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**Study Project in a Midwestern University**

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## **Intersectionality between Happiness and Well-being: A Pilot Study Project in a Midwestern University**

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### **Abstract**

This pilot study measures the possible intersectionality of happiness and well-being. Items were used from the Oxford Happiness and Well-Being Questionnaire, designed to independently measure the constructs of happiness and well-being. 42 items were combined from which 10 items were randomly selected and converted to a six-point Likert scale ranging from “*strongly disagree*” to “*strongly agree*” and administered to 28 college students at a Midwestern University taking a leisure studies course. The instrument yielded a significant alpha value of  $\alpha(27) = 0.835$ . Factor analysis was conducted to find which variable loaded on each factor (happiness and well-being). Items having a value greater than 0.30 on both happiness and well-being factors were considered to represent the intersectionality of the latent variables. The results indicated that three of the ten items loaded on both factors with a value greater than 0.30, indicating some degree of intersectionality between happiness and well-being.

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**Keywords:** Happiness; well-being; subjective well-being; intersectionality; factor analysis; Likert scale

This study explored people's perception of the distinction between happiness and well-being to identify the possible intersectionality of the constructs. This pilot project administered items from the Oxford Happiness Questionnaire (Hills & Argyle, 2002) and Well-Being Questionnaire (Bradley & Lewis, 1990; Riazi, Bradley, Barendse & Ishii, 2006) to students from a Midwestern University. The purpose of this study was to determine the possible intersectionality of happiness and well-being and perhaps see if any items overlapped synonymously; therefore, suggesting a relationship between happiness and well-being. The literature appears to be ambiguous in the distinction between happiness and well-being. This study examined the overlap of the constructs of happiness and well-being in an effort to identify the level of ambiguity by isolating the variables in both constructs.

### **Happiness Constructs**

A review of the literature suggests that happiness encompasses positive affect, life satisfaction, and absence of negative affect. It is associated with better health, sociability, stable marriages, creativity, success and well-being (Carruthers & Hood, 2004; Diener, 1984; Lyubomirsky & Layous, 2013; Myers, 2000; Shin, 2015; Singh, 2014). It is also a personal trait in which some people maintain a more positive mental and emotional state or situation-specific state of happiness (Csikszentmihalyi & Wong, 2014; Sundriyal & Kumar, 2014). Philosophers and sociologists concerned with defining happiness have categorized it into three groups: positive affect; life satisfaction; and absence of negative affect (Diener, 1984). Researchers indicate that people engaged in positive activities such as thinking gratefully, optimistically, or mindfully report being significantly happier (Lyubomirsky & Layous, 2013).

### **Well-Being Constructs**

Well-being is the subjective appraisal of individual experiences and life. Included in this appraisal may be a sense of life satisfaction, contentment, happiness, good health, positive emotions and cognition, and a sense of purpose (Carruthers & Hood, 2004; Diener, 2000; Sundriyal & Kumar, 2014; Watkins, Woodward, Stone, & Kolts, 2003). There are six categories important in determining well-being. They are: (1) intellectual; (2) emotional; (3) social; (4) physical; (5) occupational; and (6) spiritual health (Jurin, 2012).

Additionally, subjective well-being (SWB), also called life satisfaction, embraces concepts such as happiness, self-actualization, optimism, vitality, self-acceptance, a purpose driven-life, optimal functioning, and life satisfaction (Carruthers & Hood, 2004). The term happiness is most often referred to when ordinary individuals are asked to assess their overall well-being (Shin, 2015). According to research, happiness is a good measure of subjective well-being and in fact, if one needs to choose a single measure of subjective well-being, happiness would be likely a candidate. (Csikszentmihalyi & Wong, 2014).

The conceptual framework (see Figure 1 Appendix E) guiding the study suggest that there is an overlap in the perception of happiness and well-being, and the two constructs are not mutually exclusive. The literature does not clearly distinguish between happiness and well-being. Therefore, this study identified items from commonly used instruments designed to measure happiness and well-being that load on both constructs. More specifically, our goal was to isolate items that sufficiently load on both of the latent variables simultaneously. The research questions are as follows:

- Do items designed to measure happiness also measure well-being and vice versa?

- Do items specifically measures happiness or well-being?

