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Clarity of mind: Structural equation modeling of associations between dispositional mindfulness, self-concept clarity and psychological well-being

Adam W. Hanley, PhD and

University of Utah

Eric L. Garland, PhD

University of Utah

Introduction

Mindfulness is believed to encourage greater well-being (e.g., Sedlmeier et al., 2012). Indeed, the relationship between mindfulness and well-being is quite robust, with dispositional mindfulness (DM) consistently linked to psychological well-being (PWB; e.g., Baer, Lykins & Peters, 2012; Hanley et al., 2014). Given the expanding empirical support for the relationship between DM and PWB, a number of mediating mechanisms have been proposed (e.g., Shapiro et al., 2006); and, as both DM and well-being are broad constructs, it is likely that an assortment of mediating factors exist between the two constructs. Thus, continued expansion of the nomological networks surrounding DM and PWB is of considerable value for theoretical clarity and clinical purposes. This is particularly true with respect to how beliefs about the self relate to both DM and PWB.

Mindfulness is believed to be intimately linked with the self and self-concept, with mindfulness practice thought to encourage insight into the true nature of the self (Vago & Silbersweig, 2012). Indeed, cultivating awareness of the self is central to many mindfulness practices (Hanh, 1999). Given the observed relationship between mindfulness practice and experiences of the self (e.g., Berkovich-Ohana et al., 2012; Farb et al., 2007), it may be expected that individuals naturally disposed to mindfulness would also evidence characteristic patterns of belief about the self. Mindfulness, as a dispositional tendency, is believed to be normally distributed across individuals (Brown & Ryan, 2003); yet, little attention has been paid to the potential relationship between DM and the self. As a majority of individuals do not engage in a regular mindfulness practice, expanding understanding of the relationship between DM and the self would appear a valuable extension of the empirical

Correspondence regarding this manuscript should be addressed to Adam Hanley, College of Social Work, 395 South 1500 East #111 Salt Lake City, UT 84112. adam.hanley@utah.edu.

Adam W. Hanley, PhD, College of Social Work, University of Utah, Salt Lake City, UT.

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work already addressing the cognitive state of mindfulness and the self (e.g., Berkovich-Ohana et al., 2012; Farb et al., 2007).

Just as mindfulness is believed to be associated with the self and self-concept, self-concept beliefs are thought to be fundamental for PWB (Campbell et al., 1996). Specifically, self-concept clarity suggests greater self-knowledge, which in turn may encourage more consistent involvement with fulfilling pursuits and relationships (Deci, Ryan, Shultz & Niemiec, 2015). Conversely, a disorganized self-concept would be expected to undermine PWB as a disorganized self would be incapable of providing a clearly structured internal valuation system (Hirsh, Mar & Peterson, 2012). Such disorganization is believed to lead to behavioral uncertainty, which has been neurophysiologically linked with emotional distress (Hirsh, Mar & Peterson, 2012). However, despite these rather intuitive, and historically grounded theoretical assumptions, little empirical work has addressed the relationship between dispositional mindfulness and self-concept beliefs or the role self-concept beliefs may play in mediating the relationship between dispositional mindfulness and psychological well-being.

The Self, Self-Concept and Self-Concept Clarity

The self is a complex and contentious construct, despite a sense of self being one of the most basic human experiences (Klein, 2012). While commonly experienced as a unified whole, theoretical and experimental work challenge this view (Neisser, 1988). Consistent with early Buddhist philosophy, some cognitive science theories contend that there is no such thing as a self (Varela, Thompson & Rosch, 1993). Full exploration of this debate is beyond the scope of this paper, but a growing number of theorists endorse the self as a dynamic system (Marks-Tarlow, 1999) emerging from patterns of relationship (Berkovich-Ohana & Glicksohn, 2014) between fundamental aspects of the self (James, 1890).

Since William James (1890) the self has been commonly subdivided into a “minimal self” and a “narrative self” (Berkovich-Ohana & Glicksohn, 2014). The minimal self has been defined as “a consciousness of oneself as an immediate subject of experience, unextended in time” (Gallagher, 2000). In contrast, the narrative self “involves personal identity and continuity across time as well as conceptual thought” (Berkovich-Ohana & Glicksohn, 2014). Self-concept is intimately linked with the narrative self. Expressly, self-concept is defined as “a cognitive schema that organizes abstract and concrete memories about the self and controls the processing of self-relevant information” (Campbell, 1990, p.539). Markus and Wurf (1987) contend that self-concept is one of the most critical components in affective and behavioral regulation. Self-concept, as a dispositional tendency, is also believed to exist at varying levels of clarity across individuals (Campbell et al., 1996).

