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The Arabic Scale of Happiness (ASH): psychometric characteristics^{1, 2}

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Abstract

There are few happiness measures in Arabic. The purpose of this study was to construct and validate the Arabic Scale of Happiness as a trait measure, suitable for college students and adolescents. The scale comprised 15 brief statements plus five filler items. Each item was answered on a 5-point intensity scale. The total score could range from 15 to 75, with higher scores indicating higher happiness. A principal axis factor analysis followed with oblique rotation (pattern and structure matrices) yielded two factors labeled: General happiness and Successful life. Item-rest-of-test correlations ranged from .42 to .77. Cronbach's alphas and test-retest reliabilities ranged from .82 to .94, indicating good internal consistency and temporal stability. The construct validity of the scale ranged between .55 and .79 against the Fordyce Happiness Measure, the Subjective Happiness Scale, and the Oxford Happiness Inventory. The Arabic Scale of Happiness statistically significantly correlated with mental health, satisfaction with life, optimism, love of life, and self-esteem, so construct validity was adequately demonstrated. Male college and high school students obtained higher mean scores than did their female counterparts. Male and female undergraduates obtained higher mean scores than did their adolescent counterparts. It was concluded that the Arabic Scale of Happiness has good psychometric properties. The scale has an English equivalent version.

A limited number of happiness measures are available in Arabic. This study develops and assesses the Arabic Scale of Happiness (ASH) a trait measure: its development, internal consistency, temporal reliability, construct validity, and descriptive statistics among Kuwaiti students, as well as construction of an equivalent English version of the ASH. There is a paucity of Arabic studies on this endeavor, so the need is great to construct and validate Arabic scales in the well-being (WB) domain. The last few decades have witnessed a surge of interest in positive psychology; the conditions and processes that contribute to the flourishing or optional functioning of people, groups, and institutions (Gable & Haidt, 2005). Seligman and Csikszentmihalyi (2000) defined positive psychology as the study of positive emotion, positive character, and positive institutions. It is deliberately in contrast to the preoccupation of typical psychological concepts with measuring or repairing negative aspects of life, shifting that to the purpose of building positive qualities.

Current research on well-being has been derived from two general perspectives, i.e., the Hedonic and eudaimonic approaches. Ryan and Deci (2001) elucidated these constructs as follows: the hedonic approach focuses on happiness and defines well-being in terms of pleasure attainment and pain avoidance. Hedonism has been expressed in many forms and has varied from a relatively narrow focus on bodily pleasures to a broad focus on appetites and self-interests. On the other hand, the eudaimonic approach focuses on meaning and self-realization and defines well-being in terms of the extent to which a person is fully functioning in accordance of his or her daimon, or true self.

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Subjective Well-being

Subjective well-being may be considered as the main subject in positive psychology. There are many similar concepts contained within subjective well-being including happiness, satisfaction, joy, enjoyment, fulfillment, pleasure, and contentment, as well as other indicators of a life that is full and complete. The overall concept exists on a continuum, ranging from depressed mood or dissatisfaction to satisfaction and authentic happiness. Carr (2004, p. 12) presented a framework for conceptualizing various components of subjective well-being at two levels: the cognitive component, i.e., satisfaction, and the affective component, i.e., the positive affects, such as joy, ecstasy, elation, and happiness.

Happiness was used by Veenhoven (2011) in its widest sense, as an umbrella term for all that is good. In this meaning, it is often used interchangeably with terms like "well-being" or "quality of life." He stated that happiness is commonly understood as how much one likes the life one lives, or more formally, the extent to which one positively evaluates one's life as a whole (Veenhoven, 2009a). On the other hand, Argyle, Martin, and Lu (1995) proposed three possible components of happiness: positive emotion, satisfaction, and the absence of negative emotions, such as depression or anxiety. Lucas and Diener (2008) stated that the balance of positive to negative emotions is a powerful determinant of happiness or subjective well-being. Despite these distinctions, the three terms (subjective well-being, happiness, and satisfaction with life) have often been used interchangeably in the literature (Lyubomirsky, 2001; Diener, Lucas, & Oishi, 2002).

Veenhoven (1995, pp. 34-36) summarized three theories of happiness: (a) the comparison theory, which assumes that the evaluation of life is based on a mental calculus, in which perceptions of life-as-it-is are weighted against standards of how life should be, (b) the anecdotal theory sees happiness as the reflection of a body of widely held notions about life, i.e., part of the national character, and (c) the "livability" theory which assumes that subjective appreciation of life depends in the first place on the objective quality of life, the better the living conditions in a country, the happier its inhabitants will be. He tested these three theories of happiness on two cross-national data sets and found that most predictions of comparison theory and anecdotal theory are negated by the data, whereas the predictions of the livability theory were all supported.

