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> Are Mindfulness and Self-Compassion Related to Peace of Mind? The Mediating Role of Nonattachment

> > Qiang Xie<sup>1,2</sup>

<sup>1</sup>Department of Counseling Psychology, University of Wisconsin-Madison, Madison, WI, USA <sup>2</sup>Center for Healthy Minds, University of Wisconsin-Madison, Madison, WI, USA

#### **Author Note**

Qiang Xie Dhttps://orcid.org/0000-0003-3968-9629

The author declares that there is no conflict of interest. The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request. Correspondence should be addressed to Qiang Xie, Department of Counseling Psychology, University of Wisconsin-Madison, 335 Education Building, 1000 Bascom Mall, Madison, Wisconsin, 53706, United States, email: qiang.xie@wisc.edu

#### Abstract

Peace of mind is an important affective well-being valued in Chinese culture. Mindfulness and self-compassion could potentially promote peace of mind. However, the mechanisms underlying these effects were not well understood. The current cross-sectional study aimed to investigate whether nonattachment explained the benefits of mindfulness and self-compassion on peace of mind. A sample of 364 Chinese adults was recruited from WeChat, a popular Chinese social media platform. Participants filled out an online survey including measures of dispositional mindfulness, self-compassion, nonattachment, and peace of mind. The results of correlation analyses revealed significant and positive associations among mindfulness, self-compassion, nonattachment, and peace of mind. Furthermore, nonattachment significantly mediated the associations between mindfulness and self-compassion with peace of mind. Moderated mediation analyses indicated that the relationships between mindfulness and self-compassion with nonattachment were stronger for women than for men. Gender did not moderate the direct effects of mindfulness and self-compassion on peace of mind, the relationship between nonattachment and peace of mind, and the mediating effects of mindfulness and self-compassion on peace of mind through nonattachment. These findings suggest that nonattachment may be a potential mechanism by which mindfulness and self-compassion promote peace of mind among Chinese adults. If the mediating effects are confirmed in future longitudinal and experimental studies, mindfulness and self-compassion interventions can emphasize nonattachment to optimize their effects on peace of mind. It may also be important to tailor mindfulness and selfcompassion training for men and women given the gender differences in the relationships between mindfulness and self-compassion with nonattachment.

Keywords: Meditation, self-compassion, non-attachment, inner peace, mechanism

#### Introduction

Peace of mind (PoM) was defined as a state of inner peace and harmony (Lee et al., 2013). In its definition, inner peace captures low-arousal positive affect such as feelings of peacefulness, calmness, and serenity. Internal harmony, on the other hand, is characterized by a state of balance and harmony (Lee et al., 2013). PoM is an important affective well-being valued by Chinese culture (Lee et al., 2013). All three schools of ancient teaching (i.e., Confucianism, Taoism, and Buddhism) that have shaped Chinese culture place a great emphasis on pursuing inner peace and harmony (Lee et al., 2013). Specifically, Confucianism encourages individuals to maintain a state of inner peace that is free of intense positive or negative emotions by controlling their desires (Kaynak et al., 2013; Lee et al., 2013). Taoism values inner peace and contentment, which is achieved by following the principles of Tao, including non-action (allowing things to unfold without unnecessary interference), accepting the cosmic pattern of change, and embracing both positive and negative experiences without favoring one over another (Joshanloo, 2014; Peng et al., 2006). Buddhism emphasizes identifying the root causes of suffering and working towards freedom from them through spiritual training. The ultimate goal of Buddhism, Nirvana, is a state of being free from craving and characterized by inner peace and equanimity unshaken by life events (Lee et al., 2013; Mitchell, 2002).

The concept of well-being is deeply influenced by cultural norms and values (Christopher, 1999). When comparing Chinese and European American cultures, it becomes apparent that PoM may hold a greater allure within Chinese culture. Rooted in Confucianism, Taoism, and Buddhism, Chinese culture is more centered around the social-oriented view of self, valuing harmony, self-cultivation, self-transcendence, and dialectical balance between happiness and suffering (Lu, 2008). In contrast, in European American culture, there is a stronger emphasis on the independent view of self, wherein personal autonomy, striving, mastery, self-expansion, and pursuit of achievement and rewards are highly valued (Lu, 2008). As a result, the appeal of PoM may be more pronounced within the framework of Chinese culture compared to European American culture. Indeed, previous research found that low-arousal positive affect and harmony were more valued by Chinese and Asian Americans compared with European Americans (Lu & Gilmour, 2004; Tsai et al., 2006). Additionally, Taiwanese students experienced higher PoM compared with European American students (Lee et al., 2013). In contrast, high-arousal positive affect (e.g., excitement and enthusiasm) was more valued and promoted in Western cultures relative to Eastern cultures (Lim, 2016). Given the importance of PoM in Chinese culture, it is essential to explore factors and interventions that can promote PoM.

Mindfulness may increase PoM. Mindfulness is commonly conceptualized as awareness of presentment-moment experiences with curiosity, openness, and non-judgment (Kabat-Zinn, 1990). Mindfulness training (e.g., Mindfulness-Based Stress Reduction, Mindfulness-Based Cognitive Therapy) (Kabat-Zinn, 1982; Segal et al., 2013), which was designed to cultivate mindfulness skills, could improve mental health and well-being (Goldberg et al., 2018, 2022; Hilton et al., 2017; Khoury et al., 2015; Schmelefske et al., 2022; Xie, Guan, et al., 2022). Dispositional mindfulness, defined as individuals' trait-like tendency to be non-judgmentally aware of moment-by-moment experiences in daily lives (Brown et al., 2007), was also linked to fewer emotional symptoms and greater well-being (Carpenter et al., 2019; Hanley et al., 2015; Xie, Manova, et al., 2022; Zimmaro et al., 2016). Cross-sectional studies indicated that dispositional mindfulness was significantly associated with higher PoM (Ge et al., 2020; Lu et al., 2021; Naz et al., 2021; Xu et al., 2015; Yu et al., 2020). The potential benefit of mindfulness on PoM was also supported by experimental evidence. A 10-minute mindfulness practice increased self-reported calmness in school-aged children (Nadler et al., 2017). Eight-week mindfulness training was found to increase serenity in nurses from pre- to post-intervention with the changes sustained at four-month follow-up (Bazarko et al., 2013). A randomized controlled trial on college students and the general public showed that eight-week mindfulness training led to increases in momentary inner peace compared with a waitlist control group (Liu et al., 2015).

Another key concept closely connected to mindfulness is self-compassion (Neff & Dahm, 2015). Self-compassion is a way of relating to oneself that involves feeling kindness towards oneself, being non-judgmental of and taking a balanced perspective on one's experiences, and recognizing that one's experiences are a part of common human experiences (Neff, 2003a, 2003b). As key components of third-wave psychological interventions (Hayes & Hofmann, 2017), self-compassion and mindfulness share fundamental attributes, such as promoting nonjudgmental awareness and embracing experiences without self-criticism (Neff & Dahm, 2015). Meta-analytic evidence suggested a significant association between self-compassion and affective well-being (moderate- and high-arousal positive affect) with a medium-to-large effect size (r = .39) (Zessin et al., 2015). Self-compassion may also be related to higher PoM, although direct evidence supporting this relationship is lacking. Among 3,480 Spanish participants, Saiz et al. (2021) found that self-compassion significantly predicted higher inner peace and meaning during the COVID-19 pandemic lockdown. However, Saiz et al. only computed the composite score for inner peace and meaning without calculating the score for inner peace separately, thus making it impossible to determine the relationship between self-compassion and inner peace.

Despite the potential for mindfulness and self-compassion to enhance PoM, the mechanisms of the effects were not well understood. Clarifying the underlying mechanisms can help to optimize the effects of self-compassion and mindfulness-based interventions (Kazdin, 2007). Nonattachment may be an important factor in understanding how mindfulness and selfcompassion influence PoM. Nonattachment is the idea of letting go of clinging or attachment to experiences, thoughts, emotions, or external objects and understanding that they are temporary and not a fundamental part of our identity (Sahdra et al., 2010). Nonattachment does not imply aloofness, indifference, or disengagement. Instead, it is characterized by genuine care, engagement, and responsiveness to the present situation, without succumbing to feelings of selfimportance or self-deprecation (Sahdra et al., 2010).

