#### RESEARCH PAPER



# Quiet Ego and Subjective Well-Being: The Role of Emotional Intelligence and Mindfulness

Guanyu Liu<sup>1</sup> · Linda M. Isbell<sup>1</sup> · Bernhard Leidner<sup>1</sup>

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#### Abstract

The quiet ego refers to a self-identity that is balanced and growth-oriented in its stance toward the self and others. As a relatively new construct, its validity has been examined in domains related to balance, compassion, and self-control, it has not been examined in other domains that appear to have conceptual overlap such as emotional intelligence (EI), a construct entailing both ability EI (construed as cognitive ability) and trait EI (construed as self-perception). This pre-registered study (N=300) first examined the quiet ego's construct validity in the domain of EI using a confirmatory factor analysis approach, and then investigated its associations with subjective well-being and psychological stress from the angle of EI using path models. Results showed that the quiet ego was positively associated with both ability and trait EI, thereby establishing its validity in this domain. Mediation analyses revealed trait EI mediated the relationship between the quiet ego and increased subjective well-being and decreased stress. Serial mediation analyses further revealed that the link between the quiet ego and trait EI was mediated by mindfulness such that the quiet ego transmitted its effects to subjective well-being and stress first via mindfulness and then trait EI. In contrast, there was no evidence that ability EI mediated the relationship between the quiet ego and subjective well-being or stress.

**Keywords** The quiet ego  $\cdot$  Emotional intelligence  $\cdot$  Ability EI  $\cdot$  Trait EI  $\cdot$  Subjective well-being  $\cdot$  Mindfulness

#### 1 Introduction

The quiet ego is a self-identity that goes beyond egotism and its immediate, short-term lures to include in one's self-concept others as well as one's long-term, eudaemonic well-being (Bauer and Wayment 2008; Wayment and Bauer 2017; Wayment et al. 2015a). As

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Department of Psychological and Brain Sciences, University of Massachusetts Amherst, Amherst, MA 01003, USA



Guanyu Liu gliu@psych.umass.edu

a compassionate and balanced self-construal, the quiet ego has been shown to be associated with increased subjective well-being and decreased stress (Wayment and Bauer 2018; Wayment et al. 2015a, b; 2016). Mediation analyses further revealed that these relationships were mediated by balance and growth value orientations (Wayment and Bauer 2018), by self-control and self-compassion (Wayment et al. 2016), and by self-control and grit (Wayment and Cavolo 2019).

So far researchers have approached the link between the quiet ego and subjective well-being from domains related to balance, compassion, and self-control, and in doing so established the quiet ego's construct validity in these areas. Its construct validity, however, has not been examined in other domains that appear to have conceptual overlap such as emotional intelligence (EI), which is an important domain because of its implications for subjective well-being and psychological stress (Mayer et al. 2008; Petrides et al. 2016). Building on existing works on the quiet ego and EI, in this pre-registered study, we first examined the quiet ego's construct validity in the domain of EI, and then investigated its associations with subjective well-being and psychological stress from the angle of EI.

In what follows, we first describe the quiet ego and EI constructs and elaborate on their characteristics. We then discuss the theoretical associations between the quiet ego and EI. Finally, we review the connections between EI and subjective well-being and stress.

## 1.1 The Quiet Ego

The quiet ego refers to a self-understanding that is balanced and growth-oriented in its stance toward the self and others. The two orientations (balance and growth) are characterized by four traits: inclusive identity, perspective taking, detached awareness, and growth-mindedness (Wayment and Bauer 2017; Wayment et al. 2015a). Inclusive identity and perspective taking primarily concern the quiet ego's balanced view toward the self and others, emphasizing an emotional connection as well as striving for a cognitive understanding of others' points of view (Wayment and Bauer 2017; Leary et al. 2008). Detached awareness provides the necessary mental space from which one views one's actions with mindfulness, less defensiveness, and a non-judgmental attitude that paves the way for one's long-term, eudaimonic growth. Finally, growth-mindedness is a humanistic and organismic orientation that focuses on long-term, eudaimonic well-being, as well as achieving a sense of meaning and purpose in life (Bauer and Wayment 2008; Wayment et al. 2015a).

The quiet ego has been shown to be positively associated with beneficial psychological tendencies such as humility-honesty, holistic-cooperative thinking, and self-determination; it is negatively associated with maladaptive tendencies such as aggression, negative thinking, and psychological entitlement (Wayment et al. 2015a). It predicted coping efficacy and psychological resilience over and above self-compassion, authenticity, and mindfulness (Wayment et al. 2015a). In addition, it positively related to post-traumatic growth in mothers who had children with autism spectrum disorder (ASD), over and above mother-related (e.g., age, education), child-related (e.g., age), and ASD diagnosis-related factors (e.g., length), indicating its alleviating effects on psychological stress (Wayment et al. 2018).

### 1.2 Emotional Intelligence

Research on emotional intelligence (EI) has developed in two parallel streams based on two different conceptualizations (Ferguson and Austin 2010; MacCann and Roberts 2008). This



development has resulted in two kinds of EI: ability EI and trait EI. Ability EI refers to a set of four hierarchically related abilities: (1) the ability to perceive and express emotions; (2) the ability to integrate emotions into thought processes (e.g., label emotions appropriately); (3) the ability to understand the relations between emotions as well as between emotions and situations; (4) the ability to manage and adjust emotions to adapt to situations (Colman 2015; MacCann and Roberts 2008).

This conceptualization holds that EI is a reasoning, problem-solving ability in the emotion domain (Ferguson and Austin 2010). Therefore, as a set of abilities, EI can be objectively measured in much the same way as intelligence (Ferguson and Austin 2010; MacCann and Roberts 2008). Hence, assessment in this tradition usually features instruments with multiple choice questions that can be scored objectively (MacCann and Roberts 2008).

The trait EI approach conceptualizes EI as a set of emotion-related self-perceptions and dispositions, i.e., self-efficacy in the emotion domain (Petrides and Furnham 2006; Petrides et al. 2007). This conceptualization assumes that emotions are subjective in nature; and therefore anything emotion-related is also subjective in nature (including emotional intelligence), hence cannot be objectively measured. Therefore, research in this tradition relies on self-report questionnaires (Petrides 2009).