As early as 1967, Wilson answered that happy people are young, healthy, well-educated, well paid, extraverted, optimistic, worry-free, religious, married, with high self-esteem, job morale, modest aspiration, of either sex, and of a wide range of intelligence (p. 294). However, almost a century of research suggests that objective circumstances, demographic variables, and

life events are less strongly correlated with happiness. Therefore, the importance of the subjective processes in happiness must be considered (Lyubomirsky & Lepper, 1999). This is consistent with what Veenhoven (2009a) said, that happiness seems to be inferred from how we feel in the first place. From this standpoint, it is understandable that personality traits, religious faith, marriage, close relationships, social support, work experience, and culture have been found to be correlates of subjective well-being (Myers & Diener, 1995; Myers, 2000a, 2000b).

Research has evaluated such factors in detail. A meta-analysis was carried out by DeNeve and Cooper (1998), which indicated that relationships between personality measures and life satisfaction, happiness, and positive affect were similar, but the size of the effect was smaller between personality and negative affect. Francis, Brown, Lester, and Philipchalk (1998) conducted a cross-cultural study among students in the U.K., U.S.A., Australia, and Canada. They found that a measure of happiness was related with stable extraversion. Diener (1998) found that personality traits appeared to be associated with subjective well-being, whereas situational variables either have smaller effect sizes than personality traits or have statistically non-significant relations with subjective well-being.

In a similar vein, Lyubomirsky (2001) found that objective circumstances, demographic variables, and life events played only a trivial role in determining people's happiness. Following a construal theory of happiness, she proposed that multiple cognitive and motivational processes moderated the effect of the objective environment on well-being. However, using a sample from a different background and culture, i.e., 1,000 Pakistani Muslim people, Suhail and Chaudhary (2004) found that work satisfaction, social support, religious affiliation, social class, income level, marital status, and satisfaction to be the highest correlates of subjective well-being. It is evident that culture has an effect on predictors of happiness. Likewise, Abdel-Khalek and Lester (2010) explored the personal, social, and personality correlates of happiness using a university sample of Kuwaiti students. They concluded that personality traits correlated highest with happiness.

A limited number of happiness measures are available in Arabic. There is a need to develop a new scale with good and extensive psychometric parameters. The present research reports five empirical studies to construct and validate the Arabic Scale of Happiness (ASH). That is, (1) the construction of the scale, (2) internal consistency and test-retest reliability, (3) construct validity, (4) descriptive statistics, and (5) translation of the Arabic scale into English for possible use in cross-cultural comparisons between Arab samples and English-speaking participants. The present research is important because

the construct of happiness may be different in other cultures. It is important to note that the majority of psychological questionnaires in this field in the Arabic language are adaptations of American or English scales. These scales are very important in cross-cultural comparisons. In contrast, the ASH was developed and validated in the opposite direction, i.e., it was constructed in Arabic, and subsequently, several cycles of translation and back-translation of the scale items gave rise to an equivalent English version. Furthermore, the Arabic form of this scale was used with an underrepresented sample in the literature. The present research is one of the projects to fulfill the growing interest in positive psychology studies in the Arab countries.

Study 1

Construction of the Arabic Scale of Happiness

The first study described the construction of Arabic Scale of Happiness up to its final form, namely, the item pool and the four stages of item reduction: (a) item-rest-of-test correlation, (b) association with the Adjective Check list of Happiness, (c) the negative correlation with a depression scale, and (d) factor analysis.

The item pool was constructed on the basis of three sources: a search of the literature, items from previous scales, and the personal experience of the present researcher. Based on these sources, 61 preliminary positively worded statements were drafted (Version I). The statements were brief and written in modern, simple, and standard Arabic. Then, four stages of item reduction were followed on the basis of different considerations as follows:

Item-rest-of-test Correlation

In computing the correlations between item and total score, a sample of 470 male ($n = 172$) and female ($n = 298$) university undergraduates were tested. All of them were of Kuwaiti nationality. Their ages ranged from 17 to 42 years ($M = 19.9$, $SD = 2.5$; 36.6% men). The corrected item-rest-of-test score correlations (i.e., the item-remainder correlations) were computed using the 61 items.

All the items with statistically significant correlations ($p \leq .001$) over .3 and under .80 were retained. Thirty-four items fulfilled that criterion (Version II).

