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An Expanded Life Satisfaction Model: A Component of Subjective Well-Being

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The current investigation uses latent variable modeling to investigate Subjective Well-Being (SWB). Previous research has suggested that Subjective Well-Being is made up of a tripartite model consisting of life satisfaction, positive affect, and negative affect. However, recently, extant research has suggested that the tripartite model of SWB comes short of considering nuances of SWB, specifically relationship outcomes and general life challenges. This investigation presents multiple hierarchical models of SWB, including a third-order factor structure of SWB to explain satisfaction with life, subjective happiness, resiliency, and assessment of the relationship.

Keywords: Subjective Well-Being, Satisfaction with Life Scale, Subjective Happiness Scale, Brief Resiliency Scale, Relationship Assessment Scale

Subjective Well-Being is an individual's cognitive and affective evaluation of his or her life. Diener's (1984) formulation of subjective well-being (SWB) consists of a cognitive component concerning one's overall level of life satisfaction (LS) and satisfaction with life domains - both positive affect (PA) and negative affect (NA). These three are separable and capture three components that Diener theorized as the different aspects of happiness and unhappiness.

Evaluations of these three components depend on individuals' subjective views of their own lives and often their recent experiences (Busseri & Sadava, 2011). SWB falls mostly within hedonic well-being psychology, which attempts to address the degree to which individuals assess their lives as satisfying and enjoyable. In a recent evaluation of this tripartite formulation, Busseri and Sadava identified five theoretical models of SWB: (1) SWB as three separate components to distinguish the components as unique constructs; (2) SWB as a Hierarchical Construct in which the three components are first-order factors of SWB; (3) SWB as a causal system in which life satisfaction was impacted by both positive affect and negative affect; (4) SWB was considered as a composite of life satisfaction, positive affect, and negative affect; and (5) SWB as a configuration of components in which the system of life satisfaction, positive effect, and negative effect were distinctively organized on an individual level. All the models tested by Busseri and Sadava included all

three components theorized by Diener (1984). However, what was not considered in the Busseri and Sadava investigation is whether all three components constitute a necessary condition for assessing SWB. Specifically, can any of the three components be removed and replaced by others, and still maintain the essence of SWB? As Deci and Ryan maintained (2008) that well-being consisted of "more than just happiness, suggesting that people's reports of being happy does not necessarily mean that they are psychologically well." This eudaimonic perspective, is concerned with living well or actualizing one's greatest human potential. Deci and Ryan (2008) indicated that their conceptualization is not about measuring the culmination of an individual's life but is an assessment of how well the individual accomplishes "fulfilling one's virtuous potentials and living as one was inherently intended to live".

Indeed, there is room for the greater integration of SWB into a more eudaimonic perspective. The options increased considerably with the introduction of positive psychology by Seligman and Csikszentmihalyi (2000) and its mercurial growth; in both theoretical and empirical papers. Fredrickson (2001) summarized the goals of positive psychology as a field intended "to understand and foster the factors that allow individuals, communities, and societies to flourish". Examples of models for happiness or subjective well-being that incorporate some eudaimonia measures include two different presentations. First, Moore and Diener (2019) formulated a model of empirical relations eudaimonic and subjective forms of well-being in which well-being affects three first-order constructs: (1) relationship measured by support, community, trust, respect, loneliness and belonging; (2) mastery by flow, skill, learning, control, efficacy and worth; and (3) SWB converged on achievement, meaning, optimism, LS, PA, and NA. Likewise, Galinha and Pais-Ribeiro (2008) tested a correlated-uniqueness model and several higher-order models of SWB. Galinha and Pais-Riberio correlated factor model provided the best fit relative to the higher order factor models tested. Interestingly, Galinha and Pais-Ribeiro produced a model that includes the three components suggested by Diener (1984) as well as a measure of global happiness and satisfaction proposed by Diener (2002). These subjective comprehensive measures provided participants with the opportunity to respond to aspects of well-being and satisfaction that existed beyond the original three components proposed by Diener (1984).

Subjective Well-Being (SWB)

The subjective nature of SWB underscores the personal nature of happiness and life satisfaction (Diener, 1984). SWB is personal and depends heavily on what the individual values. The concept of life satisfaction (LS) is augmented by other subjective attitudinal scales such as

relationships with loved ones, fulfillment from work, satisfaction with physical health, happiness with romantic life, and contentment with your sense of spirituality or religion. As such, the current investigation focuses on the cognitive aspects of SWB - life satisfaction (LS) that entails how a person thinks globally about his or her happiness and life. This focus is achieved using the Satisfaction With Life Scale (SWL) and Subjective Happiness Scale (SHS).