Nonattachment may play a crucial role in promoting PoM. Theoretically, people with high nonattachment can let go of their attachment to certain outcomes or ideas about how things should be and be more open to whatever is happening in life. This can help them be more fully present and engaged in their experience, which may bring a sense of ease and peace. Empirical evidence supported the potential impact of nonattachment on PoM. Nonattachment was found to be associated with higher PoM in college students from Hong Kong (Chio et al., 2018; Yu et al., 2020). In Taiwanese college students, nonattachment significantly predicted higher PoM when controlling for gender and other Chinese indigenous well-being constructs (i.e., relationship harmony and dialectical coping) (Wang et al., 2016).

Nonattachment may be enhanced by mindfulness and self-compassion, both of which involve "letting go" of fixations (Sahdra et al., 2010). Mindful individuals are more aware of their thoughts and emotions as they arise, rather than getting caught up in them or reacting automatically. This may help individuals develop nonattachment by recognizing that their thoughts and emotions are temporary and not a fundamental part of their identity. Indeed, cross-sectional studies supported that dispositional mindfulness was significantly related to nonattachment (Yu et al., 2020). Several intervention studies showed that mindfulness-based

interventions significantly increased nonattachment relative to waitlist control groups, treatment as usual, and Cognitive Behavioral Therapy (Joss et al., 2020; Karing & Beelmann, 2021; Maddock et al., 2019; Van Gordon et al., 2017). Similarly, self-compassionate individuals tend to be kind to themselves during difficult times. They also recognize that their struggles are temporary and a common part of human experiences, rather than a defining part of their identity. This self-kindness and insight may cultivate acceptance of experiences and let go of clinging to them. Empirically, an uncontrolled intervention study showed that eight-week Compassion Cultivation Intervention significantly increased nonattachment in adults (Roca et al., 2021).

Nonattachment may play a mediating role in the relationships between mindfulness and self-compassion with PoM. Theoretically, nonattachment was proposed as a mechanism explaining the benefits of mindfulness (Brown et al., 2007; Hölzel et al., 2011). Specifically, mindfulness, with its emphasis on accepting the present moment without judgment, contrasts with attachment and control. By cultivating nonattachment through mindfulness, individuals can experience greater equanimity and stable well-being that is not dependent on external conditions (Brown et al., 2007; Hölzel et al., 2011). Empirically, a meta-analysis of 41 cross-sectional studies showed that nonattachment mediated the relationships between mindfulness, well-being, and psychological distress (Ho et al., 2022). Intervention studies also supported the mediating role of nonattachment in the effect of meditation training. For example, improvement in nonattachment was found to mediate the impact of a one-month intensive meditation retreat on negative affect and life satisfaction (Montero-Marin et al., 2016). The effect of an eight-week meditation awareness training on psychological distress, sleep quality, pain perception, and fibromyalgia syndrome symptomatology was mediated by increases in nonattachment (Van Gordon et al., 2017). In another study, changes in nonattachment predicted improvement in

psychological symptoms and interpersonal distress after eight-week mindfulness training (Joss et al., 2020). Given the significant relationships observed among mindfulness, self-compassion, nonattachment, and PoM in previous studies, as well as the theoretical views and empirical evidence supporting nonattachment as a mediating mechanism, it is plausible to propose that nonattachment may serve as a mediator in the relationships between mindfulness, self-compassion, and PoM.

Previous studies on mindfulness, self-compassion, nonattachment, and PoM have several limitations. First, there was converging evidence supporting that dispositional mindfulness and mindfulness training were related to improved PoM. However, little research has investigated the relationship between self-compassion and PoM (Saiz et al., 2021). Research in this area could help to determine whether self-compassion is also a factor that promotes PoM. Second, both empirical evidence and theoretical views supported that nonattachment might be a mechanism underlying the effect of mindfulness and self-compassion on PoM. However, no peer-reviewed studies examined the mediating role of nonattachment in the relationships between dispositional mindfulness and self-compassion with PoM. Investigating the mediating effect of nonattachment is crucial as it can provide valuable insight into how to optimize the effect of mindfulness and self-compassion training on PoM. Third, previous studies showed that there were gender differences in relationships among mindfulness, self-compassion, and mental health and wellbeing outcomes (e.g., depression, stress reactivity, positive affect) (Helminen et al., 2021; Kang et al., 2018; Kingery et al., 2021). However, no studies thus far have examined whether there were any gender differences in associations between mindfulness, self-compassion, nonattachment, and PoM. Exploring the moderating role of gender in the relationships between mindfulness, self-compassion, nonattachment, and PoM may help to understand the differential

impact of these factors on PoM across different genders. This understanding can inform genderinclusive interventions for PoM that address individuals' gender-specific needs.

## **Current Study**

The current cross-sectional study aimed to investigate the mediating role of nonattachment in the relationships between dispositional mindfulness and self-compassion with PoM among Chinese adults. The following hypotheses were examined. Hypothesis H1: dispositional mindfulness and self-compassion would be significantly associated with higher PoM. Hypothesis H2: nonattachment would be significantly and positively associated with PoM. Hypothesis H3: dispositional mindfulness and self-compassion would be significantly associated with higher nonattachment. Hypothesis H4: the associations between dispositional mindfulness and self-compassion with PoM would be significantly mediated by nonattachment. In addition, the current study examined whether gender moderated the associations between dispositional mindfulness, self-compassion, and PoM via nonattachment. Given the limited existing literature on gender differences in the associations among dispositional mindfulness, self-compassion, nonattachment, and PoM, these analyses were exploratory and no *a priori* hypotheses were proposed.

#### Method

#### **Participants and Procedure**

A total of 364 participants were recruited for the study through advertisements on WeChat, a popular social media platform in China. To be eligible for the study, participants had to be at least 18 years of age. After providing informed consent, participants filled out an online survey including measures of sociodemographic characteristics, dispositional mindfulness, selfcompassion, nonattachment, and PoM. The survey was administered using WenJuanXing (www.wjx.cn), a survey platform that has been widely used in previous studies to collect data from Chinese participants (e.g., Gan et al., 2022; Huang et al., 2022; Li et al., 2021; Liu & Zheng, 2020). To reduce evaluation apprehension and potential common method bias (Jakobsen & Jensen, 2015; Podsakoff et al., 2003), procedural remedies were implemented during data collection. Specifically, participants' anonymity was ensured by not requesting identifying information such as name, personal ID, birth date, or phone number from them. Participants were assured that their responses would be used strictly for scientific purposes and kept confidential. Participants were also encouraged to respond truthfully and informed of the importance of truthful responses for obtaining unbiased and accurate scientific findings. Among the eligible participants, 127 (34.89%) self-identified as male, and 237 (65.11%) were female. The average age of participants was 23.89 [standard deviation (SD) = 6.92]. See Table 1 for all sociodemographic information collected in the current study.

[Insert Table 1 here]

## Measures

The Chinese version of the 39-item Five-Facet Mindfulness Questionnaire (FFMQ) (Baer et al., 2006; Deng et al., 2011) was used to measure dispositional mindfulness. FFMQ measures five facets of mindfulness: Acting with Awareness (e.g., *I rush through activities without being really attentive to them*, reverse scoring), Non-Judging (e.g., *I believe some of my thoughts are abnormal or bad and I shouldn't think that way*, reverse scoring), Non-Reactivity (e.g., *I watch my feelings without getting lost in them*), Observing (e.g., *When I'm walking, I deliberately notice the sensations of my body moving*), and Describing (e.g., *I'm good at finding words to describe my feelings*). Participants rate the extent to which each item fits with their experiences on a five-point Likert scale (1 = Never or very rarely true, 5 = Very often or always true). The total score of the items indicates participants' level of dispositional mindfulness, with a higher total score corresponding to higher dispositional mindfulness. FFMQ exhibited sound construct validity, as evidenced by its five-factor structure, significant correlations with measures of theoretically relevant constructs such as self-compassion, and differences in scores between meditators and non-meditators (Baer et al., 2006, 2008; Deng et al., 2011). In the current study, the total score of FFMQ was calculated to denote the level of dispositional mindfulness. The internal consistency of FFMQ in the current study was .84.