Correlation With the Adjective Check List of Happiness

The same sample in the previous study ($N = 470$) was used in this study. The Adjective Check List of Happiness was extracted from the *Lexicon of Affective Traits* (Abdel-Khalek, 2004). This list composed of 52 positive (e.g., smiling, cheerful) and negative (e.g., hopeless, sad) adjectives indicating happiness. The Pearson correlation coefficients between each item of Version II of the Arabic Scale of Happiness (34 item) and the total score on the Adjective Check List of Happiness (52

item) were computed. Twenty items (Version III) fulfilled two criteria of statistically significant correlations over .3 and under .80.

Negative Correlation With Depression Scale

A sample of Kuwaiti male and female college students ($N = 360$) was recruited. Their ages ranged between 19 and 32 years ($M = 20.7$, $SD = 2.6$; 45% men). The 20 items of Version III of the Arabic Scale of Happiness and the 20 items of the Center for Epidemiologic Studies–Depression Scale (CES–Depression; Radloff, 1977) were used. Pearson correlations were computed between each item of the Arabic Scale of Happiness and the total score on the CES–Depression scale. Five items were deleted and 15 items were retained (Version IV) on the basis of statistically significant negative correlations ($p \leq .001$). This version (15 items) represents the last form of the Arabic Scale of Happiness.

Factor Analysis

A sample of male and female undergraduates was recruited ($N = 530$). They were enrolled in different faculties at Kuwait University. Their ages ranged from 19 to 35 years ($M = 20.2$, $SD = 1.9$; 40% men). In study I, administration of the Arabic Scale of Happiness was carried out in group sessions. All participants were volunteer male and female undergraduates. A principal axis factor analysis of the correlation matrix (15×15) of Version IV was used for item reduction (Floyd & Widaman, 1995). Eigenvalues greater than or equal to 1.0 criterion and the scree test were used to identify the number of factors to be retained. A direct Oblimin oblique rotation of axes was then applied (SPSS, 2009), and the pattern and structure matrices assessed.

The 15 items were examined for skew (range .03 to .80) and kurtosis (range .01 to .71) to ensure that the data were acceptable for further analysis. Bartlett's test of sphericity indicated that the matrix was appropriate for factor analysis. Using the principal axis analysis followed by direct oblimin, with criterion of eigenvalue greater than or equal to 1.0 and the scree test, two components were identified accounting for 56.9% of the variance. Based on loadings equal to or greater than .40, all the 15 items statistically significantly loaded on only one factor (except Number 15). Table 1 lists the first unrotated and the oblique two components (pattern and structure matrices) with loadings, eigenvalues, and percent of variance.

Table 1 indicates that item communalities for the two-factor solution ranged between .25 and .65. These oblique factors were labeled: "General happiness" and "Successful life." The number of statistically significant loadings onto these two factors ($\geq .4$) were 13 and 2, respectively. The highest loadings onto the first component were with the following example items; 18: "I feel that my mental state is excellent," 2: "I am happy

TABLE 1
The first unrotated factor and the two oblimin principal axis factors (pattern and structure matrices) of the 15-item Arabic Scale of Happiness (ASH; $N = 530$)

Items	Unrotated <i>d</i>	Pattern Matrix		Structure Matrix	
		F1	F2	F1	F2
1. I have an overall sense of well-being.	.73	.70	.05	.73	.53
2. I am happy with my life style.	.80	.84	.04	.81	.54
4. I love life.	.70	.14	.69	.62	.79
5. My life has meaning.	.68	.77	.10	.71	.44
7. I am as happy now as when I was younger.	.71	.41	.04	.68	.67
9. I feel good about my personal life.	.81	.81	.02	.82	.58
10. My daily life is full of pleasant and interesting experiences.	.73	.61	.17	.72	.59
11. I feel relaxed and free from tension.	.72	.76	.04	.73	.49
12. I enjoy what I do.	.77	.68	.13	.77	.60
13. I feel optimistic about the future.	.69	.65	.06	.69	.51
15. I feel full of vitality and energy.	.80	.48	.41	.76	.74
16. I feel that I am successful.	.71	.04	.93	.60	.90
18. I feel that my mental state is excellent.	.74	.85	.12	.77	.47
19. I am satisfied with my life.	.43	.40	.04	.43	.32
20. I have friendly feelings towards other people.	.77	.73	.07	.78	.57
Eigenvalue	8.27	5.42	3.1		
% of Variances	55.11	36.12	20.79		

Note The 5 filler items were excluded from this analysis, so there are here only 15 items. However, the numbering here is the same as in the Appendix even after omitting the filler items for the sake of easy comparison.

with my life style,” and 9: “I feel good about my personal life.” Therefore, this factor was labeled “General happiness.”

