


Humility, Personality, and Psychological Functioning

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Abstract

As part of the shift to a more positive psychology, researchers have demonstrated a relatively new and intense fascination with humility. Following a discussion of this construct and its correlates, we investigate how humility relates to personality dimensions, anxiety and depression, love of life and happiness, and self-efficacy in two samples—college students and adult Mturk workers. In both studies, we used the Dual Dimension Humility Scale, a measure that does not conflate the construct with honesty. Among students ($N = 399$), aspects of humility correlated with dimensions of personality (more conscientiousness and openness, and less agreeableness and neuroticism), less depression, more love of life and happiness, and stronger social self-efficacy. Although fewer associations were found, overall, among adults ($N = 509$), aspects of humility correlated with dimensions of personality, less anxiety, and some dimensions of psychological well-being. The most unique contributions of this study include linking humility with college students' love of life and self-efficacy, and with adults' well-being. We conclude with a discussion of ideas for future research and potential applications to boost humility.

Keywords

humility, personality, happiness, self-efficacy, love of life, well-being

Humility is becoming recognized as a virtue or “character strength” worthy of attention (Peterson & Seligman, 2004; Wright, 2019). Key components of humility include

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accurately assessing one's characteristics, acknowledging one's limitations, viewing one's achievements and abilities in perspective, and appreciating other people, things, and ideas (Tangney, 2002). Leary and Guadagno (2011) claim humility is central to optimal functioning, and others consider it a foundational meta-virtue, "necessary—though not sufficient—for the full development of all the other virtues (honesty, generosity, compassion, etc.)" (Wright et al., 2017, p. 27). Most researchers agree humility has an intrapersonal as well as an interpersonal component (Davis et al., 2010; Leary & Banker, 2019). It is challenging to empirically investigate humility due to a multitude of issues regarding context (i.e., religious or secular), measurement (McElroy–Heltzel et al., 2019) and definition (Leary & Banker, 2019; Porter et al., 2017; Wielenberg, 2019). Some researchers consider it a state that is elicited in certain conditions (Chancellor & Lyubomirsky, 2013; Stellar et al., 2018), however most rely on self-reports (Peters et al., 2011) or estimations made by others (Davis et al., 2011; Owens et al., 2013) to assess a rather stable characteristic.

In the present study we consider humility to be an enduring personal awareness that encompasses both low self-focus and high other-focus, "an epistemically and ethically aligned positioning of oneself within the context of the surrounding universe...an awareness of one's place alongside other morally relevant beings" (reference omitted). Our conceptualization does not connote belittling, however: self-awareness, de-centering of the self, and self-evaluation do not require self-denigration. We conceptualize humility as enduring: it likely begins to develop in childhood, role modeled by parents who foster a secure attachment (see Kesebir, 2019). Humility has many benefits, and in the present paper we investigate how it relates to mental health, personality, and self-efficacy among college students and adults.

Humility and Mental Health

After decades of focusing on suffering and mental illness, psychology is undergoing a shift toward resilience and mental health. This follows Maslow's mid-century challenge to study effective functioning (see Sappington, 1989), and suggests a return to even older issues regarding what constitutes a good person and a good life (Diener, 2009). Recently, Western psychology has embraced Ryff's conceptualization of well-being (2014), which is based on Aristotle's 4th century notion of eudaimonia (*Nichomachean Ethics*, 1985 translation). Eudaimonia refers to possessing a good character and engaging in right action; it is aligned with self-actualization (Maslow, 1943) and "pursuing the right end" (Ryan et al., 2008, p. 143) rather than a hedonic pursuit of pleasurable activities (Deci & Ryan, 2008; Huta & Waterman, 2014).

Ryff and Singer (1998) combine eudaimonia with modern humanistic, developmental, and existential literatures to form a broad approach to well-being. This conceptualization of well-being is comprised of six facets: autonomy (thoughts and behaviors are self-determined, independent), environmental mastery (creating and choosing opportunities/ contexts), personal growth (changing and improving over time), positive relationships (trusting, satisfying bonds with others), having a sense of

purpose (meaning and direction in life), and self-acceptance (recognizing and accepting good and bad personal qualities). Many studies support the claim that eudiamonia-based well-being relates to optimal functioning, resilience, and mental health (see Ryff & Singer, 2013, for a review). Indeed, scores on these well-being dimensions correlate with less depression (Bhullar et al., 2014; Wood & Joseph, 2010) and more optimism (Augusto-Landa et al., 2011), gratitude, hope, and grit (Disabato et al., 2016).

How might humility relate to eudiamonic well-being? High other-focus includes being concerned about and appreciating others, which suggests positive and healthy relationships. Low self-focus includes recognizing limitations and accepting flaws (i.e., self-acceptance). In addition, when we are more accurate in our self-concept and don't think too highly of ourselves, we acknowledge the need for self-improvement and are more likely to take advantage of relevant opportunities (i.e., environmental mastery), which then fosters personal growth. Eudiamonic well-being appears correlated with overall humility among Polish and Iranian college students (Aghababaei & Arji, 2014; Aghababaei et al., 2016). In the United States, more humble adults also reported higher scores regarding autonomy, environmental mastery personal growth, positive relationships, and a sense of life purpose (Wright et al., 2017). We anticipated replicating the finding that adults' humility is associated with eudiamonic well-being.

