Clinical and Experimental Health Sciences

Prenatal Psychosocial Profile: Validity and Reliability Study to Its Use in Turkey

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ABSTRACT

Objective: This study was planned to test the statistical properties of the prenatal psychosocial profile assessment tool in Turkish sample and to examine its validity and reliability on healthy pregnant women.

Methods: This reliability and validity study was conducted in the gynecology and obstetrics outpatient clinic of a training and research hospital with 440 healthy pregnant women between March and June 2017.

Results: In the analysis performed for internal consistency in the Prenatal Psychosocial Profile (PPP) reliability study, Cronbach's alpha reliability coefficient was found to be μ=.75 for the stress subscale, μ = .94 for the social support-partner subscale, μ = .96 for the social support-other people subscale, and μ= .80 for the self-esteem subscale. In the construct validity of the PPP-stress subscale, loads of all items except one item were found to be sufficient, and in the social support-partner, social support-other people, and self-esteem subscales, loads of all items were found to be sufficient.

Conclusion: The Prenatal Psychosocial Profile-Turkish Version is a valid and reliable assessment tool that can be used to determine the psychosocial profile of women during pregnancy.

Keywords: Prenatal psychosocial profile, stress, social support, self-esteem

1. INTRODUCTION

Pregnancy is an adaptation process, in which bio-psychosocial changes occur in a woman, a parenting relationship is established between the mother and fetus, and consequently, the birth of a new individual happens (1,2). Changes experienced in this adaptation process may adversely affect the women both physiologically and psychologically and may prevent the healthy progression of pregnancy (3). Therefore, pregnant women, their partners, and other family members need to ensure adaptation to changes that occur during pregnancy (4).

The process of adaptation to pregnancy differs for every woman (1). Some factors that are effective in these differences are unwanted pregnancy, inadequacy in receiving health care, unhealthy housing conditions, communication barriers with the family and environment, malnutrition, tobacco/substance use, the lack of security, violence, and inadequate social support. Each of these factors can be a source of stress in pregnant women, can lead to depression and disrupt the process of adaptation to pregnancy by affecting self-esteem negatively (5,6).

Psychosocial stress in pregnancy is defined as the situation in which the woman feels unworthy and expresses this both behaviorally and psychologically when she is unable to cope with the difficulty she experiences in meeting her requirements. In the study in which Woods et al. (2010) evaluated stress during pregnancy, it was determined that domestic violence, substaence use, and two or more health problems increased the incidence of psychosocial stress during pregnancy by three or four times (7). Studies reported that stress experienced during pregnancy affects both the physiology of pregnancy and the postpartum period negatively (7,8). Accordingly, the incidence rates of physiological problems such as preterm birth, hypertensive disorders, placental anomalies, antenatal bleeding, difficulty in delivery, interventional delivery, spontaneous abortus, intrauterine growth retardation, a low birth weight and APGAR score of a newborn, and perinatal mortality are also known to increase in women with the poor mental state during pregnancy (8-11).

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Social support is another variable of adaptation to pregnancy. Social support is one of the important factors affecting the woman's adaptation to pregnancy and the postpartum period and her coping with stress (12). The studies have revealed that pregnant women at risk need more social support (8), social support plays a preventive role in depression during pregnancy (13,14), and the incidence of anxiety and depression in pregnant women who receive inadequate partner support increases (15,16). The pregnancy process and postpartum period are among the periods when social support is important for the mother and the infant (12,17,18) because the process of the mother's adaptation to the maternal role starts before pregnancy and continues postnatally. One of the most significant factors that help the woman adapt to this period, which is also called the process of learning motherhood, is social support (17,19,20). Similarly, it enhances attachment to her infant and facilitates communication with her family/immediate environment (12,17).

Self-esteem, which forms the basis of an individual's personality structure (21), is known to have a feature that is systematically affected by developmental changes throughout life. According to various theoretical perspectives, life events, and especially the transition to parenting, may be related to changes in self-esteem (22). One of these theoretical perspectives emphasizes the role of biological effects on self-esteem. It focuses on the physiological and neurological changes associated with the transition to motherhood (16,22). Another theoretical perspective asserts that having the sense of motherhood is an important opportunity for the development of a person's self-esteem (22). Self-esteem in pregnancy is associated with neonatal outcomes in the postpartum period such as height, weight, Apgar score, mother-infant attachment and mother's ability to care for her infant, and low self-esteem leads to mental disorders such as postpartum depression (16,23,24).