The only statistically significant loadings onto the second factor were with the following two items: 16: “I feel that I am successful,” and 4: “I love life.” Therefore, this factor could be labeled “Successful life.” The correlation between the two factors was high ($r = .69$). These components have high relevance to happiness in its dual sides, i.e., affective and cognitive. This analysis was intended to explore the factorial structure of the scale. However, it was not the aim of this study to break down the scale results into subcomponents, but rather to use the total score from the scale as a single factor ($r = .61$), because the two factors were highly correlated and the second factor had only two significant loadings.

Inasmuch as the single-factor solution was recommended, it is important to investigate the first unrotated factor (Table 1). All the scale items are highly loaded onto it (loadings range = .43 to .81). A scree test suggested a strong first unrotated factor with a high eigenvalue ($\Lambda = 8.3$) and accounted for a large portion of the common variance (55.1% of the total 61.8%). This result suggests that the scale may be used as an overall measure of happiness.

Response Set

The ASH contains 15 items as positive indicators to happiness. An affirmatively worded strategy was used

because it is well-known, based on actual observation in testing sessions, that a large portion of participants tend to have problems in understanding the double negatives. Carver and Scheier (2000) stated that “negatively worded items often turn out to be harder to understand or more complicated to answer than positively worded items” (p. 47). Similarly, Schriesheim and Hill (1981) concluded that negatively worded items impair response accuracy.

As a remedy to the problem of understanding the double negatives, some researchers use negatively worded items (e.g., “I feel blue”) in happiness scales and then recode the responses. Based on the Baumeister, Bratslavsky, Finkenauer, and Vohs’ (2001) paper entitled: “Bad is stronger than good,” this procedure is problematic as there is evidence that items describing negative emotions tend to evoke much stronger responses than items describing positive emotions. People tended to underestimate the frequency of positive affect, but not negative affect. The last authors concluded that “bad emotions generally produce more cognitive processing and have other effects on behavior that are stronger than positive emotions” (p. 334).

In the present scale, to control acquiescence response bias and other response sets, five filler items were added with a psychopathological content without considering them neither for calculating the total score nor in any stage of validation, e.g., “I am worried,” “I feel sad and

depressed,” and “I am afraid of death” (Filler Items 3, 6, 8, 14, and 17 – see Appendix).

Response Alternatives

Each item of the Arabic Scale of Happiness is answered on a 5-point Likert-type scale, with anchors 1: Not at all and 5: Very high. The total score could range from 15 to 75, with higher scores indicating higher happiness. The Arabic Scale of Happiness was intended to be used as a trait and not a state scale, inasmuch as the instructions refer to the term “in general.”

Scoring

The Arabic Scale of Happiness consists of 20 items. At first, the five filler items have to be excluded from the computation of the total score (Items 3, 6, 8, 14, and 17). The remaining 15 items are positive indicators of happiness. The algebraic sum of the participant’s scores on these individual 15 items represents the participants total Arabic Scale of Happiness score.

Study 2

Internal Consistency and Test-retest Reliability

The purpose of the second study was to estimate the internal consistency and test-retest reliability of the 15-item Arabic Scale of Happiness.

Male and female volunteer undergraduates ($N = 230$; age range = 19–31 years) and high school students ($N = 220$; age range = 15–19 years) were given the scale to examine internal consistency. For the test-retest, 123 participants were tested twice (64 undergraduates and 59 high school students). All were Kuwaitis.

The 15-item Arabic Scale of Happiness was administered. For internal consistency, the corrected item-total correlations (i.e., the item-rest-of test correlations) and Cronbach’s alphas were computed. For test-retest reliability, the interval between the test and retest was 19 days in college students and one week in high school students.

As can be seen from Table 2, the item-rest-of-test correlations ranged from .40 to .77. Cronbach’s alphas ranged between .90 and .94, while test-retest reliability ranged from .82 to .90. These coefficients indicate good to high internal consistency and temporal stability.

Study 3

Construct Validation of the Arabic Scale of Happiness

The twofold objectives of the following four studies were (a) to test the construct validation of the Arabic Scale of Happiness using three gold standard scales of happiness, and (b) to compute the Arabic Scale of Happiness’s associations with mental health and subjective well-being scales and to estimate the loadings onto the extracted component(s).

Construct Validity: Fordyce (2005) Happiness Measure and Subjective Happiness Scale

A sample ($N = 134$) of Kuwaiti volunteer male ($n = 51$) and female ($n = 83$) college students was recruited. Their ages ranged from 18 to 30 years ($M = 21.4$, $SD = 2.5$). The ASH in its final version (20 items), the Fordyce Happiness Measure, and the Subjective Happiness Scale were administered.

