

An Assessment of Perinatal Distress and Marital Relationships in Couples: A Validation Study

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ABSTRACT

Aim of the Study: The study conducted to assess the validation of the Major Depressive Disorder Subscale (MDDS) and Generalized Anxiety Disorder Subscale (GADS) in Parental Perinatal Distress Scale (PPDS) and to assess the validation of Scale of Marital Intimacy (SMI) and the Satisfaction with Sex Life Scale-Revised (SSLS-R).

Methodology: In study 1, Perinatal Depression Inventory (PDI) and Perinatal Anxiety Screening Scale (PASS) were translated from English into Urdu in phase I. In the phase II, Urdu versions of PDI and PASS were administered along with MDDS, GADS, and Urdu version of Subjective Happiness Scale (SHS) on 50 perinatal high risk couples selected by purposive sampling technique from the hospital. In study 2, the English versions of Kansas Marital Satisfaction Scale (KMS), SSLS-R, and the Sexual Satisfaction Scale (SSS) were translated in Urdu in phase I. In phase II, translated versions of KMS, SSS, and the SSLS-R were administered along with SMI, the Depression Anxiety Stress Scale (DASS-21) Urdu and Sexual Satisfaction Subscale Urdu on 50 healthy couples selected by purposive sampling technique from the Gujrat community.

Findings: In study 1, the correlation coefficient for MDDS with PDI is positive and significant and with SHS is negative, insignificant and non-existent. The correlation coefficient for GADS with PASS is positive and significant and with SHS is insignificant and non-existent. In study 2, the relationship of SMI with KMS is positive and significant and with stress, anxiety, and depression is negative insignificant and non-existent. The convergent validity of SSLS-R with SS-Subscale is positive and significant. The divergent validity of SSLS-R with SSS, stress, anxiety, and depression is negative and insignificant.

Conclusion: MDDS and GADS are valid indigenous tools for screening perinatal depression and perinatal anxiety in couples. Moreover, SMI and SSLS-R have been found to hold good validity for assessment of intimate marital relationships in the couples.

Keywords: Marital Intimacy, Marital Satisfaction, Perinatal Anxiety, Perinatal Depression, Sexual Satisfaction, Validity.

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Introduction

Perinatal distress is defined as the manifestation of depression and anxiety during pregnancy and one year after childbirth (Wenzel, & Kleiman, 2015). Perinatal distress has been found to effect the quality of marital relationships among couples (Ngai, & Lam, 2021). Marital relationships include aspects of marital satisfaction, marital intimacy, and sexual satisfaction among couples (Masoumi et al., 2017). Marital intimacy refers to sharing of emotions, aspirations, visions, joys and sadness between the spouses (Ismail et al., 2011). Marital satisfaction is referred to happy attitude towards his or her own marriage (King, 2016). Sexual satisfaction referred to pleasure derived from sexual activities that lead to the achievement of the orgasm between the couples (Pascoal et al., 2014).

Several assessment tools are available for the measurement of perinatal distress, marital intimacy, and sexual satisfaction in married individuals. Perinatal distress is measured by Edinburgh Postnatal Depression Scale in unanimous studies (Cox et al., 1987) conducted in the West (Coo et al., 2015; Mwape et al., 2016; Jonsdottir et al., 2017) and in the East (Husain, et al., 2011; Gausia et al., 2012; Badiya, et al., 2020). Marital intimacy is measured by Waring Intimacy Questionnaire (Waring, 1984), Personal Assessment of Intimacy in Relationships (PAIR) questionnaire (Schaefer & Olson, 1981), Marital Intimacy Needs Questionnaire (Bagarozzi, 1997) and Marital Intimacy Questionnaire (Van den Broucke et al., 1995) and so on. Similarly, sexual satisfaction is measured by New Sexual Satisfaction Scale (Štulhofer et al, 2010), Index of Sexual satisfaction (Hudson, 2013), Pinney Sexual Satisfaction Inventory (Pinney et al., 1987) to name a few instruments.

