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Emergence of Transdiagnostic Treatments for PTSD and Posttraumatic Distress

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Abstract

Both theoretical and empirical findings have demonstrated similarities across diagnoses, leading to a growing interest in transdiagnostic interventions. Most of the evidence supporting transdiagnostic treatment has accumulated for depression, anxiety, and eating disorders, with minimal attention given to posttraumatic stress disorder and other reactions to traumatic stressors. Although single-diagnosis protocols are effective for posttraumatic stress disorder (PTSD) and other trauma-related disorders, in principle, transdiagnostic approaches may have beneficial applications within a traumatized population. This paper defines different types of transdiagnostic treatments, reviews transdiagnostic approaches used in related disorders, and discusses their applicability to PTSD. Examples are drawn from existing transdiagnostic treatments in order to provide a framework for the application of such interventions to the field of traumatic stress. Implications for implementation and dissemination are also discussed.

Keywords

Posttraumatic stress disorder; Transdiagnostic; Treatment; Psychotherapy

Introduction

Over the last several decades, research has accumulated demonstrating that many disparate psychiatric diagnoses share core underlying vulnerabilities [1••, 2, 3], resulting in the development of transdiagnostic interventions that are designed to treat underlying vulnerabilities rather than just one disorder. This approach has been proposed as an alternative to single-diagnosis protocols to reflect the theoretical and empirical

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Compliance with Ethical Standards

Conflict of Interest Cassidy A. Gutner, Michelle J. Bovin, and Paula P. Schnurr declare that they have no conflict of interest. **Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

commonalities across disorders [2, 4] and to better address the underlying processes and associated comorbidities across a variety of psychiatric disorders. Although single-diagnosis protocols have demonstrated beneficial effects on comorbidity while specifically targeting the primary disorder in treatment [5–9], in principle, a transdiagnostic approach should target comorbidity more efficiently and effectively by focusing on commonalities across diagnoses.

The feasibility and effectiveness of a transdiagnostic approach have received the most extensive study and empirical support for treating anxiety disorders, eating disorders, and depression [10–14, 15•, 16]. In each approach, results have demonstrated that not just one diagnosis (e.g., panic disorder) but a range of comorbid diagnoses (e.g., several comorbid anxiety disorders) have improved over the course of treatment. Despite the success demonstrated in using the transdiagnostic approach with other classes of disorders, there has been little empirical work on the application of a transdiagnostic approach to posttraumatic stress disorder (PTSD) and other trauma-related disorders.

Given the high rates of comorbidity in PTSD and trauma-related disorders [17, 18], a transdiagnostic approach may be particularly useful. However, there is little evidence as to how a transdiagnostic approach may work with this class of disorders. Given that a transdiagnostic approach may have utility in treating the underlying core vulnerability in PTSD and trauma-related disorders, the purpose of this paper is to examine the state of the literature to date, as well as to discuss future directions. To do so, we begin with a discussion of the transdiagnostic approach. Because a full review of the transdiagnostic literature is beyond the scope of this paper, we focus on the framework for transdiagnostic treatments proposed by Zavala and colleagues [19••]. Next, we review the literature on the transdiagnostic approach as applied to trauma-related disorders so far and how it may be applied going forward. We end with suggestions for future research to further explore the effectiveness and feasibility of applying this approach to PTSD and related disorders.

Transdiagnostic Approach

In accordance with the burgeoning research cutting across psychiatric diagnoses, there has been an increase in the use of the label “transdiagnostic.” Perhaps due to this rapid growth, the definition of the concept has not been applied clearly and consistently across studies, making it difficult to synthesize research and clearly distinguish boundaries between different types of transdiagnostic approaches [19••]. For the purposes of this paper, we defined transdiagnostic treatments as those that specifically target psychological processes or core vulnerabilities that have been observed to contribute to the development and maintenance of classes of disorders [20]. The construction of transdiagnostic interventions can occur through three distinct processes resulting in three defined categories: modular/common elements, universally applied therapeutic, and mechanistically transdiagnostic [19••]. These categories may be viewed as successive approximations towards a protocol that is more in line with the National Institute of Health Research Domain Criteria [RDoC; [21]]; as we move from the modular/common elements approach to the mechanistically transdiagnostic approach, the methodologies become incrementally more unified and move further away from diagnostic categories.

