

4-2011

# Measuring Lay Conceptions of Well-Being: The Beliefs About Well-Being Scale

Ethan A. McMahan

Western Oregon University, [mcmahane@wou.edu](mailto:mcmahane@wou.edu)

David Estes

University of Wyoming, [estes@uwyo.edu](mailto:estes@uwyo.edu)

Follow this and additional works at: [https://digitalcommons.wou.edu/fac\\_pubs](https://digitalcommons.wou.edu/fac_pubs)



Part of the [Psychology Commons](#)

---

## Recommended Citation

McMahan, E. A., & Estes, D. (2011). Measuring Lay Conceptions of Well-Being: The Beliefs About Well-Being Scale. *Journal of Happiness Studies*, 12 (2). <http://dx.doi.org/10.1007/s10902-010-9194-x>

This Article is brought to you for free and open access by the Faculty Research at Digital Commons@WOU. It has been accepted for inclusion in Faculty Research Publications (All Departments) by an authorized administrator of Digital Commons@WOU. For more information, please contact [digitalcommons@wou.edu](mailto:digitalcommons@wou.edu).

Measuring Lay Conceptions of Well-Being: The Beliefs about Well-Being Scale

Ethan A. McMahan<sup>1</sup> and David Estes

University of Wyoming

Published version:

McMahan, E. A., & Estes, D. (2011). Measuring lay conceptions of well-being: The beliefs about well-being scale. *Journal of Happiness Studies*, *12*, 267-287.

doi:10.1007/s10902-010-9194-x

---

<sup>1</sup> University of Wyoming

Dept. 3415

1000 E. University Ave.

Laramie, WY 82071

Office: (307)766-6303

Fax: (307)766-2926

Email: [emcmahan@uwyo.edu](mailto:emcmahan@uwyo.edu)

### Abstract

A number of explicit conceptions of well-being have been provided by philosophers and psychologists, but little is known about laypersons' conceptions of well-being. Two studies investigating the content and measurement of lay conceptions of well-being are presented. Using exploratory and confirmatory factor analytic procedures, the 16-item Beliefs about Well-Being Scale (BWBS) was developed to measure lay conceptions of well-being along four theoretically-meaningful dimensions: (1) the Experience of Pleasure, (2) Avoidance of Negative Experience, (3) Self-Development, and (4) Contribution to Others. Initial evidence concerning the reliability and validity of the BWBS indicated that this new scale has acceptable psychometric properties. In both studies, associations between each subscale, representing the above four dimensions, and multiple self-report measures of experienced well-being were also examined. Each subscale was significantly associated with well-being, with Self-Development and Contribution to Others indicating stronger associations with measures of well-being than either Experience of Pleasure or Avoidance of Negative Experience. Implications for future research using this economical new scale are discussed.

**Keywords:** Well-being; Happiness; Lay Conceptions; Scale Development; Measurement

### Measuring Lay Conceptions of Well-being: The Beliefs about Well-Being Scale

A number of professional thinkers have attempted to describe the factors that define well-being and ‘the good life’. For example, Epicurus suggested that one’s fundamental moral obligation is to maximize pleasure and minimize pain (Russell 1946), and Plato argued that humans have a duty to pursue the good life through the attainment of knowledge (Bloom 1991). Contemporary psychologists (e.g., Diener and Lucas 1999; Ryan and Deci 2001; Ryff and Singer 1998) have also attempted to define well-being in a number of ways, leading to many discussions concerning the most appropriate way to operationalize this construct. Research addressing the nature of the good life and well-being is becoming more common, particularly within the field of positive psychology (e.g., Deci and Ryan 2008; Ryff 1989; Ryff and Keyes 1995; Waterman et al. 2008). Little is known, however, concerning laypersons’ conceptions of well-being, a construct that may have important implications for the experience of well-being. The current report describes two studies investigating the content, measurement, and potential importance of lay conceptions of well-being.

#### *Definition and Content of Conceptions of Well-Being*

Conceptions of well-being are defined here as a system of beliefs about the nature and experience of well-being and may be an important aspect of one’s worldview. Conceptions of well-being are likely complex, involve a number of different beliefs, and vary between individuals. Despite a dearth of research examining conceptions of well-being among lay persons, examining the explicit conceptions of well-being described by various philosophers and psychologists provides insight into the possible content of lay conceptions of well-being. Frequently proposed aspects of well-being include the experience of happiness, a sense of purpose, wisdom, a coherent philosophy of life, achievement, pleasure, and love (Allport 1961;

Becker 1992; Coan 1977; Rogers 1961; Russell 1958; Ryff 1989). Although explicit conceptions of well-being are numerous and often complex, they appear to fall into distinct categories that revolve around two general philosophies: hedonism and eudaimonism (Ryan and Deci 2001).

The first of these philosophies, hedonism (e.g., Diener and Lucas 1999; Kahneman et al. 1999), reflects the view that well-being consists of pleasure and happiness<sup>2</sup>. This approach to well-being has had many advocates, including Aristippus (Baggini 2004) and Thomas Hobbes (Ryan and Deci 2001), among others. Although earlier conceptions of hedonism tend to focus on corporeal pleasures, psychologists adopting the hedonic approach have tended to focus on a more general conception of hedonism that includes pleasures of both the mind and the body (Kubovy 1999). The predominant view among hedonic psychologists is that well-being is subjectively determined and based on three components: life satisfaction, the presence of positive affect, and the absence of negative affect (e.g., Diener 1984; Diener and Lucas 1999; Larson et al. 1985). According to this view, the sum of these three components is indicative of an individual's overall level of happiness (Diener and Lucas 1999), and the content of a hedonic conception of well-being thus includes the experience of pleasure, a lack of unpleasant experiences, and life satisfaction.

The second philosophy, eudaimonism (e.g., Ryff 1989; Waterman 1993), views well-being as consisting of the realization and fulfillment of one's potential and living a purposeful life. Examples of the eudaimonic perspective from classical philosophy include Plato's assertion

---

<sup>2</sup> We define happiness narrowly to reflect a subjectively-determined positive mental state. This state could be cognitive (e.g., life satisfaction), affective (e.g., positive mood), or a mix of the two (Brulde 2007). The concept of well-being is considered here to be more general than happiness (see also Ryff 1989), reflecting both subjectively-determined positive mental states and experiences that are objectively good for the person (e.g., Kagan 1992). Happiness is thus considered here to be an important component of well-being, but is not synonymous with well-being.

that the good life involves the lifelong attainment of knowledge (Bloom 1991) and Aristotle's suggestion that the good life involves the cultivation of one's strengths in the interest of benefitting society (Aristotle, trans. 2000). Examples of psychological approaches that reflect the eudaimonic conception of well-being are Rogers' (1961) fully-functioning person, Maslow's (1971) concept of self-actualization, and Ryff's (1989) multidimensional approach to psychological well-being. The uniting premise behind these eudaimonic approaches is that people should find meaning and purpose in life through the identification and development of what is best in themselves and use this to benefit the greater good (Peterson et al. 2005; Ryan and Deci 2001). Thus, the content of a eudaimonic conception of well-being includes the experience of meaning or purpose, the development of personal strengths, and contribution to society.