Fordyce (2005) Happiness Measure.—This scale consists of two self-reports: (1) an 11-point, happiness/unhappiness scale in which the participant has to choose only one statement, anchored by 10: Extremely happy and 0: Extremely unhappy, and (2) two questions asking for the percent of time spent in “happy” and “unhappy” moods (a neutral mood was not assessed in this study). The author of this scale stated that it is considered by some to be the “grand-daddy” of all the happiness measures (p. 375). He added that “it would be safe to classify his scale as the most thoroughly analyzed well-being measure developed in the field” (p. 391). The scale has good reliability, exceptional stability, and record of convergent, construct, and discriminant validity (Fordyce, 2005).

Subjective Happiness Scale.—(Lyubomirsky & Lepper, 1999).—This scale is a 4-item measure of global subjective happiness, with instructions “In general, I consider myself.” Each item is answered on a 7-point intensity scale, anchored by 1: Not at all or less happy and 7: A very happy person or More happy. The total score can range between 1 and 28. The scale has high reliability and validity as well as being extensively used with university students.

TABLE 2
Item-rest-of-test correlation (r_{it}), alpha, and test-retest reliability of Arabic Scale of Happiness among undergraduates and adolescents

Sample	Range of r_{it}	Alpha		Test-retest	
		N	r_{11}	N	r_{11}
Undergraduates M	.61–.76	120	.92	31	.82
Undergraduates F	.42–.77	110	.94	33	.86
Adolescents M	.50–.71	110	.90	30	.90
Adolescents F	.52–.73	110	.91	29	.85

Note M = Male; F = Female.

TABLE 3
Construct validity of the Arabic Scale of Happiness (ASH) among male and female college students ($N = 134$)

	<i>M</i>	<i>SD</i>	<i>r</i> with ASH*	Factor 1	<i>h</i> ²
Arabic Scale of Happiness (ASH)	53.4	10.2		.86	.73
Happiness Measure (Fordyce)					
General	7.2	1.8	.64	.79	.63
% of happy time	53.6	20.9	.55	.81	.66
% of unhappy time	22.7	13.5	-.62	-.84	.70
Subjective Happiness (Lyubomirsky)	19.4	4.4	.74	.87	.75
Eigenvalue				3.47	
% of Variance				69.40	

* $p < .001$ (two-tailed)

TABLE 4
Correlations among the Arabic Scale of Happiness (ASH) and other scales ($N = 534$)

Scale	No. of Items	Response Format	Range of Scores	<i>r</i> _{tt} *	<i>M</i>	<i>SD</i>	<i>r</i> with ASH [†]	Factor 1	<i>h</i> ²
ASH	15	1–5	15–75	.93	53.7	10.2	.93	.87	
Happiness Rating	1	0–10	0–10	.85	7.1	2.2	.70	.80	.63
Arabic Scale of Mental Health	40	1–5	40–200	.95	145.3	25.1	.89	.89	.80
Mental Health Rating	1	0–10	0–10	.76	6.9	2.5	.69	.70	.50
Satisfaction with Life	5	1–7	5–35	.80	25.1	5.9	.76	.80	.64
Satisfaction Rating	1	0–10	0–10	.79	7.2	2.4	.64	.71	.51
Optimism	15	1–5	15–75	.96	56.4	11.7	.76	.82	.67
Love of Life	16	1–5	16–80	.96	59.2	13.1	.77	.79	.62
Self-Esteem	10	1–5	10–50	.91	38.8	6.7	.75	.77	.60
Eigenvalue								6.17	
% Variance								68.53	

Note *The reliabilities of the six questionnaires were computed with Cronbach's alpha, whereas the reliabilities of the three self-rating scales were test-retest. [†] $p < .001$ (2-tailed).

The scales were translated into Arabic by the present researcher. The translation was checked by three psychologists. These two scales as well as the Arabic Scale of Happiness were administered to the volunteer participants in small group sessions in their classrooms and during university hours.

Table 3 shows Pearson correlations between the three scales (five variables). The correlation between the Arabic Scale of Happiness and the other variables ranged from .55 to .74 ($df = 132$). A principal components analysis yielded one component with high percentage of variance (69.4%), and labeled "Happiness vs sadness", in which the loading of the Arabic Scale of Happiness was .86, indicating high construct validity.