There are mental health benefits of humility beyond eudiamonic-focused well-being (see Kesebir, 2019, for an overview). More humble college students report more life satisfaction and/or happiness (Rowatt et al., 2006), more awe (Stellar et al., 2018), more forgiveness and/or gratitude (Aghababaei et al., 2018; Jankowski et al., 2013; Kruse et al., 2014; Rowatt et al., 2006), and less depression and/or anxiety symptoms (Jankowski et al., 2013). Among adults, humility is associated with more life satisfaction and/or happiness (Krause et al., 2016), more gratitude and/or forgiveness (Dwiwardani et al., 2014; Kruse et al., 2014), less depression and/or anxiety symptoms (Krause et al., 2016), and lower scores on "the dark triad" (narcissism, psychopathy, and Machiavellianism; Muris et al., 2017). In the present study, we predicted more humble people would report less anxiety and depression, as well as more happiness and love of life, a construct representing an overall positive evaluation of one's life (Abdel-Khalek, 2007).

Humility and Personality

Research on whether humility correlates with personality typically uses the HEXACO (Ashton & Lee, 2009). The HEXACO measures Honesty-humility, Emotional stability, eXtraversion, Agreeableness, Conscientiousness, and Openness (see Ashton et al., 2014, for a review) and most research using it has been conducted with college students. There is some skepticism regarding the legitimacy of the "honesty-humility" dimension; critics point out that it conflates the constructs of honest and humility and presumes modesty and humility are synonymous (Davis et al., 2010; Leman et al., 2016). Despite this validity concern, an examination of findings is in order, especially considering the vital role of personality in well-being (e.g., Suldo et al. [2015] report

personality explains nearly half of the variance associated with adolescents' life satisfaction).

The most consistent HEXACO-based finding is that students' humility correlates with agreeableness (Aghababaei, 2014; Ashton & Lee, 2009). Lee and Ashton (2013) assessed personality with the HEXACO and a common measure (the NEO-FFI) of the "Big Five/Five Factor" factors (openness, conscientiousness, extraversion, agreeableness, and neuroticism). They administered both scales to pairs of people: student participants and someone students know well. Each person filled out each form twice, describing themselves and the other person. Whether HEXACO Humility was measured by the self or other, and whether the remaining five factors were based on HEXACO or the Big Five scores, the strongest correlations were between humility and agreeableness across situations (Ashton & Lee, 2013). Interpersonally, humility is associated with motives to be kind (Exline & Hill, 2012), which helps explain why humility is a strong predictor of relationship satisfaction (Goddard et al., 2016; Van Tongeren et al., 2019). We predicted positive agreeableness-humility correlations in our samples.

Humble people believe their ways of being in the world may not be the best ways for others or even the best ways in general. This lack of arrogance suggests they would also be open to new experiences, ideas and ways of being, which are hallmark characteristics of openness. "Other-orientedness and low self-focus are facilitated by openness, particularly to people, places, and ideas unfamiliar from one's own" (Paine et al., 2015, p. 7). Indeed, college students' humility correlates with openness (Ashton & Lee, 2009; Exline & Hill, 2012; Lee & Ashton, 2013), and we predicted this association as well.

Conscientious individuals tend to be organized and disciplined, and research has linked humility with conscientiousness among college students (Aghababaei, 2014; Ashton & Lee, 2009; Exline & Hill, 2012; Lee & Ashton, 2013). Perhaps conscientious people are more humble in part due to a more accurate assessment of their capabilities and limitations. Also, conscientious people, who report more affective and cognitive empathy (Melchers et al., 2016), may be more concerned about being timely and doing quality work because they more strongly wish to not inconvenience others. We predicted a positive humility-conscientiousness association.

Neuroticism is the enduring tendency to be emotionally unstable, and it consistently and strongly correlates with psychological distress, for example, anxiety and depression (see Kotov et al., 2010, for a meta-analysis). Humility is associated with less neuroticism among college students (Davis et al., 2017; Exline & Hill, 2012; Rowatt et al., 2006). We assert that because humble people recognize their limitations and flaws, they are more tolerant of others seeing their inner or genuine selves, which might foster authenticity and lessen the chances for mental instability. Thus, we predict a negative relationship between humility and neuroticism.

Although a few studies have linked humility with extraversion (Milojev et al., 2013), this dimension is less consistently and less strongly associated with humility in the

literature, and it seems less conceptually less relevant. We made no predictions regarding this dimension of personality in the present study.

