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Dealing with complexity and comorbidity: Opportunity for transdiagnostic treatment for PTSD

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Abstract

Purpose of Review—This review synthesizes literature on transdiagnostic treatments for PTSD and trauma-related psychopathology over the last three years and discusses their across diverse contexts.

Recent Findings—Global and domestic studies suggest that a transdiagnostic approach has the potential to address many challenges providers encounter when treating traumatized populations. Existing research shows that transdiagnostic approaches (including the Unified Protocol, Common Elements Treatment Approach, and Modular Approach to Therapy for Children) are effective across low and high resourced settings, populations, and with comorbid mental health symptoms. Moreover, transdiagnostic approaches offer flexibility in treatment delivery, adaptability across contexts, and parsimonious training to treatment providers. They also provide a standalone alternative for unable or unwilling individuals to engage in traditional single diagnosis trauma-focused treatment, or those presenting with complex presentations that might otherwise require sequential courses of targeted interventions.

Summary—The promise of transdiagnostic treatment for trauma-populations is strong. Research is needed to examine patient and therapist perceptions of these approaches for optimally addressing PTSD and related symptoms, the extent to which they offer comparable, or perhaps better, outcomes than existing single diagnosis PTSD treatments, and their sustainability overtime. Considerations of adaptations to transdiagnostic treatment manuals across settings are also needed.

Keywords

transdiagnostic treatment; PTSD; trauma; Unified Protocol; MATCH; CETA

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Compliance with Ethics Guidelines

Conflict of Interest

Candice Presseau declares no conflict of interest.

Human and Animal Rights and Informed Consent

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Introduction

Treatment guidelines have consistently endorsed gold standard evidence-based single diagnosis protocols (SDPs) for the treatment of posttraumatic stress disorder (PTSD) [1, 2, 3]. Although SDPs for PTSD primarily target PTSD, the diagnosis is associated with increased risk for a host of comorbid psychiatric diagnoses and mental health problems, including co-occurring emotional disorders (e.g., anxiety, depression, eating disorders), substance use disorders, and increased risk of suicide [4–9]. High rates of comorbidity can increase case complexity and pose exceptional challenges for providers as they make decisions about how to prioritize symptoms in treatment.

Furthermore, evidence-based psychotherapy (EBP) SDP manuals traditionally specify use limited to individuals that meet full diagnostic criteria for PTSD. Such guidance is likely a result of EBP manuals being designed and investigated for the efficacy with a discrete primary diagnosis of PTSD [10, 11]. However, an increase in the number of individuals who no longer meet full PTSD criteria, particularly because of recent changes to the PTSD criteria in the Diagnostic Statistical Manual-5th Edition, could result in a missed opportunity to offer EBPs to individuals with posttraumatic stress symptoms, including those with subthreshold PTSD [2, 12–14]. While it is possible that in routine care clinicians may not follow the exact recommendations of manuals, there remains a lack of research to suggest flexibility in applying EBPs to subthreshold PTSD.

A third treatment challenge in trauma-exposed populations is treatment dropout among those who are offered and participate in PTSD EBPs. A high number of individuals who receive an EBP for PTSD, such as Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT) do not complete treatment [10, 11, 15–18]. In fact, less than 10% of veterans in the VA Healthcare System with diagnosed with PTSD complete an EBP [8, 19]. Additionally, less than 6% of veterans receive one or more EBP sessions following enrollment in a PTSD clinic, which illustrates the difficulties encountered by individuals with posttraumatic psychopathology, even within the VA system with a strategic vision of EBP implementation and dissemination [20]. Dropout early in an EBP may yield a less than adequate dose, potentially lessening effectiveness as patients do not reach sessions with the most active treatment components [17, 21]. There remains a lack of consensus on predictors of dropout [22]. However, avoidance of trauma-related content, which is inherent to the diagnosis, may interfere with treatment engagement and retention. It is also possible that focusing on trauma, rather than adopting a transdiagnostic approach that addresses all current mental health concerns concurrently, contributes to low utilization and completion of these treatments among traumatized persons. Recent momentum in transdiagnostic treatment approaches for trauma-exposed populations offers a promising alternative treatment option. Present Centered Therapy, which is not trauma focused and can be used transdiagnostically, for instance, results in lower treatment dropout [23, 24]. The current paper reviews the nascent literature on a shift towards consideration of transdiagnostic treatment for trauma-exposed populations and discusses benefits of its use [25, 26].