These explicit theories concerning the nature of well-being provide a framework for studying conceptions of well-being in lay populations and also provide initial insight into the potential factors that may make up the content of these lay conceptions. In general, the hedonic perspective suggests that pleasure, a lack of unpleasant experiences, and life satisfaction may be important aspects of a conception of well-being. The eudaimonic perspective suggests that the experience of purpose, self-development, and contribution to society may be alternative aspects of these lay conceptions. Taken together, these factors seem to be good candidates for the essential components of lay conceptions of well-being.

### *Conceptions of Well-Being and Experienced Well-being*

Lay conceptions of well-being may well influence psychological functioning and experienced well-being. As stated above, conceptions of well-being are a component of one's worldview, and several other worldview beliefs have been found to be associated with

psychological functioning. For example, well-being has been found to be associated with religious beliefs (e.g., Myers and Diener 1995; Pargament 1997), beliefs about justice (e.g., Dalbert 2001; Furnham 2003), and world benevolence beliefs (Poulin and Silver 2008).

Consistent with this existing literature, we submit that conceptions of well-being may also have implications for the experience of well-being.

Despite the absence of direct evidence of associations between conceptions of well-being and experienced well-being, conceptually similar constructs have been found to be associated with multiple aspects of experienced well-being. For example, orientation to happiness, a construct reflecting the various ways in which individuals report trying to achieve well-being (e.g., through pleasure), has been found to be associated with life satisfaction (e.g., Peterson et al. 2005, 2007). Research on values also provides insight into this issue, as conceptions of well-being involve evaluative beliefs and are thus conceptually similar to values (see Koltko-Rivera 2004; Rokeach 1973). The value construct has been found to be reliably associated with several different indices of well-being (e.g., Kasser and Ryan 1996; Rokeach 1973; Sheldon et al. 2004; Srivastava et al. 2001), and it would thus seem that conceptions of well-being, due to their similarity with the value construct, may also be associated with experienced well-being. It should be noted, however, that values and conceptions of well-being, although conceptually similar, are not identical. For example, one may value financial success, but may also concede that wealth is not an essential aspect of well-being.

#### *Overview of the Present Studies*

Two studies investigating the content and measurement of lay conceptions of well-being are described here. The goals of Study 1 were to develop and refine an item pool for the Beliefs about Well-Being Scale (BWBS), a scale measuring lay conceptions of well-being, and to

identify potentially important underlying dimensions of this construct. Both theory-based and exploratory approaches were used to pursue these goals. Initial BWBS scale items were constructed by the authors of the current study and derived largely from the above mentioned explicit theories describing important aspects of well-being (e.g., the experience of pleasure, presence of meaning, cultivation of personal strengths). Some items reflect a hedonic approach to well-being and others reflect a eudaimonic approach. The main objective in scale development is to create indices of theoretically interesting and interpretable constructs (Clark and Watson 1995; Floyd and Widaman 1995), and items in the present study were retained during scale refinement only if they were deemed to be theoretically meaningful and interpretable. However, no a priori predictions were made concerning the number or type of dimensions underlying lay conceptions of well-being, and, therefore, exploratory factor analytic procedures were used to identify these underlying dimensions (see Finch and West 1997; Floyd and Widaman 1995).

The main goals of Study 2 were to replicate the factor structure of the BWBS using confirmatory factor analysis and provide further evidence supporting the validity of this scale. Findings supporting the convergent and discriminant validity and test-retest reliability of the BWBS are also presented. Both studies also addressed whether lay conceptions of well-being are associated with experienced well-being. Well-being was operationalized using a number of different outcome measures to tap multiple aspects of experienced well-being (e.g., positive emotions, life satisfaction, vitality). This was done because well-being is multifaceted (Deci and Ryan 2008; Ryff and Singer 2008) and is not likely to be completely captured by single instruments measuring only one aspect of positive psychological functioning.



### Study 1a

The main objective of Study 1a was to identify important underlying dimensions of the conceptions of well-being construct and to create and refine an item pool for the construction of the BWBS. A second objective was to examine associations between this instrument and self-report measures of experienced well-being. Fifty items were initially drafted by the authors for potential use in this scale. Items were derived largely from previous theoretical and empirical work on well-being, with some addressing content domains of well-being associated with the hedonic approach and others addressing content domains associated with the eudaimonic approach. For example, the cultivation of personal strengths has previously been identified as a potentially important component of a eudaimonic approach to well-being (e.g., Aristotle, trans. 2000), and a BWBS item was thus designed to reflect this component (e.g., ‘The identification and cultivation of personal strengths’). Items were generated to oversample content relevant to well-being, and all items were evaluated by the authors of the current study for clarity, specificity, and lack of repetition with other items (see Clark and Watson 1995; Reise et al. 2000). Following this evaluation, 30 items were retained and administered to a sample of undergraduate students for factor analyses and further refinement.

#### *Method*

*Participants.* Three hundred participants were sampled from the undergraduate population of a medium-sized public university. Ages ranged from 17 to 33 ( $M = 19.3$ ;  $SD = 2.0$ ). Approximately 73% were female, and the majority of participants were Caucasian (90%). All participants were given partial course credit for participating.

*Materials and Procedure.* All participants completed a multi-section questionnaire distributed using an online testing system. Participants could respond to the questionnaire at their

own pace and typically took about 20 minutes to complete all sections. Included in the questionnaire was a brief demographics survey, the initial 30-item version of the BWBS, and, as described below, multiple instruments intended to measure various aspects of experienced well-being.

The 30-item BWBS requires participants to indicate the degree to which they believe that an item is a necessary and required aspect of the experience of well-being and the good life. Responses were scored on a 7-point Likert-type scale, with higher scores indicating a stronger belief. As stated previously, items were designed to oversample content related to the experience of well-being. When possible, however, items were designed to resemble those used in previous research related to conceptions of well-being (e.g., King and Napa 1998; Peterson et al. 2005; Ryff 1989).

The first scale used to measure experienced well-being was the Satisfaction with Life Scale (SWLS; Diener et al. 1985), which is a widely-used measure of life satisfaction. This 5-item instrument requires participants to respond on a 7-point Likert-type scale (1 = 'strongly disagree' through 7 = 'strongly agree'), where higher scores reflect greater satisfaction with one's life (e.g., 'If I could live my life over, I would change almost nothing'). This measure has displayed strong reliability and validity in multiple studies (e.g., Diener et al. 1999; Lucas et al. 2003). Internal consistency for this scale in the present sample was good ( $\alpha = .81$ ).

The Positive and Negative Affective Schedule (PANAS; Watson et al. 1988) was used to measure the affective component of experienced well-being. This 20-item scale requires participants to report the degree to which they are experiencing both positive (e.g., interested, proud, alert) and negative (e.g., disinterested, upset, irritable) emotions on a 5-point Likert-type scale (1 = 'very slightly or not at all' through 5 = 'extremely'), with higher scores reflecting

greater emotional experience. This is one of the most widely used measures of positive and negative affect and has demonstrated strong internal consistency and strong evidence of validity (Crawford and Henry 2004; Lucas et al. 2003). Internal consistency in the present sample was acceptable for both positive ( $\alpha = .91$ ) and negative affect ( $\alpha = .80$ ).

