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Accounting for the Evaluative Factor in Self-Ratings Provides a More Accurate Estimate of the Relationship Between Personality Traits and Well-Being

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THE EVALUATIVE FACTOR, PERSONALITY, AND WELL-BEING

Accounting for the Evaluative Factor in Self-Ratings Provides a More Accurate

Estimate of the Relationship Between Personality Traits and Well-Being

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Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Highlights

- We captured evaluative factors for both self- and peer-ratings of the Big Five
- The evaluative factor in self- but not peer-ratings predicted self-rated well-being
- This evaluative factor inflated the relation between Big Five traits and well-being
- We discuss how the evaluative factors and socially desirable responding are related
- We discuss how to control for socially desirable responding in Big Five measures

Abstract

Social desirability may cause spurious relations in self-rating measures. The present study sought to disentangle socially desirable responding and content in the relation between measures of personality traits and well-being. Social desirability was operationalized as the evaluative factor (the tendency to react to evaluative content in questionnaire items). We collected self- and peer-ratings of personality and self-ratings of well-being from 219 participants. The evaluative factor in personality self-ratings significantly predicted well-being and explained more variance than all Big Five traits combined. The evaluative factor in personality peer-ratings had no unique relation to well-being. These findings suggest that previous estimates of the relationship between personality traits and well-being have generally been exaggerated. Different methods of accounting for social desirability are discussed.

Keywords: personality, well-being, social desirability, self-ratings, peer-ratings

1. Introduction

For several decades, research on well-being has turned to personality psychology to explain individual differences in well-being, and findings suggest that personality ratings are closely related to evaluations of various aspects of our lives (Anglim et al., 2020; Steel et al., 2008). However, a limitation of the existing literature is the wide reliance on self-ratings of personality and well-being, which risks inviting response styles that inflate the relationships and threaten the validity. The present study highlights social desirability as a potential inflator of the relationship between personality traits and well-being and presents a strategy to disentangle the social desirability influence to estimate the extent of its effect as well as to obtain purer estimates of the relationship between personality traits and well-being.

A common way to conceptualize well-being is through subjective and psychological well-being. Subjective well-being (SWB; Diener, 1984) focuses on the hedonic aspect and reflects overall life satisfaction as well as how frequently one experiences positive and negative affect. Related but distinct, the concept of psychological well-being (PWB; Ryff, 1989) focuses on the eudaimonic aspect and concerns the development and self-realization of the individual, in terms of six dimensions: *self-acceptance*, *positive relationships*, *personal growth*, *purpose in life*, *environmental mastery*, and *autonomy*. SWB and PWB are moderately to strongly correlated and can be considered complementary aspects of well-being (Sun et al., 2018).

Research has consistently identified personality as an important predictor of well-being. In particular, a recent meta-analysis by Anglim et al. (2020) found that all Big Five personality traits were related to both SWB and PWB. Neuroticism was identified as the strongest predictor of well-being, followed by extraversion and conscientiousness, but each Big Five trait had a unique correlational pattern to the nine investigated well-being dimensions. For instance, neuroticism was most strongly related to negative affect, self-

acceptance, and environmental mastery, whereas extraversion most strongly predicted

positive affect and positive relationships. Together, the Big Five traits explained

approximately 50% of the observed variance in well-being.

Anglim et al.'s (2020) findings illustrate that self-ratings of personality strongly

predict how people assess their well-being. However, self-ratings are prone to socially

desirable responding, i.e., the tendency to base responses on what is socially accepted and

valued in society (Edwards, 1953). Social desirability introduces unwanted variance to the

data and spurious relationships or inflated correlations that threaten the validity of the

findings. This is especially likely when the two investigated concepts both are positive to

identify with. Indeed, Anglim et al. (2020) acknowledged the confounding effect of social

desirability and warranted for caution in generalizing the strong relationship between

personality traits and well-being, due to potentially elevated correlations.

It has been debated in personality research whether accounting for measurement bias

is necessary. For example, although they are conceptualized as independent, the Big Five

traits tend to correlate (Block, 1995; Digman, 1997). While some researchers have argued

that the intercorrelations are evidence of higher-order personality factors (e.g., Irwing, 2013;

Van der Linden et al., 2017), another explanation is that the correlations reflect method biases

such as social desirability (e.g., Anusic et al., 2009; Bäckström & Björklund, 2016). To the

extent that personality measures are affected by measurement bias, the correlations between

personality traits and other constructs will be affected too.

