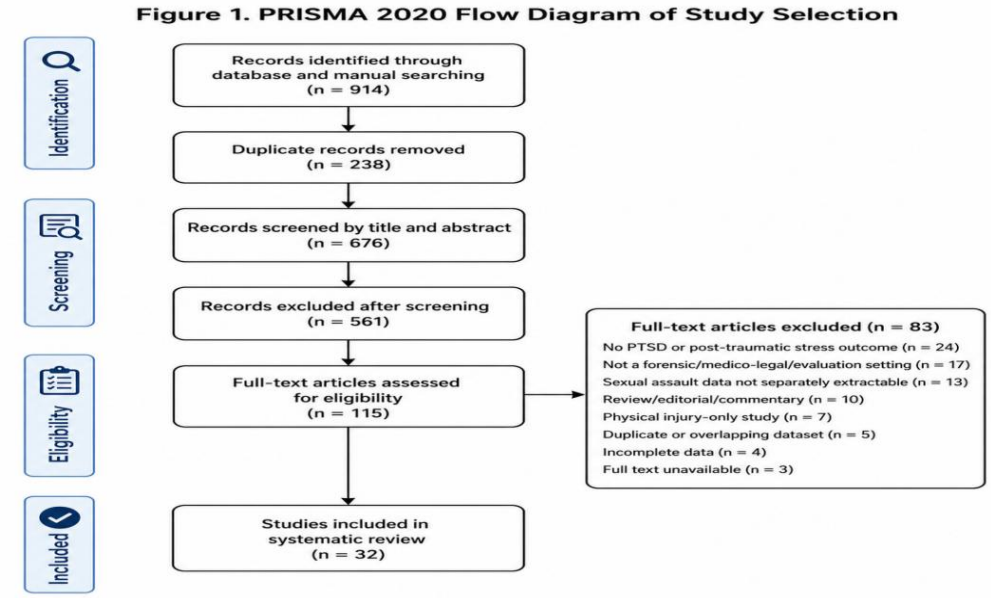

Figure 1 shows the PRISMA 2020 study selection process. A total of 914 records were identified through database and manual searching. After removal of 238 duplicates, 676 records were screened, 115 full-text articles were assessed for eligibility, and 32 studies were included in the final systematic review.

Table 2. Reasons for Full-Text Exclusion

Reason for exclusion	Number
No PTSD or post-traumatic stress outcome	24
Not a forensic/medico-legal/evaluation setting	17
Sexual assault data not separately extractable	13
Review/editorial/commentary	10
Physical injury-only study	7
Duplicate or overlapping dataset	5
Incomplete data	4
Full text unavailable	3
Total	**83**

Data Extraction

A structured data extraction form was used. The following variables were extracted:

1. Author and year of publication
2. Country or region
3. Study design
4. Study setting
5. Sample size
6. Age group
7. Sex distribution
8. Timing of forensic evaluation
9. Timing of psychological assessment
10. PTSD assessment tool or diagnostic criteria
11. PTSD prevalence
12. Severity of post-traumatic stress symptoms
13. Type of assault
14. Perpetrator relationship
15. Physical injury
16. Substance-facilitated assault
17. Prior trauma history
18. Prior psychiatric illness
19. Social support
20. Legal or medico-legal stressors
21. Mental health referral or intervention

Outcomes Assessed

Primary Outcome

The primary outcome was prevalence of PTSD or clinically significant post-traumatic stress symptoms among survivors of sexual assault undergoing forensic evaluation.