There is a correlation between the stress experienced during pregnancy, social support received from the husband and relatives, self-esteem and pregnancy outcomes (9-11). Thus, the negative psychosocial profile during pregnancy is an issue to which attention should be paid due to its effect on the mother and infant health postpartum (9-11,16,23,24). The American College of Obstetricians and Gynecologists (ACOG) (2006) advocates the assessment of risk factors by psychosocial screening regardless of the social status, educational level, race or ethnic origin of all women who want to receive prenatal care (5). Moreover, it is recommended to perform psychosocial screening in every trimester regarding the possibility that problems that are not found in the first prenatal follow-up may occur later in pregnancy (5,25,26).

In Turkey, risk assessment is performed by taking the present status and past obstetric history and general medical history of pregnant women. However, the psychosocial profile, which is composed of stress, social support, and self-esteem, is not evaluated. In this context, there is the PPP assessment tool developed by Curry et al. (1994) in the United States. The relationship between psychosocial factors and pregnancy outcomes constitutes its theoretical framework (6). The PPP is a 44-item Likert-type assessment tool consisting of four subscales (stress, social support-partner, social support-other people, and self-esteem) that can be applied to pregnant women. The PPP was designed to measure the stress perceived by women during pregnancy, the social support they receive from their partners/relatives, and their self-esteem. The assessment tool has been used in different cultures such as American, Caucasian, Spanish, African-American, and Brazilian, and it is implemented successfully for a psychosocial assessment (27).

In Turkey, there are tools assessing stress, social support, and self-esteem during pregnancy and studies conducted on this subject. However, there is no assessment tool containing all the components of the psychosocial profile. This study was planned to adapt the prenatal psychosocial profile assessment tool to Turkish sample and examine its validity and reliability on healthy pregnant women.

2. METHODS

2.1. Procedures performed before the data collection

At the beginning of the study, it was attempted to reach Professor Dr. Mary Ann Curry, who developed the PPP assessment tool, via email. However, since she is retired and transferred her rights to Dr. Linda Bullock, permission to use the PPP assessment tool was received from Dr. Bullock. Furthermore, the original version of the assessment tool and the calculation sheet were requested from Dr. Bullock.

2.2. Analysis of linguistic equivalence, content and scope validity

To analyze the linguistic equivalence, the content validity of the prenatal psychosocial profile assessment tool, the Prenatal Psychosocial Profile-Turkish Version was created using six methodological steps suggested by Beaton et al. (2000) (Figure 1) (28). According to this, at the first stage, two separate translations of the current tool (T1 & T2) were done by the researchers and a professional translator not related to the subject. Afterward, the translations (T1 & T2) were brought together, and the inconsistency between the translations was eliminated. After the corrections were completed, with the combination of the translations (T1 & T2), T1-2 was created. T1-2 was retranslated by a professional translator, whose native language was English, by working with the original version of the scale (RT1). RT1 was sent to Dr. Bullock, the owner of the PPP assessment tool, by requesting to assess its linguistic validity. By considering Dr. Bullock's recommendations and working with all reports of T1, T2, T1-2, RT1, whether there was any change in meaning according to the original scale was evaluated, and the Turkish version of the scale (TV1) was created. For the evaluation of cultural appropriateness, linguistic equivalence, and content validity, TV1 was sent to experts in the field, and necessary corrections were made following their recommendations.

Turkish version 2 of the assessment tool (TV2) was created. The Content Validity Index (CVI) was used to evaluate expert opinions. While calculating the CVI score, for each item, what percentage of the ten experts gave three or four points to the item was calculated (Item CVI score). In the evaluation, it was calculated that all items (100%) received 3-4 points, and all items were found to be suitable.

The comprehensibility of the final version of the PPP assessment tool was evaluated by conducting a pilot study in a group consisting of 15 people. With the necessary corrections, the final form of the Turkish version of the PPP was created (PPP-TV).

