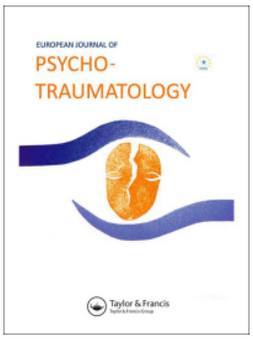

European Journal of Psychotraumatology

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/zept20

Psychological treatment of PTSD with comorbid substance use disorder (SUD): expert recommendations of the European Society for Traumatic Stress Studies (ESTSS)

Neil P. Roberts, Annett Lotzin & Ingo Schäfer

To cite this article: Neil P. Roberts, Annett Lotzin & Ingo Schäfer (2023) Psychological treatment of PTSD with comorbid substance use disorder (SUD): expert recommendations of the European Society for Traumatic Stress Studies (ESTSS), European Journal of Psychotraumatology, 14:2, 2265773, DOI: 10.1080/20008066.2023.2265773

To link to this article: https://doi.org/10.1080/20008066.2023.2265773

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 13 Oct 2023.

Submit your article to this journal

Article views: 311

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=zept20

EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY
2023, VOL. 14, NO. 2, 2265773
https://doi.org/10.1080/20008066.2023.2265773

SHORT COMMUNICATION

OPEN ACCESS Check for updates

Psychological treatment of PTSD with comorbid substance use disorder (SUD): expert recommendations of the European Society for Traumatic Stress Studies (ESTSS)

Neil P. Roberts [a], Annett Lotzin [b] and Ingo Schäfer [b]

[a]Cardiff & Vale University Health Board, Cardiff University, Cardiff, UK; [b]Center for Interdisciplinary Addiction Research, Department of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

ABSTRACT

Background: Post-traumatic stress disorder (PTSD) and substance use disorder (SUD) are often comorbid and difficult to treat. The availability of evidence-based treatment guidelines is very limited and there is significant uncertainty about what best practice looks like.

Objective: This paper describes the methodology used to develop expert recommendations for the assessment and psychological treatment of PTSD and comorbid SUD and presents the final recommendations.

Methodology: A small committee of experts in the field of PTSD and SUD was formed on behalf of the European Society for Traumatic Stress Studies (ESTSS) Board. The committee developed recommendations based on a two-stage process. In the first stage a systematic review of randomised controlled trials of psychological interventions aimed at treating PTSD-SUD comorbidity was completed, and other recent relevant reviews systematic were also considered. To complement the recommendations based on systematic review, the second stage involved the review and collation of existing guidance, good practice and consensus recommendations made in methodologically rigorous clinical practice guidelines.

Results: The two-stage process resulted in 9 recommendations related to assessment and 21 recommendations related to treatment planning and delivery.

Conclusions: To our knowledge, this is the first attempt to provide expert recommendations based on a systematic review of the literature and through collation of guidance provided in other authoritative and reliable sources. These expert recommendations will provide helpful guidance to clinicians and service providers in both addiction and mental health settings about appropriate clinical care for those with PTSD SUD comorbidity.

Tratamiento psicológico del TEPT con Trastorno por Uso de Sustancias (TUS) comórbido: recomendaciones de expertos de la Sociedad Europea de Estudios de Estrés Traumático (ESTSS)

Antecedentes: El trastorno de estrés postraumático (TEPT) y el trastorno por uso de sustancias (TUS) suelen ser comórbidos y difíciles de tratar. La disponibilidad de pautas de tratamiento basadas en evidencia es muy limitada y existe una incertidumbre significativa sobre cómo son las mejores prácticas.

Objetivo: Este artículo describe la metodología utilizada para desarrollar recomendaciones de expertos para la evaluación y el tratamiento psicológico del TEPT y el TUS comórbido y presenta las recomendaciones finales.

Metodología: Se formó un pequeño comité de expertos en el campo del TEPT y TUS en nombre del directorio de la Sociedad Europea de Estudios de Estrés Traumático (ESTSS en su sigla en inglés). El comité desarrolló recomendaciones basadas en un proceso de dos etapas. En la primera etapa se completó una revisión sistemática de ensayos controlados aleatorizadoos de intervenciones psicológicas destinadas a tratar la comorbilidad TEPT-TUS, y también se consideraron otras revisiones sistemáticas relevantes recientes. Para complementar las recomendaciones basadas en la revisión sistemática, la segunda etapa implicó la revisión y recopilación de guías existentes, buenas prácticas y recomendaciones de consenso formuladas en guías de práctica clínica metodológicamente rigurosas.

Resultados: El proceso de dos etapas resultó en 9 recomendaciones relacionadas con la evaluación y 21 recomendaciones relacionadas con la planificación y administración del tratamiento.

