

Subjective well-being components in the HEXACO personality framework

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Abstract

Subjective well-being (SWB) is a multidimensional construct composed of (i) a cognitive component, which includes an assessment of life satisfaction, and two affective components, (ii) positive affect (PA) and (iii) negative affect (NA). These three components are theoretically independent and they may have different relations with other constructs. In various studies, SWB is often associated with personality traits, which have been dominantly operationalized within five-factor frameworks. The aim of the present study is to examine the relationship between SWB components and their relations with personality traits defined within the six-factor personality model, HEXACO. The study was conducted on a sample of 830 young adults (63% women) who completed the Satisfaction with Life Scale, the Positive and Negative Affect Schedule and the HEXACO-PI-R. The results show that the three SWB components are moderately correlated. Extraversion correlated most strongly with all three components, as well as the Conscientiousness, but with smaller effect sizes, while Emotionality had only a significant positive correlation with NA. The findings of this study highlight the importance of distinguishing SWB components, but also the structural differences of the HEXACO personality model compared to five-factor models.

Keywords: *subjective well-being; life-satisfaction; positive and negative affect; personality; HEXACO*

Introduction

Subjective well-being (SWB) is a popular psychological construct that reflects a person's beliefs and feelings about the quality of their life (Diener et al., 2018). Although different definitions can be found in the literature (see Diener et al., 2018; Pocrnić & Bratko, 2021), most researchers have accepted Diener's (1984) conceptualization of SWB. More specifically, SWB is defined as a multidimensional construct with two core dimensions: the

cognitive and affective components. The cognitive component of SWB reflects a person's subjective evaluation of his or her life as a whole, and is usually operationalized with a measure of life satisfaction. The affective dimension of SWB encompasses typical emotional experiences a person has in everyday life, and can be further divided into two independent components: positive affect (PA) and negative affect (NA) (Diener et al., 2017). Thus, SWB is composed of three components in sum and, accordingly, a high level of SWB is characterized by a high level of

life satisfaction, a high level of PA, and a low level of NA (Lucas et al., 1996; Myers & Diener, 1995).

Theoretically and empirically, these three components are independent, but they are not completely uncorrelated. For example, Schimmack (2008) reports a wide range of correlations from .10 to .80 between the cognitive and affective components in various studies. PA and NA also tend to have negative correlations, but it is important to emphasize that they are not two opposite poles of the same affective dimension. It is possible for someone to frequently experience different positive affect, but also the negative affect. In their recent meta-analysis, Anglim et al. (2020) reported correlations of life satisfaction with PA and NA ranging from $|.29|$ to $|.52|$, while PA and NA correlated $-.09$ and $-.39$, depending on the dataset used. In summary, although there are some correlations between different SWB components, they vary in magnitude in different studies and samples, and they are usually in the small or medium range. Therefore, these SWB components should not be considered redundant (Tov, 2018). The other reason why it is important to differentiate SWB components is because they may have different relations with other important psychological constructs.

SWB and personality

One of the constructs that are most strongly associated with SWB are personality traits. Numerous studies have indicated personality as one of the most important predictors of SWB, explaining 30-40% of its variance, substantially more than, for example, demographic variables (Costa & McCrae, 1980; Diener et al., 1999; Lucas, 2018).

In the last 30 years, personality is dominantly operationalized within five-factor taxonomies, like the Five-Factor model (Costa & McCrae, 1992), or the Big5 model (Goldberg, 1990). Studies showed that out of these big fives, two traits that are most strongly associated with SWB components are Neuroticism and Extraversion (e.g., Bratko & Sabol, 2006; Costa & McCrae, 1980; Diener et al., 1992; Grant et al., 2009; Ng et al., 2019; Schimmack et al., 2002; Steel et al., 2008). Extraversion is primarily associated with PA and Neuroticism with NA, which

is in line with the content and structure of these traits. Namely, Neuroticism includes a tendency to experience negative emotions, like sadness, anger or fear, while Extraversion is associated with positive emotionality and cheerfulness. These two traits are indeed more strongly correlated with the affective than the cognitive SWB component, which is also confirmed in the latest meta-analysis (Anglim et al., 2020). Anglim et al. (2020) reported average correlations of .56, $-.39$ and $-.34$ between Neuroticism and NA, life satisfaction, and PA, respectively, while Extraversion correlated .44 with PA and .32 with life satisfaction. Besides these two *emotional* traits, Conscientiousness is also often found as a significant SWB correlate. Tendency to achievement, self-discipline and diligence can definitely contribute to feeling well and satisfied with life. In line with that, Conscientiousness usually has small or medium, but significant correlations with PA and life satisfaction, in the range around .20 to .30 (Anglim et al., 2020; Grant et al., 2009; Ng et al., 2019; Røysamb et al., 2018). While there is agreement that Openness is not a significant SWB predictor the results about the role of Agreeableness are not very consistent. Some studies found significant correlations, but they are usually small in effect size (Anglim et al., 2020; McCrae & Costa, 1991, Steel et al., 2008).

