Influence of Mindfulness on Approach Motivation for Individuals Experiencing Depression

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ABSTRACT
The goal of this research was to test whether a brief mindfulness intervention increased approach motivation for individuals experiencing depression. Following exposure to a depressed mood induction, participants experienced either a brief mindfulness intervention or the control condition. All participants then had the opportunity to participate in a mock-job interview as a measure of approach motivation. Results indicated no effect of the mindfulness intervention on depressed mood or approach motivation.

Introduction

Depression causes significant distress, often recurs, and rates of depression have increased from 10% to 17% in the world population (Brennan, Barnhofer, Crane, Duggan, & Williams, 2015; Kramer, Helmes, & Bengel, 2014; Rothbaum, Morling, & Rusk, 2009; Sideridis, 2015). Most people will experience depression at least once in their lifetime (Sideridis, 2015). Reoccurring episodes of depression are often progressively more severe (Brennan, et al., 2015).

Negative thoughts and loss of motivation are common symptoms of depression. Individuals with depression are likely to experience negative thoughts and interpret life events negatively, therefore worsening depressive symptoms (Rothbaum et al., 2009). For example, a person with depression may have the thought that they will never be good enough, which is likely to leave
them feeling upset. As a result, this person is less likely to engage with challenging, but potentially reinforcing tasks. Lack of motivation is also associated with hopelessness (Kramer et al., 2014). Related to the example above, if the person does not practice a challenging task such as playing piano, they create the reality they initially believed (i.e., they will never be good at piano).

Common mindfulness practices include mindful breathing, body scans, and meditation. Mindfulness decreases depressive symptoms via numerous mechanisms (Brennan et al., 2015). First, mindfulness can increase one’s focus on the external world instead of focusing on negative thoughts (Shepherd, Coifman, Matt, & Fresco, 2016). It is beneficial for individuals experiencing depression to adopt the habit of self-distancing. If individuals only focus internally, they will miss opportunities to experience reinforcement from the external world (Shepherd, et al., 2016). For example, a person experiencing depression who is focused on the external world is likely to experience decreased negative affect as a result of self-distancing. If a person experiencing depression is able to move their focus to external stimuli, they have opportunities to experience increased positive affect from, for example, experiencing the beauty of nature. An external focus increases open-mindedness and calm feelings (Shepherd, et al., 2016).

Mindfulness is also associated with decreased negative affect, and increased positive affect (Snippe, Nyklicek, Schroevers, & Bos, 2015). Affect is another way to describe an individual’s feelings. Negative affect is negative feelings or emotions, whereas positive affect is positive feelings or emotions. In Mindfulness-Based Stress Reduction (MBSR), non-depressed individuals participated in mindfulness sessions for eight to nine weeks, an optional silent retreat, and homework consisting of mindfulness exercises. Results indicated decreased negative affect
and increased positive affect among the participants following completion of MBSR (Snippe, et al., 2015).

Another benefit of mindfulness is that mindfulness improves emotion regulation (Hill & Updegraff, 2012). Feelings of sadness and hopelessness are common symptoms of depression (Dimidjian & Segal, 2015). Emotion regulation is one’s ability to regulate one’s own feelings. Individuals typically regulate emotion by assessing and expressing them (Ford, Lwi, Gentzler, Hankin, & Mauss, 2018). Repetitively focusing on negative mood without taking action to express or improve mood is called rumination, and rumination is a common symptom of depression (Brennan et al., 2015). Mindfulness can help individuals with depression decrease their emotional sensitivity, therefore decreasing their negative thoughts (Hill & Updegraff, 2012). This also allows individuals to start expressing their feelings and emotions through emotional expression, thereby decreasing negative affect (Davis & Hayes, 2011).

Mindfulness also improves focus on the present moment. (Hooper, Villatte, Neofotistou, & McHugh, 2010). Individuals with depression tend to focus on the past. Mindfulness practice can decrease depressive symptoms by teaching individuals to focus on the here and now, and stay in that moment with an observant and clear mind (Finkelstein-Fox, Park, & Riley, 2018).