Conclusiones: Hasta donde sabemos, este es el primer intento de proporcionar

ARTICLE HISTORY

Received 30 May 2023
Revised 14 September 2023
Accepted 25 September 2023

KEYWORDS

PTSD; substance use disorder; alcohol use disorder; comorbidity; psychological treatment

PALABRAS CLAVE

TEPT; trastorno por uso de sustancias; trastorno por uso de alcohol; comorbilidad; tratamiento psicológico

关键词

PTSD; 物质使用障碍; 酒精使用障碍; 共病; 心理治疗

HIGHLIGHTS

- This project aimed to develop expert recommendations for the assessment and psychological treatment of PTSD and comorbid substance use disorder.
- Trauma-focused psychological intervention combined with treatment for SUD is the most effective treatment for PTSD symptoms and for alcohol use disorder treatment benefits appear to be strongest when combined with alcohol targeted pharmacotherapy.
- The presence of co-occurring SUD should not prevent or exclude individuals from receiving established evidence-based treatments for PTSD and readiness to engage in evidence-based treatment should be evaluated on an individual basis.

CONTACT Neil P. Roberts RobertsNP1@cardiff.ac.uk Cardiff & Vale University Health Board & Cardiff University, Hadyn Ellis Building, Maindy Road, Cardiff CF24 4HQ, UK

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (http://creativecommons.org/licenses/by-nc/4.0/), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

recomendaciones de expertos basadas en una revisión sistemática de la literatura y mediante la recopilación de orientación proporcionada en otras fuentes autorizadas y confiables. Estas recomendaciones de expertos brindarán orientación útil a los clínicos y proveedores de servicios tanto en entornos de adicción como de salud mental sobre la atención clínica adecuada para aquellos con comorbilidad de TEPT and TUS.

与物质使用障碍 (SUD)共病的 PTSD 的心理治疗：欧洲创伤应激研究学会 (ESTSS) 的专家建议

背景：创伤后应激障碍（PTSD）和物质使用障碍（SUD）经常共病且难以治疗。循证治疗指南的可用性非常有限，并且最佳实践是怎样的存在很大的不确定性。
目的：本文描述了为 PTSD 和共病 SUD 的评估和心理治疗制定专家建议的方法，并提出了最终建议。
方法：代表欧洲创伤应激研究学会 (ESTSS) 理事会成立了一个由 PTSD 和 SUD 领域的专家组成的小型委员会。该委员会根据两阶段流程制定了建议。 第一阶段完成了旨在治疗 PTSD-SUD共病的心理干预随机对照试验的系统综述，并考虑了其他最近的相关系统综述。为了补充基于系统综述的建议，第二阶段涉及对方法论严格的临床实践指南中提出的现有指南、良好实践和共识建议进行综述和校正。
结果：两阶段过程产生了 9 项与评估相关的建议和 21 项与治疗计划和实施相关的建议。
结论：据我们所知，这是基于对文献的系统综述并通过整理其他权威可靠来源提供的指导来提供专家建议的首次尝试。这些专家建议将为成瘾和心理健康领域的临床医生和服务提供者提供有用的指导，为患有 PTSD SUD 合并症的患者提供适当的临床护理。

1. Introduction

The traumatic stress field has seen the updating of several highly respected and methodologically rigorous PTSD clinical practice guidelines (CPG) over the past few years (American Psychological Association, 2017; Australian PTSD Guidelines, 2020 [Phoenix Australia, 2020]; ISTSS, 2018; NICE, 2018; USA Department of Veteran's Affairs/ Department of Defense PTSD Guidelines, 2023), with all guidelines providing strong recommendations for trauma focused cognitive behavioural therapies (TF-CBT) and most providing similar recommendations for Eye Movement Desensitisation and Reprocessing (EMDR). Whilst much of the evidence underpinning these recommendations was based on studies involving participants with complex and diverse presentations, few specific recommendations were included in these CPGs for specific 'hard to treat' subgroups (Hamblen et al., 2019), such as those with comorbid substance use disorder (SUD).

PTSD and substance use disorder (SUD) co-occur frequently (Debell et al., 2014; Degenhardt et al., 2013; Kessler et al., 2017; Mills et al., 2006). The relationship between the two disorders is complex and multifaceted, with a number of potential contributing vulnerability (e.g. neurobiological, life-style, genetic) and maintaining factors (Hawn et al., 2020; Roberts et al., 2020). Probably the most prominent and widely supported explanation for the relationship between the two disorders is the self-medication hypothesis, which argues that drug and alcohol misuse functions as a means of attempting to alleviate distressing PTSD symptoms (Khantzian, 1997). Evidence supporting the self-medication hypothesis comes from several studies showing that PTSD tends to predate onset of SUD, and the fact that reduction of PTSD symptoms has more impacts on drug and alcohol use, than vice versa (Hawn et al., 2020; Roberts et al., 2020). This comorbidity poses significant challenge for treating clinicians. Individuals with PTSD-SUD comorbidity tend to present with greater clinical complexity than either disorder alone, usually experience more impaired functioning and poorer wellbeing, and typically do less well in treatment (Roberts et al., 2020; Schäfer & Lotzin, 2018; Schäfer & Najavits, 2007). Clinicians therefore frequently find PTSD-SUD comorbidity more difficult to treat, and experience greater uncertainty about when and how to offer evidence-based interventions, particularly trauma focused therapies (Roberts, 2021; Roberts et al., 2020). Unfortunately, at the present time are no widely accepted guidelines about how to manage and treat such individuals.

In view of these challenges, in 2020, a committee was set-up at the request of the European Society for Traumatic Stress Studies (ESTSS) Board, to develop recommendations for the psychological treatment of this comorbidity. This paper describes the process and methodology used to develop these recommendations and presents the final recommendations.