Little research has investigated the extent to which social desirability might underlie

the strong relationship between personality traits and well-being. Social desirability has

mainly been controlled for by means of social desirability scales, which have been criticized

for reducing construct validity, as they capture not only socially desirable responding but also

personality and well-being content (Kozma & Stones, 1988; Ones et al., 1996). Such studies

have found social desirability to be weakly to moderately related to self-rated well-being and to have a weak impact on the relationship between personality traits and well-being (Brajša-Žganec et al., 2011; Caputo, 2017; Kjell et al., 2016). However, other ways of measuring social desirability suggest a stronger influence. Chen et al. (1997) found rated item popularity to be strongly related to endorsing positive and negative affect items. Biderman et al. (2011) extracted common method variance from personality items and found that controlling for this variance reduced the correlations between the Big Five traits and positive and negative affect. Taken together, the estimated influence of social desirability appears to vary across different methodologies, and item-level analyses might be particularly sensitive at detecting the presence of social desirability. One such approach will be explicated next.

Personality items differ in how evaluatively formulated they are – some items are neutral, whereas others are clearly evaluative. This is problematic because some individuals are more motivated than others to adjust their responses when it is clear what the socially desirable response would be (Bäckström & Björklund, 2013; Peabody, 1967). This problem can be addressed by creating an evaluatively neutralized personality inventory in which items are worded more neutrally to make the socially desirable response less apparent, which is possible without compromising the validity of the original measure (Bäckström & Björklund, 2013, 2020; Bäckström et al., 2014). The influence of social desirability in personality self-ratings can be estimated using a combination of evaluatively loaded and evaluatively neutralized personality inventories to extract a latent evaluative factor that reflects the difference in responses to evaluative and neutralized items across all Big Five traits (Bäckström & Björklund, 2014). An investigation of the structural relations of the evaluative factor had Bäckström and Björklund conclude that the evaluative factor is strongly related to social desirability. Furthermore, separating the evaluative factor from the personality traits allows for purer estimates of personality that are not as contaminated by social desirability.

The effectiveness of extracting an evaluative factor to address social desirability in personality self-ratings makes the method relevant for examining the relationship between personality traits and well-being. Using this approach, it is possible to isolate individual differences in evaluative responding and thereby investigate the extent to which social desirability inflates the relationship between personality traits and well-being in general, as well as to obtain more accurate estimates of said relationship. By separating evaluative content from personality content, there is little to no evaluative variance left in personality that could bias the relationship to well-being, regardless of whether measures of well-being are evaluatively loaded. Indeed, in a test-validation study Bäckström and Björklund (2020, Study 3) found fewer significant relationships between the Big Five traits and life satisfaction (among other measures) when an evaluatively neutralized personality inventory was used compared to an evaluatively loaded inventory. Controlling for the evaluative factor reduced the correlations between personality traits and life satisfaction to be comparable to the correlations found with the neutralized inventory. The evaluative factor was moderately to strongly related to self-rated life satisfaction. This research needs to be extended to not only include life satisfaction but also well-being in general, as measured using both hedonic and eudaimonic well-being.

The purpose of the present study is to investigate the extent to which evaluative content threatens the validity of estimates of the relationship between personality traits and well-being, and to demonstrate that accounting for this influence is paramount to properly estimate the relationship between personality traits and well-being. We hypothesize that the relationship between personality traits and well-being will be reduced in a structural model when the evaluative factor is included as a predictor of well-being, compared to when only personality predicts well-being. If the evaluative factor significantly predicts well-being, that

will suggest that the relationship between personality traits and well-being has been overestimated in previous research not accounting for this influence.

However, an approach limited to self-ratings would face difficulties attributing a potential relationship between the evaluative factor and well-being as reflecting social desirability and not personality content. The present study will therefore include peer-ratings of personality to extract an evaluative peer-factor and relate it to self-rated well-being. The outlined procedure is novel in that it, for both target persons and peers, utilizes a combination of evaluatively loaded and evaluatively neutralized personality tests to extract an evaluative factor which can be related to self-rated well-being. If the evaluative self-factor but not the peer-factor is importantly related to self-rated well-being, that would further strengthen a social desirability account.

