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Assessing body experiences in pregnancy: Translation, Adaptation and Validity of the Body Experience During Pregnancy Scale to Turkish.

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Abstract

Objective: This study was conducted first to translate and adapt the Body Experience During Pregnancy Scale to Turkish and second, to validate its psychometric properties within unplanned pregnancies

Methods: 143 Turkish pregnant women filled out the Turkish version of the Body Experience During Pregnancy Scale (GVDÖ), Prenatal Distress Scale, and Prenatal Attachment Inventory. Confirmatory factor analysis was utilised, and Cronbach's alpha coefficients and correlation coefficients were reported.

Results: The overall scale of GVDÖ and its three subscales were found to have satisfactory psychometric properties, with Cronbach's alphas 0.79 for the GVDÖ, 0.78 for body agency subscale, 0.70 for body estrangement subscale, and 0.71 for body visibility subscale.

Conclusion: This study validated the use of the translated Turkish version of the Body Experience During Pregnancy Scale as a psychometrically acceptable measure for assessing the body experiences of pregnant women.

Keywords: Translations, adaptation validation studies, body experiences, unplanned pregnancy

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1. Introduction

Pregnancy is an important transition period in which the mother experiences somatic and psychological changes (Taşkın 2019). During this time, the woman's attention is directed to her body and her baby (Talmon et al. 2018). The meaning attributed to the body varies according to culture, education level, previous experiences, profession, and individual's perspective on life and chronic illness (Huberty et al. 2014). Women's experiences with their bodies during pregnancy reveal their own interpretations and evaluations, namely self-representations, as well as their physical changes during the transition to motherhood (Talmon et al. 2018).

Studies have focused on the sense of control that women feel during pregnancy, how women experience bodily changes caused by pregnancy, and how pregnant women's perceptions on femininity, sensitivity and fragility was influenced. How women explain or defense these pregnancy-related changes to others in the society has been of interest, too (Talmon et al. 2018; Bergbom et al. 2016; Watson 2015).

One of the most important issues overlooked by health professionals during pregnancy is the body image and pregnancy experiences of women (Watson et al. 2015). There was a significant relationship between the mothers' experiences during pregnancy and fetal functions. Fetuses of pregnant women who have negative experiences moved more in the second trimester and their heart rates were faster. On the other hand, the fetal movements of women who experienced positive emotions were observed to be stable, and these fetuses responded to maternal physiological stimuli. (DiPietro et al. 2004). Differences in weight gain, and the occurrences of nausea, vomiting, cramps, and pigmentation changes that develop in the woman's body during pregnancy negatively affected their body image differently and could make the woman feel like an object that hosts a living thing (Bergbom et al. 2016).

Many scales have been developed to measure body perception during pregnancy, but there is no scale including body agency, estrangement and visibility sub-dimensions. Body experiences in pregnancy scale is a measure that allows women to explain their personal experiences. Knowing these experiences allows health professionals to understand the fears, and insecurities that may develop in women during pregnancy, and the perspectives of these mothers on birth and baby so that pregnant women can be supported accordingly (Talmon et al 2018; Uçar et al. 2018).).

It is very important to reveal the pregnancy-related experiences of pregnant women in Turkey (Ozkan et al. 2020). Because in Turkish culture, pregnancy is considered as the continuation of the generation, the transfer of inheritance, and the reputation of the family, and couples who do not have children can lose their reputation in the society. On the other hand, inability to become pregnant can negatively affect the social lives, emotional states, marital relations, sexual lives, future plans, self-esteem and body image of the spouses. While pregnancy symbolizes power and prestige for the husband/partner, it is also considered as reinforcing his place in the family and getting rid of social pressure for the woman (Yalçın 2013; Engin & Pasinlioğlu 2002; Coflkun 2019).

The scales studied for this purpose were Pregnancy Experiences Scale (Esmeray and Danışman 2016), Prenatal Self-assessment Scale (Beydağ & Samiye 2008), Pregnancy Psychosocial Health Assessment Scale (PAS) (Yıldız 2011), and Birth Expectations and Experiences Scale (Muslu & Yanıkkerem 2020). There was no study assessing the adaptability and validity of the Body Experience During Pregnancy Scale in a Turkish sample, thus it is important to make this scale avilable to our community.

Methods

Ethics statements

The study was approved by the institutional review board/ethics committee of Beykent University (Social And Human Sciences Publishing Ethics Committee) on September 16, 2020.
All participants provided written informed consent.