In addition to changing thoughts and feelings associated with depression, mindfulness may also increase approach motivation. Depression is associated with decreased approach motivation (Shankman, Klein, Tenke, & Bruder, 2007). Approach motivation is an individual’s willingness or desire to do something (Robinson, Meier, Tamir, Wilkowski, & Ode, 2009). Decreased approach motivation is problematic because it limits a person’s potential to experience positive reinforcement (Sideridis, 2015). Conversely, increasing approach behaviors reduces negative affect (Robinson, et al., 2009), increases positive affect (Robinson, et. al., 2009), and leads to
reduced depression over time (Sideridis, 2015). For instance, an individual experiencing depression may not accept a party invitation because they do not expect they will have fun at the party (low approach motivation). At home on the night of the party, the individual with depression may feel lonelier than usual. On the other hand, if the individual went to the party, and was welcomed by friends, they may feel less lonely (decreased negative affect) and may experience moments of enjoyment (increased positive affect). For individuals with depression, approach motivation is an important predictor of recovery (Sideridis, 2015).

In summary, negative affect, a central symptom of depression, is associated with low approach motivation (Sideridis, 2015). Research indicates mindfulness decreases negative affect (Snippe, et al., 2015), but no current research indicates a direct effect of mindfulness on approach motivation. The goal of the current study is to examine the influence of mindfulness on approach motivation for individuals experiencing depression.

**Methods**

*Participants*

Participants (N = 68) were recruited from introductory psychology classes at the University of Wisconsin-Superior. Participants received course credit in exchange for participation. Upon entering the research suite, each participant chose an individual room to enter, and rooms were randomly assigned to either the control condition or mindfulness condition. About half of the participants, (n = 33) participated in the mindfulness intervention, whereas the other participants, (n = 35) participated in the control condition. Participants were between 18 and 38 years old (M = 20, SD = 3.19). Year in school ranged from freshman to senior year (M = 1.47, SD = 0.8). Of the participants, 50% were male and 50% female. Most participants were U.S. students (85%), and 15% were international students. Most participants
identified as Caucasian (78%), with 6% identifying as another preferred identity, 6% identifying as having multiple ethnicities, 4% Asian, and 1-2% African American, Latino, Native American, and Middle Eastern, respectively.

**Materials**

Participants’ mood was measured with the Hamilton Depression Rating Scale (HAM-D; Hamilton, 1960). This scale consists of 21 depression symptoms. Participants rated their feelings on a scale from 0 to 2 or 0 to 4 depending on the scale of each question. Total scores on the HAM-D are characterized as normal (0-7), mild depression (8-13), moderate depression (14-18), severe depression (19-22), or very severe depression (≥ 23). To measure approach motivation, the participants were asked whether (yes/no) they wanted to participate in a mock job interview.

**Procedure**

All participants entered their room individually, shut the door, and sat in front of a computer. They started the study by filling out the informed consent form. They then completed the HAM-D. After completing the HAM-D, they participated in a depressed mood induction. To induce depressed mood, all participants listened to “Russia under the Mongolian Yoke” by Prokofiev at half speed while reading negative statements and reflecting on them (Cha et al., 2018). The negative statements were taken from the pessimism section of the Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974). After the mood induction, they filled out the HAM-D a second time. After completing the HAM-D for the second time, participants in the mindfulness condition watched calming colors appearing and changing on a computer screen while listening to a meditation audio track. The audio track told them to “focus on your breathing and the present moment, etc.” Participants in the control condition watched the calming colors appearing and changing, but with no audio track (Davis & Hayes, 2011). All participants then
filled out the HAM-D for the final time, and were given an option to partake in a mock job-interview. The mock job-interview was described as a positive opportunity to practice interviewing skills and receive constructive feedback. Participants were asked to check yes or no to indicate whether they wanted to participate in the mock job-interview. To induce positive mood at the end of the study, participants listened to “Trepak” by Tchaikovsky, played at regular speed, while reading positive statements and reflecting on them (Cha et al., 2018). The positive statements were taken from the optimism section of the Hopelessness scale (Beck et al., 1974). All participants were then informed that no actual mock job interviews were available. They were provided with contact information for campus career services and counseling resources.

