Personality and Individual Differences 96 (2016) 127–131

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Mediating role of self-esteem on the relationship between mindfulness, anxiety, and depression

Badri Bajaj [a,*], Richard W. Robins [b], Neerja Pande [c]

[a] Dept. of Humanities & Social Sciences, Jaypee Institute of Information Technology, Noida, A-10, Sector: 62, Noida 201307, India
[b] Department of Psychology, University of California, Davis, CA 95616-8686
[c] Indian Institute of Management Lucknow, Noida Campus,,B-1 Sector: 62, Noida 201307, India

ARTICLE INFO

Article history:
Received 12 January 2016
Received in revised form 21 February 2016
Accepted 27 February 2016
Available online xxxx

Keywords:
Mindfulness
Self-esteem
Anxiety
Depression

ABSTRACT

The current study aimed to examine the mediation effects of self-esteem on the association between mindfulness and anxiety and depression. A sample of 417 undergraduate students completed a packet of questionnaires that assessed mindfulness, self-esteem, anxiety, and depression. Correlation results indicated that mindfulness was associated with self-esteem, anxiety, and depression. Using Structural Equation Modeling (SEM), mediational analyses showed that mindfulness exerted its indirect effect on anxiety and depression through self-esteem. A multi-group analysis showed that the mediational model was not moderated by gender and thus provided a preliminary support for the robustness of the final meditational model. The findings corroborate an important role of self-esteem in mindfulness exerting its beneficial effects on anxiety and depression.

1. Introduction

Mindfulness refers to a process that leads to a mental state characterized by nonjudgmental and nonreactive awareness of present-moment experiences, including emotions, cognitions, and bodily sensations, as well as external stimuli such as sights, sounds, and smells (Bishop et al., 2004; Brown & Ryan, 2003; Brown, Ryan, & Creswell, 2007; Kabat-Zinn, 2003). Experiencing the present-moment nonjudgmentally and openly can effectively counter the effects of stressors, because excessive orientation toward the past or future when dealing with stressors can be related to feelings of depression and anxiety (Kabat-Zinn, 2003). Mindfulness allows individuals to perceive thoughts and events the way they are and keep them away from judging it critically (Brown et al., 2007). Mindfulness is also conceptualized as a psychological trait that refers to the tendency to be mindful in everyday life (Brown & Ryan, 2003). Meditation or mindfulness training may be used to enhance levels of mindfulness (Baer et al., 2008; Falkenstrom, 2010).

1.1. Mindfulness, anxiety and depression

Mindfulness could help the individuals to give up depressive rumination (Teasdale et al., 2000; Williams, 2008). Increasing evidence has demonstrated that mindfulness-based interventions can effectively improve positive emotion and reduce depression in both clinical and nonclinical populations (Tang et al., 2007; Teasdale et al., 2000; Williams, 2008). Recent meta-analyses suggest that mindfulness-based interventions (MBIs) are efficacious in treating anxiety and mood disorders and reduce anxious and depressive symptoms (Hofmann, Sawyer, Witt, & Oh, 2010; Khoury et al., 2013). Mindfulness enhances positive affect, and reduces negative affect, and maladaptive automatic emotional responses (Hofmann, Sawyer, Fang, & Asnaani, 2012; Koole, 2009). The brain areas responsible for affect regulation, and stress impulse reaction are also affected with mindfulness training (Davidson et al., 2003; Hölzel et al., 2011; Lazar et al., 2005).

1.2. Self-esteem as mediator

Self-esteem represents the affective, or evaluative, component of the self-concept; it signifies how people feel about themselves (Leary & Baumeister, 2000). Originally, self-esteem was defined as a one-dimensional construct, which refers to a person's general sense of worth (Rosenberg, 1965). Self-esteem can be enhanced by using well-designed interventions (Robins, Trzesniewski, & Donnellan, 2012). High self-esteem prospectively predicts success in life domains such as relationships, work, and health (Orth & Robins, 2014). Self-esteem is related to a variety of positive psychological outcomes, including psychological adjustment, positive emotion, prosocial behavior (Leary & MacDonald, 2003). In a recent review of mindfulness and self-esteem; Randal, Pratt, and Bucci (2015) found a significant relationship between mindfulness and self-esteem. Prior research has supported that mindfulness is associated with self-esteem (Brown & Ryan, 2003;

* Corresponding author.
E-mail addresses: badri.bajaj@jiit.ac.in (B. Bajaj), rwrobins@ucdavis.edu (R.W. Robins), neerja@iiml.ac.in (N. Pande).

http://dx.doi.org/10.1016/j.paid.2016.02.085
0191-8869/

Pepping, O'Donovan, & Davis, 2013; Thompson & Waltz, 2008). Higher mindfulness makes an individual less engrossed by negative feelings and thoughts that represent low self-esteem (Pepping et al., 2013). Increased awareness and describing through mindfulness may encourage people to maintain attention on present experiences, making them less likely to experience negative beliefs or critical thoughts, further enhancing self-esteem. The enhanced self-esteem acts as a cushion for people against feelings of anxiety, it enhances coping, and promotes physical and mental health (Greenberg et al., 1992; Pepping et al., 2013; Taylor & Brown, 1988). Individuals with low self-esteem, experience virtually every negative emotion more often than those with high self-esteem (Goswick & Jones, 1981; Leary, 1983; Taylor & Brown, 1988). Mindfulness may help people to recognize that thoughts and feelings are events in the mind and not self-evident truths or aspects of the self. This might reduce the tendency to develop strong emotions as a consequence of cognitions related to low self-esteem (Michalak, Teismann, Heidenreich, Strohle, & Vocks, 2011). Thus, mindfulness influences self-esteem and the enhanced self-esteem affects levels of anxiety and depression.

