

## **Development and Validation of Happiness Scale for Young Adults**

**Uzma Qayyum**

GC University Lahore, Pakistan

**Iffat Batool (PhD)**

GC University Lahore, Pakistan

**Shah Rukh Tariq**

GC University Lahore, Pakistan

The present research was conducted to develop and validate an indigenous self-report measure of happiness, named as Happiness Scale (HS). A conceptual referent theory of happiness (CRT) proposed by Rojas (2005) guided the development of HS. This happiness scale requires cognitive evaluations only. Items were empirically generated with the help of psychologists and young adults. A sample of 800 young adults (400 men and 400 women, with age range 19 to 34 years) from various educational institutes of Lahore and Gujranwala were recruited. The factor analysis was used to determine construct validity of HS, which resulted in 32-items scale with eight factors. These eight factors were labeled (a) Cheerfulness (b) Satisfaction (c) Virtue (d) Familial attachment (e) Self-fulfillment (f) Sociability (g) Altruism and (h) Self-efficacy. The alpha coefficient ( $\alpha = .90$ ) and item-total correlation (ranging from  $r = .36$  to  $.66$ ,  $p < .01$ ) supported the high internal consistency of the HS. Moreover, the convergent and discriminant validity was also assessed by correlating HS with Oxford Happiness Questionnaire (OHQ - Hills & Argyle, 2001) and with the Siddiqui Shah Depression Scale (SSDS - Siddiqui & Shah, 1997) respectively, to establish construct validity. A significant positive correlation of  $.61$  of HS,  $p < .01$  was found with OHQ and significant negative correlation coefficient of  $-.54$ ,  $p < .01$  with SSDS, which provided strong evidence for the construct validity of HS. Further implications of the study were discussed.

*Keywords:* happiness, scale, construct validity, young adults.<sup>1</sup>

### **Introduction**

---

<sup>1</sup>Correspondence concerning this article should be addressed to Uzma Qayyum, Iffat Batool (PhD), and ShahRukh Tariq GC University, Lahore, Pakistan  
[uzma.nauman@gmail.com](mailto:uzma.nauman@gmail.com)

For many years, happiness has been the center of attention for psychology researchers (Bradburn, 1969; Diener & Larsen, 1993) and has been defined in several ways. Veenhoven (1994) views happiness as the level to which a person assesses his overall quality of life positively. Rojas (2005) stated that a person always appraises his happiness and judges his life according to the conceptual referent he has for a happy life. The conceptual referent theory put emphasis on what a person thinks, rather than what he feels. Lyubomirsky (2008) sees happiness as a combination of genetic phenomena, life circumstances and self-control.

Eid and Diener (2004) view happiness as a multidimensional evaluation of one's life which included both cognitive appraisal of life satisfaction and affective estimation of moods and emotions. Xing (2005) explored that there are various things which influence the happiness of the people such as the amount of social development a person received from culture, a different nationality and specific value structure. Since happiness is contingent on persons' experience, so it is grounded in the cultural context in which a person lives. Xing (2005) carried out a study on happiness of Chinese people and came to the conclusion that all happiness researches should be conducted in their indigenous background. Diener and Suh (2000) noted that across-cultures people perceive the cultural values differently.

Diener et al. (1999) emphasized that 'happiness' is not a single thing; we must study the separate components. Therefore, the current research focused on the conceptual referent theory of happiness which postulates that there are innumerable factors of happiness.

Similarly, Rojas's happiness theory is another vital concept to understand the role of happiness. Conceptual Referent Theory (CRT) states that every person has a different conceptual referent for a happy life and this referent plays a part in the judgment of his life and in the evaluation of his happiness. In short, CRT relies on two things (a) what conceptual referent a person has for happiness? (b) Person's assessment about his well-being is contingent on his conceptual referent for happiness. CRT also emphasizes the significance of heterogeneity. It states that due to cultural, social and upbringing factors people differ on their conception of what a happy life is. In other words, the explanatory factors of happiness are not same for every one nor has the equal importance (Rojas, 2005). He proposed 8 domains of the happiness. These are given below.

First, stoicism domain refers to permanent satisfaction with life styles i.e., acceptance and rejection of the original form of things. Virtue is mainly concerned with consciousness (i.e., spiritual understanding of the things). Enjoyment factor of happiness reflects the level of fulfilment of basic needs (i.e., seek pleasure and avoid pain). Carpe diem is another factor of happiness which suggests to avail all possible opportunities to enjoy the life (i.e., now and here concept). The satisfaction component of happiness deals with the intuition of self and the others. Utopian is the form of happiness that deals with the ideal states (i.e., those goals which are difficult to achieve but desired them). Tranquility reflects the stability of one's life (i.e., absence of pain). The last typology, called as fulfilment, and it is related to completeness of one self or attaining the ultimate goal i.e., being happy in life (Rojas, 2005). Moreover, these views can be further elaborate in the light of cultural practices.