To examine the intersectionality of happiness and well-being, items from two reliable instruments were chosen to measure the construct of happiness and well-being:

First, the compact scale of the Oxford Happiness Questionnaire (OHQ) is derived from the 29-item Oxford Happiness Inventory (OHI). Both the OHI and the OHQ have alpha coefficients of .92 and .91 respectively and the scales consistently yield similar results. The internal consistency of the items comparatively on both instruments were significantly related ( $P < 0.001$ ) (Hills & Argyle, 2002). Their questionnaire utilizes one sentence statements measured on a six-point Likert scale.

Second, the well-being component of the study utilized items from the Well-Being Questionnaire (W-BQ12) (Riazi et al., 2006). The W-BQ12 is a short version of the Bradley and Lewis, 1990, instrument designed to measure well-being and treatment satisfaction of patients ( $n = 140$ ) with Type 2 diabetes. The instrument consisted of three subscales one of which specifically measured psychological well-being. Items utilized in this subscale obtained an alpha coefficient of 0.88 (Bradley & Lewis, 1990). Much like the work of Salsman et al., (2014), this study explored the potential overlap of well-being and happiness.

## Methods

### Instrument Used

**Well-Being scale.** Riazi, et al. (2006) administered the short form of the W-BQ12 to 550 patients and discovered that the 12-item survey was a reliable instrument to measure depression, anxiety, and positive well-being of diabetes patients. This scale was derived from a previous ver-

sion developed for by Bradley and Lewis 1990 to measure well-being and treatment satisfaction of patients ( $n = 140$ ) with Type 2 diabetes. This instrument consisted of three subscales of which one was utilized to specifically measure psychological well-being. Items utilized in this subscale obtained a coefficient alpha of 0.88.

**Happiness Scale.** In 2002, Hills and Argyle developed an updated 29-item OHQ and was considered as “an improved instrument” to measure subjective well-being as compared to the 20-item OHI developed by Argyle, Martin & Crossland in 1989. This OHQ utilizes one sentence statements measured on a six-point Likert scale. This scale was tested among 172 undergraduate students and demonstrated that the OHQ had high scale reliability with coefficient alpha of  $\alpha (171) = 0.92$ .

### Study Participants

The pilot study utilized convenience sampling of 28 college students enrolled at a Midwestern University in a leisure studies course as part of their degree requirements. This cohort of participants were easily accessible and this sampling strategy was cost-effective. Participants were asked to complete the questionnaire that consisted of items from both well-being and happiness surveys. The majority of the class were undergraduates and the remainder comprised of graduate students. Participation was voluntary and the students were not given any incentive or extra credit to fill out the questionnaire.

### Survey Questionnaire

Both well-being and happiness questionnaires were combined to comprise a pool of questions consisting of 42 items. The surveys were chosen based on their validation and documented reliability. In an effort to observe whether or not



there was intersectionality, items were integrated from both instruments into one. The limited number of items ultimately used, and the use of reverse coded questions were employed to minimize response bias. Biases can adversely affect the validity and reliability of an instrument. Response bias such as acquiescence can occur when subjects agree or disagree with the questions in the absence of what the question is asking (Furr & Bacharach, 2008). Negatively worded versions of some of the survey items can help identify and alleviate this type of response bias. Another form of response bias is extreme and moderate response bias. Individuals who tend to choose responses in the middle range regardless of the item's content may be exhibiting this type of bias. The opposite is true of individuals that tend to respond toward one end or the other of a scale (Furr & Bacharach, 2008). To minimize respondent fatigue and thus careless and random responses, the length of the questionnaire was intentionally limited in the number of items included. In general, a shorter survey is desirable because it burdens the respondents to a lesser degree (DeVellis, 2012). From the pool of 42 questions, 10 items were randomly selected (see Table 1 Appendix A). Questions selected were: (1) well-being (3 questions); (2) happiness (3 questions); (3) well-being reversed coded (2 questions); and (4) happiness reverse coded (2 questions). The items were administered using a six-point Likert scale ranging from: (1) *strongly disagree*; (2) *moderately disagree*; (3) *slightly disagree*; (4) *slightly agree*; (5) *moderately agree*; and (6) *strongly agree*. This instrument yielded alpha coefficient  $\alpha(27) = 0.835$  suggesting sufficient reliability.

