

Adaptation of Hung Postpartum Stress Scale in Urdu Language

Schrish Wazir^{1*}, Saba Bashir¹, Sidra Sattar²**Abstract**

Postpartum period is one of the sensitive period in any women's life. As Hung Postpartum Stress Scale is the effective scale that measures level of stress in postpartum mothers. So, the study was conducted to translate and adapt this scale for Pakistani population. The aim was to translate this stress scale into Urdu language and to establish its psychometric properties. 343 postpartum mothers from government hospitals of Bahawalpur were studied for this purpose. Exploratory Factor Analysis (EFA) was conducted and validity was measured. Test-retest reliability analysis was conducted which shows high value of reliability of the translated version. The reliability value is .90 which is considered as ideal value. In order to establish the validity, convergent validity and face validity analyses were conducted. Their results also support the acceptable validity of the translated version. This adapted version is easy to use for those who can speak and understand Urdu.

Keywords: Convergent Validity, Exploratory Factor Analysis, Face Validity, Hung Postpartum Stress Scale, Postpartum Mothers, Test-retest Reliability

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Introduction

Health is a state of complete physical, mental, and social well-being (WHO, 2006). A healthy person is one who is able to perform personal and social tasks actively. Our daily routine is affected by our activities. Healthy activities help us to tackle background stressors (CDC, 2021).

Experience of health and disease in men and women is different. The reasons behind this gender difference are biological and social conditions. Some of the factors that effects women's health, other than biological factors

are poverty, health care issues, social support and family responsibilities (WHO, 2016).

Every woman faces different types of health related problems in her reproductive years. Some of these problems are related to sexuality and other issues occur in reproduction (WHO, 2013). Pregnancy produces many risks in women's health. One of the major risk factor is maternal mortality, that is a global issue (Nour, 2014). There are many reasons of maternal mortality like lack of health care facilities, mother's health, home birth (Blum & Gates, 2015). Health of a mother is also dependent on the health in non-reproductive years of that woman (Gronowski & Schindler, 2014).

Although pregnancy is itself a feeling of happiness, but it also brings physical and psychological stress in women's lives. According to a qualitative analysis, two domains of stressors are categorized, one is human stressors while second is environmental stressors. Staff related behaviors and equipment related issues could lead to stress for women during delivery.

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These factors can become reason of postpartum stress (Kazemi et al., 2020).

It is a big change in a woman's life to have a baby, because it is a big responsibility. It can provoke stress in her life as there are adjustment difficulties after having a baby. Different stressors that can lead to postpartum stress are pregnancy, labor, emotional issues, physical problems and parenting. Some other stressors can be changing relationship with partner, children and other family members (Ayers et al., 2019).

During the peripartum period sometimes women feel stress and anxiety. Likewise, there are chances in women to develop postpartum depression (Roets et al., 2023). Postpartum period is divided into three stages, acute period second is subacute stage and last is delayed postpartum stage (Romano et al., 2010).

During the second phase of postpartum period psychological symptoms appears. A woman may develop postpartum depression, posttraumatic stress, or exceptionally she may develop postpartum psychosis (Dobson & Sales 2000). One of the main factor that affects women in this phase is disturbance in mothers' sleep due to baby feeding (McGuire, 2013).

Postpartum phase may affect both partners. Parents may develop feelings of sadness, anxiety and mood swings which collectively termed as "baby blues". Parents can also develop postpartum obsessive compulsive disorder. The causes of these psychological disorders can be poor sleep, worries about body shape, anxiety about baby's health, economical issues (Adewuya & Afolabi, 2005).

Postpartum depression is considered as a mood disorder (Paulson, 2010). The onset of this disorder is in between one week to one month following childbirth and usually ends within six weeks. Baby is also affected by this disorder (Pearlstein et al., 2009).

This disorder can be treated by providing medication and psychotherapy (Hales &

Yudofsky, 2003). Social support can also be one of the tool to deal with postpartum stress. It can decrease the chance of postpartum depression, especially in cases of pregnancy loss, negative body image and working women. Medication is somehow unsuitable for postpartum mothers, particularly during breastfeeding, as it can affect baby's health. So, prevention is the best strategy to deal with it (Cho et al., 2022).