Self-concept clarity (SCC) is “the extent to which the content of an individual’s self-concept is clearly and confidently defined, internally consistent, and temporally stable” (Campbell et al., 1996). In short, SCC refers to the clarity with which the self is known. Several studies support the link between SCC and PWB (Diehl & Hay, 2011), finding SCC to be associated with more positive relationships (Ritchie, Sedikides & Wildschut, 2010), greater purpose in life (Bigler & Neimeyer, 2001), increased autonomy (Diehl & Hay, 2011), and greater self-esteem (Campbell et al., 1996). Despite evidence supporting the benefits of SCC, how SCC

is developed and the characterological qualities encouraging greater SCC are largely unknown. Fundamentally, knowledge of self would appear to require self-awareness. Dispositional mindfulness, with its demonstrated connection to self-awareness (Vago & Silbersweig, 2012), may be one such quality serving to develop or sharpen SCC.

Dispositional Mindfulness

The construct of mindfulness has been defined as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p.4). While mindfulness has been simultaneously conceptualized as a state, disposition, practice and intervention (Vago & Silbersweig, 2012), dispositional mindfulness will be the focus of this study. Individuals vary to the extent to which they exhibit mindful qualities in their everyday lives; such DM is commonly operationalized by: 1) the tendency to observe internal and external experiences, 2) describe and differentiate emotional experiences, 3) act with awareness, 4) be nonreactive to distressing thoughts and feelings, and 5) take a nonevaluative stance towards one’s inner experience (Baer et al., 2006). These five qualities are operationalized via domains of the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006), a survey instrument designed to measure DM. Examination of the FFMQ at the facet level appears to suggest that these five facets could be arranged to reflect two broad self-referential domains identified by Vago and Silbersweig (2012): 1) self-awareness facets (observing and describing) and 2) self-regulation facets (acting with awareness, non-reacting, and non-judging). DM as measured by the FFMQ has been associated with domains of self-related processing, such as self-compassion (Baer, Lykins & Peters, 2012), self-acceptance (Hanley et al., 2014), and self-control (Bowlin & Baer, 2012). Greater DM has also been associated with more flexible, less biased beliefs about the self (Hanley et al., 2013). As such, preliminary evidence suggests an association between DM and self-concept beliefs, extending parallel work suggesting a relationship between the cognitive state of mindfulness and experiences of the self (e.g., Berkovich-Ohana et al., 2012; Farb et al., 2007).

The original Buddhist soteriological aim of mindfulness was to realize the insubstantiality of the minimal self (Hanh, 1999), a claim that is supported by preliminary empirical evidence among adept mindfulness practitioners (Dor-Ziderman et al., 2013). By virtue of its effects on enhancing perceptual clarity while reducing bias related to distorted self-schemas, mindfulness may increase awareness of the narrative self (Vago & Silbersweig, 2012). While much of the work relating mindfulness to the self has emphasized shifting experiences of the self as a result of mindfulness practice (e.g., Berkovich-Ohana et al., 2012; Farb et al., 2007), it is also likely that being disposed towards mindfulness would also be related to characteristic experiences of the self. Evidence suggests that mindfulness practice disengages self-referential processing networks (e.g., Farb et al., 2007), potentially relaxing habitual patterns of belief about the self during the course of practice. Similarly, it may be that more dispositionally mindful individuals are prone to relax habitual beliefs about the self in general, increasing the clarity with which the nature of the self is perceived. Thus, individuals naturally disposed to mindfulness would be expected to evidence greater familiarity with and knowledge about the self. As such, DM would be expected to support SCC. Moreover, the tendency to attend to present moment experience is likely to facilitate a

clearer representation of the self across time, which in turn has been linked to well-being (e.g., Campbell et al., 1996; Diehl & Hay, 2011). Taken together, it may be that dispositionally mindful individuals would demonstrate greater SCC given the emerging empirical evidence of a relationship between mindfulness practice and experiences of the self along with the emerging evidence of a relationship between DM and the self. Such empirical evidence supports long standing theoretical proposals concerning the relationship between mindfulness and the self. Thus, more mindful individuals would be expected to act in more personally consistent and fulfilling ways, likely resulting in greater well-being.

