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Development and Validation of the Subjective Well-Being Resources Scale

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ABSTRACT

Subjective well-being (SWB) is an important construct of positive psychology and it is known that these resources should be supported to prevent mental health disorders. However, there is no measurement tool to assess individual differences concerning SWB resources. The present study aims to develop a valid and reliable scale to measure SWB resources. For this aim, two studies were conducted. As a result, the five-factor (personal, religious, health, social, and external resources) construct explaining 45.3% of the variance was derived and validated with both exploratory and confirmatory factor analysis. The factors were related to mental health indicators and personality as expected. The internal consistency coefficient of the scale was .83), and the test re-test reliability was .88. As a result of the analysis, it is concluded that the Subjective Well-Being Resources Scale is valid and reliable and can be used to measure SWB resources.

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Assessment; depression; personality; measurement; quality of life

Introduction

Since the 90s, mental health researchers have begun to focus on positive features of individuals' life instead of focusing on only negative features such as psychopathology or treatment (Seligman & Csikszentmihalyi, 2014). Subjective well-being (SWB) is defined as a person's emotive and intellectual assessment of his/her life (Flouri, 2004). It is an expansive construct that incorporates having more pleasurable feelings, having a high level of life satisfaction, and having low levels of negative evaluations about life (Diener et al., 2002). Seligman (2011) proposed that subjective well-being is composed of five variables which are positive emotion, engagement, relationship meaning and accomplishment (PERMA). Goodman et al. (2018) examined its relationship with SWB and observed that there is almost a perfect correlation (.98) between the PERMA and SWB. Goodman et al. (2018) and Kashdan (2017) criticized the PERMA for not providing anything new to SWB. On the other hand, Diener and Ryan (2009) tripartite model of SWB includes positive and negative affect and life satisfaction as determinants of SWB. Diener's tripartite model defines SWB as a hedonic construct and it points out emotional well-being. It is thought that emotional well-being would be more related to mental health. In mental health literature, it could be seen that the World Health

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Organization Well-Being Index (WHO-5) which aims to measure subjective well-being is widely used to assess the outcomes of treatment methods (Topp et al., 2015). When the items are examined, it could be seen that they focus on positive feelings and satisfaction about daily life. Considering all of these, in this study we define SWB according to Diener and Ryan (2009).

Although SWB is one of the constructs of positive psychology, recent research indicates that there might be a hidden and undeniable relationship between SWB and psychopathology. For example, in their ten-year cohort study, Wood and Joseph (2010) reported that the risk of having depression among people with low well-being was twice as high. A fifteen-year follow-up study reported that low life satisfaction increased the risk of moderate and severe depression (Koivumaa-Honkanen et al., 2004). In this perspective, efforts to prevent mental health disorders should consider supporting SWB resources as a means of prevention. If low SWB is a risk factor for mental health, how can it be intervened? It was observed that there is no measurement tool to assess individual differences concerning SWB resources among individuals. The present study aims to develop a valid and reliable measurement tool to determine SWB resources.

Subjective Well-Being and Its Resources

Based on a combined review of the psychology and public health literature, Das et al. (2020) have classified theoretical SWB studies into four main categories: fulfillment and commitment theories, personal orientation theories, appraisal theories, and affective theories. Regardless of its orientation, when all theories are reviewed, it has been observed that there are common factors that determine SWB. These are demographics (age, ethnicity etc.), socioeconomic status (income, education etc.), self-reported health status and functioning, personality, social support, religion, and geography (neighbourhood, city, town etc.). Similarly, Diener and Fujita (1995), claim that individuals need some material (e.g., money), social (e.g., friends, family) or personal resources (e.g., intelligence, personal goals, life experiences) for a satisfying life. People use their internal (self-esteem, perceived control, etc.) and external resources (social support, income, etc.) to increase their subjective well-being (Cummins, 2010; Tomy & Cummins, 2011). According to Diener and Fujita (1995), people with such resources should get ahead well in his/her purposes in life and experience higher levels of positive affect. On the other hand, required subjective resources and their contribution to SWB are differed according to individuals' needs, and objectives. Individuals strains are regularly different, so the most essential resources are presumably changed over people. Individuals can frequently get positive SWB by linking together their objectives and the benefits they have (Diener & Fujita, 1995).

Although many possible subjective well-being resources are identified in the literature, they can be grouped under specific headings. Research indicates that the first dimension that should be taken into consideration in the context of SWB or happiness resources is one's resources such as values and goals (Diener, 2000; Gutiérrez et al. 2005; Oishi & Diener, 2001). Dedicating a purpose can give people a feeling of individual power and a feeling of a meaningful life, which improves happiness. To achieve personal goals, one must plan and show a situational effort. Personal characteristics such as skills generally help people to perform their plans. On the other hand, it

improves the capacity to cope with problems in everyday life (Cantor & Sanderson, 1999; Diener et al., 1997; Diener & Fujita, 1995). For instance, people who experienced a traumatic event or have mental illnesses cope differently with symptoms because they differ in their resources. People who have a sense of humor or empathy, which are skills, that promote the person's well-being, show lower levels of depression and anxiety (Bos et al., 2016).