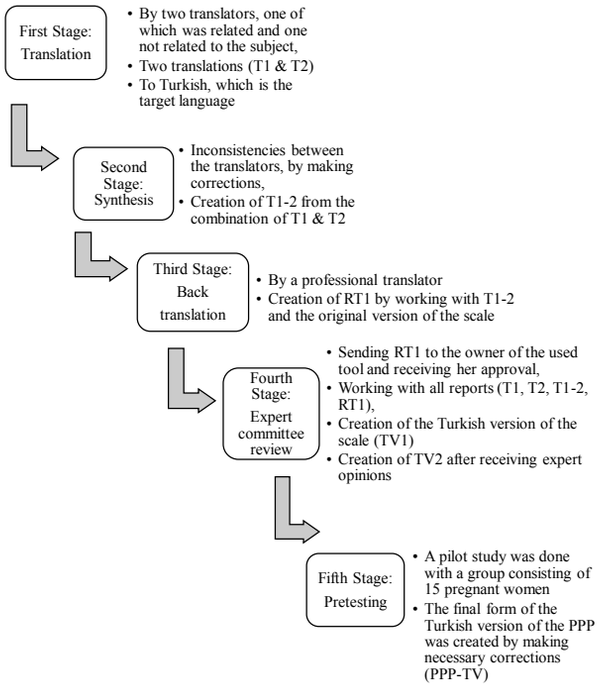


Figure 1. *Steps applied for linguistic equivalence and cultural adaptation*

2.3.Data collection

The study was conducted in the Gynecology and Obstetrics Outpatient Clinic of a training and research hospital between March and June 2017. The study sample consisted of all pregnant women who applied to the Gynecology and Obstetrics Outpatient Clinic. Pregnant women who had no chronic or pregnancy-related disease diagnosed by a physician, who knew Turkish at a level that they could understand, and answer the questions, and who agreed to participate in the research were included in the study sample.

In the literature, it is recommended to reach five to ten times more participants than the number of the items in the scale while the sample size is determined in validity and reliability studies (29,30). Validity and reliability studies were carried out with 440 healthy pregnant women. The questionnaire containing the socio-demographic and obstetric characteristics of pregnant women, which was prepared as a result of the literature review, and the Prenatal Psychosocial Profile were filled out by the researcher face-to-face with the pregnant women, who agreed to participate in the study, and each interview lasted for 10 minutes on average.

2.4. Data Collection Tools

The Questionnaire Containing Socio-Demographic and Obstetric Characteristics of Pregnant Women

The form, which was developed by the researcher as a result of the literature review, consists of 25 questions in total, 12 questions related to socio-demographic characteristics of pregnant women and 13 questions related to obstetric characteristics. This questionnaire includes questions about socio-demographic characteristics such as age, marital status, educational status, perception of economic level, employment status, etc. and questions about obstetrics characteristics such as the number of pregnancies and live births, the status of planning to continue the pregnancy controls, smoking/alcohol use during pregnancy, herself and her partner's status of wanting the pregnancy.

Prenatal Psychosocial Profile

The PPP is a Likert-type assessment tool consisting of four subscales and a total of 44 items. Stress, which is the first subscale, consists of 11 items, including factors such as financial concerns, family-related problems, being pregnant, being exposed to violence, and problems related to working life. All items are answered in four-point Likert type graded between 1 and 4. The four-point Likert-type scale was classified as follows: no stress = 1, little stress = 2, medium-level stress = 3, severe stress = 4. The lowest score to be obtained from this subscale is 11, and the highest score is 44. As the score received from the subscale increases, the stress level also increases.

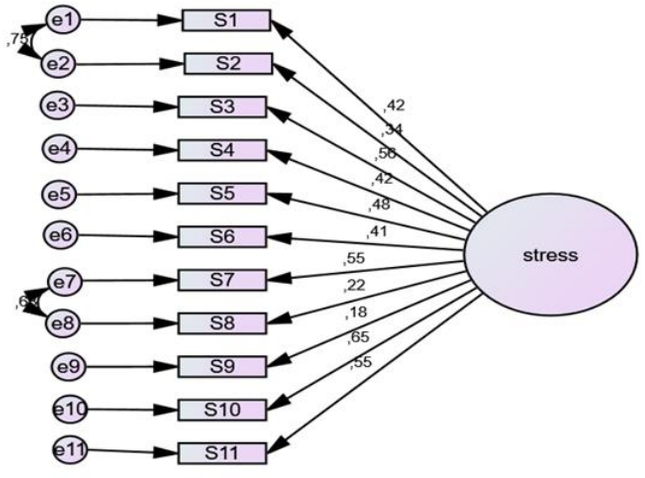
The social support subscale consists of 11 items questioning how satisfied the woman is with the support received during pregnancy. This subscale is the short version of Brown's Support Behaviors Inventory. The social support subscale was repeated twice as social support-partner and social support-other people. In the first repetition, the social support of the spouse/partner is questioned, while in the second repetition, the social support of other people is questioned. If the woman does not have a spouse/partner, this subscale is filled out only once by considering the support of the surrounding people. All items are answered in a six-point Likert type graded between 1 and 6. The six-point Likert-type scale was classified as follows: I am not satisfied at all = 1, I am very satisfied = 6. The lowest score to be obtained from this subscale is 11, and the highest score is 66. As the score received from the subscale increases, the social support level also increases (2).