The primary purpose of this study was to examine the relationship between dispositional mindfulness and self-concept clarity given the scarcity of empirical work attending to this relationship despite established theoretical links. The relationships between dispositional mindfulness, self-concept clarity and psychological well-being were investigated at two levels of specificity given the multifaceted nature of DM. We hypothesized that: a) DM would be positively associated with SCC; and b) the association between DM and PWB would be statistically mediated by SCC.

Method

Participants and Procedures

Participants were 1089 university students recruited from a large university's College of Education (COE) subject pool located in the Southeastern United States. Subject pool participants are expected to earn 2 hours of research credit each semester by participating in research activities. Alternative, equivalent activities are provided if students choose not to participate in research. The three measures investigated in this study were included in a larger research project addressing the relationship between mindfulness and beliefs about the self. Participants completing the current study earned .5 credit hours. Recruitment of participants was conducted online and all surveys were administered online. The mean completion time was 27 minutes, with a completion rate of 89%.

The majority of participants were female (75%). Participant ages ranged from 18 to 53, with an average age of 21 ($SD=2.92$). The ethnic breakdown of this sample was as follows: 68% Caucasian, 16% Latino, 10% African American, 2% Asian or South Asian, 2% Multiracial, 1% American Indian or Alaskan Native, and 1% non-classified.

Measures

Dispositional Mindfulness—Dispositional mindfulness was measured with the Five Facet Mindfulness Questionnaire (Baer et al., 2006), a 39-item self-report instrument assessing DM across five domains: observing (“I notice the smells and aromas of things”), describing (“I’m good at finding words to describe my feelings”), acting with awareness (“I find myself doing things without paying attention”), non-reacting (“I watch my feelings without getting lost in them”), and non-judging (“I make judgments about whether my thoughts are good or bad”). Items were scored on a 5-point Likert scale (1=never or very rarely true, 5=very often or always true) with higher total and facet scores reflecting greater mindfulness.

Self-Concept Clarity—Self-concept clarity was measured with the Self-Concept Clarity Scale (Campbell et al., 1996), a 12-item self-report instrument assessing the degree to which individuals report stability and consistency in their self-concept (“In general, I have a clear sense of who I am and what I am”). Items were scored on a 6-point Likert scale (1=disagree very much, 6=agree very much) with higher scores reflecting greater clarity of self-concept.

Psychological Well-Being—Psychological well-being was measured with the Scales of Psychological Well-Being short form (Ryff & Keyes, 1995), an 18-item instrument assessing PWB across six domains: self-acceptance (“I like most parts of my personality”), positive relationships (“People would describe me as a giving person, willing to share my time with others”), autonomy (“I have confidence in my own opinions, even if they are different from the way most other people think”), environmental mastery (“I am good at managing the responsibilities of daily life”), purpose in life (“Some people wander aimlessly through life, but I am not one of them”), personal growth (“For me, life has been a continuous process of learning, changing, and growth”). Items were scored on a 7-point Likert scale (1=strongly disagree, 6=strongly agree) with higher total and domain scores reflecting greater PWB.

Statistical Analysis

This study employed structural equation modeling (SEM) to explore the extent to which SCC mediates the relationship between DM and PWB in a general sample of young adults. It has been suggested that only exploring multifaceted constructs’ total scores can obfuscate results, and that failing to investigate the domains of multifaceted constructs may lead to the inaccurate assumptions about relationships between variables and domains, with differential relationships potentially existing at the domain level (Baer, Lykins & Peters, 2012). To this end, two successive SEMs were conducted: 1) exploring SCC as mediating the relationship between an aggregated DM score and PWB, and 2) exploring SCC as mediating the relationship between the five facets of DM (i.e., observing, describing, acting with awareness, non-reacting, and non-judging) and PWB. Measurement models and structural models were constructed for both analyses. Structural models were derived from the measurement models after items with non-significant loadings were trimmed and non-significant paths were removed. The comparative fit index (CFI; $>.90$), the root mean square error of approximation (RMSEA; $<.06$), and the relative chi-square (CMIN/df; <3) were selected as fit indices given the large sample size.