Another dimension of SWB resources should be taken as interpersonal connections and social resources which are firmly connected with subjective well-being. Especially the expansiveness and deepness of one's social connections are strong predictors of subjective well-being. Individuals who perceive themselves as having good relationships with relatives, partners, and friends do not consider money and reputation for life satisfaction (Helliwell & Putnam, 2004). Life satisfaction appears to be associated with the quality of one's social connections. Lonely people are frequently distressed and down (O'Connor, 1994). Besides, it is reported that married individuals are more pleased than those who never married, divorced, separated, or widowed (Diener & Lucas, 1999). Marriage can give both financial and social prizes, yet the level of these advantages is likely to rely on the evaluations of the culture (Diener & Fujita, 1995). When considered from another perspective, never-married people seem to perceive less support from their friends and family; have low levels of social interactions than married people (Bookwala & Fekete, 2009). In conclusion having a partner, family support, and socializing with family and friends have positive effects on subjective well-being (Dolan et al., 2008; Pichler, 2006).

The other factor which affects subjective well-being is physical health but the relationship between the two is definitely complicated. Physically healthier people can be cheerful and being healthy can support well-being (Howell et al., 2007). Over the last three decades, researchers have begun to uncover that positive psychological states are a fundamental piece of health. Positive psychological states can really impact the onset of diseases and physical issues and additionally the healing processes (Vázquez et al., 2009). In this context effect of physical health on subjective well-being seems related to an individual's perception of the situation. Brickman et al. (1978) compared the happiness level of people with accidental disabilities and healthy ones. Results showed that, when compared with healthy ones, victims of accidents generally stated that they were happier in the past and less happy in the present. Researchers said that people with accidental disabilities idealize their past. So, their judgment affects today's happiness negatively. On the other hand, more subjective well-being advances health (Diener et al., 1999). According to the stress-buffering model, coping with stressful events successfully affect health positively by increasing immune response, and pain tolerance, and slowing disease progression. Personal resources such as coping skills might be mediating the relationship between health and subjective well-being. Pressman and Cohen (2005) also reviewed literature that investigates the relationship between health and well-being. They stated that there might be some mediators such as stronger social networks, more positive experiences, and fewer negative experiences.

External resources should be taken as the other dimension, but objective conditions such as money, richness, and comfort are not seen as a characteristic and fundamental piece of subjective well-being (Diener, 1984; Jorgensen et al., 2010). Being rich or poor generally determines if an individual could access proper nutrition and medical care

or not. Accessing well nutrition and medical care means a high level of health. On the other hand, a high level of wealth might cause a controlled environment where people show respect. By this means, the future might be looked more predictable. A predictable future means less concern and anxiety about the future.

On the other hand, people who have more money can avoid situations more, which can affect their subjective well-being (Cummins, 2000). On the contrary, as Olson and Schober (1993) said, some people with positive material conditions might have a low level of SWB, and others with negative material conditions might have a high SWB. It is told that more money might help someone if he/she is very poor. For upper and middle-income people, more money predicts less subjective well-being by causing more divorce, less enjoyment of small activities, and greater stress rather than more subjective well-being (Diener & Biswas-Diener, 2002). Additively, Brickman et al. (1978) compared lottery winners and control groups in their study and found that lottery winners were not significantly happier than others. Winning a lottery could be a stressful event. It may disrupt the social relations of the winner (friends who ask for a loan etc.), and generally, winners need to hide. Brickman et al. (1978) also stated that winners get less pleasure from ordinary events than controls. Contrary to general opinion, it would be said that money does not bring happiness to people. Some theoretical traditions, such as Self-Determination Theory or Psychological Well-Being Theory, which are about eudemonic well-being, state that meaningful life includes being oneself and using their own skills for other people (Ryan & Deci, 2000). In controversy, the hedonic approach to well-being includes having pleasurable things or experiences to be happy. Research showed that eudemonic conduct was related to higher levels of well-being than hedonic conduct (Steger et al., 2008; Peterson et al., 2005). Like Maslow (1943) said, until the basic needs and safe environment needs are met, external resources such as money support SWB. On the other hand, redundant money, car or house -in some situations- also may have an adverse effect on subjective well-being.

It is worth noting here that leisure has also been indicated to be an SWB domain by Diener et al. (1999). Consequently, Kuykendall et al. (2015) investigated the relationship between leisure and SWB and found that the leisure domain is a critical point to increase subjective well-being, especially leisure satisfaction. Leisure activities have essential outcomes such as better social relationships, health, and success as we consider SWB resources (Brajša-Žganec et al., 2011; Pressman et al., 2009). On the other hand, leisure activities generally include social interaction and require personal resources such as motivation to engage them or skills (Hills et al., 2000). Individual-centered leisure activities, such as playing sports, require being healthy. Taking into account all of these, it is seen the leisure domain has an indirect effect on SWB. However, it may serve as a valuable focus to increase satisfaction in other domains. For this reason, it has not been considered in this study.