Study design and participants

This methodological study was conducted in Istanbul between September 2020 and December 2020 and included 143 women between the age of 18 and 45 years who visited the pregnancy polyclinic of a state hospital with pregnancy monitoring. The sample was chosen using purposive

sampling methods with the improbable sampling design. Volunteering women who spoke Turkish, did not receive any psychiatric treatment, have unplanned pregnancies were included. Women with severe problems about pregnancy such as any fetal anomalies, abortus risk, risk of abortion were excluded from the study since these problems could affect their body image, self-esteem, and self-confidence.

Data collection and measurements

All data collection was collected face to face by the researchers in the hospital's polyclinics. Demographic information, Turkish version of The Body Experience during Pregnancy Scale (GVDÖ), Prenatal Distress Questionnaire, Prenatal Attachment Inventory were collected.

Demographic information.

Participants were asked about their height, weight, marital status, economic status, education level, pregnancy week, number of children they have.

Turkish version of The Body Experience During Pregnancy Scale (GVDÖ)

The scale was developed by Talmon et al in 2018 to measure body experiences during the pregnancy. In this scale four themes were formulated: (1) sense of joy and attractiveness versus dissatisfaction (2) sense of control, potency, and femininity versus a feeling loss of control (3) sense of invasion versus comfort and pleasure in the developing fetus (4) a sense of the pregnancy being a public versus a private experience. The questionnaire included a total of 28 items and 3 subscales (body agency, body estrangement, body visibility). The scale organized as 4-point Likert-type scale (1 = never, 2 = rarely, 3 = often, and 4 = always). The internal consistency estimate of the BEPSt was α= .89 in this study. The α was .71 for each three sub-scales.

Prenatal Distres Questionnaire

Prenatal Distress Scale; It was developed as 12 items by Yali and Lobel (1999) in order to evaluate anxieties specific to the pregnancy period such as medical problems, physical symptoms, parenting relationships, bodily changes, birth, and baby's health.[4] Later, the scale was rearranged by Lobel [17,18] in 2008, and a version consisting of 17 items across three sub-dimensions was introduced ("concerns about birth and baby, concerns about body weight/body image, and concerns about emotional and relationships"). . The scale was in a five-point Likert type, ranging from 0 (not at all) to 4 (extreme). The scores that can be obtained from the scale are in the range of 0–48. The Cronbach alpha value of the scale in this study was α= 0.78.

Prenatal Attachment Inventory

The scale was developed by Mary Muller in 1993. This tool was designed to measure the mother's personal relationship or affectionate attachment to the fetus during pregnancy. It did not include any subscales, only an overall score is obtained. This scale emphasized emotional intimacy (Çıldır, 2015). The Turkish adaptation and validity of the inventory was carried out by Yılmaz and Kızılkaya Beji in 2012. The inventory consisted of 21 items and a five-point Likert scale was developed between “always” and “never”. The lowest score was 21, the highest score was 84, with higher scores indicating higher attachment. The Cronbach alpha value of the scale in this study was α= 0.86.

Validation and reliability of the questionnaire

During the intercultural integration process, Body Experience During Pregnancy Scale was translated into Turkish and then the Turkish version GEVDÖ was examined by two experts in linguistics. Two of them is a professor in the foreign languages department of a university, and the one of them is a Turkish linguistics expert residing in USA.

To test the clarity of the items and the validity of the content, the translated scale was evaluated by four midwives, two women health nurses, one obstetrician, and an independent psychiatrist. Their role was to find out possible incomprehensible expressions. They evaluated and approved each item of the Turkish version of GEVDÖ on significance, clarity, and simplicity. This scale was administered in a pilot study with 27 individuals who visited the polyclinic. A suggestion box was added under each question in the Turkish version of the GEVDÖ, then participants were asked to add their suggestions inside the boxes. Thereafter, the questions were translated back to English by a private company accredited from a native English-speaking country and sent to the expert who developed the scale. After receiving the expert’s suggestions, a consensus was reached on an appropriate translation to reflect the English version. The purpose of the translation phase was to check for discrepancies between the content and meaning of the original version and the translated instrument.

Data analysis

The analysis was completed by transferring the study data to SPSS Statistics 23 and IBM SPSS Amos 22 programs. For the Body Experience During Pregnancy Scale, first of all, the structure

of the dimensions in the original of the scale was confirmed by confirmatory factor analysis (IBM SPSS Amos 22) and reliability analysis was applied.