2. Method

2.1 Participants

Two-hundred and eighty participants were recruited in pairs using a convenience sampling method on XXXXX University grounds (blinded for peer-review) and on the website XXXXX (blinded for peer-review), where university students can sign up for research studies. Participants were able to freely choose their peer, and each pair was provided with linked codes so that their responses could be matched during data analysis. To be included in the analysis, participants needed to complete all self-ratings and be rated by their peer. Forty-one participants either failed to begin the study or did not complete any personality inventory, and 20 participants completed the self-ratings but not peer-ratings; thus, 219 participants took part in the full study. Due to a technical error, demographic information from 26 participants was not recorded. Age varied between 18 and 72 years ($M =$ 26.93, $SD =$ 8.25). One-hundred and twenty-five participants identified as female (64.8%), 66 as male (34.2%), and 2 as other (1.0%). The majority (72.0%) of the collected sample were

students, 22.3% were employed, 3.8% unemployed, and 1.9% answered "other". One-hundred and eighty participants were born in Sweden (93.3%) and 13 participants were born outside of Sweden (6.7%; Brazil, Colombia, Netherlands, Norway, Poland, South Korea, Sri Lanka, Thailand, United Kingdom, and USA). Participants received two movie tickets as compensation.

The full dataset is openly available on: https://osf.io/rxwca/?view_only=3f5ec70042a14e8e8171eeeed09eb20b

For the present study, it was not possible to conduct a power analysis for parameter estimation, because there were no relevant population estimates for the nontarget parameters in the structural models (see Wang & Rhemtulla, 2021). We attempted to recruit as many participants as possible based on our budget, to better be able to detect even smaller target effects, if present, of the evaluative self- and peer-factors on well-being.

2.2 Material

2.2.1 *Well-Being*

Psychological Well-Being. The 84-item version of Ryff's (1989) Scales of Psychological Well-Being was used. It measures all six dimensions of PWB, each on a 14-item scale. Respondents rated the items on a 6-point Likert scale, ranging from (0) "Strongly disagree" to (5) "Strongly agree". Because there is no validated Swedish version of the 84-item version to date, the instrument was translated to Swedish by the process of back translation. The first author translated the items from English to Swedish, after which three psychology graduate students translated the items back to English.

A composite PWB variable was created by combining the items from all six subscales. Cronbach's alpha for the composite variable was .96.

Harmony in and Satisfaction With Life. The cognitive component of SWB was conceptualized as a combination of life satisfaction and its complement *harmony in life* (Kjell

et al., 2016), which we named Harmony in and Satisfaction with Life (HSWL). Life

satisfaction was measured using a Swedish version of the Satisfaction With Life Scale

(SWLS; Diener et al., 1985) that has been used in previous studies (e.g., Garcia & Siddiqui,

2009). Because there is no validated Swedish version of the Harmony in Life Scale (HILS;

Kjell et al., 2016) to date, the instrument was translated to Swedish using the same back

translation procedure outlined for PWB. For both instruments, respondents were presented

with five statements about life satisfaction or harmony in life and asked to rate the items on a

7-point Likert scale, ranging from (0) "Strongly disagree", to (6) "Strongly agree".

Cronbach's alpha for HSWL was .89.

Positive and Negative Affect. The Positive and Negative Affect Schedule (PANAS;

Watson et al., 1988) consists of two sets of 10 adjectives that measure positive and negative

affect, respectively. Examples of included adjectives are "inspired" and "excited" for positive

affect, and "guilty" and "nervous" for negative affect. We used a Swedish version of the

PANAS that has been used in previous studies (e.g., Schütz et al., 2013). Respondents were

asked to rate the extent to which they had experienced the emotions in the past few weeks on

a 5-point Likert scale, ranging from (0) "Not at all" to (4) "Very much". Cronbach's alpha

was .83 for positive affect and .84 for negative affect.