Modular/Common Elements Approach

The modular/common elements approach is perhaps the most pragmatic method for developing a transdiagnostic treatment [19••]. This approach consists of a variety of therapeutic strategies and elements that have demonstrated effectiveness across therapies (e.g., cognitive restructuring, exposure). Modular/common elements treatments apply empirically supported strategies selectively to each patient based on that individual's presenting problem, as well as demographic and contextual factors that are unique to that patient [22]. This approach allows clinicians to design more individualized treatments for each patient by selecting from a set of evidence-based elements. To date, this approach has been used most often with children [23] and in low- and middle-income countries [24•, 25••, 26••].

One example of the modular/common elements approach is the Modular Approach to Therapy for Children with anxiety, depression, or conduct problems [MATCH; 22]. MATCH provides clinicians with a decision tool to guide the selection of available modules that best meet the needs of an individual patient. MATCH has demonstrated strong empirical support throughout community-based settings [23, 27•]. In the adult literature, the Common Elements Treatment Approach [CETA; 24], another modular/common elements approach, has demonstrated success in treating trauma-exposed populations in low- and middle-income countries in waitlist-controlled trials [25••, 26••]. The CETA manual contains a range of treatment elements (e.g., behavioral activation, cognitive restructuring) and provides specific guidance to the therapist as to the order in which to deliver the elements based on each patient's presenting problems.

Universally Applied Therapeutic Approach

Transdiagnostic treatments also have been developed from universally applied therapeutic principles. Using this approach, theoretically derived strategies are assumed to be underlying the process of change. Traditional psychotherapies have historically applied these strategies (e.g., cognitive change, therapeutic relationship) across diagnoses and clinical presentations. While these interventions have only more recently been described as transdiagnostic, they have long been applied to a broad range of types of psychopathology [28•]. Within the universally applied therapeutic approach, theory guides the course of treatment without overt consideration of whether or not all disorders treated with a specific technique are maintained by the same core processes [19••].

Cognitive therapy (CT) provides an example of a transdiagnostic intervention stemming from a universally applied therapeutic approach. CT, as originally developed by Aaron T. Beck, takes a top-down approach to treatment (as opposed to a bottom-up approach used in a mechanistically transdiagnostic approach). His early description of CT notes a "formula for treatment" and discusses cognitive distortions at a level broader than by diagnostic category [29]. CT was designed to challenge any distorted thoughts a patient might have, across diagnoses, in an effort to help the patient arrive at more accurate, balanced conclusions. CT prioritizes challenging distorted thoughts and beliefs about the world, self, and others, focusing on the ones that are contributing the most to distress and impairment in functioning. CT has since been successfully applied across a range of diagnoses [30–34] and

can be applied in disorder-specific model as well [35]. In addition to CT, there are several additional therapies based on the universally applied therapeutic approach [19••] including, but not limited to client-centered therapy [36], psychodynamic psychotherapy [28•, 37], mindfulness-based therapy [38, 39], and acceptance and commitment therapy [ACT; 40]. The universally applied approach can also be administered as single-diagnosis protocols including ACT for PTSD [40].

Mechanistically Transdiagnostic Approach

A mechanistically transdiagnostic approach identifies psychological processes that underlie a given class of disorders (e.g., overvaluation of shape and weight for eating disorders). This approach has been applied successfully to a range of disorders, such as anxiety disorders [11] and eating disorders [10]. This approach is also effective for emotional disorders [13, 14, 15•], which are a group of psychiatric disorders, including PTSD, that are characterized by frequent, intense negative affect, strong aversive reactions to negative affect, and significant efforts to escape or avoid negative affect [41]. The mechanistically transdiagnostic approach is hypothesized to be particularly well suited to treating emotional disorders because it aims to target the underlying core process among this class of disorders.

The Unified Protocol for the Transdiagnostic Treatment of Emotional Disorders [UP; [42]] is an empirically supported mechanistically transdiagnostic protocol that targets a core underlying vulnerability, rather than a diagnostic category, across a range of clinical presentations [13, 14, 15•]. The idea that a core psychological vulnerability can underlie classes of psychiatric disorders is supported by a considerable body of research that has heavily influenced treatment design in this transdiagnostic category in general and of the UP in particular [1••, 2, 13]. Specifically, this literature has consistently found that higher-order factors of high negative affect and low positive affect are associated with the development and maintenance of a range of psychiatric disorders [1••]. Based on these findings, the UP targets the core psychological process of negative affect as its intervention focus. The goal of each session is to identify and treat the intense negative affect impacting the patient rather than strong emotions related to one disorder. The modules (e.g., emotional awareness, cognitive appraisal/reappraisal) of the UP have flexibility in the number of sessions spent on each of the modules, which can be adjusted based on the individual. The UP has demonstrated initial efficacy in reducing symptoms across samples of participants who met the criteria for a range of emotional disorders (e.g., generalized anxiety disorder, social anxiety disorder, obsessive compulsive disorder, panic disorder with agoraphobia, major depressive disorder, hypochondriasis, and PTSD) across different studies [13, 14, 15•].