### Analysis

The statistical analysis was performed from the data collected. IBM SPSS Statistics version 23 software was used to find Cronbach's alpha and Factor Analysis. In addition, descriptive statistics

for each question was performed using the same software.

## Results and Discussion

### Reliability Test

Using SPSS statistical software, the reliability test was performed to find if the scale that was used for this pilot project was consistent and reliable. The result indicated that the instrument used in this pilot project is reliable with a Cronbach's Alpha of  $\alpha(27) = 0.835$  (see Table 2 Appendix B). The inter-item correlation for this questionnaire ranged from 0.040 to 0.806 with mean 0.378. The observed maximum inter-item correlation (0.806) indicated that each item measured the constructs i.e. happiness and well-being.

### Factor Analysis

The factor analysis was performed to identify the degree of variability on each of the variables, factors, or items. This pilot study contain two set of factors; happiness and well-being. This analysis primarily indicates that the happiness variable loaded on happiness factor and well-being variable on the well-being factor. In addition, this study revealed items that loaded on both factors. If some variables loaded on both, then there is an intersectionality between two factors; happiness and well-being.

**Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test.** The KMO and Bartlett's test was performed to indicate if the sample size used for this study was adequate. The analysis indicated the KMO value of 0.659 (see Table 3 Appendix C) showing that the sample was adequately taken. The minimum value of this test is 0.5 and below this point it is considered that the sample taken is not acceptable for analysis. In addition, the Bartlett's test with a significance level of  $<0.001$  indicated that there are correlations between the data set and that the survey variables are appropriate for

factor analysis.

**Scree Plot.** Another tool utilized for factor analysis is the scree plot. The scree plot helps to determine the number of factors to be considered for analysis. Eigen values of less than 1.0 were not considered to be viable sub-dimensions. As a result, it was determined from the plot that there were two factors with Eigen values greater than 1.0 that accounted for 55.43% of total variance (see Figure 2 Appendix F). Therefore, the two factors that accounted for values greater than 1.0 were happiness and well-being.

**Factor matrix.** Two factors, happiness and well-being were considered for analysis. Values greater than 0.30 occurring in the matrix were used to determine if a given item loaded on one factor or another. The analysis indicated that three of the ten items, loaded on both factors (see Table 4 Appendix D). Question 3 “I do not think that the world is a good place” and Question 6 “Life is good” are happiness questions, however they loaded on both factors. Question 8 “My life is pretty full” is a well-being question but it also loaded on both factors. Therefore, overlapping of these three items in factor analysis suggests intersectionality between happiness and well-being.

Question 5 “I have felt I could easily handle or cope with any serious problem or major change in my life” is a well-being question and yet it loaded only as happiness variable (0.627). On the other hand, Question 9 “I feel that I am not specially in control of my life” is a happiness question, but it loaded only on well-being (0.919). Therefore, the result again suggests that the items designed to measure one factor may measure the other and vice versa.

## Conclusion and Future Implications

This small-scale pilot study measured intersectionality between happiness and well-being. This questionnaire used items from previously developed and reliable happiness and well-being surveys which were combined together to make a “Happy-being” questionnaire. Each item from the previous surveys were randomly selected and pooled together to make final ten item questionnaire with six-point Likert scale ranging from 1- “*Strongly Disagree*” to 6- “*Strongly Agree*.” After surveying 28 students in a Midwestern University, the study found that the instrument used was reliable with coefficient alpha value of  $\alpha(27) = 0.835$ . The factor analysis also found that three items in this instrument loaded on both factors i.e. happiness and well-being showing intersectionality between them.

In this type of study, there are limitations and three were identified. First, the sample size was relatively small which limits the generalizability of the study. However, it did meet the requirements for the KMO Bartlett test. Second, the sample was not reflective of the campus population of students and it was not stratified to control for variables such as gender, race, socioeconomic status etc. Third, the group of students were homogenous sampling of leisure studies class.