Last but not least, religion has been considered another factor that affects subjective well-being (Ferriss, 2002; Lim & Putnam, 2010). Religious involvement may improve different parts of subjective well-being: through, social gathering and support, the formation of individual relationships, the provision frameworks of meaning and existential cohesion and the advancement of a more specific model of religious association and individual way of life (Ellison, 1991; Lim & Putnam, 2010). Okulicz-Kazaryn (2009) mentioned that religiosity makes people gladder in religious societies, and social

religiosity makes people happy by satisfying their need for belonging. When it is examined in terms of money; external resources have a weak correlation with SWB among religious people (Lelkes, 2006). From a different viewpoint, religious faith might act as a buffer for individuals by promoting an optimistic attitude, such as expecting positive outcomes in the future, hope, and acceptance of stressful events. Spiritual support from God, faith in more goodness in the universe, a feeling of spiritual connectedness with others, and religious hope help people cope successfully with adverse life events so this religious coping provides better well-being (Abu-Raiya et al., 2015).

Consequently, the aforementioned resources offer individuals some assistance with their physical and psychological needs (Diener & Fujita, 1995; Diener et al., 2003). These SWB resources contribute positively to one's evaluation of his/her life. So, SWB resources should be useful in protecting and maintaining mental health. Also, there are many studies which investigate the relationship between subjective well-being and mental health (Bushi, 2016; Eker, 2016; Ozer, 2013), but there is no study which investigates the relationship between SWB resources and psychological disorders. The reason for this situation may be the result of the unavailability of a valid measuring tool. This study aims to develop a scale to measure subjective well-being resources.

Study 1: Scale Construction, Exploratory Factor Analysis, and Reliability

The main aim of this study was to create a scale to measure subjective well-being resources and validate the factor structure of the scale. After a careful review of the literature and results of the systematic review study of Das et al. (2020), subjective well-being resources were considered as a five-dimensional construct which includes personal resources (intelligence, skills etc.), social resources (friends, family etc.), material resources (income, money etc.), health (physical health, mental health) and religious resources (religiosity, and visits to houses of worship). By using these constructs, an item pool including 25 items was created. These items were examined and rated by 3 experts. The inter-rater reliability was high (.89). Subjects were asked to choose a more appropriate answer scoring from 1 (never) to 5 (quite a lot). Study 1 was designed to test the psychometric properties of the Subjective Well-being Resources Scale (SWBRS).

Method

To obtain evidence for construct validity, two sets of data from different samples of participants were used. The first sample consisted of 494 participants and the data was used for exploratory factor analysis. A convenience sampling method was used and of the respondents, 303 of them females, 184 of them males and 7 were unclassified. The mean age was 31.2 with a standard deviation of 13.4. The second sample used for confirmatory analysis consisted of 313 (213 female, 7 missing information) volunteers. The mean age was 30.6 and a standard deviation of 12.3. The two samples consist of university staff, and graduate and undergraduate students from two Turkish public sector universities.

Strategy of Analysis

To determine the factor structure of the SWB Resources Scale, principal-axis factor analysis was performed on twenty-five items using the Oblique rotation method (Direct Oblimin; Delta = 0). The direct oblimin rotation method was used because the factors were related to each other. The number of components to be extracted was then determined by eigenvalues above 1.0. Items loadings less than .32; one-item factors and variables with cross-loadings higher than .10 were eliminated.

Results

Exploratory Factor Analysis

An initial analysis of a total of 25 items generated six factors with eigenvalues above 1. One-item factor, indicating that the item does not show cohesiveness with any other items was deleted (Item 18). One item that loads less than .32 was removed (Item 11). Two items that load on two factors were removed (Item 4 and Item 13). Two items (Item 2 and Item 5) that load on one factor, but are irrelevant to other items on that factor were also removed.

Six of the original 25 items were eliminated by the strategy of analysis criteria. The factor loadings of the 19 items are represented in Table 1. The first factor included five items measuring personal resources that include “success, aims/goals, abilities, self-confidence, and intelligence.” The second factor included four items measuring religious resources. The third and fourth factors included three items measuring

Table 1. Factor Loadings of the Items of the SWBR Scale (N=494) *.