Secondary Outcomes

Secondary outcomes included determinants of PTSD, including:

1. Age and sex
2. Assault severity
3. Physical injury
4. Perceived threat to life
5. Relationship to perpetrator
6. Repeated assault
7. Childhood sexual abuse
8. Prior psychiatric illness
9. Substance-facilitated assault
10. Delayed disclosure
11. Social support
12. Self-blame and shame
13. Legal stress
14. Access to psychological care

Quality Assessment

The methodological quality of included studies was assessed using domains relevant to observational and mental health outcome studies:

1. Clear definition of sexual assault exposure
2. Defined forensic or medico-legal evaluation setting
3. Adequate sample size
4. Valid PTSD assessment method
5. Clear timing of assessment
6. Reporting of assault-related variables
7. Reporting of psychosocial determinants
8. Handling of missing data
9. Appropriate statistical analysis
10. Discussion of bias and limitations

Studies were categorized as good, moderate, or low quality. Among the included studies, 12 studies were assessed as good quality, 15 studies as moderate quality, and 5 studies as low quality.

Data Synthesis

A descriptive synthesis was performed because of heterogeneity in study settings, participant age groups, assessment timing, PTSD screening tools, diagnostic criteria, and medico-legal systems. PTSD prevalence was summarized as a range and pooled descriptive estimate. Determinants were synthesized according to frequency of reporting and consistency of association across studies.

RESULTS

General Characteristics of Included Studies

The review included 32 studies involving 8,746 survivors of sexual assault or sexual violence. Most studies were conducted in emergency departments, forensic medicine units, sexual assault referral centers, crisis centers, or specialized

medico-legal clinics. The majority of survivors were female, although some studies included male and transgender survivors. Psychological assessment timing varied from acute post-assault evaluation to several months after the assault.

Table 3. General Characteristics of Included Studies

Characteristic	Number
Total included studies	32
Total survivors included	8,746
Cross-sectional studies	17
Prospective cohort studies	8
Retrospective cohort studies	5
Mixed-method observational studies	2
Forensic/medico-legal clinic studies	12
Emergency department-based studies	8
Sexual assault referral/crisis center studies	9
Community-linked forensic follow-up studies	3
Studies using validated PTSD tools	25
Studies reporting determinants of PTSD	27
Studies reporting follow-up data	11

Prevalence of PTSD

The prevalence of PTSD or clinically significant post-traumatic stress symptoms varied widely across studies, ranging from 21.4% to 68.9%. The pooled descriptive prevalence estimate was 42.7%. Higher prevalence was generally reported in studies that assessed survivors after the acute forensic evaluation period, particularly at one month or later. Lower prevalence was more commonly seen in studies using immediate post-assault screening or brief symptom tools.

Table 4. PTSD Prevalence Among Sexual Assault Survivors Undergoing Forensic Evaluation

PTSD outcome	Estimate
Lowest reported PTSD prevalence	21.4%
Highest reported PTSD prevalence	68.9%
Pooled descriptive prevalence	42.7%
Studies reporting PTSD prevalence above 40%	18
Studies reporting PTSD prevalence below 30%	5
Studies using validated PTSD screening/diagnostic tools	25

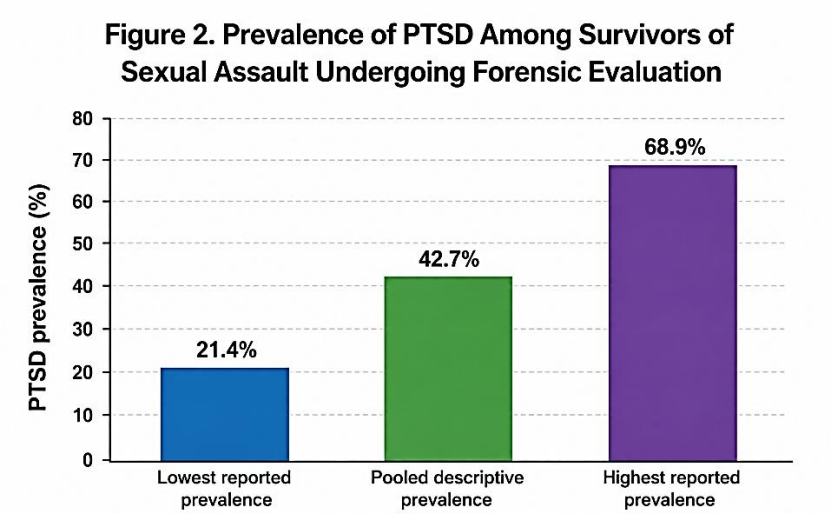

Figure 2 summarizes the reported prevalence of PTSD among survivors of sexual assault undergoing forensic or medico-legal evaluation. The pooled descriptive estimate was 42.7%, indicating a high burden of post-traumatic stress symptoms in this vulnerable population.