Construct Validity: Arabic Oxford Happiness Inventory

A convenience sample of 70 Kuwaiti male and female volunteer University undergraduates was recruited. The Arabic Scale of Happiness and the Arabic version of the Oxford Happiness Inventory (Argyle, *et al.*, 1995) were administered. Participants responded anon-

ymously to the two scales in small group sessions. Pearson correlation coefficient was computed. The Pearson correlation between the two scales was .76 ($p < .01$, two-tailed), indicating good construct validity of the Arabic Scale of Happiness.

Construct Validity: Other Measures

A sample ($N = 534$) of Kuwaiti male ($n = 210$) and female ($n = 324$) volunteer undergraduates was recruited, with ages ranging from 20 to 38 years ($M = 20.2$; $SD = 2.1$). The following six questionnaires and three self-rating scales were administered: ASH, Arabic Scale of Mental Health (Abdel-Khalek, 2011), Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), Arabic Scale of Optimism (Abdel-Khalek, 1996; Abdel-Khalek & Lester, 2006), Love of Life Scale (Abdel-Khalek, 2007) and Rosenberg's (1989) Self-Esteem Scale, as well as three self-rating scales assessing happiness (Abdel-Khalek, 2006), mental health, and satisfaction. All of the scales were administered in Arabic and have good reliability (see Table 4). Testing was carried out in small

TABLE 5
Descriptive statistics, comparisons, and effect size (*d*) of total scores on Arabic Scale of Happiness (ASH) between Kuwaiti adolescent and undergraduate groups

Sample	Men			Women			<i>t</i>	<i>d</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>		
Undergraduates	363	54.4	10.8	575	51.4	11.5	4.04 [†]	0.27
Adolescents	251	51.9	11.1	254	47.2	10.9	4.80 [†]	0.43
		<i>t</i> = 2.77* <i>d</i> = 0.23			<i>t</i> = 5.03 [†] <i>d</i> = 0.38			

Note All Cohen's *d* values indicate small effects. **p* < .001 (2-tailed). [†]*p* < .01 (2-tailed).

group sessions. The Pearson correlations between total score of the scales were computed and then a principal components analysis was done.

Table 4 sets out the intercorrelations and the single component extracted. As can be seen, the correlations with the Arabic Scale of Happiness ranged from .64 (Satisfaction rating scale) to .89 (Arabic Scale of Mental Health), and the median correlation was .75, indicating good construct validity. A single component was extracted and labeled "happiness and well-being," on which the Arabic Scale of Happiness had a high loading (.93), indicating good construct validity.

Construct Validity: Happiness and Well-being

A sample of 429 volunteer male and female undergraduates took part in the study. Their ages ranged between 19 and 32 years (*M* = 22.7, *SD* = 2.1). The Arabic Scale of Happiness (15 items) was administered with the WHO (Five) Well-being Index (Psychiatric Research Unit, 1998) and the Five-item Mental Health Screening Test (Berwick, Murphy, Goldman, Ware, Barsky, & Weinstein (1991). The volunteer undergraduates answered the three scales anonymously, in small group sessions.

The Arabic Scale of Happiness correlated .60 and -.62 (*p* < .001) with the two other scales, respectively. It is important to note that the latter mental health scale consists of negative indicators to mental health, so its correlation with the Arabic Scale of Happiness was negative.

Study 4

Descriptive Statistics for the ASH

The objective of this study was to develop preliminary norms in the form of means and standard deviations of the ASH among high school and university students. Two separate samples of male and female undergraduates (*N* = 938; age range = 18–30) and high school students (*N* = 505; age range = 15–18) were recruited. The final form of the Arabic Scale of Happiness was administered to undergraduates and high school students in small group testing sessions, in their classrooms, during the school and university hours.

As can be seen from Table 5, male high school and university students obtained a statistically significantly

higher mean total score on happiness than did their female counterparts. Male and female college students obtained higher mean Arabic Scale of Happiness scores than did their adolescent counterparts. However, the effect size was small.

Study 5

An English version of the ASH

The purpose of the fifth study was to develop an English version of the ASH based on back translation and testing bilingual participants.

Method

The Arabic Scale of Happiness in its Arabic version was translated into English by the present researcher. Then, the English preliminary translation was carefully evaluated by two Arab psychologists to check comparability in terms of meaning³. They were requested to review each English item and compare it to the corresponding original Arabic item. Suitable revisions and corrections were carried out accordingly. Then, a back translation (Brislin, 1970, 1980) of the scale items from English into Arabic was performed as a check on the adequacy of the Arabic into English translation, and this preliminary English translation was given to an Arab specialist (Ph.D.) competent in both languages to translate them back into Arabic. Then, the original Arabic form of the Happiness Scale was compared with the back translation form for similarity. Several cycles of translation and back translation were attempted for a number of items. An American Professor of Psychology revised the final English version with some alterations.⁴

Procedure

The cross-language equivalence of the Arabic and English versions of the Scale was estimated with the help of bilingual participants. Both versions of the scale were administered to 15 Arabic students in the last academic year

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in the Department of English literature, College of Arts, University of Kuwait. All of them had good command of both languages. The two forms of the scale were introduced in a counterbalanced order. Two combinations of the scale were presented. The bilingual participants were randomly assigned to one of two administration orders: Arabic form first or English form first.