The two conceptualizations do not seem to differ on whether EI is a cognitive phenomenon, but rather on what the cognitive phenomenon is *about*—if it is about reasoning or solving problems in the emotion domain, then it is an ability (Ferguson and Austin 2010); if it is about understanding one's tendencies and dispositions related to emotions, then it is a trait (Petrides et al. 2007).

## 1.3 The Quiet Ego and Emotional Intelligence

The quiet ego is theoretically linked to both ability and trait EI. In terms of ability EI, the theoretical connection revolves around detached awareness and perspective taking.

The quiet ego and ability EI. Detached awareness is a non-defensive, receptive state of awareness that is present-centered (i.e., experiencing whatever is in the present moment without superimposing preconceived notions) (Brown et al. 2007). It provides a critical mental distance between attending to stimuli and reacting to them, enabling one to experience psychological phenomena without getting entangled in them (e.g., emotions, thoughts, motivations), thereby allowing one to achieve a deeper understanding of the nature of these phenomena (Brown et al. 2007). Applied to ability EI, detached awareness will likely enable one to recognize and label one's emotions appropriately and to achieve a clear understanding between one's emotions and triggering situations as both the emotions and the situations can be directly observed as part of the ongoing stream of consciousness. This clear understanding, coupled with an objective, non-defensive processing of experience would also allow for a more informative adjustment of emotions (Brown and Ryan 2003; Brown et al. 2007).

Perspective taking refers to the ability and tendency to adopt another's psychological point of view (Davis 1983; Wayment et al. 2015a). It allows one to anticipate another's behavior and reactions (e.g., cognitive and affective reactions), which facilitates understanding of their emotional states as well as adjustment of one's own emotional states (Davis 1983). Since understanding and managing emotions are components of ability EI, it is therefore expected that ability EI will be positively related to perspective taking, which is itself a component of the quiet ego.



The quiet ego and trait EI. The theoretical connection between the quiet ego and trait EI involves inclusive identity, perspective taking, and detached awareness. Inclusive identity refers to the extent to which one identifies with others or views oneself as similar to others (Wayment et al. 2015a). Trait EI is emotional self-efficacy—that is, one's judgments of how well one can execute actions to deal with prospective emotional situations (Petrides et al. 2007). An important emotional situation involves one's perception on how well one can deal with other people (Petrides et al. 2007). Following this logic, then, inclusive identity should be expected to be positively related to trait EI in that including others in one's psychosocial identity necessarily entails the judgment that one is capable of dealing with others.

Perspective taking complements inclusive identity in its connection to trait EI in that it enables one to understand things from others' points of view, to empathize with them, thereby facilitating social interaction and enhances social functioning (Davis 1983). This enhanced social functioning, in turn, confers confidence in one's perception of one's ability to deal with others, including their emotions (Petrides et al. 2016).

Detached awareness is associated with clear comprehension and receptive, non-judgmental processing because it enables one to disengage and switch awareness from the usual mode of self-referential processing to an objective, experiential mode of processing that allows one to understand deeply and accurately the meaning and import of one's emotional experience (Brown et al. 2007; Brown and Ryan 2003; Wayment et al. 2015a). This increase in accuracy in one's understanding would in turn enhance one's perception of one's ability to deal with emotion related problems. In addition, mindfulness (akin to detached awareness) has been shown to transmit its effects via trait EI to life satisfaction (Wang and Kong 2014), affective well-being (Schutte and Malouff 2011), and perceived stress (Bao et al. 2015), offering further support to the theoretically assumed association between the quiet ego and trait EI.

## 1.4 Emotional Intelligence and Well-Being

Both ability and trait EI are linked to subjective well-being and stress. Ability EI has been found to be associated with increased life satisfaction (MacCann and Roberts 2008; Mayer et al. 2008), enhanced affective well-being (i.e., with increased positive affect and decreased negative affect; Burrus et al. 2012), and lowered stress (MacCann and Roberts 2008). For example, high ability EI is positively associated with life satisfaction after controlling for cognitive intelligence and social emotional variables (Mayer et al. 2008). Using a Day Reconstruction Method, Burrus et al. (2012) reported that people with higher ability EI experienced more positive affect and less negative affect across different life activities (e.g., working, dining, socializing, studying). Finally, MacCann and Roberts (2008) reported that ability EI is negatively associated with both anxiety and stress.

Trait EI has also been linked to life satisfaction (Petrides et al. 2007), affective well-being (Kong and Zhao 2013; Kong et al. 2012), and stress (Mikolajczak and Luminet 2008; Mikolajczak et al. 2007; Petrides and Furnham 2006). For example, trait EI predicted increased life satisfaction above and beyond major personality dimensions (as categorized by the Big Five and the Eysenck Personality Questionnaire) (Petrides et al. 2007). Unpacking this relationship, Kong and Zhao (2013) found that it was mediated by affect, such that higher trait EI was associated with increased positive affect and decreased negative affect, both of which contributed to increased life satisfaction.



Higher trait EI has also been linked to lower stress, both in general (Mikolajczak and Luminet 2008) and in the workplace (Mikolajczak et al. 2007; Petrides and Furnham 2006). This relationship is mediated by higher trait EI leading to more adaptive coping in general (Mikolajczak and Luminet 2008), or greater perceived autonomy in a work environment (Petrides and Furnham 2006). These findings are consistent with the nature of trait EI as emotional self-efficacy—that is, one's judgment about how well one can execute actions to deal with prospective emotional situations (Petrides et al. 2007). People with higher trait EI believe they are capable of coping with difficult emotional situations, so they employ more active strategies such as perceiving a difficult situation as a challenge rather than a threat (Mikolajczak and Luminet 2008), or using reason-based coping in stressful situations (Petrides et al. 2007).

In addition to its direct relationships with subject well-being and stress, trait EI has also been implicated in the indirect relationships between mindfulness and subjective well-being and stress. Specifically, trait EI has been found to mediate the relationship between mindfulness and increased subjective well-being (Schutte and Malouff 2011) as well as decreased stress (Bao et al. 2015).