Self-esteem is strongly correlated with anxiety and depression in cross-sectional studies (Liu, Wang, Zhou, & Li, 2014; Michalak et al., 2011; Pinniger, Brown, Thorsteinsson, & McKinley, 2012). Moreover, numerous longitudinal studies have demonstrated that low self-esteem prospectively predicts increases over time in anxiety and depression, whereas anxiety and depression do not predict declining levels of self-esteem (Orth & Robins, 2014; Sowislo & Orth, 2013). Thus, consistent with our proposed mediation model, the research literature supports the claim that low self-esteem leads to anxiety and depression, but does not support an effect of anxiety and depression on self-esteem.

Based on the preceding rationale and available literature showing that mindfulness contributes to self-esteem (Brown & Ryan, 2003; Thompson & Waltz, 2008), and that self-esteem correlate to depression and anxiety (Liu et al., 2014; Rasmussen & Pidgeon, 2011), in this study, self-esteem was hypothesized to mediate the relationship between mindfulness and anxiety and depression. Thus mindfulness will indirectly predict lower levels of anxiety and depression through self-esteem. To our knowledge, no study has been encountered to examine the effects of mindfulness on depression through self-esteem and to examine the effects of mindfulness on anxiety through self-esteem in a sample of students in Indian context.

Life at a university can be quite complex and demanding with the heavy burden of studies and the high levels of stress due to study/life balance, financial problems, and relationship related issues. University students also feel lonely and homesick as they are away from their parents and live independently. In this period, many students may face anxiety and depression due to these problems. Thus, the present study might throw some light on the potential psychological mechanism in helping university students in reducing anxiety and depression.

2. Method

2.1. Participants

417 undergraduate students from an Indian university volunteered to take part in the study. In the sample, 305 were males and 112 were females. The mean age of the sample was 20.2 years (standard deviation = 1.4 years).

2.2. Measures

2.2.1. Mindfulness

Mindfulness was assessed with 15 item Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003). The participants expressed their agreement on a six point Likert type scale ranging from 1 = almost always, to 6 = almost never. It includes items such as, "I do jobs or tasks automatically, without being aware of what I'm doing" and "I find myself doing things without paying attention". Excellent test–retest reliability, good internal consistency, and good convergent and discriminant validity have been found with the MAAS (Bajaj, Gupta, & Pande, 2016; Brown & Ryan, 2003).

2.2.2. Self-esteem

Self-esteem was assessed with the 10 item Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The participants expressed their agreement on a four point Likert type scale ranging from 1 = strongly disagree to 4 = strongly agree. It includes items such as, "I feel that I have a number of good qualities." and "I feel that I'm a person of worth." The RSES has good levels of reliability and validity (Kong, Zhao, & You, 2012; Zhao, Kong, & Wang, 2013).

2.2.3. Anxiety and depression

Anxiety and depression scores were measured with Depression Anxiety Stress Scales short version-21 (DASS; Lovibond & Lovibond, 1993). Seven items for anxiety and seven items for depression were used from DASS-21 to measure anxiety and depression respectively. Participants were asked to provide Likert ratings of their symptoms (0 = did not apply to me, 3 = applied to me very much or most of the time). It includes items for anxiety such as, "I felt scared without any good reason" and "I was worried about situations in which I might panic and make a fool of myself." It includes items for depression such as, "I felt that I had nothing to look forward to" and "I was unable to become enthusiastic about anything." The DASS −21 has good levels of reliability and validity (Antony, Bieling, Cox, Enns, & Swinson, 1998; Henry & Crawford, 2005).

2.3. Procedure

Participants completed surveys consisting of the MASS, RSES, and DASS (14 items) in the classroom environment. The researcher assured the participants of the confidentiality of their responses. To handle any queries raised by the participants, a trained research assistant was available throughout the process. It took approximately 15 min for the students to complete the surveys.

2.4. Data analysis

SEM procedure using AMOS 18.0 was used to investigate the impact of self-esteem on the relationship between mindfulness and anxiety and depression. To evaluate the overall fit of the model to data, several indices recommended by Hu and Bentler (1999) were calculated in the study: Chi square statistics; root-mean-square error of approximation (RMSEA) of.06 or less; Standardized Root-Mean-Square Residual (SRMR) of .08 or less; and Comparative Fit Index (CFI), best if above .95. Three item parcels for each of the mindfulness and self-esteem and two item parcels for each of the anxiety, and depression factors were formed to control inflated measurement errors caused by multiple items for the latent factor. These parcels were created using an item-to-construct balance approach i.e. successively assigning highest and lowest loading items across parcels (Bajaj & Pande, 2016; Little, Cunningham, Shahar, & Widaman, 2002).

3. Results

3.1. Preliminary analysis

The means, standard deviations, reliability estimates (Cronbach's alpha coefficients), and correlations for all study variables are displayed in Table 1. All measures were significantly correlated.