For the best treatment plan it is necessary to use the appropriate tool for assessing level of stress in postpartum mothers. Diagnostic and Statistical Manual for Mental disorders can be used to confirm the symptoms. There are different available tools that can be used to identify or measure the level of postpartum problems in women. Some of them are as follows;

- Edinburgh Postnatal Depression Scale
- The Postpartum Specific Anxiety Scale
- The Depression Anxiety Stress Scale-21
- Perceived Stress Scale
- Hung Postpartum Stress Scale

Hung Postpartum Stress Scale

This is the only scale that is used to screen stressors in postpartum phase. Its contents cover the factors of maternity role attainment, body changes and social support. These all produces stress in newly mothers. It contains 61 items with a response five-point scale from 1 (not at all) to 5 (always). The score is derived by summing up all the ratings of responses. Higher values indicated higher level of stress (Hung, 2007).

Rationale of the Study

Pregnancy, child birth and postpartum phase are very sensitive stages in any women's life. Women feel emotional and hormonal issues in all these stages. Apart from happiness that comes with a child there are any factors that promote stress in women.

They may feel stress due to inadequate health facilities, support during all this period, body changes, child responsibilities (Adewuya &

Afolabi, 2005). These irritable feelings can be changed usually within 6 days to two weeks by providing supportive environment to newly mothers. If a woman faces psychological disturbances more than 6 weeks, postpartum depression is converted into psychosis (Pearlstein et al., 2009).

Perinatal and postnatal conditions produce stress in women's lives (Roets et al., 2023). Hung is the only one scale that measures postpartum stress. The purpose of this study is to translate Hung Postpartum Stress Scale into Urdu language and to establish its psychometric properties for the women of Bahawalpur. Its translated version will be easy to use by the practitioners to identify the level of stress in mothers of postpartum phase. This will help the practitioners to treat negative emotional states in women by reducing factors that produce stress in them.

Objective of the Study

1. To translate the Postpartum Stress Scale.
2. To assess its psychometric properties among postpartum mothers in Bahawalpur.

Method

Research Design

A cross sectional, quantitative research design was used to conduct this research.

Participant's Characteristics

The study is designed to examine the postpartum stress in women of Bahawalpur city. The participants were selected from different areas of city. The age ranges of the women were from 20 to 40. The education of the women is from lower to higher. The participants belonged to high, middle and lower socioeconomic status.

Inclusion Criteria. The data was collected from the women:

1. Who were between four to six months postpartum;
2. Who had no mental and physical illness;
3. Whose babies were alive;
4. Whose babies were physically and mentally healthy.

Exclusion Criteria. Unmarried women and women experiencing any stage other than

postpartum period were excluded from the study.

Sampling

Purposive sampling technique was used to collect data from the women.

Sample size. The sample size for main study was calculated by multiplying five times the total items of questionnaire (62×5) which was 310 but 343 mothers were included in the study.

Measure

Two scales were used to collect the data from the participants.

Hung Postpartum Stress Scale. Hung Postpartum Stress Scale developed 11 year ago and requires revalidation because of rapid changes in cultures over the last two decades. The Hung Postpartum Stress Scale (Hung PSS) is the only measure to date designed specifically to evaluate postpartum stress (Hung, 2005). As reported in Hung (2005), content validity of the original Hung PSS was generated based on stressors identified by postpartum women during the researcher's clinical practice and by review of the current literature on postpartum issues (Hung, 2005, 2007). The scale Hung Postpartum Stress Scale (HPSS) specifically measures postpartum stress in women. It is easy to use and understand for the population. Participants rated each item on the scale on a 5-point Likert rating of 1 (not at all) to 5 (always), based on how often they perceived postpartum stress during the puerperium. The score for postpartum stress was derived by summing all ratings. Higher values indicated higher stress

Perceived Stress Scale. A more precise measure of personal stress can be determined by using a variety of instruments that have been designed to help measure individual stress levels. The first of these is called the Perceived Stress Scale. The Perceived Stress Scale (PSS) is a classic stress assessment instrument. The tool, while originally developed in 1983, remains a popular choice for helping us understand how different situations affect our feelings and our

perceived stress. The questions in this scale ask about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way; rather indicate the alternative that seems like a reasonable estimate. (Cohen, 1983).

Procedure

After getting permission from the original author of Hung Postpartum Stress Scale, the scale was adapted in Urdu language through following four phases.

Phase I: Translation of Hung Postpartum Stress Scale into Urdu

Hung Postpartum Stress Scale was translated into Urdu by the following steps:

Step 1: Forward Translation

The translation was done by 2 bilingual experts having 15 years of experience with sufficient competency and command on language. Then the department committee was formed to check the translation.