The Subjective Vitality Scale (SVS; Ryan and Frederick 1997) was used to measure feelings of mental and physical vitality, aliveness, and vigour (e.g., 'I nearly always feel awake and alert'). Participants respond to this 7-item measure on a 7-point Likert-type scale (1 = 'Not at all' through 7 = 'Very true'), where higher scores indicate greater feelings of vitality. This scale has been found to display good psychometric properties (see Ryan and Frederick 1997) and also showed acceptable internal consistency in the present sample ( $\alpha = .85$ ).

Finally, the Meaning in Life Questionnaire-Presence Subscale (MLQ; Steger et al. 2006) was used to measure the degree to which participants felt the presence of purpose and meaning in their lives (e.g., 'I have a good sense of what makes my life meaningful'). This 5-item instrument requires participants to respond on a 7-point Likert-type scale (1 = 'absolutely untrue' through 7 = 'absolutely true'), with higher scores indicating greater presence of meaning in life. The psychometric properties of this scale have been shown to be acceptable (see Steger et al. 2006), and the internal consistency in the present sample was also acceptable ( $\alpha = .88$ ).

## *Results*

*Factor Identification and Initial Scale Revision.* A principle components analysis (PCA) using varimax rotation was performed on the 30-item BWBS. Seven factors emerged with eigenvalues greater than 1 (6.06, 4.61, 2.20, 1.35, 1.34, 1.09, 1.02), but scree-plot analyses suggested four dominant factors. How to accurately determine the number of factors to retain in exploratory factor analytic procedures has been a source of debate in previous research (e.g.,

Fava and Velicer 1992; Reise et al. 2000; Wood et al. 1996), and no strategy is entirely satisfactory. The rotated component matrix of the initial item pool was therefore examined to address whether the extracted factors focused on theoretically meaningful aspects of a conception of well-being. The first factor clearly addressed avoidance of negative experience (e.g., ‘Not experiencing negative emotions’). This factor seemed to represent one dimension of a hedonic conception of well-being (e.g., Diener and Lucas 1999; Kahneman et al. 1999) and was deemed to be theoretically meaningful. The second factor addressed contribution to others (e.g., ‘Contribution to society’). This factor thus seemed to represent one dimension of a eudaimonic conception of well-being (e.g., Ryan and Deci 2001) and was also deemed to be theoretically meaningful. The third factor appeared to address self-development (e.g., ‘The identification and cultivation of one’s strengths’), a theoretically-meaningful dimension of a eudaimonic conception of well-being. The fourth factor concerned the experience of pleasure (e.g., ‘Experiencing a great amount of pleasure’), another theoretically-meaningful dimension of a hedonic conception of well-being. The fifth factor appeared to be redundant with the experience of pleasure factor, and it was difficult to interpret the sixth and seventh factors because the items in each factors seemed to be unrelated. The items composing the fifth, sixth, and seventh factors were thus excluded from further analyses.

The four retained factors were labeled (1) Avoidance of Negative Experience, (2) Contribution to Others, (3) Self-Development, and (4) Experience of Pleasure. To create independence between each of the subscales, a criterion of factor loadings above .60 on the intended factor and below .30 on any other factor was used for item retention. Thirteen items met this criterion (4 items on the Avoidance of Negative Experience subscale, 4 items on the Self-Development subscale, 3 items on the Contribution to Others subscale, and 2 items on the

Experience of Pleasure subscale). These items were thus subjected to a second PCA with varimax rotation, which confirmed the expected four factor solution, explaining approximately 68% of the total variance in responses. Reliability analyses indicated adequate internal consistency for Avoidance of Negative Experience ( $\alpha = .87$ ), Self-Development ( $\alpha = .74$ ), and Contribution to Others ( $\alpha = .81$ ) subscales, with slightly lower internal consistency observed for the Experience of Pleasure subscale ( $\alpha = .69$ ). Eigenvalues for Avoidance of Negative Experience, Self-Development, Contribution to Others, and the Experience of Pleasure subscales were 3.04, 3.02, 1.68, and 1.10, respectively, and all items loaded most highly on their intended factor (.66-.89)<sup>3</sup>.

*Correlations with Measures of Well-Being.* Bivariate correlations were examined for potential associations between each of the four subscales of the BWBS and measures of experienced well-being. As seen in Table 1, each of the four subscales showed significant positive correlations with at least one of the measures of well-being, with the Self-Development and Contribution to Others subscales indicating stronger associations with more measures of experienced well-being than the Experience of Pleasure and Avoidance of Negative Experience subscales. These results thus provide initial evidence indicating that each subscale of the BWBS is associated with experienced well-being.

### *Discussion*

The results of Study 1a provide initial information on the content, measurement, and importance of lay conceptions of well-being. Four factors were identified, representing interpretable, theoretically-meaningful dimensions of lay conceptions of well-being. The

---

<sup>3</sup> Given the exploratory nature of the current study, PCA with varimax rotation was used. However, this type of analysis assumes that factors are uncorrelated, and there exists theoretical rationale suggesting the emerged factors of the BWBS may be related. Accordingly, we reexamined the data using principle-axis factor analysis with oblique, direct oblimin rotation ( $\text{deltas} = 0$ ). These analyses produced results that were virtually identical to those found above.

Experience of Pleasure and Avoidance of Negative Experience dimensions represent important aspects of a hedonic conception of well-being (e.g., Diener and Lucas 1999; Kahneman et al. 1999). The Self-Development and Contribution to Others dimensions represent important aspects of a eudaimonic conception of well-being (e.g., Aristotle, trans. 2000; Deci and Ryan 2008; Ryan and Deci 2001). The current results thus indicate that lay conceptions of well-being include both hedonic and eudaimonic dimensions, and these dimensions are consistent with the explicit conceptions of well-being described previously by philosophers and psychologists. Significant associations were found between each of the BWBS subscales and at least one of the measures of well-being included in this study, suggesting that one's conception of well-being may have implications for experienced well-being. Further, each of the eudaimonic subscales indicated stronger associations with measures of experienced well-being when compared to the hedonic subscales, suggesting that eudaimonic aspects of lay conceptions of well-being may be particularly important for experienced well-being.

#### Study 1b

The smaller number of items in the Contribution to Others (three items) and the Experience of Pleasure (two items) subscales may be a threat to the factor stability of these subscales. Because increasing the number of items per factor improves factor stability (Guadagnoli and Velicer 1988), adding items is often a prudent strategy to define factors that initially contain only two or three items (Floyd and Widaman 1995). With this in mind, Study 1b was conducted to find additional items to constitute the Contribution to Others and Experience of Pleasure factors of the BWBS.

### *Method*

*Participants.* One hundred additional undergraduate participants were sampled from the same university for additional refinement of the BWBS scale. Ages ranged from 18 to 50 ( $M = 20.1$ ;  $SD = 3.8$ ). Approximately 47% of the sample was female, and the majority of participants were Caucasian (90%). All participants received partial course credit for participating.