Satisfaction with Life Scale (SWL)

Satisfaction with Life Scale (SWL) is the level of satisfaction individuals have with their socio-cultural conditions. The SWL is an overall assessment of the many variables that scholars proposed as measures of this construct (Maddux, 2017; Post, van Leeuwen, van Koppenhagen, & de Groot, 2012). Despite criticisms, SWL is the most frequently used measure of satisfaction with life in the existing literature (Margolis, Schwitzgebel, Ozer, & Lyubomirsky, 2018).

Subjective Happiness Scale (SHS)

Happiness is a person's state of well-being and contentment; it is a joy. Many self-report scales exist to measure subjective happiness (Andrews & Withey, 1976; Bradburn & Noll, 1969; Lyubomirsky & Lepper, 1999). The Subjective Happiness Scale (SHS) by Lyubomirsky and Lepper (1999) is an instrument that measures the overall subjective happiness of an individual as "a global, subjective assessment of whether one is a happy or an unhappy person". According to the developers, the inventory was developed to fill a void in the existing measures in providing a global measure of psychological happiness. This scale provides an overall subjective barometer of one's self reported happiness.

Community Aspects of Well Being

To incorporate the community aspect of SWB, this investigation considers other subjective scales of resilience to personal setbacks and the nature of the self-centered interpersonal relationship networks, as having some impact on an individual's SWB. A number of researchers have suggested that personal relationships and recovery from setbacks in life influence SWB (e.g., Achour & Nor, 2014; Badran & Youssef-Morgan, 2015; Mahmood & Ghaffar, 2014; Patil & Adsul, 2017; Robbins, Ford, & Tetrick, 2011; Sagone & Caroli, 2014; Souri & Hasanirad, 2011). Based on these findings, the present study includes two scales measuring how individuals cope with personal challenges (The Brief Resilience Scale, BRS) and the

nature of their social and personal networks (Perceived Relationship Quality, RAS).

Brief Resilience Scale (BRS)

Individuals face many challenges over their life span. The manner in which they cope with these challenges affects many aspects of their lives; it means to rebound or recover after experiencing a crisis or challenge; resilience is the ability to survive, to adapt to changing conditions, and to recover from adversity successfully (Taormina, 2015). Resilience could be the key to explaining resistance to risk across the lifespan and how people bounce back (Windle, Bennett, & Noyes, 2011). Resiliency is a disposition that ameliorates the adverse effects of stress and promotes positive outcomes. Because of these characteristics, resilience is part of research on job satisfaction (Badran & Youssef-Morgan, 2015; Robbins et al., 2011), life satisfaction (Achour & Nor, 2014) and well-being (Sagone & Caroli, 2014; Souri & Hasanirad, 2011). The current investigation includes the BRS, as developed by Smith, Wiggins, Tooley, Christopher, and Bernard (2008), to assess resilience to bounce back from adverse events.

Relationship Assessment Scale (RAS)

The Perceived Relationship Quality scale examines areas of relationship assessment that can be measured with a wide variety of inventories (Lawrence et al., 2011; Renshaw, McKnight, Caska, & Blais, 2011). However, Renshaw et al. maintain that most of these scales focus primarily on marital relationships, therefore "they are not suitable for studies that include unmarried couples of non-romantic dyads in their sample". The current study incorporates the Relationship Assessment Scale (RAS) developed by Susan Hendrick and associates (Hendrick, 1988; Hendrick, Dicke, & Hendrick, 1998). The RAS was created initially as a brief measure of marriage quality, but later it was expanded for use with other intimate relationship situations such as parent-child, and close friends.

Based on the existing literature, we propose that these four constructs (SWL, SHS, BRS, and RAS) constitute a multifaceted happiness model: the augmented life satisfaction model. The purpose of this investigation is to examine the factorial structure of the construct of happiness. Models evaluated included: a single latent factor of happiness, a hierarchical model for happiness, and a correlated uniqueness model.

Method

Participants

The data for the current investigation are a convenience sample of 851 respondents, primarily current and former students at a university in northeastern Ohio. Participants were invited to complete the survey through an email invitation sent out by a professor who works at a NE Ohio university. This invitation was sent to students, recent graduates, and fellow faculty members. Participants were asked to share the survey link with their co-workers and friends.

The respondents were mostly white (91.2%), female (89.1%), under the age of 50 years of age (72.6%), and a predominately married (73.4%). Most of the respondents indicated that they were educated, with 58.6% showing that they have some post-undergraduate education, and 21.2% indicating that they have an undergraduate-level degree. Geographically, 47.4% resided in cities and villages while 52.6% lived in the suburbs.