In the self-esteem subscale, in addition to Rosenberg's self-esteem scale, the item "I feel that I can control my life" was added. Therefore, a new subscale of 11 items was created (2).

All items are answered in four-point Likert type graded between 1 and 4. The four-point Likert-type scale was classified as follows: completely agree = 1, agree = 2, disagree = 3, strongly disagree = 4. While half of the items included expressions related to feeling valued, feeling satisfied, and positive attitude, the other half included negative expressions related to feeling useless and unsuccessful. When calculating the total score to be obtained from the subscale, negative expressions should be included in the calculation by reversing them (5 items will be scored in reverse). As the score obtained from the subscale increases, self-esteem is considered to be high.

2.5. Data analysis

The data were analyzed using the SPSS version 23.0 and AMOS 26 packaged software. We used AMOS 26 in order to perform the confirmatory factor analysis and used SPSS 23.0 in order to perform the descriptive statistics, exploratory factor analysis, and correlation analysis. The descriptive statistics of the continuous variables in the study were presented as mean, standard deviation, minimum and maximum values, whereas the descriptive statistics of the categorical variables were presented as frequency and percentage. The correlation reliability coefficients were used for the PPP reliability study, and Cronbach's alpha coefficients were used for internal consistency. Pearson's product-moment coefficients and the t-test were used for the test-retest measurements of the PPP assessment tool. For validity analysis, the confirmatory factor analysis (Figures 2-3-4-5) and the exploratory factor analysis were used.

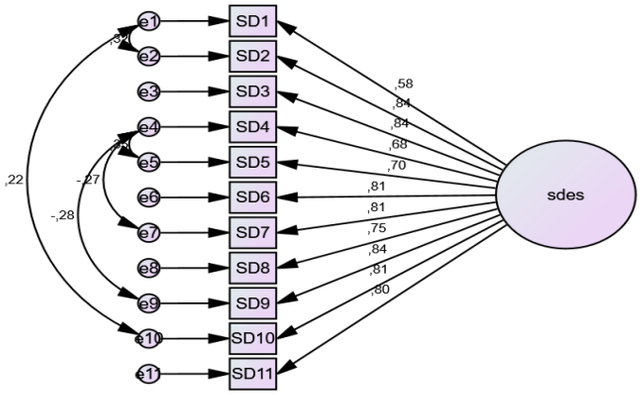


Chi-Square=136,1, Sd=42, RMSEA=0,071

Figure 2. *Confirmatory factor analysis of stress subscale of PPP*

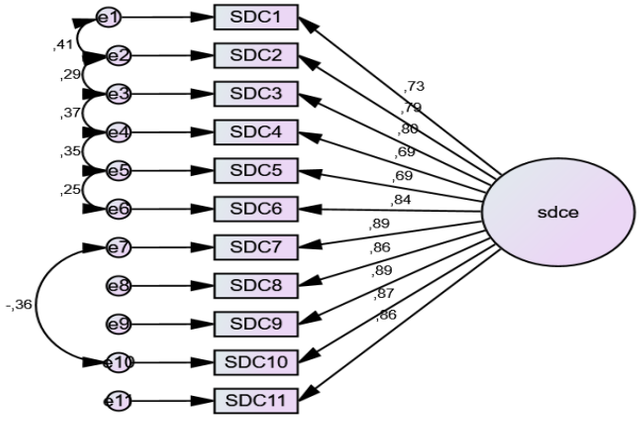
2.6.Ethical issues

In order to conduct the study, permission was obtained from the administrator of the hospital where data would be collected, and written permission was obtained from the ethics committee (Istanbul University Cerrahpaşa Clinical Research Ethics Committee Approval Date: 13.12.2016, Approval Number: A-01). In accordance with the Declaration of Helsinki, written and verbal information about the study and the nature of the study was provided to the participants, and their written consent was obtained.