In addition to the question of whether humility correlates with major personality traits, there is the question of whether it is a personality dimension itself. Clearly, it is conceptualized as such on the HEXACO (Ashton et al., 2014). Kesebir asserts it is a personality trait, saying “it is safe to assume that a significant portion of variability in humility will be due to genetics, as with any other personality trait” (2019, p. 192). We agree that humility is fairly stable over time rather than dependent on one’s situation. For example, Wright and colleagues reported two dimensions of humility (low self-focus and high other-focus) correlated .65–.80 over a 2 month period (2017). Similarly, New Zealanders’ humility scores had the highest correlation ($r = .70$) of all HEXACO dimensions across a 2 year interval (Milojev & Sibley, 2014). This temporal stability supports the position that humility is a personality trait, even if the HEXACO is a rather convoluted measure of it.

Humility and Self-Efficacy

Another potentially relevant construct is self-efficacy, which refers to beliefs about our capability “to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over task demands” (Wood & Bandura, 1989, p. 408). Self-efficacy motivates us, directing our behavior in ways that assist with coping and success (Bigman et al., 2016; Burger & Samuel, 2017; Wei et al., 2005). Self-efficacy is shaped by early experiences. “Environments that are responsive to the child’s actions facilitate the development of efficacy beliefs” (Maddux, 2009, p. 338), which are the early environments ideal for promoting secure attachment as well (Bowlby, 1969). In turn, self-efficacy is associated with well-being. Students transitioning to college who were lower in social self-efficacy reported more loneliness and attachment anxiety, as well as more subsequent depression (Wei et al., 2005). In addition, self-efficacy appears associated with more life satisfaction and happiness, and with less anxiety and depression among young adults (Warnecke et al., 2014).

Theoretically, if humility were merely self-debasement, we would expect it to negatively associate with self-efficacy. However, our conceptualization of humility as a de-centering of the self does not require a lack of confidence in one’s competence. Indeed, we can feel capable of doing what needs to be done without over-valuing our abilities and skills as special or superior. Furthermore, we can self-reflect and consider specific personal weaknesses and inabilities, and still conclude, overall, that we are capable individuals. Research has yet to link self-reported humility with self-efficacy. Owens and colleagues (2013) reported self-efficacy was unrelated to humility, however their humility measure was not based on self-ratings but rather ratings by team members. We included self-efficacy in the present study to test our assertion that humility is not self-deprecating. We predicted a positive association between humility and self-efficacy.

Current Hypotheses

In summary, humility appears relevant to well-being, as defined by lower levels of characteristics with a negative valence (e.g., anxiety and depression), or higher levels of markers with a positive valence (e.g., life satisfaction, gratitude, forgiveness, and happiness). We seek to replicate and extend this literature in multiple ways. First, we explore relationships across two distinct samples: young adults recruited because they attend college, and a wider range of adults not recruited due to their student status. Second, we employ an updated measure of humility—the *Dual Dimension Humility Scale* (Wright et al., 2018)—that does not blend humility with modesty and honesty. Third, we include an additional construct representing healthy functioning (love of life). Finally, we include self-efficacy to establish humility is not self-debasement.

Based on prior research and our motives, our first study tested the following hypotheses:

- 1) humility will negatively correlate with trait anxiety and depression symptoms, and positively correlate with happiness and love of life;
- 2) humility will positively correlate with openness to experience, agreeableness, conscientiousness, and less neuroticism; and
- 3) humility will correlate positively with self-efficacy.

STUDY ONE

Method

Participants. Students ($N = 399$) taking Introduction to Psychological Science classes at a medium-sized (10,000–15,000 students) public college in the Southeast region of the US participated. Ages ranged from 18–23 ($M = 18.73$ years, $SD = 1.258$). The sample was predominantly female (83%). Students reported their ethnic background. A majority self-identified as Caucasian/White (83%); fewer identified as African-American/Black (8%), Hispanic (4%), or another ethnic grouping (5%). These data over-represent females at this institution and represent the ethnic diversity more closely. Students received research credit for participation and were given several choices to earn this credit, including other surveys and non-participation alternatives.

Materials

The survey recorded a variety of demographic information, including age, ethnicity, and gender. In addition, participants completed several scales.

We administered the 25-item *Dual Dimension Humility Scale*. Five domains each contain five items and internal consistency of subscales is strong (.84–.95; Wright et al., 2017). This scale is relatively new and therefore we offer a sample item as well as (Cronbach, 1947) coefficient alphas in the present sample: religious low self-focus humility (“Ultimately, there is a Supreme Being who gets all of the credit and glory for

our individual accomplishments," $\alpha = .94$); cosmic low self-focus humility ("I often find myself pondering my smallness in the face of the vastness of the universe," $\alpha = .89$); environmental low self-focus humility ("We should always try to be in harmony with Mother Nature," $\alpha = .92$); high other-focus humility ("I often place the interests of others over my own interests," $\alpha = .93$); and valuing humility ("It's important to always keep one's accomplishments in perspective," $\alpha = .96$). Higher scores reflect more of that dimension. Prior work has documented that scores are moderately correlated with other humility scales (including the honesty-humility dimension of the HEXACO) and that scores are not significantly correlated with social desirability (Wright et al., 2017).