Considering a Conceptual Movement Toward Alternative Approaches

The term transdiagnostic is increasingly applied to a variety of constructs [27•, 28]. In the current paper, we use transdiagnostic treatment to refer to interventions specifically designed to be applied to diverse and complex diagnostic presentations with specific guidance on how to address co-occurring diagnoses and apply intervention techniques to address complex symptom presentations. Although not the focus of the current paper, it is important to note that transdiagnostic treatment approaches are either mechanistically transdiagnostic, in that they target mechanisms that are causally related to a range of psychopathology, or they are descriptively transdiagnostic, in that they target constructs present in multiple disorders without addressing how or why they exist across presentations [27•]. Both mechanistically and descriptively transdiagnostic treatments can be delivered in a modular protocol or one continuous protocol [29, 30•, 31, 32•, 33]. To date, mechanistically transdiagnostic treatments tend to be delivered through continuous manuals, with descriptively transdiagnostic approaches delivered through modular manuals. While continuous manual are packaged similar to SDPs, modular approaches use evidence-based treatment elements in freestanding modules that the therapist can decide if and when to use based on the individual they are treating.

The majority of work on transdiagnostic treatments with trauma-exposed individuals has occurred globally, with modular approaches, and/or with youth, although the literature with adults is growing [30•, 32•, 34, 35•, 36•, 37•]. Research which solely focuses on transdiagnostic treatment for PTSD remains scarce for understandable reasons [38•, 39•]. First, transdiagnostic interventions do not aim to reduce symptoms solely for a single diagnosis such that conducting research using transdiagnostic approaches to address a standalone diagnosis of PTSD largely defeats the purpose. However, recently global work has investigated this [34, 40•]. A second reason may be the misconception that transdiagnostic treatment cannot be used for PTSD [41].

Descriptively transdiagnostic approaches—Modular transdiagnostic approaches are the most common descriptively transdiagnostic treatments for trauma. They have been successfully implemented and resulted in symptom reduction domestically and in low and middle-income countries (LMICs) where trauma exposure is common [30•, 42•, 43•]. Although SDPs, such as CPT, have also been used in LMICs, they still require clinicians in low resourced settings, who are often lay workers, to assess for the presence or absence of PTSD [11, 34]. These factors may inadvertently inhibit reach of treatment, especially in lower resourced settings where trainings, skilled clinicians, access to experts, and manuals are limited. Alternatively, a transdiagnostic approach allows for evidence-based intervention components to be applied without requiring a diagnostic decision about the presence or absence of PTSD, or the specification of a single index event. With modular approaches, clinicians prioritize symptom areas related to different diagnostic categories (e.g., depression, PTSD), but do not require a diagnosis by a gold standard assessment measure. Modular approaches apply the cognitive behavioral therapy (CBT) techniques most relevant to each patient through related modules. For example, the modular approach to therapy for children with anxiety, depression, traumatic stress, and conduct problems (MATCH) instructs the use of a decisional balance worksheet to select specific modules for each

patient's treatment plan [29]. MATCH allows for flexible selection and sequencing of treatment components to more efficiently target symptoms [35••, 44]. Studies on MATCH demonstrate effective implementation and symptom reduction to include PTSD and trauma-related symptoms in youth across mental healthcare settings [35••, 44].