## 1.5 Mindfulness and Well-Being

Mindfulness captures a quality of consciousness characterized by a state of being attentive to and aware of the present moment and experience (Brown and Ryan 2003). As such, it represents an experiential mode of being that involves the capacity to "step outside" one's usual, conceptual mode of functioning. By doing so, it enables one to disentangle from cognitive content, allowing thoughts and desires to be observed (instead of being stuck in them), thereby relieving oneself from the burden of often repetitive and ruminative thoughts and preoccupations with associated negative affect (Brown and Ryan 2003; Brown et al. 2007; Creswell 2017).

Mindfulness also facilitates well-being by adding a sense of clarity to one's current experience and allowing one to be in closer contact with life without a "dense filtering of experience through discriminatory thought" (Brown et al. 2007, p. 219). As such, the mindful individual gains a deeper insight into themselves and becomes more capable of acting in ways that are self-determining and consistent with their fundamental values—all of which contribute to increased life satisfaction (Brown and Ryan 2003; Brown et al. 2007; Leary 2004).

Although mindfulness is similar to the quiet ego's characteristic of detached awareness, they are separate, distinct constructs in that the quiet ego concerns personhood (i.e., what it means to be a person; Wayment et al. 2015a). It deals with one's fundamental conceptualization of one's self or, in James's terms, it deals with the *I*'s framing of the *Me* (Brown 1998). Mindfulness, on the other hand, is a quality of consciousness, characterized by attentiveness and present-focused, non-judgmental awareness (Brown et al. 2007; Brown and Ryan 2003). The quiet ego and mindfulness are independent but related concepts—a person with a quiet ego likely, but not necessarily, displays mindfulness. And it is possible that a person with a quiet ego exhibits mindfulness in some, but not all, domains,



as mindfulness is situationally variable<sup>1</sup> (Baer et al. 2006; Brown et al. 2007; Brown and Ryan 2003).

# 1.6 The Present Study

In this study, we examined the quiet ego's construct validity in the domain of EI. We also tested the quiet ego's associations with subjective well-being and stress via EI. We predicted that the quiet ego would be positively associated with both ability and trait EI. This association, in turn, would result in greater subjective well-being and less psychological stress. The ordering of the variables in the indirect effects analyses was based on the humanistic approach that treats the self as explanatory variable (Rogers 1951; Wayment et al. 2015a) as well as prior research showing that the manipulation of the quiet ego reduced physiological stress and improved cognitive functioning (Wayment et al. 2015b).

In addition, we tested serial indirect effects that predicted the quiet ego would transmit its effects to subjective well-being and stress first via mindfulness, and then via trait EI. This model and its underlying theoretical rationale extended prior works showing that mindfulness benefited life satisfaction (Schutte and Malouff 2011; Wang and Kong 2014) and alleviated mental stress via its association with trait EI (Bao et al. 2015; Wang and Kong 2014). In other words, trait EI mediated the positive relationship between mindfulness and life satisfaction, as well as the negative relationship between mindfulness and mental distress. We predicted that the quiet ego would be positively associated with mindfulness, which would then be positively associated with trait EI, an association that would translate to increased subjective well-being and decreased psychological stress.

#### 2 Method

## 2.1 Participants

We pre-registered a sample size of 300 participants. This sample size corresponds to a power of at least .90, assuming a medium effect size for the serial mediation model (Taylor et al. 2008, Table 8). We excluded six participants because they failed to pass an attention check and replaced them with another six.<sup>3</sup> All participants (231 female, 69 male) were University of Massachusetts Amherst undergraduate psychology students who participated in exchange for course credit. Their mean age was 19.7 years (SD=1.7); ethnically, 225

<sup>&</sup>lt;sup>3</sup> The attention check asked participants to select a number from four number options.



<sup>&</sup>lt;sup>1</sup> We examined the quiet ego's correlations with the other variables after removing the 3 mindfulness items from the scale (items 2, 6, 10). The reduced quiet ego scale had very similar correlations with the other variables including mindfulness, suggesting the quiet ego's relationship with mindfulness was not solely driven by the original mindfulness items, but rather that it relates to mindfulness as a whole. The correlation table can be found in the supplemental material.

<sup>&</sup>lt;sup>2</sup> For example, Schutte and Malouff (2011) found that trait EI mediated the relationship between mindfulness and life satisfaction such that mindfulness had a positive influence on life satisfaction via its positive association with trait EI. In Bao et al.'s (2015) investigation of the relationships between mindfulness, trait EI, and perceived stress, mindfulness was negatively associated with perceived stress. This association was mediated by trait EI such that higher levels of mindfulness were associated with higher levels of trait EI, which ultimately resulted in lower levels of perceived stress.

(75%) identified as Caucasian, 31 (10.3%) as Asian, 17 (5.7%) as African American, 13 (4.3%) as Hispanic, 7 (2.3%) as Multi-Racial, and 7 (2.3%) as Other.

#### 2.2 Materials

## 2.2.1 Quiet Ego

The Quiet Ego Scale was used to measure the strength of the quiet ego (Wayment et al. 2015a). It measures the four characteristics of the construct: Inclusive Identity, Perspective Taking, Detached Awareness, and Growth-mindedness. The scale consists of 14 items, answered on a 5-point Likert scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Sample items include "I find myself doing things without paying much attention" (Detached Awareness, reverse-keyed); "I feel a connection to people of other races" (Inclusive Identity). Higher scores indicate greater quiet ego strength. It's McDonald's omega was .714 for this sample.<sup>4</sup>

## 2.2.2 Ability El

Ability EI was measured using the Situational Test of Emotional Management—Brief (STEM-B) (Allen et al. 2015). It is an abbreviated version of the Situational Test of Emotional Management (STEM)—an instrument developed as a theory-driven and ecologically valid alternative to the then dominant, proprietary Mayer-Salovey-Caruso Emotional Intelligence Test (MacCann and Roberts 2008).