Ten items from the *State-Trait Anxiety Inventory* were selected to assess trait anxiety (Spielberger et al., 1983). Responses options are from 1 (almost never) to 4 (almost always) in the context of how you generally feel. Higher scores convey more anxiety. Across several studies, Barnes and colleagues (2002) reported strong internal consistency ($\alpha = .88$) and test-retest reliability ($\alpha = .88$). Trait anxiety scores were internally consistency in the present study ($\alpha = .88$).

Depression symptoms were measured using a brief ten-item version of Radloff's (1977) *Center for Epidemiologic Studies—Depression Scale* (Cole et al., 2004), which assesses how often someone experienced depressive symptoms in the past week. Responses range from 1 (rarely or none of the time [less than 1 day]) to 4 (most or all of the time [5–7 days]). Higher scores reflect more depression. Internal consistency was acceptable in prior studies with community samples ($\alpha = .75$ and $.83$; Cole et al., 2004), as it was in the current study ($\alpha = .78$).

The Lyubomirsky and Lepper (1999) *Subjective Happiness Scale* was administered to a subset of the sample. Respondents read four items and check one of seven choices between two response ends, for example "in general I consider myself . . ." has response options from 1 (not a very happy person) to 7 (a very happy person). Reliability was strong in prior samples of college students ($\alpha = .85$ – $.92$) and samples of adults in the United States ($\alpha = .85$ – $.86$), and internal consistency was strong in our sample ($\alpha = .88$). Higher scores connote more happiness.

An abbreviated version of the *Love of Life Scale* (LOL; Abdel-Khalek, 2007) was administered to a subset of the sample. Participants report the degree to which they appreciate are pleasurable attachment to their lives; responses are made on a scale from 1 (no) to 5 (very much). Past research documents both strong internal consistency ($\alpha = .91$) as well as temporal reliability (.81) for the full scale, and that scores correlate with measures of happiness, self-esteem, life satisfaction, and optimism (Abdel-Khalek, 2013), as well as mental health and physical health (Abdel-Khalek, 2015). Due to time constraints, we selected nine of the original 16 items that had moderate-to-strong item-total correlations in prior studies; these items were internally consistent ($\alpha = .95$) in the present sample.

Personality was assessed for most students, and it was measured in different ways. The 44-item *Big Five Inventory* (BFI; John & Srivastava, 1999) assesses five dimensions of personality; internal consistency estimates on factors range from .75 to .80 and 3 month test-retest reliabilities range from .80 to .90 over 3-month periods

(John & Srivastava, 1999; Worrell & Cross, 2004). The dimensions, along with internal consistency coefficients in the present study, are extraversion (8 items; $\alpha = .90$), agreeableness (8 items; $\alpha = .84$), conscientiousness (9 items; $\alpha = .84$), neuroticism, (8 items; $\alpha = .88$), and openness to experience (10 items; $\alpha = .81$). Response options ranged from 1 (“disagree strongly”) to 5 (“agree strongly”). Higher scores reflect more of each factor. Due to a computer glitch for a portion of this group, scores were invalid on six items (scattered across factors); for these 108 individuals, the personality scores were calculated separately, with comparable coefficient alphas for reliability (ranging from .71 for agreeableness to .85 for extraversion) and with an identical pattern of correlations amongst the dimensions themselves. Furthermore, during a subsequent semester, a subsample took the *Ten-Item Personality Inventory* (TIPI); Gosling et al., 2003). Each of the five dimensions is represented by two adjectives or statements that indicate high or low scores, thus we did not compute reliability coefficients. However, others report that this brief scale has acceptable test-retest reliability estimates over 2 weeks (ranging from .76 to .82; Gosling et al., 2003), and that TIPI scores are comparable to longer measures of the big five personality model, in terms of convergent validity and factor structure (Ehrhart et al., 2009). In our sample the inter-correlations of TIPI scores revealed directions and significance levels that matched full and abbreviated BFI scores, and all three formats for assessing factors were yielded comparable correlations with other measures. Therefore, personality scores were computed that represented full BFI scores (if available), the slightly shorter BFI scores, or, the TIPI scores for each of the big five factors.

Self-Efficacy was measured with 11 items from Sherer and colleagues’ Self-Efficacy Scale (1982). Participants stated how often they related to or agreed with each statement over the past week on a scale ranging from 1 (Rarely or none of the time [less than 1 day]) to 4 (Most or all of the time [5–7 days]). Higher scores reflect more self-efficacy pertaining to general self-efficacy (7 items) and social self-efficacy (4 items). The general items appear somewhat more internally consistent than social items (α s = .86 and .71; Sherer et al., 1982). In the present sample, both were adequately reliable (general $\alpha = .81$ and social $\alpha = .73$).