In psychology, emotions are usually considered universal and organically regulated (Ekman, 1992). However, "many culturally oriented psychologists have pointed out the critical role of culture in shaping emotions (Benson, 2000; Kitayama, 2002; Markus & Kitayama, 1991; Schweder & Sullivan, 1993). These culturally oriented theorists have claimed that emotions are not the direct result of physiological arousal. Rather, emotions are always placed and embedded in specific cultural backgrounds. So, they are totally saturated with cultural meanings (Kitayama et al., 2004). This analysis indicates that what happiness means might vary markedly across cultures (Kitayama & Markus, 2000; Diener & Suh, 2000). This variation between eastern and western culture is quite prominent. Eastern cultures are considered very collectivistic: they do things for the sake of others, interpersonal connectedness is emphasized and individuality is minimized, whereas western culture said to be more individualistic, which lay emphasis on personal achievement and promote individuals' demands, wants and desires (Diener & Suh, 2000; Ratner, 2008).

Norasakkunkit and Kalick (2002) also believe that concept of happiness has some inherent biases that are implicitly embedded in emotional distress measures. Similar observations have been made by Uchida, Norasakkunkit and Kitayama (2004). They realized that happiness is deeply seated in socio-cultural ways in which a person interacts with each other. This never negates the universal underpinnings of happiness; however, it indicates that real understanding of these universal factors remains incomplete without considering culture-

dependent ways in which these factors are understood and shape happiness.

Cultural variations and inherent biases in the concept of happiness across countries led the psychologists to think about the development of a culture specific measure of happiness. In Pakistan hardly any attempt has been made to develop an indigenous happiness measure. Therefore, the present study has been devised to explain the construct “happiness” by developing and validating an indigenous measure. In this research, the emphasis has been given to the various facets of happiness that are relevant to the culture. For this purpose, Rojas (2005) conceptual referent theory was utilized.

### **Objectives of the Study**

- Development of Happiness scale for young adults
- Validation of newly developed happiness scale (convergent and discriminant validity)

### **Method**

#### **Study I: Development of Happiness Scale (HS)**

The objectives of this study were attained in two phases. In phase-I, the items of Happiness Scale (HS) were generated in an empirical way. In phase-II, factor structure and internal consistency of the scale were estimated.

**Phase-I: Item Generation.** For the development of Happiness Scale (HS), items were generated from two sources i.e., psychologists and young adults. (a) Psychologists: A pro form consisted of eight conceptual referents of happiness with its definition and examples to generate indicators of happiness were prepared. Forty psychologists (from GC University Lahore and Govt. Post Graduate College (w) Satellite town Gujranwala) were requested to provide minimum five indicators for each referent in Urdu language; (b) Young adults: Similar proforma with identical instructions was given to 60 young adults (30 men, 30 women) (S.S Imam, personal communication, November 10, 2014) age ranging from 19 to 34 years. Formal consent of each participant was acquired through the informed consent forms.

This process yielded 437 items on eight conceptual referents of happiness. The items that were similar in content (duplicate items or

similar themes) or irrelevant to the construct were deleted (i.e., face validity is checked at this stage for item screening), leaving behind a total of 329 items. In the next step, item randomization process was implied. In this process, items are rotated randomly to minimized response bias. The items acquired were shuffled and ordered randomly to form a new list (Lavrakas, 2008). This item list was then provided to three psychologists of GCU to be categorized to their relevant referents, keeping in view of the description of eight conceptual referents. The result showed that all items were assigned to pre-decided categories except three items which were classified in new categories. In order to assess content validity, items were presented to five judges (Govt. College University, Lahore) who were expert in the subject matter. These judges evaluated items with respect to (a) construct relevance, (b) content clarity, (c) comprehensibility and (d) comprehensiveness. Additionally, items were presented to Urdu language expert in order to remove any grammatical or linguistic error. This exercise resulted in 80 items.

The 80 items were, then, randomly ordered along a five-point Likert scale ranging from Always to Not at all (*Always = 5, Often=4, Sometimes=3, Rarely=2, not at all=1*). High score on the scale shows high level of happiness and low score indicates low level of happiness. The scale was pilot tested on 100 young adults (50 men, 50 women). The participants were asked about the clarity and comprehensibility of items. The pilot testing resulted in the same 80 items.

### **Phase-II: Factor Structure and Internal Consistency of HS.**

In phase II the main objective was to determine the factor structure of HS. It was expected that the factor structure would map onto eight referents of stoicism, virtue, enjoyment, carpe diem, satisfaction, utopian, tranquility and fulfillment. Moreover, internal consistency was obtained by computing Cronbach's alpha, item total correlation and sub scale correlations.