While evaluating the study data, frequencies (number, percentage) were given for categorical variables, and descriptive statistics (mean, standard deviation) were given for numerical variables. The normality of the numerical variables was examined with the skewness and kurtosis coefficients, and it was observed that the coefficients were normally distributed as they were in the range of ±1.5. For this reason, parametric statistical methods were used in the study.

The relationships between two independent numerical variables were examined with the Pearson Correlation coefficient. Differences between two independent groups were examined with the Independent Sample T-Test. Differences between more than two independent groups were analyzed with One-Way Analysis of Variance (ANOVA). In case of difference as a result of One Way Analysis of Variance (ANOVA), Tukey multiple comparison test was used to determine from which group the difference was originated. Statistical significance was interpreted at the 0.05 level in the analyzes.

The Cronbach Alpha reliability coefficient of the 17-item Prenatal Stress Scale used in the study was 0.778 and the Cronbach Alpha reliability coefficient of the 21-item Prenatal Attachment Scale was 0.865.

FINDINGS

Table 1. Distributions by Demographic Characteristics

	(n=143)	%
Age (Mean±SS=27,50±4,48)		
19-29 Age	103	72,0
30-39 Age	40	28,0
Marital Status		
I don't want to explain	2	1,4
Single	1	0,7
Married	140	97,9
Economic Sattus		
I have a regular income, I have no debt, I am well	104	72,7
My income is low, I can't make a living	34	23,8
I have no income, I'm in trouble	5	3,5
Education level		
Primary education	31	21,7
High school	33	23,1
College	66	46,2
Masters, Ph.D.	13	9,1
First Pregnancy of This Pregnancy		
No	64	44,8
Yes	79	55,2
Miscarriage/Abortion Story		
Yes	28	19,6
No	115	80,4
The method desired to give birth		
Normal Birth	102	71,3
Caesarean section	41	28,7
Regular Pregnancy Checkup		
Yes	136	95,1
No	7	4,9
Gestational Week (Mean±SD=24.62±10.65)		
12-28 weeks	89	62,2
28-40 Weeks	54	37,8

When the table was examined, 72% of the people participating in the study were in the 19-29 age group. 97.9% of them were married. 72.7% of them had regular income and no debt. 46.2% of them had higher education level.

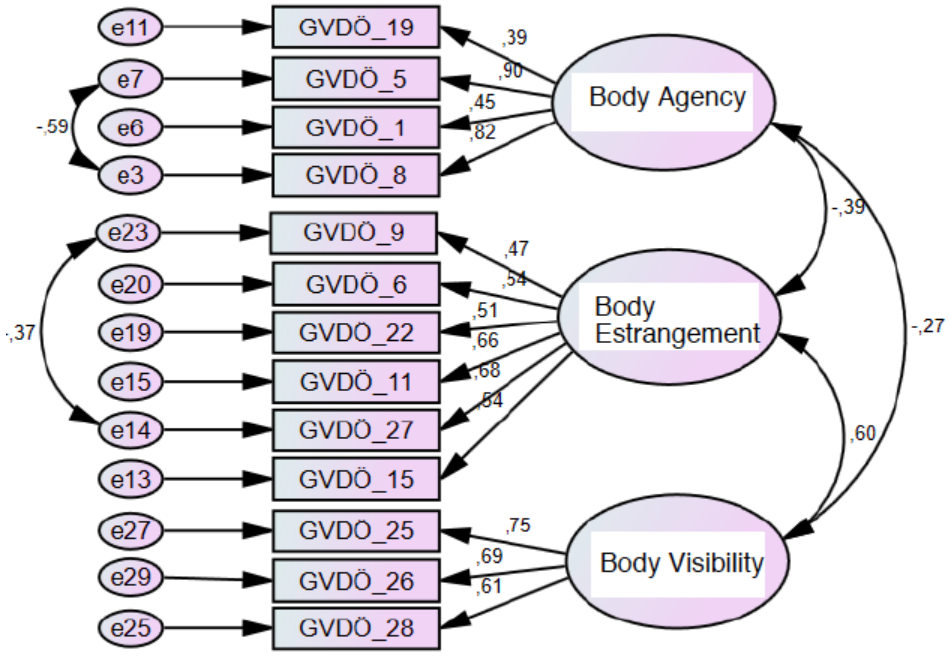
This was the first pregnancy of 55.2% of them. 80.4% did not have a history of miscarriage/abortion. 71.3% of them wanted to have a normal birth. 95.1% of them regularly went to pregnancy control. The gestational week of 62.2% was between 12-28 weeks and 37.8% of them were between 28-40 weeks.