Procedure

Participants were recruited via an online signup program. Two rounds of data collection occurred. In the first round, researchers administered paper surveys in small groups meeting in regular classrooms; this began with an informed consent form and speech. The full survey took around 50–60 minutes to complete (portions were for another study) and then participants took part in a debriefing. Participants kept a copy of the consent form, which contained contact information for community and campus mental health clinics, as well as the Principal Investigator. For the second round, participants completed a 25–30 minute online survey that contained all relevant constructs. This protocol began with a somewhat vague introductory message and ended with a more detailed debriefing message, along with telephone numbers for the campus counseling

Table 1. Student Sample Humility Inter-correlations.

Humility Dimension	Religious	Cosmic	Environmental	Other-Oriented	Value	Mean (SD)	Range
Religious	—	.22 ^b	.15 ^b	.25 ^b	.26 ^b	3.7 (1.84)	1–7
Cosmic		—	.76 ^b	.55 ^b	.68 ^b	3.8 (1.61)	1–7
Environmental			—	.69 ^b	.81 ^b	3.7 (1.77)	1–7
Other-oriented				—	.76 ^a	3.6 (1.61)	1–7
Value					—	3.4 (1.91)	1–7

^{ab} < .05, < .01, *N* = 395–398.

center, a local mental health hotline, and the principal investigator. Both procedures and all scales received approval from the college's Institutional Review Board.

Results

Inter-correlations and descriptive information for humility subscales are presented in Table 1.

The first hypothesis predicted that humility would correlate with less trait anxiety and depression symptoms, and with higher love of life and happiness scores. These correlations are presented in Table 2. There were small but significant negative correlations between depression and both environmental humility and other-oriented humility, but a similar pattern was not found for anxiety. All aspects of humility correlated with love of life scores. Finally, happiness scores positively correlated with religious and other-oriented humility, and valuing humility. Thus, hypothesis one was partially supported, especially for positive-valenced mental health.

The second hypothesis predicted humility would correlate with more openness, more agreeableness and conscientiousness, and less neuroticism. As shown in Table 3, all aspects of humility significantly correlated with openness; some correlations (e.g., religious) suggested a comparatively weak relationship, and others (e.g., service to others and value) suggested a relationship of moderate strength. Although all aspects of humility correlated with agreeableness, the magnitude of the correlations were rather small and they were in the direction opposite of what we predicted. Cosmic, environmental, and other-oriented humility all correlated with more conscientiousness and less neuroticism, as did valuing humility; in contrast, religious humility was not associated with self-reported conscientiousness or neuroticism. Thus, findings are fully supportive with regards to openness, partially supportive regarding conscientiousness and neuroticism, and contradictory regarding agreeableness.

According to the third hypothesis, humility would correlate positively with self-efficacy. Global self-efficacy scores did not correlate with humility, however social self-efficacy scores did for all dimensions other than religious humility. Students describing more social self-efficacy also reported more cosmic humility ($r = .19, p < .01$), more environmental humility ($r = .16, p < .05$), and more other-oriented humility ($r = .22, p < .01$), as well as placing more value on humility ($r = .28, p < .01$). Thus, the data did not

Table 2. Student Sample Mental Health Correlations with Humility.

Mental Health	Religious	Cosmic	Environmental	Other-Oriented	Value	Mean (SD)	Range
Depression	—	—	-.14 ^a	-.16 ^b	—	2.2 (.60)	1–4
Anxiety	—	—	—	—	—	2.3 (.63)	1–3.6
Love of life	.29 ^b	.23 ^b	.24 ^b	.24 ^b	.41 ^b	3.7 (1.77)	1.56–5
Happiness	.33 ^b	—	—	.20 ^a	.29 ^b	3.6 (1.61)	1.5–7

^{ab}< .05, < .01

N = 335–378 for anxiety and depression correlations and 128–136 for love of life and happiness correlations.

Table 3. Student Sample Personality Correlations with Humility.

Personality Dimension	Religious	Cosmic	Environmental	Other-Oriented	Value	Mean (SD)	Range
Extraversion	—	—	—	—	—	3.3 (1.04)	1–5
Conscientiousness	—	.18 ^b	.21 ^b	.25 ^b	.25 ^b	3.9 (.71)	1.3–5
Openness	.14 ^a	.15 ^b	.21 ^b	.29 ^b	.32 ^b	3.7 (.74)	1.7–5
Agreeableness	-.13 ^a	-.11 ^a	-.15 ^b	-.15 ^b	-.15 ^b	3.7 (.69)	1–5
Neuroticism	—	-.14 ^a	-.23 ^b	-.24 ^b	-.24	3.0 (.96)	1–5

^{ab}< .05, < .01, *N* = 311–316.

support the final hypothesis regarding general self-efficacy, but findings partially supported the hypothesis for social self-efficacy.