Results

The Pearson correlation between scores on the final Arabic and English versions was .97 ($N = 15$) indicating high equivalence. Moreover, another criterion of equivalence was used. It was defined as obtaining similar scores on the two versions of the scale, whether presented in English or in Arabic. Therefore, the M , SD , and t value were computed for the bilingual participants. For the Arabic form, $M = 53.4$ ($SD = 10.4$), while for the English version $M = 54.1$ ($SD = 11.1$, $t = .18$, ns), indicating that the two forms of the Arabic Scale of Happiness functioned as equivalent stimuli, and were answered quite similarly by bilingual participants. The alpha coefficients of the scale were .95 and .94 for the English and Arabic versions, respectively.

General Discussion

On the basis of published psychological research papers, periodicals, books, and international conferences, one can conclude that we are now in the Age of Positive Psychology. There has been widespread interest in research on subjective well-being, including happiness, hope, optimism, satisfaction with life, and quality of life, among others. Generally speaking, the core topic in positive psychology may be considered as subjective well-being. In the same vein, the fundamental topic in subjective well-being studies is happiness (see Veenhoven, 2009b).

Psychometric instruments are critical to any psychological empirical study to investigate any given construct. Plenty of scales to assess happiness are available in English. Most of the psychometric questionnaires available in Arabic are translations from English. The main objective of the present study was to develop and validate the Arabic Scale of Happiness, to fulfill the growing interest in both positive psychology studies and cross-cultural research in Arabic-speaking countries. The present research has fulfilled this objective via five empirical studies.

The item pool to construct the preliminary version of the Arabic Scale of Happiness was based on different sources, so the origins of the items were wide. Furthermore, four stages of item reduction were followed. That is, item-rest-of-test correlation, highest positive correlation with an Adjective Check List of Happiness, highest negative correlation with a depression scale, and principal axis factor analysis. Therefore, the selection of the items in the final form was based on different bases, and gave rise to good items.

Principal axis factor analysis yielded two salient components, "General happiness" and "Successful life", accounting for over half of the common variance (56.9%). The affective and cognitive components of happiness were represented in these two components of the scale. Based on a strong criterion for statistically significant loading of the item onto its components ($\geq .40$), all the 15 items but one significantly loaded on only one component. These results may be considered an indication of adequacy and suitability of the items in assessing a consistent phenomenon-happiness. For several reasons, the present researcher recommends a single-factor solution.

Using high school and college student participants, test-retest reliabilities were high, indicating temporal stability. Cronbach's alphas for the Arabic Scale of Happiness were also high indicating good internal consistency. By the same token, the internal consistency of the scale as assessed by the corrected item-rest-of test (remainder) correlation was good ($> .42$).

Three gold standard scales of happiness were chosen to estimate construct validity, i.e., the Fordyce (2005) Happiness Measure (HS), the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) and the Oxford Happiness Inventory (Argyle, *et al.*, 1995). The strong correlations between these three scales and the Arabic Scale of Happiness, as well as the high loading of the latter onto a single component, support the construct validity of the Arabic Scale of Happiness.

Consistent with the last-mentioned results were the statistically significant and positive correlations between the total scores on the Arabic Scale of Happiness and the following five questionnaires of mental health and subjective well-being: mental health, satisfaction with life, optimism, love of life, and self-esteem, as well as three self-rating scales assessing happiness, mental health, and satisfaction. The median correlation between the Arabic Scale of Happiness and these eight scales was .75. Supporting this result was the high loading of the Arabic Scale of Happiness onto the only component extracted from these variables. Notwithstanding these results on construct validity, there is a need to establish the other sources of validity evidence, such as convergent and discriminant validity and response processes, among others.

In summary, the Arabic Scale of Happiness has several important properties, i.e., brevity of scale (15 items), simple items, use of positive indicators of happiness, use of negatively worded items as fillers, avoidance of double negatives, and use of multiple response alternatives (a 5-point scale format). Moreover, the Arabic Scale of Happiness has good face validity, internal consistency, temporal stability, and construct validity using three gold standard scales of happiness, as well as six mental health and subjective well-being questionnaires.