Instruments

The current investigation incorporates four happiness scales (Satisfaction with Life, Subjective Happiness Scale, Brief Resiliency Scale, and Relationship Assessment Scale). Basic demographic information was also collected; age, gender, relationship status, education, occupation, the geography of residence, and current socio-economic status.

Satisfaction with Life (SWL) consists of five items rated on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). The items include: (1) In most ways, my life is close to my ideal; (2) The conditions of my life are excellent; (3) I am satisfied with my life; (4) So far, I have gotten all the important things in life; and (5) If I could live my life over, I would change almost nothing. This scale is intended to be a unidimensional measure of satisfaction with life. However, to achieve unidimensionality, some empirical studies correlate some error covariances among some items (e.g., Pavot & Diener, 1993; Slocum-Gori, Zumbo, Michalos, & Diener, 2009). The validity and reliability of SWL have been established in different socio-economic conditions and cultures (Busing & West, 2016; Diener et al., 1985; Diener, Inglehart, & Tay, 2013; Tay, Ng, Kuykendall, & Diener, 2014; Vela, Lerma, & Ikonomopoulos, 2017) and different demographic groups (López-Ortega, Torres-Castro, & Rosas-Carrasco, 2016; Lucas-Carrasco, Den Oudsten, Eser, & Power, 2014). The SWL is a very stable measure and has been found to perform better than single variable measures of satisfaction with life (Andrews & Withey, 1976; Eid & Diener, 2006; Krueger & Schkade, 2008).

Subjective Happiness Scale (SHS) consists of four items rated on a 7-point Likert scale. In the SHS, two items assess absolute (self) and relative (to peers) ratings, while the other two ask respondents the extent to which scenarios of happy and unhappy individuals describe them. The items include: (1): In general, I consider myself… Not a very happy person (1) to A very happy person (7); (2): Compared with most of my peers, I consider myself… Less happy (1) to More happy (7); (3): Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you? Not at all (1) to A great deal (7); and (4): Some people are generally not very happy. Although they are not depressed, they never seem to be happy as they might be. To what extent does this characterization describe you? Responses: Not at all (1) to A great deal (7). Despite its brevity, SHS has good psychometric qualities; it is characterized by "high internal consistency, a unitary structure, and stability over time" (Lyubomirsky, 2008). Based on Lyubomirsky (2008), the reliability estimates for the scale ranged from α=.79 to α= .94.

The Brief Resiliency Scale (BRS) consisting of six items on a 5-point Likert-type scale ranging from strongly disagree (1) to strongly agree (5) (Tansey et al., 2016). Items include: (1) I tend to bounce back quickly after hard times; (2) I have a hard time making it through stressful events; (3) It does not take me long to recover from a stressful event; (4) It is hard for me to snap back when something bad happens; (5) I usually come through difficult times with little trouble; and (6) I tend to take a long time to get over set-backs in my life. Based on Rodríguez-Rey et al. (2018), the reliability estimates for the scale are estimated at α= .89.

The Relationship Assessment Scale (RAS) consisting of seven items on a 5-point Likert-type has exhibited high internal reliability (Tansey et al., 2016). The items include: (1) In general, how satisfied are you with your relationship?; (2) How good is your relationship compared to most?; (3) How often do you wish you hadn't gotten into this relationship?; (4) To what extent has your relationship met your original expectations?; (5) How much do you love your partner?; (6) How many problems are there in your relationship?; and (7) How many problems are there in your relationship?

This instrument exhibits good internal consistency (α=.73 to .92) across different demographic groups and when administered in different languages (Dinkel & Balck, 2005). Even when applied to multiple types of relationships the RAS provides a stable measure “when completed with regards to romantic partners, parents, friends, and other types of relatives" (Renshaw et al., 2011).

Data Analysis

Descriptive statistics and Cronbach's alpha were used to describe the scales and the demographic characteristics. Structural equation models were estimated using MPlus. Measurement models were estimated for each of the four scales. Three higher order structural models were estimated to evaluate the factorial structure of happiness.

The evaluation of model fit considers the chi-square and its associated degrees of freedom, root mean square error of approximation (RMSEA), and its 90% confidence interval (CI), and the comparative fit index (CFI).

We developed a hierarchical model of the four constructs. Dube, Cervellon, and Jingyuan (2003) proposed a structurally similar hierarchical model of consumer attitudes, and they stated that "consumer attitudes be best represented by a hierarchical structure that preserves, at the first level, clusters of attributes, these clusters being nested at the second level." Then these two-level constructs (cognitive and affective) are correlated (Φ12). This structure is similar to the correlated higher-order factor models of personality conceptualized by Hull and Beaujean (2011).