STEM-B consists of 18 questions, each presenting an emotion-provoking scenario in which participants are asked to choose what they think is the most effective way to manage emotions in that scenario (among 4 alternatives). A typical scenario goes as follows: "Jacob is having a large family gathering to celebrate him moving into his new home. He wants the day to go smoothly and is a little nervous about it. What action would be the most effective for Jacob?" Each of the four options has an a-priori determined score on a 6-point scale, based on expert ratings from previous scale construction research (i.e., emotion researchers and professionals in related fields such as psychotherapy). Scoring is done by summing up the scores of the options selected for each question, with higher scores indicating greater ability in emotion management (MacCann and Roberts 2008). McDonald's omega for this measure was .721.

#### 2.2.3 Trait El

Trait EI was measured by the Trait Emotional Intelligence Questionnaire—Short Form (TEIQue-SF) (Petrides 2009). The scale consists of 30 items, answered on a 7-point Likert scale, ranging from 1 (*Completely Disagree*) to 7 (*Completely Agree*). Sample items include "Expressing my emotions with words is not a problem for me" and "I can deal effectively with people." Scoring is done by first reverse scoring certain items and then

<sup>&</sup>lt;sup>4</sup> We used McDonald's omega instead of Cronbach's alpha as it's a more accurate reliability index (Dunn et al 2014; Hayes and Coutts 2020). We used the MBESS package in R to compute omega (Kelley 2007). For multidimensional scales, we first computed omega for each subscale and then averaged them to yield the omega for the construct.



averaging across all items, with higher scores indicating greater trait EI. McDonald's omega was .894 for this sample.

#### 2.2.4 Mindfulness

Mindfulness was measured by the Five Facet Mindfulness Scale (FFMS) (Baer et al. 2006). The FFMS consists of 5 subscales, each measuring 1 facet of the underlying construct mindfulness: (1) Nonreactivity to Inner Experience; (2) Observing Sensations/Perceptions/Thoughts; (3) Acting with Awareness; (4) Describing with Words; (5) Nonjudging of Experience (Baer et al. 2006). It consists of 39 items, answered on a 5-point Likert scale from 1 (*Never or very rarely true*) to 5 (*Very often or always true*). Sample items include "When I'm walking, I deliberately notice the sensations of my body moving" (Observing Sensations) and "I can easily put my beliefs, opinions, and expectations into words" (Describing with Words). McDonald's omega for this sample was .873.

## 2.2.5 Subjective Well-Being (Cognitive Well-Being)

The Satisfaction with Life scale was used to measure cognitive well-being (Diener et al. 1985). This 5-item, unidimensional scale was designed to measure a global cognitive evaluation of one's satisfaction with life. Items were answered on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). A sample item is "If I could live my life over, I would change almost nothing." Higher scores indicate greater satisfaction with life. McDonald's omega for this sample was .888.

## 2.2.6 Subjective Well-being (Affective Well-being)

The Positive and Negative Affect Schedule (PANAS) was used to measure affective well-being (Watson et al. 1988). This scale consists of 20 words (e.g., Upset, Active), with 10 referring to positive affect and the other 10 referring to negative affect. Participants indicated the extent to which each word applied to their lives *over the past week*, using a 5-point Likert scale ranging from 1 (*Very Slightly or Not at All*) to 5 (*Extremely*). Scoring is done by summing up positive items and negative items separately to yield a positive affect score and a negative affect score. McDonald's omegas were .903 for positive affect and .854 for negative affect.

## 2.2.7 Perception of Stress

Perception of stress was measured using the Perceived Stress Scale (Cohen et al. 1983). It measures the extent to which situations in one's life are perceived as stressful (for example, as a result of an inability to predict or control things in life). The scale consists of 10 items, answered on a 5-point Likert scale ranging from 0 (*Never*) to 4 (*Very Often*). A sample item is "In the last month, how often have you been upset because of something that happened unexpectedly?" Scoring is done by first reverse scoring certain items and then summing across all items, with higher scores indicating more perceived stress. McDonald's omega for this sample was .880.



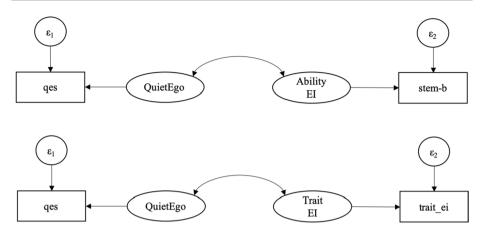


Fig. 1 CFA models with single indicator specifications examining the quiet ego's construct validity in EI qes=Quiet Ego Scale; stem-b=Situational Test of Emotional Management—Brief; trait\_ei=Trait Emotional Intelligence Questionnaire

#### 2.3 Procedure

After arriving at the lab, participants read and signed a consent form before being placed in front of a computer to start the study, which was designed in and hosted by Qualtrics. The survey started with the Quiet Ego Scale, followed by the Mindfulness Scale, the Ability EI measure (STEM-B), the Trait EI questionnaire, Satisfaction with Life Scale, PANAS, the Perceived Stress Scale, and a final demographic questionnaire assessing age, gender, ethnicity, social status, and religiosity.

## 2.4 Analytical Strategy

Construct validity. Construct validity concerns the theoretical relationship of one variable to other variables, i.e., the extent to which a measure behaves the way it should with regard to established measures of similar (or dissimilar) constructs (Devellis 2017). It is usually examined by simple correlations (*r*). Although a valid approach (DeVellis 2017), it can be less accurate in that it does not distinguish between true construct variance and random measurement error, i.e., it treats construct variance as if it reflects the true variability of the construct (Brown 2015; Kline 2016).

We therefore adopted a confirmatory factor analysis framework (CFA) with single-indicator specifications. This approach is superior in that it partitions the variance of a construct into two components: true variance and unexplained variance (i.e., random measurement error), which can provide a better (and purer) estimate of the relationship between two constructs (after partialling out random measurement errors) (Brown 2015; Kline 2016).

Measurement errors were calculated by multiplying each variable's variance by its unreliable component, which is 1 minus its reliability (as measured by McDonald's omega) (Brown 2015; Kline 2016). Figure 1 illustrates the model specifications.