In a recent effort to further increase efficiency and reach of treatment, MATCH was examined in a diverse population that included a wider age range and more severe and complex symptoms presentations [35••]. Participants were 5–15 years old from low income communities, many of whom had experienced traumatic stress. When compared to traditional community-based EBP implementation, MATCH had superior rates of improvement on both clinical and functional outcomes [35••]. This study design allowed for generous inclusion criteria with respect to symptom presentation and had a high representation trauma exposure. Inclusion of individuals with trauma exposure is notable as it provides substantial evidence for the effectiveness of a modular transdiagnostic approach in a complex sample with high rates of trauma domestically. This study demonstrates that a modular training approach may be advantageous compared to training in SDPs [35••]. Overall, MATCH helps eliminate many barriers of using a single disorder treatment approach outside of specialty clinics, and results in meaningful symptom decrease for patients.

Another modular transdiagnostic approach with strong empirical support among highly traumatized populations is the Common Elements Treatment Approach (CETA). In the past few years, the literature on CETA has continued to demonstrate promising results [30••, 40•, 43••, 45••]. While the majority of CETA research has focused on trauma populations globally, a recent study established feasibility and effectiveness of CETA in Washington State [45••]. This study demonstrated promising results at both the provider and patient level, showing a global to local translation of CETA.

Global research on CETA provided by lay workers has continued to demonstrate effectiveness and feasibility in trauma-exposed populations. An open trial of CETA in Somali refugee youth and families showed significant reduction in symptoms on objectively rated measures of internalizing, externalizing, and posttraumatic stress symptoms (measured by the Child PTSD Symptom Scale-Interview), as well as report of symptoms observed by caregivers [30••, 46, 47]. CETA has also resulted in symptom improvement for depression, anxiety and functional impairment in Colombia [43••]. However, differential effectiveness across the two sites in the study highlights the need to consider translation of an effective intervention to a new context as the same results should not be assumed. A third recent study compared CETA to CPT in Iraq through examination of less traditional symptoms outcome measurement [11, 40•]. CETA resulted in greater change in intervention-related changes (e.g., family, social standing, anger management, physical health) over time compared to CPT, indicating CETA resulted in meaningful changes in traumatized populations compared to a traditional PTSD EBP. Taken together, the recent studies on CETA have demonstrated strong support for significant symptom reduction through a modular transdiagnostic treatment in populations with trauma-exposure when delivered by lay providers [11]. The inclusion of a domestic study highlights the translation of results domestically [45••]. CETA research highlight the opportunity to further narrow the treatment gap by offering a protocol

that can be easily utilized in low resourced settings where highly trained clinicians and diagnostic measurement are not routine. Future research will also be able to speak to potential additional flexibility of CETA when delivered in 5-sessions [42••].

Mechanistically transdiagnostic approaches—Transdiagnostic treatments have also shown great promise when delivered through continuous manuals [32••, 36•]. The Unified Protocol for the Transdiagnostic Treatment of Emotional Disorders (UP) is an example of a mechanistically transdiagnostic treatment that has demonstrated comparable results to SDPs for a range of emotional disorders [31, 32••]. The UP targets factors responsible for development and maintenance of emotional disorders (e.g., negative affect), rather than a specific diagnosis. A seminal study of the UP showcased the ability to target primary disorders transdiagnostically in an effective and efficient manner with adults [32••]. Importantly, PTSD was not a primary diagnostic group in this study and only served as an occasional comorbidity. As such, there is limited generalizability of these results for traumatic stress-related psychopathology more broadly. However, a clinical replication series provides both detail on the application of the UP for PTSD and initial support for its use and bridges this gap [39•].

Further advancing Barlow and colleagues UP study is preliminary data on the UP delivered in group format to veterans presenting to a PTSD clinic [32••, 36•]. This pilot study, embedded in a routine care PTSD specialty clinic within a large VA system, offered a 16-week UP group to male and female veterans ($n = 52$) presenting with PTSD and comorbid emotional disorders. Diagnoses were obtained from medical records and self-report measures of emotion regulation, depression, and PTSD were given at the first and last session. Overall, veterans reported significant decreases in emotion regulations difficulties, depression, and PTSD symptom severity (PTSD Checklist for *DSM-5*) [48–50]. Despite the pilot nature of this study, results with a mixed gender group of veterans with PTSD offer an important first step in better understanding the potential broad reach of the UP for PTSD.