HEXACO personality model and SWB

Although five-factor taxonomies of personality are still dominant in the literature, there is growing support for the alternative HEXACO model that defines six broad personality domains: Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to Experience (Ashton & Lee, 2001). Identification of the sixth factor Honesty-Humility is the biggest difference between HEXACO and five-factor models, but differences can also be found in HEXACO Agreeableness and Emotionality domains. More precisely, Emotionality includes anxiety, dependent behaviours and sentimentality, which is usually part of Agreeableness in other personality models, but does not have content related to depression or anger. Anger and irritability in HEXACO indicate low Agreeableness. Because of that, content

shifts between Agreeableness and Emotionality domains, so those traits can be considered as the rotated variants of the Big Five Emotional Stability and Agreeableness axes (Ashton & Lee, 2007).

Since the HEXACO model differently conceptualized its broad personality domains, different relations with SWB can be expected. Although there are not many studies that simultaneously used some measure of SWB and the HEXACO personality questionnaire, existing data suggest some consistent differences compared to five-factor models (e.g., Aghababaei & Arji, 2014; Pollock et al., 2016; Romero et al., 2015; Visser & Pozzebon, 2013). In other words, the results indicate that the HEXACO Extraversion is the most significant and sometimes the only domain associated with all three SWB components. This was also confirmed in the meta-analysis by Anglim et al. (2020), which examined 22 independent effect sizes for relationship of SWB and the HEXACO model. The average correlation coefficient of Extraversion with PA is .55, with life satisfaction .43, and with NA -.39. Emotionality, on the other hand, does not show nearly as high levels of association as Neuroticism, and is only significantly associated with NA (.31). Conscientiousness is mostly related to PA (.31), while other HEXACO domains have no significant effects on the degree of SWB components (Anglim et al., 2020). Therefore, relations of SWB with personality traits can depend on the personality model that is used in different studies.

The present study

This study has two main goals. The first one is to examine the relationship between three SWB components in a Croatian sample. More specifically, we want to explore the associations between cognitive component, operationalized as satisfaction with life, and the affective components PA and NA. In accordance with earlier findings, we hypothesised that these three SWB components will have small to medium correlations. The second goal of this study is to investigate the differential relationship of three SWB components with personality traits operationalized through the HEXACO personality framework. Based on what we know from previous studies, we

expect that Extraversion will have the strongest correlations with all three components. Additionally, we aimed to apply three regression analyses to test how much the variance of SWB components can be explained by HEXACO personality traits. We set the hypothesis that personality will explain a higher amount of variance in the two affective rather than in the cognitive component.

Method

Participants and Procedure

Participants were part of a population-based twin sample across six birth cohorts in Croatia, previously formed for the purpose of a larger research project. Thus, the sample consisted of 830 young adults (63% women) with the average age of 22.15 years (range: 19-28 years). All participants had high school education, and the vast majority of them (86%) attended college. Participants filled in self-report measures in the paper-pencil format.

Measures

HEXACO Personality Inventory-Revised. For measuring personality within the HEXACO personality framework, we used the Croatian version of the 100-item version of the HEXACO personality inventory (Babarović & Šverko, 2013; Lee & Ashton, 2018). This instrument measures each of the six broad personality traits from the HEXACO personality model with 16 items, i.e., Honesty-humility (e.g., *I am an ordinary person who is no better than others.*), Emotionality (e.g., *I feel like crying when I see other people crying.*), Extraversion (e.g., *I am energetic nearly all the time.*), Agreeableness (e.g., *Most people tend to get angry more quickly than I do.*), Conscientiousness (e.g., *I clean my office or home quite frequently.*), and Openness to Experience (e.g., *I enjoy looking at maps of different places.*). Every item is accompanied with a five-point Likert-type scale (1 = *strongly disagree*; 5 = *strongly agree*). The internal consistency of the six scales in the present study varies between $\omega = .80$ and $\omega = .86$.