The Chinese version of the 26-item Self-Compassion Scale (SCS) was used to measure self-compassion (Chen et al., 2011; Neff, 2003b). Participants rate the frequency with which they experience or do not experience self-compassion on a scale from 1 (Almost never) to 5 (Almost *always*). SCS measures three compassionate and three uncompassionate components. The compassionate components include Self-Kindness (e.g., I try to be loving towards myself when I'm feeling emotional pain), Mindfulness (e.g., When something upsets me I try to keep my emotions in balance), and Common Humanity (e.g., When things are going badly for me, I see the difficulties as part of life that everyone goes through). The uncompassionate components include Self-Judgment (e.g., I'm disapproving and judgmental about my own flaws and inadequacies), Over-Identification (e.g., When I'm feeling down I tend to obsess and fixate on everything that's wrong), and Isolation (e.g., When I fail at something that's important to me, I tend to feel alone in my failure) (Neff, 2003b). Among these components, Self-Judgment, Over-Identification, and Isolation are the negative counterparts of Self-Kindness, Mindfulness, and Common Humanity, respectively. The overall self-compassion score is obtained by reversing the scores of the items for the negative components, computing the average score for each of the six components, and then averaging these average scores. Empirical evidence provided support for

the scale's six-factor structure and its significant relationship with measures of theoretically relevant constructs such as self-criticism (Chen et al., 2011; Neff, 2003b), indicating strong construct validity of SCS. Narcissism displayed no significant relationship with SCS, while showing significant associations with other measures of self-attitude, such as self-esteem. This finding suggested sound discriminant validity of SCS (Neff, 2003b). In the current study, the overall self-compassion score was calculated to denote the level of self-compassion. The internal consistency of SCS in the current study was .89.

The Chinese version of the 30-item Nonattachment Scale (NAS) was administered to assess nonattachment (Chao & Chen, 2013; Sahdra et al., 2010). Participants rate the extent to which each item reflects their experiences from 1 (*Disagree strongly*) to 6 (*Agree strongly*). Sample items of NAS include *I can enjoy pleasant experiences without needing them to last forever* and *If things aren't turning out the way I want, I get upset* (reverse scoring). The average score of the items indicates the level of nonattachment, with a higher average score corresponding to higher nonattachment. Construct validity of NAS was demonstrated by its single-factor structure and significant associations between NAS and similar constructs (e.g., noncontingent happiness) (Chao & Chen, 2013; Sahdra et al., 2010). In support of discriminant validity, NAS showed non-significant associations with theoretically unrelated constructs, such as controlled motivation (Sahdra et al., 2010). In the current study, the internal consistency of NAS was .94.

The 7-item Peace of Mind Scale (PoMS) was used to measure PoM (Lee et al., 2013). Participants rate how often they experience or do not experience PoM on a five-point Likert scale ( $1 = Not \ at \ all, 5 = All \ of \ the \ time$ ). Sample items of PoMS include *I have peace and harmony in my mind* and *It is difficult for me to feel settled* (reverse scoring). The average score of the items represents the level of PoM, with a higher average score corresponding to higher PoM. Construct validity of PoMS was supported by its single-factor structure and significant associations with other measures of affective well-being (Lee et al., 2013). Additionally, lowarousal positive affect exhibited a stronger correlation with PoMS compared to other measures of subjective well-being, such as satisfaction with life. This result supported strong discriminant validity of PoMS (Lee et al., 2013). In the current study, the internal consistency of PoMS was .87.

## **Data Analyses**

All data analyses were run in IBM SPSS 24.0 software. Harman's single-factor test on all items of the measures was conducted to check for the presence of common method bias (Podsakoff et al., 2003). The test showed that the variance explained by a single-factor model was 24.16%, which was below the critical threshold of 50%. This result indicated that there was no significant common method bias in this study. An examination of the skewness and kurtosis for dispositional mindfulness, self-compassion, nonattachment, and PoM revealed that the absolute values of skewness ranged from 0.16 to 0.66, and kurtosis ranged from 0.02 to 0.80. The skewness and kurtosis of the variables fell within the acceptable range (Curran et al., 1996), suggesting that the data followed a normal distribution.

Zero-order correlation analyses were conducted to examine the correlations among dispositional mindfulness, self-compassion, nonattachment, and PoM. Next, mediation analyses were conducted using PROCESS macro Version 4.0 (Hayes, 2022) to test the mediating effect of nonattachment in the associations between dispositional mindfulness and self-compassion with PoM. Model 4 in PROCESS was selected for simple mediation analyses. Lastly, Model 59 in PROCESS was used to test the moderating effect of gender (dummy coded as male = 1, female =

2) in the direct and indirect relationships between dispositional mindfulness and self-compassion with PoM. The number of bootstrap samples was set at 5,000. A 95% confidence interval (CI) was used. CIs not including zero suggested significant effects.

## Results

## **Correlation Analyses**

Zero-order correlation analyses showed that both dispositional mindfulness (r = .67, p< .001) and self-compassion (r = .71, p < .001) were significantly and positively associated with PoM. Nonattachment was also significantly and positively correlated with PoM (r = .72, p< .001). Dispositional mindfulness (r = .61, p < .001) and self-compassion (r = .68, p < .001) had significant and positive relationships with nonattachment. See Table 2 for descriptive statistics and correlations among dispositional mindfulness, self-compassion, nonattachment, and PoM.

## [Insert Table 2 here]

#### **Mediation Analyses**

Unstandardized path coefficients and indirect effects of the mediation models were reported here. When dispositional mindfulness was the independent variable in the mediation model, it was found that dispositional mindfulness significantly predicted higher nonattachment (a = 0.029, p < .001). Nonattachment significantly and positively predicted PoM (b = 0.49, p< .001). Furthermore, nonattachment significantly mediated the relationship between dispositional mindfulness and PoM (ab = 0.014, 95% CI [0.011, 0.018]). The direct effect of dispositional mindfulness on PoM when controlling for nonattachment was significant (c' =0.018, p < .001).

When self-compassion served as the independent variable in the mediation model, selfcompassion was found to significantly predict higher nonattachment (a = 0.94, p < .001). Additionally, nonattachment significantly predicted higher PoM (b = 0.43, p < .001). The relationship between self-compassion and PoM was significantly mediated by nonattachment (ab = 0.40, 95% CI [0.31, 0.50]). The direct effect of self-compassion on PoM when controlling for nonattachment was significant (c' = 0.56, p < .001).

The standardized path coefficients and completely standardized indirect effects of the mediation models were reported in Table 3. The mediating effect of nonattachment in the associations between dispositional mindfulness and self-compassion with PoM was demonstrated in Figures 1 and 2.

[Insert Table 3 here] [Insert Figure 1 here] [Insert Figure 2 here]

## **Moderated Mediation Analyses**

Standardized coefficients were not available for models with moderators in the output of SPSS PROCESS macro. Unstandardized path coefficients and indirect effects were reported here. As shown in Table 4, gender positively and significantly interacted with dispositional mindfulness on nonattachment (B = 0.010, p = .017). Simple slope tests indicated that the effect of dispositional mindfulness on nonattachment was larger for females ( $B_{female} = 0.032$ , p < .001) than for males ( $B_{male} = 0.022$ , p < .001). The interaction between gender and nonattachment did not significantly predict PoM (B = 0.037, p = .669). The interaction between gender and dispositional mindfulness did not predict PoM (B = -0.0020, p = .633). Thus, gender only moderated the relationship between dispositional mindfulness and nonattachment. The bias-corrected bootstrap analyses indicated that the indirect effect of dispositional mindfulness on PoM via nonattachment was not significantly moderated by gender. For males, the indirect effect

(Effect1) of dispositional mindfulness on PoM via nonattachment was 0.010, Boot 95% CI = [0.0061, 0.015]. For females, the indirect effect (Effect2) of nonattachment was 0.016, Boot 95% CI = [0.012, 0.020]. The pairwise contrasts between conditional indirect effects (Effect2 minus Effect1) were non-significant: contrasts effect = 0.0061, Boot 95% CI = [-0.00020, 0.012].

As shown in Table 5, the effect of the interaction between gender and self-compassion on nonattachment was significant (B = 0.34, p = .005). Simple slope tests indicated that the effect of self-compassion on nonattachment was larger for females ( $B_{female} = 1.04$ , p < .001) than for males ( $B_{male} = 0.71$ , p < .001). The interaction between gender and nonattachment did not significantly predict PoM (B = 0.019, p = .839). The interaction between gender and self-compassion did not predict PoM (B = -0.14, p = .295). Thus, gender only moderated the relationship between self-compassion and nonattachment. The bias-corrected bootstrap analyses indicated that the indirect effect of self-compassion on PoM via nonattachment was not significantly moderated by gender. For males, the indirect effect (Effect1) of self-compassion on PoM via nonattachment was 0.30, Boot 95% CI = [0.19, 0.43]. For females, the indirect effect (Effect2) of nonattachment was 0.46, Boot 95% CI = [0.32, 0.59]. The pairwise contrasts between conditional indirect effects (Effect2 minus Effect1) were non-significant: contrasts effect = 0.16, Boot 95% CI = [-0.032, 0.34].