Although the contributions of this study are noteworthy, it is important to highlight that clinician rated assessments were not completed and results are therefore not directly comparable to efficacy studies [36•]. Second, there were many veterans in this study that started the group and did not complete the final session (approximately 60%). Looking ahead, it is important to examine the experience of patients and identify reasons for treatment drop out, as well as tolerability of the UP both in terms of content and method of delivery. For instance, veteran samples have been shown to dropout of group treatment at exceptionally high rates [51]. In response, the length of the group may need to be adapted to increase reach and acceptability, or perhaps making the group more modular to allow for a rolling admission would improve retention in components of treatment even if the full course of treatment is not completed. Notwithstanding these limitations, the findings in favor of the UP in routine care may speak to the strength of the protocol to deliver meaningful results in a traumatized population.

Implementation studies show that adaptations are key to utilization and sustainment of interventions, which is important with respect to advancing our understanding of a how far a transdiagnostic protocol can be adapted while maintaining effectiveness [52]. An ongoing

study examining the UP for PTSD leverages cultural adaptations to the UP for treating victims of the Colombian Conflict [37••]. Results from the study have not been published to date, but a thorough description of the methodology for the cultural adaptations has been published and provides important guidance on applying the UP to a novel population [37••].

A case study of a woman from Colombia that completed the culturally adapted UP was recently published [37••]. This study highlighted a case that demonstrated dramatic decreases in symptoms to the point of no longer meeting criteria for PTSD, major depressive disorder, generalized anxiety disorder, or panic disorder, and substantial reductions across self-report measures. This woman had a complex trauma history including sexual assault, as well as witnessing violence throughout the Colombian Conflict. A notable takeaway from this case report is that transdiagnostic approaches can not only be tolerated by individuals presenting with PTSD and complex trauma histories, but also that they may find it an acceptable form of treatment in a cultural context where stigma around mental health treatment has historically serves as a barrier to care. The work in Colombia illuminates the potential impact of the UP globally and will be an important contribution to understanding the reach of the UP for trauma-exposed populations. Even though the UP is not the only transdiagnostic non-modular approach to date, it appears to be the only mechanistically transdiagnostic approach used within an adult population with high rates of trauma exposure. However, the larger trial of the UP remains ongoing with results forthcoming [36•, 37••].

Clinical Impressions of Transdiagnostic Treatment & Impact on Implementation Efforts

The label of “transdiagnostic” may sound like a new treatment approach, however, treatments like the UP, MATCH, and CETA are based on the very same foundational principles of gold standard EBPs (i.e., CPT, PE) [10, 11]. As with learning any new EBP, they require training and familiarization with a new flexible format to delivery treatment that involves some collaborative decision making with the patient with variations between protocol. For example, the UP applies these effective techniques to the emotional experience more broadly, rather than a single diagnosis. Alternatively, MATCH and CETA combine relevant modules based on diagnostic presentation. While the transdiagnostic approaches differ slightly, they all apply foundational CBT techniques. Consequently, transdiagnostic treatments for trauma-exposed populations should be considered a viable treatment option, especially for patients that refuse the gold standard trauma focused EBPs, are not otherwise eligible to receive them, or in settings where traditional EBPs are not feasible.