Predicting subjective well-being and stress. To test the hypotheses that the quiet ego transmitted its effects to subjective well-being and stress via ability and trait EI, respectively, we used structural equation modelling (path models) with single indicator



Fig. 2 a Model specification testing the indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via ability EI. *Note* Pairwise covariances between the subjective well-being and stress variables were omitted to save space. Also omitted were covariates age, gender, ethnicity, social status, and religiosity. b Model specification testing the indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via trait EI. *Note* Pairwise covariances between the subjective well-being and stress variables were omitted to save space. Also omitted were covariates age, gender, ethnicity, social status, and religiosity. c Model specification testing the serial indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via mindfulness and trait EI. *Note* Pairwise covariances between the subjective well-being and stress variables were omitted to save space. Age, gender, ethnicity, social status, and religiosity were also omitted as covariates

specifications (with measurement errors partialled out) using Mplus 7.1 (Kline 2016). Figure 2a and b depict the models. Again, we calculated measurement errors by multiplying each variable's variance by its unreliable component which is 1 minus its reliability (e.g., Error<sub>QuietEgo</sub> = Variance<sub>QuietEgo</sub> x [1 – Omega<sub>QuietEgo</sub>]) (Brown 2015; Kline 2016). We used the Satorra-Bentler scaled Maximum Likelihood (ML) estimator to calculate standard error as the data violated the assumption of multivariate normality (i.e., the MLM estimator in Mplus) (Brown 2015; Kline 2016).

Indirect effects. We estimated indirect effects by using the product of coefficients approach (Fairchild and McDaniel 2017; Hayes 2018). The products of paths a  $b_1$ , a  $b_2$ , a  $b_3$ , and a  $b_4$  estimated the indirect effects of the quiet ego on subjective well-being (i.e., life satisfaction, positive and negative affect), and stress via ability EI,<sup>5</sup> as shown in Fig. 2a.

Similarly, the products of paths  $a b_1$ ,  $a b_2$ ,  $a b_3$ , and  $a b_4$  estimated the indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via trait EI, as can be seen in Fig. 2b.

To test the hypotheses that the quiet ego transmitted its effects to subjective well-being and stress via mindfulness and trait EI in a serial fashion, we again used a path model with single indicator specifications and the product of coefficients approach. As shown in Fig. 2c, the products of paths  $a_1$   $d_{21}$   $b_5$ ,  $a_1$   $d_{21}$   $b_6$ ,  $a_1$   $d_{21}$   $b_7$ , and  $a_1$   $d_{21}$   $b_8$  estimated the serial indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via first mindfulness and then trait EI.

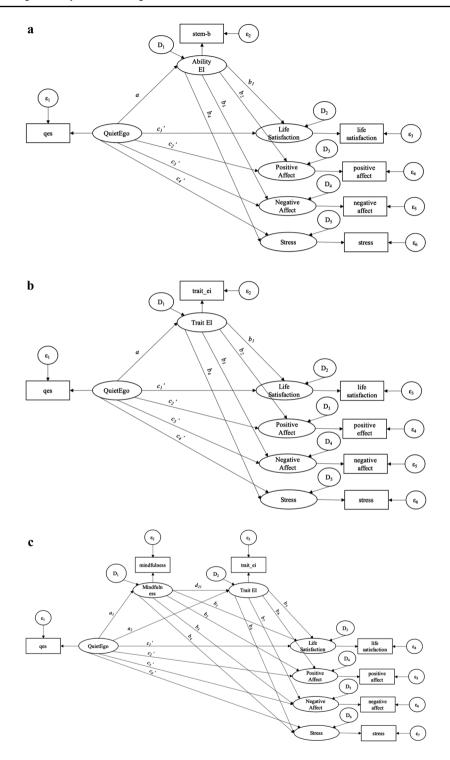
We accounted for the (unexplained) covariances within the subjective well-being measures (i.e., life satisfaction, positive affect, and negative affect) and between the subjective well-being and psychological stress by correlating their error variances in all models. We also included participants' age, gender, ethnicity, religiosity, and social status as covariates in all models.

## 3 Results

Table 1 presents the correlations between the study variables as well as their means and standard deviations. As can be seen, the quiet ego correlated highly with trait EI (.60); this may reflect the fact that both measures tap into one's understanding of oneself, with the quiet ego being a general understanding of the kind of person one is and trait EI being a specific understanding of one's characteristics and tendencies when dealing with emotional

<sup>&</sup>lt;sup>5</sup> We did not treat subjective well-being (SWB) as one latent variable because its structural conceptualization is not clear with respect to how life satisfaction, positive, and negative affect constitute or combine to generate the theoretical construct SWB (Busseri 2015).







	1	2	3	4	5	6	7	8	M (SD)
1. Quiet Ego	_								3.72 (.410)
2. STEM-B	.13*	_							83.91 (5.40)
3. TEIQue	.60**	.08	_						4.88 (.73)
4. Mindfulness	.50**	.05	.73**	_					3.15 (.48)
5. LS	.39**	.01	.65**	.48**	_				23.31 (7.00)
6. PA	.40**	06	.63**	.48**	.55**	_			34.03 (8.31)
7. NA	18**	03	45**	47**	37**	12*	_		23.10 (7.31)
8. Stress	30**	04	65**	62**	55**	46**	.66**	-	17.93 (6.88)

Table 1 Correlations, means, and standard deviations of study variables

STEM-B=Situational Test of Emotional Management—Brief; TEIQue=Trait Emotional Intelligence Questionnaire—Short Form; Mindfulness=Five Facet Mindfulness Scale; LS=life satisfaction; PA=positive affect; NA=negative affect; Stress=Perceived Stress Scale. \*p < .05, \*\*p < .01

situations. The quiet ego also correlated highly with mindfulness (.50)—this may reflect that one of the quiet ego characteristics is detached awareness which is akin to mindfulness, though they differ in the sense that mindfulness is about moment-by-moment awareness whereas detached awareness also reflects situational awareness, "an ability to step back when necessary and adjust initial understanding or response" (Huffman et al. 2015, p. 664).