Step 2: Committee Approach

The Urdu translation completed by bilingual experts was examined by a committee of 3 Subject Experts in the field of test construction. These included two lecturers and one assistant professor of Psychology, and researcher herself. The experts had minimally five years of experience of teaching and research. Each item was discussed in detail to make it more understandable following the same rating for all items.

Step 3: Back Translation

In this step, the Urdu translated HPSS was back translated into English to verify the initial translation by a bilingual expert with seven years of experience with sufficient competency and command on language.

Step 4: Committee Approach

Committee comprised of three Professors and one lecturer of Psychology having four years of experience in the relevant field. After receiving the translations, experts of committee carefully observed the content of the instrument both in Urdu and English. However, commonly used words of Urdu were used in the process.

Phase II: Pilot Study

After translation procedure, pilot study was conducted on a sample of 34 participants which is the 10% of the total sample used in main study. Sample for pilot study should be 10% of the sample projected for the large study (Connelly, 2008).

Phase III: Main Study

In phase III, a purposive sampling ($N=350$) was recruited from population of Bahawalpur were found fulfilling inclusion criteria and out of those 4 was refused to do the task assigned due to shortage of time. Out of the rest, 3 forms were discarded due to some missing information. So, the final sample contained 343 postpartum females.

Phase IV: Test Retest Analysis

In phase IV, 28 participants were selected to test retest analysis. For this purpose data was collected from 28 postpartum females in phase I and after 15 days again data was collected from same subjects to retest reliability that is phase II.

Ethical Consideration

While conducting this research ethical issues were considered. All information about the scale was given to participants of research before they started participation. Consent was taken from the participants regarding to their enthusiasm to participate in research. Confidentiality of data was maintained. Participants were allowed to leave the research any time without any permission. Their data was used only for educational purpose.

Results

Face Validity

After translation procedure, pilot study was conducted on a sample of 34 participants which is the 10% of the total sample used in main study. Sample for pilot study should be 10% of the sample projected for the large study (Connelly, 2008). The population reported difficulty in understanding item number 15, 18, 23, 34, 47 and 53. After incorporating the suggestions by participants, the pilot study was again conducted on 34

participants. This time, participant reported good understanding of the wording of items. Then the back translation was done of the translated questionnaire. It was depicted the same content as the original questionnaire. This questionnaire was administered to the population of Bahawalpur after getting their consent to participate in research. The demographic characteristics of the sample have been outlined in Table 1. The results of Kaiser-Meyer-Olkin and Bartlett tests have been given in Table 2.

Table 1

Demographic Characteristics of the Sample (N=343)

Characteristics	<i>n</i>	%	Characteristics	<i>n</i>	%
Age			Family System		
20-25	125	36.0	Joint	223	65.0
26-30	112	32.7	Nuclear	120	35.0
31-35	67	19.0	Type of Delivery		
36-40	39	11.4	Vaginal	183	53.4
Education			Cesarean Section	160	46.6
Illiterate	114	33.2	Socioeconomic Status		
Primary	74	21.6	Lower	126	36.7
Secondary/Bachelor	97	28.3	Middle	202	58.9
Higher Degree	58	16.9	Upper	15	4.4
Profession			Sex of Child		
Working	14	4.1	Female	126	63.3
Non Working	329	95.9	Male	217	36.7
Number of Delivery			Feeding Method		
1 st	34	22.7	Breastfeeding	176	51.3
Other	309	77.3	Bottle Feeding	36	10.5
			Both	131	38.2

Table 2

KMO and Bartlett's Test (N=343)

