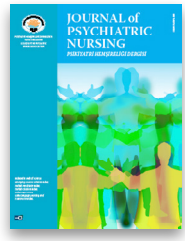
JOURNAL OF
PSYCHIATRIC NURSING

DOI: 10.14744/phd.2020.72621
J Psychiatric Nurs 2020;11(3):228-238



Original Article

Relationship between perceived stress level and self-perception level of women who had three or more pregnancies

Esra Demir Alkin,[1] Kerime Derya Beydağ[2]

[1]Department of Hemodialysis, Kocaeli University Training and Research Hospital, Kocaeli, Turkey
[2]Department of Nursing, İstanbul Okan University Faculty of Health Sciences, İstanbul, Turkey

Abstract

Objectives: The present study determined the relationship between the perceived stress level of women who had three or more pregnancies and their self-perception levels.

Methods: This descriptive and cross-sectional study was carried out with 230 pregnant women who had three or more pregnancies and visited the Gynecology and Obstetrics Polyclinics of Kocaeli University Research and Application Hospital between May and October 2018. The data collection was performed using the personal information form, Self-Perception Scale for Pregnant Women and Perceived Stress Scale (PSS). In analyzing the data obtained, the percentages, t-test, ANOVA test, Mann-Whitney U test, Kruskal-Wallis test, and Spearman's Correlation Analysis were used.

Results: The mean score of the pregnant women on the PSS was 42.62±5.01 and the mean scores on the "Perception of Motherhood during Pregnancy" (PMDP) and "Perception of Body during Pregnancy" (PBDP) subscales were 19.54±5.07 and 13.16±3.96, respectively. A weak negative relationship was found between PSS and PMDP ($p<0.05$), whereas no relationship was found for PBDP ($p>0.05$). PMDP and PBDP had a weak negative relationship ($p<0.05$).

Conclusion: The perceived stress level of women having a history of three or more pregnancies affected their motherhood perception but not their body perception.

Keywords: Body perception; motherhood perception; perceived stress; three or more pregnancies.

Pregnancy is a developmental crisis period in which women experience physiological, psychological, and social changes and must adapt to these changes.[1] Physiological changes experienced during pregnancy cause psychological and emotional changes.[2] These changes are temporary states affecting pregnant women, their husbands, and those around them, which continue until the baby joins the family.[3] Pregnancy is a variant situation in body image, social relationships, and domestic relationships, which is why it is a stressful life event requiring adaptation.[4]

Stress, a part of modern life, is a routine factor in daily life that affects human life as a whole. Long-term exposure to stress causes various health issues and negatively affects an individual's quality of life.[5] Experiencing intense stress during pregnancy causes a depressed immune system, low fetus weight, and premature birth risk.[6] Stress that women experience during pregnancy and labor vary by their personal and obstetric history, socio-economic situation, environmental aspects, and past experiences.[7]

Pregnant women's positive approach towards changes in their body, attitude towards pregnancy, and psychological, physiological, and social readiness for pregnancy are significant determinants of a healthy advancement of pregnancy and the health of the baby.[2] Factors such as the number of labors, mother's age, the newborn's health, stress, and inadequate social support affect adaptation to the role of motherhood.[8] Women with the highest level of concern regarding their body image are more depressed, have a tendency to diet, smoke

Address for correspondence: Kerime Derya Beydağ, İstanbul Okan Üniversitesi Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, İstanbul, Turkey
Phone: +90 216 677 16 30 / 3849 **E-mail:** derya.beydag@okan.edu.tr **ORCID:** 0000-0002-7251-4882

Submitted Date: October 11, 2019 **Accepted Date:** June 25, 2020 **Available Online Date:** October 05, 2020

What is known on this subject?

- Numerous pregnancies are usually unintended and women may have difficulties in these pregnancies due to the care of and responsibility for their other children and the problems resulting from the new pregnancy, which could affect their acceptance of the pregnancy and their ability to cope with any problems during this process. No study has investigated the perceived stress due to numerous pregnancies and the pregnant woman's level of self-perception.

What is the contribution of this paper?

- The study found that pregnant women's perception of motherhood increased as the stress level of women who experienced three or more pregnancies increased, which did not affect the perception of the body. The perception of motherhood increased as the body image of the women with three or more pregnancies increased.

What is its contribution to the practice?