	X	SD	Factor				
			Personal	Religious	External	Social	Health
15. My success	3.69	1.06	.62	-0.05	.06	.05	-0.04
6. My aims/goals	3.79	1.05	.55	.03	-0.06	.01	.19
3. My abilities	3.58	1.04	.50	.00	.06	.02	.00
22. My self-confidence	3.84	1.11	.49	-0.11	.03	.04	.08
10. My intelligence	3.72	1.06	.40	-0.11	.06	.04	.08
12. My religious belief	3.65	1.28	-0.04	-0.89	.01	.07	-0.05
23. My belief after death	3.63	1.27	-0.02	-0.70	.02	.01	.04
14. My belief in God	3.96	1.23	.19	-0.66	-0.07	.08	-0.05
21. Worship I performed	3.20	1.24	-0.01	-0.64	.03	-0.14	.12
8. Things I have (such as car, house etc.)	3.04	1.24	.04	.04	.75	-0.05	-0.02
16. Money I have	2.99	1.13	.16	.07	.54	.04	.09
9. My life standard	3.40	1.06	-0.08	-0.07	.55	.03	.01
25. My social environment	3.77	1.06	.10	-0.02	.11	.74	-0.09
1. My friends	3.76	1.01	-0.05	.03	-0.04	.49	.12
24. Love of my relatives	3.92	1.12	.31	-0.19	.03	.42	-0.04
19. My mental health	3.70	1.07	.14	-0.10	.10	.01	.58
20. My intellectual strength	3.80	1.05	.22	-0.10	.03	.03	.56
17. My physical health	3.65	1.00	-0.07	-0.08	.11	.12	.50
7. My general health	3.87	1.03	.25	.02	.00	.07	.40
Cronbach Alpha Coefficients			.74	.83	.67	.67	.77

material and social resources, respectively. The fifth factor included four items measuring health resources such as mental health, physical health, intellectual strength, and general health. The first factor, “Personal Resources” explained 29.78% of the variance in the SWB resources. The second factor, “Religious Resources” explained 6.54% of the variance. The third factor, “External Resources,” explained an additional 4.54% of the variance. The fourth factor “Social Resources” explained 3.16% of the variance, and the fifth factor Health Resources’ explained 2.10% of the variance.

The Cronbach’s Alpha score for the scale was .88, indicating high internal consistency, which means the scale is reliable. Internal consistencies of five factors were ranging from $a = .67$ to $a = .83$. Corrected item-total correlations ranged from .47 to .56 for “personal resources,” from .59 to .75 for “religious resources,” from .49 to .64 for “health resources,” and from .43 to .53 for “external resources,” from .38 to .59 for social resources. Table 1 represents the factor loadings of the items.

The intercorrelations among the factors suggested that the relationships between “social resources” and “religious” ($r = -0.25$) and “social” and “material” ($r = .25$) are weak whereas those of “personal” and “health” ($r = .53$), “personal” and “social” ($r = .49$), “personal” and “religious” ($r = -0.46$), “social” and “health” ($r = .38$), “health” and “religious” ($r = -0.37$), “personal” and “material” ($r = .36$), “material” and “health” ($r = .35$) and “religious” and “material” ($r = -0.32$) are moderate.

Study 2: Validation of the SWBR Scale

Confirmatory factor analysis was conducted to investigate the stability of the five-factor solution obtained in Study 1. Confirmatory factor analyses were implemented using LISREL 8.80 (Jöreskog & Sörbom, 2001). Also, in this study, it was aimed to obtain evidence regarding the construct validity of the SWBS by investigating its association with some scale scores related to trait personality, depression, life satisfaction, and happiness. It was expected that the SWBS scores would correlate positively with life satisfaction, happiness, and positive dimensions of trait personality as extraversion, and conscientiousness. Additionally, the SWBS scores were expected to be negatively correlated with depression and negative dimensions of trait personality such as neuroticism.

Measures

Participants were asked to fill the Subjective Wellbeing Resources Scale, Life Satisfaction Scale, PANAS Scale, Big Five Personality Inventory, and SCL-90 Depression Subscale.

Big Five Personality Inventory

The 44-item big five inventory (BFI; John and Srivastava 1999) was employed to assess five personality dimensions—Extraversion (E), Agreeableness (A), Conscientiousness (C), Neuroticism (N), and Openness to Experience (O). The BFI uses a 5-point rating scale ranging from 1 (disagree strongly) to 5 (agree strongly). The Turkish version by Somer et al. (2004) was used in the present study.

Life Satisfaction

The life Satisfaction with life scale (SWLS) was used to assess overall cognitive judgments of well-being, i.e., life satisfaction (Diener et al., 1985). The SWLS consists of five items (e.g., “In most ways my life is close to ideal”) rated on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), and yields a score reflective of one’s satisfaction with his/her life. The Turkish version by Durak et al. (2010) was used in this study.

Positive and Negative Affect Scale (PANAS)

PANAS Scale was used to assess the happiness score. The scale consists of two 10-item mood scales. Each item is rated on a Likert scale ranging from 1 (very slightly) to 5 (very much). The scale was developed to assess negative and positive affect (Watson et al., 1988). Happiness is defined as the predominance of PA over NA (Diener et al., 1999) and to control for extremity biases (Schimmack & Diener, 1997), NA composite score was subtracted from the PA composite score. Higher scores indicate higher levels of happiness

Symptom Checklist-90 (SCL-90) Depression Subscale

The SCL-90 was developed to measure subjective psychopathology among people aged at least 13 years (Derogatis et al., 1973). It consists of ninety items and nine symptom dimensions. Items are rated on a five-point scale ranging from 0=Not at all to 4=Extremely. The scale was adapted to Turkish by Sahin and Durak (1994) and the measurement demonstrated good internal validity. Only the depression dimension was used in the present study. Cronbach’s alpha coefficient for the depression subscale was reported as .82 (Sahin & Durak, 1994). The Depression subscale was found to be reliable in the present study’s sample, yielding a Cronbach’s alpha of .89.