2. Expert recommendation development process

The Committee members were a psychiatrist and two psychologists who are experts in researching and treating PTSD-SUD comorbidity. Recommendations

were developed through a two-stage process, including a synthesis of the current evidence and a consensus-based approach to develop recommendations. We consulted with ESTSS members about the methodology prior to commencement of the project.

2.1. Stage 1: synthesizing the evidence from existing randomised controlled trials

In the first stage of the process, we proposed and then undertook a systematic review and meta-analysis of the available treatment evidence from randomised controlled trials (RCTs). The review followed Cochrane Collaboration (Higgins et al., 2022) and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). The review addressed three scoping questions, which were supplemented by sub-questions to consider specific treatment approaches. From a knowledge of the literature, we determined that the types of interventions most widely evaluated in the literature would be present focused treatments (also known as coping based/ non-trauma-focused treatments), trauma-focused treatments and integrated cognitive restructuring-based interventions (ICBT) (without imaginal and in vivo exposure). We also determined that the most likely control comparator in studies evaluating these types of interventions would be treatment for SUD only. The scoping questions were:

1. For individuals with PTSD and comorbid SUD, do psychological treatments for PTSD only or PTSD and SUD, when compared to treatment as usual for SUD only, result in a clinically important reduction of PTSD and SUD symptoms, reduced presence of disorder in terms of diagnostic status, decreased drop-out or difference in reported adverse effects? Example comparison:

   Are present-focused treatments (also known as coping based/ non-trauma-focused treatments) plus treatment as usual for SUD more effective than treatment as usual for SUD only?

2. For individuals with PTSD and comorbid SUD, do psychological treatments for PTSD and SUD when compared to other psychological treatments for PTSD and SUD (head-to-head comparisons), result in a clinically important reduction of PTSD and SUD symptoms, reduced presence of disorder, decreased drop-out or difference in reported adverse effects? Example comparison:

   Are trauma focused treatments more effective than present focused treatments?

3. When compared to sequential treatments do integrated treatments offered by one therapist OR simultaneous treatments for PTSD and SUD offered by different therapists result in a clinically important reduction of PTSD and SUD symptoms, reduced presence of disorder, decreased drop-out or difference in reported adverse effects?

Scoping questions were addressed by updating a previous Cochrane review of psychological interventions for this population, which was previously led by the first author (Roberts et al., 2016). Meta-analyses were undertaken by evaluating similar interventions together. A full description of the systematic review, meta-analytic findings and identified studies can be found here (Roberts et al., 2022).

Consistent with the ISTSS treatment guideline methodology (Bisson et al., 2019), we agreed that treatment recommendations following from the systematic review would be based on the strength of findings from meta-analyses, and the quality of these findings based on the GRADE approach. We developed criteria for considering the clinical importance of findings based on a threshold effect size ≥ 0.4 for PTSD severity and 0.3 for SUD severity for interventions compared against a SUD only/ treatment as usual comparator, and 0.2 for head-to-head comparisons. The decision to set a threshold of 0.4 for PTSD, rather than 0.8, as used in the ISTSS guidelines, was based on the fact that treatment effects in PTSD-SUD trials tend to be smaller than those reported in the PTSD only psychological intervention literature (Roberts et al., 2022), and our included studies were comparing active intervention against another active SUD only comparator. The decision to set a smaller threshold of 0.3 for SUD severity was in recognition that we were comparing active PTSD-SUD interventions against intervention for SUD only in most studies, and improvement in SUD outcomes across both treatment arms would be expected. The threshold of 0.2 for head-to-head comparisons was consistent with that used in earlier guidelines (International Society for Traumatic Stress Studies (ISTSS), 2018). We decided to take a cautious approach to interpreting the outcomes of analyses, in recognition of the fact that there is no consensus in the literature about such criteria in the PTSD/ SUD population.

During our deliberations, two further methodologically rigorous systematic reviews relevant to the recommendations were published (Hien et al., 2023; Simpson et al., 2021), the first of which was based on patient level data from 36 studies of psychological and pharmacological interventions. Given the direct relevance of these reviews we decided to incorporate their findings studies into the recommendations.

2.2. Stage 2: synthesizing previous practice recommendations

We recognised that many of the challenges and dilemmas faced in the clinical assessment and treatment of this population were unlikely to be adequately

addressed from systematic review findings. To complement the recommendations based on systematic review, we collated guidance, good practice and consensus recommendations made in methodologically rigorous CPGs focused on psychological interventions for PTSD, published in English.

We reviewed each guideline for possible recommendations related to the assessment, management or treatment of the comorbidity prior to inclusion.