2.2.2 *Personality*

Personality was measured using both self- and peer-ratings, each by a combination of

two five-factor inventories: one that contained evaluatively loaded items, and one with

evaluatively neutralized items. The items in the peer-rating inventories were rephrased to

make it easier to rate a friend. The evaluative personality inventory consisted of 200 items

from the IPIP-NEO (Goldberg et al., 2006) that were translated to Swedish and validated by

Bäckström et al. (2014). The neutralized personality inventory NB5I measures the same

factors and facets as the IPIP-NEO used in the present study, but instead consists of 121

items that have been evaluatively neutralized. The inventory has been validated in several studies and has shown to have comparable levels of construct validity and criterion validity as other Big Five measures (e.g., Bäckström et al., 2014). An example of an evaluatively loaded item is "Love to help others", and a similar neutralized item is "Have a need to help others".

All personality items were rated on a 5-point Likert scale, ranging from (0) "Completely disagree" to (4) "Completely agree". Cronbach's alpha for both the self-rating and peer-rating scales were high, ranging between .84 and .95 on the trait level. The correlation between the evaluative and neutralized test for Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism was .81, .81, .77, .67, and .90 for self-ratings and .83, .80, .83, .71, and .89 for peer-ratings. The average correlation between the self- and peer-measures was $r = .52$ for the evaluative scales, and $r = .53$ for the neutralized scales.

2.3 Procedure

The study was administered online (website blinded for peer-review). Participants were provided with unique identities to create an account and complete the study. After reporting demographic information, participants were first presented with items from the SWLS and HILS, in a common block. They then completed the PANAS, followed by the PWB scale. After completing all well-being measures, participants were asked to complete the self-ratings of personality, followed by the peer-ratings of personality. The evaluative and neutralized personality items were mixed and presented as a single measure of personality for both the self- and peer-ratings.[1] The study took approximately 1.5 hours to complete.

2.4 Ethics

The study was conducted in accordance with the Swedish Ethical Review Act (SFS 2003:460).

2.5 Data Analysis

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[1] Participants also completed 34 additional items which were not part of the present study.

The data was analyzed in R version 4.0.3 (R Core Team, 2020). Prior to the analysis, two multivariate outliers were identified using Mahalanobis distances at the $p < .001$ level and were excluded. The final sample consisted of 217 participants.

The hypotheses were tested by means of structural equation modeling (SEM) using the lavaan package (Rosseel, 2012). The purpose of SEM is to estimate latent variables, i.e., variables free from measurement error; this is done using multiple observed variables, from which shared variance is extracted to create latent variables (for an accessible description, see Kline, 2015). Robust maximum likelihood estimation was employed for the SEM analysis (Satorra & Bentler, 1994), as the data deviated from multivariate normality. In the structural models (see Figure 1), a latent well-being variable was created with PWB, HSWL, positive affect, and negative affect as indicators. Personality was structured as a framework in which each Big Five trait was a latent variable with four indicators: self- and peer-ratings of both the evaluative and the neutralized inventories. We created two bifactors – one evaluative self-factor (Eval Self) and one evaluative peer-factor (Eval Peer) – to represent the evaluative variance in the evaluatively loaded personality items. These factors were independent from the latent personality variables and had loadings on all five evaluative personality indicators for self- and peer-ratings, respectively; this isolates the variance that is unique for the evaluatively loaded inventories (i.e., not part of their neutralized counterparts). The latent personality variables were defined as orthogonal to each other and to the evaluative factors. Furthermore, to account for idiosyncratic bias in ratings, we added correlations between the evaluative and neutralized personality indicators rated by the same person (self, peer) for each personality trait. To be able to account for this bias for both self- and peer-ratings, the two correlations within each personality trait were specified as equal; this was a necessary constraint, given the model degrees of freedom. The ten correlations were high in all models, $r = .60–.83$.