Notwithstanding these good characteristics, the Arabic Scale of Happiness is in need of the following

work: (a) use of item response theory to develop a short version of the scale, (b) confirmatory factor analysis, (c) exploration of divergent validity by computing its association with scales of abnormal traits, (d) assessment of its relations with Big Five personality factors, (e) examination of associations with affect scales such as the Positive and Negative Affect Schedule (PANAS), (f) determination of normative values for different age groups in Kuwait and in other Arab countries, and (g) study of the effects of age, gender, education, and socio-economic status and their interactions. Because the Arabic Scale of Happiness has an English equivalent version, it merits investigation in a cross-cultural study using an English-speaking sample.

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APPENDIX

THE ARABIC SCALE OF HAPPINESS (ASH)

Instructions: Please read the following statements and decide to what extent each one describes your feelings, behavior or attitudes. Demonstrate how it applies to you in general by putting a circle around only one number for each item. There are no right or wrong answers. Do not spend too much time on any one statement.

Item	Not at all	A little	Moderately	High	Very high
1. I have an overall sense of wellbeing.	1	2	3	4	5
2. I am happy with my life style.	1	2	3	4	5
3. I am worried. (F)	1	2	3	4	5
4. I love life.	1	2	3	4	5
5. My life has meaning.	1	2	3	4	5
6. I feel sad and depressed. (F)	1	2	3	4	5
7. I am as happy now as when I was younger.	1	2	3	4	5
8. I am afraid of death. (F)	1	2	3	4	5
9. I feel good about my personal life.	1	2	3	4	5
10. My daily life is full of pleasant and interesting experiences.	1	2	3	4	5
11. I feel relaxed and free from tension.	1	2	3	4	5
12. I enjoy what I do.	1	2	3	4	5
13. I feel optimistic about the future.	1	2	3	4	5
14. I am bothered by aches and pains. (F)	1	2	3	4	5
15. I feel full of vitality and energy.	1	2	3	4	5
16. I feel that I am successful.	1	2	3	4	5
17. Bad things will happen to me. (F)	1	2	3	4	5
18. I feel that my mental state is excellent.	1	2	3	4	5
19. I am satisfied with my life.	1	2	3	4	5
20. I have friendly feelings towards other people.	1	2	3	4	5

Note (F): Items 3, 6, 8, 14, and 17 are filler items and are not scored.

تعليمات : اقرأ من فضلك كل عبارة مما يلي بعناية ، وقرر إلى أي حد تعد مميزة لمشاعرك وسلوكك وأرائك ، ثم بين مدى انطباقها أو عدم انطباقها عليك ، وذلك بوضع دائرة حول رقم من الأرقام التالية لها.

العبارات	لا	قليلا	متوسط	كثيرا	كثيرا جدا
١ - أشعر بأنني على ما يرام .	١	٢	٣	٤	٥
٢ - أنا سعيد بأسلوب حياتي.	١	٢	٣	٤	٥
٣ - أشعر بالقلق.	١	٢	٣	٤	٥
٤ - أحب الحياة .	١	٢	٣	٤	٥
٥ - حياتي لها معنى .	١	٢	٣	٤	٥
٦ - أنا حزين ومكتئب .	١	٢	٣	٤	٥
٧ - أنا سعيد هذه الأيام مثلما كنت صغيرا.	١	٢	٣	٤	٥
٨ - أخاف من الموت.	١	٢	٣	٤	٥
٩ - لدى شعور بالسعادة فيما يخص حياتي الشخصية.	١	٢	٣	٤	٥
١٠ - حياتي اليومية مليئة بأمور سارة ومسلية.	١	٢	٣	٤	٥
١١ - أشعر بالاسترخاء والتحرر من التوتر .	١	٢	٣	٤	٥
١٢ - أستمتع بما أقوم به من أفعال.	١	٢	٣	٤	٥
١٣ - أشعر بالتقاول تجاه المستقبل.	١	٢	٣	٤	٥
١٤ - أشعر بالألم شديدة في جسمي.	١	٢	٣	٤	٥
١٥ - أشعر بأنني مليء بالحياة والنشاط .	١	٢	٣	٤	٥
١٦ - أشعر بأنني ناجح في حياتي .	١	٢	٣	٤	٥
١٧ - ستحدث لي أمور سيئة .	١	٢	٣	٤	٥
١٨ - أشعر بأن حالتي النفسية ممتازة .	١	٢	٣	٤	٥
١٩ - أنا راضى عن حياتي .	١	٢	٣	٤	٥
٢٠ - لدى مشاعر طيبة تجاه الآخرين .	١	٢	٣	٤	٥