Transdiagnostic approaches provide significant, and sometimes superior, symptom relief for individuals with comorbid disorders and complex presentations, including those with significant trauma histories [30••, 32••, 35••, 42••]. Growing support for transdiagnostic treatment approaches is an enhancement to existing treatment approaches rather than a threat, and this alternative approach may have several benefits. An overarching benefit is the inherent therapist flexibility. Manuals like CETA, MATCH, and the UP are all designed to allow the protocol to support the therapist in delivering evidence-based intervention techniques that meet the needs of the individual patient. Despite protocol nuances, these approaches ultimately allow for tailored treatment for the context. The adaptiveness of the

approach is a key factor when thinking about how to sustain EBPs and how to offer them to individuals with complex presentations. Clinicians have a limited capacity and are often unable to get trained on multiple SDPs [26]. Additionally, therapists may perceive limitations of SDPs with difficult-to-treat or complex patients [53]. The cost (e.g., money, time, energy) to train clinicians in multiple protocols to treat the variety of symptom presentations that present in routine care is substantial and may contribute to the low adoption rate in routine care [25, 54, 55]. Nonetheless, evidence furthers the notion that we need alternative flexible options to engage more trauma-exposed individuals in treatment.

Of specific relevance to trauma-exposed populations, transdiagnostic approaches may help to engage patients who are unwilling to directly discuss details of the trauma, or who are reluctant to participate in a treatment solely focused on PTSD. The UP does not allow patients to avoid the trauma, rather it teaches patients to confront the strong emotions they experience in response to the trauma, or trauma-related cues, while using CBT skills to process the event. Additionally, treatments like the UP offer the flexibility to discuss and process traumatic events as needed without being the sole focus of the intervention. Rather than direct exposure to details of a specific traumatic event in cases where a patient is unwilling, exposure can focus on the patient's emotional experience beyond a single event, adding to treatment flexibility. Further, patients with subthreshold PTSD who experience trauma-related distress can receive an effective and efficient treatment learning similar skills to those offered in treatments like CPT and PE (i.e., exposure to aversive emotional stimuli, awareness of the relationship between thoughts, feelings, and behaviors) [10, 11]. Although patients often benefit from gaining proficiency in these skills, transdiagnostic approaches are not intended to be used as preparatory interventions for traditional single disorder protocols. In fact, transdiagnostic treatments enable significant symptom reduction across a range of disorders as a first line intervention [30•, 32•, 35•, 36•, 42•].

Anecdotally, our experience using transdiagnostic approaches for PTSD and trauma-related symptoms in routine care has allowed for greater flexibility in meeting patient needs while still delivering evidence-based CBT. We have also gathered data to support the potential benefits discussed thus far. Specifically, using the UP with trauma-exposed veterans allows for less of a focus on a diagnostic category and more of a focus on the intense emotions they experience that interfere with their daily lives. The core skills are applied to more effectively react to intense emotions, which allows for sessions to address a range of concerns rather than a single diagnosis at a time. Use of this approach has been especially helpful when veterans present with comorbid mental health problems. Historically, when not operating from a transdiagnostic framework, comorbidity made it difficult to identify and agree upon a primary concern to prioritize in treatment. The session content in the UP is guided by the manual, but the skills can be taught and applied to any emotionally-laden experience. As such, therapists can use strong emotional experiences from the past week, or ones that emerge within sessions, to address pervasive difficulties with emotions that may be present in multiple diagnoses rather than restricting content to a single diagnostic category. Furthermore, skill acquisition, including developing a language for understanding emotional experiences, including avoidance behaviors, can be seamlessly applied to trauma-related content without the requirement of engaging in direct discussion of traumatic content. While trauma-related avoidance is certainly not encouraged, the method of approaching rather than

avoiding trauma-related content occurs through emotion exposures during the course of treatment. Additionally, treatment is paced according to the individual patient's skill acquisition and can be flexibly tailored to meet the patients' evolving needs. In our observations, this approach has resulted in increased patient and therapist satisfaction, as well as symptom reduction, and increased functioning across quantitative and qualitative data collection across trauma-exposed male and female veterans [56].

Future directions

Utilizing transdiagnostic treatment approaches for trauma-exposed individuals, with and without PTSD, offers a promising alternative approach to traditional SDPs. Evidence from the UP, CETA, and MATCH, suggests a transdiagnostic approach may be a particularly promising strategy to maximize the fit and personalization of treatment. These treatments allow for greater flexibility in factors like pacing and session content while still providing therapists a protocol that can be maintained across patients who present with different or more complex presentations [26].