- Midwives and nurses are responsible for detecting the situations that may negatively affect the body image and perception of motherhood of women during pregnancy and determining appropriate nursing care. Anxiety and stress states of the women with histories of unplanned and unintended pregnancies should be evaluated. Finally, guidance and training services should be provided to the pregnant women with intense stress and low levels of self-perception.

frequently, and are at risk during pregnancy.[9] Concern about body image is significant for most women while women's perception of their body and adaptation to changes may affect their psychology positively or negatively.[10]

After having children, women may have difficulties during pregnancy due to the care of and responsibility for her other children and the burdens of the new pregnancy, which affect women's acceptance of the pregnancy and ability to cope with the problems during this process.[11,12] Numerous labors increase maternal and neonatal mortality rates during pregnancy, labor, and the postpartum period. Numerous labors cause an increase in voluntary miscarriages, which is risky for maternal health. In this case, body resistance of the mother breaks down, and her risk of cancer in her reproductive organs increases. Women who have given birth a lot and at frequent intervals experience difficult and long labor, postpartum bleeding, anemia, puerperal fever, infection, toxemia, abortus nutrition problems, hormonal instabilities, postpartum stress, depression, folate deficiency, uterine rupture, and reproduction system disorders.[13] Previous studies indicate that the number of pregnancies and the way of giving birth affects the biological and psychological states of the pregnant women in addition to increasing their level of anxiety and concern. Unplanned/unintended pregnancies, not being able to adapt to pregnancy, problems regarding family and marriage, disrupted body image, an increasing number of pregnancies, difficulties due to pregnancy, job status, socio-economic difficulties, psychiatric disturbances, concern regarding the baby to be born, low level of social support, and the thought of not being able to be a good parent cause stress in pregnancy.[14–16]

Healthcare professionals are required to help determine their patient's stressors and sources of anxiety that may affect their identity, social support, and labor experience and help pregnant women realize the complexity of their experiences regarding the body.[17] Healthcare professionals need to evaluate pregnant women's dissatisfaction with their body image and support them in accepting their current image. They should guide pregnant women in exploring their concerns about body image and determining ways of accepting their pregnant body.[18]

Women who have experienced numerous pregnancies need better social support and care. The nurse should define the possible risks, plan a proper intervention by evaluating these risks, and implement the plan. If a pregnant woman and her family experience intense stress, nurses should encourage the woman and her family to develop positive coping behaviors. They should let the family explain the stress they experience, determine the problem-causing stressors, plan interventions for them, and provide training about the changes and events that will happen during this process. Nurses can achieve positive results by planning protective interventions for psychological problems, determining the factors causing stress, and providing intervention.[7]

The present study was conducted to determine the relationship between the perceived stress and self-perception levels of women who experienced three or more pregnancies.

Materials and Method

Study Design Type

This is a descriptive cross-sectional study.

Study Population and Sample

The study population included 570 pregnant women who experienced three or more pregnancies who visited the Gynecology and Obstetrics Polyclinics of Kocaeli University Research and Application Hospital between May and October 2018. The study sample was calculated based on the sample calculation formula when the population became clear. It included 230 pregnant women of all trimesters who could speak and understand Turkish, had no psychological problems, had no health problems, and had a healthy fetus.

Data Collection Tools

Study data were obtained using the sociodemographic and obstetric information form, the Self-Perception Scale for Pregnant Women, and the Perceived Stress Scale.

Perceived Stress Scale (PSS): Cohen et al. (1983) developed this scale. Turkish adaptation of the scale was conducted by Eskin et al.[5] (2013). The PSS includes 14 items that measure the extent of a person's perceived stress in their life. Participants evaluate each item from "Never (0)" to "Very Frequently (4)" on the 5-point Likert-type scale. Seven items including positive expression are reverse scored. The scores of PSS-14 range from 0 to 56. A higher score indicates more stress perception in the individual. Eskin et al.[5] (2013) found the Cronbach's Alpha value of the scale is 0.84. This study found the Cronbach's Alpha value of the scale was 0.73.

Self-Perception Scale for Pregnant Women (SPSPW): Kumcağız et al.[2] (2017) developed this 4-point Likert-type scale (4 Always, 3 Most of the time, 2 Sometimes, 1 Never) with 2 factors and 12 items. The "Perception of Motherhood during Pregnancy" subscale (PMDP) includes 7 positive questions whereas the "Perception of Body during Pregnancy" subscale (PBDP) includes 5 negative questions. Higher scores on the PMDP subscale indicate a higher level of perception of motherhood during pregnancy while lower scores on this subscale indicate a low-level perception of motherhood. The highest score is 28 and the lowest score is 7 for the PMDP subscale. Higher scores on the PBDP subscale indicate a negative body image during pregnancy whereas lower scores indicate a positive body image during pregnancy. The highest score is 20 and the lowest score is 5 for the PBDP subscale. Kumcağız et al.[2] (2017) found the Cronbach's Alpha value is 0.86 for the first factor of the scale and 0.75 for the second factor. This study found the Cronbach's Alpha value of the first factor was 0.97 and the second factor was 0.94.