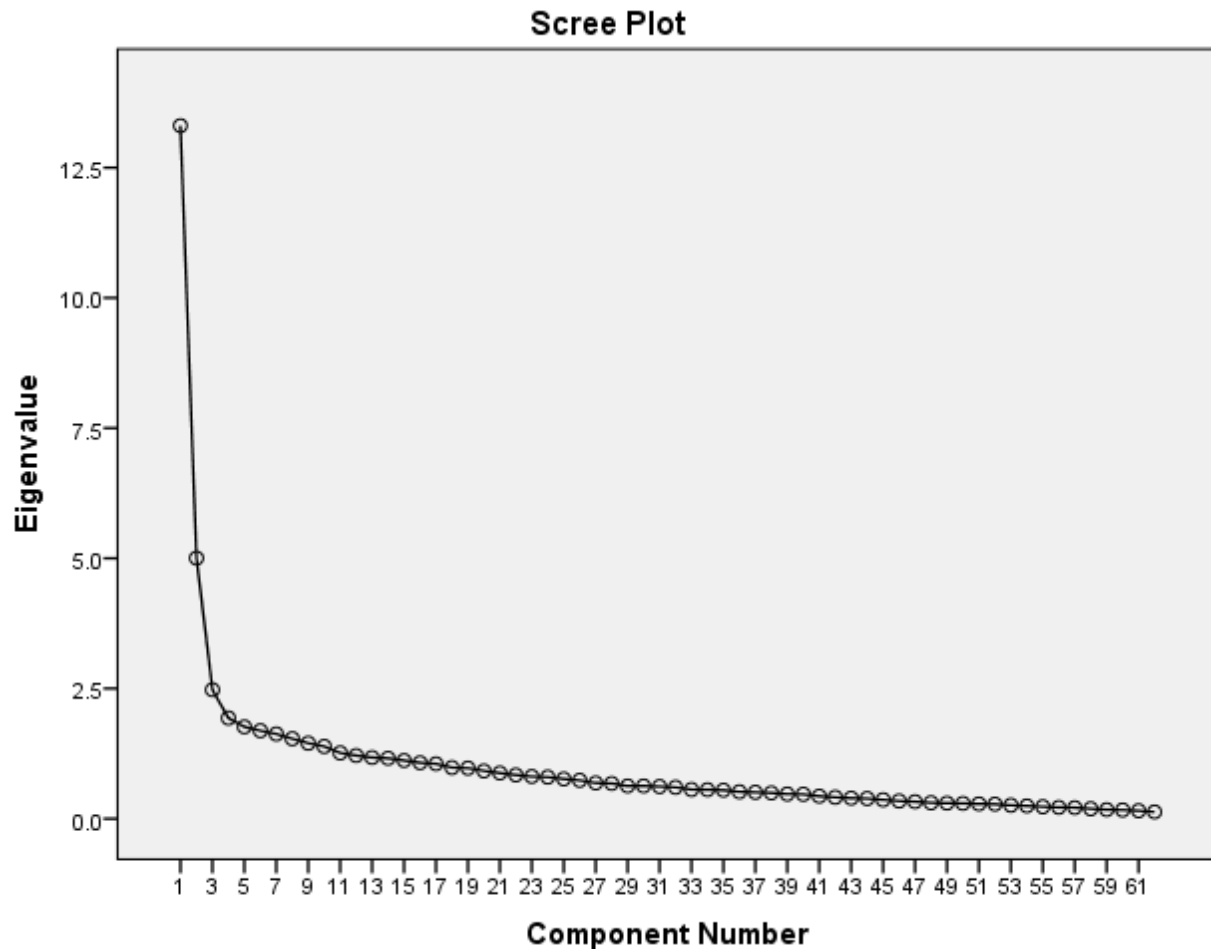
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.85
Bartlett's Test of Sphericity	Approx. Chi-Square	9408.10
	df	1891
	<i>p</i>	.000

Table 3
Eigenvalues and Total Variation of Factors (N=343)

Factors	Eigenvalues (Total)	Eigenvalues (% of Variance)	Eigenvalues (% of cumulative)	Composite Reliability (CR)
1	13.30	21.46	21.46	0.905
2	5.004	8.07	29.53	0.798
3	3.47	3.99	3.47	0.756
4	7.28	7.17	6.99	0.743

The Table 3 shows the Eigen values and composite reliability of each factor.

Figure 1



Scree Plot forms elbow (decline) at four factors which showed this scale should have four factors.

Table 4*Factors of Hung Postpartum Stress Scale (N=343)*

Factor 1: Baby's Health Related Concerns					
Item #	Factor Loading	Item #	Factor Loading	Item #	Factor Loading
10	.701	22	.708	34	.690
11	.530	24	.687	35	.625
12	.594	32	.669	61	.618
21	.638				
Factor 2: Baby's Needs and Appearance Related Concerns					
Item #	Factor Loading	Item #	Factor Loading	Item #	Factor Loading
9	.721	36	.711	45	.609
13	.663	38	.687	46	.679
17	.582	39	.669	47	.531
26	.645	40	.629	48	.662
29	.639	41	.692	49	.603
30	.708	43	.643		
Factor 3: Mother's Health Related Concerns					
Item #	Factor Loading	Item #	Factor Loading	Item #	Factor Loading
1	.587	18	.651	53	.605
2	.510	19	.653	54	.616
3	.556	25	.698	55	.672
4	.641	33	.633	56	.661
5	.620	42	.647	57	.698
6	.728	44	.689	59	.699
14	.715	50	.556	60	.709
16	.664	51	.606	62	.722
Factor 4: Social and Financial Concerns					
Item #	Factor Loading	Item #	Factor Loading	Item #	Factor Loading
7	.592	23	.608	37	.655
8	.637	27	.527	52	.634
15	.584	28	.569	58	.529
20	.698	31	.753		

Table 4 provides the factor loadings for each factor. There were found 4 factors namely; baby's health related concerns, baby's needs and appearance related concerns, mother's

health related concerns, and social and financial concerns.