Although the use of transdiagnostic treatments, especially ones like the UP, may still be considered relatively novel, it would be interesting to expand on Barlow and colleagues work to examine non-inferiority of the UP compared to gold standard SDPs to include CPT and PE specifically with PTSD and/or dually diagnosed patients [10, 11, 32••]. CPT and PE were not designed to be used transdiagnostically, and as such, how the UP compares to these interventions on a primary diagnosis of PTSD remains an empirical question [10, 11]. As we have seen, there is ample opportunity to consider CETA as an alternative trauma treatment, including domestically [45••]. Research using less traditional outcome measures appropriate for the context being studied has demonstrated CETA results in changes across a range of outcomes compared to CPT, which underscores the treatment's promise for reducing symptoms and increasing availability of effective interventions in low resources settings [34, 40•].

Unfortunately, our understanding of the nuances of transdiagnostic treatments on symptoms is confined by our current metrics of symptom change. At present, available measures do not necessarily match a transdiagnostic case conceptualization as measures have traditionally focused on symptoms of single disorders. Although some measures, such as those focused on positive and negative affect, are helpful in looking at dimensional change in transdiagnostic approaches, limited measures map directly onto this type of a treatment approach. The Multidimensional Emotional Disorders Inventory is an optimal example of how new measures can better fit a transdiagnostic approach through dimensional measurement of transdiagnostic vulnerabilities as opposed the presence or absence, or severity of symptoms within single disorder or construct [57, 58]. As the conceptualization of patients' presenting concerns undergoes a shift, so too should our evaluations and established benchmarks of improvement. It is possible that focusing changes in quality of life and functioning might help capture shifts in transdiagnostic treatment, yet more research is needed in this area.

Although flexibility of transdiagnostic approaches to provide skills to traumatized patients without the requirement of directly discussing the trauma is arguably a strength, further work is needed to evaluate patient perspectives of these approaches. It remains to be seen if this aspect of the treatment is indeed more effective at engaging patients who are reluctant to discuss details of their trauma or retaining them for longer periods of time so that active ingredients of treatment are provided. Relatedly, more research is needed to understand therapist preferences for the use of a more flexible, transdiagnostic approach and the extent to which therapists consider it easier, more effective, and/or more efficient, to use when treating more complex patients.

From a systems perspective, understanding the full impact of transdiagnostic approaches in trauma-exposed populations requires examination of whether or not they improve efficiency of training and sustainability in care. Improving our understanding of the impact of these treatments comes in part from strengthening our understanding of the economic impact of transdiagnostic treatments from an implementation perspective [59•]. Specifically, examining the economic impact of these treatments compared to SDPs would further clarify their utility and potential advantage across settings. To date, literature has discussed that a transdiagnostic approach is likely more economical, yet to our knowledge, no empirical study has been undertaken.

Conclusion

In an era where the treatment gap remains vast and there are more people in need than can be properly treated by the current workforce of trained providers, considering efficient interventions is an important part of the solution [60•]. SDPs for PTSD will always serve an essential function, and transdiagnostic approaches may allow individuals that would not otherwise have access to effective interventions, either because they are unable to find a trained clinician or are unwilling to focus their course of treatment solely on a traumatic event, the opportunity to receive them. Moreover, transdiagnostic approaches may be beneficial in low resourced settings domestically and globally, and in populations where diagnostic evaluations are not possible. Transdiagnostic approaches have an advantage for scale-up in low resources settings where trauma is prominent and understanding the variables that impact their flexibility and fidelity remains an important area of inquiry [61•]. At the very least, researchers, clinicians and policy makers need to consider applying lessons learned in trauma populations globally to challenges with the treatment gap that we see domestically. Such data can supplement domestic work on treatments like the UP and MATCH with trauma populations to make progress on increasing access to care in a streamlined manner that helps the patient, clinician, and system delivering care.

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