Exploring Mindfulness as an Illness Pathway Between Eating Disorder and Post-Traumatic Stress Disorder Symptoms

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Introduction

Mindfulness is defined as 'an active, non-judgmental awareness of what is occurring both inside one's body and their surroundings'.[1] In recent years, research on mindfulness has grown in popularity, with the literature highlighting the psychological benefits of these practices, including stress and anxiety reduction, as well as enhanced well-being.[2] Mindfulness-based treatments have also been adapted, incorporating mindfulness principles to treat a variety of psychiatric conditions including eating disorders (EDs) and post-traumatic stress disorder (PTSD) These two psychiatric illnesses are often seen concurrently, with up to 25% of ED patients also meeting criteria for PTSD.[3] Mindfulness helps in the recovery from traumatic events[4] and is a protective factor against the development of EDs and maladaptive coping mechanisms resulting from trauma.[5,6] Thus, the literature suggests that mindfulness is an important protective factor in the development of both ED and PTSD symptoms. Little is known about how aspects of mindfulness may protect against the development of ED-PTSD comorbidity (i.e., co-occurrence), and understanding the complex relationships between mindfulness and these two conditions is key in promoting better treatment outcomes in patients with concurrent PTSD symptoms and ED pathology. Thus, the current study aimed to use network analysis to investigate specific aspects of mindfulness as illness pathways bridging (i.e., connecting) symptoms of comorbid ED and PTSD symptoms. In line with the literature suggesting that mindfulness is a protective factor against ED and PTSD symptoms, we hypothesized that mindfulness would negatively relate to ED and PTSD symptoms.

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Methodology & Results

A sample of undergraduate students (N=709) completed self-report measures including the Eating Disorder Examination Questionnaire [4,7] the PTSD checklist,[8] and the Five Factors of Mindfulness Questionnaire.[9] Ages ranged from 17-68 years old (M=19.51, SD=2.98) and the majority were female (74.27%) and White (68.41%). Individual items on these surveys were used to measure specific aspects of mindfulness, as well as individual ED and PTSD symptoms. Network analysis was used to investigate the unique connections (i.e. partial correlations) among symptoms to identify the central and bridge symptoms. In this case, the identified central symptoms are proposed to be the 'maintaining' symptoms of the entire network (i.e., ED symptoms, PTSD symptoms, and mindfulness). Identified bridge symptoms are symptoms that connect between illness clusters, in this case, mindfulness symptoms connecting to ED or PTSD symptom clusters.

In our network of ED symptoms, PTSD symptoms, and mindfulness, five central symptoms were identified. These were, in order of strength, *being able to describe one's feelings*, *not criticizing oneself for emotions*, *difficulty concentrating*, *feeling very upset after being reminded of a stressful experience*, and *desire to lose weight*. Additionally, three bridge symptoms were established: *noticing bodily sensations while walking*, *not criticizing oneself for emotions* and *rarely running on automatic.*

Conclusions & Discussion

The purpose of this study was to investigate aspects of mindfulness as central and bridge symptoms between ED and PTSD symptoms. Emotion-related aspects of mindfulness were the most central in the network, and three bridge symptoms were identified: *noticing bodily sensations while walking, not criticizing oneself for emotions,* and *rarely running on automatic*. These results provide precision insight into the complex relationships at play between mindfulness and ED-PTSD comorbidity.

Noticing bodily sensations while walking had an unexpected positive relationship with ED and PTSD symptoms, suggesting that heightened awareness of one's bodily sensations may promote the co-occurrence of these symptoms. This positive correlation countered the originally hypothesized model, in which higher mindfulness symptoms were suspected to negatively correlate with EDs and PTSD. There are multiple reasons why this relationship may exist in our sample. Bodily awareness may positively relate to PTSD symptoms as a manifestation of hypervigilance, which is a common PTSD cognition that involves an increased state of

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alertness.[10] It may also relate to EDs as an expression of maladaptive interoceptive awareness (i.e., heightened sensitivity to physical sensations).[11] Individuals with EDs often find their bodily sensations distressing, so they may find themselves fixating on them.[12] Further research is needed to investigate this aspect of mindfulness among ED and PTSD symptoms.

In line with our hypotheses, *not criticizing oneself for emotions* and *rarely running on automatic* negatively correlated with ED and PTSD symptoms. These findings imply that not criticizing emotions and avoiding the mindlessness of running on automatic may protect against concurrent expression of ED and PTSD symptoms, which aligned with previous literature documenting similar mindfulness cognitions.[13] This data suggests that criticizing one's own emotions and running on automatic are possible treatment and prevention targets to address ED and PTSD symptoms concurrently.

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