Overall, the hypotheses for Study One were partially supported. Because much of past research, including Study One, has been conducted on college students, we carried out a partial replication study on a sample of adults. We tested the following hypotheses in Study Two:

- 1) humility will negatively correlate with trait anxiety;
- 2) humility will positively correlate with openness to experience, agreeableness, conscientiousness, and negatively correlate with neuroticism; and
- 3) humility will positively correlate with psychological well-being (e.g., autonomy, environmental mastery, personal growth, positive relationships, sense of purpose, and self-acceptance)

STUDY TWO

Method

Participants. Adults living in the United States were recruited via Amazon Mechanical Turk across six different rounds of data collection, conducted within a 6-month period.

Potential respondents were invited to complete a 15–20 minute survey in exchange for monetary compensation (\$2.00). MTurk recruitment provides data that are generally considered reliable, fast and rather inexpensive (Buhrmester et al., 2011). In total, we had 644 participants' complete surveys, with 20 discarded due to incomplete surveys, leaving 624 participants. Of these, 509 were unique (non-duplicate) participants: 48% female; 76% Caucasian, 8% African-American, 8% Asian-American, 5% Hispanic, and 3% other. Based on data provided about their birth year, 13% of the sample was 18–28 years old, 44% was 29–38 years old, 23% was 39–48 years old, 10% was 49–58 years old, 8% was between 59 and 68 years old, and the remaining 2% of the sample was between 69 and 78 years old.

Materials

The (Cronbach, 1947) coefficient alphas for each measure completed in the adult sample is reported here. Additional details for each scale can be found in the Materials section for Study One.

The *Dual Dimension Humility Scale* (Wright et al., 2017) assessed humility. The reliability for the overall scale was very high ($\alpha = .91$), along with each subscale: $\alpha = .95$ (religious humility), $.85$ (environmental humility), $.88$ (value of humility), $.84$ (cosmic humility), and $.88$ (other-focus).

Anxiety was measured with the *State-Trait Anxiety Inventory* (Spielberger et al., 1983). Respondents indicate how they generally feel on a scale from 1 (almost never) to 4 (almost always). Higher scores on items such as “I worry too much over something that really doesn't matter” reflect more anxiety. In our sample these 10 items were reliable ($\alpha = .86$).

The *Ten-Item Personality Measure* (TIPI; Gosling et al., 2003) assessed personality. Because each dimension is assessed with only two items, estimates of internal consistency are not computed.

The *Ryff Scales of Psychological Well-being* (Ryff, 1989) assessed levels of perceived

Autonomy, environmental mastery, personal growth, positive relationships, sense of purpose, and self-acceptance. We administered the 18-item version (three items per subscale), which has demonstrated prior reliability (full and subscale alpha range = $.83$ – $.91$; Ryff & Keyes, 1995).

Procedure

Potential respondents were presented with a screen that gave them a brief description of the study, details on the duration of time required, and compensation information. They were notified that their completion of the survey constitutes consent to participate. Following completion, they were thanked and encouraged to email the primary investigator with any questions. The institution's IRB approved of the protocol.

Table 4. Adult Sample Humility Inter-Correlations.

Humility Dimension	Religious	Cosmic	Environmental	Other-Oriented	Value	Mean (SD)	Range
Religious	—	.26 ^b	.08	.22 ^b	.17 ^a	-.32 (2.1)	3 to -3
Cosmic			.56 ^b	.41 ^b	.48 ^a	1.1 (1.2)	3 to -3
Environmental				.40 ^b	.52 ^b	1.4 (1.1)	3 to -2.2
Other-oriented					.44 ^a	.68 (1.3)	3 to -3
Value					—	1.5 (1.1)	3 to -3

^a< .05^b < .01, N = 488.

Table 5. Adult Sample Personality Correlations with Humility.

Personality Dimension	Religious	Cosmic	Environmental	Other-Oriented	Value	Mean (SD)	Range
Agreeableness	.03	.10	.10	.31 ^b	.39 ^b	.72 (1.7)	3 to -3
Conscientiousness	.22 ^b	.02	.13	.01	.17 ^a	1.5 (1.2)	3 to -3
Neuroticism	-.04	.04	-.02	-.08	-.10	.62 (1.5)	3 to -3
Extraversion	.18 ^b	.11	.10	.16 ^a	.15 ^a	.42 (1.7)	3 to -3
Openness	.09	.08	.28 ^b	.06	.01	1.4 (1.1)	3 to -2

^a< .05

^b< .01, $N = 220$.

We administered the humility survey, along with other surveys (some related to this project and others not included in the present study), in six different rounds to minimize participant fatigue. We aimed for approximately 200 questions per round, which translates into no more than 60–90 minutes, on average, to complete the battery. All of the rounds included the humility scale and demographic questions.

Results

Correlations and the descriptive information for the humility subscales are displayed in Table 4.

The first hypothesis predicted a negative relationship between humility and trait anxiety. We detected significant correlations for two dimensions: individuals reporting more anxiety also reported less humility overall ($r = -.16$, $n = 215$, $p = .02$) and less environmental humility ($r = -.22$, $n = 215$, $p = .001$). Furthermore, more anxious adults were less likely to value humility ($r = -.15$, $n = 215$, $p = .027$). The first hypothesis was partially supported.