*Materials and Procedure.* Participants completed a single-section questionnaire using an online testing system. Participants responded to the questionnaire at their own pace which typically took about five minutes to complete. Included in the questionnaire were the five existing items from the BWBS tapping the Contribution to Others and Experience of Pleasure dimensions. Sixteen additional items were included that were designed to be conceptually similar to either the Contribution to Others (8 items) or the Experience of Pleasure (8 items) subscales. The questionnaire thus included 21 total items. The response format of this questionnaire was identical to that of the BWBS, as described in Study 1a.

### *Results and Discussion*

Correlations between each of the existing BWBS items and the potential items were examined. One item showing the highest correlations with the existing Contribution to Others items was chosen, and two items showing the highest correlations with existing Experience of Pleasure items were chosen. This yielded four items in the Contribution to Others subscale and four items in the Experience of Pleasure subscale. To ensure that appropriate items were selected for each of the subscales, the eight items were next submitted to a PCA with varimax rotation. The expected two factor solution emerged, explaining approximately 71% of the variance in responses. Examination of the rotated component matrix indicated that each item loaded highly on only the intended factor for both the Contribution to Others (.85 to .91) and the Experience of

Pleasure (.71 to .81) subscales. Additionally, reliability analyses of each subscale indicated adequate internal consistency for both Contribution to Others ( $\alpha = .92$ ) and Experience of Pleasure ( $\alpha = .77$ ) subscales. The results thus suggest that appropriate items were selected to add to the BWBS subscales.

### *Summary of Studies 1a and 1b*

In Study 1a, exploratory factor analysis was used to refine the initial item pool for the BWBS. Four factors were identified, labeled Avoidance of Negative Experience, Self-Development, Contribution to Others, and Experience of Pleasure, and each of these factors were found to be associated with existing measures of well-being. In Study 1b, the BWBS was further refined to improve the factor stability of the Contribution to Others and Experience of Pleasure subscales of the BWBS. The final version of the BWBS thus includes 16 total items, with four items in each subscale (see Appendix for the final 16-item BWBS). Because the scale was modified substantially in Studies 1a and 1b, replication of the four factor structure in an independent sample and further validation of the BWBS was necessary (see Floyd and Widaman 1995; Reise et al. 2000).

### Study 2

The main objectives of Study 2 were (1) to cross-validate the BWBS in an independent sample using confirmatory factor analysis, (2) to examine the test-retest reliability of the scale, and (3) to establish the convergent and discriminant validity of the scale. This was a two-phase study, with participants completing the BWBS twice within three months. Time 1 responses were used to test the previously identified four-factor structure of the scale. Alternative structural models were also examined to address whether the structure of the BWBS is best described by the hypothesized four-factor model. In particular, there are theoretical reasons to suspect that the



BWBS may also be adequately described by a hierarchical model where Experience of Pleasure and Avoidance of Negative Experience load on a higher-order Hedonic factor and Self-Development and Contribution to Others load on a higher-order Eudaimonic factor. We therefore conducted a model comparison between the hypothesized four-factor model, the null model, a single factor model, and the above described hierarchical model.

At Time 2, participants again completed the BWBS to provide data on the test-retest reliability of the scale and also completed other self-report instruments to establish the convergent and discriminant validity of the scale. Convergent validity is demonstrated by significant correlations between the subscales of the BWBS and self-report instruments measuring conceptually similar constructs. Evidence of discriminant validity is obtained when higher correlations are observed for instruments measuring similar constructs as compared to those measuring dissimilar construct. Various measures of experienced well-being were also included at Time 2 to provide further evidence supporting the association between lay conceptions of well-being and experienced well-being.

### *Method*

*Participants.* Four hundred and six participants were sampled from the undergraduate population of a medium-sized public university to participate in the first phase of the study. Ages ranged from 18 to 42 ( $M = 20.3$ ;  $SD = 2.8$ ). Approximately 63% of the sample was female, and the sample was primarily Caucasian (90%). Of these participants, 167 completed the second phase. For this sample, ages ranged from 18 to 42 ( $M = 20.1$ ;  $SD = 2.5$ ), approximately 65% of participants were female, and the sample was again primarily Caucasian (93%). All participants received partial course credit for participating.

*Materials and Procedure.* At Time 1 of this two-phase study, participants completed the BWBS as part of a larger multi-section online questionnaire. This questionnaire was composed of multiple instruments, tapping many different aspects of psychological functioning, and required approximately an hour to complete. Participants had to complete this questionnaire prior to participating in the second phase of the study. At Time 2, participants completed a second set of instruments online, including a brief demographics survey, the 16-item BWBS, and multiple self-report instruments, described below, which were used to establish the convergent and discriminant validity of the scale and measure participants' experienced well-being.

The instruments used were chosen because they were designed to measure constructs conceptually similar or dissimilar to the constructs measured by the subscales of the BWBS. The first of these instruments was the Orientations to Happiness Scale (OHS; Peterson et al. 2005), which assesses three approaches to gaining happiness. This 18-item instrument asks participants to respond to each item (e.g., 'I go out of my way to feel euphoric') by indicating on a 5-point Likert-type scale the degree to which the item applies to them (1 = 'very much unlike me' through 5 = 'very much like me'). This scale is composed of three subscales measuring the degree to which participants endorse finding happiness through Pleasure (6 items, e.g., 'I love to do things that excite my senses'), Meaning (6 items, e.g., 'My life serves a higher purpose'), and Engagement (6 items, e.g., 'I seek out situations that challenge my skills and abilities'). This scale has displayed acceptable psychometric properties elsewhere (e.g., Peterson et al. 2005), and internal consistency in the present sample was acceptable for the Pleasure ( $\alpha = .79$ ) and Meaning ( $\alpha = .72$ ) subscales. Internal consistency was substantially lower for the Engagement ( $\alpha = .46$ ) subscale.

The Aspiration Index (AI; Grouzet et al. 2005) measures the importance and perceived likelihood of achieving 11 different goals or values (e.g., financial success, self-acceptance, affiliation). This 57-item instrument asks participants to indicate how personally important each item is (e.g., 'I will feel energetic and full of life') using a 9-point Likert-type scale (1 = 'not at all' through 9 = 'extremely'). This instrument also asks participants to indicate perceived probability that they will achieve the goal listed in the item on a similar 9-point scale (1 = 'very low' through 9 = 'very high'). This scale has displayed good psychometric properties in multiple samples (e.g., Grouzet et al. 2005). For brevity, only some items from the AI were used in the current study. Items measuring the importance of Community (3 items, e.g., 'I will assist people who need it, asking nothing in return'), Hedonism (3 items, e.g., 'I will have a great sex life'), and Self-acceptance (7 items, e.g., 'I will feel free') goals were deemed to be most relevant to the current study and were thus included. Reliability analyses in the present sample indicated acceptable internal consistency for the Community ( $\alpha = .80$ ), Hedonism ( $\alpha = .81$ ), and Self-Acceptance ( $\alpha = .83$ ) subscales.