# 3.1 Construct Validity

As explained in Sect. 2.4 "Analytical Strategy," we used a CFA framework to examine the quiet ego's construct validity with regard to ability and trait EI as it allowed us to partition the variances of the variables into two components (true variances and random measurement errors) and to partial out the random measurement errors to achieve purer estimates of the relationships between these variables.

Hence, we first computed and removed these variables' (i.e., the quiet ego, ability and trait EI) measurement errors before examining the correlations between them in Mplus (v 7.1). The correlation between the quiet ego and ability EI was r = .18, p = .02, 95% CI [.03, .34]. The correlation between the quiet ego and trait EI was r = .75, p < .001, 95% CI [.67, .83]. Although highly correlated, the two constructs are not identical (both theoretically and empirically). The r value .75 was Fisher-z transformed to z = .97 and was compared to z = 2.65 (i.e., r = .99) and it was significantly different from r = .99, z = -20.4, p < .001.

# 3.2 Predicting Subjective Well-Being and Stress via Ability El and Trait El

Ability EI. For ability EI (Fig. 3a), the model fit the data well: Satorra-Bentler scaled  $\chi^2(10) = 7.76$ , p = .65, SRMR = .014, S-B RMSEA = .00 (90% CI = .00 – .054), S-B



TLI=1.02, S-B CFI=1.00.<sup>6</sup> As can be seen in Fig. 3a, indirect effects analyses did not reveal significant effects from the quiet ego to life satisfaction ( $ab_1 = -.18$ , SE = .29, p = .53), positive affect ( $ab_2 = -.59$ , SE = .50, p = .24), negative affect ( $ab_3 = -.07$ , SE = .31, p = .82), and perceived stress ( $ab_4 = -.03$ , SE = .26, p = .90).

After accounting for the indirect effects, the direct effects of the quiet ego (i.e., c' paths in Fig. 3a) on life satisfaction, positive, negative affect, and perceived stress were significant; that is, holding constant ability EI, participants who were higher on the quiet ego reported experiencing greater satisfaction with life ( $c_1'$ =9.06, SE=1.17, p<.001,  $c_1'c_s^{-7}$ =.52), more positive affect ( $c_2'$ =11.57, SE=1.64, p<.001,  $c_2'c_s$ =.57), less negative affect ( $c_3'$ =-4.13, SE=1.37, p<.01,  $c_3'c_s$ =-.23), and less perceived stress in their lives ( $c_4'$ =-7.37, SE=1.33, p<.001,  $c_4'c_s$ =-.43). These results replicate past research showing the associations between the quiet ego and subjective well-being and stress (e.g., Wayment et al. 2015a, b, 2016).

*Trait EI.* Regarding trait EI (Fig. 3b), the model provided good fit to the data: Satorra-Bentler scaled  $\chi^2(10) = 7.76$ , p = .65, SRMR = .015, S-B RMSEA = .00 (90% CI = .00-.054), S-B TLI = 1.013, S-B CFI = 1.00.8 Further, indirect effects analyses revealed significant effects from the quiet ego to life satisfaction ( $ab_1 = 11.62$ , SE = 2.06, p < .001,  $ab_1 \,_{cs}^{9} = .67$ , 95% CI [7.59, 15.66]), positive affect ( $ab_2 = 11.07$ , SE = 2.12, p < .001,  $ab_2 \,_{cs} = .55$ , 95% CI [6.92, 15.21]), negative affect ( $ab_3 = -12.27$ , SE = 2.42, p < .001,  $ab_3 \,_{cs} = -.69$ , 95% CI [-17.01, -7.52]), and perceived stress ( $ab_4 = -14.79$ , SE = 2.14, p < .001,  $ab_4 \,_{cs} = -.87$ , 95% CI [-18.98, -10.60]), via trait EI.

There was no evidence that the quiet ego influenced life satisfaction  $(c_1'=-2.75, p=.25)$  or positive affect  $(c_2'=-.09, p=.97)$  independent of the indirect effects; there was, however, evidence that the quiet ego was associated with an increase in negative affect  $(c_3'=8.06, p<.01)$  and stress  $(c_4'=7.39, p=.001)$  after accounting for trait EI and covariates. These findings are at odds with the negative, zero-order correlations between the quiet ego and negative affect and stress. This mostly likely reflects a suppression effect, defined

6	Frror	correl	ations	for	the	ability	FI	model.
	EHOI	COLLEI	auons	101	uic	aumity	LI	model.

	1	2	3	4
1. Life satisfaction	_			
2. Positive affect	.43***	_		
3. Negative affect	42***	$.00^{\mathrm{ns}}$	_	
4. Stress	58***	42***	.76***	_

<sup>&</sup>lt;sup>7</sup> Completely standardized direct effect:  $c'_{cs} = SD_X(c')/SD_Y$ , It expresses direct effects in terms of the difference in standard deviations in the dependent variable (Y) between two cases that differ by one standard deviation in the independent variable (X) (Hayes 2018).

<sup>&</sup>lt;sup>8</sup> Error correlations for the trait EI model.

	1	2	3	4
1. Life satisfaction	_			
2. Positive affect	.18*	_		
3. Negative affect	$11^{ns}$	.39***	-	
4. Stress	23*	07 ns	.63***	-

<sup>&</sup>lt;sup>9</sup> Completely standardized indirect effect:  $ab_{cs} = SD_X (ab)/SD_Y$ . It expresses indirect effects in terms of the difference in standard deviations in the dependent variable (Y) between two cases that differ by one standard deviation in the independent variable (X) (Hayes 2018).



Fig. 3 a Path coefficients of structural equation model testing the indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via ability EI. \*p < .05, \*\*p < .01, \*\*\*p < .001. **b** Path coefficients of structural equation model testing the indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via trait EI. \*p < .05, \*\*p < .01, \*\*\*p < .001. **c** Path coefficients of structural equation model testing the serial indirect effects of the quiet ego on life satisfaction, positive affect, negative affect, and stress via mindfulness and trait EI. \*p < .05, \*\*p < .01, \*\*\*p < .001

as cases in which "the inclusion of a second predictor increases the predictive power of one or both predictors" (Watson et al. 2013, p. 2). In other words, if predictor number 2 is a good measure of the sources of error (i.e., criterion-*irrelevant* variance) of predictor number 1, then by giving predictor number 2 a negative weight, the model as a whole can predict the criterion more accurately than either predictor 1 or 2 can alone (Darlington and Hayes 2017).