Data Analysis

Study data were analyzed using the SPSS 22.0 software program. Data analysis was conducted using number percentage calculations, the t-test, ANOVA test, Mann-Whitney U test, Kruskal-Wallis test, and Spearman Correlation test.

Ethical Considerations

Approval was obtained from Kocaeli University Non-Invasive Clinical Researches Ethics Committee on 18/04/2018 before the data collection. Women who experienced three or more pregnancies were informed about the study before completing the survey and written permissions were obtained from the participants.

Results

Table 1 presents the sociodemographic characteristics of the pregnant women. The mean age of the pregnant women was 32.36±4.98 (min: 21–max: 44) and 50.4% were aged between 33 and 44, 45.7% were high school graduates, 70.4% did not work, and 67.8% had equal income and expenditures.

Table 2 presents characteristics regarding the marriage and pregnancy of the pregnant women. The mean age of marriage for the pregnant women was 19.76±1.80 (min: 15–max: 25), mean gestational week was 22.63±9.63 (min: 5–max: 40), and mean number of pregnancies was 3.97±1.22 (min: 3–max: 9). Of the pregnant women, 26.5% married at 18 or under, 45.7% were in the 13th-27th week of pregnancy, 53% experienced four or more pregnancies, 54.8% had an unplanned/unintended pregnancy, and 83.9% did not have a disease during their pregnancy.

Table 3 presents the pregnant women's opinions on motherhood and labor. Of the pregnant women, 54.3% felt positive

Table 1. Pregnant women's demographic characteristics

Variable	n	%
Mean age, Mean±SD (min.–max.)	32.36±4.98 (21–44)	
Age group		
21–32 years	114	49.6
33–44 years	116	50.4
Education level		
Literate	20	8.7
Primary school graduate	81	35.2
High school graduate	105	45.7
University graduate	24	10.4
Working		
Yes	68	29.6
No	162	70.4
Income status		
Income<Expenditure	51	22.2
Income=Expenditure	156	67.8
Income>Expenditure	23	10.0
Total	230	100.0

SD: Standard deviation; Min: Minimum; Max: Maximum.

Table 2. Characteristics regarding the marriage and pregnancy of pregnant women

Variable	n	%
Marriage mean age, Mean±SD (min.–max.)	19.76±1.80 (15–25)	
Mean gestational week, Mean±SD (min.–max.)	22.63±9.63 (5–40)	
Mean number of pregnancies, Mean±SD (min.–max.)	3.97±1.22 (3–9)	
Marriage age		
18 and younger	61	26.5
19 and older	169	73.5
Gestational week		
5–12	38	16.5
13–27	105	45.7
28 or more	87	37.8
Number of pregnancies		
Three	108	47.0
Four or more	122	53.0
Status of pregnancy		
Planned/intended pregnancy	104	45.2
Unplanned/unintended pregnancy	126	54.8
Disorder during pregnancy		
No disorder	193	83.9
There is a disorder	37	16.1
Total	230	100.0

SD: Standard deviation; Min: Minimum; Max: Maximum.

emotions, 57.4% felt ready for motherhood, and 48.7% perceived the changes related to pregnancy in their body both positively and negatively. Of the pregnant women, 43.5% did not receive information on pregnancy, labor, and baby care, 84.8% did not take pregnancy education class, and 78.3% had concern/anxiety regarding pregnancy and labor. Of the pregnant women, 36.1% received the most support from their mother during their pregnancy and 68.3% had someone to support them with baby care after labor.