The following clinical practice guidelines (CPGs) meeting this description were identified and reviewed:

- American Psychological Association PTSD Guidelines, 2017 (American Psychological Association, 2017)
- Australian PTSD Guidelines, 2020 (Phoenix Australia, 2020)
- Effective Treatments for PTSD: Practice Guidelines from ISTSS, 2020 (Roberts et al., 2020)
- International Society for Traumatic Stress Studies PTSD Guidelines, 2018 (International Society for Traumatic Stress Studies (ISTSS) [2018])
- UK NICE PTSD Guidelines 2018 (National Institute for Health and Care Excellence (NICE), 2018)
- USA Department of Veteran's Affairs/ Department of Defense PTSD Guidelines, 2023 (VA/DoD Clinical Practice Guideline, 2023)
- World Health Organisation Guidelines for the Management of Conditions specifically related to Stress, 2013 (World Health Organization, 2013)

All CPGs were indicated in a systematic review of treatment guidelines published in 2021 (Martin et al., 2021) and included the five most recent CPGs (American Psychological Association, 2017; Phoenix Australia, 2020; International Society for Traumatic Stress Studies (ISTSS), 2018; National Institute for Health and Care Excellence (NICE), 2018; VA/DoD Clinical Practice Guideline, 2023) and the five CPGs (American Psychological Association, 2017; Phoenix Australia, 2020; National Institute for Health and Care Excellence (NICE), 2018; VA/DoD Clinical Practice Guideline, 2023; World Health Organization, 2013) scoring highest on an evaluation of guideline quality. The ISTSS guideline (International Society for Traumatic Stress Studies (ISTSS), 2018) scored slightly lower on this evaluation as information on editorial independence was not available to the reviewers. We replicated the search undertaken by the review authors on the 14 August 2023, and identified one additional recent CPG undertaken by the World Federation of Societies of Biological Psychiatry (WFSBP) (Bandelow et al., 2023). In common with the APA and WHO guidelines, this guideline provided no recommendations related to the treatment of comorbid PTSD and SUD. Recommendations related to the management and treatment of PTSD comorbidity from these guidelines were reviewed and those relevant for PTSD patients with comorbid SUD were selected and together discussed in the expert group. The expert group decided on consensus which of the recommendations were relevant and should be included. Practice recommendations made within individual CPGs without reference to empirical support were included if there was consensus in the expert group that they were of high clinical relevance. The final expert recommendations were reviewed and authorised by the ESTSS Board prior to publication on the ESTSS website.

3. Recommendations

This process resulted in a total of 30 recommendations; 9 recommendations related to the assessment process and 21 recommendations related to treatment planning and delivery. Recommendations are presented in Table 1 with a description of the source(s) of support for the recommendation and the publication source(s).

4. Discussion

PTSD-SUD comorbidity is common and presents significant clinical challenges for care and treatment providers. To our knowledge, this is the first attempt to provide expert recommendations based on recent systematic reviews of the literature and through collation of guidance provided in other authoritative and reliable sources. As we identified earlier, clinicians are faced with considerable uncertainty about how best to support and treat individuals with this comorbidity. We believe that these expert recommendations will provide helpful guidance to clinicians and service providers in both addiction and mental health settings about appropriate clinical care for those with PTSD SUD comorbidity. The literature underpinning these recommendations shows that individuals with this comorbidity can benefit from integrated psychological intervention, and that trauma focused approaches currently have the strongest evidence of efficacy (Roberts et al., 2022). However, average treatment gains are smaller than for those seen in studies where this comorbidity is excluded and there is a need to continue to develop interventions and approaches which can engage and retain service users in treatment, whilst promoting long-term treatment gains (Molina & Whittaker, 2022; Roberts et al., 2022).

The development of these guidelines was based in part on the conduct of a methodologically rigorous systematic review based on Cochrane Collaboration (Higgins et al., 2022) and PRISMA (Page et al., 2021) guidelines. We have also drawn on two other recent methodologically rigorous systematic reviews

Table 1. ESTSS expert recommendations for the assessment and psychological treatment of PTSD with comorbid substance use disorder (SUD).

