

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

Emma G. Roberts, Brenna M. Williams, BA, & Cheri A. Levinson, PhD  
Department of Psychology, University of Louisville

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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’.<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup> Mindfulness helps in the recovery from traumatic events<sup>4</sup> and is a protective factor against the development of EDs and maladaptive coping mechanisms resulting from trauma.<sup>5,6</sup> 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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<sup>1</sup> Hofmann, S. G., & Gómez, A. F. (2017). Mindfulness-based interventions for anxiety and depression. *Psychiatric Clinics of North America*, 40(4), 739-749. doi:10.1016/j.psc.2017.08.008

<sup>2</sup> Shankland, R., Tessier, D., Strub, L., Gauchet, A., & Baeyens, C. (2020). Improving mental health and Well-being through INFORMAL MINDFULNESS practices: An intervention study. *Applied Psychology: Health and Well-Being*, 13(1), 63-83. doi:10.1111/aphw.12216

<sup>3</sup> Tagay, S., Schlottbohm, E., Reyes-Rodriguez, M. L., Repic, N., & Senf, W. (2013). Eating disorders, Trauma, PTSD, and Psychosocial Resources. *Eating Disorders*, 22(1), 33-49. doi:10.1080/10640266.2014.857517

<sup>4</sup> Nitzan-Assayag, Y., Aderka, I. M., & Bernstein, A. (2015). Dispositional mindfulness in Trauma recovery: PROSPECTIVE relations and MEDIATING MECHANISMS. *Journal of Anxiety Disorders*, 36, 25-32. doi:10.1016/j.janxdis.2015.07.008

<sup>5</sup> Meyer, L., & Leppma, M. (2018). The Role of Mindfulness, Self-Compassion, and Emotion Regulation in Eating Disorder Symptoms Among College Students. *Journal of College Counseling*, 22(3), 211 - 224. doi:10.1002/jocc.12138.

<sup>6</sup> Follette, V., Palm, K. M., & Pearson, A. N. (2006). Mindfulness and trauma: Implications for treatment. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 24(1), 45-61. doi:10.1007/s10942-006-0025-2

## Methodology & Results

A sample of undergraduate students (N=709) completed self-report measures including the Eating Disorder Examination Questionnaire<sup>4,7</sup> the PTSD checklist,<sup>8</sup> and the Five Factors of Mindfulness Questionnaire.<sup>9</sup> 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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<sup>7</sup> Fairburn, C.G. and Beglin, S.J. (1994), Assessment of eating disorders: Interview or self-report questionnaire? *Int. J. Eat. Disord.*, 16: 363-370. [https://doi.org/10.1002/1098-108X\(199412\)16:4<363::AID-EAT2260160405>3.0.CO;2-#](https://doi.org/10.1002/1098-108X(199412)16:4<363::AID-EAT2260160405>3.0.CO;2-#)

<sup>8</sup> Weathers, F. W., Litz, B., Herman, D., Juska, J., & Keane, T. (1993). *Ptsd checklist—civilian version*. PscyTESTS Dataset. doi:10.1037/t02622-000

alertness.<sup>10</sup> It may also relate to EDs as an expression of maladaptive interoceptive awareness (i.e., heightened sensitivity to physical sensations).<sup>11</sup> Individuals with EDs often find their bodily sensations distressing, so they may find themselves fixating on them.<sup>12</sup> 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.<sup>13</sup> 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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<sup>9</sup> Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13(1), 27-45. doi:10.1177/1073191105283504

<sup>10</sup> Forbes, D., Lockwood, E., Phelps, A., Wade, D., Creamer, M., Bryant, R. A., . . . O'Donnell, M. (2013). Trauma at the hands of another. *The Journal of Clinical Psychiatry*, 75(02), 147-153. doi:10.4088/jcp.13m08374

<sup>11</sup> Lattimore, P., Mead, B. R., Irwin, L., Grice, L., Carson, R., & Malinowski, P. (2017). 'I can't accept that feeling': Relationships between interoceptive awareness, mindfulness and eating disorder symptoms in females with, and at-risk of an eating disorder. *Psychiatry Research*, 247, 163-171. doi:10.1016/j.psychres.2016.11.022

<sup>12</sup> Merwin, R. M., Zucker, N. L., Lacy, J. L., & Elliott, C. A. (2010). Interoceptive awareness in eating disorders: DISTINGUISHING lack of clarity FROM non-acceptance of internal experience. *Cognition & Emotion*, 24(5), 892-902. doi:10.1080/02699930902985845

<sup>13</sup> Kurland, Alina. *Exploring the Interaction between Trauma and Mindfulness and their Effects on Emotional Eating*, Palo Alto University, Ann Arbor, 2018. *ProQuest*, <https://libproxy.bellarmine.edu/login?url=https://www.proquest.com/dissertations-theses/exploring-interaction-between-trauma-mindfulness/docview/2234883868/se-2?accountid=6741>

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