SUBJECTIVE HAPPINESS SCALE; TRANSLATION AND VALIDATION IN A SAMPLE OF PREGNANT WOMEN

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ABSTRACT

Positive psychology addresses the beneficial impacts that positive variables have on the well-being of individuals. The importance of positive emotion variables to psychological health has led to a substantial increase in research on these topics in recent years. Subjective happiness has become a subject of growing interest in this context due to the belief that it significantly influences overall well-being and happiness. During pregnancy the importance of subjective happiness increases as it's associated with positive birth outcomes and maternal health. The aim of this study was to translate and validate the Urdu version of Subjective Happiness Scale. The study was conducted in the twin's city Rawalpindi and Islamabad and the time duration was 6 month. The data was collected from Gynea OPD and Ward patients of private and Government hospitals. In this study 404 pregnant women were taken as a study sample. Descriptive, inferential and factorial analyses were applied on the data. Results show that SHS has satisfactory reliability and Validity Indexes. Moreover, the factorial structure of the scale matches the ones found in previous studies in numerous countries. The Urdu version of Subjective Happiness Scale is reliable and valid instruments and can be used other than sample of pregnant women.

KEY WORDS: Happiness, Subjective Happiness Scale, Reliability, Validity,

INTRODUCTION

Happiness is a subjective experience of feeling well, joyful, or content, which encompasses both pleasant emotions and overall satisfaction with life (Lyubomirsky et al., 2005). Martin Seligman, widely regarded as the father of positive psychology, is a prominent figure in the study of happiness. Seligman argues that happiness is not solely derived from external, momentary pleasures but also from internal fulfillment. He introduced the acronym "PERMA," which encapsulates positive psychology's perspective on the components of human happiness. "P" stands for Pleasure (e.g., enjoying good food), "E" for Engagement (e.g., embracing life's challenges), "R" for Relationships (e.g., nurturing stable social connections), "M" for Meaning (e.g., feeling part of a greater purpose), and "A" for Accomplishments (e.g., achieving personal goals). Seligman also described three dimensions of happiness: 'The Pleasant Life,' which involves appreciating simple pleasures like relationships, physiological needs, and the natural environment; 'The Good Life,' which focuses on recognizing and using personal strengths creatively to improve quality of life; and 'The Meaningful Life,' which refers to attaining deep satisfaction by using individual virtues in service of a higher purpose (Seligman et

al., 2005). Research conducted in the past has demonstrated that there exists a reciprocal correlation between happiness and health (Feldman, 2006).Subjective happiness encompasses both the emotional and cognitive aspects. The emotional dimension refers to the presence of pleasant emotions and the absence of negative emotions, while the cognitive dimension is described as the level of life satisfaction. Individuals who possess a high level of subjective happiness tend to view their past experiences in a more favorable perspective, have a greater number of positive thoughts, have a greater sense of personal control, and experience more powerful emotional responses to positive situations. However, they tend to have shorter-term reactions to unpleasant experiences (Renfrew et al., 2014). Prior research has been undertaken in various fields regarding subjective happiness, as documented in the literature. A study conducted by Demirbaş and Kadıoğlu revealed that women who struggle to accept their pregnancy exhibit lower levels of adaptation to both their pregnancy and parenthood (Demirbas & Kadioglu, 2014). Additionally, these women tend to have heightened fear in relation to the delivery process. Pregnant women who exhibit more adaptation to their pregnancy are more likely to receive prenatal care (Zhu et al., 2013). Unplanned pregnancies are associated with reduced adaptability to pregnancy and an increased likelihood of harmful maternal behaviors that can negatively impact the health of both the infant and the mother (González et al., 2018). A study found that the incidence of nausea and vomiting is greater in cases of unintended pregnancy, which in turn leads to a decreased ability to adjust to pregnancy and the role of mother (Taka-Eilola (Nèe Riekki) et al., 2019). In planned pregnancies the woman and her family typically anticipate the news of pregnancy and experience a sense of joy as a result. The woman's embracement of her pregnancy is more effortless, and her apprehension is diminished. She enters a moment of joyful anticipation. If the baby is desired, the news of pregnancy is enthusiastically conveyed (Grimes et al., 2014). Nevertheless; the revelation of an undesired pregnancy may not be readily disclosed if it has the potential to cause dissatisfaction within the family (Levandowski et al., 2012). The mother's experiences during pregnancy have a significant influence on the developmental outcomes of children. Comprehensive studies demonstrate that maternal distress significantly affects multiple dimensions, including the health of both the mother and the foetus (Ilska, Brandt-Salmeri, and Kołodziej-Zaleska, 2020), as well as the general stability of the family unit (Cihan, Gumus, and Erkenekli, 2017).