Recommendation	Source(s) of recommendation	Supporting publication(s)
Assessment		
1. Individuals with suspected PTSD require a thorough assessment which should include relevant history, including trauma history; exploration of PTSD features and related disorders using appropriate assessment instruments (such as the Clinician Administered PTSD Scale for DSM-5 (CAPS-5)); general psychiatric status; physical health; marital and family situation; social and occupational functioning; quality of life; strengths and resilience; previous treatment and the patient's response to this.	Practice recommendation based on expert opinion	Australian PG ISTSS PG NICE
2. Clinicians assessing and treating individuals with PTSD, should recognise that SUD and other comorbidities are common and should routinely assess for them, using appropriate assessment instruments (such as the Alcohol Use Identification Test (AUDIT) and the Drug Abuse Screening Test (DAST)), during the evaluation and treatment for PTSD.	Practice recommendation based on multiple clinical studies	Australian PG VA/DOD
3. Clinicians assessing and treating individuals with SUD should recognise that trauma exposure is common in this population and should routinely assess for trauma history and symptoms of PTSD during the evaluation and during treatment for SUD.	Systematic review based on multiple clinical studies	Roberts et al. (2022)
4. Current and past alcohol and drug use patterns for individuals with PTSD or reported trauma histories should be assessed routinely to identify possible substance misuse or dependency.	Practice recommendation based on expert opinion	VA/DOD
5. Clinicians should seek to understand the development of PTSD symptoms and drug and alcohol usage over time, both pre- and post-traumatic event(s), so that they can fully understand the relationship between traumatic events, symptom development, and maintaining factors to formulate a treatment plan appropriate to the individual's needs.	Practice recommendation based on expert opinion	ISTSS PG
6. Any associated risks, such as suicidal intent, serious self-harming, and potential threat to others, should be assessed and addressed in treatment planning. High-risk concerns where a person is in imminent danger of harm to themselves, or others should normally be the priority for intervention.	Practice recommendation based on expert opinion	VA/DOD ISTSS PG
7. Assessing clinicians should note both the presence and severity of SUD and other comorbidities in their assessments and consider their implications in the treatment plan.	Practice recommendation based on expert opinion	Australian PG
8. When PTSD-SUD comorbidity is indicated health care providers should consider whether treatment can be safely and effectively delivered in primary care or a general mental health setting, or whether referral to a specialist service is required. Factors that might influence decisions about where treatment should take place include the availability of appropriate clinical expertise to deliver the required intervention effectively within the provider service, as well as broader case management and risk management need.	Practice recommendation based on expert opinion	VA/DOD
9. Assessment and monitoring should continue throughout treatment and if the individual is not making adequate progress, the clinician should revisit the treatment plan and consider reassessment and reformulation.	Practice recommendation based on expert opinion	Australian PG ISTSS PG
Treatment planning		
10. Clinicians should develop a collaborative care treatment strategy to address comorbid health concerns, such as SUD, simultaneously with PTSD symptoms.	Practice recommendation based on expert opinion	VA/DOD
11. Information on PTSD and strategies to deal with PTSD symptoms should be provided to individuals with SUD who are seeking to reduce their drug or alcohol use, as PTSD symptoms may worsen during substance use treatment due to acute withdrawal or loss of substance use as a coping mechanism. Addressing PTSD early in treatment may help to optimise long-term outcomes. Clinicians should also consider providing such information to family or loved ones, as well as the individual, with their consent, in order to strengthen social support.	Practice recommendation based on expert opinion	ISTSS PG Australian PG
12. Evidence suggests that drug and alcohol misuse should be dealt with from the start of treatment, alongside interventions which aim to promote understanding and initial behavioural management of an individual's PTSD symptoms. This approach recognises that frequent alcohol and drug usage often functions as a form of self-medication which the individual has used to address their PTSD symptoms.	Practice recommendation based on expert opinion	Australian PG
13. The presence of co-occurring disorders such as SUD should not prevent or exclude individuals from receiving established evidence-based/ guideline recommended treatments for PTSD and individuals should not be excluded from treatment solely on the basis of comorbid drug or alcohol misuse. Readiness to engage in evidence-based treatment should be evaluated on an individual basis.	Practice recommendation based on data from two systematic reviews (Roberts et al., 2022; Simpson et al., 2021) and at least two RCTs (Haller et al., 2016; Norman et al., 2019).	NICE VA/DOD ISTSS PG
14. For people with PTSD and co-occurring alcohol or drug misuse, the treating clinician/ team should help the individual manage any circumstances which provide a barrier to them engaging with trauma focused therapies. Common barriers include difficulties with travel, treatment related costs, perceived service stigma, motivational issues, and fears about potential negative effects of treatment.	Practice recommendation based on expert opinion	NICE
15. For those with complex needs, a case management approach is often required to plan and coordinate a response to primary needs. Common case management issues might include housing problems, health related and medical needs, involvement with the criminal justice system and management of acute serious risks.	Practice recommendation based on expert opinion	ISTSS PG
16. Some individuals may require a period of time to focus on developing a trusting therapeutic relationship with a clinician, service or team in order to facilitate engagement in evidence-based treatment.	Practice recommendation based on expert opinion	ISTSS PG
17. Psychoeducation, adapted to the individual's level of understanding, and motivational interventions are often an important part of the engagement process.	Practice recommendation based on expert opinion	ISTSS PG

(*Continued*)

Table 1. Continued.