The BIS/BAS scales (Carver and White 1994) are frequently used to measure behavioral inhibition and behavioral activation. Participants are asked to complete this 20-item instrument by indicating the degree to which they agree with each item (e.g., 'I am always willing to try something new if I think it will be fun') using a 4-point Likert-type scale (1 = 'strongly agree' through 4 = 'strongly disagree'). This instrument is composed of four subscales, with one subscale measuring behavioral inhibition (BIS; 7 items, e.g., 'I feel pretty worried or upset when I think or know somebody is angry at me') and three behavioral activation subscales measuring Reward Responsiveness (5 items, e.g., 'It would excite me to win a contest'), Drive (4 items, e.g., 'I go out of my way to get things I want'), and Fun Seeking (4 items, e.g., 'I will often do

things for no other reason than that they might be fun'). This instrument has previously displayed good psychometric properties (Carver and White 1994; Cooper et al. 2007), and internal consistency of the BIS ( $\alpha = .78$ ), Reward Responsiveness ( $\alpha = .70$ ), Drive ( $\alpha = .80$ ), and Fun Seeking ( $\alpha = .73$ ) subscales were acceptable in the present sample.

Instruments assessing multiple aspects of experienced well-being were also included to further address the association between implicit conceptions of well-being and experienced well-being. For this purpose, the SWLS (Diener et al. 1985), SVS (Ryan and Frederick 1997), and MLQ (Steger et al. 2006) were used again (see Study 1a for descriptions of these instruments). Indicators of internal consistency for these measures were again acceptable, with Chronbach alphas of .85, .87, .85, and .91 for the SWLS, Subjective Vitality Scale, MLQ-Presence Subscale, and MLQ-Search Subscale, respectively. In addition, the Intensity and Time Affect Scale (ITAS; Diener et al. 1995) was used to measure the affective component of well-being. This is a 24-item instrument measuring how frequently or intensely participants have experienced different positive (e.g., affection, joy) and negative (e.g., fear, anger) emotions. Participants respond on a 7-point Likert-type scale, where higher scores reflect more frequent or intense experiences with the given emotion (1 = 'never' through 7 = 'always'). The present study used this instrument to examine how frequently participants have experienced the listed emotions in the past month. This instrument exhibited strong internal consistency and strong evidence of validity in previous research (see Lucas et al. 2003), and items tapping positive affect ( $\alpha = .91$ ) and negative affect ( $\alpha = .93$ ) displayed excellent internal consistency in the present sample.

## *Results*

*Confirmatory Factor Analyses and Model Comparison.* Time 1 responses to the 16-item BWBS were first subjected to a series of confirmatory factor analyses using LISREL 8.80. Four different structural models were examined: (1) the null model, (2) an omnibus one-factor model, (3) the hypothesized four-factor oblique model, and (4) a hierarchical model with four first-order factors and two second-order factors. The four-factor oblique model was specified by assigning items to factors based on the results of Study 1a and 1b. The hierarchical model was similarly specified with first-order factors representing Experience of Pleasure and Avoidance of Negative Experience assigned to a second-order Hedonic factor and first-order factors representing Self-Development and Contribution to Others assigned to a second-order Eudaimonic factor. Chi-square is the most commonly used summary statistic for examining model fit, but this statistic is also likely to overestimate lack of fit in larger samples (Bollen 1989). Accordingly, we used multiple fit indices to evaluate each model, including chi-square, the root-mean-square error of approximation (RMSEA), the comparative fit index (CFI), goodness of fit index (GFI), and the normed fit index (NFI). An adequate fit to the proposed model is indicated by a nonsignificant chi-square, values less than .08 for the RMSEA, and values greater than .90 for the CFI, GFI, and NFI (Jöreskog and Sörbom 1993).

Table 2 reports the fit indices for the four models. As expected due to the large sample size, the chi-square statistic indicated a lack of fit for each model. The remaining fit indices further indicated that the null model (Model 1) and the one-factor model (Model 2) were a poor fit to the data. The hypothesized four-factor model (Model 3) and the hierarchical model (Model 4) both adequately fit the data, as indicated by the RMSEA, CFI, GFI, and NFI. A chi-square difference test further indicate that the hypothesized four-factor model provided a better fit to the data than the hierarchical model,  $\Delta\chi^2(2) = 9.31, p < .01$ . The four-factor structure of the BWBS

was thus confirmed and found to be the best fitting model. Table 3 displays the final four-factor oblique model, including standardized regression weights and factor correlations.

*Internal Consistency and Test-Retest Reliability.* The means, standard deviations, and alphas of the BWBS for Time 1 and Time 2 scale administration are presented in Table 4, as well as the test-retest correlation for each subscale. As shown, reliability analyses indicated acceptable internal consistency for all subscales at both time points. Additionally, large test-retest correlations were found, indicating adequate stability in scores across both time points.

*Convergent and Discriminant Validity and Associations with Well-Being.* A series of bivariate correlations were conducted to examine the convergent and discriminant validity of the BWBS. As shown in Table 5, the Experience of Pleasure subscale of the BWBS showed moderate to large positive correlations with the Pleasure subscale of the OHS, the Hedonism and Self acceptance subscales of the AI, and the Drive, Reward Responsiveness, and Fun Seeking subscales of the BIS/BAS. The Self-Development subscale showed moderate to large positive correlations with the Meaning subscale of the OHS, the Self-acceptance and Community subscales of the AI, and the Reward Responsiveness subscale of the BIS/BAS. The Contribution to Others subscale showed moderate to large positive correlations with the Meaning subscale of the OHS and the Community and Self-acceptance subscales of the AI. The Avoidance of Negative Experience subscale, however, only showed a small negative correlation with the Self-acceptance subscale of the AI<sup>4</sup>. While moderate to large in size, correlations rarely exceeded .60, providing evidence of adequate discriminant validity. Furthermore, while each of the BWBS

---

<sup>4</sup> The lack of evidence supporting the convergent validity of the Avoidance of Negative Experience subscale puts the overall validity of this subscale into question. As indicated by the descriptive statistics of the BWBS (see Table 4), a different pattern of responses are observed for this subscale when compared to the other BWBS subscales, raising further questions concerning the appropriateness of including it in the BWBS. However, the current studies represent only the early phases of psychometric evaluation of the BWBS, and there exist theoretical reasons for retaining the Avoidance of Negative Experience dimension. Accordingly, this subscale is at this point included in the BWBS, but additional research will be conducted to address the above concerns.

subscales were correlated with multiple measures, the largest correlations were observed between scales measuring conceptually similar constructs (e.g., contribution to others with community goals), providing additional evidence concerning the convergent and discriminant validity of the BWBS.

Also shown in Table 5 are the correlations between each BWBS subscale and measures of experienced well-being. As found in Study 1a, each of the BWBS subscales correlated with at least one measure of well-being, with the Self-Development and Contribution to Others subscales again showing stronger correlations with more measures of well-being than the Experience of Pleasure or Avoidance of Negative Experience subscales. These results thus provide further evidence supporting the association between conceptions of well-being and experienced well-being.

### *Discussion*

The results of Study 2 provide additional evidence concerning the psychometric properties of the BWBS and the association between conceptions of well-being and experienced well-being. First, the four-factor structure of the BWBS was replicated in an independent sample and found to be the best fitting structural model when compared to alternative models. Second, each of the subscales showed acceptable internal consistency as well as adequate test-retest reliability. Third, this study provided promising initial evidence concerning the convergent and discriminant validity of the BWBS by finding moderate to large positive correlations between the BWBS subscales and other scales measuring theoretically similar constructs. Fourth, each of the subscales was associated with at least one measure of experienced well-being, suggesting that conceptions of well-being may have implications for psychological functioning. Finally, each of the eudaimonic subscales were again found to be more highly associated with more measures of

well-being than either of the hedonic subscales, suggesting that eudaimonic aspects of lay conceptions of well-being may be relatively more important for experienced well-being.