Because of this study, we were also able to identify those items that load on both well-being and happiness despite the items being identified as solely happiness or well-being measurements. Therefore, the pilot study revealed the ambiguity of the constructs of happiness and well-being. It is promising that certain items designed to measure a particular construct did in fact load only on that construct. However, some items that were designed to measure a specific construct did not measure that particular construct. For example Question 5 was supposed to measure well-being but in fact it measured only happiness. For exam-

ple, the literature suggest that happiness entail life satisfaction, positive affect, and well-being (Carruthers & Hood, 2004; Diener, 1984; Lyubomirsky & Layous, 2013; Myers, 2000; Shin, 2015; Singh, 2014). Whereas the literature also suggest that well-being is a sense of life satisfaction, contentment, happiness, good health, positive emotions and cognition, and a sense of purpose (Carruthers & Hood, 2004; Diener, 2000; Sundriyal & Kumar, 2014; Watkins, Woodward, Stone, & Kolts, 2003). Therefore, the results from this study reveals the overlap in the perception of these constructs.

Limited research has explored the intersectionality of happiness and well-being. Further exploration of the intersectionality of happiness and well-being may enable researcher to isolate items that measure either happiness or well-being.

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## Appendix A

**Table 1.** Happy-Being Survey

			Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
			1	2	3	4	5	6
Q1	I feel downhearted and blue	WR						
Q2	I feel nervous and anxious	WR						
Q3	I do not think that the world is a good place	HR						
Q4	I am very happy	H						
Q5	I have felt I could easily handle or cope with any serious problem or major change in my life	W						
Q6	Life is good	H						
Q7	I feel that life is very rewarding	H						
Q8	My life is pretty full	W						
Q9	I feel that I am not especially in control of my life	HR						
Q10	I feel that I am useful and needed	W						

Note: W=Well-being; WR=Well-being (Reversed coded); H=Happiness; HR= Happiness (Reversed Coded)

**Appendix B****Table 2.** Cronbach's Alpha Value

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.835	.858	10

**Appendix C****Table 3.** KMO and Bartlett's Test

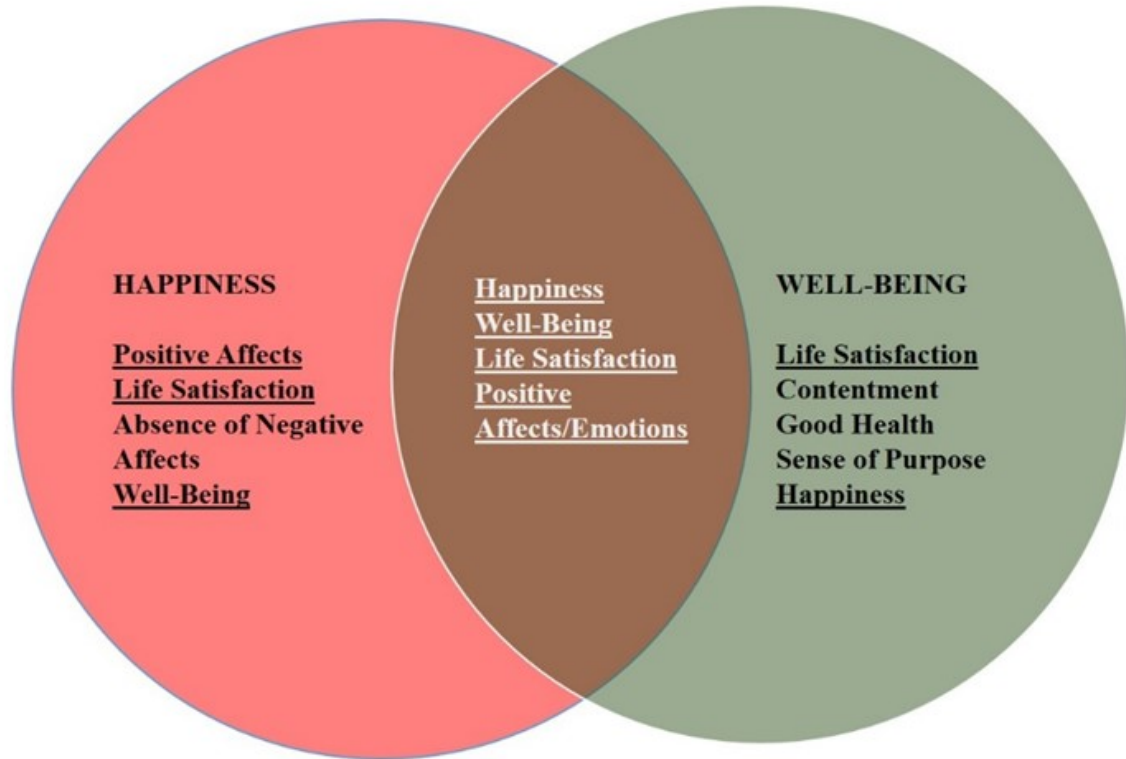
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.659
Bartlett's Test of Sphericity	Approx.	140.907
	df	45
	Sig.	.000