To test our hypotheses, we created four structural models. Model 1 was created with structural relations from the latent Big Five traits to well-being (Figure 1, solid lines). This model tests the uncorrected relationships between personality and well-being; in other words, the latent Big Five traits predict well-being, and the paths from the evaluative factors were set to zero. In Model 2, a path is added from Eval Self to well-being (Figure 1, line M2). Comparisons between the two models tests the extent to which the evaluative self-factor influences the relationship between personality and well-being; better fit for Model 2 than Model 1 would suggest that the evaluative self-factor uniquely contributes to well-being. If the coefficients between the Big Five traits and well-being are influenced (e.g., reduced) by the added path, this would suggest that part of the common variance between the Big Five and well-being could be attributed to the evaluative factor. Model 3 adds a path from Eval Peer to well-being (Figure 1, line M3); better fit for Model 3 than Model 2 would indicate a unique contribution from the Eval Peer factor. Lastly, Model 4 tests the influence of Eval Peer in a model without Eval Self as a predictor of well-being. In addition, Models 3 and 4 also seek to contribute to our understanding of the relationship between the evaluative factor and well-being, i.e., whether it reflects social desirability or personality content. If Eval Peer does not contribute to explaining well-being whereas Eval Self does, that would indicate that only social desirability from self-ratings inflates the relationship between personality and well-being. In all models, a correlation was included between Eval Self and Eval Peer.

3. Results

Table 1 presents the correlations between personality and well-being across the different personality inventories.[2] Overall, the correlations to well-being were stronger for the evaluative personality inventories than for the neutralized personality inventories; this pattern

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[2] See Supplemental Material for descriptive statistics and a correlation matrix for the observed variables in the SEM analysis. The R-script used for the analysis can be found on:
https://osf.io/rxwca/?view_only=3f5ec70042a14e8e8171eeeed09eb20b

was especially notable for self-rated personality, as illustrated in the rightmost columns and lowermost rows for self- and peer-ratings.

To estimate the influence of the evaluative factor on the relationship between personality and well-being, we compared the direct effects on well-being in Model 1 and Model 2, presented in Table 2. In Model 1, all Big Five traits except agreeableness significantly predicted well-being; neuroticism was the strongest predictor and explained 59.1% of the variance in well-being, followed by conscientiousness (9.5%), openness (6.7%), and extraversion (5.1%). Together, personality predicted 80.0% of the variance in well-being.

Adding Eval Self as a predictor in Model 2 was associated with the expected decrease in the overall predictive strength of personality; in this model, neuroticism only explained 17.0% of the well-being variance, followed by extraversion (9.2%),[3] conscientiousness (8.6%), and openness (1.0%). Eval Self emerged as the strongest predictor of well-being, explaining 52.1%, more than all Big Five traits combined (36.2%). The model fit statistics for all structural models are presented in Table 3. Model 2 had significantly better model fit than did Model 1, based on a Satorra-Bentler scaled chi-square difference test (Satorra & Bentler, 2001), $\Delta\chi^2(1) = 87.88$, $p < .001$. This suggests that Eval Self makes a unique contribution to predicting well-being. The total explained variance in well-being was 88.3%. Overall, these results confirm our predictions that the strong relationship between personality traits and well-being partly reflects the common influence of the evaluative factor. Although personality content remains an important predictor, our results suggest that the relationship between personality traits and well-being becomes inflated when the evaluative factor is not accounted for.

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[3] The increase in the predictive strength of extraversion in Model 2 compared to Model 1 could be interpreted as a suppression effect.

Next, we wanted to investigate whether Eval Peer makes a unique contribution to explaining well-being, by analyzing the impact of adding Eval Peer as a predictor of well-being in Model 3. Figure 2 shows the path diagram for Model 3. Adding Eval Peer as a predictor in Model 3 did not significantly improve model fit compared to Model 2, $\Delta\chi^2(1) = 0.03$, $p = .867$. Moreover, Eval Peer did not significantly predict well-being. Similarly, in Model 4 we added Eval Peer to Model 1 as a predictor of well-being, but it did not significantly improve model fit, $\Delta\chi^2(1) = 3.42$, $p = .064$. In Model 4, Eval Peer was weakly related to well-being (see Table 2). While the two evaluative factors were significantly correlated in all four models, suggesting that they to some extent overlap in content, the variance in Eval Peer was largely distinct from the variance in Eval Self that strongly predicted well-being. The nonsignificant relationship between Eval Peer and well-being could be taken to indicate that there is no substantive variance shared between a target person's well-being ratings and the peer's tendency to react to evaluative content. Taken together, these results suggest that the strong relationship between personality traits and well-being reflects social desirability, not personality content.