Results

Preliminary Analyses

Bivariate correlations between the primary variables of interest along with the means and standard deviations for each construct are reported in Table 1.

Basic SEM Model

The measurement model relating DM with SCC and PWB evidenced good fit across two indices ($\chi^2/df=2.71$, RMSEA=.04) and acceptable fit on the third (CFI=.91). Removing items with non-significant loadings increased the fit such that all three indices reflected good fit: $\chi^2/df=2.34$, RMSEA=.035, CFI=.94. The structural model was then used to test whether

SCC mediated the relationship between the aggregated dispositional mindfulness and psychological well-being constructs. Dispositional mindfulness was found to have a positive, direct effect on both self-concept clarity ($B=.53, p<.001$) and psychological well-being ($B=.25, p<.001$). Self-concept clarity demonstrated a direct relationship with psychological well-being ($B=.34, p<.001$) and was also found to partially mediate the relationship between dispositional mindfulness and self-concept clarity. A significant indirect effect of DM on PWB via SCC was observed ($B=.25, p=.006$). This model accounted for 26% of the variance in psychological well-being and 25% in SCC. Moderation analyses revealed paths of statistically equivalent strength with respect to gender and race.

Examination of the individual item loadings revealed that five of the DM items and one of the SCC items had non-significant factor loadings. Four of the five non-significant DM items were from the same mindfulness facet, describing, suggesting that the individual facets of DM may be differentially related to SCC and PWB.

Mindful Facets Model

The measurement model relating the five facets of DM with SCC and PWB evidenced good fit across two indices ($\chi^2/df=2.77, RMSEA=.04$) and acceptable fit on the third ($CFI=.90$). Only one item from the SCC scale evidenced a non-significant loading and removal of this item did not significantly alter model fit: $\chi^2/df=2.81, RMSEA=.041, CFI=.90$. The structural model was then used to test whether SCC mediated the relationship between the facets of DM and psychological well-being.

All mindfulness facets demonstrated significant direct relationships with self-concept clarity. The non-judging facet was found to be most strongly associated with self-concept clarity. The non-reacting, acting with awareness, and describing facets evidenced similar magnitudes of association with self-concept clarity. Observing had the weakest associations with SCC and was the only DM facet negatively associated with SCC. All mindfulness facets demonstrated significant direct relationships of relatively equivalent magnitude with psychological well-being. Self-concept clarity was also found to be directly associated with psychological well-being.

Significant indirect relationships emerged from each of the mindfulness facets, with all indirect associations being positive except for the indirect relationship linked to the observing facet. As such, self-concept clarity appears to partially mediate the relationship between each of the mindfulness facets and psychological well-being. This model accounted for 39% of the variance in PWB and 40% in SCC.

Discussion

The purpose of this study was to investigate the relationships between dispositional mindfulness, self-concept clarity and psychological well-being. Of primary interest in this study was the basic relationship between dispositional mindfulness and self-concept clarity given the paucity of empirical work addressing this relationship. Furthermore, self-concept clarity was explored as a mediator of the relationship between dispositional mindfulness and

psychological well-being at increasing levels of granularity, paying particular attention to the relations among the facets of mindfulness.

Results suggest that DM is associated with SCC, such that more mindful individuals are more likely to report greater self-concept clarity. Results also indicate the presence of a significant indirect effect of dispositional mindfulness on well-being through self-concept clarity both at the total score and facet levels of analysis. Thus, it appears that dispositional mindfulness may occasion greater clarity with respect to beliefs about the self, which in turn is associated with greater psychological well-being. Fundamentally, mindfulness is believed to promote awareness of the self by encouraging engagement with the present moment, revealing greater clarity by relaxing biased or habitual cognitive repertoires (Vago & Silbesweig, 2012). Greater engagement with the present is likely to occur through mindfulness practice, but a tendency to be oriented towards the present moment is also likely to occur organically for individuals naturally disposed to mindfulness. Concomitantly, experiencing greater self-concept clarity in the present moment is likely to encourage enhanced self-concept clarity across time, such that moments of self-clarity may accrue into a more enduringly clear, temporally-extended narrative self. As such, findings offer correlational support for extant theoretical claims (e.g., Campbell et al., 1996) that self-concept clarity promotes psychological well-being by providing a stable platform from which autonomous decisions can be made in reference to an idealized self.