Next, we tested the hypothesis that predicted humility would positively correlate with openness to experience, more agreeableness and conscientiousness, and less neuroticism. Humility overall was positively correlated with all three (openness, $r = .18$, agreeableness, $r = .21$, and conscientiousness, $r = .22$, $n = 220$, $ps < .01$). Also, as seen in Table 5, adults reporting more openness scored higher on environmental humility; this was one of the strongest correlations between personality and humility. In addition, agreeable adults also appear more service-oriented (i.e., higher scores on other-oriented humility) and they reported valuing humility more. Finally, more conscientious adults scored higher on religious-based humility and they value humility more. Contrary to expectation, there were no correlations with neuroticism. Although we did not predict humility-extraversion correlations, extraversion correlated with religious humility, other-oriented humility, and valuing humility. Overall, this hypothesis was partially supported.

The third hypothesis pertained to psychological well-being. As shown in Table 6, all aspects of humility except for religious humility were positively correlated with the

Table 6. Adult Sample Psychological Well-being Correlations with Humility.

Well-being Dimension	Religious	Cosmic	Environmental	Other-Oriented	Value	Mean (SD)	Range
Autonomy	-.08	.21 ^b	.41 ^b	.14 ^a	.33 ^b	1.3 (1.1)	3 to -2
Environmental mastery	.08	.06	.27 ^b	.04	.31 ^b	.70 (1.4)	3 to -2.67
Personal growth	-.04	.33	.48 ^a	.15 ^a	.41 ^b	1.5 (1.3)	3 to -2.33
Positive relationships	.13 ^b	.12	.21 ^b	.30 ^b	.24 ^b	.89 (1.2)	3 to -3
Sense of purpose	.09	.21 ^b	.29 ^b	.19 ^b	.30 ^b	1.0 (1.2)	3 to -2
Self-acceptance	.22 ^b	.01	.15 ^a	.11	.16 ^a	.56 (1.5)	3 to -3
Well-being composite	.11	.21 ^b	.40 ^b	.21 ^b	.40 ^b	1.1 (.93)	2.9 to -.9

^a< .05^b< .01, N = 1558.

composite of psychological well-being as a whole. Looking at subscale correlations more closely, religious humility only correlated with self-acceptance. Cosmic humility correlated with autonomy, personal growth, and sense of purpose. Other-focused humility correlated with positive relationships and a sense of purpose in life, and to a lesser extent with autonomy and personal growth. Both environmental humility and valuing humility correlated with all facets of well-being, and the strongest correlations were with personal growth for both aspects of humility. Correlations with subscales partially support the final hypothesis, and the correlations with the composite psychological well-being score offer a clear pattern of support.

Discussion

We summarize our findings across the two samples first in terms of mental illness and wellness, then in terms of personality and self-efficacy. Overall, there were fewer significant correlations among adults compared to students.

Trait anxiety was the mental health indicator we measured across both samples, but findings were not consistent. Among college students, there were no significant relationship between anxiety and humility. In contrast, adults who report more environmental humility and valuing humility more are less anxious, which is consistent with Krause and colleagues (2016) findings on humility buffering the stress-anxiety relationship.

We also asked college students about depression, and current symptoms related to less other-oriented and environmental humility. The findings between less depression and more other-oriented humility might shed light on why community service (high other-focus) is good for our well-being, such that adolescents who help others demonstrate stronger emotional competence (being more self-controlled, planful, autonomous, and responsible) in young adulthood (Hallam et al., 2014). It is not surprising, then, that caring about the planet is also related to slightly less depression, because other-oriented humility and environmental humility have a great deal of overlap (with approximately half of the variance shared).

In addition to the associations that humility had with psychological distress, humility also related to psychological wellness. The most consistent associations with humility were with love of life, which connotes flourishing and an excitement about being alive. Students with religious and other-oriented humility reported more love of life and happiness. Perhaps connections with forces, a higher power, or other people beyond the self helps promote a vision of the “big picture,” that is, helping people feel they are a part of something greater and more important than themselves, and this gives added meaning and importance (and appreciation for) one’s own life. Happiness researcher Luyobrimirsky estimates that intentional activities, including thoughts (e.g., how we interpret the world) and behaviors (e.g., engaging in acts of kindness) account for approximately 40% of the variance associated with happiness, compared to a larger contribution (about 50%) from genetics and a comparatively small contribution (10%)

from life events and demographic factors (Lyubomirsky & Della Porta, 2010). Among adults, eudaimonic well-being correlated with humility.

Most dimensions of humility correlated with most (if not all) aspects of psychological wellness. The exception to this was religious humility, which correlated only with self-acceptance. For the most part, this pattern of findings replicates a prior study by Wright et al. (2017) in that non-religious dimensions of humility are quite relevant to adults' eudaimonic well-being, and it corroborates the link found between humility and eudaimonic well-being in other studies of college students (Aghababaei & Arji, 2014; Aghababaei et al., 2016).