Lyubomirsky and Lepper (1999) highlighted the need for broader methods to assess an individual's chronic happiness level. To address this, they developed the Subjective Happiness Scale (SHS), a tool designed to measure overall happiness in a global and comprehensive manner. The SHS is a subjective assessment of whether a person feels happy or unhappy. Based on 14 subsamples from the U.S. and Russia, the SHS demonstrated strong internal consistency (ranging from r = .79 to r = .93), reliable test-retest stability over intervals of 3 weeks to 1 year, and good convergent validity with related constructs like optimism, positive and negative affect, and neuroticism (Lyubomirsky & Lepper, 1999). The SHS has been shown to measure happiness as distinct from other constructs like self-esteem (Lyubomirsky et al., 2006). The SHS is a 4-item Likert scale (1–7) that asks individuals to evaluate their happiness both in absolute terms and compared to others. Subsequent research has confirmed the psychometric properties of the SHS in English (Mattei & Schaefer, 2004) and its validity in other languages, including German (Swami et al., 2009), Japanese (Shimai et al., 2004), Arabic (Moghnie & Kazarian, 2012), Portuguese (Spagnoli et al., 2012), and Malaysian (Swami, 2008), all demonstrating adequate temporal stability and internal consistency. This study aims to validate the SHS in the Urdu-speaking Pakistani population, particularly among pregnant women. Currently, no Urdu version

exists, and validating its psychometric properties would extend the scale's applicability to new cultural contexts, contributing to cross-cultural research on happiness and well-being, particularly in understanding cultural differences in the meaning of happiness (Diener & Suh, 2013).

MATERIALS AND METHODS

STUDY SITE

The multiphase study was conducted from Sep 2017- May 2018. The first phase was the translation of the Subjective happiness scale and the second phase was to establish the psychometric properties of translated scale. In the first phase the data was collected from 140 pregnant women. For the cross language validation the data was obtained from 40 pregnant women. And then for reliability analysis the data was collected from 100 pregnant women. In the second phase the data was taken from 404 pregnant women, 204 for the exploratory factor analysis and 200 for Confirmatory factor analysis. The sample was selected through convenient and purposive sampling and from different hospitals working in Rawalpindi and Islamabad. Women who were pregnant and educated participated in the research while women who were unmarried or non-pregnant and uneducated were not the part of this research. Prior to data-collection, the study was approved by the ethics review board of International Islamic University, Islamabad. Permission was also obtained from the administration of participating hospitals and clinics.

INSTRUMENTS USED IN THE STUDY

DEMOGRAPHIC SHEET

Demographic information was obtained through demographic sheet concerning the information about participant's age, education, trimester, no of children, socioeconomic status, occupation, family system and previous delivery procedure.

SUBJECTIVE HAPPINESS SCALE

The Subjective Happiness Scale (SHS) was developed by Lyubomirsky & Lepper in 1999. It has four items that are mesure the subjective happiness of an individual. It has 7-point Likert scale, and fourth item was reverse-coded. Scores range from 1.0 to 7.0, with higher scores indicating greater happiness (Lyubomirsky & Lepper, 1999). According to the analysis, the SHS is a reliable tool for measuring subjective happiness in the Greek population. Specifically, the Cronbach's alpha for the scale was $\alpha = 0.76$, with split-half reliability indexes including a Spearman–Brown coefficient (for both equal and unequal lengths) of 0.72 and a Guttman coefficient of 0.71, indicating satisfactory reliability (Karakasidou et al., 2016).