**Participants.** The sample consisted of 800 participants, 400 men (50%) and 400 women (50%). Convenient sampling technique was used for data collection. Age of the sample ranged from 19 to 34 years ( $M = 26.64$ ,  $SD = 4.83$ ). Young adults with minimum middle qualification were included. The sample size was selected in accordance with the notion that a subject-to-item ratio of 10:1 is essential for a clear factor structure (Nunnally, 1978). Sample included students (40.9%), teachers

(31.4%) and other professionals (27.8%) residing in Lahore (42.8%), Gujranwala (34.8%) and other areas (22.5%) of the country.

## **Procedure**

The Happiness Scale (HS), developed in earlier phase was administered to 800 young adults volunteer. Formal consent of the participants was acquired through consent form. Sample was approached either individually or in small groups. Each participant was instructed to read the questionnaire carefully and not to omit any item. Each participant was also asked to choose the one option which best describes his or her personality. Participants were encouraged to answer the items honestly and were assured that their responses would be used only for research purposes. All data were gathered anonymously; no information on identity was required. It is also assured that no participants were harmed in anyway.

## **Results Study I**

For the determination of factor structure, the appropriateness of data was checked. For this purpose, Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of Sphericity were applied. The results revealed that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .90 which was excellent for structure detection. Bartlett's Test of Sphericity was also highly significant  $\chi^2(561, N= 800) = 8396.72, p < .001$  indicated that the factor analysis was appropriate for these data.

Data of 800 participants with 34 items of Happiness Scale were factor analyzed. A principal component analysis followed by varimax rotation was used. The initial PCA yielded nine factor solutions with eigenvalues greater than 1.0. The ninth factor contained only two items. A commonly used rule is that there should be at least three variables per factor. Thus, by following the criteria of Kaiser (1960) PCA was rerun on 32-items again, and it was decided to retain eight factors based on Eigen value criteria (see Figure 1). These factors were conceptually relevant to the referents given by Rojas (2005) and had the significant amount of variance (57%). Further inspection of items appearing in eight factors revealed that these factors were relatively conceptually distinct from each

other (i.e., indicated by the factor loadings). Table 1 presents the factor loadings of 32 items on eight subscales.

Table 1

*Factor Loading for Exploratory Factor Analysis with Varimax Rotation of Happiness Scale (N=800)*

Item	Cheerfulness	Satisfaction	Virtue	Familial attachment	Self-fulfilment	Sociality	Altruism	Self-efficacy	<i>h</i>
26	<b>.75</b>	.18	.10	.16	.17	.05	-.07	.03	.69
17	<b>.71</b>	.16	.03	.18	.11	-.05	.06	-.01	.59
35	<b>.69</b>	.14	.09	.28	.03	-.02	.11	.05	.62
57	<b>.67</b>	.18	.01	-.03	-.04	.19	.18	.04	.56
7	<b>.63</b>	.14	-.09	-.02	.07	.34	-.04	.11	.57
43	<b>.62</b>	.17	.23	.29	.06	-.14	.13	.08	.61
37	<b>.56</b>	.14	.02	-.06	-.01	.35	.18	.23	.58
16	<b>.55</b>	.07	.30	-.27	.14	.12	-.19	-.02	.55
58	<b>.48</b>	.19	.02	.30	.01	-.07	.32	.24	.53
13	.19	<b>.81</b>	.00	-.02	.03	.04	.05	.07	.70
22	.10	<b>.77</b>	-.02	.08	.08	-.01	-.08	.11	.63
59	.12	<b>.76</b>	.07	.10	.04	.03	.05	-.03	.61
14	.19	<b>.71</b>	.05	-.11	-.02	.11	-.03	.01	.57
46	.18	<b>.66</b>	.08	.09	-.02	-.09	.09	-.02	.52
48	.02	.03	<b>.72</b>	.09	.20	.11	.25	.17	.68
47	-.00	.09	<b>.70</b>	.09	.14	.09	.17	.24	.62
49	.15	.05	<b>.65</b>	.20	.03	-.02	.10	.19	.54
52	.19	.06	.29	<b>.65</b>	.09	.11	-.07	-.04	.57
74	.11	.07	.09	<b>.59</b>	.28	.26	.07	.20	.56
64	.21	.01	.11	<b>.56</b>	.04	.28	.11	.28	.53
19	.07	.03	.08	.05	<b>.75</b>	.13	.14	.08	.62
18	.05	.05	.07	.27	<b>.73</b>	.02	.12	.06	.65
20	.21	.00	.39	-.06	<b>.58</b>	.00	.01	.11	.57
73	.04	-.00	.04	.11	.04	<b>.69</b>	.06	.22	.55
72	.17	.03	.14	.30	.12	<b>.67</b>	.13	.01	.62
33	.17	.05	.43	.13	.08	<b>.46</b>	-.00	-.34	.63
61	.04	.06	.24	-.02	.07	.17	<b>.78</b>	.15	.73
28	.18	-.03	.15	.02	.34	-.02	<b>.63</b>	.05	.58
60	.14	.03	.40	.23	.04	.18	<b>.48</b>	-.17	.56
54	.14	.05	.27	.09	.14	.07	.00	<b>.66</b>	.60
68	.10	.08	.20	.18	.13	.24	.16	<b>.58</b>	.53
53	.15	.04	.29	.10	.04	.04	.04	<b>.50</b>	.53
Eigen values	8.01	3.11	1.91	1.41	1.38	1.20	1.17	1.10	
% of variance	23.57	9.14	5.61	4.15	4.06	3.52	3.43	3.23	
Cumulative %	23.57	32.71	38.32	42.47	46.53	50.05	53.48	56.71	