Results

Exploratory Factor Analysis and Reliability

The results of the exploratory factor analysis supported the five-factor model revealed in Study.1. A principal-axis factor analysis with oblique rotation method (Direct Oblimin; Delta = 0) yielded five factors with the items under consideration. These five factors explained 45.3% of the total variance. Internal consistency coefficients for these factors were again strong, ranging from $\alpha = .62$ to $\alpha = .85$. Cronbach’s alpha coefficient was found to be high ($\alpha = .83$) for the full scale.

Confirmatory Factor Analysis

According to Flora and Curran (2004), the Maximum Likelihood estimation requires a continuous, normal latent process behind observed variables. Jöreskog and Sörbom (2001) state that the use of Weighted Least Squares or Robust Weighted Least Squares produces more reliable estimates for model evaluation when ordinal variables are used in confirmatory factor analysis. Consequently, confirmatory factor analyses were performed on the asymptotic covariance matrix produced from the polychoric correlations

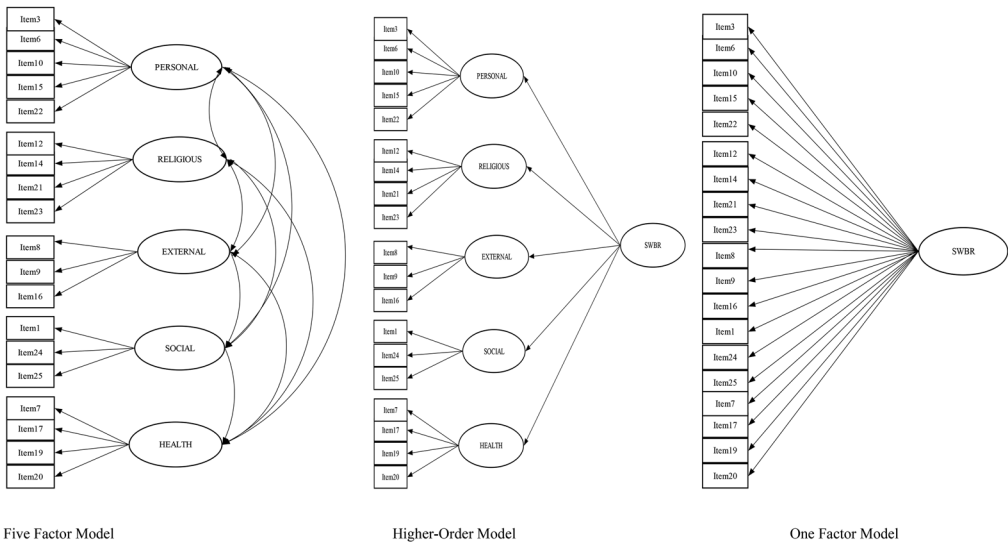


Figure 1. Measurement models tested in Study 2.

Table 2. The Results of Confirmatory Factor Analyses on the SWBR.

Indices	One-Factor Model	Five-Factor Model	Higher-Order Model
χ^2	1046.93	329.05	340.04
df	152	142	147
CFI	0.81	0.96	0.96
GFI	0.88	0.97	0.97
AGFI	0.85	0.96	0.96
RAMSEA	0.14	0.06	0.06
SRMR	0.13	0.06	0.07

$N = 313$; CFI comparative fit index, GFI goodness-of-fit index, AGFI adjusted goodness-of-fit index, RMSEA root-mean-square error of approximation, SRMR standardized-root-mean-square residual.

of the items with the Robust Weighted Least Squares estimation method because this produces better results when compared to other estimation methods (Flora & Curran, 2004).

In evaluating the model, several goodness-of-fit statistics including the comparative fit index (CFI), goodness-of-fit index (GFI), root mean square error of approximation (RAMSEA) and standardized RMR were used. In these analyses, the five-factor model obtained in Study 1 was tested against the one-factor model and a higher-order model in which these five factors were considered as first-order factors of a second-order construct (Figure 1).

The results obtained by CFA procedures are shown in Table 2. As can be seen from Table 2, both the higher-order model and the five-factor model produced similar goodness of fit statistics. Chi-square difference tests were computed to confirm the similarity of these two models. The results of the chi-square difference test supported that there isn't a significant difference between the higher-order model and the five-factor model (10.99, 5: $p < .001$).