Table 5*Test Retest Reliability Correlation Analysis (N=28)*

Scale	Number of Items	Cronbach's Alpha
Phase 1: Postpartum Stress Scale	62	.911
Phase 2: Postpartum Stress Scale	62	.903

Table 6*Correlation of Two Scales for Convergent Validity (N=40)*

Variable	<i>M</i>	<i>SD</i>	1	2
Perceived Stress Scale	32.29	6.063	-	
Postpartum Stress Scale	158.56	38.97	.02	--

Note. 1=perceived stress, 2=postpartum stress

The Cronbach alpha reliability of the newly adapted Hung Postpartum Scale was found to be $\alpha=.93$. The test retest reliability analysis for two phases of Hung Postpartum Stress

Scale is given in Table 5. The correlation for computing the convergent validity of the Hung Postpartum Scale is given in Table 6.

Discussion

Postpartum period is the very sensitive period in women's life (Roets et al., 2023). Hung Postpartum Stress scale is one of the effective scale that measures stress and stressors in postpartum women (Hung, 2007). There are many factors, discussed in this scale, that lead to stress in postpartum period like child care, social support.

The objective of this study was to translate Hung Postpartum Stress Scale in Urdu Language and to establish its psychometric properties for women in Bahawalpur. As this scale was developed 18 years ago, so there was a strong need to develop its psychometric properties before its use. Psychometric properties were also needed to be established due to change in cultural values. Translation and adaptation were required to get more reliable results.

A sample of 343 postpartum women were evaluated for this purpose. The Hung Postpartum Stress was translated and validated according to extensive procedure of scale translation. Validity and reliability analysis are made to establish psychometric properties of revised version.

Face validity and convergent validity of the translated version were evaluated. For the purpose of face validity participants were asked about the items and items' reflected meanings to them. For the purpose of convergent validity, the scores of participants on this scale were related to the scores on another stress scale. Results in Table 2 show a correlation among scores in Hung Postpartum Stress Scale and Perceived Stress Scale. Hence this analysis shows that validity of new version of scale is acceptable.

Overall, reliability of the scale was measured through Cronbach's Alpha. In Table 3, result shows the overall reliability of the test which is 0.93. Table 3 shows the values of composite reliability for the subscales of the updated version. Its values are also satisfactory. Then test-retest reliability analysis was made. The values of Cronbach's Alpha .91 for phase I and .90 for phase II in Table 5 show that on the basis of test retest-reliability analysis, reliability of the translated version can be considered as ideal. Factor analysis was also conducted for the test. For this purpose, subjective analysis and statistical analysis were used. Scree Plot

shows that the Hung Postpartum Stress Scale is divided into four subscales. First subscale includes baby's health related concerns, second shows baby's need and appearance related concerns, third includes mothers' health related concerns and fourth has the factors related to social and financial concerns. Correlation analysis of these factors show that all these four factors are correlated with each other.

Conclusion

Finally, results of reliability and validity analysis show that Urdu Version of Hung Postpartum Stress Scale is a trustworthy and authentic scale for measuring postpartum stressors. All the subscales are correlated with each other. Hence, this scale is easily applicable and help to evaluate the factors that are promoting stress in postpartum women.

Limitations of the Study

For the translation purpose, the postpartum mothers were included only from Bahawalpur region. The sample in this study does not include data from private hospitals. Better results could be generated with large sample size from various areas of Pakistan.

Contribution of Authors

Sehrish Wazir: Conceptualization, Methodology, Writing - Reviewing & Editing, Supervision

Saba Bashir: Methodology, Writing - Reviewing & Editing

Sidra Sattar: Investigation, Data Curation, Formal Analysis, Writing – Original Draft,

Conflict of Interest

There is no conflict of interest declared by authors.

Source of Funding

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Data Availability Statement

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [S.W.] upon the reasonable request.

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