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Dispositional mindfulness and perceived stress: The role of emotional intelligence

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ABSTRACT

The present study examined the relationships between dispositional mindfulness, emotional intelligence and perceived stress using self-report measures. We administered the Mindful Attention Awareness Scale (MAAS), the Wong Law Emotional Intelligence Scale (WLEIS), and the Perceive Stress Scale (PPS) to a non-clinical sample of Chinese adults (n = 380). The results showed that mindfulness was positively associated with four components of WLEIS, and negatively associated with perceived stress. Mediation analysis indicated that only the regulation and use of emotion components of WLEIS acted as mediators of the association between mindfulness and perceived stress. Effect contrasts showed no significant difference between the specific indirect effects through these two mediators. Implications and suggestions for future research are discussed.

1. Introduction

Over the last decades, mindfulness has received much attention in the research literature. Mindfulness can be conceptualized as a receptive attention to and awareness of internal and external experiences as they occur (Brown & Ryan, 2003; Brown, Ryan, & Creswell, 2007). Although levels of mindfulness can be increased through meditation or mindfulness-based training (e.g., Baer et al., 2008; Falkenstrom, 2010), mindfulness may also be conceptualized as a psychological trait that refers to the tendency to be mindful in everyday life (Brown & Ryan, 2003). Mindfulness has been shown to have positive effects on mental health and psychological well-being (e.g., general distress, depression, anxiety), physical health (e.g., chronic pain), and quality of intimate relationships, whether based on a trait approach or an invention approach (Baer, 2003; Brown & Ryan, 2003; Brown et al., 2007; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007; Grossman, Niemann, Schmidt, & Walach, 2004). The present study mainly focused on the trait approach and used a self-report measure to assess dispositional mindfulness.

There is a substantial body of research investigating the relationship between mindfulness and perceived stress. Several studies of mindfulness to date have reported negative correlations between self-reported mindfulness and perceived stress (Black, Sussman, Johnson, & Milam, 2012; Bränström, Duncan, & Moskowitz, 2011; Gard et al., 2012; Weinstein, Brown, & Ryan, 2009). With an increase in mindfulness as a result of interventions, e.g., Mindfulness-based stress reduction (MBSR) intervention, perceived stress tended to decrease (e.g., Baer, Carmody, & Hunsinger, 2012; Carmody, Baer, Lykins, & Olendzki, 2009; Chu, 2010; Oman, Hedberg, & Thoresen, 2006).

Although the negative relationship between mindfulness and perceived stress has been well established, the mechanisms that might account for this relationship are still unclear. Some researchers (Schutte & Malouff, 2011) have asserted that mindfulness may encourage individuals to develop better emotional intelligence (EI) which in turn lead to higher well-being. Petrides, Pita, and Kokkinaki (2007) proposed two different conceptualization of EI, i.e., trait EI and ability EI. Ability EI is defined as a set of interrelated skills that can be classified within the four dimensions: the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997). Trait EI, by contrast, is conceptualized as a trait which refers to "a constellation of behavioral dispositions and emotional self-perceptions located at the lower-levels of personality hierarchies" (Petrides et al., 2007). There is some evidence to support the hypothesis. For example, people with high levels of mindfulness are likely to perceive greater EI (e.g., Baer, Smith, & Allen, 2004; Baer, Smith, Hopkins,

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Krietemeyer, & Toney, 2006; Brown & Ryan, 2003; Schutte & Malouff, 2011; Sinclair & Feigenbaum, 2012; Snowden et al., 2015); People with high EI report less perceived stress (e.g., Extremera, Durán, & Rey, 2007; Gohm, Corser, & Dalsky, 2005; Mikolajczak, Balon, Ruosi, & Kotsou, 2012; Vesely, Siegling, & Saklofske, 2013). Thus, we predicted trait would mediate the association between mindfulness and perceived stress.

To our knowledge, two studies have shown that EI acts as a mediator of the association between mindfulness and subjective well-being (Schutte & Malouff, 2011; Wang & Kong, 2013), but some questions still remain unanswered. One the one hand, although these two studies have demonstrated the mediating role of EI between EI and subjective well-being, as Schutte and Malouff (2011) pointed out, it is necessary to explore the possible mediating role of EI in the relationship between mindfulness and other variables such as stress. On the other hand, because EI is multidimensional construct (Mayer & Salovey, 1997), which aspects of EI play a more important role in the relationship between mindfulness and perceived stress is unclear. Some researchers have pointed out mindfulness may encourage the development of regulation of emotion (Chambers, Gullone, & Allen, 2009; Koole, 2009). Evidence from fMRI studies shows that brain regions involved in attentional and emotion regulation processes, such as the dorsomedial prefrontal cortex and the amygdala, play a role in mindfulness (Frewen et al., 2010). Thus, we predicted that only some aspects of EI (e.g., regulation of emotion) might mediate the mindfulness- perceived stress relationship.