Positive and Negative Affect Schedule (PANAS). To measure the affective components of SWB, we used a shortened version of PANAS. The version we used has 16 items with best psychometric properties after adapting PANAS-X (Waston & Clark, 1994) to Croatian language (Križanić, 2013). Eight items are used for measuring PA (e.g., cheerful, interested, inspired, relaxed), and another eight for measuring NA (e.g., irritable, nervous, lonely, angry). For a single item, participants have to answer how they feel in general on a scale 1 (*not at all or very rare*) to 5 (*extremely*). The internal consistency of the composite scale of PA in this study was $\omega = .82$, and $\omega = .85$ for NA.

Satisfaction With Life Scale (SWLS). The cognitive component of the subjective well-being was measured using a Satisfaction with Life Scale, which is designed to measure global cognitive judgments of one's life (Diener et al., 1985). It consists of 5 items (e.g., *In most ways my life is close to my ideal.*), followed by a seven-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*). The internal consistency of the composite scale in this study was $\omega = .82$.

Results

Descriptive statistics and Pearson's intercorrelations of all study variables are shown in Table 1. Due to a large number of participants in this study, we set the risk ratio for the hypotheses testing to 1%. Because large numbers of participants

can cause low correlations to become significant, we also limited the interpretation to correlation coefficients above .30. As it can be seen from the Table 1, life satisfaction has correlations of -.41 and .48 with NA and PA, respectively, while two affective components correlate -.33. Regarding associations between SWB and HEXACO personality traits, all three SWB components have the strongest correlation with Extraversion. Also, life satisfaction and PA have a correlation greater than .30 with Conscientiousness. NA has more distinctive relations with HEXACO traits since it also significantly correlates with Emotionality ($r = .33$) and Agreeableness ($r = .30$).

To determine the amount of the SWB variance explained by HEXACO personality domains, three separate regression analyses were conducted, where six HEXACO domains were set as predictors for three SWB components as outcomes. The results are presented in Table 2. The HEXACO personality model significantly explains the variance of all SWB components, but mostly for PA ($R^2_{adj} = .39, p < .001$), while for life satisfaction the HEXACO model explains the smallest amount of variance ($R^2_{adj} = .31, p < .001$). The beta coefficients for HEXACO domains are consistent with the results of the correlation analyses - Extraversion is the strongest predictor for all SWB components. It is also found that Honesty-Humility is a significant predictor of life satisfaction and NA, as is Openness for life satisfaction and PA, but the magnitudes of these beta coefficients are small.

Table 1. Descriptive Statistics and Intercorrelations of SWB Components and HEXACO Domains ($N = 830$)

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.
1. Life satisfaction	4.68	1.12								
2. Positive affect	3.43	0.57	.48							
3. Negative affect	2.17	0.65	-.41	-.33						
4. Honesty-Humility	3.57	0.56	.15	.08	-.12					
5. Emotionality	3.28	0.57	-.03	-.06	.33	.12				
6. Extraversion	3.47	0.56	.49	.58	-.45	.02	-.07			
7. Agreeableness	2.93	0.52	.13	.12	-.30	.24	-.17	.12		
8. Conscientiousness	3.58	0.50	.34	.33	-.23	.19	.04	.25	.08	
9. Openness	3.35	0.63	-.01	.18	-.01	.08	.01	.05	.06	.18

Note. All correlations significant at $p < .01$ are in bold.

Discussion and conclusions

The aim of this study was to investigate the associations of different SWB components and their relationships with the HEXACO personality model in a Croatian sample of young adults. Regarding our first problem, the results showed that the correlations between SWB components are in the medium range. This confirms that these constructs are correlated but not redundant. Interestingly, the lowest correlation was between the two affective components ($r = -.33, p > .001$), which is consistent with the theoretical basis that PA and NA are not two poles of the same affective dimensions, but two separable constructs (Tov, 2018; Watson & Tellegen, 1985). Despite the independence of WB dimensions, it is not surprising that these components are not completely orthogonal. Indeed, it is intuitive that the reasons that can lead to life satisfaction, such as the successful achievement of various goals or good social relationships, can also lead to a positive affective balance. Conversely, the fact that one experiences positive affect more often than negative affect can also contribute to a positive evaluation of one's own life, i.e., a higher life satisfaction. Therefore, it was expected that weak to moderate correlations between SWB components would be found.

