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

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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.

Key words

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

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.

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[1]; Australian PTSD Guidelines, 2020[2]; ISTSS 2018[3]; NICE 2018[4]; USA Department of Veteran's Affairs/ Department of Defense PTSD Guidelines, 2023[5]), 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[6], such as those with comorbid substance use disorder (SUD).

PTSD and substance use disorder (SUD) co-occur frequently[7,8,9,10]. 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[11,12]. 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[13]. 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[11,12]. 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[12,14,15]. 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[12,16]. 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.

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.

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[17] and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines[18]. 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 [19]. 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 [20].

Consistent with the ISTSS treatment guideline methodology [21], 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[19], 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[3]. 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[22,23], the second 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.

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[1]
- Australian PTSD Guidelines, 2020[2]
- Effective Treatments for PTSD: Practice Guidelines from ISTSS, 2020[12]
- International Society for Traumatic Stress Studies PTSD Guidelines, 2018[3]
- UK NICE PTSD Guidelines 2018[4]
- USA Department of Veteran's Affairs/ Department of Defense PTSD Guidelines, 2023[5]
- World Health Organisation Guidelines for the Management of Conditions specifically related to Stress, 2013[24]

All CPGs were indicated in a systematic review of treatment guidelines published in 2021[25] and included the five most recent CPGs [1,2,3,4,5] and the five CPGs [1,2,4,5,24] scoring highest on an evaluation of guideline quality. The ISTSS guideline[3] 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 14th August 2023, and identified one additional recent CPG undertaken by the World Federation of Societies of Biological Psychiatry (WFSBP)[26]. 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.

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).

Table 1 about here

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[19]. 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 [19,31].

The development of these guidelines was based in part on the conduct of a methodologically rigorous systematic review based on Cochrane Collaboration [17] and PRISMA[18] guidelines. We have also drawn on two other recent methodologically rigorous systematic reviews 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. 32] 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)[33] and as described by Hamblen and colleagues[6]. 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 [6]. A rigorous consistency of procedures has led to many common recommendations across these CPGs. However, despite these similarities some differences in recommendations were observed [6]. 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 [5].

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 [33].

Disclosures

Dr Ingo Schäfer and Dr Annett Lotzin have published one RCT that was included in the review[19] 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.

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Data availability statement

This paper does not include any primary data.

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