Table 3. Pregnant women's opinions regarding motherhood and labor

Variable	n	%
The first emotion when she learned about her pregnancy		
Sadness and negative emotions	34	14.8
Happiness and positive emotions	125	54.3
Nothing	71	30.9
Feeling ready for motherhood		
Yes	132	57.4
No	29	12.6
Not sure	69	30.0
Perception of the changes in her body		
Positive	90	39.1
Negative	28	12.2
Both positive and negative	112	48.7
Received information on pregnancy, labor, baby care, etc.		
Did not receive information	100	43.5
From healthcare personnel	62	27.0
From the internet	16	7.0
From family elders	52	22.6
Taking a pregnancy education class		
Yes	35	15.2
No	195	84.8
Anxiety/concern regarding pregnancy and labor		
Yes	180	78.3
No	50	21.7
Who provided the most support		
No one	48	20.9
Mother	83	36.1
Mother-in-law	36	15.7
Healthcare personnel	33	14.3
Spouse	19	8.3
Friend	11	4.8
Have a person who can help with baby care after labor		
Yes	157	68.3
No	73	31.7
Total	230	100.0

Table 4 presents the mean score of the scales. The mean score of the pregnant women on the PSS was 42.62±5.01 and the mean scores on the PMDP and PBDP sub-dimensions were 19.54±5.07 and 13.16±3.96, respectively.

Table 5 presents the mean scale scores regarding the marriage and pregnancy characteristics of pregnant women. A significant difference was found for marriage age and the number of pregnancies with the PSS mean score ($p<0.05$) but no significant difference was found with the other variables ($p>0.05$). Those who married underage and experienced four or more pregnancies had higher perceived stress. A significant difference was found for marriage age, number of pregnancies, and status of the pregnancy (planned or not) with PMDP subscale mean scores ($p<0.05$) but no significant difference was found with other variables ($p>0.05$). Participants who married at age 18 or younger, who experienced four or more pregnancies, or who had an unplanned pregnancy had lower motherhood perception. A significant difference was found for the status of the pregnancy (planned or not) with PBDP mean scores ($p<0.05$) but no significant difference was found with the other variables ($p>0.05$). Those who experienced an unplanned pregnancy had a more negative body image.

Table 6 presents mean scale scores regarding pregnant women's opinions on motherhood and labor. A significant difference was found for a pregnant woman's feeling ready for motherhood, her perception of the changes in her body, and her primary support person with the PSS mean score ($p<0.05$). Those who did not feel ready for motherhood, negatively perceived the changes in their bodies, or had no support had a higher level of stress. Pregnant women who felt ready for motherhood, positively perceived the changes in their body, received information from health personnel, took a pregnancy education class, and received the most support from health personnel during their pregnancy had a higher level of motherhood perception.

A significant difference was found for pregnant women feeling ready for motherhood, their perception of the changes in their body, and their primary support person with PBDP mean score ($p<0.05$ (Table 6). Pregnant women who did not feel ready for motherhood, negatively perceived the changes in

Table 4. Mean scale scores

Scale	Mean	Standard deviation	Minimum	Maximum
Perceived Stress Scale	42.62	5.01	30	62
Perception of Motherhood During Pregnancy subscale	19.54	5.07	7	28
Perception of Body During Pregnancy subscale	13.16	3.96	5	20

Table 5. Comparison of mean scale scores regarding the marriage and pregnancy characteristics of the pregnant women

Socio-demographic characteristic	n	PSS	PMDP	PBDP
		Mean±SD	Mean±SD	Mean±SD
Marriage age				
18 and younger	61	44.26±4.87	16.96±5.40	13.72±3.70
19 and older	169	42.03±4.94	20.47±4.62	12.95±4.05
Statistical test	t	3.025	-4.846	1.285
	p	.003	.000	.199
Gestational week				
1–12	38	43.60±6.13	19.31±4.77	13.89±4.41
13–27	105	42.14±4.68	19.74±4.78	13.40±3.86
28 and more	87	42.78±4.85	19.40±5.57	12.55±3.84
Statistical test	F	1.256	.152	1.879
	p	.287	.859	.155
Number of pregnancies				
Three	108	41.78±4.85	21.78±4.38	12.75±4.22
Four or more	122	43.36±5.05	17.55±4.82	13.52±3.70
Statistical test	t	-2.412	6.922	-1.481
	p	.017	.000	.140
Pregnancy situation				
Planned/intended pregnancy	104	42.03±5.27	22.32±3.40	12.57±3.99
Unplanned/unintended pregnancy	126	43.11±4.75	17.24±5.08	13.64±3.89
Statistical test	t	-1.620	8.700	-2.041
	p	.107	.000	.042

t: t-test; F: ANOVA test; PSS: Perceived Stress Scale; PMDP: Perception of Motherhood during Pregnancy Subscale; PBDP: Perception of Body during Pregnancy Subscale; SD: Standard deviation.

their body, did not receive information regarding pregnancy, and primarily received support from their mother-in-law had a more negative body perception.