### General Discussion

The studies reported here address the content, measurement, and importance of lay conceptions of well-being. Dimensions underlying the conceptions of well-being construct were identified, the subscales of the BWBS appear to represent reliable, structurally sound measures of these dimensions, and each of the dimensions was found to be associated with experienced well-being. Each of these points will be addressed more specifically below.

First, using exploratory factor analytic procedures, four dimensions were identified representing the Experience of Pleasure, Avoidance of Negative Experience, Self-Development, and Contribution to Others, and these dimensions seem to represent potentially important aspects of lay conceptions of well-being. It should be noted that although these dimensions were identified using exploratory procedures, they are consistent with previous theory concerning conceptions of well-being. The experience of pleasure and lack of negative experiences are emphasized in hedonic theories of well-being (e.g., Diener and Lucas 1999; Kahneman et al. 1999; Veenhoven 2003). Alternatively, self-development and contribution to others are often emphasized in various eudaimonic theories of well-being (e.g., Aristotle, trans. 2000; Ryff 1989). The results of the current studies thus suggest that both hedonic and eudaimonic aspects are present in laypersons' conceptions of well-being (see also King and Napa 1998).

Second, the results of the current studies also provide promising evidence concerning the measurement of lay conceptions of well-being. The four-factor structure of the BWBS was replicated in independent samples and found to be the best fitting model when compared to alternative structural models. It should be noted that the hierarchical model tested in Study 2 was



also an adequate fit to the data based on conventional goodness-of-fit criteria (Hu and Bentler 1999), despite the finding that it was a poorer fit than the hypothesized four-factor model. The adequacy of this hierarchical model further suggests that the Experience of Pleasure and Avoidance of Negative Experience subscales of the BWBS represent a broader hedonic dimension, while Self-Development and Contribution to Others represent a broader eudaimonic dimension. Additionally, each of the four BWBS subscales showed adequate internal consistency. Conceptions of well-being and other worldview beliefs have been suggested to be relatively stable over time (e.g., Koltko-Rivera 2004), and consistent with this assertion, each of the subscales of the BWBS showed acceptable test-retest reliability. Further, initial evidence indicated acceptable convergent and discriminant validity of the BWBS. Taken together, these results suggest acceptable psychometric properties of the BWBS.

Third, lay conceptions of well-being were found to be associated with self-reports of experienced well-being in both Studies 1a and 2. The correlational nature of the present studies prevents any conclusions concerning the direction of this relationship, but these findings raise the possibility that how one thinks about the nature of well-being may influence the actual experience of well-being. Interestingly, the Self-Development and Contribution to Others subscales showed a greater number of significant associations with experienced well-being than the Experience of Pleasure or Avoidance of Negative Experience subscales. This finding is particularly provocative, as it suggests that a more eudaimonic orientation is associated with greater well-being. While the hedonic subscales tended to only be associated with affective measures of well-being and satisfaction with life, the eudaimonic subscales indicated significant associations, typically of a larger magnitude, with multiple indices of self-reported well-being, suggesting that eudaimonic aspects of a conception of well-being may be associated with a

potentially richer and fuller experience of well-being. This finding also seems to have implications for what has been termed the ‘hedonic paradox’, where it is suggested that pleasure seeking leads to unhappiness (see Martin 2008; Veenhoven 2003). The results of the current studies similarly suggest that pleasure seeking may be associated with relatively less well-being when compared to contribution to others and self-development, but due to the lack of data specifically addressing this point, this claim should be interpreted with caution.

The findings of the current study do, however, provide correlational evidence indicating a relationship between lay conceptions of well-being and experienced well-being, but an important issue to be addressed concerns *how* these conceptions are associated with experienced well-being. One possible avenue is through the manifestation of behavior that is consistent with one’s conception of well-being (see Koltko-Rivera 2004). For example, conceptualizing well-being primarily in terms of self-development is likely to prompt behavior focused toward self-development. Alternatively, conceptualizing well-being primarily in terms of pleasure is likely to prompt pleasure-seeking. This has yet to be examined empirically, but research on a diverse set of phenomena such as optimism (Carver et al. 2009), hope (Snyder 1994), self-efficacy (Bandura 1997), and implicit personality theories (Dweck 2006) indicates that many fundamental beliefs produce adaptive or maladaptive behaviors that are consistent with those beliefs. Another possible avenue through which conceptions of well-being may influence self-reported well-being is through the interpretation of well-being-relevant life conditions and events. Previous research indicates that conceptions of well-being influence interpretations of another’s well-being based on the hedonic and eudaimonic quality of their life conditions (King and Napa 1998), and it is likely that individuals similarly use their conception of well-being when interpreting their level of experienced well-being. For example, an individual who conceptualizes well-being primarily

in hedonic terms may assess their satisfaction with life by reflecting on the amount of pleasure versus pain they have experienced.

### *Limitations and Future Directions*

Several limitations of the current work should be addressed in future research on conceptions of well-being. First, the items used in the development of the BWBS scale were largely derived from previous hedonic and eudaimonic theories of well-being, and it is certainly possible that laypeople's conceptions of well-being do not fit conveniently into a hedonic or eudaimonic framework, are more complex, and involve a number of other dimensions. A strength of the current studies is that the dimensions measured by the BWBS were largely determined by the population of interest (i.e., laypeople), rather than determined solely by prior theory. However, future research should address whether this approach presented an overly simplistic picture of conceptions of well-being in lay populations. Including open-ended qualitative responses to questions concerning individuals' beliefs about the experience of well-being may address this limitation and reveal additional dimensions of the conceptions of well-being construct to be included in future versions of the BWBS.

An additional limitation is that the samples used in these studies were composed entirely of undergraduate students at a single university and were quite homogenous in terms of gender, ethnicity, and age. This raises two important issues. First, the four factor structure of the BWBS must be replicated in more heterogeneous and diverse samples that are appropriately representative of gender, ethnicity, and age to determine whether the factor structure of this instrument is valid in more general populations. Second, it is possible that lay conceptions of well-being differ cross-culturally. As a worldview belief, conceptions of well-being are culturally-embedded (Ng et al. 2003), and therefore the nature of what it means to be well or

experience well-being may be culture-specific (Shweder 1998). Accordingly, cultures may differ in terms of the importance they place on various aspects of well-being. There have been few systematic investigations of cross-cultural similarities and differences in lay conceptions of well-being, however, and examining conceptions of well-being in diverse samples composed of different cultures and ethnicities would thus seem to be a fruitful area for future research.