Examining these results through the lens of Hirsh et al.'s (2012) entropy model of uncertainty (EMU) may also provide some explanatory utility. EMU contends that uncertainty is intimately linked with emotional distress, principally anxiety, in self-organizing systems such as the self. Indeed, Hirsh et al. (2012) assert that uncertainty may be a fundamental threat to "personal stability and integrity" (p.314). In systems characterized by high entropy (i.e., highly disorganized and thus uncertain), no clear course of behavior is readily apparent as potential outcomes appear equally probable. As such, identifying the most advantageous behavioral course is increasingly difficult as entropy increases. Thus, EMU claims that an organizing principle is needed to guide movement through the world, and the more clearly this principle is understood the less anxiety inducing entropy exists within the system. In the context of this study, the self may function as an organizing principle and the clearer the self is perceived the more apparent preferred behavioral courses may appear to be, culminating in greater psychological well-being. That said, the cross-sectional nature of the data renders all such inferences tentative.

The Mindful Facet Model

As dispositional mindfulness is a multifaceted construct, exploring how the various mindfulness facets related to both self-concept clarity and psychological well-being was a secondary aim of this study. The mindful facet model revealed positive, direct relationships between self-concept clarity and all of the mindful facets, except observing. The mindfulness facets most closely associated with self-concept clarity and psychological well-being were acting with awareness, on-reacting, non-judging and describing. Each of these facets evidenced significant direct and indirect relationships with PWB via SCC. Non-reacting was the only mindfulness facet not demonstrating a direct relationship with PWB,

as self-concept clarity was found to fully mediate this relationship. These findings suggest that a range of mindfulness skills are recruited in the maintenance of a clearly defined self-concept and PWB. Taken together, facets of mindfulness representing both the self-regulatory (i.e. acting with awareness, non-reacting, non-judging) and self-awareness (i.e., describing) skills appear linked with PWB through SCC. Given this pattern of associations, it appears that mindful self-regulation, acting with awareness and intention while maintaining an attitude of acceptance, is linked with greater self-concept clarity as well as greater PWB; and, to a lesser degree, greater mindful self-awareness, in the form of using language to label internal experience, functions similarly in this model with respect to SCC and PWB. Further examination of the role each of these facets plays in this model is addressed next.

With respect to the most behavioral DM facets, acting with awareness and non-reacting, these results suggest that behaving mindfully contributes substantially to greater self-concept clarity. Reciprocally, Dumont (201) asserts that “self-regulatory behavior may well be the most important function of the self” (p.214). In short, behavior begets self, and self dictates behavior. Hirsh et al. (2012) assert that the adoption of a clear goal or belief limits uncertainty (e.g., distress) as behavioral options are constrained by efforts to achieve the predetermined goal. Similar to self-concept providing a broad orientation in the navigation of uncertainty, acting with awareness may function to orient behaviors on a smaller scale as acting with awareness would appear to presuppose an intentional, behavioral stance. Indeed, Varela et al. (1993) assert that “the goal [of mindfulness] is ... to be fully present in one’s action, so that one’s behavior becomes progressively more responsive and aware” (p.122). Potentially, behavior gives rise to self-concept beliefs and mindful behavior, marked by awareness and intention, may result in more consistent behaviors reflecting more consistent information about the self. As behavior informs the self, more adaptive behavior would be expected to lead to more adaptive beliefs about the self.

With respect to the non-judging facet, demonstrating greater acceptance and less judgement is also unique in its impact on this model. Greater acceptance is linked with greater SCC, potentially reflecting a tendency to accept the self. Critical deconstruction of the self may result in a fractured self-concept, encouraging intrapsychic tension and potentially frustrating decision-making as competing self-interests struggle for primacy. Hirsh et al. (2012) propose that psychological entropy, or “the experience of conflicting perceptual or behavioral affordances” (p.304), undermines well-being. An alternative formulation of entropy as the ratio of microstates to a given macrostate illustrates this principle. The greater the number of microstates existing within a macrostate the greater the potential entropy in the system (Hirsh et al. 2012). With respect to the self, critical fissures in the self-concept would be understood to result in conflicting micro-selves that increase self-concept uncertainty and decrease psychological well-being. Remaining nonjudgmental towards the self may support a more integrated self-concept, promoting more consistent, integrated beliefs about the self, which may inform more stable behavioral repertoires designed to sustain well-being. Indeed, correlational and experimental evidence corroborate this finding, suggesting that dispositional mindfulness is associated with greater self-acceptance (Jimenez et al., 2010; Thompson & Waltz, 2008) and that mindfulness practices encourage greater self-acceptance (Fredrickson et al., 2008).