Eigen values of these eight factors ranged from 8.01 to 1.10 as indicated in Table 1. Each factor was defined by appropriate number of items and had the significant amount of variance that is Cheerfulness 23.57 %, Satisfaction 9.14 %, Virtue 5.61 %, Familial-attachment 4.15

%, Self-fulfilment 4.06 %, Sociability 3.52 %, Altruism 3.43 % and Self-efficacy 3.23 %. Combined together, these eight factors explained 57% of total variance.

Table 2

*Item-Total Score Correlations for the 32-item Happiness Scale (N=800)*''

Item No.	Correlation with Total Score	Item No.	Correlation with Total Score
7	.44**	47	.46**
13	.42**	48	.45**
14	.43**	49	.43**
16	.58**	52	.46**
17	.39**	53	.46**
18	.39**	54	.55**
19	.38**	57	.56**
20	.45**	58	.48**
22	.66**	59	.48**
26	.40**	60	.40**
28	.44**	61	.48**
33	.63**	64	.46**
35	.59**	68	.49**
37	.44**	72	.36**
43	.47**	73	.50**
46	.46**	74	.50**

\*\*  $p < .01$

Results in Table 2 indicate that each item of HS correlated significantly positive ( $r = .36$  to  $.66$ ,  $p < .01$ ) with the sum of total items. Thus, all items may be considered valid and reliable indicators of happiness. It indicates the content validity of the scale, as each item is significantly positive relate to the overall scores of happiness. In addition, it also reflects the internal consistency of items.

Table 3 shows the mean, standard deviation, Cronbach's alpha, and potential and actual response range. It was found that overall Cronbach's alpha for the all eight domains of the newly developed happiness scale was satisfactory ( $r = .59$  to  $.90$ ).

Table 3  
*Psychometric Properties of the Happiness Scale (N = 800)*

Scale	<i>k</i>	<i>M(SD)</i>	$\alpha$	Range	
				Potential	Actual
Happiness total	32	138.78(11.36)	.90	1-5	2.8-5.0
Cheerfulness	9	37.44(5.92)	.86	1-5	1.3-5.0
Satisfaction	5	12.49(4.60)	.82	1-5	1.0-5.0
Virtue	3	13.90(1.54)	.75	1-5	2.0-5.0
Familial attachment	3	13.93(1.57)	.64	1-5	2.3-5.0
Self-fulfilment	3	13.84(1.58)	.62	1-5	1.0-5.0
Sociability	3	12.10(2.34)	.59	1-5	1.0-5.0
Altruism	3	13.67(1.67)	.60	1-5	1.7-5.0
Self-efficacy	3	13.47(1.65)	.63	1-5	1.0-5.0

*Note.* *k* = no. of items.  $\alpha$  = Cronbach's alpha

Pearson product moment correlation was carried out to establish the relationship among the sub-scales of the Happiness Scale and its total (homogeneity of the sub-scales). Results suggested that all sub-scales are positively and significantly correlated with each other ( $r = .12$  to  $.51$ ,  $p < .01$ ). Table 4 indicated the highest subscale correlation between virtue and altruism. While the total-subscale correlation showed the highest correlation between cheerfulness and HS total and lowest between self-fulfillment and HS total

Table 4

*Inter-correlation between Total and Sub-Scales of Happiness Scale (N = 800)*

Scale	2	3	4	5	6	7	8	9
1. Cheerfulness	.43**	.29**	.41**	.31**	.36**	.34**	.40**	.85**
2. Satisfaction	-	.15**	.18**	.12*	.12*	.12*	.19**	.62**
3. Virtue		-	.42**	.42**	.33**	.51**	.48**	.53**
4. F. attachment			-	.36**	.44**	.35**	.43**	.59**
5. Self-fulfilment				-	.28**	.36**	.36**	.48**
6. Sociability					-	.36**	.34**	.58**
7. Altruism						-	.35**	.55
8. Self-efficacy							-	.60**
9. HS total								-

*Note.* \*\* $p < .001$ . \* $p < .01$ .