A related issue concerns potential age-related differences in conceptions of well-being. It is likely that children, adolescents, young adults, and older adults define well-being differently. For example, Erikson (1959) argued that individuals will become increasingly more concerned with generativity (i.e., a feeling that one must maintain, contribute to, and perpetuate society) during adulthood, suggesting that contribution to others and society may seem more indicative of well-being among older adults. Additionally, research on socioemotional selectivity theory (SST; Carstensen 2006; Carstensen et al. 1999) indicates that younger adults, relative to older adults, place more importance on knowledge acquisition goals, whereas older adults place more importance on emotional experiences and emotional regulation. These findings suggest that younger adults may place more emphasis on self-development in their conceptions of well-being, whereas older adults may place more emphasis on the experience of pleasure and avoiding negative experiences. The results of the current study do not address these issues, but future research should investigate these possibilities by examining lay conceptions of well-being in various age-groups.

Finally, we recognize that scale validation is an ongoing process, and the results of the current study provide only initial evidence that the BWBS has acceptable psychometric properties. Accordingly, future research will further address the reliability and validity of the BWBS in multiple independent samples using several different methodological approaches. In

particular, an important priority for research in this domain is to further establish the convergent and discriminant validity of the BWBS. Initial evidence of convergent and discriminant validity was obtained in the current study by examining bivariate correlations between the BWBS subscales and other instruments designed to measure theoretically similar and dissimilar constructs, but future research should attempt to further address the convergent and discriminant validity of the BWBS using multitrait-multimethod designs (see Campell and Fiske 1959; John and Benet-Martinez 2000).

Despite the limitations of the current study, our findings represent an important first step in the investigation of lay conceptions of well-being and suggest multiple avenues for potentially fruitful research. We suggest that this domain of inquiry represents an important but relatively unexplored aspect of positive psychological functioning. Future work in this domain will define the conception of well-being construct more specifically, refine the measurement of this construct, address the nature of the relationship between conceptions of well-being and experienced well-being, and in this way contribute to our expanding knowledge of well-being and positive human functioning.

## References

- Allport, G. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart, & Winston.
- Aristotle. (2000). *Nicomachean ethics*. R. Crisp (Trans.). Cambridge: Cambridge University Press.
- Baggini, J. (2004). *What's it all about? Philosophy and the meaning of life*. New York: Granta Books.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Becker, L. (1992). Good lives: Prolegomena. *Social Philosophy and Policy*, 9, 15-37.
- Bloom, A. (1991). *The republic of Plato*. New York: Basic Books.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Brulde, B. (2007). Happiness and the good life: Introduction and conceptual framework. *Journal of Happiness Studies*, 8, 1-14.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- Carver, C. S., Scheier, M. F., Miller, C. J., & Fulford, D. (2009). Optimism. In S. J. Lopez & C. R. Snyder (Eds.), *Handbook of positive psychology, 2<sup>nd</sup> Edition* (pp. 679-687). New York, NY: Oxford University Press.
- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS Scales. *Journal of Personality and Social Psychology*, 67, 319-333.
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Coan, R. W. (1977). *Hero, artist, sage, or saint?* New York: Columbia University Press.

- Cole, D. A. (1987). Utility of confirmatory factor analysis in test validation research. *Journal of Consulting and Clinical Psychology, 55*, 584-594.
- Cooper, A, Gomez, R., & Aucote, H. (2007). The Behavioral Inhibition System and Behavioral Approach System (BIS/BAS) Scales: Measurement and structural invariance across adults and adolescents. *Personality and Individual Differences, 43*, 295-305.
- Crawford, J. R., & Henry, J. D. (2004). The Positive and Negative Affective Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 43*, 245-265.
- Dalbert, C. (2001). *The justice motive as a personal resource: Dealing with challenges and critical life events*. New York: Kluwer Academic/Plenum.
- Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies, 9*, 1-11.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542-575.
- Diener, E., Emmons, R. A., Larson, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71-75.
- Diener, E., & Lucas, R. E. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 213-229). New York: Russell Sage Foundation.
- Diener, E., Smith, H., & Fujita, F. (1995). The personality structure of affect. *Journal of Personality and Social Psychology, 50*, 130-141.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276-302.
- Dweck, C. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.

- Fava, J. L., & Velicer, W. F. (1992). The effects of overextraction on factor and component analysis. *Multivariate Behavioral Research, 27*, 387-415.
- Finch, J. F., & West, S. G. (1997). The investigation of personality structure: Statistical models. *Journal of Research in Personality, 31*, 439-485.
- Floyd, F. J., & Widaman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment, 7*, 286-299.
- Furnham, A. (2003). Belief in a just world: Research progress over the past decade. *Personality and Individual Differences, 34*, 795-817.
- Grouzet, F. M. E., Kasser, T., Ahuvia, A., Fernandez Dols, J. M., Kim, Y., Lau, S., et al. (2005). The structure of goal contents across 15 cultures. *Journal of Personality and Social Psychology, 89*, 800-816.
- Guadagnoli, E., & Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin, 103*, 265-275.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.
- John, O. P., & Benet-Martinez, V. (2000). Measurement: Reliability, construct validation, and scale construction. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 339-369). New York, NY: Cambridge University Press.
- Jöreskog, K., & Sörbom, D. (1993). *LISREL 8: Structural equation modelling with the SIMPLIS command language*. Hillsdale, NJ: Erlbaum.
- Kagan, S. (1992). The limits of well-being. In E. F. Paul, F. D. Miller, Jr., & J. Paul (Eds.), *The good life and the human good* (pp. 169-189). Cambridge: Cambridge University Press.



- Kahneman, D., Diener, E., & Schwarz, N. (1999). *Well-being: The foundations of hedonic psychology*. New York: Russell Sage Foundation.
- Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22, 280-287.
- King, L. A., & Napa, C. K. (1998). What makes life good? *Journal of Personality and Social Psychology*, 75, 156-165.
- Koltko-Rivera, M. E. (2004). The psychology of worldviews. *Review of General Psychology*, 8, 3-58.
- Kubovy, M. (1999). On the pleasures of the mind. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 134-154). New York: Russell Sage Foundation.
- Larson, R. J., Diener, E., & Emmons, R. A. (1985). An evaluation of subjective well-being measures. *Social Indicators Research*, 17, 1-17.
- Lucas, R. E., Diener, E., & Larson, R. J. (2003). Measuring positive emotions. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 201-218). Washington, DC: American Psychological Association.
- Martin, M. W. (2008). Paradoxes of happiness. *Journal of Happiness Studies*, 9, 171-184.
- Maslow, A. H. (1971). *The farther reaches of human nature*. New York: Viking.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science*, 6, 10-19.
- Ng, A. K., Ho, D. Y. F., Wong, S. S., & Smith, I. (2003). In search of the Good Life: A cultural odyssey in the East and West. *Genetic, Social, and General Psychology Monographs*, 129, 317-363.

- Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. New York: Guilford Press.
- Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, 6, 25-41.
- Peterson, C., Ruch, W., Beerman, U., Park, N., & Seligman, M. E. P. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology*, 2, 149-156.
- Poulin, M., & Silver, R. C. (2008). World benevolence beliefs and well-being across the life span. *Psychology and Aging*, 23, 13-23.
- Reise, S. P., Waller, N. G., & Comrey, A. L. (2000). Factor analysis and scale revision. *Psychological Assessment*, 12, 287-297.
- Rogers, C. R. (1961). *On becoming a person*. Boston: Houghton-Mifflin.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Russell, B. (1946). *A history of western philosophy*. New York: Simon & Schuster.
- Russell, B. (1958). *The conquest of happiness*. New York: Liveright.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-166.
- Ryan, R. M., & Frederick, C. M. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65, 529-565.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719-727.

Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9, 1-28.

Ryff, C. D., & Singer, B. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies*, 9, 13-39.

Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. (2004). The independent effects of goal contents and motives on well-being: It's both what you pursue and why you pursue it. *Personality and Social Psychology Bulletin*, 30, 475-486.

Shweder, R. A. (1998). *Welcome to middle age! (and other cultural fictions)*. Chicago: University of Chicago Press.

Snyder, C. R. (1994). *The psychology of hope: You can get there from here*. New York, NY: Free Press.

Srivastava, A., Locke, E. A., & Bartol, K. M. (2001). Money and subjective well-being: It's not the money, it's the motives. *Journal of Personality and Social Psychology*, 80, 959-971.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence and search for meaning in life. *Journal of Counseling Psychology*, 53, 80-93.

Veenhoven, R. (2003). Hedonism and happiness. *Journal of Happiness Studies*, 4, 437-457.

Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678-691.

Waterman, A. S., Schwartz, S. S., & Conti, R. (2008). The implications of two conceptions of happiness (hedonic enjoyment and eudaimonia) for the understanding of intrinsic motivation. *Journal of Happiness Studies*, 9, 41-79.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

Wood, J. M., Tataryn, D. J., & Gorsuch, R. L. (1996). Effects of under- and overextraction on principle axis factor analysis with varimax rotation. *Psychological Methods, 1*, 354-365.

## Appendix. Beliefs about Well-Being Scale

**BWBS**

**Instructions:** Different people have different beliefs about what factors are involved in the experience of high well-being and 'the good life'. Please indicate the degree to which **you believe** that each of the items is a **necessary and required** aspect of the experience of high well-being and living the good life by circling the appropriate number .

**The experience of well-being and the good life necessarily involves:****1. A great amount of pleasure**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**2. Experiencing a great deal of sensual pleasure**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**3. Living in ways that benefit others**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**4. Not experiencing hassles**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**5. Making the world a better place**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**6. Working to achieve one's true potential**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**7. Not experiencing negative emotions**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**8. The identification and cultivation of one's strengths**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**9. Experiencing euphoria and pleasure**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**10. Being a positive influence within the community**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**11. The exertion of effort to meet life's challenges**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**The experience of well-being and the good life necessarily involves:**

**12. Pleasurable experiences**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**13. Contribution to society**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**14. A lack of unpleasant experiences**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**15. A high degree of self-knowledge**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

**16. A lack of painful experiences**

1	2	3	4	5	6	7
<i>Strongly Disagree</i>			<i>Neutral</i>			<i>Strongly Agree</i>

Table 1. Study1a: Relations of BWBS Subscales to Well-being Variables, ( $n = 300$ )

BWBS Subscales	Satisfaction with Life	Subjective Vitality	Positive Affect (PANAS)	Negative Affect (PANAS)	MLQ-Presence
(1)Experience of Pleasure	.18**	.08	.05	-.04	-.02
(2)Avoidance of Negative Experience	.12*	.11	.02	-.01	.10
(3)Self-Development	.16**	.20**	.31**	-.08	.35**
(4)Contribution to Others	.18**	.18**	.20**	-.08	.33**

note: \* $p < .05$ . \*\* $p < .01$

Table 2. Study 2: Fit Indices for Null, One-Factor, Four-Factor, and Two-Factor Second-Order Models, ( $n = 406$ )

Model	Description	$\chi^2$	$df$	$\chi^2/df$	RMSEA	CFI	GFI	NFI
1	Null	5142.03**	114	45.11	.33	.00	.39	.00
2	1 Factor	2379.00**	104	22.88	.23	.55	.58	.54
3	4 Factors	269.03**	98	2.75	.07	.97	.92	.95
4	2 Second-Order Factors	278.34**	100	2.78	.07	.96	.92	.95

note: \*\* $p < .01$ .



Table 3. Study 2: Standardized Regression Weights and Correlations among Factors for Final Four-Factor Oblique Model, ( $n = 406$ )

	BWBS-EP	BWBS-ANE	BWBS-SD	BWBS-CO	$R^2$
<u>BWBS Item</u>					
BWBS1	.83				.71
BWBS2	.70				.53
BWBS9	.75				.57
BWBS12	.76				.58
BWBS4		.70			.49
BWBS7		.83			.70
BWBS14		.86			.75
BWBS16		.82			.67
BWBS6			.81		.66
BWBS8			.67		.45
BWBS11			.60		.36
BWBS15			.61		.37
BWBS3				.70	.49
BWBS5				.81	.66
BWBS10				.88	.78
BWBS13				.87	.76
<u>BWBS Factor</u>					
BWBS-EP	1.00				
BWBS-ANE	.23	1.00			
BWBS-SD	.37	-.07	1.00		
BWBS-CO	.18	.02	.75	1.00	

note: BWBS-EP = Experience of Pleasure; BWBS-ANE = Avoidance of Negative Experience; BWBS-SD = Self-Development; BWBS-CO =

Contribution to Others. Blank cells indicate where parameters have been constrained to zero in this model.

Table 4. Study 2: BWBS Means, Standard Deviations, Alphas, and Test-Retest Correlations

BWBS Subscale	Time 1 ( <i>n</i> = 406)			Time 2 ( <i>n</i> = 167)			Test-Retest Correlation
	<i>M</i>	<i>SD</i>	<i>α</i>	<i>M</i>	<i>SD</i>	<i>α</i>	
(1)Experience of Pleasure	5.35	.92	.87	5.43	.87	.85	.55**
(2)Avoidance of Negative Experience	3.64	1.30	.91	3.42	1.39	.92	.61**
(3)Self- Development	5.76	.71	.78	5.79	.74	.79	.54**
(4)Contribution to Others	5.54	.91	.88	5.49	.90	.88	.65**

note: \**p* < .05. \*\**p* < .01

Table 5. Study 2: Correlates of BWBS subscales, ( $n = 167$ )

	Experience of Pleasure	Avoidance of Negative Experience	Self- Development	Contribution to Others
Orientation to Happiness				
Pleasure	.57**	.13	.16*	.15*
Engagement	.17*	.07	.24**	.20*
Meaning	.03	-.08	.31**	.53**
Aspiration Index (Imp.)				
Community	.03	-.07	.31**	.57**
Hedonism	.63**	.07	.28**	.19*
Self-Acceptance	.33**	-.19*	.58**	.39**
BIS/BAS				
BIS	-.04	.09	.11	.24**
Reward Responsiveness	.35**	-.08	.43**	.28**
Drive	.40**	.04	.17*	.16*
Fun Seeking	.34**	.02	.11	.03
Satisfaction with Life	.16*	-.20*	.31**	.31**
Subjective Vitality	.20*	-.07	.26**	.35**
Meaning in Life				
Presence	-.03	-.19*	.20**	.30**
Search	-.02	.09	.16*	.18*
ITAS				
Positive Affect	.26**	-.11	.25**	.26**
Negative Affect	-.08	.19*	-.21**	-.07

note: \* $p < .05$ . \*\* $p < .01$ .