CONFIDENTIAL FACTOR ANALYSIS

Confirmatory Factor Analysis Results for the Body Experience During Pregnancy Scale

The measurement model established to verify the structure consisting of 28 items and 3 factors was analyzed. As a result of the analysis, it was seen that the first model did not fit enough and therefore model improvement studies were carried out. First of all, chi-square reduction values ("M.I." values) were examined for possible changes to be made in the model by looking at the table of modification indices. The highest "M.I." The model was then carried out by linking the modification indicated by the value in cases where it was conceptually appropriate. However, it was observed that the model still did not fit adequately after the modification, so the 15 items (2, 3, 4, 7, 10, 12, 13, 14, 16, 17, 18) loaded with the most modifications and/or had an item factor load of less than 0.300. , 20, 21, 23 and 34) were removed from the structure. As a result, the model was validated with 13 items and 3 factors. The validated measurement model was presented below.

Figure 1. Measurement Model of Body Experience Scale During Pregnancy



When the measurement model in the figure was examined, we observed the items of the measurement model confirmed by 13 items and 3 factors. The standardized regression coefficients of the paths were shown by the one-way arrows, in other words, the factor loads. There was no factor load below 0.300. Details on factor loadings were given below.

Table 3. Body Experience During Pregnancy Scale DFA Factor Loads

	Body agency	**Body Estrangement**	**Body visibility**
GVDÖ_8	0,816		
GVDÖ_1	0,447		
GVDÖ_5	0,904		
GVDÖ_19	0,388		
GVDÖ_15		0,540	
GVDÖ_27		0,681	
GVDÖ_11		0,664	
GVDÖ_22		0,511	
GVDÖ_6		0,539	
GVDÖ_9		0,474	
GVDÖ_28			0,614
GVDÖ_25			0,753
GVDÖ_26			0,686

When the table was examined, the factors of the Body Experience During Pregnancy Scale and the item factor loads related to the items in these factors were given. 4 items (Items 1, 5, 8, and 19) in the Body Agency factor, 6 items (Items 6, 9, 11, 15, 22, and 27) in the Body Estrangement factor, and 3 items (25, 26, and 28) in the Body Visibility factor. . Items) were available.

Table 4. Fit Index Values and Good Fit Values of the Measurement Model

	First State Fit Index Values	**Fit Index Values After Modification and Substance Extraction**	**Acceptable Compliance Values**
p	0,000	0,083	>0,05
χ^2/sd	2,481	1,262	≤5
GFI	0,683	0,927	≥ 0,900
CFI	0,623	0,960	≥ 0,950
TLI	0,632	0,948	≥ 0,900
RMSEA	0,102	0,043	≤ 0,080
SRMR	0,109	0,056	≤ 0,100

When the table is examined, the confirmatory factor analysis results of the 28 items and 3 factors of the Body Experience During Pregnancy Scale are given as the initial state fit index values, and it is seen that only χ^2/sd among the coefficients are within acceptable limits. When the factor analysis results in the form of 13 items and 3 factors were examined after item extraction and modification, it was seen that all coefficients showed good agreement.

RELIABILITY ANALYSIS RESULTS

Table 5. Reliability Analysis Results of Body Experience Scale Factors During Pregnancy

	Item Number	**Cronbach Alfa (α)**
Body Agency	4	0,708
Body Estrangement	6	0,707
Body Visibility	3	0,715

As a result of the reliability analysis applied, it was seen that the reliability levels of the sub-dimensions of the 3 scales were sufficient (α>0.700).

Table 6. Descriptive Statistics on the Sub-Dimensions of the Body Experience During Pregnancy Scale and the Prenatal Stress and Prenatal Attachment Scales

	Mean	**SD**	**Min**	**Max**
Body Agency	13,24	2,34	6,00	16,00
Body Estrangement	9,41	3,01	6,00	18,00
Body Visibility	5,37	2,22	3,00	12,00
Prenatal Stress Scale	10,71	5,35	0,00	30,00
Prenatal Attachment Scale	65,19	9,74	43,00	84,00

When the table is examined, the mean and standard deviation of the Body Establishment sub-dimension scores of the participants in the study are 13.24±2.34, 9.41±3.01 for the body estrangement sub-dimension and 5.37±2.22 for the Body Visibility sub-dimension. While the mean and standard deviation of the Prenatal Stress Scale scores are 10.71±5.35, it is seen that the Prenatal Attachment Scale is 65.19±9.74.