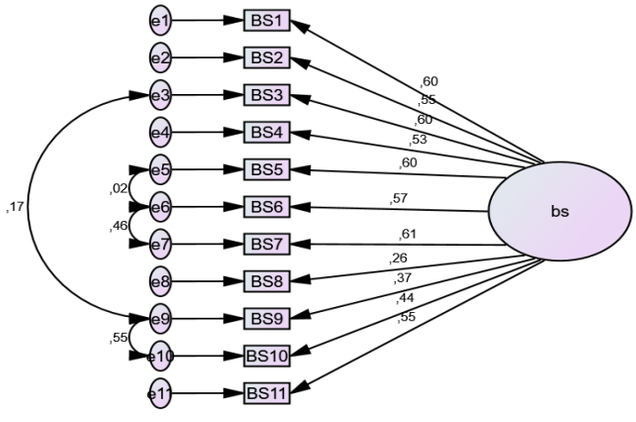
Chi-Square=215,11, Sd=45, RMSEA=0,084

Figure 3. *Confirmatory factor analysis of partner support subscale of PPP*



Chi-Square=224,7, Sd=46, RMSEA=0,088

Figure 4. *Confirmatory factor analysis of other support subscale of PPP*



Chi-Square=143,803, Sd=40, RMSEA=0,077

Figure 5. *Confirmatory factor analysis of self-esteem subscale of PPP*

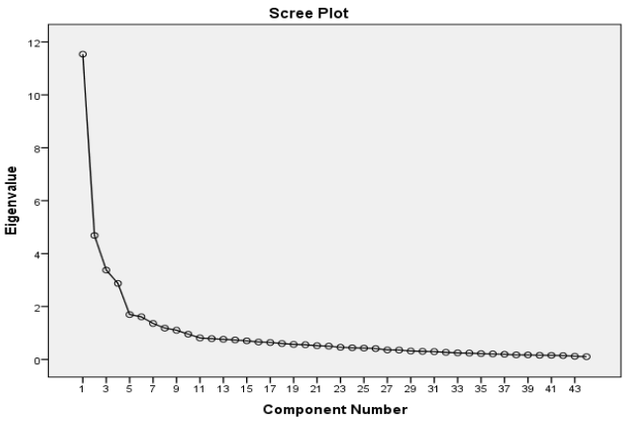


Figure 6. *Scree plot*

3. RESULTS

It was found that the mean age of the pregnant women included in the study was 28.42 ± 5.59 years (min: 18, max: 44), more than half of them (57.7%) received education under 8 years, the majority (72.0%) of them did not work and had an income equal to expenses (70.9%). It was observed that the mean marriage duration of the pregnant women was 6.00 ± 5.05 (min: 1, max: 28) years, a great majority (90.2%) considered their marital relationship as good, and most of them had a nuclear family (86.1%) (Table 1).

Table 1. *Distribution of socio-demographic characteristics of pregnant women (n = 440).*

Characteristics	n	%
Age		
28 years and under	237	53.9
Above 28 years old	203	46.1
Education		
Under 8 years	254	57.7
8 years or more	186	42.3
Employment status		
Employed	121	27.5
Unemployed	319	72.0
Economical situation		
Income less than expenses	111	25.2
Income equivalent to expenses	312	70.9
Income is more than expenses	17	3.9
Family type		
Nuclear family	379	86.1
Extended family	61	13.9
Marriage duration		
Under 5 years	223	50.7
5 years or more	217	49.3
Evaluation of the marital relationship		
Good	397	90.2
Middle	38	8.6
Bad	5	1.2

When the obstetric characteristics of the pregnant women included in the study were examined, it was found that nearly half of them experienced three and more pregnancies (40.5%) and were in the third trimester of pregnancy (48.9%), and most of them had planned pregnancy (73.6%). The mean gestational week of the participants was found to be 26.63±10.30, and the number of living children to be 1.66±0.91 (Table 2).