Transdiagnostic Treatments for PTSD

Current Research

Mechanistically transdiagnostic treatments like the UP have not been applied to traumatized populations. Several studies have applied the modular/common elements and the universally applied therapeutics approach to PTSD and posttraumatic symptoms. CETA is the most common, and most empirically supported, application of the modular/common elements approach in treating trauma-related sequelae. To date, CETA has been studied in low- and

middle-income countries (Iraq and Thailand) in several forms: an open pilot trial [24•]; a single-blinded, waitlist, randomized controlled trial [25••]; and a randomized controlled trial that examined CETA and Cognitive Processing Therapy [CPT; [43]]. In each of these studies, participants who received CETA had significant symptom reduction. Further, in the Weiss study [26••], a two-site study, CETA was compared to a waitlist condition at one site and CPT was compared to a waitlist condition at the other. CETA had a large effect on all outcomes, whereas CPT had only moderate effects for trauma and depression and small to no effect for anxiety and overall dysfunction [26••]. Because CETA and CPT were not directly compared and differences between sites may have accounted for overall treatment responsiveness, no firm conclusions can be drawn about the superiority of CETA over CPT. However, the results do suggest that CETA may be an effective approach to treating trauma-related disorders. Additionally, in the empirical literature, CETA has consistently been delivered by lay providers, with little to no previous familiarity with mental health treatment. This suggests that a transdiagnostic approach such as CETA may be particularly useful in clinics with fewer resources.

A recent study used a universally applied therapeutics approach to treat veterans who had post-deployment distress [44••]. Participants were randomized to transdiagnostic versions of ACT [45] or Present Centered Therapy, a comparison treatment designed to control for the nonspecific benefits of psychotherapy [PCT; [46]]. Although the study did not require participants to have PTSD, 82 % of participants met the criteria for PTSD. The investigators expected that ACT would be applicable across a range of diagnoses because it is an inherently transdiagnostic approach. Both ACT and PCT had modest effects across a variety of outcomes, including improvements in general distress and functioning, but ACT did not outperform PCT. The relatively small magnitude of change associated with ACT and lack of difference from PCT suggest that not all theoretically transdiagnostic treatments will be effective in treating trauma survivors. However, additional research is needed before a definitive conclusion can be made. Moreover, the small effect sizes may be attributable to a range of factors beyond the use of a transdiagnostic approach.

Applying a Mechanistically Transdiagnostic Approach to PTSD

A transdiagnostic approach, in the form of the modular/common elements approach (e.g., CETA) and universally applied therapeutics approach (e.g., ACT), has begun to be applied to PTSD and trauma-related disorders with encouraging results. However, the mechanistically transdiagnostic approach to these disorders has not yet been studied. Whereas a handful of participants in mechanistically transdiagnostic studies [13, 14] have presented with primary or comorbid PTSD; no study to date has focused on applying this approach to patients who present with primary PTSD.

The lack of PTSD representation in previous studies investigating the mechanistically transdiagnostic approach is unfortunate, as there are theoretical reasons why each approach may be effective with these disorders. For example, as noted, the most frequently used mechanistic approach, the UP, targets negative affect. Because negative affect has been found to play a central role in PTSD [1••, 47, 48••], the UP might be particularly effective with this disorder. Further, the UP contains modules that parallel core elements utilized in

frontline treatments for PTSD. That is, the UP modules on cognitive appraisal/reappraisal and exposure take a similar approach to symptom reduction as CPT and prolonged exposure [PE; [49]], respectively. The evidence suggesting an intervention like the UP may be successful in treating PTSD comes from studies that have used CETA [24•, 25••, 26••], which also employs these treatment elements with trauma-related disorders but was not designed to target a wide spectrum of diagnoses with a common underlying mechanism involved in the development or maintenance of the diagnoses.