Recommendation	Source(s) of recommendation	Supporting publication(s)
18. There is evidence that the majority of patients with PTSD-SUD comorbidity prefer integrated treatment.	Practice recommendation based on single study (Back et al., 2014)	ISTSS PG
19. There is some evidence showing the benefits of combined or integrated substance misuse and PTSD treatment for adults on PTSD and SUD symptoms. Sequential models of treatment have not been widely tested. Further studies investigating the differential effects of sequential vs integrated or combined treatments are needed.	Systematic review and meta-analyses from independent groups	Hien et al. (2023); Roberts et al. (2022), APG; Simpson et al. (2021)
20. Current evidence for adults is that those receiving combined and integrated PTSD-SUD treatment make similar progress to those receiving SUD only based interventions in reducing drug and alcohol use.	Systematic review and meta-analyses from independent groups	Hien et al. (2023); Roberts et al. (2022)
21. Current evidence for adults is that trauma-focused psychological intervention based on prolonged exposure, combined with treatment for SUD is the most effective treatment for PTSD symptoms. Average treatment gains are smaller than they are for individuals without SUD comorbidity and there is a higher level of treatment drop-out.	Systematic review and meta-analyses from independent groups	Hien et al. (2023); Roberts et al. (2022)
22. The benefits of trauma focused psychological therapy for individuals with AUD, in terms of reduction in PTSD severity and alcohol misuse appear to be stronger when trauma focused therapy is delivered in combination with alcohol targeted pharmacotherapy.	Systematic review and meta-analysis based on data from 2 studies	Hien et al. (2023)
23. For adults there is weaker evidence of PTSD symptom improvement from integrated cognitive behavioural therapy (ICBT), also with a higher level of drop-out than typical seen for individuals without SUD comorbidity.	Evidence from meta-analysis in one systematic review	Roberts et al. (2022)
24. Current evidence for adults is that present focused therapies such as Seeking Safety are not more effective than SUD only treatments at improving PTSD symptoms. However, there is evidence that present focused treatment and treatment for SUD only demonstrate small to medium improvements in PTSD and SUD symptoms. In the absence of access to trauma focused psychological intervention these interventions may therefore be of benefit to some individuals with PTSD-SUD comorbidity.	Systematic review and meta-analyses from independent groups	Hien et al. (2023); Roberts et al. (2022); Simpson et al. (2021)
25. The current evidence base is not yet sufficiently developed to make treatment recommendations for children and young people.	Evidence from one systematic review	Roberts et al. (2022)
26. Integrated and combined trauma focused treatment is usually characterised by a brief period of psychoeducational and symptom-focussed cognitive behavioural interventions for both disorders prior to the introduction of trauma-focused interventions. Normally this would take up to three or six sessions, depending on need. The provision of psychoeducation should not unnecessarily delay trauma-focused treatment when the individual is ready to engage in this.	Practice recommendation based on expert opinion	Australian PG
27. Patients presenting with co-occurring PTSD-SUD should be offered integrated treatment or evidence-based treatment for PTSD without waiting for abstinence. However, the trauma focused component of treatment should not commence until the individual demonstrates the capacity to manage treatment related distress without recourse to prolonged, therapy interfering substance misuse. Decisions about readiness to begin trauma focused intervention should be undertaken collaboratively and some planning for the management of cravings related to exposure related reminders should be undertaken before the onset of trauma processing.	Practice recommendation based on expert opinion	ISTSS PG Australian PG
28. For individuals with complex presentations and needs it may be necessary to increase the duration or number of therapy sessions according to the individual's needs.	Practice recommendation based on expert opinion	NICE
29. There is emerging evidence from one study that incentivisation with shopping vouchers may reduce drop-out from trauma-focused CBT based intervention.	Evidence from one study (Schacht et al., 2017) included in a systematic review	Roberts et al. (2022)
30. Therapists should work with the individual to plan any ongoing support they will need after the end of treatment (e.g. residual PTSD symptoms, continuing substance misuse, other mental health difficulties, relapse prevention).	Practice recommendation based on expert opinion	NICE

Note. Australian PG = Australian PTSD Guidelines; ISTSS PG = Effective Treatments for PTSD: Practice Guidelines from ISTSS, 2020; NICE = UK NICE PTSD Guidelines 2018; VA/DOD = USA Department of Veteran's Affairs/ Department of Defense PTSD Guidelines, 2023.

to develop these recommendations. We recognise that a limitation of these reviews was that there was significant clinical and statistical heterogeneity in the included studies. Nevertheless, we think that the reviews provide a thorough synthesis of the extant RCT treatment literature. These recommendations were also supported by the collation of guidance and consensus good practice points from methodologically rigorous CPGs. We must acknowledge that we only included publications published in English and we did not include guidance from guidelines focused on the care of individuals with addiction problems. The reason for this was based on our knowledge that such guidelines e.g. (National Institute for Health and Care Excellence (NICE), 2011) do not normally address the PTSD-SUD comorbidity specifically, but we did not investigate these guidelines systematically. All of the PTSD guidelines that we examined in order to develop our recommendations met the requirements for trustworthy guidelines set out by the Institute of Medicine (IoM) (Institute of Medicine [IOM], 2011) and as described by Hamblen and colleagues (Hamblen et al., 2019). The IoM criteria included oversight from a multidisciplinary panel of experts, following fairly transparent mechanisms of selection of panel members; a process of reporting of conflicts of interest; involvement of individuals with lived experience of PTSD; recommendations based

on systematic review (mostly based on RCT level evidence) and a process of external review once draft guidelines were completed (Hamblen et al., 2019). A rigorous consistency of procedures has led to many common recommendations across these CPGs. However, despite these similarities some differences in recommendations were observed (Hamblen et al., 2019). This was evident to us in the different extent to which individual CPGs considered PTSD-SUD comorbidity, with only one guideline seeking to address scoping questions related to the comorbidity (VA/DoD Clinical Practice Guideline, 2023).

The expert recommendations presented here should therefore be seen as a first attempt to develop practical guidance about psychological intervention for this comorbidity for treating clinicians. The field will clearly benefit from continuing research and future studies might include the development of recommendations that are based on all criteria outlined by the IoM (Institute of Medicine (IOM), 2011).

Acknowledgments

We would like to thank Dr Jana Javakhishvili for initiating this work and Dr Evaldas Kazlauskas and the ESTSS Board for supporting the guideline process.

Data availability statement

This paper does not include any primary data.