In the formulations, like those conceptualized by Schweizer, Moosbrugger, and Schermelleh-Engel (2003), we replaced the correlation by a higher-order construct. This formulation is used to examine the linkages among these four types of activities: grouping SWL and SHS; RAS and BRS. The final single grouping includes all four activities. The formulation follows closely the conceptualization and procedural strategies proposed by Schweizer et al. (2003). Their formal description of hierarchical models is a set of three structural equations:

i. measurement model $Y = \Lambda\eta + \varepsilon;$

ii. structural equation model: $\eta = \Gamma\xi + \zeta,$

where Y is a column vector of indicator variables Λ is the matrix of loadings of p indicator variables Y on q first-order factors η, and ε is the column vector of measurement errors; Γ is the matrix of loadings of first-order factors η on second-order factors ξ, and ζ is the column vector of disturbance terms. Substituting the structural equation for η into the measurement yields:

$$Y = \Lambda(\Gamma\xi + \zeta) + \varepsilon = \Lambda\Gamma\xi + \Lambda\zeta + \varepsilon;$$

The covariance of Y, $\Sigma = YY' = (\Lambda\Gamma\xi + \Lambda\zeta + \varepsilon)(\Lambda\Gamma\xi + \Lambda\zeta + \varepsilon)'$

$$\Lambda\Gamma\xi(\Lambda\Gamma\xi)' + \Lambda\zeta(\Lambda\zeta)' + \varepsilon\varepsilon',$$

It is assumed that the expected values of manifest variables, latent variables, and errors are zero.

iii. Variance decomposition model: $\Lambda \Gamma\Phi\Gamma' \Lambda' + \Lambda\psi \Lambda' + \theta \varepsilon$

When Schweizer et al. applied this formulation, they included two levels of latent variables, "which may represent traits or abilities. (p. 162)" The same is utilized with pairs of two latent variables: Subjective Well-Being (SWB)= SWL, SHS, and Interpersonal Experiences (IES) = RAS, BRS.

Results

Basic descriptive statistics reveal that n = 758 (89.1%) of participants are female and n = 93 (10.9%) are male. Additionally, n = 226 (26.6%) reported being single while n = 626 (73.4%) indicate that they are married (Table 1).

Table 1
Descriptive Statistics (n = 851)

Variable	Category	*n*	%
Age	18-39 years	422	49.6
	Over 39 years	429	50.4
Education	No Graduate	352	41.4
	Graduate	499	58.6
Job (Occupation)	Others	361	47.4
	Health professions	490	57.6
Socio-Economic Status	Low to Medium	500	65.8
	Medium to High Income	291	47.4

Scale Attributes

Table 2 reports the descriptive statistics of the four scales (SWL, SHS, BRS, RAS). The Cronbach's α coefficients, measures of the internal consistency of the constructs, are high: α=.90 for SWL,α=.89 for SHS, α=.92 for RAS and α=.92

Unidimensionality of the constructs

For each of the four scales, convergence on a single construct with uncorrelated errors did not fit the data based on all the measures of fit discussed above. As summarized in Table 2, at least a pair of error

Table 2
Descriptive Statistics for the Four Happiness Scales

Scale	Mean	*SD*	Cronbach's α
Satisfaction with Life (SWL)	24.65	6.82	.90
Subjectiveness Happiness (SHS)	19.98	5.19	.89
Relationship Assessment (RAS)	27.39	6.61	.92
Brief Resilience (BRS)	21.07	4.66	.89

covariances had to be freed in the fitting process. Specifically, error terms that were allowed to correlate were shs1, shs2; swl1, swl2; brs1, brs3; ras2, ras5; and ras4, ras7. With these correlations, each of the scales converged. for BRS. The four scales were correlated significantly (Table 3). The intercorrelated nature of the constructs justifies the formulation and testing of higher-order constructs in the next section.

Table 3
Intercorrelations Between the Happiness Scales

Scale	SWL	SHS	RAS	BRS
Satisfaction with Life (SWL)	1.00			
Subjectiveness Happiness (SHS)	.59	1.00		
Relationship Assessment (RAS)	.55	.36	1.00	
Brief Resilience (BRS)	.38	.57	.17	1.00

The Covariance Analyses

The structural equations are based on all the covariances among the 22 items: five for SWL, four for SHS, seven for RAS and six for BRS. The measurement models are described in Table 4 which summarizes the results

Table 4
Summary of CFA for the Measurement Models (n= 856)

Model	χ^2	*df*	CFI	*p*
Satisfaction with Life Scale (SWL)	6.48	4	1.00	.166
Subjective Happiness Scale (SHS)	7.02	1	1.00	.008
Relationship Assessment Scale (RAS)	78.15	12	0.99	< .001
Brief Resilience Scale (BRS)	16.97	8	0.99	.030

for these models. The four-construct model present the results for each of the four scales, which test each of the four constructs for single dimensionality. All four of the single construct models have CFI values higher than 0.99, indicating that the unidimensional models have a good fit.