Mean inter-item correlation is a direct type of internal consistency measuring method, and usually computed as the mean of the inter-item correlations. The cut-off value to interpret the mean inter-item correlation is .15 to .5, specifically for newly developed constructs (Clark & Watson, 1995). The current findings confirmed that Happiness Scale has good internal consistency.

Table 5

*Mean Inter-item and Item Total Correlations for Happiness Scale (N = 800)*

Scale	Mean Inter-item Correlation	Mean Item-total Correlation
1. Cheerfulness	.41	.59
2. Satisfaction	.48	.61
3. Virtue	.50	.59
4. Familial attachment	.38	.45
5. Self-fulfilment	.36	.43
6. Sociability	.33	.41
7. Altruism	.37	.44
8. Self-efficacy	.37	.44
9. Happiness total	.21	.43

*Note.* All values are significant at .001.

## Study II: Convergent and Discriminant Validity of Happiness Scale (HS)

Convergent and Discriminant validities are the two subtypes of validity that form the construct validity. In this study, the convergent validity of the Happiness Scale (HS) was established by correlating the HS with Oxford Happiness Questionnaire (OHQ). It was expected that the Oxford Happiness Questionnaire (OHQ) would have positive correlation with Happiness Scale (HS).

### Participants

A total of 100 participants, (50 men, 50 women, *Mean* = 27.0 years, age range: 19 to 34 years) took part in this study. The data were collected from 30 students, 68 teachers and two other professionals belonging to Lahore (3), Gujranwala (83) and other areas (14) of the country. The participants were conveniently approached and recruited from different cities of the Pakistan. In addition, they were educated and can understand the items.

### Measures

**Happiness Scale (HS).** The Happiness Scale (HS), developed in study 1 was utilized to establish the correlation between HS and OHQ. The Happiness Scale is a 32 item self-report multidimensional instrument, which purports to measure individual differences in happiness. It is a 5-point Likert type scale with response options ranging from *always* (5), *often* (4), *sometimes* (3) to *rarely* (2) and *not at all* (1). To reduce acquiescence bias, five items out of 32 were negatively worded is meant for young adult population. The mean score on the total scale of HS = 138.78 with *SD* = 11.36. HS consists of eight domains namely *Cheerfulness*, *Satisfaction*, *Virtue*, *Familial attachment*, *Self-fulfilment*, *Sociability*, *Altruism*, and *Self-efficacy*. The Cronbach's alpha for the Happiness Scale was .90.

**Oxford Happiness Questionnaire (OHQ).** Oxford Happiness Questionnaire is a 29-item measure of happiness, developed by Hills and Argyle (2001). This scale is equally appropriate for adults and adolescents. It is a Likert type 6-point rating scale. Its response options ranged from *strongly agree* (6), to *strongly disagree* (1). In order to reduce respondent bias 12 items out of 29 items were negatively worded. Oxford Happiness Questionnaire demonstrated high scale reliability with

$\alpha$  (168) = 0.91. Factor analysis identified a single higher order factor which proves OHQ a uni-dimensional measure.

**Siddiqui Shah Depression Scale (SSDS).** Siddiqui Shah Depression Scale (SSDS) was developed by Siddiqui and Shah (1997) in Urdu language to screen out depression. It is 36 items scale. Each item is rated on 4-point Likert type scale ranging from 0 to 3 (0 = *Never*, 1 = *Sometimes*, 2 = *Often* and 3 = *All the time*). The scores ranged from 0 to 108. High score is indicative of depression. Reliability estimates were established on both clinical and non-clinical samples. The split half reliabilities with Spearman Brown correction were  $r = .79$  and  $r = .84$  for the clinical sample while  $r = .80$  and  $r = .89$  for the non-clinical samples respectively. Whereas Cronbach's alpha for 36 items was found to be .91 and .89 for the clinical and non-clinical samples respectively.

### Procedure

Happiness Scale (HS), Oxford Happiness Questionnaire (OHQ) and Siddiqui Shah Depression Scale (SSDS) were collectively administered to the volunteer participants. The questionnaires were distributed individually as well as in small groups. Participants were instructed to read the items carefully and to choose the option which describes them best. They were also asked not to skip any item. They were encouraged to be honest and candid in their responses.