Disclosures

Dr Ingo Schäfer and Dr Annett Lotzin have published one RCT that was included in the review (Roberts et al., 2022) supporting this work. Dr Neil Roberts reports no competing interests. Dr Roberts has been involved in the development of an internet based guided self-help intervention for PTSD called SPRING and may receive future profits if the intervention is monetized.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Neil P. Roberts http://orcid.org/0000-0002-6277-0102
Annett Lotzin http://orcid.org/0000-0002-2834-8047
Ingo Schäfer http://orcid.org/0000-0002-9711-3559

References

American Psychological Association. (2017). *Clinical practice guideline for the treatment of posttraumatic stress disorder (PTSD) in adults.*

Back, S. E., Killeen, T. K., Teer, A. P., Hartwell, E. E., Federline, A., Beylotte, F., & Cox, E. (2014). Substance use disorders and PTSD: An exploratory study of treatment preferences among military veterans. *Addictive Behaviors*, *39*(2), 369–373. https://doi.org/10.1016/j.addbeh.2013.09.017

Bandelow, B., Allgulander, C., Baldwin, D. S., Costa, D. L. D. C., Denys, D., Dilbaz, N., Domschke, K., Hollander, E., Kasper, S., Möller, H. J., Eriksson, E., Fineberg, N. A., Hättenschwiler, J., Kaiya, H., Karavaeva, T., Katzman, M. A., Kim, Y. K., Inoue, T., Lim, L., … Zohar, J. (2023). World Federation of Societies of Biological Psychiatry (WFSBP) guidelines for treatment of anxiety, obsessive-compulsive and posttraumatic stress disorders – Version 3. Part II: OCD and PTSD. *The World Journal of Biological Psychiatry*, *24*(2), 118–134. https://doi.org/10.1080/15622975.2022.2086296

Bisson, J. I., Berliner, L., Cloitre, M., Forbes, D., Jensen, T. K., Lewis, C., Monson, C. M., Olff, M., Pilling, S., Riggs, D. S., Roberts, N. P., & Shapiro, F. (2019). The International Society for Traumatic Stress Studies new guidelines for the prevention and treatment of posttraumatic stress disorder: Methodology and development process. *Journal of Traumatic Stress*, *32*(4), 475–483. https://doi.org/10.1002/jts.22421

Debell, F., Fear, N. T., Head, M., Batt-Rawden, S., Greenberg, N., Wessely, S., & Goodwin, L. (2014). A systematic review of the comorbidity between PTSD and alcohol misuse. *Social Psychiatry and Psychiatric Epidemiology*, *49*(9), 1401–1425. https://doi.org/10.1007/s00127-014-0855-7

Degenhardt, L., Whiteford, H. A., Ferrari, A. J., Baxter, A. J., Charlson, F. J., Hall, W. D., Freedman, G., Burstein, R., Johns, N., Engell, R. E., Flaxman, A., Murray, C. J., & Vos, T. (2013). Global burden of disease attributable to illicit drug use and dependence: Findings from the Global Burden of Disease Study 2010. *The Lancet*, *382* (9904), 1564–1574. https://doi.org/10.1016/S0140-6736(13)61530-5

Haller, M., Norman, S. B., Cummins, K., Trim, R. S., Xu, X., Cui, R., Allard, C. B., Brown, S. A., & Tate, S. R. (2016). Integrated cognitive behavioral therapy versus cognitive processing therapy for adults with depression, substance use disorder, and trauma. *Journal of Substance Abuse Treatment*, *62*, 38–48. https://doi.org/10.1016/j.jsat.2015.11.005

Hamblen, J. L., Norman, S. B., Sonis, J. H., Phelps, A. J., Bisson, J. I., Nunes, V. D., Megnin-Viggars, O., Forbes, D., Riggs, D. S., & Schnurr, P. P. (2019). A guide to guidelines for the treatment of posttraumatic stress disorder in adults: An update. *Psychotherapy*, *56*(3), 359–373. https://doi.org/10.1037/pst0000231

Hawn, S. E., Cusack, S. E., & Amstadter, A. B. (2020). A systematic review of the self-medication hypothesis in the context of posttraumatic stress disorder and comorbid problematic alcohol use. *Journal of Traumatic Stress*, *33* (5), 699–708. https://doi.org/10.1002/jts.22521

Hien, D. A., Morgan-López, A. A., Saavedra, L. M., Ruglass, L. M., Ye, A., López-Castro, T., Fitzpatrick, S., Killeen, T. K., Norman, S. B., Ebrahimi, C. T., & Back, S. E. (2023). Project Harmony: A meta-analysis with individual patient data on behavioral and pharmacologic trials for comorbid posttraumatic stress and alcohol or other drug use disorders. *American Journal of Psychiatry*, *180* (2), 155–166. https://doi.org/10.1176/appi.ajp.22010071

Higgins, J. P. T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M. J., & Welch, V. A. (Eds.) (2022). *Cochrane handbook for systematic reviews of interventions* version 6.3. www.training.cochrane.org/handbook.

Institute of Medicine (IOM). (2011). *Clinical practice guidelines we can trust*. The National Academies Press.