Table 5 contains nested model comparisons for the higher order factor models. Three higher order models were tested: A single second order factor, a correlated factor model, and higher order model (happiness super construct).

Table 5
Fit Indices for Nested Model Comparisons

Model	χ^2	*df*	CFI	*p*
1 Single Second-Order Factor	1446.35	200	0.97	<.001
2 Four Intercorrelated Factors	528.45	198	0.99	<.001
Model 2 versus Model 1	*917.90*	*2*	*0.02*	*<.001*
3 Happiness Super Construct	1514.30	200	0.97	<.001
Model 3 versus Model 2	*985.85*	*2*	*0.02*	*<.001*
Null model	48787.15	231		

Note: Model 1 and 3 have same df and are not comparable, however, both Model 1 and Model 3 can be directly compared with Model 2. Null model: all the structural (regression) paths and correlations among the observed variables are assumed to be zero.

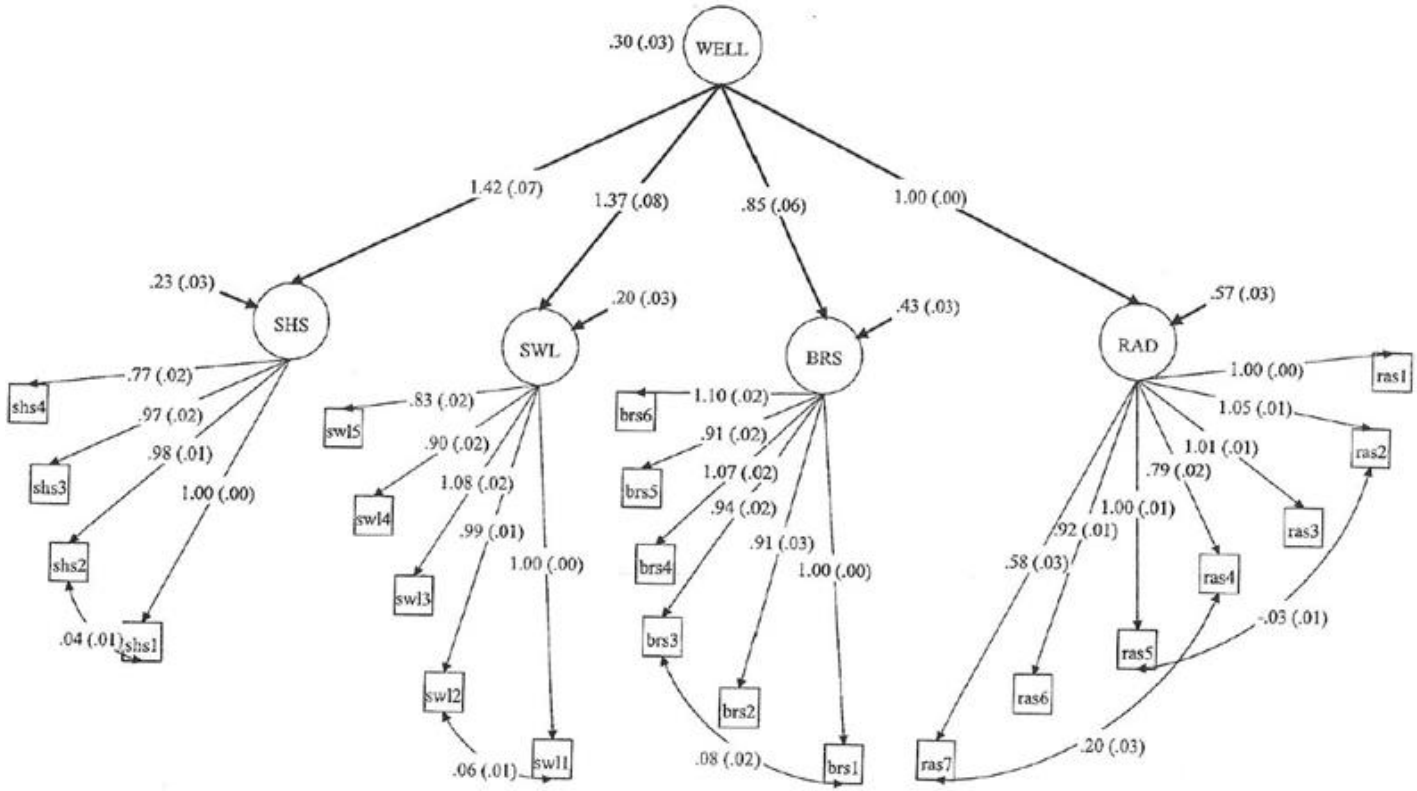
These results provided the bases for testing alternate hierarchical models: a single second-order model, a correlated four-factor model, and a third-order single-factor model (presented in Fig. 1, Fig. 2, and Fig. 3).

