

Evaluating the Relation of Psychological Flexibility, Self-Compassion, and Anxiety Symptoms Prior to and Following a Mindfulness Intervention

Emily A. Kalantar, Ashmita Ghosh, Lucas D. Baker, Rachel C. Bock, & Christopher R. Berghoff
The University of South Dakota



Introduction

- Research suggests psychological flexibility (PF) is positively related to self-compassion (SC), which entails being kind to oneself, and negatively related to anxiety symptoms (Marshall & Brockman, 2016; Webb et al., 2017).
- High SC is related to low anxiety symptoms relative to individuals who report low SC (Arch et al., 2018).
- Yet, no research has evaluated SC as a mediator of the PF-anxiety symptom relation.

Hypothesis: Self-compassion will mediate the relation of psychological flexibility and anxiety symptoms pre- and post-establishment of a 2-week, 10-min daily mindfulness practice.

Method

Participants

N = 120 undergraduate college students and community members M_{age} = 22.25, SD_{age} = 8.33, Range: 18–56; 72.2% Female; 66.3% White

Procedure

Participants completed an online survey battery pre- and postestablishment of a 2-week, 10-min daily mindfulness practice.

- Psychological Flexibility (AAQ-II; Bond et al., 2011)
- Self-Compassion (SCS; Neff, 2003)
- Anxiety symptoms (DASS-21; Lovibond & Lovibond, 1995)

Analytic Approach

Two path-analytic mediation analyses were conducted. *Model 1*

- Evaluated pre-intervention data.
- PF and anxiety symptoms were entered as the antecedent and consequent, respectively.
- SC was entered as the mediator.

Model 2

- Evaluate post-intervention data.
- PF and anxiety symptoms were entered as the antecedent and consequent, respectively.
- SC was entered as the mediator.

Results

Mediation Analysis

- PF was inversely related to self-compassion in both models (a =-1.07 and -1.17, respectively).
- SC did not mediate the relation of PF and anxiety symptoms before the intervention.
- SC significantly mediated the PF-anxiety symptom relation following the intervention, ab = 0.07, p < .00.

This research was funded in part by the Center for Brain and Behavior Research at the University of South Dakota School of Medicine.

Self-compassion mediates the

relation of psychological

flexibility and anxiety symptoms

following establishment of a daily

2-week mindfulness practice.



Visit the BERTHA Lab
Website!

Tables and Figures

Table 1

Descriptive and Correlational Statistics for Self-Report Measures

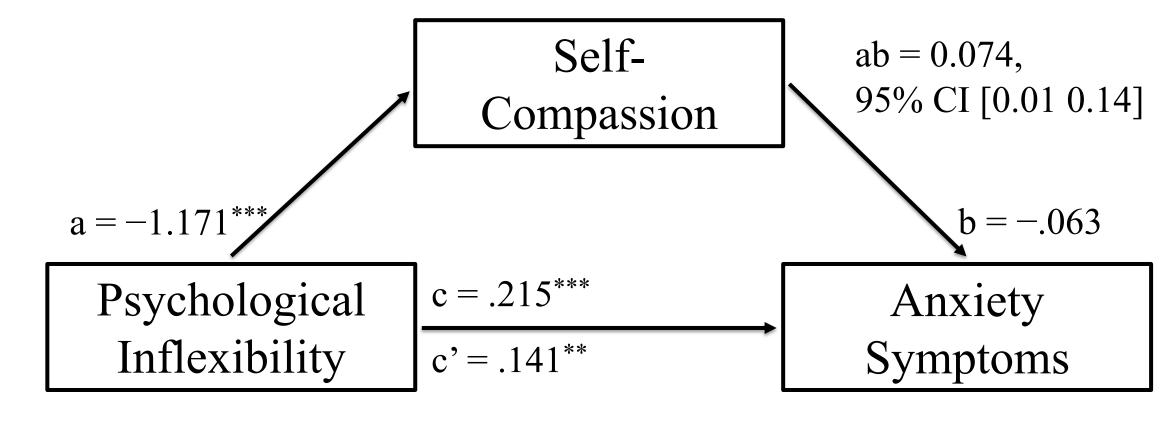
A					
Scales	M	SD	1	2	3
AAQ-II	26.24	9.26			
DASS-21	5.91	4.26	0.46**		
SCS	72.33	18.40	-0.59^{**}	-0.45^{**}	

Note. SCS = Self-Compassion Scale; AAQ-II = Acceptance and Action Questionnaire-II; DASS-21 = Depression Anxiety and Stress Scale; M = mean; SD = standard deviation.

**p < .01

Figure 1

Mediation Analysis Examining the Relation of PF, SC, and Anxiety



Note. Mediation analysis of data collected following establishment of a 2-week mindfulness practice. PF = psychological flexibility; SC = self compassion.

** = p < .05, *** = p < .001.

Discussion

- Results suggest SC mediates the relation of PF and anxiety symptoms following a mindfulness intervention.
- Interventions that promote SC may improve anxiety symptoms, for individuals who report low PF.
- Considerable variance in anxiety symptoms was not explained, suggesting identification of additional variables that account for the relation of PF, SC, and anxiety symptoms is warranted.

Limitations

- Data is cross-sectional so the direction of relations reported herein cannot be delineated.
- The sample did not include individuals with anxiety diagnosis.
- Analyses do not address mediation of moderation of the effect of the intervention.

Future Directions

- Long-term effects of SC among individuals with anxiety should be evaluated in longitudinal designs.
- The effect of SC and low PF should be clarified in the context of psychiatric diagnoses.
- Change in variables across time should be included in future analysis to evaluate the effect of the mindfulness intervention.

References

Arch, J. J., Landy, L. N., Schneider, R. L., Koban, L., & Andrews-Hanna, J. R. (2018). Self-compassion induction enhances recovery from social stressors: Comparing adults with social anxiety disorder and healthy controls. *Anxiety, Stress, & Coping, 31*(5), 594–609. https://doi.org/10.1080/10615806.2018.1504033

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., Waltz, T., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire – II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy, 42*(4), 676–688.

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, 44(1), 1–25. https://doi.org/10.1016/j.brat.2005.06.006
Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. https://doi.org/10.1016/0005-7967(94)00075-u
Marshall, E. -J., & Brockman, R. N. (2016). The relationships between psychological flexibility, self-compassion, and emotional well-being. *Journal of Cognitive Psychotherapy*, 30(1), 60–72. https://doi.org/10.1891/0889-8391.30.1.60

Psychotherapy, 30(1), 60–72. https://doi.org/10.1891/0889-8391.30.1.60

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. Self and Identity, 2(3), 223–250. https://doi.org/10.1080/15298860309027

Webb, C. A., Beard, C., Kertz, S. J., Hsu, K. J., & Björgvinsson, T. (2016). Differential role of CBT skills, DBT skills and psychological flexibility in predicting depressive versus anxiety symptom improvement. Behaviour Research and Therapy, 81, 12–20. https://doi.org/10.1016/j.brat.2016.03.006