These instruments are used consistently in a lot of research studies due to their sound psychometric properties of validity. Validity refers to the quality of an instrument or scale to measure what it is supposed to measure (Borsboom et al., 2004). Construct validity is a decree about the relevance of conclusions drawn from test scores regarding a construct that inturn is defined as a scientific explanation developed to pronounce or elucidate a behaviour (Cohen & Swerdlik, 2018). Convergent validity and divergent validity are the two different types of measurement of the truthfulness of the scale used to assess the construct validity (Campbell & Fiske, 1959). Hence, the assessment of the validity of the psychological tools provides trustworthy results when used in research studies (Vakili, & Jahangiri, 2018). The objective of the present study is to assess the construct validity of indigenous developed two subscales of Parental Perinatal Distress Scale (Shafiq, 2023) that is required to use in further studies for the investigation of perinatal distress among couples. Moreover, indigenously developed Scale for Marital Intimacy (Shafiq & Naz, 2023) is validated in the present study to use in future researches. In addition, a translated and adapted version of Satisfaction with Sex Life Scale-Revised (Park, & MacDonald, 2022) has been validated. The significance of the study is to provide validated versions of PPDS, SMI, and SSLS-R for subsequent use in researches designed for the investigation of issues related with perinatal depression, perinatal anxiety, marital intimacy and sexual satisfaction among couples in Pakistan.

Hypotheses of the Study

The hypotheses of the study 1 are given below

- 1) There would be a positive association between PPDS subscales with perinatal depression inventory and perinatal anxiety screening scale.
- 2) There would be a negative or no association between PPDS subscales and subjective happiness scale.

The hypotheses of the study 2 are given below

- 1) There would be a positive association between SMI and KMS scale.
- 2) There would be a negative or no association between SMI and DASS.
- 3) There would be a positive association between SSLS-R and SS subscale.
- 4) There would be a negative or no association between SSLS-R and DASS.

Method

Research Design

This study was approved by Advance Studies and Research Board (ASRB), University of Gujrat, Gujrat, with letter no: UOG/ASRB/1613. A cross-sectional correlational research design, aimed to assess the outcome measures at the same time in the participants (Setia, 2016) is used in the current research. The present research has been carried out in two studies, each having two phases. In study 1, the English versions of Perinatal Depression Inventory (PDI) and Perinatal Anxiety Screening Scale (PASS) were translated in Urdu in phase I. In the phase II, translated versions of PDI and PASS were administered along with the Major Depressive Disorder Subscale, Generalized Anxiety Disorder Subscale, and Urdu version of Subjective Happiness Scale on 50 perinatal couples selected by purposive sampling technique from Robina Sajid Hospital, Gujrat. In study 2, the English versions of Kansas Marital Satisfaction Scale (KMS), the Satisfaction with Sex Life Scale-Revised, and the Sexual Satisfaction Scale (SSS) were translated in Urdu in phase I. In phase II, translated versions of KMS, SSS, and the Satisfaction with Sex Life Scale-Revised were administered along with SMI, the Depression Anxiety Stress Scale-21 Urdu version and Sexual Satisfaction Subscale Urdu version on 50 healthy couples selected by purposive sampling technique from the Gujrat community.

Study 1

Instruments

Parental Perinatal Distress Scale (PPDS). It is indigenously developed scale with 42 items, 4 subscales, and 0.90 Cronbach's Alpha reliability coefficient. Two subscales, Major Depressive Disorder and Generalized Anxiety Disorder, each with 14 and 8 items respectively were used in the present study. It is a Likert scale with four options, "Always = 3, Often = 2, Sometimes = 1, Never = 0". The scores in Major Depressive Disorder subscale ranged from 0 to 42, with higher score indicating high level of depression. The scores in Generalized Anxiety Disorder subscale ranged from 0 to 24, with higher score indicating high level of anxiety (Shafiq, 2023).

Perinatal Depression Inventory (PDI). It contained 14 items. It is a Likert scale with five options, "always= 5 to never =1". The scores ranged from 14 to 70 with higher score indicating high depression. It has good validity (Brodey et al., 2016).