On conceptual grounds, any of the three models are all tenable. Model 1 results indicate a χ^2_{200}=1446.35, p<.001, CFI=.97 and supports the position of a higher-order factor well-being. Model 2 demonstrates the result of correlating the four constructs without a higher order construct. The benefit of the four-factor construct according to Gorsuch (1983) is that "primary factors are concerned with narrow areas of generalization where the accuracy is great" (p. 240). However, Gorsuch continues that while the higher-order factor reduces accuracy it provides a greater scope of generalization of the model. While the results indicate good fit, χ^2_{198}=528.45, p<.001, CFI = .99, the lack of the second-order factor limits the generalizability of the model to the broader context.

However, the third model, Happiness Super Construct, introduces two second order factors (Subjective Well-Being, SWB, and Interpersonal Experience, IES) and a third-order factor of Happiness. The second-order factor SWB is constructed with SHS and SWL scale responses. The second-order factor IES is constructed with the BRS and the RAS responses. While the correlated uniqueness model provides the best fit, the third-order model is the preferred model. This Happiness Super Construct provides the most parsimonious while demonstrating good fit, χ^2_{200}=1514.25, p<.001, CFI = .97. More importantly, this model demonstrates the original proposition: that happiness is constructed from subjective well-being and interpersonal experiences.

Figure 1 presents a hierarchical structural model of the second-order factor model of well-being. This first-order of this model includes the Relationship Assessment Scale (RAS), the Brief Resiliency Scale (BRS), the Subjective Happiness Scale (SHS), and the Satisfaction with Life Scale (SWL) converging on a second-order well-being factor.

Figure 1. Hierarchical Structure of the Single Second Order Factor.



Likewise, Figure 2 presents a correlated four-factor model which includes the Relationship Assessment Scale (RAS), the Brief Resiliency Scale (BRS), the Subjective Happiness Scale (SHS), and the Satisfaction with Life Scale (SWL). As seen below, these factors are correlated with each other without the introduction of the higher-order factor.

Figure 2. Structure of the Four Correlated Factors.