Table 7. Evaluation of the Relationships between Prenatal Stress and Prenatal Attachment Scores of the Body Experience Scale during Pregnancy Sub-Dimension Scores

		Prenatal Stress Scale	Prenatal Attachment Scale
Body Agency	r	**-,385****	**,290****
	p	**0,000**	**0,000**
Body Estrangement	r	**,411****	-0,028
	p	**0,000**	0,737
Body Visibility	r	**,257****	-0,098
	p	**0,002**	0,246

r: Pearson Correlation Coefficient **:p<0,05

When the table is examined, as a result of the correlation analyzes applied, the people who participated in the study:

There is a statistically significant moderate negative correlation between Body Agency sub-dimension scores and Prenatal Stress Scale scores (r=-0.385). The relationship between body agency and the prenatal stress scale decreases as body agency scores decrease, and the relationship here is moderate. There was a statistically significant low positive correlation between the scores of the Body Agency sub-dimension and the Prenatal Attachment Scale (r=0,290). As the body agency scores increase, the PBL scores also increase, and the relationship here is low-positive.

There is a statistically significant moderate positive correlation between Body Estrangement sub-dimension scores and Prenatal Stress Scale scores (r=0.411).

There was a statistically significant low positive correlation between the scores of the Body Visibility sub-dimension and the Prenatal Stress Scale scores (r=0.257).

Table 8. Examination of Sub-Dimension and Scale Differences by Demographic Characteristics

	Body Agency	Body Estrangement	Body Visibility	Prenatal Stress Scale	Prenatal Attachment Scale
	Mean±SD	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**
Age					
19-29 Age	13,39±2,19	9,17±2,99	5,39±2,18	10,71±5,00	65,59±9,70
30-39 Age	12,88±2,69	10,03±3,03	5,32±2,34	10,70±6,23	64,15±9,90
t;p	1,177;0,241	-1,521;0,131	0,153;0,879	0,009;0,993	0,793;0,429
Economic Status					
Good	13,13±2,44	9,36±2,97	5,11±2,15	10,97±5,74	65,95±9,38
Moderate/Bad	13,54±2,08	9,56±3,16	6,08±2,28	10,00±4,10	63,15±10,51
t;p	-0,917;0,361	-0,367;0,714	-2,368;**0,019***	1,122;0,265	1,537;0,127
Education level					
1) Primary Education	13,19±2,48	9,94±2,99	6,10±2,23	9,74±4,90	61,81±10,95
2) High School	12,03±2,73	10,06±3,62	6,27±2,15	12,58±6,51	63,58±8,42
3) High School	13,74±1,99	8,91±2,72	4,76±2,16	10,08±5,04	67,03±9,74
4) Master, PhD	13,92±1,50	9,08±2,60	4,46±1,33	11,46±3,60	68,00±7,56
F;p	4,643;**0,004***	1,502;0,217	5,879;**0,001***	2,121;0,100	2,795;**0,043***
Difference (Tukey)	2-3		3-1,2 2-4		1-3
First Pregnancy of This Pregnancy					
No	12,95±2,48	9,81±3,09	5,69±2,28	9,91±4,85	63,27±10,24
Yes	13,48±2,22	9,09±2,93	5,11±2,15	11,35±5,67	66,75±9,10
t;p	-1,343;0,182	1,433;0,154	1,544;0,125	-1,619;0,108	-2,151;**0,036***
Miscarriage/Abortion Story					
Yes	13,07±2,46	9,50±2,89	4,96±2,25	8,86±4,80	65,89±10,51
No	13,29±2,32	9,39±3,06	5,47±2,21	11,16±5,40	65,02±9,59
t;p	-0,435;0,664	0,170;0,865	-1,081;0,282	-2,063;**0,041***	0,425;0,671
The method desired to give birth					
Normal Birth	13,54±2,17	9,27±2,83	5,44±2,28	10,28±4,53	66,12±9,49
Caesarean section	12,51±2,61	9,76±3,46	5,20±2,09	11,76±6,93	62,88±10,10
t;p	2,409;**0,017***	-0,863;0,390	0,598;0,551	-1,255;0,215	1,812;0,072
Pregnancy Week					
Less than 30 Weeks	13,58±2,06	8,82±2,38	4,98±2,05	10,33±4,70	64,83±10,06
30-40 Weeks	12,69±2,68	10,39±3,66	6,02±2,35	11,33±6,27	65,78±9,26
t;p	2,117;**0,037***	-2,809;**0,006***	-2,783;**0,006***	-1,093;0,276	-0,562;0,575

t: Independent Sample T-Test F: One-Way Analysis of Variance (ANOVA) *:p<0,05

When the table is examined, as a result of the statistical analyzes applied, the people who participated in the study:

Body Agency scores show statistically significant differences according to education level, method of delivery and gestational week ($p<0.05$). According to this, the Body Agency points of the people with high school education level are statistically significantly lower than those with a college

education level. Body Setup scores of those who want to have a normal birth are statistically significantly higher than those who want to have a cesarean section. Body Agency scores of people with a gestational week of less than 30 weeks are statistically significantly higher than those with a gestational week of 30-40 weeks.