All of the parameter estimates between items and factors were significant: For the Personal Resources Factor, the 5-parameter estimates ranged from .053 to .066; for

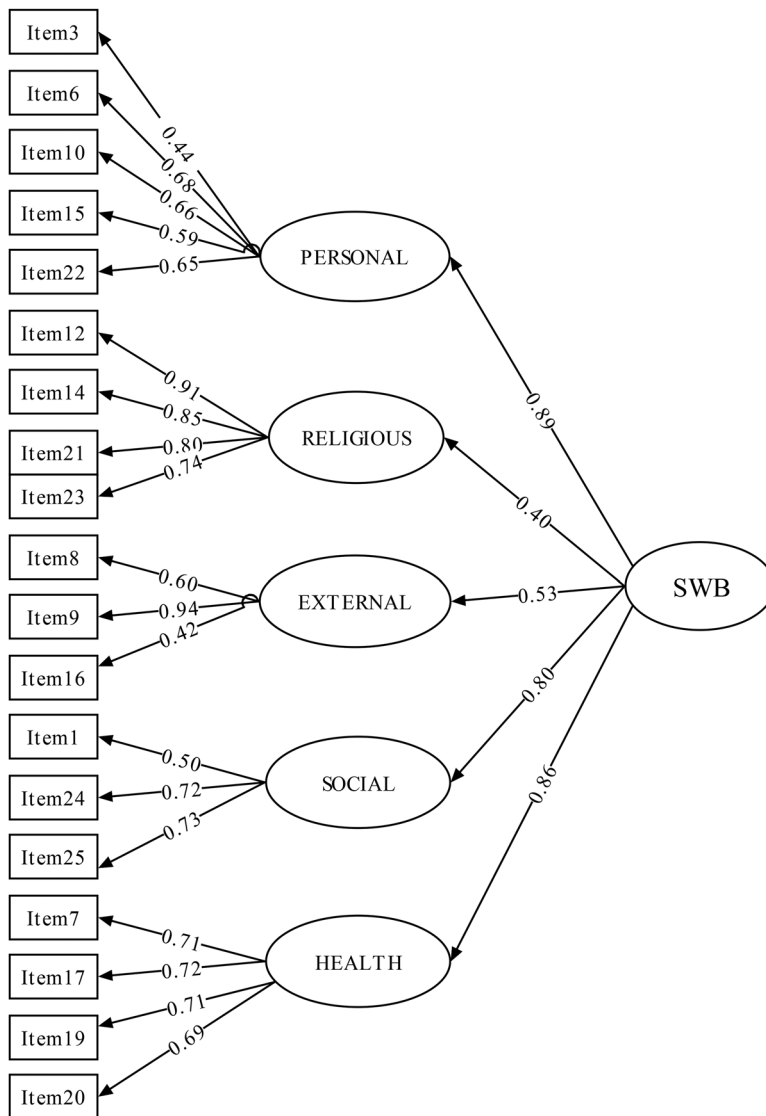


Figure 2. Diagram of the Higher-Order Model.

the Religious Resources factor, the 4-parameter estimates ranged from .065 to 0.86; for the Material factor, the three-parameter estimates ranged from .049 to 0.76; for the Social factor, the three-parameter estimates ranged from .58 to .78; for the Health factor, the four-parameter estimates ranged from .43 to .78. First-order factors (personal, health, social, material, and religious) explained 78%, 73%, 64%, 28%, and 16% of the variance in SWB, respectively (Figure 2).

All of the parameter estimates between items and factors were significant: For the Self Factor, the 5-parameter estimates ranged from .044 to 0.68; for the Religion factor, the 4-parameter estimates ranged from .074 to 0.91; for the Material factor, the three-parameter estimates ranged from .042 to 0.94; for the Social factor, the

three-parameter estimates ranged from .50 to .74; for the Health factor, the four-parameter estimates ranged from .69 to 0.72.

Construct Validity

To obtain evidence regarding the construct validity of the SWBS, the scales' relationship with happiness score, life satisfaction, and personality traits was investigated. It was expected that the SWBS sub-scores would correlate positively with life satisfaction, happiness score, and positive dimensions of personality traits such as openness. Additionally, sub-scale scores of SWBS were expected to be negatively correlated with neuroticism and depression scores. Intercorrelations of the SWBS scores with scores on the measures of personality traits, happiness score, depression, and life satisfaction are presented in Table 3. Considering that subjective well-being is the sum of happiness and life satisfaction, it could be said that results of the construct validity also supports the criterion validity.

As can be seen from the Table, external resources were only related to life satisfaction and extraversion personality trait. It was observed that among all the subjective well-being resources, personal resources scores were moderately correlated with happiness ($r=.45$) and openness ($r=.42$). It was observed that while depression scores were related to health ($r=-0.25$) and personal resources ($r=-0.24$) negatively, they were not related to material and religious resources. Interestingly, only personal resources ($r=-0.12$) and health resources were correlated significantly with the neuroticism trait ($r=-0.17$). All subjective resources were associated with extraversion, agreeableness, and conscientiousness, as expected, except for external resources.

Study 3: Test Re-Test Validity

To test the re-test reliability of the scale, it was planned to be filled the scale to a group of students with an interval of 1 month. Twenty-one volunteer students who study psychology participated in the study and 18 of them were women. The mean age was 23.0 ($SD=3.0$). Test re-test reliability was conducted using the Pearson product-moment correlation coefficient. The results revealed that test re-test reliability was .88 for the whole scale. For subscales, test re-test validity was .90 for personal resources, .93 for religious resources, .67 for external resources, .83 for social resources, and .73 for health.