The present study expands the existing research in several ways. First, this study set out first to examine the mediating effect of EI on the link between mindfulness and perceived stress, which would extend our comprehensive understanding of the mechanism whereby mindfulness and perceived stress are connected. Second, we determined which components of EI play a more prominent role in this association via the methods comparing specific indirect effects in multiple mediator models because Preacher and Hayes (2008) asserted that significance of the total indirect effect was not a necessary precondition for significant specific indirect effects in multiple mediator models.

2. Method

2.1. Participants

Three hundred and eighty native Chinese speaking adults from mainland China volunteered to take part in the study. The mean age of the sample was 27.21 years (standard deviation = 5.10 years). In the sample, 223 were women and 157 were men. Participants' education level was classed as middle school education ($n = 11$), high school education ($n = 10$), undergraduate education ($n = 115$) and post-graduate education ($n = 244$). Each participant volunteered to take part in this study, and had no compensation for their participation.

2.2. Measures

The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) was used to assess dispositional mindfulness. It consists of 15 brief statements. It includes items such as, "I tend to walk quickly to get where I'm going without paying attention to what I experience along the way" and "I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there". Respondents are asked to rate their agreement on a 6-point Likert-type scale (1 = almost always, 6 = almost never). The mean rating across all items is computed. Higher scores reflect higher levels of mindfulness. The PSS has good reliability and validity (e.g., Brown & Ryan, 2003; Kong, Wang, & Zhao, 2014). In this study, the scale was internally consistent and had a Cronbach alpha coefficient of .86.

The Wong Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002) was used to assess trait EI. It consists of 16 brief statements. The scale consists of four dimensions: Self Emotion Appraisals (SEA), Others' Emotion Appraisals (OEA), Regulation of Emotion (ROE), and Use of Emotion (UOE). SEA relates to the individual's ability to understand their deep emotions and be able to express these emotions naturally. OEA relates to peoples' ability to perceive and understand the emotions of those people around them. ROE relates to the ability of people to regulate their emotions, which will enable a more rapid recovery from psychological distress. UOE (or Emotional Facilitation of Thought) relates to the ability of individuals to make use of their emotions by directing them towards constructive activities and personal performance. The WLELS includes items such as, "I have good understanding of my own emotions" (SEA), "I have good understanding of the emotions of people around me" (OEA), "I am quite capable of controlling my own emotions" (ROE) and "I would always encourage myself to try my best" (UOE). Items are rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Higher scores reflect higher levels of EI. The WLEIS has good reliability and validity (e.g., Kong & Zhao, 2013; Kong, Zhao, & You, 2012a, 2012b; Wong & Law, 2002). In this study, the Cronbach alpha coefficients for the four subscales were: SEA: .75; OEA: .85; ROE: .83; UOE: .73. The Cronbach alpha coefficient for all 16 items was .86.

The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) was used to assess perceived levels of stress. This scale measures an individual's appraisal of their life as stressful (i.e. unpredictable, uncontrollable and overloading), consisting of 10 items. Item examples include, "How often have you felt nervous or stressed?" and "How often have you felt confident about your ability to handle your personal problems?" People rated how often they had experienced these feelings in the last month on a five-point Likert scale from 0 (never) to 4 (very often). PSS scores were obtained by reversing the scores on the four positive items; the items were 4, 5, 7 and 8. Total scores range from 0 to 40, with higher scores indicating greater overall distress. The PSS has good reliability and validity (e.g., Cohen et al., 1983). In this study, the scale was internally consistent and had a Cronbach alpha coefficient of .85.

2.3. Procedure

Participants completed a multi-section questionnaire survey distributed using an online testing system. Included in the questionnaire were a brief demographics survey, and self-report measures of WLEIS, MAAS and PSS. All the questionnaires used in this study were in Chinese language. The hyperlink to the questionnaire survey was distributed via email and through online forums (e.g., tianya.cn). Participants could respond to the questionnaires at their own pace and typically took about 15 min to complete all sections. This method has been used successfully in other studies (e.g., Kong et al., 2012a; Meyerson & Tryon, 2003).

3. Results

3.1. Preliminary analyses

Descriptive statistics and intercorrelations for all variables included are presented in Table 1. All variables were significantly correlated in the predicted directions. Mindfulness was negatively associated with perceived stress and positively associated with four dimensions and total scores of EI as well as age. Perceived