Body Estrangement scores show a statistically significant difference according to the gestational week ($p<0.05$). Accordingly, the Body Estrangement scores of people with 30-40 weeks of gestation are statistically significantly higher than those with a gestational week of less than 30 weeks.

Body Visibility scores show statistically significant differences according to economic status, education level, and gestational week ($p<0.05$). According to this, the Body Visibility scores of people with a high school education level are statistically significantly lower than those with a primary and high school education level. Body Visibility scores of those with a master's/doctorate education level are statistically significantly lower than those with a high school education level. Body Visibility scores of people whose gestational week is 30-40 weeks are statistically significantly higher than those whose gestational week is less than 30 weeks.

Prenatal Stress Scale scores show a statistically significant difference according to abortion/abortion history ($p<0.05$). Accordingly, the Prenatal Stress Scale scores of those without a history of miscarriage/abortion were statistically significantly higher than those with a history of miscarriage/abortion.

Prenatal Attachment Scale scores show a statistically significant difference according to education level, being the first pregnancy of this pregnancy ($p<0.05$). According to this, the Prenatal Attachment Scale scores of people with a college education level are statistically significantly higher than those with a primary education level. Prenatal Attachment Scale scores of those who had their first pregnancy in this pregnancy were statistically significantly higher than those who did not have this pregnancy.

DISCUSSION

Body experiences are neither just somatic nor spiritual; what should be understood from this concept is the personal experiences and awareness that the person has in light of the components that affect his own body.

Body agency: the perception of body integrity and functionality. Positive body acceptance and satisfaction includes processes such as accepting the body as competent and owning the body.

Body estrangement: It can be evaluated as a feeling of estrangement from the body or cooling. The anxiety and dissatisfaction caused by the tension that arises in the acceptance of the physical changes in the body resulting from the changes in the pregnancy process lead to feelings of estrangement and loss of control in the body.

Body visibility: Visibility is the degree to which different parts of the environment can be observed from a certain vantage point (Gath et al 2021). It emphasizes the social visibility of the body, the objectification of the female body, and the change in social role that comes with pregnancy (Talmon).

The results of this study demonstrated that the GVDÖ is a reliable and valid tool for measuring and assessing the Body Experience during Pregnancy Scale with unplanned Turkish pregnancies. It is important that the internal consistency coefficient is high in order to provide a homogeneous structure in scale studies (Sönmez & Alacapınar 2013). In our study, the Cronbach's alpha coefficient for the internal consistency of the scale was found to be sufficient ($\alpha>0.79$). GEVS reflects three dimensions of body experiences: 1) Body agency $\alpha>0.71$ 2) Body estrangement $\alpha>0.71$ and 3) Body visibility $\alpha>0.71$. The internal reliability values in our study were similar to the original Body Experience during Pregnancy Scale (internal consistency estimates of the subscales were moderate to high with α being .88 for body agency, .89 for body estrangement, and .66 for body visibility) (Talmon et al 2018). The alpha values were as follows: Body Understanding Measure Pregnancy Scale (BUMPs) Cronbach's alpha coefficient of the scale 0.90 (Uet al, 2022) Turkish version of body image during pregnancy Cronbach's alpha coefficient 0.90 (Gün et al 2022) The scale of body image concerns during pregnancy Cronbach's alpha reliability coefficient 0.88 (Uçar et al. 2018).

One of the goals in reliability assessment is to determine whether the participant can respond to a repeated assessment in a way that is consistent with the initial assessment. In this study, mean sub-dimensions and inter-scale correlations were in the range of .15–.50 as suggested by Watson (1995). The test-retest, on the other hand, revealed the invariance of the scale with respect to time.

15 questions were excluded from the study from the scale as the item-total correlation value was <0.30. According to similar scale studies, 2 questions from the Perception of Pregnancy Risk Questionnaire Study (Heaman et al. 2009), and 33 questions from 61 questions in the scale study they developed on

Emerald and Bilgin motherhood role perceptions (Bilgin & Ecevit alpar 2021). In addition, in the study of Nagl et al. on measuring body image during pregnancy, 4 questions were excluded from the original 36-item scale.