Discussion and Conclusion

These two studies aimed to develop a subjective well-being resources measure, the SWBR Scale. It was observed that SWB resources were separated into five factors as expected, which are personal, religious, health, social, and external resources. Personal resources are the factor that explained the highest variance, followed by social and health. When human lifestyle is considered, it is obvious that personal resources also facilitate access to other resources. For example, being more skillful or self-confident can lead to more socialization or access to more economic resources. Personal resources were highly related to happiness and openness traits. This result is not surprising because personal resources include intelligence, skills, and performance. DeYoung et al. (2005)

Table 3. Intercorrelations Between SWB Subscales and Personality Traits, Life Satisfaction, Depression and Happiness Scores.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Personal Resources	–												
2. Religious Resources	.27**	–											
3. External Resources	.29**	.18**	–										
4. Social Resources	.47**	.22**	.18**	–									
5. Health Resources	.52**	.25**	.34**	.34**	–								
6. Happiness	.45**	.08	.06	.29**	.34**	–							
7. Extraversion	.30**	.10	.15*	.24**	.19**	.43**	–						
8. Agreeableness	.21**	.14*	–0.02	.33**	.17**	.34**	.04	–					
9. Conscientiousness	.34**	.18**	.01	.19**	.23**	.49**	.15**	.38**	–				
10. Neuroticism	–0.12*	.03	–0.07	–0.01	–0.17**	–0.43**	–0.28**	–0.23**	–0.25**	–			
11. Openness	.42**	.12*	.08	.26**	.23**	.37**	.47**	.12*	.28**	–0.06	–		
12. Life Satisfaction	.32**	.18**	.36**	.15**	.27*	.27**	.24**	–0.01	.17**	–0.15**	.27**	–	
13. Depression	–0.24**	.02	–0.02	–0.13**	–0.25**	–0.55**	–0.23**	–0.23**	–0.30**	.51**	–0.01	–0.03	–

N= 313; *p<.05, **p<.001.

described openness as a cognitive trait that includes cognitive flexibility. As stated before, personal goals, skills, and capacity to cope with problems help people's well-being. Additionally, positive psychologists considered open-mindedness, flexibility, and social intelligence to be some of the strengths that are protective of mental health. The negative relationship between personal resources and depression also supports the literature that lower levels of personal resources are related to mental health problems (Bos et al., 2016; Kashdan & Rottenberg, 2010). The high correlation coefficient between the test-retest result of the personal resources subscale refers to the stability of intelligence and skills without any intervention. It is also worth noting that the "my family" item was loaded on the factor with items that include personal success, intelligence, abilities, and self-confidence. It may indicate a cultural characteristic of people in a collectivist society. People in collectivist cultures define themselves as part of the group, and their goals are affected by group goals (Triandis et al., 1988).

The results of these two studies showed that social and health resources are related to each other moderately and they explain a similar variance in SWBR. According to Pescosolido (1991), the social network is the source of information about individuals' beliefs, attitudes and medical options, and information on the severity of the medical condition and the status of medical options. People made their healthcare decisions within their social network. On the other hand, it is stated that social relations may be mediating the relationship between health and well-being (Pressman & Cohen, 2005). As a result, it can be said that social and health resources are interrelated and contribute to the SWB to a similar degree. It was also observed that social and health resources have a weak negative relationship with depression scores. The Covid-19 pandemic and curfews provide a good insight into the relationship between depression, health and social resources. Many studies reported that loneliness was an important stressor during the lockdowns and it was related to depression (Marroquín et al., 2020; Robb et al., 2020). To support this, a systematic review reported that perceiving less social support and feeling more lonely is related to severe depression (Wang et al., 2018). On the other hand, it is seen that the perceived social network has a buffering effect. A study conducted with 2,020 participants revealed that the increased risk of depression was 63% lower in those who reported higher levels of perceived social support than in those with lower perceived social support (Grey et al., 2020).

Religious resources are the factor that has the weakest effect both on the definition of SWB structure and on mental health. This result is consistent with Hackney and Sanders (2003) meta-analysis which found a weak relationship between mental health and religiosity. They also stated that internal motivation (emotional attachment to God) about religion is related to more positive mental health outcomes than external motivation (personally chosen and adopted beliefs against threatful situations such as going to Hell). It could be said that religious resources could help people to deal with adverse life events if they are devoted but intrinsic resources are more effective on well-being. To support this, it has been found that feeling respected and meaning in life mediated the relationship between religion and SWB (Diener et al., 2011).