With regard to the results, trait EI and quiet ego are positively correlated with each other but negatively correlated with stress and negative affect (see Table 1). In the models predicting stress and negative affect, a negative weight or sign was given to the quiet ego, making its beta coefficient positive (it was originally negative), thereby making the model as a whole more accurate in predicting variances in stress and negative affect. In fact, the suppression effect showed up for all DVs as the quiet ego coefficients predicting life satisfaction ( $c_1' = -2.75$ ) and positive affect ( $c_2' = -.09$ ) turned negative (as opposed to its positive, zero-order correlations with the two variables), although the coefficients weren't significant. <sup>10</sup>

## 3.3 Predicting Subjective Well-Being and Stress via Mindfulness and Trait El

Regarding the serial indirect effects model, it provided good fit to the data: Satorra-Bentler scaled  $\chi^2(10) = 7.89$ , p = .64, SRMR = .016, S-B RMSEA = .00 (90% CI = .00–.055), S-B TLI = 1.012, S-B CFI = 1.00.<sup>11</sup> As can be seen in Fig. 3c, there was evidence of serial indirect effects from the quiet ego to life satisfaction ( $a_1 \ d_{21} \ b_5 = 6.26$ , SE = 1.53, p < .001,  $a_1 \ d_{21} \ b_5 \ c^{12} = .36$ , 95% CI [3.25, 9.27]), positive affect ( $a_1 \ d_{21} \ b_6 = 6.08$ , SE = 1.68, p < .001,  $a_1 \ d_{21} \ b_6 \ c_s = .30$ , 95% CI [2.79, 9.36]), negative affect ( $a_1 \ d_{21} \ b_7 = -3.59$ , SE = 1.38, p < .01,  $a_1 \ d_{21} \ b_7 \ c_s = -.20$ , 95% CI [-6.30, -.89]), and perceived stress ( $a_1 \ d_{21} \ b_8 = -5.42$ , SE = 1.29, p < .001,  $a_1 \ d_{21} \ b_8 \ c_s = -.32$ , 95% CI [-7.94, -2.89]), first via mindfulness, and then trait EI.

Independent of the serial indirect effects, there was no evidence that the quiet ego influenced life satisfaction ( $c_1' = -2.31$ , p = .33) and positive affect ( $c_2' = .33$ , p = .90); there

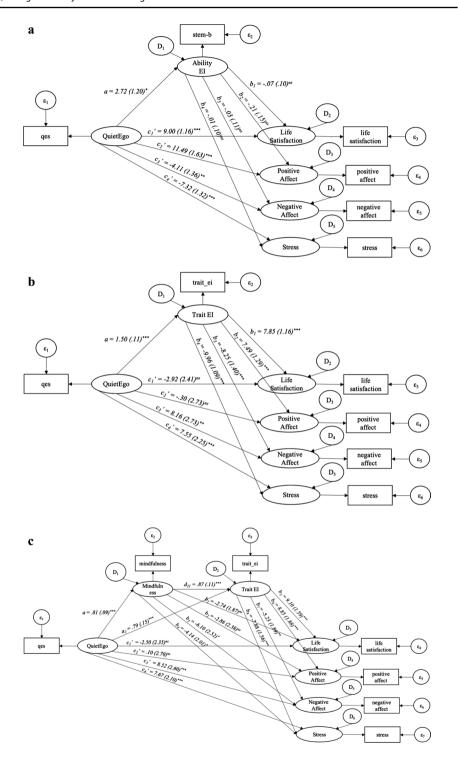
<sup>&</sup>lt;sup>11</sup> Error correlations for the serial indirect effects model.

	1	2	3	4
1. Life satisfaction	_			
2. Positive affect	.14 <sup>ns</sup>	_		
3. Negative affect	$17^{ns}$	.37***	_	
4. Stress	26*	08 <sup>ns</sup>	.61***	_

<sup>&</sup>lt;sup>12</sup> Completely standardized effect of serial indirect effects:  $adb_{cs} = SD_X(adb)/SD_Y$  (Hayes 2018).



We probed the suppression effects with regard to negative affect and stress by conducting indirect effects analyses with each of the four quiet ego components as exogenous variable. Results are presented in detail in the article's supplemental materials.





was, however, evidence that the quiet ego was associated with increased negative affect  $(c_3'=8.54, SE=2.62, p<.01)$  and stress  $(c_4'=7.61, SE=2.10, p<.001)$  after controlling for mindfulness and trait EI (i.e., independent of the serial indirect effects). This again is consistent with a suppression effect as explained in the previous section.<sup>13</sup>

## 4 Discussion

In this study, we examined the quiet ego's construct validity in the domain of EI and demonstrated that the quiet ego was associated with both ability EI and trait EI, providing the first evidence of the quiet ego's construct validity in this domain.

Then, based on prior research showing the connections between ability EI, trait EI, and subjective well-being and psychological stress, we hypothesized that ability EI and trait EI (respectively) would mediate the effects of the quiet ego on subjective well-being and psychological stress such that the quiet ego would be associated with greater ability EI and trait EI, which would then translate to greater life satisfaction, more positive affect, less negative affect, and less stress.

Consistent with the hypotheses, we found that trait EI mediated such effects: Participants higher in quiet ego showed higher trait EI, which in turn was associated with greater life satisfaction, more positive affect, less negative affect, and less perceived stress, after controlling for age, gender, ethnicity, social status, and religiosity. These indirect effects were also of large sizes as shown in the standardized effects (the smallest of which was .55 for positive affect: One standard deviation difference in the quiet ego was associated with .55 SDs difference in positive affect through trait EI).