PROCEDURE

After taken permission from the scale author, the scale was given to 3 MS scholar and 2 PhD scholars for the forward translation (English to Urdu). The scholar belongs from psychology and English departments. After the forward translation, a committee approach was conducted in which the panel of 5 PhD's reviewed the translated version of the scale and remarks were given about changes and modifications. After the suggested modifications the article were given for the

backward translation (Urdu to English). There were 5 scholars, 2 PhD's Scholars, from psychology department and 3 (2 MS scholars and 1 PhD Scholar) from Urdu department. After the backward translation, committee approach with experts was conducted to finalize the Scale. With the agreement of all experts, best version of the scale was selected for cross validation. 40 pregnant women aged 18–45 were carefully selected for cross-language scale validation. The females were recruited from government, private, and municipal clinics in Rawalpindi and Islamabad. This ensured that the sample comprised women from varied socioeconomic backgrounds and healthcare situations, more accurately representing the population. The sample was split into two equal groups for validation. Group 1, with 20 participants, completed the original English scales. Group 2, with 20 participants, received the translated Urdu scales. To evaluate the translation's consistency and precision with the original, both groups were tested on the different linguistic scales. To further strengthen the dependability of this validation process, the scales were re-administered to the same subjects after a period of 15 days. However, the administration procedure was revised slightly in the second round to generate a more thorough review. Group 1, which having finished the English scales, was split into Group 1a (n=10) and Group 1b (n=10). Group 2 was divided into Group 2a (n=10) and Group 2b (n=10). In this second administration, subgroups 1a and 2a received the original English scales to compare their initial responses. Subgroups 1b and 2b were given the Urdu scales to compare their responses when switching languages. This method assessed the scale's cross-language reliability and validity. The study examined responses across multiple time points and language versions to ensure the Urdu translation was accurate and culturally appropriate for Urdu-speaking populations.

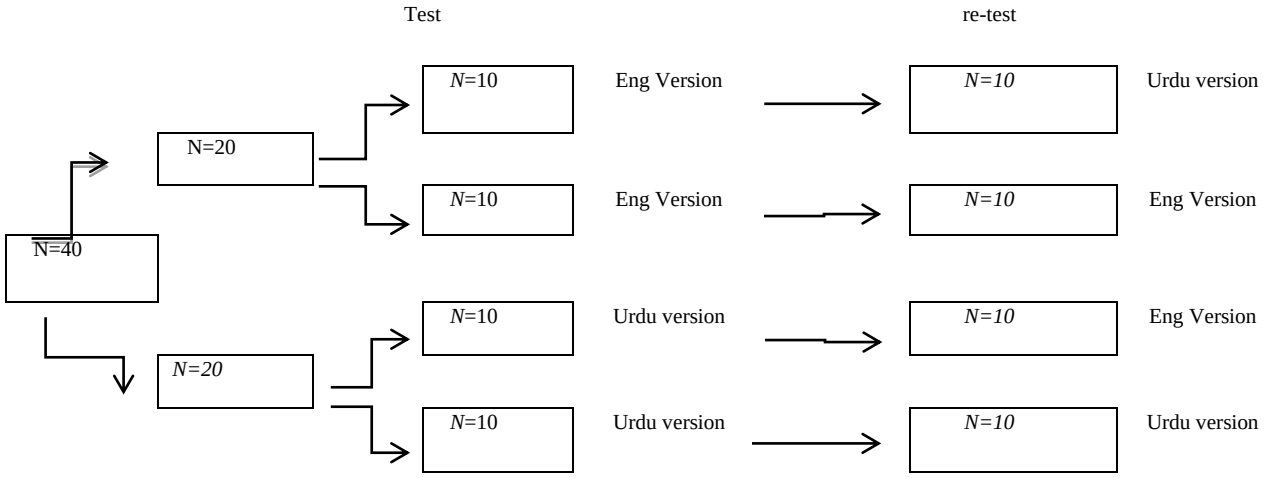

Figure 1: Distribution of the Sample

In the second phase the data was collected from the main sample. The rule of the thumb was used for the estimation of sample size. For factor analysis, it is 5 participants per item, which suggested 260 participant should be taken for the data collection (Sakaluk & Short, 2016), but literature suggested a minimum of 200 participants (Memon et al., 2020) and the present study the initial data for the exploratory factor analysis werer collected from 204 women pregnant

women and experienced different trimesters and for the Confirmatory factor analysis the data were collected from other 200 pregnant women.