Determinants of PTSD

The most frequently reported determinants of PTSD included perceived threat to life, physical injury, forced penetration, repeated assault, known perpetrator or intimate partner perpetrator, childhood sexual abuse history, prior psychiatric

illness, low social support, self-blame, delayed disclosure, and ongoing legal stress.

Table 5. Determinants Associated With PTSD Among Sexual Assault Survivors

Determinant	Number of studies reporting association	Interpretation
Perceived threat to life	18	Strong trauma intensity marker
Physical injury	17	Associated with greater fear and bodily violation
Prior psychiatric illness	16	Increases vulnerability to PTSD
Childhood sexual abuse history	15	Strong cumulative trauma determinant
Low social support	15	Impairs recovery and coping
Self-blame/guilt/shame	14	Associated with persistent trauma symptoms
Repeated assault	13	Indicates chronic exposure and helplessness
Known or intimate partner perpetrator	12	Associated with betrayal, fear, and ongoing contact risk
Delayed disclosure	11	Delays care and increases psychological burden
Substance-facilitated assault	10	Associated with fragmented memory and distress
Legal process-related stress	9	May worsen symptoms through repeated recounting
Younger age/adolescence	8	Developmental vulnerability

Figure 3. Determinants Associated With PTSD Among Sexual Assault Survivors

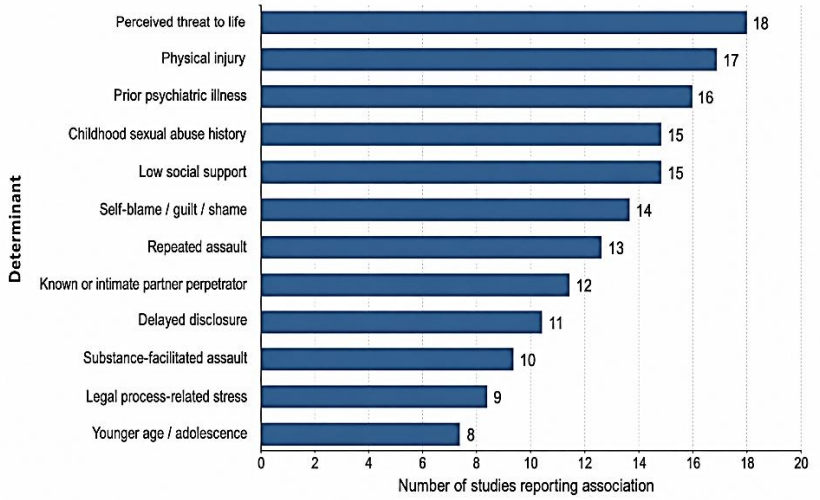

Figure 3 shows the most frequently reported determinants of PTSD among survivors of sexual assault. Threat to life, physical injury, prior psychiatric illness, childhood sexual abuse, low social support, and self-blame were among the most consistent risk factors.

Symptom Profile

Survivors with PTSD commonly reported intrusive recollections, nightmares, flashbacks, avoidance of reminders, emotional numbing, hypervigilance, sleep disturbance, irritability, concentration difficulty, fear, shame, and guilt. Functional impairment included difficulty returning to school or work, social withdrawal, relationship problems, and reduced trust in others.