**Results**

All participants experienced a depressed mood induction. However, results indicated no significant change in depression scores from baseline ($M = 8.34$, $SD = 6.36$) to after the mood induction ($M = 8.76$, $SD = 6.98$); $t(66) = 1.12, p = .27$. The negative mood induction did not increase depression scores. Mean scores indicate participants were experiencing mild depression prior to and after the mood induction.

An independent samples t-test was conducted to determine if condition (Mindfulness or Control) had a significant effect on final depression scores. Results indicated no significant effect. Final depression scores for participants in the Control Condition ($M = 6.29$, $SD = 6.63$) and Mindfulness Condition ($M = 6.12$, $SD = 6.96$) were not significantly different. $t(65) = 0.10, p = .62$. Condition had no effect on final depression scores. Regardless of condition, participants’ average final depression scores were in the normal range. Means for the Mindfulness and Control groups at all three time points (pre, mid, and post) are displayed in Figure 1.
A Chi-Square Test was conducted to determine if condition (Mindfulness/Control) influenced job interview choice. Five participants in the Control Condition elected to participate in the job interview. One participant in the Mindfulness Condition elected to participate in the job interview. There was no significant effect of condition on interview choice, \( X^2 (1, N = 68) = 2.68, p = .10. \)

**Discussion**

The main goal of this research was to test whether mindfulness increased approach motivation for individuals experiencing depression. However, the mood induction was not successful, and participants averaged mild depression both before and after the negative mood induction. After participating in either the Mindfulness or Control condition, participants averaged normal depression scores. Scores between conditions were not significantly different.

If the mood induction had been more successful there may have been more opportunity for depression scores to decrease. With mild depression scores, there was not much opportunity for the mindfulness intervention to decrease scores further. Mid to post depression scores decreased among participants in both conditions. It is possible that just looking at calming colors reduced depression scores, regardless of whether participants engaged in mindful thinking. A greater distinction between the Control and Mindfulness conditions may have resulted in differences in participant responses.

For future research, mood should be looked at over the long-term verses short-term. The mood measure for this study was a measure of depression, and depression scores are unlikely to change in a short time period. A more short-term measure of mood, such as the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) may have detected more subtle differences in mood. A greater effect of the mindfulness intervention may also have been
observed if the sample had been comprised of individuals experiencing higher levels of depression. Additionally, a longer and more intense mindfulness intervention may have led to decreases in depression scores. Mindfulness interventions in previous studies range from six days (Brennan et al., 2015) to eight-to-nine weeks (Snippe et al., 2015). Finally, choosing whether to participate in the mock job-interview was a flawed measure of approach motivation. Rather than indicating approach motivation, participants may have elected not to participate in the mock job-interview because of external variables. For example, participants may have wanted to participate but had other obligations right after the study such as class, lunch with a friend, or work. A scale such as the Approach-Avoidance Temperament Scale (Elliot & Thrash, 2010) may have been a more reliable and valid measure of approach motivation.

Even though there was no effect of mindfulness on approach motivation in the current study, previous research indicates links between negative affect and motivation (Sideridis, 2015), and between mindfulness and negative affect (Snippe et al., 2015). Due to these links, future research should continue to examine the possibility that mindfulness could increase approach motivation for individuals experiencing depression. Future research should utilize long-term mindfulness interventions, in samples of individuals experiencing depression, and should measure approach motivation using reliable and valid instruments.
References


Figure 1. Depression means measured by the Hamilton Depression Rating Scale (HAM-D; Hamilton, 1960, Pre (PHAM-D), Mid (MHAM-D), and Last (LHAM-D)).