The results are consistent with theories on both the quiet ego and trait EI. As a compassionate self-identity, people higher in quiet ego are more inclusive in their identity and engage more in perspective taking, a tendency that not only facilitates social interaction but also enhances one's self-efficacy in dealing with other people, which is inherently an emotional situation (Baron-Cohen et al. 2001; Wayment et al. 2015a). One's self-efficacy in dealing with other people is part of one's trait EI, i.e., one's judgement on how well one can deal with others' emotions (Petrides et al. 2007). Therefore, it makes sense that the quiet ego would positively predict trait EI, which had already been shown to be related to subjective well-being and psychological stress (e.g., Petrides et al. 2016).

The notion that the quiet ego and trait EI are complementary is also illustrated by the suppressor effect we observed between these two variables in models predicting stress and negative affect (Sect. 3.2). Trait EI concerns emotional self-efficacy. The quiet ego, on the other hand, concerns one's conceptualization of the self, a higher-level trait that encompasses trait EI and is therefore able to correct for or suppress the sources of error in it (criterion-irrelevant variance).

Inconsistent with the predictions, however, there was no evidence of indirect effects from the quiet ego to subjective well-being and psychological stress via ability EI: Although the quiet ego was positively associated with ability EI, this didn't seem to have any effect on subjective well-being and stress.

We again probed the suppression effects by conducting serial indirect effects analyses with each of the four quiet ego components as exogenous variable. Detailed results are presented in the article's supplemental materials.



Ability EI is conceptualized as a reasoning, problem-solving ability that can be objectively measured (Ferguson and Austin 2010), whereas subjective well-being and psychological stress are subjective in nature as they are about people's perceptions of their lives and may therefore correspond less to the objectively measured ability EI.

Though contradictory to some past findings indicating associations between ability EI and subjective well-being measures (e.g., MacCann and Roberts 2008; Mayer et al. 2008), there is evidence indicating that the links between ability EI and these measures are weak and sometimes non-significant. For example, Brackett and Mayer (2003) found that the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) was not significantly associated with life satisfaction (r=-.05). In addition, Zeidner and Olnick-Shemesh (2010) reported that MSCEIT did not significantly predict either life satisfaction or experienced affect. Taken together, this suggests that the link between ability EI and subjective well-being is in general tenuous.

Although there was no evidence that the quiet ego transmitted its effects via ability EI, there was evidence that the quiet ego predicted each of the measures in the expected directions (i.e., the direct effects): After controlling for ability EI and the covariates, the quiet ego predicted increased life satisfaction and positive affect; it also predicted decreased stress and negative affect. These results replicate past findings showing the connections between the quiet ego and these measures (Wayment et al. 2015a, b; Wayment and Bauer 2018), but with more stringent controls and relevant covariates, thereby strengthening its discriminant validity.

Furthermore, ability EI was not significantly correlated with trait EI (r=.08), a finding that reflects the differences in the conceptualization of the two constructs, with ability EI being one's objectively manifested ability to recognize, understand, and manage one's emotions and trait EI being one's subjective evaluation of one's tendencies and dispositions related to emotions (Ferguson and Austin 2010; Petrides et al. 2007; Siegling et al. 2015). The result was consistent with prior findings; for example, Austin (2010) reported a non-significant relationship between ability and trait EI (r=.12), which was corroborated by another study that reported ability and trait EI correlated at r=.11 (p>.05) (Ferguson and Austin 2010).

In addition to testing EI as the sole mediator, based on the literature on mindfulness and trait EI, we also tested whether mindfulness and trait EI acted in a serial fashion to transmit the quiet ego's effects onto subjective well-being and psychological stress.

Consistent with the hypotheses, mindfulness and trait EI mediated serially the quiet ego's effects: Participants who were higher on quiet ego were also more mindful; and participants who were more mindful perceived themselves to be more capable in dealing with emotional situations (i.e., trait EI), a perception that translated into greater life satisfaction, more frequently experienced positive affect, less frequently experienced negative affect, and less perceived stress.

These results replicated past research showing that trait EI mediated the relationship between mindfulness and life satisfaction (Petrides et al. 2007; Wang and Kong 2014), affective well-being (Kong and Zhao 2013; Schutte and Malouff 2011), and perceived stress (Mikolajczak et al. 2007; Mikolajczak and Luminet 2008). They also extended past research to the realm of the quiet ego, theoretically enriching not only the quiet ego, but also mindfulness and trait EI research.

Finally, limitations to the study should be noted. First, the study used a convenience sample of 300 undergraduate students. As such, the relations it uncovered may not be generalizable to other more diverse populations. Despite this limitation, however, this work makes a contribution from the perspective of process inference, that is "inferences about



the [theoretical] processes at work generating the pattern of associations rather than what the associations would be if all members of a population participated in the study" (i.e., population inference) (Hayes 2018, p.64; Mook 1983). From this perspective, it matters less that the participants were not randomly selected from a larger population because the inferences are geared more toward the theoretical processes that generate the observed associations; in other words, they are geared toward "the generalization of theoretical conclusions" and it's that understanding of the theoretical processes that has external validity (Brewer and Crano 2014; Mook 1983, p. 381).

Further, given our methodology, our results are correlational in nature and do not provide all the necessary conditions for establishing causation: covariation, temporal ordering, and the elimination of competing hypotheses—at best, they established covariation among the variables (Hayes 2018). However, the study was theoretically driven and the results were consistent with prior research showing the associations between the quiet ego and subjective well-being (Wayment and Bauer 2017, 2018; Wayment et al. 2015a), findings that should increase confidence in the current results.

In sum, the study uncovered trait EI as a mediator linking the quiet ego and subjective well-being and psychological stress. Building on the research on mindfulness and trait EI, the study further revealed that mindfulness and trait EI sequentially transmitted the quiet ego's effects on subjective well-being and stress. The study not only replicated past research, it also expanded the current understanding of the quiet ego. In doing so, it paved the way for further investigations using experimental manipulations to examine whether the quiet ego would causally influence subjective well-being and perceived stress.

# **Compliance with Ethical Standards**

**Conflict of interest** The authors declare that they have no conflict of interest.

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