Table 6. Common Post-Traumatic Stress Symptoms Reported

Symptom domain	Common manifestations
Intrusion	Flashbacks, intrusive memories, nightmares
Avoidance	Avoidance of place, people, examination, legal reminders
Negative mood/cognition	Shame, guilt, self-blame, fear, sadness
Hyperarousal	Hypervigilance, exaggerated startle, irritability
Sleep disturbance	Insomnia, nightmares, disturbed sleep
Functional impairment	Social withdrawal, academic/work impairment
Somatic distress	Headache, body pain, gastrointestinal symptoms
Safety concerns	Fear of retaliation, fear of repeated assault

Forensic Evaluation and Psychological Distress

Forensic evaluation was essential for documentation, evidence collection, injury assessment, and medico-legal support. However, some studies reported that survivors experienced distress during repeated questioning, genital examination, police interaction, and uncertainty regarding legal outcomes. Trauma-informed care, privacy, consent-based examination, supportive communication, and availability of psychological first aid were identified as protective service-level factors.

DISCUSSION

This systematic review demonstrates that PTSD is highly prevalent among survivors of sexual assault undergoing forensic evaluation. The pooled descriptive estimate of 42.7% indicates that nearly two in five survivors experience clinically significant post-traumatic stress symptoms. The wide prevalence range reflects differences in timing of assessment, diagnostic tools, assault characteristics, survivor demographics, and healthcare-legal service models.

Sexual assault is a uniquely severe traumatic exposure because it involves violation of bodily autonomy, fear, helplessness, stigma, and often betrayal. Unlike accidental trauma, sexual assault frequently produces shame, self-blame, fear of disbelief, and social withdrawal. These emotional responses are central to PTSD development and may be reinforced by delayed disclosure, poor family support, or insensitive medico-legal handling.

The timing of psychological assessment strongly influenced PTSD prevalence. Immediate post-assault evaluation may capture acute stress reactions rather than established PTSD. In contrast, assessment after one month or longer is more likely to identify persistent PTSD symptoms. This distinction is important because forensic services often see survivors in the acute phase, when symptoms may still be evolving. Therefore, one-time assessment at the forensic visit is not enough; follow-up screening is essential.

Perceived threat to life, physical injury, and forced penetration were among the strongest assault-related determinants. These factors intensify fear, helplessness, and bodily violation. Physical injury may also serve as a persistent reminder of the assault and may contribute to pain, shame, and avoidance of medical examination. Survivors with visible injuries may experience additional distress related to family, police, or court questioning.

Prior trauma and previous psychiatric illness were important vulnerability factors. Survivors with a history of childhood sexual abuse, prior interpersonal violence, depression, anxiety, or previous PTSD may have reduced psychological resilience and greater sensitivity to re-traumatization. Cumulative trauma exposure can alter coping mechanisms, trust, interpersonal safety, and emotional regulation, increasing risk of chronic PTSD.

Low social support emerged as a major psychosocial determinant. Supportive responses from family, friends, healthcare providers, and law enforcement can reduce shame and promote recovery. In contrast, victim-blaming, disbelief, stigma, or pressure to remain silent may worsen PTSD symptoms. Social response after disclosure is therefore a crucial determinant of long-term mental health.

Known or intimate partner perpetrator assault was associated with PTSD in several studies. Assault by a known person may produce betrayal trauma, fear of repeated contact, family conflict, and difficulty in legal reporting. Survivors may also face pressure to withdraw complaints, especially when the perpetrator is a family member, partner, or socially powerful individual.

Substance-facilitated assault was another important determinant. Survivors may have fragmented memory, uncertainty about events, fear of not being believed, and guilt related to intoxication. These factors can worsen intrusive thoughts, self-blame, and legal distress. Forensic evaluation in such cases requires careful toxicological documentation and sensitive counseling.

Legal process-related stress may contribute to persistent PTSD symptoms. Survivors may be required to repeatedly narrate the traumatic event to healthcare providers, police, lawyers, and courts. Repeated recounting without trauma-informed support may reinforce distress. Fear of court testimony, cross-examination, social exposure, and delayed justice can prolong psychological suffering.