[Insert Table 4 here]

[Insert Table 5 here]

#### Discussion

The current study investigated whether nonattachment mediated the associations between dispositional mindfulness and self-compassion with PoM in Chinese adults. It was found that both dispositional mindfulness and self-compassion were significantly and positively associated with PoM, which supported hypothesis H1. This finding is in line with previous research indicating a significant relationship between dispositional mindfulness and mindfulness training with improved PoM (Bazarko et al., 2013; Ge et al., 2020; Liu et al., 2015; Lu et al., 2021; Nadler et al., 2017; Naz et al., 2021; Xu et al., 2015; Yu et al., 2020). This finding is also consistent with a previous meta-analysis suggesting a significant relationship between self-compassion and affective well-being (Zessin et al., 2015). However, studies included in Zessin et al. (2015)'s meta-analysis only investigated moderate- and high-arousal positive affect. The relationship between self-compassion and PoM was rarely examined in previous studies (Saiz et al., 2021), Hence, the current study goes beyond previous studies by demonstrating that self-compassion may potentially improve PoM which is characterized by low-arousal positive affect and harmony.

As predicted by hypothesis H2, the current study revealed that nonattachment was significantly related to higher PoM. Nonattachment may theoretically promote inner peace as it allows individuals to recognize that their experiences, thoughts, emotions, and external objects are not a fundamental part of their identity and be more open to whatever is happening in life (Ho et al., 2022). The finding of this study provides support for this view. It also aligns with previous research on the relationship between nonattachment and PoM (Chio et al., 2018; Wang et al., 2016; Yu et al., 2020).

Supporting hypothesis H3, the results showed that both dispositional mindfulness and self-compassion were significantly related to higher nonattachment. Mindfulness allows individuals to observe moment-by-moment experiences from a detached perspective (Bernstein et al., 2019), which may help them recognize that the experiences are temporary and not defining, thus leading to increased nonattachment. Individuals with high self-compassion are more inclined to approach themselves with kindness, view experiences from a balanced

perspective, and recognize that suffering and difficulties are a normal part of human experiences (Neff, 2003a). These may make individuals less likely to identify with or get caught up in their experiences, thus helping in cultivating nonattachment. The finding is consistent with this theoretical view. It also supports previous studies which showed that mindfulness and compassion-based interventions could promote nonattachment (Joss et al., 2020; Karing & Beelmann, 2021; Maddock et al., 2019; Roca et al., 2021; Van Gordon et al., 2017).

More importantly, the current study suggested that the relationships dispositional mindfulness and self-compassion had with PoM were significantly mediated by nonattachment, which supports hypothesis H4. This finding is in line with previous cross-sectional and intervention studies which suggested that nonattachment significantly mediated the association between meditation and improved well-being and psychological distress (Ho et al., 2022; Joss et al., 2020; Montero-Marin et al., 2016; Van Gordon et al., 2017). It also goes beyond previous studies by demonstrating that nonattachment may be a potential mechanism underlying the effect of mindfulness and self-compassion on PoM, a type of affective well-being valued in Chinese culture.

Moderated mediation analyses revealed that the associations between mindfulness and self-compassion with nonattachment were stronger for women than for men. This finding suggests that women may exhibit a stronger increase in nonattachment as a result of engaging in mindfulness and self-compassion compared to men. Previous studies also found that the associations between mindfulness and self-compassion with mental health outcomes (e.g., stress reactivity, rumination) were stronger for women than for men (e.g., Helminen et al., 2021; Hodgetts et al., 2021). Women were also more responsive to mindfulness and self-compassion training (Bluth & Eisenlohr-Moul, 2017; Rojiani et al., 2017). Traditional gender roles often encourage women to be more in tune with their internal experiences than men (Garside & Klimes-Dougan, 2002). This quality aligns closely with the principles and practices of mindfulness and self-compassion, which emphasize self-awareness and nonjudgmental acceptance of one's thoughts, emotions, and experiences. Additionally, women may be more prone to self-criticism and lower self-esteem due to internalized societal standards or stereotypes (Gentile et al., 2009; Kupeli et al., 2013; Tang & Tang, 2001). Mindfulness and self-compassion may help women develop self-acceptance and cultivate a positive self-image, offering valuable tools to navigate and counteract these challenging societal influences. These factors may potentially result in a greater receptiveness to and benefit from mindfulness and self-compassion for women. Furthermore, the current study showed that gender did not moderate the direct effects of mindfulness and self-compassion on PoM, the relationship between nonattachment and PoM, and the mediating effects of mindfulness and self-compassion on PoM through nonattachment. These findings suggest that gender may have varying influences on different aspects of the relationships among mindfulness, self-compassion, nonattachment, and PoM.

## **Theoretical and Practical Implications**

According to Buddhist teachings, human suffering stems from the desire for things to be different (e.g., craving and aversion) (Ekman et al., 2005; Wallace, 2005). Mindfulness can assist in cultivating equanimity and nonattachment, thereby leading to freedom from suffering and promoting happiness that is not contingent on circumstances (e.g., external conditions) (Thera, 1994). Based on Buddhist philosophy, Brown et al. (2007) posited that nonattachment was a key mechanism underlying the benefits of mindfulness. At the theoretical level, the mediating effect of nonattachment found in the current study provides support for the Buddhist teachings and theoretical view on the importance of nonattachment.

At the practical level, the current study may have implications for optimizing the effect of mindfulness and self-compassion training on PoM. If the results are confirmed in future longitudinal and experimental (intervention) studies, intervention developers may emphasize nonattachment in the interventions to promote PoM among Chinese people. For example, interventions may incorporate psychoeducation on the negative impact of excessive attachment on PoM. Additionally, interventions may emphasize the scientific basis of the connection between meditation practices and the cultivation of nonattachment, highlighting how mindfulness and self-compassion can facilitate a greater sense of equanimity and freedom from attachment. Intervention developers may also consider including Buddhist teachings on dependent origination and impermanence to cultivate nonattachment. In Buddhism, dependent origination is the understanding that all things arise in dependence upon other things and that this interdependence is the fundamental nature of reality (Cummiskey & Hamilton, 2017). Impermanence refers to the understanding that all phenomena are subject to change and that nothing is permanent (Gokhale, 2021). Together, teachings on dependent origination and impermanence promote an understanding that attachment to things that are interdependent and constantly changing leads to suffering. It is important to note that incorporating these teachings into mindfulness and self-compassion training should be done with caution, as not all individuals are open to receiving religious or spiritual teachings in the interventions. Future studies may involve community members in the design and implementation of interventions emphasizing nonattachment to ensure that the interventions are appropriate and relevant to people's needs.

Given the gender differences observed in the relationships between mindfulness and selfcompassion with nonattachment, it may be crucial to tailor mindfulness and self-compassion training for men and women. For instance, interventions could incorporate discussions regarding the influence of gender roles on participants' mindfulness and self-compassion practices, as well as their attitudes toward nonattachment. By addressing these gender-specific considerations, interventions can foster a more inclusive and effective approach to cultivating nonattachment in different genders.

#### **Limitations and Future Research Directions**

The results of the present study should be interpreted in light of its limitations. First, the current study employed a cross-sectional design in which all variables were measured at the same time point. It could not determine the temporal relationship among dispositional mindfulness and self-compassion, nonattachment, and PoM, which is essential for inferring causality (Kazdin, 2007). Nonetheless, both theoretical underpinnings (Brown et al., 2007; Hölzel et al., 2011) and empirical evidence (Ho et al., 2022; Montero-Marin et al., 2016; Van Gordon et al., 2017) supported that nonattachment could be a potential mechanism of meditation. Therefore, although the current study could not provide definitive evidence, nonattachment being the mediator in the associations between dispositional mindfulness and self-compassion with PoM seems plausible. Future experimental and longitudinal studies should be conducted to examine whether nonattachment is a *causal* mechanism underlying the effect of mindfulness and self-compassion on PoM.