Perinatal Anxiety Screening Scale (PASS). It contained 31 items. It is a Likert scale with five options, "almost always= 3 to not at all =0". The scores ranged from 0 to 93 with higher score indicating high anxiety (Somerville, et al., 2014).

Subjective Happiness Scale (SHS)-Urdu. It contained 4 items. The scores ranged from 4 to 28 with higher score indicating high happiness. The Cronbach's alpha coefficients for the SHS range from 0.79 to 0.94 (Lyubomirsky, & Lepper, 1999).

Phase I: Translation and Adaptation. WHO guidelines for translation and adaptation of instruments (WHO, 2023) were carried out with PDI and PASS. A health professional (Ph.D. in Clinical Psychology) conducted a forward translation by maintaining conceptual equivalence, using clear and precise wording and avoiding jargons in Urdu version. An expert panel of three Ph. D. professionals in teaching and scale development evaluated the expression of the words in Urdu version and suggested alternatives for a few words. The improved Urdu version was back translated in the English by an expert (Ph.D. in Social Psychology). The incongruities concerning original English version and back translated English version were removed. The final Urdu version of PDI and PASS was pre-tested on 10 participants (5 couples) visiting Robina Sajid Hospital, Gujrat during perinatal period. The PDI-Urdu version and PASS-Urdu version were found to be comprehensive and concise measure of perinatal depression and perinatal anxiety in the couples.

Phase II: Validation Study. After pre-test, the Urdu-translated versions of the PDI and PASS were employed to conduct a validity analysis, with Major Depressive Disorder subscale and Generalized Anxiety Disorder subscale of PPDS respectively.

Sample

A sample of 100 participants (50 high risk couples) was taken from the screened from 386 participants (193 couples) from Robina Sajid Hospital, Gujrat. They were selected by purposive sampling technique with inclusion criteria of >28 score on Major Depressive Disorder subscale and >17 on Generalized Anxiety Disorder subscale. The mean age of the wives was (M=25.54, SD = 5.62) and of the husbands was (M=31.98, SD = 7.84).

Procedure

First of all permission was taken from the hospital head to commence the study. A total of 396 participants were contacted who visited Robina Sajid Hospital, Gujrat. Out of 396, 386 (193 couples) were willing to participate for the screening of perinatal distress. In total 128 (64 couples) were screened high risk for perinatal distress with Major Depressive Disorder subscale and Generalized Anxiety Disorder subscale of PPDS. The 100 participants (50 couples) were briefed about the nature and aims of the study. Demographic information was filled out. They were given the PDI, PASS, and SHS in Urdu to complete. Verbal informed consent was taken and they were assured for the confidentiality and privacy of their revealed information. Each participant took 10-15 minutes to fill out the instruments. They were thanked in the end.

Study 2

Instruments

Scale of Marital Intimacy (SMI). It is an indigenously developed scale, containing 16 items with 5 subscales, Dyadism, Genuineness, Openness, Positive Cliquishness, and Negative Cliquishness. It is a Likert scale with seven options, “strongly agree= 7 to strongly disagree =1”. The scores ranged from 16 to 112 with higher score indicating high marital intimacy. The Cronbach’s Alpha reliability of SMI was 0.74 (Shafiq & Naz, 2023).

Kansas Marital Satisfaction Scale (KMS). It contained 3 items and Cronbach alphas for the scale were 0.89 and 0.93 for husbands and wives respectively. The KMS scale along with Marital Conventionalization Scale (Anderson et al., 1983) showed good concurrent validity. It is a Likert scale with seven options, “strongly agree= 7 to strongly disagree =1”. The scores ranged from 3 to 21 with higher score indicating high marital satisfaction (Schumm et al., 1983).

Satisfaction with Sex Life Scale-Revised (SSLS-R). It contained 4 items and Cronbach alphas for the scale was 0.97. It is a Likert scale with seven options, “strongly agree= 7 to strongly disagree =1”. The scores ranged from 4 to 24 with higher score indicating high sexual satisfaction (Park, & MacDonald, 2022).