### Results Study II

The results indicated sufficient support for the convergent validity of HS. A significant positive correlation of .61 ( $p < .01$ ) between the HS and OHQ was found (Table 6). The scale also showed evidence of discriminant validity. The negative and significant correlation of -.54 ( $p < .01$ ) suggested that Happiness Scale has considerable discriminant validity (Table 7).

Table 6

*Correlation Coefficient between the Happiness Scale (HS) and the Oxford Happiness Questionnaire (OHQ) (N = 100)*

Scales	2
1.Happiness Scale	.61**
2. Oxford Happiness Questionnaire	

Note. \*\*  $p < .01$ .

Table 7

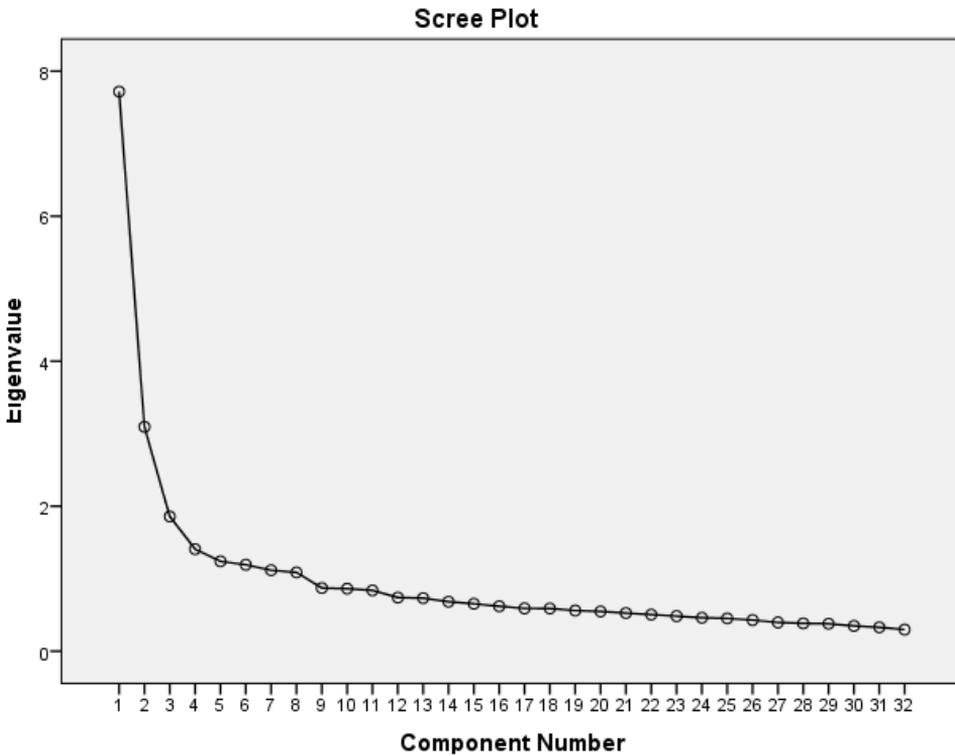
*Correlation Coefficient between the Happiness Scale (HS) and the Siddiqui Shah Depression Scale (SSDS) (N = 100)*

Scales	2
1.Happiness Scale	-.54**
2. Siddiqui Shah Depression Scale	

*Note.* \*\*  $p < .01$

Figure 1.

*Scree Plot of Happiness Scale for Youth*



*Note.* Scree plot of Happiness scale for youth. It indicates 8-factor solution. The elbow shape is the clear indication of factors to retain in the study (i.e., Eigen value > 1.0).

## Discussion

The present research was designed to develop a reliable and valid measure of happiness, for young adults, in Urdu language. A conceptual referent theory of happiness proposed by Rojas (2005) guided the development of Happiness Scale (HS). This eight-referent theory was, in turn, based on the extensive review of philosophical essays about what happiness is. The study of happiness has focused mainly on eight distinct referents based upon its eight different definitions. Usually, happiness scales involve affective component alone, cognitive component alone, or the combination of both. This happiness scale based on the Conceptual Referent Theory (CRT), which relied on the cognitive evaluations only.

Credibility of factor analysis is reliant on the characteristics of data. Present data meet all necessary conditions (i.e., Appropriate indices of communalities, KMO, and Chi-square). Communalities of each item exceeds .50 which is excellent. The KMO value for this data is .90 which is excellent. Thus, indicating that patterns of correlations are compact and analysis would produce distinct and reliable factors. Bartlett's test of Sphericity is also highly significant ( $p < .001$ ) revealing that factor analysis is suitable for these data (Field, 2005).

The initial 34-item happiness scale was then subjected to Principal Component Analysis (PCA) utilizing the varimax rotation to extract a factor structure of the construct of happiness. Moreover, final PCA solution yielded eight factors with 32 items. A total of nine items defined the first factor which was named 'Cheerfulness' because the items loading on it showing the tendency to be cheerful and contented with life. It was found to be internally consistent (Cronbach's Alpha  $\alpha = .86$ ). The highest positively loaded item was "I am happy with my life".