Second, the variables were measured by retrospective assessment, which can be prone to response biases (e.g., recall bias) (Raphael, 1987). To overcome this limitation, future studies can consider measuring mindfulness, self-compassion, nonattachment, and PoM through ecological momentary assessment in people's daily lives (Liu et al., 2015; Mey et al., 2023; Neff et al., 2021; Tanay & Bernstein, 2013), which may provide more reliable results with greater ecological validity (Enkema et al., 2020).

Third, the current study did not measure other variables that may potentially explain the links between dispositional mindfulness and self-compassion with PoM. Therefore, it could not rule out the confounding effect of other potential mediators (e.g., emotion regulation) (Gratz & Tull, 2010; Inwood & Ferrari, 2018). Future research can include multiple potential mediators and investigate the unique contribution of nonattachment in the mediation models.

Fourth, the majority of participants were young and highly educated, although the current study did not restrict the sample to young adults with high education. This means that the results may not apply to other populations, such as older adults or those with lower levels of education. Future research should aim to replicate the findings in other populations in China.

Fifth, Harman's single-factor test is insufficient in examining common method bias (Jakobsen & Jensen, 2015). Hence, despite the non-significant common method bias indicated by Harman's single-factor test and the implementation of procedural remedies during data collection, common method bias remains a potential concern that should not be overlooked. To better mitigate the impact of common method bias, future studies may measure sources of common method bias (e.g., social desirability) in the surveys and control for them in statistical analyses (Jakobsen & Jensen, 2015).

#### Conclusion

The current cross-sectional study on Chinese adults suggests that nonattachment mediates the relationships dispositional mindfulness and self-compassion have with PoM, a type of affective well-being valued in Chinese culture. Furthermore, the associations between dispositional mindfulness and self-compassion with nonattachment are stronger for women than for men. The findings may have implications for maximizing the effect of mindfulness and selfcompassion training on PoM. Future longitudinal and experimental (intervention) research needs to confirm whether nonattachment accounts for the effect of mindfulness and self-compassion on PoM.

# **Declaration of Conflicting Interests**

The author declares that there is no conflict of interest.

#### References

- 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. https://doi.org/10.1177/1073191105283504
- Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. M. G. (2008). Construct Validity of the Five Facet Mindfulness
  Questionnaire in Meditating and Nonmeditating Samples. *Assessment*, 15(3), 329–342.
  https://doi.org/10.1177/1073191107313003
- Bazarko, D., Cate, R. A., Azocar, F., & Kreitzer, M. J. (2013). The Impact of an Innovative Mindfulness-Based Stress Reduction Program on the Health and Well-Being of Nurses Employed in a Corporate Setting. *Journal of Workplace Behavioral Health*, 28(2), 107– 133. https://doi.org/10.1080/15555240.2013.779518
- Bernstein, A., Hadash, Y., & Fresco, D. M. (2019). Metacognitive processes model of decentering: Emerging methods and insights. *Current Opinion in Psychology*, 28, 245– 251. https://doi.org/10.1016/j.copsyc.2019.01.019
- Bluth, K., & Eisenlohr-Moul, T. A. (2017). Response to a mindful self-compassion intervention in teens: A within-person association of mindfulness, self-compassion, and emotional well-being outcomes. *Journal of Adolescence*, 57, 108–118. https://doi.org/10.1016/j.adolescence.2017.04.001
- Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical Foundations and Evidence for its Salutary Effects. *Psychological Inquiry*, 18(4), 211–237. https://doi.org/10.1080/10478400701598298

- Carpenter, J. K., Conroy, K., Gomez, A. F., Curren, L. C., & Hofmann, S. G. (2019). The relationship between trait mindfulness and affective symptoms: A meta-analysis of the Five Facet Mindfulness Questionnaire (FFMQ). *Clinical Psychology Review*, 74, 101785. https://doi.org/10.1016/j.cpr.2019.101785
- Chao, S.-H., & Chen, P.-H. (2013). The reliability and validity of the Chinese version of the Nonattachment Scale: Reliability, validity, and its relationship with mental health. *Bulletin of Educational Psychology*, 45, 121–139.
- Chen, J., Yan, L., & Zhou, L. (2011). Reliability and validity of Chinese version of Selfcompassion Scale. *Chinese Journal of Clinical Psychology*, 19, 734–736.
- Chio, F. H. N., Lai, M. H. C., & Mak, W. W. S. (2018). Development of the Nonattachment Scale-Short Form (NAS-SF) Using Item Response Theory. *Mindfulness*, 9(4), 1299– 1308. https://doi.org/10.1007/s12671-017-0874-z
- Christopher, J. C. (1999). Situating psychological well-being: Exploring the cultural roots of its theory and research. *Journal of Counseling & Development*, 77, 141–152. https://doi.org/10.1002/j.1556-6676.1999.tb02434.x
- Cummiskey, D., & Hamilton, A. (2017). Dependent Origination, Emptiness, and the Value of Nature. *Journal of Buddhist Ethics*, 24, 1–37. http://blogs.dickinson.edu/buddhistethics/
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16– 29. https://doi.org/10.1037/1082-989X.1.1.16
- Deng, Y.-Q., Liu, X.-H., Rodriguez, M. A., & Xia, C.-Y. (2011). The Five Facet Mindfulness Questionnaire: Psychometric Properties of the Chinese Version. *Mindfulness*, 2(2), 123– 128. https://doi.org/10.1007/s12671-011-0050-9

- Ekman, P., Davidson, R. J., Ricard, M., & Alan Wallace, B. (2005). Buddhist and Psychological Perspectives on Emotions and Well-Being. *Current Directions in Psychological Science*, 14(2), 59–63. https://doi.org/10.1111/j.0963-7214.2005.00335.x
- Enkema, M. C., McClain, L., Bird, E. R., Halvorson, M. A., & Larimer, M. E. (2020).
  Associations Between Mindfulness and Mental Health Outcomes: A Systematic Review of Ecological Momentary Assessment Research. *Mindfulness*, *11*(11), 2455–2469. https://doi.org/10.1007/s12671-020-01442-2
- Gan, Y., Ma, J., Wu, J., Chen, Y., Zhu, H., & Hall, B. J. (2022). Immediate and delayed psychological effects of province-wide lockdown and personal quarantine during the COVID-19 outbreak in China. *Psychological Medicine*, *52*(7), 1321–1332. https://doi.org/10.1017/S0033291720003116
- Garside, R. B., & Klimes-Dougan, B. (2002). Socialization of Discrete Negative Emotions:
  Gender Differences and Links with Psychological Distress. *Sex Roles*, 47(3), 115–128.
  https://doi.org/10.1023/A:1021090904785
- Ge, J., Yang, J., Song, J., Jiang, G., & Zheng, Y. (2020). Dispositional Mindfulness and Past-Negative Time Perspective: The Differential Mediation Effects of Resilience and Inner Peace in Meditators and Non-Meditators. *Psychology Research and Behavior Management*, 13, 397–405. https://doi.org/10.2147/PRBM.S229705
- Gentile, B., Grabe, S., Dolan-Pascoe, B., Twenge, J. M., Wells, B. E., & Maitino, A. (2009).
   Gender Differences in Domain-Specific Self-Esteem: A Meta-Analysis. *Review of General Psychology*, 13(1), 34–45. https://doi.org/10.1037/a0013689
- Gokhale, P. P. (2021). Buddhist Approaches to Impermanence: Phenomenal and Naumenal. *Religions*, *12*(12), 1081. https://doi.org/10.3390/rel12121081

- Goldberg, S. B., Riordan, K. M., Sun, S., & Davidson, R. J. (2022). The empirical status of mindfulness-based interventions: A systematic review of 44 meta-analyses of randomized controlled trials. *Perspectives on Psychological Science*, 17(1), 108–130. https://doi.org/10.1177/1745691620968771
- Goldberg, S. B., Tucker, R. P., Greene, P. A., Davidson, R. J., Wampold, B. E., Kearney, D. J.,
  & Simpson, T. L. (2018). Mindfulness-based interventions for psychiatric disorders: A systematic review and meta-analysis. *Clinical Psychology Review*, 59, 52–60. https://doi.org/10.1016/j.cpr.2017.10.011
- Gratz, K. L., & Tull, M. T. (2010). Emotion regulation as a mechanism of change in acceptanceand mindfulness-based treatments. In Assessing mindfulness and acceptance processes in clients: Illuminating the theory and practice of change (pp. 107–133). Context Press/New Harbinger Publications.
- Hanley, A., Warner, A., & Garland, E. L. (2015). Associations Between Mindfulness,
  Psychological Well-Being, and Subjective Well-Being with Respect to Contemplative
  Practice. *Journal of Happiness Studies*, *16*(6), 1423–1436.
  https://doi.org/10.1007/s10902-014-9569-5
- Hayes, A. F. (2022). Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach (3rd ed.). The Guilford Press. https://www.guilford.com/books/Introduction-to-Mediation-Moderation-and-Conditional-Process-Analysis/Andrew-Hayes/9781462549030
- Hayes, S. C., & Hofmann, S. G. (2017). The third wave of cognitive behavioral therapy and the rise of process-based care. World Psychiatry, 16(3), 245–246. https://doi.org/10.1002/wps.20442