Marital Satisfaction Scale (MSS). It contained 33 items with 11 subscales. Sexual Satisfaction is one of the subscale that possess three items. It is a Likert scale with four options, “Always = 3, Often = 2, Sometimes = 1, Never =0”. The scores ranged from 0 to 21, with higher score indicating sexual satisfaction. The Cronbach’s Alpha reliability and test-retest reliability of MSS was 0.69 and 0.85 respectively. The convergent validity of MSS with Adult Self-Perception Profile (Messer, & Harter, 1986) and Spouse Rating Scale (Sacco et al., 1993) is 0.61 and 0.56 respectively (Ayub, 2010).

Sexual Satisfaction Scale (SSS). It is composed of 4 items with Cronbach’s Alpha reliability 0.91. It is a Likert scale with six response categories ranging “extremely dissatisfied =6 to extremely satisfied = 1”. The total score range from 4-24. Higher scores indicate greater problems with sexual satisfaction. It is one

out of ten scales in Multiple Sclerosis Quality of Life Inventory (MSQLI) (The Consortium of Multiple Sclerosis Centers Health Services Research Subcommittee, 1997).

Depression Anxiety Stress Scale-21 (DASS-21). Urdu version (Husain, & Gulzar, 2020) of DASS (Lovibond, & Lovibond, 1995) with 21 items for assessment of depression, anxiety, and stress was used. It is a Likert scale with four response categories ranging “not at all =0 to almost always= 3”. The total score range from 0-63. Higher scores indicate higher levels of depression, anxiety, and stress experienced by the participants.

Phase I: Translation and Adaptation. The forward translation of English versions of KMS, SSLS-R, and SSS was carried out by a health professional (Ph.D. in Clinical Psychology) by maintaining conceptual equivalence, using clear and precise wording and avoiding jargons in Urdu version. An expert panel of three Ph. D. professionals in teaching and scale development evaluated the expression of the words in Urdu version and suggested alternatives for a few words. The improved Urdu version was back translated in the English by an expert (Ph.D. in Social Psychology). The discrepancies between original English version and back translated English version were removed. The final Urdu version of KMS, SSLS-R, and SSS was pre-tested on 10 participants (5 couples) selected by convenient sampling technique from Gujrat. The PDI-Urdu version and PASS-Urdu version were found to be comprehensive and concise measure of perinatal depression and perinatal anxiety in the couples (WHO, 2023).

Phase II: Validation Study. After pre-test, the Urdu-translated versions of the SSLS-R, SSS; and KMS scale were employed to conduct a validity analysis, with SS subscale and SMI respectively.

Sample

A sample of 100 participants (50 healthy couples) was taken from the screened from Gujrat community. They were selected by purposive sampling technique with the inclusion criteria of one year of marriage and having at least one child. The mean age (in years) of the wives was (M=38.78, SD = 11.28) and of the husbands was (M=43.72, SD = 12.05).

Procedure

A total of 110 participants were contacted who resided in Gujrat. In total 100 participants (50 couples) were willing to participate in the study. They were briefed about the nature and aims of the study. Demographic information was filled out. They were given the SSLS-R, SSS, SS subscale, DASS, KMS scale, and SMI in Urdu to complete. Verbal informed consent was taken and they were assured for the confidentiality and privacy of their revealed information. Each participant typically spent approximately 10-15 minutes to fill out the questionnaire. They were thanked in the end.

Results

The results of the present study have been analysed in Statistical Package for Social Sciences (SPSS-24 version). The results of the study 1 are shown in table 1 and table 2. The results of study 2 are shown in table 3 and table 4.