With respect to the describing facet, Dumont (2012) echoes claims from mindfulness theorists (e.g., Hanh, 1999; Vago & Silbersweig, 2012) in suggesting that introspection and self-monitoring provide the foundation for self-regulatory capacities. This claim appears to enjoy preliminary empirical support in the observed relationship between the mindful self-awareness facet of describing and self-concept clarity in this study. Pragmatically, awareness of internal phenomenon would appear fundamental to the experience agency. Indeed, Self-Determination Theory (Ryan & Deci, 2000) posits awareness as “foundational for autonomy, supplying its informational basis” (Deci, Ryan, Shultz & Niemiec, 2015, p. 120). Thus, the tendency to use language to describe internal experiences and motivations may encourage a comfort, and ultimately trust, with the self as a competent decision maker and actor.

While promising, the results of this study should be interpreted cautiously given several limitations. First, participants were primarily college educated Caucasian females, potentially limiting the generalizability of these findings. Future investigations of the relationship between mindfulness, self-concept and psychological well-being should incorporate more diverse samples. Second, the cross-sectional nature of this study precludes causal conclusions. Whereas this study presupposed theoretically-grounded, directional relationships, utilizing longitudinal designs in future studies may provide evidence of a causal relationship between dispositional mindfulness, self-concept clarity and psychological well-being. Nevertheless, as a preliminary investigation of the relationships between dispositional mindfulness, self-concept clarity, and psychological well-being, this study provides valuable evidence towards previously uninvestigated relationships.

References

- Baer RA, Smith GT, Hopkins J, Krietemeyer J, Toney L. Using self-report assessment methods to explore facets of mindfulness. *Assessment*. 2006; 13(1):27–45. [PubMed: 16443717]
- Baer RA, Lykins EL, Peters JR. Mindfulness and self-compassion as predictors of psychological wellbeing in long-term meditators and matched nonmeditators. *The Journal of Positive Psychology*. 2012; 7(3):230–238.
- Barnes S, Brown KW, Krusemark E, Campbell WK, Rogge RD. The role of mindfulness in romantic relationship satisfaction and responses to relationship stress. *Journal of Marital and Family Therapy*. 2007; 33(4):482–500. [PubMed: 17935531]
- Berkovich-Ohana A, Glicksohn J, Goldstein A. Studying the default mode and its mindfulness-induced changes using EEG functional connectivity. *Social Cognitive and Affective Neuroscience*. 2014; 9(10):1616–1624. [PubMed: 24194576]
- Berkovich-Ohana A, Glicksohn J, Goldstein A. Mindfulness-induced changes in gamma band activity—implications for the default mode network, self-reference and attention. *Clinical Neurophysiology*. 2012; 123(4):700–710. [PubMed: 21940201]
- Bigler M, Neimeyer GJ, Brown E. The divided self revisited: Effects of self-concept clarity and self-concept differentiation on psychological adjustment. *Journal of Social and Clinical Psychology*. 2001; 20(3):396–415.
- Campbell JD. Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology*. 1990; 59(3):538. [PubMed: 2231284]
- Campbell JD, Trapnell PD, Heine SJ, Katz IM, Lavallee LF, Lehman DR. Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*. 1996; 70(1):141.