Factor 2 items represented the sense of dissatisfaction with life. As the items loaded on this factor were reverse (or negatively worded), it was decided to label them as 'Satisfaction'. Factor 2 comprised 5 items with a coefficient alpha of .82. As the items on third factor vividly corresponded to the dimension of virtue, the same label was given to define this factor. This dimension has also been represented by Rojas as a second referent. A total of 3 items loaded on this factor. The strength of this dimension ( $\alpha = .75$ ) and the conceptual parsimony of the items led us to include it as such in the final scale.

The item in the fourth factor showed a tendency to seek happiness through familial bonding, so was named "familial attachment". This sub scale comprised 3 items and had an alpha of .64. Total 3 items loaded on fifth factor corresponded to the hypothesized dimension of fulfilment.

These items were conceptually related with the description of fulfillment as described by Rojas. So, the same label with partial addition of self (self-fulfillment) was used to explain this factor. Cronbach's alpha of .62 proved it to be a reliable measure of one's self-fulfillment.

A close inspection of the items of the sixth factor led to conceptualizing it as "sociability". Three items loaded on this factor with a coefficient alpha of .59. Sociability or social relationship is one of the greatest predictors of happiness. Everyone need other persons and like being around them. According to Froh et al. (2007) spending time in social setting increases the level of well-being.

The seventh factor, consisting of three items represented the tendency to help others. This dimension involved items showing the inclination of selfless concern for the well-being of others, so was named "altruism". The strength of this dimension ( $\alpha = .60$ ) indicate that it is a reliable factor to contribute the construct happiness.

Total three items loaded on factor eight. The items loaded on this factor represented the tendency to get pleasure from self-effectiveness, so factor 8 was named "self-efficacy". Cronbach's alpha of .63 proved this scale to be a reliable estimate of one's self-efficacy. The existence of the factor structure was further made sure by computing inter-correlations between the eight subscales and with the total score of Happiness Scale (HS). The results indicated that all the factors strongly and significantly correlate ( $r = .53$  to  $.85$ ,  $p < .001$ ) with the total score of HS.

Reliability estimates provided support to the overall internal consistency of the Happiness Scale (HS). Item total correlations showed that each item correlated positively, though moderately ( $r = .36$  to  $.66$ ,  $p < .01$ ), with the total score of HS. Mean inter-item correlation and mean item total correlations were also good, representing high internal consistency. More notably, Cronbach's alpha of .90 showed that HS is a highly reliable and homogenous measure of happiness.

The convergent validity was established by finding the correlation between the HS and the Oxford Happiness Questionnaire (Hills & Argyle, 2001). The positive and significant correlation of .61 ( $p < .01$ ) between the HS and the OHQ was the sufficient evidence of the convergent validity of the scale.

The scale also exhibited evidence of discriminant validity. The negative and moderately significant correlation of  $-.54$  ( $p < .01$ ) was found between HS and SSDS. Therefore, the happiness scale has considerable discriminant validity and measures the construct effectively. The results,

in general, exhibit that Happiness Scale (HS) is a multifaceted and internally consistent measure of Happiness.

### **Conclusion**

The present study developed the happiness scale for youth in Pakistan, and validated the scale with the help of objective measurements (i.e., factor analysis and construct validity). It is suggested that the Happiness Scale for youth is a reliable and valid measure to screen the level of happiness in youth. In addition, the scale sound psychometric properties, and it could assess the eight distinct factors of happiness.

### **Limitations and Suggestions**

The present study found that newly developed happiness scale was a valid and reliable tool to assess happiness. However, the research is not without its limitations. Firstly, the items were developed using young adult samples, therefore the measure is appropriate for use with same population. However, further research into the psychometric properties of the with more diverse populations would be encouraged. Secondly, entire sample of the study was recruited from two cities only (Lahore and Gujranwala) and mainly from educational institutions. Keeping in view the scope of this study, the sample was adequate. However, for future research it would be beneficial to include the sample of Pakistani population from major cities so as to increase its generalizability. Thirdly, the HS is a valid and reliable tool but its norms have not been developed so it is suggested for future research to establish its norms as well. It is also suggested that HS should be extended to only those societies which have the same cultural and socio-economic background.

### **Implications**

The Happiness Scale (HS), developed in this research, may help to measure individual differences in happiness among young adults. Apart from this, it may be used in colleges and universities for research purposes. It is equally useful for diagnostic purposes. It may help the test constructors to establish the convergent or discriminant validity of a new test in indigenous context.