The reason why we excluded 15 questions from this study is mostly the cultural perception of pregnancy. Turkish women see being pregnant as a valuable situation with ideas such as ensuring family integrity and strengthening their femininity roles. This may be the reason why the questions (I felt that I was sharing my body with someone else. I felt that I was starting to lose control of my body, I felt like the baby took my body from me) were answered negatively and some of the questions were excluded (Karatopuk &Yarıcı 2021)

As a result of the correlation analyzes applied, there is a statistically significant moderate negative correlation between the Body agency sub-dimension scores and PSS scores of the participants (r=-0.385). (Table 6.) In other words, as the Body agency scores decrease, the decrease in PSS scores indicates that the mother's bad perception of her body will cause stress. According to the studies of Bacacı & Apay (in the study, the "Multidimensional Body-Self-Relationship Scale (PDPA)" and "Tilburg Pregnancy Distress Scale (TGSS)" scales were used), it was found that the distress level increased as the pregnant women felt inadequate physically and in terms of health (Bacacı & Apay) 2018). According to the results of Coşgun et al, as the Prenatal distress Scale scores increase, the perception of motherhood decreases according to the self-perception scale of the pregnant women. A weak and significant positive correlation was found between the prenatal distress scale and the self-perception scale of pregnant women-Body perception, which supports our results (Coşgun et al.2020).
There is a statistically significant low level of positive correlation between Body agency sub-dimension scores and Prenatal Attachment Scale scores (r=0,290). Prenatal attachment scale scores increase as body agency scores increase. In the study of Huang et al. (2004), it was reported that there was a relationship between body image and prenatal attachment scale scores, and that pregnant women with low body image scores had lower prenatal attachment scale scores (Huang et al. 2004). In a scale development study, statistically significant and positive results were obtained between prenatal attachment and psychosocial health assessment scale during pregnancy (Kurnaz&Çevik). In the study of Can and Demirtaş, the participants' mean prenatal attachment inventory scores had a weak positive relationship with their total body perception scores (r = .226). In this relationship, factors such as body

area satisfaction, appearance assessment, and fitness assessment were examined (Canlı, A., & Demirtaş, B. 2022).

Body Visibility

Physical changes during pregnancy have also been associated with adverse health outcomes such as body image disturbances, maternal depression and low self-esteem, restricted eating, impaired maternal-fetal attachment, obesity, decreased breastfeeding intention, and smoking behavior during pregnancy (Nagl et al 2019; Watson). et al. 2015; Fuller et al. 2013).

In this study, there was a statistically significant low positive correlation between Body Visibility sub-dimension scores and Prenatal Stress Scale scores (r=0.257). In one study, it was explained that a higher level of negative evaluation of appearance increases the probability of depression in pregnant women by almost one and a half (Przybyła 2020). In the study of Tsuchiya et al., some women with normal body sizes during pregnancy perceived their body sizes as larger than their real bodies as their body mass indexes increased and they felt more body dissatisfaction (Tsuchiya 2019). In the study of Canlı and Demirtaş, there was a weak positive correlation between the perinatal attachment questionnaire scores and body appearance and body satisfaction assessments of pregnant women (Canlı&Demirtaş 2022). Another study found small negative associations between body visibility and life satisfaction and personal health assessment. In addition, small positive associations were found between body visibility and impaired body boundaries, body shame, negative affect, and depression (Talmon).

Body Estrangement

There is a statistically significant moderate positive correlation between Body Estrangement sub-dimension scores and Prenatal Stress Scale scores (r=0.411).

However, in Talmon's study, estrangement from the body was found to be negatively related to life satisfaction and positive affect. Disruption of body boundaries has been found to be positively associated with body shame, negative affect and depression at a low level (Talmon 2018). In another study, women who became estranged from themselves as they saw their body sizes start to become larger than their real body sizes stated that they experienced more body dissatisfaction (Tsuchiya et al.

2919). In the study of Fuller et al., it was revealed that body dissatisfaction during pregnancy is related to psychological factors and even body dissatisfaction is related to depression (Fuller at al 2013).

In this study, the body agency scores of those who want to have a normal birth are statistically significantly higher than those who want to have a cesarean section. The subject could not be discussed because there was no study on this sentence.

Body agency scores show statistically significant differences according to education level, method of delivery and gestational week ($p<0.05$). According to this, the Body Agency points of the people with high school education level are statistically significantly lower than those with a college education level. Talmon's study, on the other hand, found a small positive correlation between education and body agency (Talmon 2018).