- Carmody J, Baer RA, Lykins E, Olendzki N. An empirical study of the mechanisms of mindfulness in a mindfulness-based stress reduction program. *Journal of Clinical Psychology*. 2009; 65(6):613–626. [PubMed: 19267330]
- Deci, EL., Ryan, RM., Schultz, PP., Niemiec, CP. Being aware and functioning fully: mindfulness and interest-taking within self-determination theory. In: Brown, KW, Creswell, JD., Ryan, RM., editors. *Handbook of Mindfulness: Theory, Research, and Practice*. New York: Guilford; 2015.
- Diehl M, Hay EL. Self-concept differentiation and self-concept clarity across adulthood: Associations with age and psychological well-being. *The International Journal of Aging and Human Development*. 2011; 73(2):125–152. [PubMed: 22010361]
- Dor-Ziderman Y, Berkovich-Ohana A, Glicksohn J, Goldstein A. Mindfulness-induced selflessness: A MEG neurophenomenological study. *Frontiers in Human Neuroscience*. 2013; 7:1–17. [PubMed: 23355817]
- Dumont, F. *A history of personality psychology: Theory, science, and research from Hellenism to the twenty-first century*. New York: Cambridge University Press; 2012.
- Farb NA, Segal ZV, Mayberg H, Bean J, McKeon D, Fatima Z, Anderson AK. Attending to the present: mindfulness meditation reveals distinct neural modes of self-reference. *Social Cognitive and Affective Neuroscience*. 2007; 2(4):313–322. [PubMed: 18985137]
- Fredrickson BL, Cohn MA, Coffey KA, Pek J, Finkel SM. Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology*. 2008; 95(5):1045. [PubMed: 18954193]
- Gallagher S. Philosophical conceptions of the self: implications for cognitive science. *Trends in Cognitive Sciences*. 2000; 4(1):14–21. [PubMed: 10637618]
- Nhat Hanh, T. *The miracle of mindfulness: An introduction to the practice of meditation*. Boston: Beacon; 1999.
- Hanley AW, Warner A, Garland EL. Associations between mindfulness, psychological well-being, and subjective well-being with respect to contemplative practice. *Journal of Happiness Studies*. 2014:1–14.
- James, W. *The principles of psychology*. Vol. 1. New York: Holt; 1890.
- Jimenez SS, Niles BL, Park CL. A mindfulness model of affect regulation and depressive symptoms: Positive emotions, mood regulation expectancies, and self-acceptance as regulatory mechanisms. *Personality and Individual Differences*. 2010; 49(6):645–650.
- Kabat-Zinn, J. *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York: Hyperion; 1994.
- Klein SB. The self and its brain. *Social Cognition*. 2012; 30(4):474–518.
- Marks-Tarlow T. The self as a dynamical system. *Nonlinear Dynamics, Psychology, and Life Sciences*. 1999; 3(4):311–345.
- Neisser U. Five kinds of self-knowledge. *Philosophical Psychology*. 1988; 1(1):35–59.
- Ritchie TD, Sedikides C, Wildschut T, Arndt J, Gidron Y. Self-concept clarity mediates the relation between stress and subjective well-being. *Self and Identity*. 2011; 10(4):493–508.
- Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*. 2000; 55(1):68. [PubMed: 11392867]
- Ryff CD. Beyond Ponce de Leon and life satisfaction: New directions in quest of successful ageing. *International Journal of Behavioral Development*. 1989; 12(1):35–55.
- Ryff CD, Keyes CLM. The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*. 1995; 69(4):719. [PubMed: 7473027]
- Sedlmeier P, Eberth J, Schwarz M, Zimmermann D, Haarig F, Jaeger S, Kunze S. The psychological effects of meditation: A meta-analysis. *Psychological Bulletin*. 2012; 138(6):1139. [PubMed: 22582738]
- Shapiro SL, Carlson LE, Astin JA, Freedman B. Mechanisms of mindfulness. *Journal of Clinical Psychology*. 2006; 62(3):373–386. [PubMed: 16385481]
- Thompson BL, Waltz JA. Mindfulness, self-esteem, and unconditional self-acceptance. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*. 2008; 26(2):119–126.

- Vago DR, Silbersweig DA. Self-awareness, self-regulation, and self-transcendence (S-ART): A framework for understanding the neurobiological mechanisms of mindfulness. *Frontiers in Human Neuroscience*. 2012; 6(296):1–30. [PubMed: 22279433]
- Varela, FJ., Thompson, E., Rosch, E. *The embodied mind: Cognitive science and human experience*. Cambridge, MA: MIT Press; 1992.
- Wachs K, Cordova JV. Mindful relating: Exploring mindfulness and emotion repertoires in intimate relationships. *Journal of Marital and Family therapy*. 2007; 33(4):464–481. [PubMed: 17935530]

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Highlights

This study examined mindfulness (DM), self-concept clarity (SCC) and well-being (WB)