- Helminen, E. C., Scheer, J. R., & Felver, J. C. (2021). Gender Differences in the Associations Between Mindfulness, Self-Compassion, and Perceived Stress Reactivity. *Mindfulness*, *12*(9), 2173–2183. https://doi.org/10.1007/s12671-021-01672-y
- Hilton, L., Hempel, S., Ewing, B. A., Apaydin, E., Xenakis, L., Newberry, S., Colaiaco, B.,
  Maher, A. R., Shanman, R. M., Sorbero, M. E., & Maglione, M. A. (2017). Mindfulness
  Meditation for Chronic Pain: Systematic Review and Meta-analysis. *Annals of Behavioral Medicine*, *51*(2), 199–213. https://doi.org/10.1007/s12160-016-9844-2
- Ho, C. Y. Y., Yu, B. C. L., & Mak, W. W. S. (2022). Nonattachment mediates the associations between mindfulness, well-being, and psychological distress: A meta-analytic structural equation modeling approach. *Clinical Psychology Review*, 95, 102175. https://doi.org/10.1016/j.cpr.2022.102175
- Hodgetts, J., McLaren, S., Bice, B., & Trezise, A. (2021). The relationships between self-compassion, rumination, and depressive symptoms among older adults: The moderating role of gender. *Aging & Mental Health*, 25(12), 2337–2346. https://doi.org/10.1080/13607863.2020.1824207
- Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How Does Mindfulness Meditation Work? Proposing Mechanisms of Action From a Conceptual and Neural Perspective. *Perspectives on Psychological Science*, 6(6), 537–559. https://doi.org/10.1177/1745691611419671
- Huang, L., Chen, Z., Jiang, W., Qu, D., Wang, Y., Fang, X., Han, H., Huang, C., Li, Z., & Chi,
  X. (2022). Validation of the Chinese Version of Self-Compassion Scale for Youth (SCSY). *Mindfulness*, *13*(12), 3166–3178. https://doi.org/10.1007/s12671-022-02024-0

Inwood, E., & Ferrari, M. (2018). Mechanisms of Change in the Relationship between Self-Compassion, Emotion Regulation, and Mental Health: A Systematic Review. *Applied Psychology: Health and Well-Being*, 10(2), 215–235. https://doi.org/10.1111/aphw.12127

Jakobsen, M., & Jensen, R. (2015). Common Method Bias in Public Management Studies. International Public Management Journal, 18(1), 3–30. https://doi.org/10.1080/10967494.2014.997906

- Joshanloo, M. (2014). Eastern Conceptualizations of Happiness: Fundamental Differences with Western Views. *Journal of Happiness Studies*, *15*(2), 475–493. https://doi.org/10.1007/s10902-013-9431-1
- Joss, D., Lazar, S. W., & Teicher, M. H. (2020). Nonattachment Predicts Empathy, Rejection Sensitivity, and Symptom Reduction After a Mindfulness-Based Intervention Among Young Adults with a History of Childhood Maltreatment. *Mindfulness*, 11(4), 975–990. https://doi.org/10.1007/s12671-020-01322-9
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry*, 4(1), 33–47.
  https://doi.org/10.1016/0163-8343(82)90026-3
- Kabat-Zinn, J. (1990). Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness. Delacorte Press.
- Kang, Y., Rahrig, H., Eichel, K., Niles, H. F., Rocha, T., Lepp, N. E., Gold, J., & Britton, W. B. (2018). Gender differences in response to a school-based mindfulness training intervention for early adolescents. *Journal of School Psychology*, 68, 163–176. https://doi.org/10.1016/j.jsp.2018.03.004

- Karing, C., & Beelmann, A. (2021). Evaluating the Implementation and Effectiveness of a Low Dose Mindfulness-Based Intervention in a Student Sample: A Randomized Controlled
   Trial. *Mindfulness*, *12*(6), 1438–1450. https://doi.org/10.1007/s12671-021-01613-9
- Kaynak, E., Wong, Y. H., & Leung, T. (2013). Guanxi: Relationship Marketing in a Chinese Context. Routledge. https://doi.org/10.4324/9780203863183
- Kazdin, A. E. (2007). Mediators and Mechanisms of Change in Psychotherapy Research. Annual Review of Clinical Psychology, 3(1), 1–27.
   https://doi.org/10.1146/annurev.clinpsy.3.022806.091432
- Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *Journal of Psychosomatic Research*, 78(6), 519–528. https://doi.org/10.1016/j.jpsychores.2015.03.009
- Kingery, J. N., Bodenlos, J. S., Schneider, T. I., Peltz, J. S., & Sindoni, M. W. (2021).
  Dispositional mindfulness predicting psychological adjustment among college students: The role of rumination and gender. *Journal of American College Health*, 0(0), 1–12. https://doi.org/10.1080/07448481.2021.1943411
- Kupeli, N., Chilcot, J., Schmidt, U. H., Campbell, I. C., & Troop, N. A. (2013). A confirmatory factor analysis and validation of the forms of self-criticism/reassurance scale. *British Journal of Clinical Psychology*, 52(1), 12–25. https://doi.org/10.1111/j.2044-8260.2012.02042.x
- Lee, Y.-C., Lin, Y.-C., Huang, C.-L., & Fredrickson, B. L. (2013). The Construct and Measurement of Peace of Mind. *Journal of Happiness Studies*, 14(2), 571–590. https://doi.org/10.1007/s10902-012-9343-5

- Li, Z., Liu, Y., Peng, K., Hicks, J. A., & Gou, X. (2021). Developing a Quadripartite Existential Meaning Scale and Exploring the Internal Structure of Meaning in Life. *Journal of Happiness Studies*, 22(2), 887–905. https://doi.org/10.1007/s10902-020-00256-2
- Lim, N. (2016). Cultural differences in emotion: Differences in emotional arousal level between the East and the West. *Integrative Medicine Research*, 5(2), 105–109. https://doi.org/10.1016/j.imr.2016.03.004
- Liu, X., Xu, W., Wang, Y., Williams, J. M. G., Geng, Y., Zhang, Q., & Liu, X. (2015). Can Inner Peace be Improved by Mindfulness Training: A Randomized Controlled Trial. *Stress and Health*, 31(3), 245–254. https://doi.org/10.1002/smi.2551
- Liu, Y., & Zheng, L. (2020). Relationships between the Big Five, narcissistic personality traits, and online sexual activities. *Personality and Individual Differences*, 152, 109593. https://doi.org/10.1016/j.paid.2019.109593
- Lu, J., Potts, C. A., & Allen, R. S. (2021). Homeless people's trait mindfulness and their resilience – a mediation test on the role of inner peace and hope. *Journal of Social Distress and Homelessness*, 30(2), 155–163. https://doi.org/10.1080/10530789.2020.1774847
- Lu, L. (2008). Culture, self, subjective well-being: Cultural psychological and social change perspectives. *Psychologia: An International Journal of Psychology in the Orient*, 51, 290–303. https://doi.org/10.2117/psysoc.2008.290
- Lu, L., & Gilmour, R. (2004). Culture, Self and Ways to Achieve SWB: A Cross-Cultural Analysis. *Journal of Psychology in Chinese Societies*, *5*, 51–79.