Table 2. *Distribution of obstetric and pregnancy-related characteristics of pregnant women (n = 440).*

Characteristics	n	%
Number of pregnancies		
One pregnancy	141	32.0
Two pregnancies	121	27.5
Three and more pregnancies	178	40.5
Pregnancy period		
I trimester	66	15.0
II trimester	159	36.1
III trimester	215	48.9
Pregnancy planning status		
Planned	324	73.6
Not planned	116	26.4
	Range	**Mean (SD)**
Gestational age	5-41	26.63 (10.30)
Live birth (n: 261)	1-6	1.66 (0.48)
Living child (n: 258)	1-6	1.66 (0.91)
Stillbirth (n: 13)	1-2	1.23 (0.43)
Abortion (n: 89)	1-3	1.26 (0.53)
Curretage (n: 43)	1-8	1.51 (1.18)

3.1.Reliability

Findings Related to Item Analysis

When the subscale total scores and their correlations were examined for the reliability study of the PPP, it was found that the correlation reliability coefficients were distributed between r = .270 – .646 in the stress subscale, r =.401 – .865 in the social support-partner subscale, r = .763 – .868 in the social support-other people subscale, and r =.464 – .660 in the self-esteem subscale, and that there was a positive correlation.

When the correlations between the PPP subscales were evaluated, a significant negative correlation was found between the stress subscale and social support-partner, social support-other people and self-esteem ($p<0.01$). Accordingly, stress increases as the partner support, the support of other people, and self-esteem decrease. A significant positive correlation was found between the self-esteem subscale and social support-partner and social support-other people ($p<0.01$). In line with this, self-esteem increases as the partner support and the support of other people increase. Moreover, a significant positive correlation was found between the social support-other people subscale and social support-partner ($p<0.05$). As the support of other people increases, partner support also increases (Table 3).

Table 3. *Correlations between the PPP subscales (n = 440).*

Subscales	Stress	Partner Support	Other Support	Self-esteem
Stress	1.00			
Partner Support	-0.247*	1.00		
Other Support	-0.228*	0.434**	1.00	
Self-esteem	-0.262*	0.357*	0.261*	1.00

*$p<0.01$; **$p<0.05$

Findings Related to the Internal Consistency Reliability Coefficient

In the analysis performed for internal consistency in the reliability study of the PPP, Cronbach's alpha reliability coefficient was determined as μ = .75 for the stress subscale, μ = .94 for the social support-partner subscale, μ= .96 for the social support-other people subscale, and μ= .80 for the self-esteem subscale. Cronbach's alpha values of the original and Portuguese versions of the scale are presented in Table 4.

Table 4. *Cronbach's alpha values of the original, Portuguese, and Turkish versions of the PPP assessment tool.*

Subscales	PPP-TV	PPP-PV (2015)	Curry et al. (1994)
Stress	**.75**	.71	.78
Partner Support	**.94**	.95	.93
Other Support	**.96**	.95	.95
Self-esteem	**.80**	.79	.89

PPP-PV: Prenatal Psychosoyal Profile – Portuguese Version
PPP-TV: Prenatal Psychosoyal Profile – Turkish Version

Comparison of the Test and Retest Mean Scores and Findings Related to Their Correlations

In the present study, the test-retest measurements of the PPP assessment tool, conducted with 30 subjects, who met the inclusion criteria, with a four-week break, were evaluated by Pearson's product-moment correlation and the t-test. When the average of the scores obtained by the pregnant women from the test and retest was compared with the t-test in the dependent groups, no significant difference was found between the mean scores ($p>0.05$, Table 5). When there is no significant difference between the measurement averages, it is understood that the scale measures similar results in periodic measurements, and there is consistency between the measurements. Furthermore, in reliability analysis, when the relationship between the scores obtained from the first and second applications was examined with Pearson's correlation analysis, a significant positive correlation was found between the two measurement scores of the four subscales obtained with a four-week break, and the reliability coefficients varied between .79 and .90 (Table 5).

Table 5. *Comparison of the test and retest mean scores of the PPP assessment tool and their correlations (n = 30).*

Subscales	Test Mean (SD)	Retest Mean (SD)	t	p	r	p
Stress	40.23 (3.55)	39.80 (3.76)	1.019	.317	.80	.000
Partner Support	56.53 (9.51)	55.90 (9.50)	.843	.406	.90	.000
Other Support	51.03 (11.96)	50.96 (12.03)	.060	.953	.87	.000
Self-esteem	36.90 (4.14)	37.10 (5.12)	-.351	.728	.79	.000

The t-test in the dependent groups: the degree of freedom = 29, t: t-test in the dependent groups (Paired Samples t-test), r: Pearson's correlation test.