Another reason why a mechanistic approach such as the UP might be particularly well suited to the treatment of PTSD and trauma-related disorders is its provision of guidance for therapists on what skills to emphasize to ideographically map onto the patient's needs. Some of this guidance comes in the form of offering a range of sessions for each module. Given that a mechanistic approach like the UP focus on core underlying processes, this approach allows the therapist to utilize clinical judgement (informed by ongoing self-report questionnaires) in collaboration with the patient's input, to speed-up or slow down delivery of new content based on the patient's mastery of material. Taken together, these aspects of the mechanistically transdiagnostic approach, coupled with the benefits demonstrated when other transdiagnostic approaches are applied to PTSD, suggest that a mechanistic approach such as the UP may be particularly effective in treating trauma-related disorders.

Future Directions

The literature on transdiagnostic approaches in treating PTSD and trauma-related disorders is in its infancy. There are no published empirical data comparing a transdiagnostic approach to single-diagnosis protocols for PTSD. This absence leaves a number of remaining questions that require empirical attention. Research is needed to determine how a transdiagnostic approach compares to single-diagnosis protocols for PTSD in terms of reducing symptoms of both PTSD and associated comorbidities. As discussed above, one study employing CETA suggested that this approach yielded larger effect sizes than single-diagnosis treatments in reducing a range of comorbid symptoms [26••]. However, because this research did not employ a head-to-head comparison, no direct comparisons were made and, therefore, no firm conclusions can be drawn. In addition, no research has examined how a mechanistically transdiagnostic approach such as the UP can compare to single-diagnosis treatments. A mechanistically transdiagnostic approach could possibly be as effective as a modular/common elements approach in treating PTSD and related disorders. Additional research is clearly needed to explore these possibilities.

Despite impressive efforts at implementation and dissemination of psychotherapy [50, 51], barriers to implementing protocols into clinical care remain challenging [52], resulting in a low adoption rate in clinical care [53–55]. Furthermore, the cost of training therapists in multiple protocols to treat the variety of symptom presentations is substantial in terms of dollars, time, and energy [56]. A transdiagnostic approach may be particularly useful on this front. Research has demonstrated that transdiagnostic approaches such as CETA are effective even among lay providers with little to no previous exposure to providing mental health treatment [24•, 25••, 26••]. However, the question of superior cost effectiveness from such a transdiagnostic approach awaits empirical investigation.

One additional area that requires empirical study is in the realm of assessment. To fully understand the effectiveness of the transdiagnostic approach in treating PTSD and related disorders, a shift in measurement is required [4]. Measurement has been largely driven by diagnostic specificity. This is problematic in capturing the effect of the mechanistically transdiagnostic approach, which targets core processes rather than just diagnostic symptoms. To address this issue, some studies [12, 57] have utilized instruments designed to measure both common underlying processes as well as distinct aspects of symptoms [58, 59]. More recently, a self-report measure, the Multidimensional Emotional Disorder Inventory (MEDDI), was developed with seven empirically derived dimensional categories for generating a profile approach to categorizing symptom presentations based on transdiagnostic vulnerabilities and phenotypes (e.g., neurotic temperament, positive temperament, autonomic arousal, intrusive cognitions) [60, 61]. The MEDDI is a prime example of a measure that may ultimately advance our measurement and understanding of core processes and allow studies to more accurately assess how effectively, if at all, we are able to target core processes across diagnostic categories. Future research is needed to design measures that capture both PTSD symptoms as well as core processes to get a more nuanced understanding of the role of transdiagnostic treatments in trauma populations.

Conclusion

Preliminary research suggests that applying a transdiagnostic approach to PTSD and other trauma-related disorders may be effective in treating these disorders and their related comorbidities. Further, a transdiagnostic approach has the potential to be effectively disseminated so that it can be used to treat trauma survivors in clinics with limited resources. However, given the limited evidence for the transdiagnostic treatment of PTSD and trauma-related disorders, trials are needed to understand the effectiveness of transdiagnostic models as well as the comparative effectiveness of transdiagnostic and symptom-focused treatment. It is also important to investigate the proposed cost, training, and implementation advantages of transdiagnostic treatment relative to disorder-specific treatment. Understanding which treatment approach may be most effective under various circumstances, differences in cost between approaches, and differences in ease/complexity of dissemination is key to successfully obtaining the greatest reach of mental health treatments to trauma-exposed individuals. Furthering previous work [24, 25, 26, 62] that involves disseminating and implementing interventions that are transportable and effective for PTSD and trauma-related sequelae beyond the borders of westernized countries is important.

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