In a study conducted to compare the pregnancy risk perceptions of obese and normal pregnant women, it was revealed that those with higher education knew and perceived the risks associated with obesity more during pregnancy (de jersey 2015). In the study of Özkan et al., it was found that there was no statistically significant relationship between the body perception scale score of pregnant women and their educational status (Özkan et al. 2020).

In this study, the body agency scores of those who want to have a normal birth are statistically significantly higher than those who want to have a cesarean section. The subject could not be discussed because there was no study on this sentence.

Body agency scores of people with a gestational week of less than 30 weeks are statistically significantly higher than those with a gestational week of 30-40 weeks. It is thought that those with a gestational age of less than 30 weeks answered this way because they could not predict what shape their bodies would take in the later months of pregnancy. In Talmon's study, no statistically significant result was found between gestational week and body agency (Talmon 2018).

Body Estrangement scores show a statistically significant difference according to the gestational week ($p<0.05$). Accordingly, the Body Estrangement scores of people with 30-40 weeks of gestation are statistically significantly higher than those with a gestational week of less than 30 weeks. It is thought that this result is due to the fact that the mother has aggravated movements due to the advanced pregnancy, problems such as circulation and respiratory problems, and the fetus has grown well (Taşkın 2019). However, no significant difference was found in Talmon's study on the same subject (Talmon 2018).

Body Visibility scores show statistically significant differences according to economic status, education level and gestational week ($p<0.05$). Those with poor economic status have lower body visibility scores.

In Özkan's study, it was determined that there was no statistically significant relationship between the Body Perception Scale score of the pregnant women and the economic status (Özkan et al. 2020).

According to Altınayak, the economic situation does not affect the self-perception of expectant mothers (Altınayak et al.2021)

In this study, the Body Visibility scores of people with a college education level were found to be statistically significantly lower than those with a primary and high school education level. In Talmon's study (2018), Body Visibility scores of those with a master's/doctorate education level were found to be statistically significantly lower than those with a high school education level (Talmon et al. 2019).

Body Visibility scores of people with 30-40 weeks of gestation are statistically significantly higher than those with a gestational week of less than 30 weeks. It is thought that this situation is due to the advanced pregnancy (Taşkın 2019). In another study, gestational week does not affect the self-perception of expectant mothers (Talmon et al. 2019).

In this study, Prenatal Stress Scale scores show a statistically significant difference according to abortion/abortion history ($p<0.05$).

Accordingly, the Prenatal Stress Scale scores of those without a history of miscarriage/abortion were statistically significantly higher than those with a history of miscarriage/abortion.

The fact that there are individuals in the family who help the pregnant woman, support her in every way, and listen to her if she has any problems, is among the factors that make the post-abortion/abortion more comfortable (Özorhan 2012). On the other hand, it is thought that the emergence of a new experience in the individual as a result of miscarriage/abortion and the development of their awareness on this issue may be preparing women better for the new pregnancy. In a study, it was found that there was no statistically significant relationship between body image scale score and abortion/abortion history (Özkan et al. 2020). In another study, no significant difference was

found between the mean scores of the characteristics of physical-psychosocial changes related to pregnancy in pregnant women who had and did not experience prenatal loss (Bulut 2018).

In this study, Prenatal Attachment Scale scores show a statistically significant difference according to education level ($p<0.05$). According to this, the Prenatal Attachment Scale scores of people with a college education level are statistically significantly higher than those with a primary education level. In a study, a statistically significant result could not be obtained when the Prenatal attachment inventory score of the pregnant women and their educational status were compared. (Elkin 2015)

In this study, the Prenatal Attachment Scale scores of those who had their first pregnancy were statistically significantly higher than those who did not have a first pregnancy. Primiparous individuals, who will experience motherhood for the first time due to the fear and stress of the unknown, may experience more stress and their communication with their babies may be impaired (Barabach et al, 2017; Chung et al 2018)

LIMITATIONS

This study could be performed in a limited number of pregnant women due to the pandemic. Faced with culturally challenging questions such as “I felt like my body was betraying me, I felt like the baby inside me had taken over my body”), some mothers were hesitant to fill out the form. Since our study was conducted in a single center (a state hospital), it cannot be generalized to the general population. Further studies on a population-based sample are recommended to confirm our findings.

CONCLUSION

In this study, observations were made about the body experiences of mothers. Initial psychometric estimates for the 15-item GVDÖ supported that it was a valid and reliable measure of women's bodily experiences during pregnancy. It is thought that the scale will shed light on future studies.

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