Exploratory Factor Analysis

The skewness and kurtosis values were calculated for the distribution testing of the scale. The skewness value was found as .24, and the kurtosis value as .74. These values show that the distribution is within the range of – 1 and +1, which is a condition for accepting the distribution normal (31).

It was examined with the exploratory factor analysis whether the PPP assessment tool consisted of 4 subscales, as in the original version. The Kaiser-Meyer-Olkin (KMO) and Bartlett's test scores of the factor analysis are stated in Table 6.

Table 6. *KMO and Bartlett's Test*

KMO and Bartlett's Test		
Kaiser-Meyer Olkin		**.900**
Bartlett's Test	Chi-Square	12206.56
	Degree of Freedom	946
	p	.000

The KMO ranges are as follows: .90-1.00 marvelous, .80–.89 meritorious, .70–.79 middling, .60–.69 mediocre, .50–.59 miserable, and .50 and below unacceptable (31). Since the result obtained in our study is .900, the suitability of the sample size appears to be marvelous; on the other hand, Barlett's Sphericity test is valid with p value .000. Accordingly, the results of the KMO test indicate that the data are suitable for the factor analysis. Furthermore, based on the significant outcome of Barlett's Sphericity test, a sufficient correlation existed between the items to conduct the factor analysis. The level of the total variance explained was calculated as 51%. These findings show that the factor analysis is structurally valid. Also the scree plot is shown in Figure 6.

As known, factor analysis is carried out to reveal whether the items in a scale are separated into fewer factors excluding each other (31). The common varimax rotation was used in factor analysis, and the factor number was limited to 4, as in the original version of the assessment tool. With the factor analysis, a 4-factor structure emerged. The results of the factor analysis are shown together with the factor loads. (Table 7).

Tablo 7. *Rotated Component Matrix*

	Component			
	Stress	Partner Support	Other Support	Self-esteem
Being exposed to violence (sexual, emotional, physical)	.717			
Problems about friends	.667			
Family problems (e.g., spouse/ partner, children, etc.)	.556			
Having lost someone you love recently (e.g., death, divorce, being away from each other)	.548			
Generally feeling extreme burnout	.548			
Having recently moved or being obliged to move in the future	.,519			
Problems about consuming alcohol or drugs	.501			
Financial concerns (e.g., foods, shelter, healthcare, transportation)	.496			
Other monetary concerns (e.g., bills, etc.)	.417			
Being pregnant	.353			
Problems about work life (e.g., being dismissed, etc.)	.316			
He helps me keep my morale high		.825		
He clarifies my condition so that I can understand more easily		.816		
He helps me when I need or when I am in trouble		.812		
He spares time to talk to me about personal and private issues		.809		
He takes me serious when I am concerned about something		.786		
He appreciates the things I do for him		.766		
I know he/she will be with me when I need help		.758		
He tries to make something special or thoughtful for me		.751		
He tolerates my ups and downs and unusual behaviors		.720		
He is interested in my daily routine and problems		.700		
He shares similar experiences with me		.640		
I know he/she will be with me when I need help			.847	
He/she takes me serious when I am concerned about something			.844	
He/she helps me when I need or when I am in trouble			.843	
He/she appreciates the things I do for him/her			.839	
He/she clarifies my condition so that I can understand more easily			.830	
He/she tolerates my ups and downs and unusual behaviors			.830	
He/she helps me keep my morale high			.828	
He/she spares time to talk to me about personal and private issues			.822	
He/she shares similar experiences with me			.788	
He/she is interested in my daily routine and problems			.751	
He/she tries to make something special or thoughtful for me			.714	
Generally, I am pleased with myself				-.663
I feel that I do not have many things to be proud of				.654
I feel unsuccessful				.648
I have a positive attitude towards myself				-.634
I feel at least as valuable as other people				-.603
I feel that I can control my life				-.593
I feel that I have some good characteristics				-.574
I feel that I can do things as other people do				-.539
Sometimes I think I am worthless				.528
Sometimes I feel useless				.497
I would like to have more self-respect				.346

All the factor structures were examined according to their factor loads, and the factor loads in the four-factor structure are given in sequence in the table presented above. While interpreting the items with a loading on each factor, the level of .30 was generally considered the minimum factor load in the literature (31). Therefore, it was decided in our study that the items with a factor load above .30 in the six-factor structure explaining 51% of the total variance would be included in the same dimension. In line with the previous studies, the factors were named “Stress,” “Partner Support,” “Other Support,” and “Self-esteem.”