This appears to be the first study to link personality and scores on Wright and colleagues' Dual Dimension Humility Scale (2017). Overall, there were more significant humility-personality associations among students than adults. Students' cosmic humility, environmental humility, other-oriented humility, and valuing humility correlated with more conscientiousness, more openness, and less neuroticism, as predicted. However, these humility dimensions also correlated with *less* agreeableness. It is unclear why more humble students would also describe themselves as less kind toward others. This was especially unexpected due to the fact agreeableness is more consistently correlated with humility than other personality traits among college students (Aghababaei, 2014; Ashton & Lee, 2009; Davis et al., 2017; Exline & Hill, 2012; Lee & Ashton, 2013). In contrast, overall humility (in particular, other-oriented humility and valuing it) was *positively* associated with adults' agreeableness, as predicted. The strongest association between adults' humility and personality was between environmental humility and openness. Surprisingly, adults' extroversion correlated with humility, yet neuroticism did not.

The link between environmental humility and openness across samples suggests those who care about the environment and wish to feel connected to "Mother Nature" are open to new ways of thinking. This relates to the emerging literature on awe and cultivating a sense of awe in response to the natural world (Stellar et al., 2018; Williams, 2017). Louv discusses "moments of inexplicable wonder, times when I received from nature just what I needed: an elusive it for which I have no name" (2012, p. 2). The many cognitive, social, and emotional benefits of nature are due in part to our perceptions of having more time (Rudd et al., 2012) and self-diminishment or feeling small compared to the awe of one's experience (Stellar et al., 2018).

Although general self-efficacy was unrelated to humility, students describing more social self-efficacy also reported more cosmic, environmental, and other-oriented humility. These associations are a good reminder that self-efficacy does not indicate one is a braggart or possesses an unmitigated sense of worthiness. In other words, confidence in one's competence is distinct from self-aggrandizing.

Implications and Evaluation

Findings from the present study inform future potential applications of humility. Although the present research lends some support for humility as a stable and

meaningful individual difference variable, this is not to say it cannot be boosted or induced, perhaps in the contexts of education, social policy, and culture at large (see Narvaez, 2019). Means and colleagues (1990) offer techniques for strengthening one's level of humility that rely on self-acceptance, empathy, and patience. Lavelock and colleagues (2014) randomly assigned participants to a control condition or to complete workbook assignments to boost humility. Those in the boosted humility condition reported increased humility, patience, and forgiveness over time compared to individuals in the control condition (Lavelock et al., 2014).

One strength of the current study is we investigated our hypotheses in both student and non-student samples. Our multi-faceted humility measure allowed for a nuanced examination of this complicated construct. Humility does not involve self-abasement—indeed, some aspects correlated with social self-efficacy. Instead, humility involves a healthy sense of oneself within the larger context of the natural world and environment. One potential limitation was the fact we didn't have the exact same constructs (and in some cases scales) across both samples. This would have allowed for a more direct comparison between the first and second studies. In particular, how students' eudaimonic well-being relates to the dimensions of humility measured by the scale we chose needs to be assessed, as does the relationship between adults' self-efficacy and humility.

Future research may wish to investigate whether self-described humility predicts behaviors such as meditation, as styles such as loving-kindness meditation focus on the other (Shonen et al., 2014; Wallmark et al., 2013). Similarly, in the practice of Tonglen meditation, “the practitioner breathes in the bad and breathes out the good, taking on the suffering of other sentient beings” (Chödrön, 2002, par. 1). Additionally, future research could investigate whether the practice of mindfulness and self-kindness boosts humility.

Several additional avenues have yet to be explored, such as whether humility relates to the willingness to be vulnerable or the ability to take another person's perspective, both of which should be higher among humble persons. In contrast, we predict individuals low in humility report a stronger need for uniqueness and more frequent self-rumination. Also, more research is needed on the benefits of humility in clinical populations (Brandel et al., 2017), on how self-reported humility correlates with reports made by others (Goddard et al., 2016; Lee & Ashton, 2013), and on whether “humility instruction” can assist those in therapy (Means et al., 1990).

Related to the notion of humility as a potential buffer, future studies should investigate the extent to which various contexts evoke humility. We have been focusing humility as a personality variable, however context or environment is still relevant. Indeed, Davis and Hook (2013) state “humility is most accurately judged when it is under strain. Humility involves self-regulation which, like a muscle, can be ‘weakened’ with short-term use, but strengthened with regular exercise” (par. 6). In summary, these studies and our findings add to our understanding of humility as an important contributor to a healthy life.

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Ethical Approval

All standards for ethical treatment of human participants according to the American Psychological Association were met. The institution's Human Research Protection Program (i.e., Institutional Review Board) reviewed and approved the protocol for both studies summarized here.

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