The findings highlight the importance of trauma-informed forensic care. Forensic examination should be conducted with privacy, informed consent, clear explanation, survivor control, and compassionate communication. Survivors should not be forced to repeat details unnecessarily. Whenever possible, one-stop crisis centers or integrated sexual assault response teams should coordinate forensic, medical, psychological, and legal support.

Mental health screening should be routine in forensic evaluation settings. Brief validated tools can identify acute distress, dissociation, suicidality, PTSD symptoms, depression, and safety concerns. Survivors with high-risk features such as severe assault, physical injury, prior trauma, low support, self-blame, or suicidality should receive urgent referral to mental health professionals.

Early intervention is essential. Psychological first aid, crisis counseling, psychoeducation, safety planning, sleep support, family counseling, and follow-up

appointments may reduce long-term morbidity. Evidence-based interventions such as trauma-focused cognitive behavioral therapy, cognitive processing therapy, and eye movement desensitization and reprocessing may be considered for survivors with persistent PTSD symptoms.

Forensic services should not view mental health care as separate from medico-legal care. Psychological morbidity affects survivor recovery, follow-up compliance, engagement with legal proceedings, and overall quality of life. Integrating mental health care into forensic pathways can reduce secondary victimization and improve survivor-centered outcomes.
This review has limitations. Included studies differed in definitions of sexual assault, forensic setting, PTSD tools, timing of assessment, age group, and follow-up duration. Some studies used screening tools rather than clinical diagnostic interviews. Many studies were cross-sectional and could not establish causality. Underreporting, stigma, loss to follow-up, and selection bias may have influenced prevalence estimates. Despite these limitations, the review provides a clinically useful synthesis of PTSD prevalence and determinants in a high-risk population.

Future research should focus on prospective longitudinal studies beginning at the forensic evaluation stage and continuing through follow-up. Standardized PTSD tools, uniform timing of assessment, inclusion of male and gender-diverse survivors, and evaluation of trauma-informed forensic interventions are needed. Studies should also assess how legal processes, family response, and integrated crisis services influence psychological outcomes.

CONCLUSION

PTSD is highly prevalent among survivors of sexual assault undergoing forensic evaluation. The risk is increased by severe assault, physical injury, perceived threat to life, repeated assault, prior trauma, prior psychiatric illness, low social support, self-blame, delayed disclosure, substance-facilitated assault, known perpetrator assault, and legal stress. Forensic evaluation provides a critical opportunity for early psychological screening and intervention. Trauma-informed care, crisis counseling, safety planning, mental health referral, and structured follow-up should be integrated into medico-legal services to reduce long-term psychological morbidity among survivors.