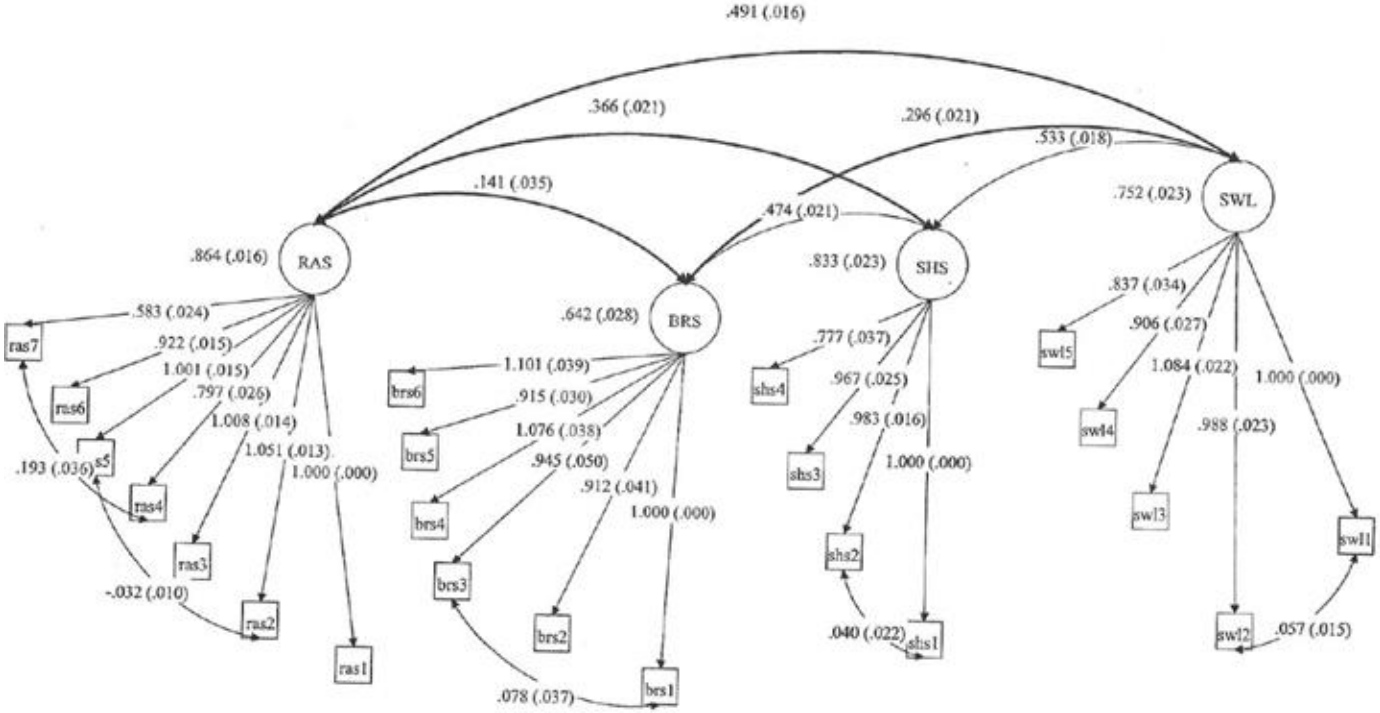
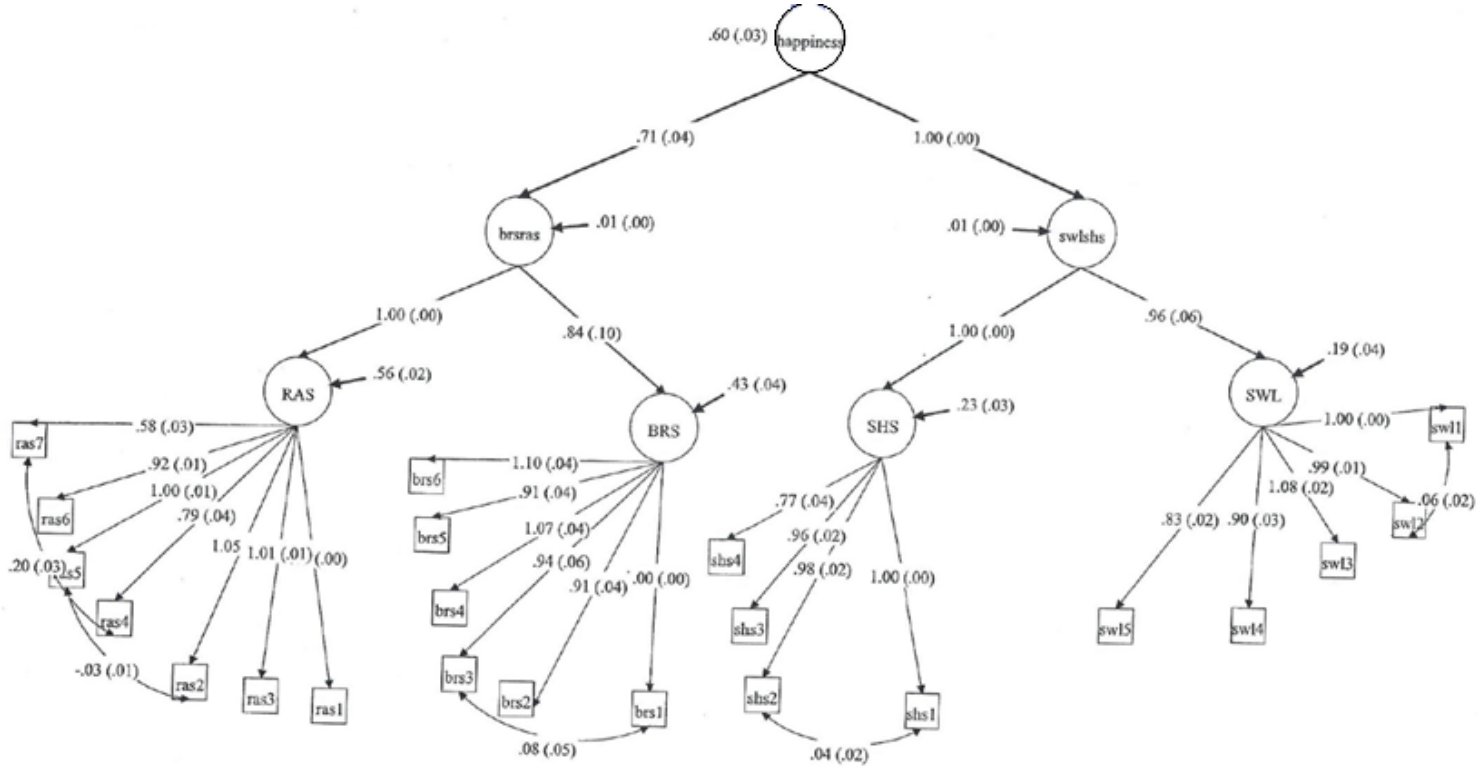


Figure 3 presents the third-order single factor model. Subjective Well-Being consists of SWL and SHS (swlshs) and Interpersonal Experiences (IES) consists of BRS and RAS (brsras).