- Maddock, A., Hevey, D., D'Alton, P., & Kirby, B. (2019). A Randomized Trial of Mindfulness-Based Cognitive Therapy with Psoriasis Patients. *Mindfulness*, 10(12), 2606–2619. https://doi.org/10.1007/s12671-019-01242-3
- Mey, L. K., Wenzel, M., Morello, K., Rowland, Z., Kubiak, T., & Tüscher, O. (2023). Be Kind to Yourself: The Implications of Momentary Self-Compassion for Affective Dynamics and Well-Being in Daily Life. *Mindfulness*. https://doi.org/10.1007/s12671-022-02050-y
- Mitchell, D. W. (2002). *Buddhism: Introducing the Buddhist Experience*. Oxford University Press.
- Montero-Marin, J., Puebla-Guedea, M., Herrera-Mercadal, P., Cebolla, A., Soler, J., Demarzo,
  M., Vazquez, C., Rodríguez-Bornaetxea, F., & García-Campayo, J. (2016). Psychological
  Effects of a 1-Month Meditation Retreat on Experienced Meditators: The Role of Nonattachment. *Frontiers in Psychology*, *7*, 1935. https://doi.org/10.3389/fpsyg.2016.01935
- Nadler, R., Cordy, M., Stengel, J., Segal, Z. V., & Hayden, E. P. (2017). A Brief Mindfulness Practice Increases Self-Reported Calmness in Young Children: A Pilot Study. *Mindfulness*, 8(4), 1088–1095. https://doi.org/10.1007/s12671-017-0685-2
- Naz, M. A., Shazia, A., & Khalid, A. (2021). Role of Mindfulness, Religious Coping and Serenity in Institutionalized and Non-Institutionalized Elderly. *Journal of Spirituality in Mental Health*, 23(3), 278–294. https://doi.org/10.1080/19349637.2020.1789536
- Neff, K. D. (2003a). Self-Compassion: An Alternative Conceptualization of a Healthy Attitude Toward Oneself. *Self and Identity*, *2*, 85–101. https://doi.org/10.1080/15298860309032
- Neff, K. D. (2003b). The Development and Validation of a Scale to Measure Self-Compassion. *Self and Identity*, 2(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D., & Dahm, K. A. (2015). Self-Compassion: What It Is, What It Does, and How It Relates to Mindfulness. In B. D. Ostafin, M. D. Robinson, & B. P. Meier (Eds.), *Handbook of Mindfulness and Self-Regulation* (pp. 121–137). Springer. https://doi.org/10.1007/978-1-4939-2263-5\_10

- Neff, K. D., Tóth-Király, I., Knox, M. C., Kuchar, A., & Davidson, O. (2021). The Development and Validation of the State Self-Compassion Scale (Long- and Short Form). *Mindfulness*, *12*(1), 121–140. https://doi.org/10.1007/s12671-020-01505-4
- Peng, K., Spencer-Rodgers, J., & Nian, Z. (2006). Naïve Dialecticism and the Tao of Chinese Thought. In U. Kim, K.-S. Yang, & K.-K. Hwang (Eds.), *Indigenous and Cultural Psychology: Understanding People in Context* (pp. 247–262). Springer US. https://doi.org/10.1007/0-387-28662-4\_11
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903. https://doi.org/10.1037/0021-9010.88.5.879
- Raphael, K. (1987). Recall bias: A proposal for assessment and control. *International Journal of Epidemiology*, 16(2), 167–170. https://doi.org/10.1093/ije/16.2.167
- Roca, P., Diez, G., McNally, R. J., & Vazquez, C. (2021). The Impact of Compassion Meditation Training on Psychological Variables: A Network Perspective. *Mindfulness*, *12*(4), 873– 888. https://doi.org/10.1007/s12671-020-01552-x
- Rojiani, R., Santoyo, J. F., Rahrig, H., Roth, H. D., & Britton, W. B. (2017). Women Benefit More Than Men in Response to College-based Meditation Training. *Frontiers in Psychology*, 8. https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00551

- Sahdra, B. K., Shaver, P. R., & Brown, K. W. (2010). A scale to measure nonattachment: A Buddhist complement to Western research on attachment and adaptive functioning. *Journal of Personality Assessment*, 92(2), 116–127. https://doi.org/10.1080/00223890903425960
- Saiz, J., Ausín, B., González-Sanguino, C., Castellanos, M. Á., Salazar, M., Marin, C., López-Gómez, A., Ugidos, C., & Muñoz, M. (2021). Self-Compassion and Social
  Connectedness as Predictors of "Peace and Meaning" during Spain's Initial COVID-19
  Lockdown. *Religions*, 12(9), 683. https://doi.org/10.3390/rel12090683
- Schmelefske, E., Per, M., Khoury, B., & Heath, N. (2022). The Effects of Mindfulness-Based Interventions on Suicide Outcomes: A Meta-Analysis. *Archives of Suicide Research*, 26(2), 447–464. https://doi.org/10.1080/13811118.2020.1833796
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2013). *Mindfulness-based cognitive therapy for depression, 2nd ed.* The Guilford Press.
- Tanay, G., & Bernstein, A. (2013). State Mindfulness Scale (SMS): Development and initial validation. *Psychological Assessment*, 25, 1286–1299. https://doi.org/10.1037/a0034044
- Tang, T. N., & Tang, C. S. (2001). Gender Role Internalization, Multiple Roles, and Chinese Women's Mental Health. *Psychology of Women Quarterly*, 25(3), 181–196. https://doi.org/10.1111/1471-6402.00020
- Thera, N. (1994). *Satipatthana Sutta: The Foundations of Mindfulness*. https://www.accesstoinsight.org/tipitaka/mn/mn.010.nysa.html
- Tsai, J. L., Knutson, B., & Fung, H. H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology*, 90, 288–307. https://doi.org/10.1037/0022-3514.90.2.288

- Van Gordon, W., Shonin, E., Dunn, T. J., Garcia-Campayo, J., & Griffiths, M. D. (2017). Meditation awareness training for the treatment of fibromyalgia syndrome: A randomized controlled trial. *British Journal of Health Psychology*, 22(1), 186–206. https://doi.org/10.1111/bjhp.12224
- Wallace, B. A. (2005). *Genuine Happiness: Meditation as the Path to Fulfillment*. John Wiley & Sons.
- Wang, S.-Y., Wong, Y. J., & Yeh, K.-H. (2016). Relationship Harmony, Dialectical Coping, and Nonattachment: Chinese Indigenous Well-Being and Mental Health. *The Counseling Psychologist*, 44(1), 78–108. https://doi.org/10.1177/0011000015616463
- Xie, Q., Guan, Y., Hofmann, S. G., Jiang, T., & Liu, X. (2022). The potential mediating role of anxiety sensitivity in the impact of mindfulness training on anxiety and depression severity and impairment: A randomized controlled trial. *Scandinavian Journal of Psychology*, 64(1), 21–29. https://doi.org/10.1111/sjop.12860
- Xie, Q., Manova, V., & Khoury, B. (2022). How do dispositional mindfulness and selfcompassion alleviate loneliness? The mediating role of rejection sensitivity. *Current Psychology*. https://doi.org/10.1007/s12144-022-03549-2
- Xu, W., Rodriguez, M. A., Zhang, Q., & Liu, X. (2015). The Mediating Effect of Self-Acceptance in the Relationship Between Mindfulness and Peace of Mind. *Mindfulness*, 6(4), 797–802. https://doi.org/10.1007/s12671-014-0319-x
- Yu, B. C. L., Mak, W. W. S., & Chio, F. H. N. (2020). Promotion of Well-Being by Raising the Awareness on the Interdependent Nature of All Matters: Development and Validation of the Interconnectedness Scale. *Mindfulness*, 11(5), 1238–1252. https://doi.org/10.1007/s12671-020-01334-5

- Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The Relationship Between Self-Compassion and Well-Being: A Meta-Analysis. *Applied Psychology: Health and Well-Being*, 7(3), 340–364. https://doi.org/10.1111/aphw.12051
- Zimmaro, L. A., Salmon, P., Naidu, H., Rowe, J., Phillips, K., Rebholz, W. N., Giese-Davis, J.,
  Cash, E., Dreeben, S. J., Bayley-Veloso, R., Jablonski, M. E., Hicks, A., Siwik, C., &
  Sephton, S. E. (2016). Association of Dispositional Mindfulness with Stress, Cortisol,
  and Well-Being Among University Undergraduate Students. *Mindfulness*, 7(4), 874–885.
  https://doi.org/10.1007/s12671-016-0526-8