### **References**

- Benson, C. (2000). *The cultural psychology of self: Place, morality and art in human worlds*. Philadelphia: Routledge.
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine.

- Clark, L. A., & Watson, D. (1995). Constructing validity: basic issues in objective scale *Development. Psychological Assessment*, 7(3), 309-319. <https://doi.org/10.1037//1040-3590.7.3.309>
- Diener, E., & Larsen, R. J. (1993). The experience of emotional well-being. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 405-416). Guilford, NY: MIT Press
- Diener, E., & Suh, E. M. (2000). *Culture and subjective well-being*. Cambridge, MA: MIT Press.
- Diener, E., Suh, E. M., Lucas, R. D., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276-302. <https://doi.org/10.1037//0033-2909.125.2.276>
- Eid, M., & Diener, E. (2004). Global judgments of Subjective Well-Being: Situational variability and long-term stability. *Social Indicators Research*, 65(3), 245-277. <https://doi.org/10.1023/b:soci.00000003801.89195.bc>
- Ekman, P. (1992). An Argument for Basic Emotions. *Cognition and Emotion*, 6, 169-200. <https://doi.org/10.1080/02699939208411068>
- Field, A. (2005). *Discovering statistics using SPSS*. London: Sage Publications Ltd.
- Froh, J. J., Miller, D. N., & Snyder, S. (2007). Gratitude in children and adolescents: Development, assessment, and school-based intervention. *School Psychology Forum*, 2, 1-13. <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.183.3297>
- Hills, P., & Argyle, M. (2001). Emotional stability as a major dimension of happiness. *Personality and Individual Differences*, 31, 1357-1364. [https://doi.org/10.1016/s0191-8869\(00\)00229-4](https://doi.org/10.1016/s0191-8869(00)00229-4)
- Kitayama, S., & Markus, H. R. (2000). The pursuit of happiness and the realization of sympathy: Cultural patterns of self, social relations, and well-being. In E. Diener and E. M. Suh (Eds.), *Cultural and Subjective Well-Being*. (pp. 113-161) Cambridge: The MIT Press.
- Kitayama, S. (2002). Culture and basic psychological processes – Toward a system view of culture: Comment on Oyserman et al. *Psychological Bulletin*, 128, 89-96. <https://doi.org/10.1037//0033-2909.128.1.89>
- Kitayama, S., Mesquita, B., & Karasawa, M. (2004). *The emotional basis of independent and interdependent selves: Socially disengaging and Engaging emotions in the US and Japan*. Unpublished manuscript, University of Michigan.

- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Thousand Oaks, Calif: SAGE Publications.
- Lyubomirsky, S. (2008). *The how of happiness: A scientific approach to getting the life you want*. New York: Penguin Press. <https://doi.org/10.1080/17521880701878182>
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253. <https://doi.org/10.1037//0033-295x.98.2.224>
- Norasakkunkit, V., & Kalick, S. M. (2002). Culture, ethnicity and emotional distress measures: The role of self-construal and self-enhancement. *Journal of Cross-Cultural Psychology*, 33, 56-77. <https://doi.org/10.1177/0022022102033001004>
- Nunnally, J. C. (1978) *psychometric theory* (2nd ed.). New York: McGraw Hill.
- Ratner, C. (2008). *Cultural psychology, cross-cultural psychology, indigenous psychology*. New York: Nova Science Publishers, Inc.
- Rojas, M. (2005). A Conceptual Referent Theory of Happiness Heterogeneity and its Consequences. *Social Indicators Research*, 74, 261-294. <https://doi.org/10.1007/s11205-004-4643-8>
- Shweder, R. A., & Sullivan, M. A. (1993). Cultural psychology: Who needs it? *Annual Review of Psychology*, 44, 497-523. <https://doi.org/10.1146/annurev.psych.44.1.497>
- Siddiqui, S., & Shah, A. A. (1997). Siddiqui Shah Depression Scale (SSDS): Development and Validation. *Psychology and Developing Societies*, 9, 245-262. <https://doi.org/10.1177/097133369700900205>
- Uchida, Y., Norasakkunkit, V., & Kitayama, S. (2004). Cultural Constructions of Happiness: Theory and Empirical Evidence. *Journal of Happiness Studies* 5, 223 - 239. [https://doi.org/10.1007/978-94-007-5702-8\\_14](https://doi.org/10.1007/978-94-007-5702-8_14)
- Veenhoven, R. (1994). Is happiness a trait? *Social Indicators Research*, 32, 101-160. [https://doi.org/10.1007/1-4020-3742-2\\_17](https://doi.org/10.1007/1-4020-3742-2_17)
- Xing, Z. (2005). Reflections on subjective well-being measures research. *US-China Education Review*, 2(3), 73-81.

Received July 8, 2018

Revision Received January 3, 2021