International Society for Traumatic Stress Studies (ISTSS). (2018). *ISTSS PTSD prevention and treatment guidelines methodology and recommendations*. https://www.istss.org/treating-trauma/new-istssprevention-and-treatment-guidelines.aspx

Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., Degenhardt, L., de Girolamo, G., Dinolova, R. V., Ferry, F., Florescu, S., Gureje, O., Haro, J. M., Huang, Y., Karam, E. G., Kawakami, N., Lee, S., Lepine, J.-P., Levinson, D., … Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology*, *8*(sup5), 1353383. https://doi.org/10.1080/20008198.2017.1353383

Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry*, *4*(5), 231–244. https://doi.org/10.3109/10673229709030550

Martin, A., Naunton, M., Kosari, S., Peterson, G., Thomas, J., & Christenson, J. K. (2021). Treatment guidelines for PTSD: A systematic review. *Journal of Clinical Medicine*, *10*(18), 4175. https://doi.org/10.3390/jcm10184175

Mills, K. L., Teeson, M., Ross, J., & Peters, L. (2006). Trauma, PTSD, and substance use disorders: Findings from the Australian National Survey of Mental Health and Well-Being. *American Journal of Psychiatry*, *163*(4), 652–658. https://doi.org/10.1176/ajp.2006.163.4.652

Molina, G., & Whittaker, A. (2022). Treatment of post-traumatic stress disorder and substance use disorder in adults with a history of adverse childhood experiences: A systematic review of psychological interventions. *Drug and Alcohol Dependence Reports*, *2*, 100028. https://doi.org/10.1016/j.dadr.2022.100028

National Institute for Health and Care Excellence (NICE). (2011). *Alcohol-use disorders: diagnosis, assessment and management of harmful drinking (highrisk drinking) and alcohol dependence (CG115)*. https://www.nice.org.uk/guidance/cg115

National Institute for Health and Care Excellence (NICE). (2018). *Post-traumatic stress disorder (NICE Guideline No. 116)*. https://www.nice.org.uk/guidance/NG116

Norman, S. B., Trim, R., Haller, M., Davis, B. C., Myers, U. S., Colvonen, P. J., Blanes, E., Lyons, R., Siegel, E. Y., Angkaw, A. C., Norman, G. J., & Mayes, T. (2019). Efficacy of integrated exposure therapy vs integrated coping skills therapy for comorbid posttraumatic stress disorder and alcohol use disorder: A randomized clinical trial. *JAMA Psychiatry*, *76*(8), 791–799. https://doi.org/10.1001/jamapsychiatry.2019.0638

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, *372*, n71. https://doi.org/10.1136/bmj.n71

Phoenix Australia. (2020). *The Australian Guidelines for the Prevention and Treatment of Acute Stress Disorder (ASD), Posttraumatic Stress Disorder (PTSD) and Complex PTSD*. https://www.phoenixaustralia.org/australian-guidelines-for-ptsd/

Roberts, N. P. (2021). Development of expert recommendations for the treatment of PTSD with comorbid substance use disorder. *European Journal of Psychotraumatology*, *12*(sup1), 1866419. https://doi.org/10.1080/20008198.2020.1866419

Roberts, N. P., Back, S. E., Mueser, K. T., & Murray, L. (2020). Treatment considerations for PTSD comorbidities. In D. Forbes, J. I. Bisson, C. Monson, & L. Berliner (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (pp. 417–450, 3rd ed.). Guildford Press.

Roberts, N. P., Lotzin, A., & Schäfer, I. (2022). A systematic review and meta-analysis of psychological interventions for comorbid PTSD and substance use disorder. *European Journal of Psychotraumatology*. https://doi.org/10.1080/20008198.2022.2041831

Roberts, N. P., Roberts, P. A., Jones, N., & Bisson, J. I. (2022). Psychological therapies for post-traumatic stress disorder and comorbid substance use disorder. *Cochrane Database of Systematic Reviews*, *2016*(Issue 4), Art. No.: CD010204. https://doi.org/10.1002/14651858.CD010204.pub2.

Schäfer, I., & Lotzin, A. (2018). *Psychosocial support to tackle trauma-related symptoms and related substance use disorders*. Co-operation Group to Combat Drug Abuse and Illicit trafficking in Drugs, Council of Europe. https://www.drugsandalcohol.ie/30825/

Schäfer, I., & Najavits, L. M. (2007). Clinical challenges in the treatment of patients with posttraumatic stress disorder and substance abuse. *Current Opinion in Psychiatry*, *20*(6), 614–618. https://doi.org/10.1097/YCO.0b013e3282f0ffd9

Schacht, R. L., Brooner, R. K., King, V. L., Kidorf, M. S., & Peirce, J. M. (2017). Incentivizing attendance to prolonged exposure for PTSD with opioid use disorder patients: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *85*(7), 689–701. https://doi.org/10.1037/ccp0000208

Simpson, T. L., Goldberg, S. B., Louden, D. K. N., Blakey, S. M., Hawn, S. E., Lott, A., Browne, K. C., Lehavot, K., & Kaysen, D. (2021). Efficacy and acceptability of interventions for co-occurring PTSD and SUD: A meta-analysis. *Journal of Anxiety Disorders*, *84*, 102490. https://doi.org/10.1016/j.janxdis.2021.102490

VA/DoD Clinical Practice Guideline. (2023). *VA/DoD clinical practice guideline for the management of posttraumatic stress disorder and acute stress disorder*. VA-DoD-CPG-PTSD-Full-CPG 2023.pdf

World Health Organization. (2013). *Guidelines for the management of conditions specifically related to stress*. WHO. 9789241505406_eng.pdf (who.int)