## Appendix D

**Table 4.** Factor Matrix

Factor Matrix		
	Factor	
	1 (Happiness)	2 (Well-being)
Q4	.999	
Q5	.627	
Q7	.557	
Q9		.919
Q10		.790
Q6	.313	.780
Q2		.708
Q3	.324	.518
Q8	.408	.413
Q1		.411
Extraction Method: Maximum Likelihood.		
a. 2 factors extracted. 6 iterations required.		

## Appendix E

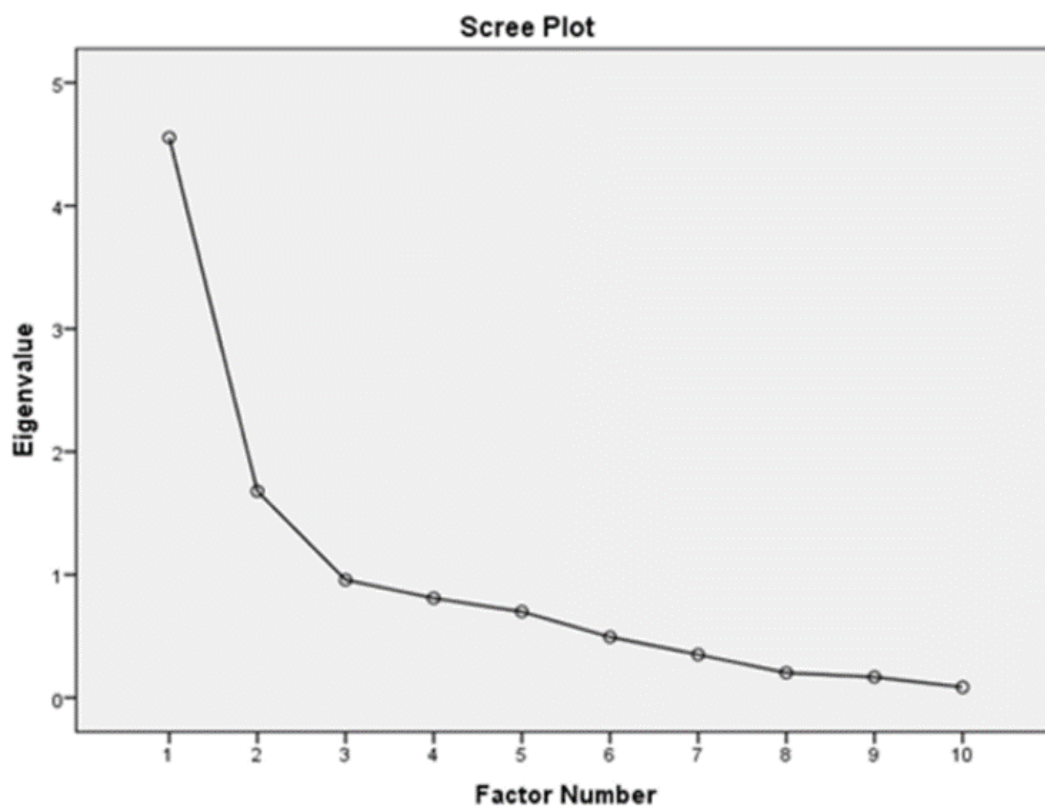


**Figure 1.** Conceptual Framework of Intersectionality of Happiness and Well-Being

Source: Carruthers & Hood, 2004; Diener, 1984; Diener, 2000, Lyubomirsky & Layous, 2013; Myers, 2000; Shin, 2015; Singh, 2014; Sundriyal & Kumar, 2014; Watkins, Woodward, Stone, & Kolts, 2003



## Appendix F



**Figure 2.** Scree Plot showing Eigenvalue