The model fit statistics in Table 3 illustrate that none of the structural models fit the data perfectly. This is partly because some direct relations between personality and lower-order well-being were not included in the models. Upon testing some of these relationships, the largest model improvements compared to Model 3 emerged from adding a direct relationship between neuroticism and negative affect. Other similar but weaker relationships between personality and lower-order well-being were also identified. Adding these relationships improved, but did not completely address, the poor model fit. The rest of the poor fit could largely be attributed to relations between the personality variables. Across all tested configurations, however, Eval Self remained the strongest predictor of well-being by a large margin.

4. Discussion

The present study aimed to investigate the extent to which social desirability, operationalized as the evaluative factor, inflates the estimated relationship between Big Five personality traits and well-being. The evaluative self-factor not only emerged as the strongest predictor of well-being, but also explained more variance in well-being than all Big Five traits combined when included as a predictor in the structural models. As we hypothesized, accounting for the evaluative factor was associated with a decrease in the proportion of well-being variance explained by personality, clearly showing that the evaluative factor shares variance with many of the personality traits. It is important to note that even when accounting for the evaluative factor, personality remains a substantial predictor of well-being, not least when compared to the effect sizes commonly reported in individual differences research (Gignac & Szodorai, 2016). Given this dominance of the evaluative factor, there is a high risk that previous research has overestimated the relationship between many personality traits and well-being due to the use of evaluatively loaded inventories without accounting for the evaluative factor. The risk for inflated correlations between personality traits and well-being was already cautioned by Anglim et al. (2020) in discussing the generalizability of the strong relationships reported in their meta-analysis.

While peer-ratings have been used in past research to study personality and well-being (Dobewall et al., 2013; Schimmack & Kim, 2020), to the extent of our knowledge, the present study is the first to include both self- and peer-ratings of personality in a study of the importance of the evaluative factor for the relationship between personality and well-being. Given that only the evaluative self-factor and not the evaluative peer-factor made a notable contribution to explaining the variance in well-being in the structural models, the strong effect of the evaluative self-factor can be interpreted to reflect social desirability rather than personality content.

The strong relationship between the evaluative factor and well-being clearly illustrates that the evaluative factor cannot be ignored in well-being research, and that this aspect of social desirability might have received too little attention in previous research on personality and well-being. The main implication of our findings is that previous estimates of the relationship between personality traits and well-being need to be interpreted with caution, as it is unclear to what extent these estimates reflect the shared influence of social desirability (viz., the evaluative factor). The findings also stress the importance of accounting for this influence in future research, to not overestimate the relationship between well-being and other constructs.

4.1 Accounting for Social Desirability

An effective way of accounting for social desirability in future research on personality and well-being would be to rely on peer-ratings or to use an evaluatively neutralized personality measure, in which items are phrased more neutrally to minimize the influence of social desirability. Evaluative neutralization is an accessible and effective procedure for reducing the evaluative content in items (Bäckström & Björklund, 2013). Another possibility would be to create a social desirability index using a combination of participants' item scores and item social desirability ratings, and then control for it (Konstabel et al., 2006). A less optimal option would be to measure and control for item popularity or item social desirability ratings, as they have been found to be indicative of social desirability (Bäckström & Björklund, 2013; Chen et al., 1997). Lastly, although not optimized for specifically capturing evaluative variance, controlling for common method factors as outlined in Biderman et al. (2011) would also provide less biased estimates of the relationship between personality traits and well-being. One advantage with using a social desirability index, item popularity, item social desirability, or common method factors is that these methods can be used on already collected data to re-estimate the found relationships in previous research. This way, past

endeavors can be meaningfully complemented by the novel insights that the present study

provides.

4.2 Limitations

In the present study, our primary goal was to investigate the influence of the

evaluative factor on the relationship between personality traits and well-being. Nonetheless,

the reality is that none of our models fit the data particularly well. We believe that the poor fit

might be partly due to unaccounted relationships between personality and the lower-order

well-being variables, as the Big Five traits have been found to have unique relational patterns

to different aspects of well-being (Anglim et al., 2020). This is especially notable for

neuroticism and negative affect. Furthermore, another reason is likely the intercorrelations

between the latent Big Five traits as well as the presence of secondary loadings in the

personality inventories, most notably within the evaluatively loaded inventories (see

Bäckström et al., 2014).

