

treatment, the WHO retained the category to help ensure access to appropriate clinical care while addressing stigma through its placement in the new chapter of conditions related to sexual health as well as through additional information in the CDDG⁷.

In interpreting these comments, it is clear that many of the submissions have been made from an advocacy perspective, often focused on a particular category. It is appropriate for scientific experts to review their recommendations in the light of patient experience and feedback. The WHO has used the comments and proposals on the beta platform in combination with other sources of information, particularly developmental field studies^{8,9}, as a basis for making modifications in the MMS and CDDG.

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DOI:10.1002/wps.20635

The controversy about cognitive behavioural therapy for schizophrenia

The effectiveness of cognitive behavioural therapy (CBT) in schizophrenia is currently disputed. For example, the UK National Institute for Health and Care Excellence (NICE)¹ recommends this therapy, whereas another influential UK organization, the Cochrane Collaboration, has argued since 2012 that there is no clear evidence that it is effective²⁻⁴.

Of clear relevance here is a network meta-analysis of psychological interventions in schizophrenia published in this journal⁵ which found pooled evidence that CBT is effective against positive symptoms. On the contrary, a 2014 meta-analysis by Jauhar et al⁶ failed to find clear evidence of effectiveness against this class of symptoms. Since it is important to understand what factors give rise to different results in meta-analyses⁷, we, as the authors of those two meta-analyses, decided to examine why such a discrepancy might have arisen.

Bighelli et al⁵'s examination of CBT for positive symptoms was based on 27 trials out of a total dataset of 40 that met their inclusion criteria (the remaining studies contained data relevant to one or more of the other outcomes they examined, e.g., overall symptoms, negative symptoms, relapse/rehospitalization, depression, quality of life, functioning and mortality). In these 27 studies, the pooled effect size was at the upper end of the small range, against both treatment as usual (-0.30; 95% CI: -0.45 to -0.14, 18 trials) and inactive control interventions (-0.29; 95% CI: -0.55 to -0.03, 7 trials). A larger effect size was found for CBT compared to supportive therapy (-0.47; 95% CI: -0.91 to -0.03, two trials). Leaving aside the findings for supportive therapy, where the number of trials was small, these findings in themselves are not greatly different from the overall effect size that Jauhar et al⁶ found for positive symptoms against all controls (-0.25; 95% CI: -0.37 to -0.13, 33 trials).

Where the two meta-analyses diverged, however, was in relation to the findings in blind trials. Bighelli et al⁵ continued to

find a significant effect against treatment as usual (-0.27; 95% CI: -0.41 to -0.13) in 15 blind trials, but not against inactive control (-0.14; 95% CI: -0.37 to 0.09), although the number of studies here was smaller (n=5). In contrast, Jauhar et al⁶ found that the pooled effect size for positive symptoms against all controls dropped to very low levels in their sub-analysis of 20 blind trials (-0.08; 95% CI: -0.18 to 0.03).

The divergent findings in blind studies did not reflect differences in the way in which criteria for blindness were applied to the trials included in the two meta-analyses. The approach used was similar, and cross-checking revealed that discrepancies about whether individual studies were rated as "blind", "non-blind" or "unclear" were trivial.

The most important difference between the two meta-analyses was found to concern the inclusion criteria used. While Jauhar et al⁶ employed a broad strategy similar to those used by NICE¹ and the Cochrane Collaboration²⁻⁴, the focus in Bighelli et al⁵'s meta-analysis was planned from the outset⁸ to be on the efficacy of psychological interventions for treating positive symptoms (the indication CBT was initially developed for). Consequently, trials carried out in patients with predominantly negative symptoms and those enrolling stable patients (i.e., relapse prevention studies) were excluded. Bighelli et al⁸ also decided to exclude studies that were carried out in first-episode patients; this was on the grounds that such studies have been found to have significantly higher treatment response rates compared with those in chronic patients.