STATISTICAL ANALYSIS

The data was analyzed -through SPSS -24. Descriptive statistics were calculated using SPSS 24.The Psychometric properties were assessed through reliability analysis, split half reliability, Inter item reliability and item total reliability and construct validity of translated scale were established through Exploratory Factor Analysis and Confirmatory Factor Analysis..

RESULTS

In this research, younger mothers (61%) are more than older mothers (39%). Women who experienced vaginal and caesarean deliveries were equal (50% each). Second pregnancies (39%) were more than first (35%) and third pregnancies (25%). Most women were from the middle class (39%), followed by the lower (41%) and upper classes (20%). Equal numbers of women were in their first, second, and third trimesters (33% each). Women with graduate-level education (55%) were more prevalent than those with primary (13%) or middle-level education (31%).The psychometric properties of the scale were assessed by Cronbach Alpha (Table 1), Split Half Reliability (Table 2), Inter-item correlation (Table 3), Item Total Correlation (Table 4) and Stepwise Model Fit Indices for CFA of SHS-U (Table-5).

Table 1 is indicating the correlation between English and Urdu version of Subjective Happiness Scale Urdu and the both version are significant correlated (***p<.001). The correlation value ranges from .82 to .88.

Table 1: Cross language validation and test-retest reliability of Subjective Happiness Scale (N=40)

Groups	*N*	1st Administration	2nd Administration	*R*
I	10	English	English	.88
II	10	English	Urdu	.82
III	10	Urdu	Urdu	.86
IV	10	Urdu	English	.85

Note. ***p<.001

Table 2 elucidates the psychometric properties of Subjective Happiness Scale-Urdu Version (SHS-U). The Chronbach alpha of the scales is .84 and it indicates high internal consistency.

Table 2: Pearson Alpha Correlation of Subjective Happiness Scale –Urdu (N= 204)

Variables	*No.of Items*	*M*	*SD*	A	*Ranges* *Potential*	*actual*	skewness	kurtosis
SHS	4	3.5	1.7	.84	1-7	1-6	1.68	-1.44

Table 3 is for calculating the split half reliability coefficient, SHS – Urdu version was split into two divisions: 2 items in first division and 2 in the second division. The correlation coefficient computed between the two divisions was obtained as .86 and split half coefficient was .92.

Table 3: Split –Half correlation of Subjective Happiness Scale –Urdu (N=204)

Cronbach alpha	Part 1	Value	.86
		No of items	2(a)
	Part 2	Value	.83
		No of items	2(b)
	Total no of items		4
Correlation between forms			.86
Guttmann split –Half reliability			.92

Table 4 shows the result of item total correlation of the subjective happiness scale -Urdu. All items in the scale are correlated considerably with the overall SHS-U scores ranges from 0.69 to 0.89. $p<0.001$.The correlation of an item should be .30 and more than this to meet the inclusion criteria. (Sukaesi Marianti et al., 2014). The result indicated that each item correlation is bigger .30 so it's a reliable scale for the research sample.

Table 4: Item total correlation of Subjective Happiness Scale (N=204)

Item total correlation	
1	.74***
2	.83***
3	.69***
4	.89***

The table 5 indicated the rages of correlation from .54 to .72 that show that all items are highly correlated to each other.

Table 5: Inter Item correlation of Subjective Happiness Scale (N=204)

	1	2	3	4
1	-			
2	.76***	-		
3	.54***	.72***	-	
4	.76***	75***	.72***	-

P<0.001

According to the factor analysis and the Kaiser criterion, which suggests retaining factors with eigenvalues greater than 1, the analysis revealed a single principal factor within the scale. This means that most of the variance in the data can be explained by one dominant underlying factor, rather than multiple independent factors. In this case, the principal factor accounts for 79.57% of the total variance, indicating that the majority of the responses or variables measured by the scale are strongly related to this one factor. This result suggests that the scale is measuring a uni-dimensional construct, where most of the items are contributing to the same overarching concept, likely the central trait or characteristic that the scale aims to assess. (Table 6).