The present investigation was limited to one personality framework and the most

common conceptualizations of well-being. It remains unknown whether our results would

extend to other measures of personality and well-being. Although we believe that our

research has contributed to coming closer to an answer regarding the true relationship

between personality traits and well-being, we focused on the influence of socially desirable

responding and never had the ambition to reveal the exact relationship in all detail, this is a

question for future research. Researchers have problematized the conceptual distinction

between personality and well-being (e.g., Steel et al., 2008); however, it appears that the

conventional view regarding conceptual overlap between Big Five personality traits and well-

being is that they are separate constructs, which is likely also why the relationship between

the two are so often studied (as e.g., in Anglim et al. 2020).

The relatively small sample size should also further incite to caution, and replications are encouraged. Although the majority of our sample consisted of students, we would expect the relationship between individual differences in the level of socially desirable responding and ratings of well-being to hold also for nonstudents. As for intercultural generalizability, it is important to note that socially desirable responding is a cultural variable in that it revolves around the specific cultural norms of a given society (Bou Malham & Saucier, 2016; Sedikides et al., 2005). Depending on how strongly valued a given personality trait is in the culture, the influence of the evaluative factor on the relationship between personality and well-being will be weaker or stronger. As for generalizability in terms of age, our participants were of varying age, but it would be interesting to see whether our results generalize to older adults.

Lastly, while our results strongly suggest that social desirability inflates the relationship between personality traits and well-being, we cannot completely exclude a substance account of the evaluative factor based on the present study alone. An alternative account could be that the evaluative self-factor measures private aspects of well-being that the evaluative peer-factor does not capture (see Schimmack & Kim, 2020). This is an interesting venue for future research to explore. For this reason, we encourage the use of both self- and peer-ratings, when possible, as well as that researchers make sure not to phrase their items in a way that makes them evaluatively loaded and/or tap into other constructs.

4.3 Future Directions

Social desirability, in the form of the evaluative factor, appears to be of key importance for well-being research and effective steps should be taken to reduce its confounding effects in future research. An important first step would be to re-estimate previously reported relationships between personality traits and well-being while also accounting for social desirability using the methods outlined in section 4.1. This allows future

researchers to obtain more accurate representations of the relationship between personality

traits and well-being, both on the factor and facet level. These insights could be summarized

in a meta-analysis and compared to the relationships reported by Anglim et al. (2020).

Accounting for social desirability using the evaluative factor or any of these methods is also

recommended as well-being research moves forward.

In addition, researchers might benefit from considering the potential influence of the

evaluative factor in other domains of individual differences. It may in principle be possible to

generate an evaluative factor for other constructs than the Big Five too, although extremely

difficult for constructs that are inherently positive (e.g., well-being) or negative (e.g.,

prejudice); in practice, this is not always a problem, as it suffices that only one of the two

constructs that are being correlated is evaluatively neutralized.

4.4 Conclusions

When the evaluative factor is not accounted for, the use of self-ratings invites social

desirability to inflate the estimated relationships between personality traits and well-being.

The present study illustrated the extent of this problem and provided suggestions on how

future researchers can control for this confounding influence. In return, such practice will

promote a better understanding of how personality and other concepts are related to how we

as individuals evaluate our lives.

Contributions

All the authors worked on the study design. The first author collected the data. The

data analysis was done by the first author with the advice and support from the second and

third authors. The first author wrote the manuscript with assistance from the second and third

authors. All authors approved the final version of the manuscript for submission.