Our second problem was to examine the relationships between SWB components and HEXACO personality traits. In contrast to the use of five-factor models, where Neuroticism is the main SWB predictor, the HEXACO Extraversion emerged as the main correlate for all three components, with the highest correlation with PA ($r = .58$), which is corresponding with the meta-analytic estimate of .55 (Anglim et al., 2020). Although Extraversion in HEXACO is quite similar to the same-named domain in other personality models and is not emphasized as a differentiating factor, there are some interesting differences that are reflected in our results. More precisely, the HEXACO Extraversion also has a strong relationship with NA ($r = -.45$). These results can be explained if we descend to the level below the broad domains, and focus on the facets that define each domain. Specifically, the HEXACO Extraversion is defined with the facet scale Social Self-Esteem, which refers

to the tendency to have a positive self-regard, where low scorers tend to have a sense of personal worthlessness (Lee & Ashton, 2009). These thoughts can be associated with low self-esteem and depression, which can lead to a tendency for experiencing NA. Besides Extraversion, the HEXACO Conscientiousness correlates around .30 with PA and life satisfaction, which is consistent with previous findings (Anglim et al., 2020; Grant et al., 2009; Ng et al., 2019; Røysamb et al., 2018). Because this trait encompasses behaviours aimed at diligent and dedicated work, individuals who are highly conscientious are more inclined to successfully achieve their life goals, which can in turn lead to life satisfaction and positive emotions associated with success (e.g., happiness, pride) (Headey, 2008; Sheldon et al., 2010). While Neuroticism is the main SWB correlate in five-factor taxonomies, the HEXACO Emotionality is significantly correlated only with NA in our study, with a correlation size of .33, confirming the differences between these two traits. Although Emotionality includes the tendency to experience negative emotions, such as anxiety and fear, it also consists of more neutral tendencies, i.e., dependency and sentimentality, and does not include depression, which is important because depression is usually considered as the most important facet for predicting SWB (Anglim et al., 2020; Quevedo & Abella, 2011; Røysamb et al., 2018; Schimmack et al., 2004). As mentioned earlier, depression is not explicitly defined in HEXACO, but there is some content that can be associated with depression in the Extraversion scale. Finally, consistent with findings in the literature that personality can explain 30-40% of the variance in SWB (Costa & McCrae, 1980; Diener et al., 1999; Lucas, 2018), we found that the HEXACO model explains 31-39% of its variance, and that the affective components are more strongly explained by personality than the cognitive component, which is not surprising given that affective experiences are incorporated in the content core of some personality traits.

Naturally, this study of has some limitations. We used only self-report questionnaires for all study variables. It would be interesting to see the results if other methods were used, such as other-reports, or if SWB components were measured using, for

example, the day reconstruction method. Indeed, some studies have shown that the relationship between SWB and personality is lower when different assessment methods are used, i.e., when there is no method variance (Anusic et al., 2017; Hudson et al., 2016; Lucas & Fujita, 2020). Moreover, our sample consisted of young adults, so it is doubtful if we can generalize our results to other life periods. In future work, it would also be interesting to investigate if there are any gender differences in SWB-HEXACO relationships.

Table 2. Results of the Three Regression Analyses with Six HEXACO Domains as Predictors ($N = 830$)

	SWLS	PA	NA
Predictors	β	β	β
Honesty-Humility	.10*	.03	-.09*
Emotionality	-.02	-.03	.29*
Extraversion	.43*	.53*	-.38*
Agreeableness	.03	.02	-.17*
Conscientiousness	.23*	.18*	-.13*
Openness	-.09*	.11*	.05
$R^2_{adj} (F)$.31 (61.83)*	.39 (89.03)*	.36 (77.37)*

Note. * $p < .01$. SWLS = Satisfaction with Life Scale

In conclusion, the results of this study confirmed that it is important to distinguish SWB components, since they are not redundant constructs. Consequently, our findings suggest that the association between SWB and personality, as well as with other relevant constructs, can depend on which specific SWB component is measured. This study could also help in better understanding the differences between personality models and the domains they define. For example, although Extraversion is usually seen as a domain that is not much different in HEXACO and five-factor models, our findings point out that there are some variations in content that result in higher correlations of that factor with SWB when the HEXACO model is used.

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