Table 1. *Convergent and divergent validity of Major Depressive Disorder Subscale (N=100)*

Subscale/scales	Mean	Std. Deviation	PDI	SHS
MDDS	34.33	3.21	.52**	-.07
PDI	62.24	4.15	-	.15
SHS	6.32	1.05	-	-

**p<0.01

Table 1 showed that the Pearson product moment correlation coefficient for convergent validity of Major Depressive Disorder Subscale with Perinatal Depression Inventory is positive and significant ($r=0.52$, $p<0.05$). The correlation coefficient for divergent validity of Major Depressive Disorder Subscale with Subjective Happiness Scale is insignificant and non-existent in reverse direction ($r= -0.07$, $p<0.05$). The

level of Major Depressive Disorder is high (M=34.33, SD=3.21) in couples, indicating presence of high risk for perinatal depression.

Table 2. *Convergent and divergent validity of Generalized Anxiety Disorder Subscale (N=100)*

Subscale/scales	Mean	Std. Deviation	PASS	SHS
GADS	21.66	1.62	.79**	.04
PASS	68.79	3.48	-	-.03
SHS	6.32	1.05	-	-

**p<0.01

Table 2 showed that the Pearson product moment correlation coefficient for convergent validity of Generalized Anxiety Disorder Subscale with Perinatal Anxiety Screening Scale is positive and significant (r=0.79, p<0.05). The correlation coefficient for divergent validity of Generalized Anxiety Disorder Subscale with Subjective Happiness Scale is insignificant and non-existent (r= 0.04, p<0.05). The level of MDD is high (M=21.66, SD=1.62) in couples, indicating presence of high risk for perinatal anxiety.

Table 3. *Convergent and divergent validity of the Scale of Marital Intimacy (N=100)*

Subscales/ Scales	Mean	Std. Deviation	KMSS	Stress	Anxiety	Depression
SMI	47.11	9.62	.83**	-.04	-.02	-.01
KMS	11.34	2.64	-	-.001	.04	.06
Stress	8.78	3.90	-	-	.66**	.72**
Anxiety	8.21	4.19	-	-	-	.79**
Depression	8.07	4.48	-	-	-	-

**p<0.01

Table 3 showed that the Pearson product moment correlation coefficient for convergent validity of SMI with KMS is positive and significant (r=0.83, p<0.05). The correlation coefficient for divergent validity of SMI with stress (r= -0.04, p<0.05), anxiety (r= -0.02, p<0.05), and depression (r= -0.01, p<0.05) is insignificant and non-existent in reverse direction. The level of marital intimacy is moderate (M=47.11, SD=9.62) in healthy couples, indicating presence of average relational closeness in marriage among couples.

Table 4. *Convergent and divergent validity of Satisfaction with Sex Life Scale-Revised (N=100).*

Subscale/ Scales	Mean	Std. Deviation	SS- Subscale	SSS	Stress	Anxiety	Depression
SSLS-R	11.90	2.81	.66**	-.50**	-.02	-.02	-.02
SS-Subscale	7.52	1.43	-	-.24*	.11	.07	.11
SSS	3.52	2.19	-	-	.03	.05	.11
Stress	8.78	3.90	-	-	-	.66**	.72**
Anxiety	8.21	4.19	-	-	-	-	.79**
Depression	8.07	4.48	-	-	-	-	-

**p<0.01

Table 4 showed that the Pearson product moment correlation coefficient for convergent validity of SSLS-R with SS-Subscale is positive and significant (r=0.66, p<0.05). The correlation coefficient for divergent validity of SSLS-R with SSS (r= -0.24, p<0.05) is significant with weak inverse relationship. The correlation coefficient for divergent validity of SSLS-R with stress (r= -0.02, p<0.05), anxiety (r= -0.02, p<0.05), and depression (r= -0.02, p<0.05) is insignificant and non-existent in reverse direction. The level of sexual satisfaction is moderate (M=47.11, SD=9.62) in healthy couples, indicating presence of average sexual gratification in marital relationships among couples.