3.2. Comfirmatory Factor Analsis

Findings Related to Construct Validity Analysis

In the construct validity of the PPP-stress subscale, the loads of all items except one (S9) were found to be sufficient (.18-.65). In the construct validity of the social support-partner (.58-.84), social support-other people (.69-.89), and self-esteem (.26-.61) subscales, the loads of all items were found to be sufficient (Figures 2-3-4-5).

4. DISCUSSION

4.1.Reliability

Discussion of the Findings Related to Item Analysis

If the items in a scale have equal weights and are in the form of independent units, the correlation coefficient between each item and total values is expected to be high. With the increase in the correlation coefficient, the relationship of that item with the quality that is desired to be measured increases to the same extent. Although there is no specific standard related to which value of the item-total score correlation coefficient will be considered insufficient, the correlations are recommended to be not negative, and even to be above .25 or .30 and less than .70 (29,32,33). The results obtained in this study are consistent with the literature.

In this study, a negative correlation was found between stress and social support-partner, social support-other people and self-esteem, which are the PPP subscales, and a positive correlation was found between self-esteem and social support-partner and social support-other people. The study results display similarity with the results of the PPP-PV study conducted by Weissheimer and Mamede (2).

Discussion of the Findings Related to the Internal Consistency Reliability Coefficient

To evaluate the internal consistency of the Prenatal Psychosocial Profile, Cronbach's alpha coefficient, which is a method suitable for Likert-type measurement tools, was used (29). Cronbach's alpha values of the original (27), Portuguese (2), and Turkish versions of the PPP assessment tool were similar.

Comparison of the Test and Retest Mean Scores and Discussion of the Findings Related to Their Correlations

Test-retest reliability is the ability of a measurement tool to give consistent results from application to application and to be invariable over time. To find the test-retest reliability, the correlation between the scores obtained from the two applications is calculated. The high correlation coefficients indicate the power of the consistency between the first and second application results (34). In this study, high correlation coefficients indicate that the consistency between test-retest results is high. In the original PPP and the Brazilian version, the test-retest reliability was studied, and similar results were obtained (2,27).

4.2. Validity

Discussion of the Findings Related to Construct Validity Analysis

For construct validity in the adaptation of the Prenatal Psychosocial Profile to Turkish, confirmatory factor analysis was performed to verify the compliance of the factors. In this study, the compliance values were found to be at the desired level and compliance to be good in all subscales. However, in the construct validity of the PPP-stress subscale, the load of an item (S9) was determined to be below .20 (.18). Since the study was an intercultural adaptation, it was decided to keep the item.

5. CONCLUSION

Stress, inadequate social support, and low self-esteem are important determinants of the psychosocial profile affecting pregnancy. Therefore, the negative psychosocial profile during pregnancy is an issue that needs to be considered because of its negative effect on the health of the mother and infant during pregnancy, birth, and the postpartum period.

This tool, which evaluates the psychosocial profiles of women during pregnancy, was adapted to Turkish society, and its reliability and validity were examined on healthy pregnant women. According to the study results, the PPP-TV is a valid and reliable measurement tool in terms of Turkish culture.

In line with the study results, using the Prenatal Psychosocial Profile assessment tool as a valid and reliable assessment tool to determine the psychosocial status of women during pregnancy, trying it in different socio-demographic groups, and using it also in groups with risky pregnancy are recommended. Furthermore, starting the follow-up at the beginning of pregnancy and reapplying the PPP assessment tool in each trimester may provide the follow-up of psychosocial situations that change during pregnancy. Each subscale that makes up the assessment tool can be used independently.

The facts that the gestational weeks of the pregnant women included in the sample were variable (between 5-41 weeks) and the number of pregnant women in the third trimester was high were among the study's limitations. Moreover, since stress, social support, and self-esteem may be affected by acute events, the obtained results may vary during pregnancy. Therefore, they should not be generalized to the whole pregnancy period.

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