Figure 3. Hierarchical Structure of the Single Third Order Factor (Happiness Superconstruct)



Discussion

This research focused on subjective well-being as measured by the Satisfaction with Life scale (SWL) and the Subjective Happiness Scale (SHS), as describe by Busseri et al. (2001; 2011). The current investigation expands their linkages to other aspects of the characteristics of happy people. Traditionally, happiness is measured using reported subjective happiness and life satisfactions, but research supports that success in sexual and social relationships and a proclivity to rebound successfully from disappointing encounters have an impact on the individual's happiness (e.g., Diener, 2020). These more "global" aspects of well-being and life-satisfaction, as suggested by Diener (2002) and later demonstrated by Galinha and Pais-Ribeiro (2008), are measured via the relationship assessment scale (RAS) and the latter by the brief resilience scale (BRS). As such, the current investigation expands upon the extant research by considering a multi-factor model that considers both the subjective well-being and interpersonal life experiences of participants as a measure of happiness.

Using four well validated scales, several alternate hierarchical models were evaluated using structural equation modeling. Three models are tested, including a model that assesses the unidimensionality of the constructs, a second-order composite model that demonstrates the correlation between all four of the constructs, and a final hierarchical model. All the models fit the data with varying degrees of fit and all models were tenable. The first model supported the unidimensionality of the four constructs. The second model demonstrated that there is a strong significant correlation between the SWL scale and the SHS, and a significant correlation between the BRS and the RAS that supported this proposition in the extant literature. Since these correlations exist, testing the existence of the two second-order factors (SWB and IES) was merited (Schweizer, et al.,2003). However, the hierarchical was model reinforced by the 22 items from the four constructs and resulted in a single third-order construct of happiness. Consistent with Schweizer, et al., the third order factor is explained by the two second-order factors. The third-order model exhibited the best fit. Unique to this research is the conceptualization of the third-order factor model, which explains two-second order factors, SWB and Interpersonal Experiences (IES), incorporating measures of relationship and resiliency self-evaluations.

On the theoretical level, the model demonstrated in the current investigation suggests that happiness is best conceptualized with a measure of subjective well-being, and the person's assessment of life experiences and their relationships. This expands on prior research suggesting that the latent construct of SWB was an incomplete conceptualization (Cf., Busseri et al., 2001; 2011). The current investigation is the only known study that

links subjective happiness, satisfaction with life, relationship assessment and reported resiliency as a holistic measure of happiness. The results of this study provide evidence there is overlap among these constructs based on a large sample of participants. Based on the findings, the latent construct of happiness can be conceptualized as manifested by the two second-order constructs, SWB and IES. Specifically, when considering the addition of a higher order concept of happiness, the components of SWB have been demonstrated as independent, and as such, a person's happiness can relate differently to outcomes associated with relationship, and personal setbacks, across the different phases of life.

Limitations. A potential limitation to the current investigation, like many that employ surveys for data collection is the self-reporting by the participants to several survey items. While there was no pressure to have individuals participate in the survey, and the anonymous survey was administered electronically, social-desirability bias can still occur. However, reliability estimates were high for each construct. Another limitation is that those who volunteered to participate in this survey are heavily represented by females, with graduate degrees, who reported working in health care. This specific population may respond to the survey items differently than other demographics. Additional research should focus on individuals from other occupations, marginalized groups, and males, who may process and may report on feelings and reactions to experiences differently.

Many other studies have used the four scales employed in this paper, and their psychometric attributes have been tested and documented. Future research using these four scale inventories should consider differential item functioning and systematic item reduction. While these scales demonstrate good convergent and discriminant validity individually (e.g., Busing & West, 2016; Diener et al., 1985; Diener, Inglehart & Tay, 2013; Dinkel & Balck, 2005; Tay, Ng, Kuykendall, & Diener, 2014; Vela, Lerma, & Ikonomopoulos, 2017), item analysis can provide insight on how different groups, especially across gender, reflect on the impact of life challenges and relationships on their happiness. Additionally, the novel application of these scales with used in conjunction with the other scales provides opportunities for future research in reducing the overall number of items across the four scales (Cf.,Larwin & Harvey, 2012).

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