Variable	п	Percent (%)	Mean	SD
Gender				
Male	127	34.89		
Female	237	65.11		
Age			23.89	6.92
<b>Relationship status</b>				
Single	188	51.65		
Dating	92	25.27		
Married	83	22.80		
Divorced	0	0.00		
Widowed	1	0.27		
Highest education				
Elementary school	0	0.00		
Middle school	14	3.85		
High school	57	15.66		
College	261	71.70		
Post-graduate	32	8.79		
Employment status				
Student	210	57.69		
Working full-time	113	31.04		
Working part-time	24	6.59		
Umemployed	15	4.12		
Retired	2	0.55		
Annual household income (	Chinese Yuan)			
Less than 30,000	63	17.31		
30,000-80,000	84	23.08		
80,000-150,000	104	28.57		
150,000-250,000	76	20.88		
250,000-500,000	26	7.14		
More than 500,000	11	3.02		

Sociodemographic Characteristics of Participants (N = 364)

Measures	1.	2.	3.	4.
1. Mindfulness	-			
2. Self-compassion	.73***	-		
3. Nonattachment	.61***	$.68^{***}$	-	
4. Peace of mind	.67***	.71***	$.72^{***}$	-
Mean	123.40	3.28	4.17	3.57
SD	15.90	0.55	0.77	0.75

Descriptive Statistics and Correlations among Study Variables

*Note*. Mindfulness = the overall score of the Chinese version of the Five-Facet Mindfulness Questionnaire (Baer et al., 2006; Deng et al., 2011). Self-Compassion = the overall score of the Chinese version of the Self-Compassion Scale (Chen et al., 2011; Neff, 2003b). Nonattachment = the overall score of the Chinese version of the Nonattachment Scale (Chao & Chen, 2013; Sahdra et al., 2010). Peace of Mind = the overall score of the Peace of Mind Scale (Lee et al., 2013). \*\*\*p < .001.

Mediation Analysis Results for the Mediating Effect of Nonattachment in the Associations between Dispositional Mindfulness and

Self-Compassion with Peace of Mind	Self-Compassion	with Peace of Mind
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Independent variable	Mediator	Dependent variable	Effect of IV on M	Effect of M on DV	Direct effect	Indirect	effect	
(IV)	(M)	(DV)	( <i>a</i> )	(b)	(c')	( <i>ab</i> )	95% CI	
Mindfulness	Nonattachment	Nonattachment Peace of mind	Peace of mind	0.61***	0.49***	0.37***	0.30	[0.24, 0.36]
Self-compassion		Peace of mind	0.68***	0.44***	0.41***	0.30	[0.23, 0.36]	

*Note.* Mindfulness = the overall score of the Chinese version of the Five-Facet Mindfulness Questionnaire (Baer et al., 2006; Deng et al., 2011). Self-Compassion = the overall score of the Chinese version of the Self-Compassion Scale (Chen et al., 2011; Neff, 2003b). Nonattachment = the overall score of the Chinese version of the Nonattachment Scale (Chao & Chen, 2013; Sahdra et al., 2010). Peace of Mind = the overall score of the Peace of Mind Scale (Lee et al., 2013). a = standardized path coefficient for the effect of dispositional mindfulness or self-compassion on nonattachment. b = standardized path coefficient for the effect of nonattachment on peace of mind. c' = standardized path coefficient for the effect of dispositional mindfulness or self-compassion on peace of mind when controlling for nonattachment.  $^{***}p < .001$ .

The Moderated Mediation Effect of Gender of	n the Relationship between Mindfulnes	s and Peace of Mind Via Nonattachment
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Predictors		Model 1 (DV: Nonattachment)					Model 2 (DV: Peace of Mind)		
	В	t	р	95% CI	В	t	р	95% CI	
Mindfulness	0.011	1.44	.151	[-0.0041, 0.026]	0.021	2.96	.003**	[0.0069, 0.034]	
Gender	-0.16	-2.40	.017*	[-0.29, -0.029]	0.048	0.91	.366	[-0.056, 0.15]	
Mindfulness X Gender	0.010	2.39	.017*	[0.0019, 0.019]	-0.0020	-0.48	.633	[-0.010, 0.0061]	
Nonattachment					0.43	2.99	.003**	[0.15, 0.72]	
Nonattachment X Gender					0.037	0.43	.669	[-0.13, 0.21]	
$R^2$	0.39				0.60				
F	75.34				109.02				

*Note.* Gender was dummy coded: male = 1, female = 2. Mindfulness = the overall score of the Chinese version of the Five-Facet Mindfulness Questionnaire (Baer et al., 2006; Deng et al., 2011). Nonattachment = the overall score of the Chinese version of the Nonattachment Scale (Chao & Chen, 2013; Sahdra et al., 2010). Peace of Mind = the overall score of the Peace of Mind Scale (Lee et al., 2013). b = unstandardized coefficient. \*p < .05, \*\*p < .01.

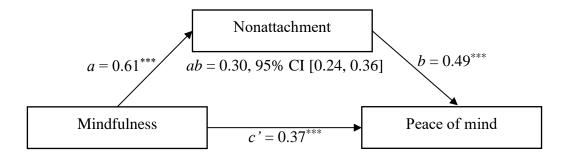
The Moderated Mediation Effect of Ge	ider on the Relationship between	Self-Compassion and	d Peace of Mind Via Nonattach	ment
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Predictors	Model 1 (DV: Nonattachment)				Model 1 (DV: Nonattachment) Model 2 (DV: Peace of Mind)			Mind)
	В	t	р	95% CI	В	t	р	95% CI
Self-compassion	0.37	1.76	.079	[-0.043, 0.78]	0.79	3.68	<.001***	[0.37, 1.22]
Gender	-0.25	-4.16	<.001***	[-0.37, -0.13]	-0.029	-0.54	.593	[-0.13, 0.077]
Self-compassion X Gender	0.34	2.86	.005**	[0.10, 0.57]	-0.14	-1.05	.295	[-0.39, 0.12]
Nonattachment					0.40	2.70	.007**	[0.11, 0.70]
Nonattachment X Gender					0.019	0.20	.839	[-0.16, 0.20]
$R^2$	0.50				0.61			
F	117.90				111.95			

*Note.* Gender was dummy coded: male = 1, female = 2. Self-Compassion = the overall score of the Chinese version of the Self-Compassion Scale (Chen et al., 2011; Neff, 2003b). Nonattachment = the overall score of the Chinese version of the Nonattachment Scale (Chao & Chen, 2013; Sahdra et al., 2010). Peace of Mind = the overall score of the Peace of Mind Scale (Lee et al., 2013). b = unstandardized coefficient. \*\*p < .01, \*\*\*p < .001.

# Figure 1

Diagram for the Mediating effect of Nonattachment in the Relationship Between Dispositional Mindfulness and Peace of Mind

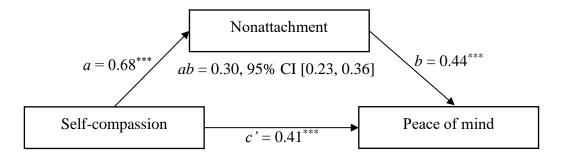


*Note*. Mindfulness = the overall score of the Chinese version of the Five-Facet Mindfulness Questionnaire (Baer et al., 2006; Deng et al., 2011). Nonattachment = the overall score of the Chinese version of the Nonattachment Scale (Chao & Chen, 2013; Sahdra et al., 2010). Peace of Mind = the overall score of the Peace of Mind Scale (Lee et al., 2013). a = standardized path coefficient for the effect of dispositional mindfulness on nonattachment. b = standardized path coefficient for the effect of nonattachment on peace of mind. c' = standardized path coefficient for the effect of dispositional mindfulness on peace of mind when controlling for nonattachment. \*\*\*\*p < .001.

# Figure 2

Diagram for the Mediating effect of Nonattachment in the Relationship Between Self-

Compassion and Peace of Mind



*Note.* Self-Compassion = the overall score of the Chinese version of the Self-Compassion Scale (Chen et al., 2011; Neff, 2003b). Nonattachment = the overall score of the Chinese version of the Nonattachment Scale (Chao & Chen, 2013; Sahdra et al., 2010). Peace of Mind = the overall score of the Peace of Mind Scale (Lee et al., 2013). a = standardized path coefficient for the effect of self-compassion on nonattachment. b = standardized path coefficient for the effect of nonattachment on peace of mind. c' = standardized path coefficient for the effect of self-compassion on peace of mind when controlling for nonattachment. \*\*\*p < .001.