SCC was found to significantly mediate the relationship between DM and WB

Results suggest DM may occasion greater SCC, which in turn is linked with greater WB

Unique associations were also observed between the five DM facets, SCC and WB

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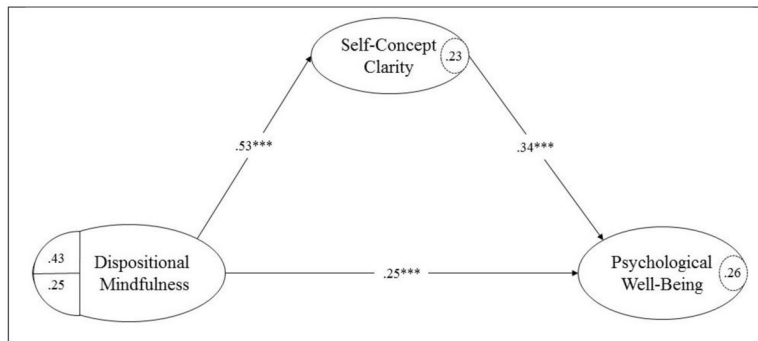


Figure 1. Standardized Basic Mediation Model. The number in the top left of the DM, latent variable is the standardized total effect of DM on PWB. The number reported in the bottom left of the DM, latent variable is the standardized indirect effect of DM on PWB. The number on the right of each endogenous variable is the percentage of variance explained by this model for that variable.
 $*** p < .001$.

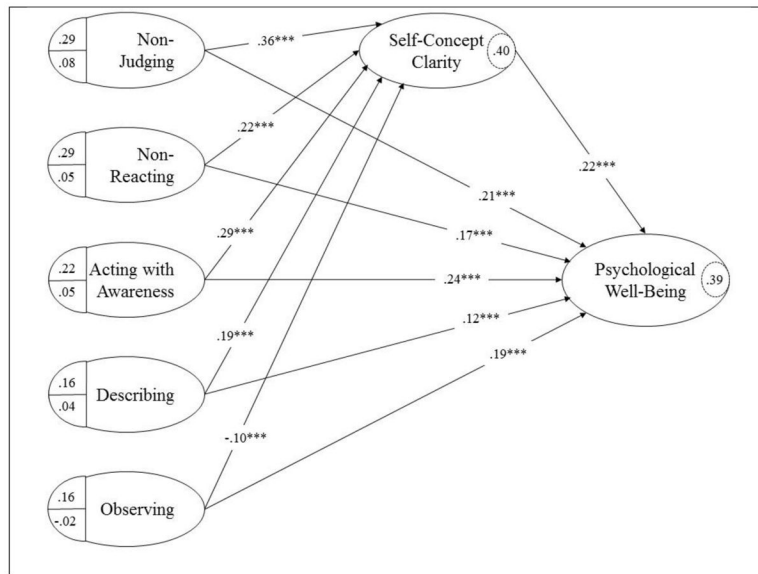


Figure 2. Standardized Mindful Facets Model. The number in the top left of each exogenous variable is the standardized total effect of that variable on PWB. The number reported in the bottom left of each exogenous variable is the standardized indirect effect of that variable on PWB. The number on the right of each endogenous variable is the percentage of variance explained by this model for that variable.
 *** $p < .001$.

Table 1
 Bivariate Correlations, Means, Standard Deviations and Reliabilities for Primary Variables of Interest

Variable	1.	2.	3.	4.	5.	6.	7.	Mean (SD)	α
1. Dispositional Mindfulness	-							124.13 (16.18)	.84
2. Observing	.29***	-						26.53 (5.43)	.83
3. Describing	.68***	.18***	-					26.48 (5.71)	.86
4. Acting with Awareness	.62***	-.26***	.28***	-				25.09 (6.17)	.90
5. Non-Judging	.58***	-.35***	.16***	.54***	-			24.73 (6.77)	.92
6. Non-Reacting	.37***	.35***	.16***	-.17***	-.12***	-		21.30 (4.52)	.82
7. Self-Concept Clarity	.52***	-.10**	.31***	.42***	.47***	.17***	-	39.74 (8.89)	.89
8. Psychological Well-Being	.58***	.08**	.40***	.45***	.42***	.07*	.46***	93.38 (16.12)	.88

* p < .05,

** p < .01,

*** p < .001