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Figure Captions

Figure 1. *Structural Model Used in the Study. Abbreviations First Letter: E, Evaluative Inventory; N, Neutralized Inventory. Second Letter: S, Self-Ratings; P, Peer-Ratings. Third Letter: O, Openness; C: Conscientiousness; E, Extraversion; A, Agreeableness; N, Neuroticism. Eval S = Eval Self; Eval P = Eval Peer; WB = Well-Being; PWB = Psychological Well-Being; HSWL = Harmony in and Satisfaction With Life; PA = Positive Affect; NA = Negative Affect. Solid Lines Represent Paths Included in all Models. M2 = Path Added in Model 2; M3 = Path Added in Model 3.*

Figure 2. *Path Diagram for Model 3 (Standardized Parameter Estimates). Abbreviations First Letter: E, Evaluative Inventory; N, Neutralized Inventory. Second Letter: S, Self-Ratings; P, Peer-Ratings. Third Letter: O, Openness; C: Conscientiousness; E, Extraversion; A, Agreeableness; N, Neuroticism. Eval S = Eval Self; Eval P = Eval Peer; WB = Well-Being; PWB = Psychological Well-Being; HSWL = Harmony in and Satisfaction With Life; PA = Positive Affect; NA = Negative Affect.*

Journal Pre-proofs

Table 1. *Pearson Correlations Between Well-Being and Self- and Peer-Rated Personality Traits.*

Personality Trait	PWB Eval	PWB Neut	HSWL Eval	HSWL Neut	PA Eval	PA Neut	NA Eval	NA Neut	M_{col} Eval	M_{col} Neut
Self										
Openness	.44	.27	.16	.05	.38	.27	.03	.10	.24	.12
Conscientiousness	.59	.33	.44	.20	.51	.40	−.23	−.10	.44	.26
Extraversion	.58	.21	.39	.12	.54	.27	−.16	.02	.42	.15
Agreeableness	.37	.03	.24	.04	.06	−.07	−.06	.13	.18	−.03
Neuroticism	−.68	−.60	−.55	−.47	−.37	−.33	.64	.59	−.56	−.50
M_{row}	.53	.29	.36	.18	.37	.24	−.21	−.09		
Peer										
Openness	.20	.12	.08	.01	.19	.18	.16	.20	.08	.03
Conscientiousness	.25	.16	.21	.10	.16	.20	−.04	−.03	.17	.12
Extraversion	.34	.19	.30	.16	.28	.21	−.10	−.06	.25	.15
Agreeableness	.17	.04	.13	.01	.04	.00	.05	.11	.07	−.01
Neuroticism	−.38	−.32	−.41	−.35	−.23	−.21	.41	.41	−.36	−.32
M_{row}	.27	.17	.23	.13	.18	.16	−.07	−.04		

Note. Eval = evaluatively loaded personality inventory; Neut = evaluatively neutralized personality inventory; PWB = psychological well-being; HSWL = harmony in and satisfaction with life; PA = positive affect; NA = negative affect. M_{col} = mean correlation after reversing NA. M_{row} = mean correlation after reversing neuroticism.

Table 2. *Direct Effects on Well-Being for Personality and the Evaluative Factors.*

| | Latent Predictors of General Well-Being | | | | | | | r_{Eval} | R^2_{WB} |
	Eval S	Eval P	O	C	E	A	N		
Model 1			.253***	.308***	.225***	−.011	−.769***	.305***	.800
Model 2	.722***		.100*	.293***	.303***	−.067	−.412***	.313***	.883
Model 3	.724***	−.009	.101*	.294***	.302***	−.065	−.414***	.316***	.884
Model 4		.147*	.234***	.291***	.247***	−.041	−.739***	.355***	.770

Note. * = $p < .05$, ** = $p < .01$, *** = $p < .001$. $N = 217$. Eval S = Eval Self; Eval P = Eval Peer; O = openness; C = conscientiousness; E = extraversion; A = agreeableness; N = neuroticism. r_{Eval} = Pearson correlation between Eval S and Eval P. R^2_{WB} = proportion of variance explained in well-being.

Table 3. *Model Fit Statistics for the SEM Models.*

	χ^2	*df*	*p*	CFI	RMSEA	RMSEA 90% CI lower	upper	SRMR
Model 1	850.68	231	< .001	.853	.114	.106	.122	.135
Model 2	729.63	230	< .001	.881	.102	.094	.111	.128
Model 3	729.64	229	< .001	.881	.103	.094	.111	.128
Model 4	847.38	230	< .001	.854	.114	.105	.122	.133

Note. CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

Figure 1

Figure 2