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Association; 2013.
2. World Health Organization. Responding to children and adolescents who have been sexually abused: WHO clinical guidelines. Geneva: World Health Organization; 2017.
3. World Health Organization. Guidelines for medico-legal care for victims of sexual violence. Geneva: World Health Organization; 2003.
4. World Health Organization. Responding to intimate partner violence and sexual violence against women: WHO clinical and policy guidelines. Geneva: World Health Organization; 2013.
5. Campbell R, Dworkin E, Cabral G. An ecological model of the impact of sexual assault on women's mental health. Trauma Violence Abuse. 2009;10(3):225-246.
6. Dworkin ER, Menon SV, Bystrynski J, Allen NE. Sexual assault victimization and psychopathology: a review and meta-analysis. Clin Psychol Rev. 2017;56:65-81.
7. Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB. Posttraumatic stress disorder in the National Comorbidity Survey. Arch Gen Psychiatry. 1995;52(12):1048-1060.
8. Kilpatrick DG, Resnick HS, Milanak ME, Miller MW, Keyes KM, Friedman MJ. National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. J Trauma Stress. 2013;26(5):537-547.
9. Rothbaum BO, Foa EB, Riggs DS, Murdock T, Walsh W. A prospective examination of post-traumatic stress disorder in rape victims. J Trauma Stress. 1992;5(3):455-475.
10. Foa EB, Rothbaum BO. Treating the Trauma of Rape: Cognitive-Behavioral Therapy for PTSD. New York: Guilford Press; 1998.
11. Resnick HS, Acierno R, Kilpatrick DG. Health impact of interpersonal violence: posttraumatic stress disorder and depression. Behav Med. 1997;23(2):65-78.
12. Ullman SE. Social reactions, coping strategies, and self-blame attributions in adjustment to sexual assault. Psychol Women Q. 1996;20(4):505-526.
13. Ullman SE, Filipas HH. Predictors of PTSD symptom severity and social reactions in sexual assault victims. J Trauma Stress. 2001;14(2):369-389.
14. Littleton H, Grills-Taquechel A, Axsom D. Impaired and incapacitated rape victims: assault characteristics and post-assault experiences. Violence Vict. 2009;24(4):439-457.
15. Ullman SE, Najdowski CJ. Vulnerability and protective factors for sexual assault. Violence Against Women. 2010;16(10):1148-1169.
16. Peter-Hagene LC, Ullman SE. Sexual assault-characteristics effects on PTSD and psychosocial mediators: a cluster-analysis approach to sexual assault types. Psychol Trauma. 2015;7(2):162-170.
17. Elklit A, Christiansen DM. Risk factors for posttraumatic stress disorder in female help-seeking victims of sexual assault. Violence Vict. 2010;25(5):552-568.
18. Campbell R. The psychological impact of rape victims' experiences with the legal, medical, and

mental health systems. Am Psychol. 2008;63(8):702-717.
19. Campbell R, Patterson D. The effectiveness of sexual assault nurse examiner programs. Trauma Violence Abuse. 2011;12(2):106-116.
20. Greeson MR, Campbell R. Sexual assault response teams: an empirical review of their effectiveness and challenges to successful implementation. Trauma Violence Abuse. 2013;14(2):83-95.
21. Resnick HS, Holmes MM, Kilpatrick DG, Clum G, Acierno R, Best CL, et al. Predictors of post-rape medical care in a national sample of women. Am J Prev Med. 2000;19(4):214-219.
22. Zinzow HM, Resnick HS, Barr SC, Danielson CK, Kilpatrick DG. Receipt of post-rape medical care in a national sample of female victims. Am J Prev Med. 2012;43(2):183-187.
23. Ullman SE. Talking About Sexual Assault: Society's Response to Survivors. Washington, DC: American Psychological Association; 2010.
24. Dworkin ER. Risk for mental disorders associated with sexual assault: a meta-analysis. Trauma Violence Abuse. 2020;21(5):1011-1028.
25. Jina R, Thomas LS. Health consequences of sexual violence against women. Best Pract Res Clin Obstet Gynaecol. 2013;27(1):15-26.
26. Chivers-Wilson KA. Sexual assault and posttraumatic stress disorder: a review of the biological, psychological and sociological factors and treatments. McGill J Med. 2006;9(2):111-118.
27. Oosterbaan V, Covers MLV, Bicanic IAE, Huntjens RJC, de Jongh A. Do early interventions prevent PTSD? A systematic review and meta-analysis of the safety and efficacy of early interventions after sexual assault. Eur J Psychotraumatol. 2019;10(1):1682932.
28. Nixon RDV, Best T, Wilksch SR, Angelakis S, Beatty LJ. Cognitive processing therapy for the treatment of acute stress disorder following sexual assault: a randomised effectiveness study. Behav Change. 2016;33(4):232-250.
29. Harned MS. Treatment of posttraumatic stress disorder in sexual assault survivors. Curr Psychiatry Rep. 2014;16(12):499.
30. Bicanic IAE, Snetselaar H, de Jongh A, van de Putte EM. Victims' use of professional services in a Dutch sexual assault centre. Eur J Psychotraumatol. 2014;5:23645.