External Resources are the fourth in explaining the variance in SWB. To reach SWB, people are required to possess some external resources (Diener & Biswas-Diener, 2005). The absence of external resources, and unemployment for a long period, for instance, is found to reduce SWB (Cummins, 2000). External resources have a moderate relation

with personal, religious, and health resources, and a weak relationship with social resources. Personal resources can result in having more external resources, and external resources can be beneficial to enrich personal resources. Thus, personal resources can be used directly to obtain some external resources (Diener & Scollon, 2003). For example, a self-confident person might get a high-earning job, which in return helps them reach their personal goals. The interaction of personal and external resources of support is crucial for SWB (Ng et al., 2014). The relation between external and health resources can be explained similarly. The intercorrelation can be exemplified as a high salary meaning access to better health care which in return enables higher performance and achievement at work. The moderate nature of external resources with religious relations might be linked to the fact that religiosity in itself is considered to have both external (religious attendance) and internal (religiosity) dimensions (Kuhn & Brulé, 2019). As for the social and external resources relation, it can be explained by the fact that relatedness to other human beings (both at individual and community levels) promotes social support and serves SWB (Ng et al., 2017).

External resources were only related to extraversion personality traits and life satisfaction. As life satisfaction is one of the fundamental components of SWB (Diener et al., 2002), it is not surprising that external resources are related to life satisfaction. This relation might be about the fact that people need material resources to some degree for a satisfying life (Diener & Fujita, 1995). For instance, to reach a personal goal of achievement one might need access to a better education which is directly related to material resources such as wealth. Thus, a loss of a material resource (for instance, losing a job) is found to cause a dramatic decrease in life satisfaction levels. And research shows consistently that poor people report more dissatisfaction with life than wealthy ones (Diener & Biswas-Diener, 2005). External resources, life satisfaction, and extravert personalities may affect each other mutually. According to Pollet et al. (2011), extroverted people have larger social networks, which might be an advantage when dealing with the challenges against materialistic goals. Research shows that extroverts are tended to be in a more positive mood and spend more time in the company of others (Diener & Biswas-Diener, 2005; Diener & Scollon, 2003). It is known that positive moods and emotions are another core component of SWB (Diener & Scollon, 2003) which could be resulted in higher life satisfaction. Interestingly, there was no relation between external resources and any other personality traits (agreeableness, openness, or conscientiousness). When the personality dimensions in the five-factor personality model are examined, it is seen that some material resources are needed only to be extroverted. For example, items that measure the extraversion sub-dimension include items such as "I see myself as someone outgoing, sociable". Also, there was no relation between external resources and depression or happiness. It could be interpreted as that money does not lead to happiness (or unhappiness) but what you do with it does. Besides, income does not affect happiness or SWB once the basic needs are met (Maslow, 1943).

Lastly, the lowest correlation coefficient between the test-retest result was of the external resources subscale. It can be referred to as the subjective and unstable nature of external resources. As mentioned earlier, it is not the subjective materialistic conditions of one that contribute to SWB, but rather the personal subjective experiences reached through these materials. These subjective evaluations might change rapidly

throughout a period. External resources have psychological influences on SWB beyond their effect (Diener & Biswas-Diener, 2005).

SWBR Scale is expected to serve in future studies when it is needed to get a better understanding of the underlying dynamics of SWB. Recently, the focus of SWB and mental health studies is on the positive side and preventive interventions are found to be more functional than treatment programs (Seligman & Csikszentmihalyi, 2014). From this perspective, when it is required to measure the efficiency of preventive and protective intervention programs, this scale is suggested to be used. For instance, during a needs analysis, the SWBS scale can be used to detect exactly which dimensions of SWB require support and strengthening. Thus, a program according especially to the specific needs of the individual might be developed. In addition, this scale can be used afterwards to measure the effects and benefits of the intervention program for each dimension of the resource once the intervention is completed.

One of the limitations of this study is the sociodemographics of the participants. It can be observed that almost all of the participants are categorized to be well-educated. This is considered a limitation when it comes to the validity of SWBS across populations. It is suggested to replicate this study with different sample groups with sociodemographic variations. Secondly, one might argue that the leisure domain could have been another dimension to be explored. However, as it is mentioned earlier, the indirect and moderating effect of the leisure factor has led to the conclusion that it can be excluded as it was aimed to get a very clear and functional definition of SWB.

These two studies aimed to develop the SWBR Scale and resulted in supporting the five-dimensioned structure of SWB as expected. The findings provided evidence of the SWBR Scale's validity and reliability. Even if the importance of subjective well-being resources was emphasized by literature, this study is the first one that defined an SWB structure and measured the factors behind it.

Authors' Contribution Statements

Conceptualization: Omer Faruk Simsek, Sinem Cankardas; Methodology: Sinem Cankardas, Irmak Arslan, Omer Faruk Simsek; Formal analysis and investigation: Omer Faruk Simsek, Sinem Cankardas; Writing - original draft preparation: Sinem Cankardas, Irmak Arslan, Omer Faruk Simsek; Writing - review and editing: Sinem Cankardas, Irmak Arslan, Omer Faruk Simsek.

Disclosure Statement

The authors have no relevant financial or non-financial interests to disclose.

Ethics Approval, Informed Consent

Ethical approval for this study was obtained from the Izmir University of Economics Ethics Committee.

After the participants were informed about the study, the informed consent form was read and approval was obtained.

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