This methodological difference turned out to be consequential. Although the number of studies of CBT included were not greatly different in the two meta-analyses (27 vs. 33), only 14 of the studies in Bighelli et al⁵ were also included by Jauhar et al⁶. This means that Bighelli et al⁵ had more studies with positive symptoms as explicit inclusion criteria (14 in Jauhar et al⁶ vs.

27 in Bighelli et al⁵).

We therefore conclude that the discrepancy concerning the effectiveness of CBT on positive symptoms of schizophrenia (especially in blind studies) found in our two meta-analyses reflects the substantially differing data sets examined. To reduce confusion in this area, where the study designs are much more variable than those about pharmacological treatments for schizophrenia, we propose that future systematic reviews on psychotherapies for schizophrenia should always document their methods and in particular inclusion criteria in an *a priori* published protocol.

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DOI:10.1002/wps.20636

ICD-11 PTSD and complex PTSD: structural validation using network analysis

The newly released ICD-11 includes two related diagnoses within the section on Disorders Specifically Associated with Stress: post-traumatic stress disorder (PTSD) and complex PTSD (CPTSD)¹.

PTSD has been substantially refined relative to earlier ICD and DSM descriptions. Two symptoms each reflect the three “subdomains” of: a) re-experiencing the event in the here and now, b) avoidance of traumatic reminders, and c) a sense of current threat. The diagnosis now requires the endorsement of one symptom from each of these subdomains, plus evidence of functional impairment.

CPTSD includes the above-mentioned core PTSD symptoms plus three additional subdomains, each comprised of two symptoms, collectively referred to as “disturbances in self-organization” (DSO). These three subdomains are: a) affective dysregulation, b) negative self-concept, and c) disturbances in relationships. The diagnosis of CPTSD requires that the PTSD criteria be met, plus endorsement of one symptom in each of the DSO subdomains, and evidence of functional impairment associated with these latter symptoms. Importantly, a person may only qualify for a diagnosis of PTSD or CPTSD but not both.

Although initial psychometric work has supported the structure of the 12-indicator description of PTSD-CPTSD², this model has yet to be empirically validated using diverse methodologies and samples. We used a novel and sophisticated network psychometric approach to examine the structure of this description of PTSD/CPTSD in two large, trauma-exposed samples.

The network approach conceptualizes psychopathology as a complex network of locally associated symptoms³. Under this interpretation, the effects of causal factors (e.g., a traumatic event) are proposed to spread throughout the network via direct, symptom-level interactions and reinforcement, and

what we might consider to be psychiatric “disorders” are captured in densely connected groups/clusters of symptoms. By focussing on the direct associations between symptoms, the network approach may provide a more detailed and nuanced description of the structure of psychopathology, and help us ascertain how and where our diagnostic constructs overlap.

We analyzed two trauma-exposed samples: a representative sample from Israel⁴ (N=1,003; 51.7% female; mean age 40.6±14.5 years), and a sample consisting of internally displaced persons from Ukraine⁵ (N=1,790; 67% female; mean age 43.0±15.8 years). Symptoms of PTSD and CPTSD were self-reported using the recently developed International Trauma Questionnaire², a 12-item measure designed to reflect the ICD-11 descriptors of PTSD/CPTSD.

Regularized partial correlation networks were estimated separately for both samples using the R package qgraph⁶. In order to determine whether symptoms clustered in a manner reflecting the new ICD-11 criteria for PTSD-CPTSD, exploratory graph analysis (EGA) was performed using the EGA package⁷. EGA uses the walktrap algorithm⁸ to identify clusters of highly associated symptoms within networks, and recent simulation work has demonstrated that it outperforms traditional methods for uncovering the underlying structure of data (e.g., Horn’s parallel analysis, Kaiser-Guttman rule), particularly when the correlations between the underlying dimensions are high, and the number of indicators per dimension is low⁷. The networks were then compared across samples using the NetworkComparisonTest package⁹, which tests for invariance in structure and connectivity using a permutation test procedure. Finally, to quantify and compare the overall importance/influence of individual symptoms across the two groups, three common measures of centrality were calculated: strength, betweenness and closeness.