Discussion

The results of the two studies conducted on two different samples yielded consistent findings for supporting the convergent and divergent validities of assessment tools, two subscales of Parental Perinatal Distress Scale and SMI respectively. In order to interpret correlation coefficients for establishment of convergent and divergent validation, Ary, Jacobs, and Razavieh (1996) recommendations for cut-off scores were used. They implied that $r=0.00$ to 0.19 exhibited negligible relationship, $r=0.20$ to 0.49 exhibited low relationship, $r=0.50$ to 0.69 exhibited moderate relationship, $r=0.70$ to 0.85 exhibited high relationship, and $r=0.86$ to 1.00 exhibited very high association. The acceptable range for the convergent validity is the correlation coefficient value to be not less than 0.50 to 0.70 and above (Carlson & Herdman, 2012). However, divergent validity is a correlation coefficient indicating if there is little or no relation exists and it is insignificant in the two constructs (Cohen, & Swerdlik, 2018).

In study 1, the first hypothesis stated, “There would be a positive association between PPDS subscales with perinatal depression inventory and perinatal anxiety screening scale”. The findings of the present study supported the hypothesis (see Table 1 and 2). The results are consistent according to the findings of the previous studies. Brodey et al (2016) found positive correlation for depression measured with PDI and Beck Depression Inventory-II (Beck et al. 1996). Similarly, Somerville, et al., 2014 found positive correlation for anxiety measured with PASS and anxiety subscale of DASS and Spielberg State-Trait Anxiety Inventory (Spielberger et al. 1983).

In study 1, the second hypothesis stated, “There would be a negative or no association between PPDS subscales and subjective happiness scale”. The findings of the present study supported the hypothesis (see Table 1 and 2). The results are consistent according to the findings of the previous studies. The depression and anxiety is found to be negatively associated with happiness (Milić et al., 2019; Qayyum et al., 2020; Spinhoven et al., 2021).

The first hypothesis, in study 2 stated, “There would be a positive association between SMI and KMS scale”. The findings of the present study supported the hypothesis (see Table 3). The results are consistent according to the findings of the previous studies. The marital intimacy and marital satisfaction is found to be positively associated (Tolstedt, & Stokes, 1983; Greeff, & Hildegard, 2001).

The second hypothesis, in study 2 stated, “There would be a negative or no association between SMI and DASS”. The findings of the present study supported the hypothesis (see Table 3). The results are consistent according to the findings of the previous studies. The marital intimacy and depression, anxiety, and stress are found to be negatively associated (Waring, & Patton, 1984; Whiffen, & Oliver, 2013; Rodríguez-Domínguez et al., 2022).

The third hypothesis, in study 2 stated, “There would be a positive association between SSLS-R and SS subscale”. The findings of the present study supported the hypothesis (see Table 4). The results are consistent according to the findings of the previous study. Park and MacDonald (2022) found positive correlation for sexual satisfaction measured by SSLS-R and Sexual Desire Inventory-2 (Spector et al., 1996).

The fourth hypothesis, in study 2 stated, “There would be a negative or no association between SSLS-R and DASS”. The findings of the present study supported the hypothesis (see Table 4). The results are consistent according to the findings of the previous studies. The sexual satisfaction and depression, anxiety, and stress are found to be negatively associated (Morokqff, & Gilliland, 1993; Trudel, & Goldfarb, 2010).

Conclusion

Conclusively, the findings of the present study provided empirical evidences for sound validity of Major Depressive Disorder Subscale, Generalized Anxiety Disorder Subscale, Scale of Marital Intimacy, and Satisfaction with Sex Life Scale-Revised in couples. Therefore, these assessment tools hold sound

psychometric properties for usage in clinical setups for the purpose of psychotherapeutic interventions, prevention, and rehabilitations of perinatal distress and marital relationships of husbands and wives in Pakistan.

Limitations and Suggestions

The small sample size and sampling technique are considered to be the limitation of the study because it cannot be used to investigate predictive relationships among the study variables. The future research might include cluster sampling technique with large sample taken from various provinces in Pakistan. This would be helpful to enhance generalizability of the study findings on larger sample.

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Conflict of Interest

Authors have no conflict of interest.

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