Table 6: SHS item loading (N=204)

Sr.No	Item No	Factor loading
1	1	0.89
2	2	0.88
3	3	0.88
	4	0.90
	Eigen Value	3.18
	Total variance Explained	79.57

Table 7 showed the stepwise model fit indices for confirmatory factor analysis of the Multidimensional distress Inventory-Urdu (MDDI-U). Model 1 describes CFA results. The chi-square to degrees of freedom ratio was 1.57, which is below the permitted threshold. Additionally, several model fit indices exhibited a remarkable correspondence between the data and the model. The CFI, GFI, and NFI values all above the threshold of .90, indicating that they satisfy the rigorous fit index standards. The RMSEA value is 0.04, which is significantly lower than the cutoff criterion of 0.05.

Table 7: Stepwise Model Fit Indices for CFA of SHS-U (N = 200)

Models	χ^2	df	χ^2/df	GFI	CFI	NFI	RMSEA
Model 1	3.15	2	1.57	.90	.82	.81	.04
(4 items first order)							

P<0.001

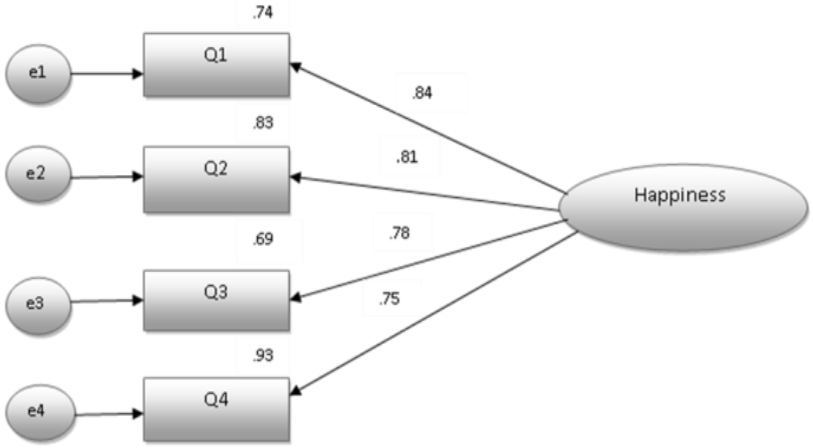

Figure 2: Complete standardized solution of Subjective Happiness Scale (N=200)

DISCUSSION

This study provides empirical evidence supporting the reliability and validity of the Urdu version of the Subjective Happiness Scale (SHS). Scale validation was conducted through both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) using data from 404 participants—204 for EFA and 200 for CFA. The results demonstrate that the items on the scale exhibit satisfactory psychometric properties, with no polarization issues. The SHS shows strong reliability, with a Cronbach's alpha of 0.83 and a split-half reliability of 0.92, as well as significant inter-item and item-total correlations ($p<0.001$). The factorial structure of the SHS was examined through both EFA and CFA. EFA revealed a single principal factor explaining 79.57% of the variance in subjective happiness, which was confirmed by CFA. These results are consistent with the original validation of the scale and its validation in other countries. The author viewed subjective happiness as a uni-dimensional construct, a notion that aligns with the

Pakistani cultural context, reinforcing the idea of subjective happiness as a universally shared concept. The findings validate the use of the SHS in the Pakistani population, though the study does have limitations. Reliability was assessed using only Cronbach's alpha and split-half methods, without the use of a test-retest approach. The sample was confined to participants from Rawalpindi and Islamabad, hence limiting the generalizability of the findings. Subsequent research ought to encompass a more heterogeneous sample from around Pakistan to enhance both internal and external validity. Notwithstanding these constraints, the study significantly contributes to indigenous psychological literature, demonstrating that the Urdu version of the SHS can reliably and accurately assess subjective satisfaction in both clinical and non-clinical populations. The work provides significant insights for future research on the SHS within Urdu-speaking people, potentially enhancing the field of positive psychology research. In the future, validation efforts might focus on more objective measures of happiness, such as biological data, and investigate cultural differences in happiness experiences across diverse populations. The SHS-Urdu is a reliable and valid instrument for assessing subjective happiness within the Pakistani context.

CONCLUSION

The primary aim of this study was to translate and validate the Subjective Happiness scale into the national language of Pakistan, Urdu. The results of the study indicate that the Subjective Happiness Scale-Urdu version is a reliable and valid scale that can be employed in both descriptive and interventional studies.

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