Table 7 presents the correlation between scales. A weak negative relationship was found between PSS and PMDP ($p<0.05$), whereas no relationship was found between PSS and PBDP ($p>0.05$). PBDP and PMDP had a weak negative relationship ($p<0.05$).

Discussion

Participants' mean number of pregnancies was 3.97±1.22 (min: 3–max: 9). Of the pregnant women, 47% had three pregnancies and 53% experienced four or more pregnancies (Table 2). This pregnancy rate was different from the literature because women who experienced three or more pregnancies were chosen for the sample. Bacacı and Apay[10] (2018) found 38.8% of pregnant women in their sample had three or four pregnancies. Dağlar and Nur[19] (2014) indicated that 41.8% of the pregnant women they sampled had three or more pregnancies. Gözüyeşil et al.[20] (2008) stated that 13.1% of the pregnant women had four or more pregnancies and Ejder and Apay[21] (2015) stated that 31.2% of pregnant women had five or more pregnancies. Turkey Demographic and Health Survey[22] (2013) data indicates Turkish women feel the ideal mean number of children is 2.9 and a higher level of education correlates with a lower level of fertility.

Examining the pregnant women's opinions on motherhood and labor, 54.3% of the pregnant women felt happy and had positive emotions, 30.9% felt nothing, and 14.8% felt sadness and negative emotions (Table 3). More than half of the pregnant women felt happy and positive emotions when they first learned about their pregnancy because they mostly planned to be pregnant and felt ready for pregnancy and motherhood. Pregnancies of those who felt sadness and negative emotions or those who felt nothing were thought to have an unintended/unplanned pregnancy. The present study results are similar to the literature. Özçalkap[23] (2018) indicated 87.3% of the pregnant women felt happy and had positive emotions, Evrenol Öçal[24] (2011) indicated 93.4% of the pregnant women felt happy and had positive emotions, and Şirin[25] (2016) indicated 50.7% of the pregnant women felt happy and had positive emotions.

Of the pregnant women in the study, 57.4% felt ready for motherhood, 30% were not sure about their readiness, and 12.6% did not feel ready for motherhood (Table 3). This rate was lower in the literature because women who experienced three or more pregnancies had difficulty in pregnancy due to care and

Table 6. Comparison of mean scale scores regarding the pregnant women's opinions on motherhood and labor (n=230)

Characteristic	n	PSS	PMDP	PBDP
		Mean±SD	Mean±SD	Mean±SD
Feeling ready for motherhood				
Yes[a]	132	41.77±5.21	22.15±4.11	12.60±4.14
No[b]	29	44.44±5.64	13.82±3.44	14.86±3.73
Not sure[c]	69	43.49±3.95	16.95±3.91	13.50±3.50
Statistical test	KW	6.015	96.035	8.677
	p	.049 a<b,c	.000 a>b,c	.013 b>a,c
Perception of the changes in her body				
Positive[a]	90	41.06±5.16	22.97±3.94	12.43±4.34
Negative[b]	28	44.82±4.09	14.17±3.85	14.50±3.60
Both positive and negative[c]	112	43.33±4.76	18.12±4.27	13.41±3.63
Statistical test	KW	13.850	83.971	6.078
	p	.001 b>a,c	.000 a>b,c	.035 b>a,c
The person providing information regarding pregnancy, labor, baby care, etc.				
Did not receive any information[a]	100	43.36±5.09	17.71±4.68	13.75±3.75
Healthcare personnel[b]	62	41.96±5.28	22.74±4.41	12.64±4.35
Internet[c]	16	42.75±5.01	21.18±2.92	10.68±3.34
Family elders[d]	52	41.96±4.44	18.75±5.17	13.40±3.78
Statistical test	KW	4.477	41.116	9.676
	p	.214	.000 b>c>d	.022 a>b,c
The person providing the most support during pregnancy				
No one[a]	48	45.41±4.94	16.37±4.72	13.41±3.14
Mother[b]	83	41.74±4.54	20.14±4.74	12.55±3.94
Mother-in-law[c]	36	43.72±6.14	18.58±4.13	15.36±3.39
Healthcare personnel[d]	33	41.36±4.58	22.30±4.72	13.15±4.26
Husband[e]	19	40.84±4.16	20.73±5.48	11.94±4.78
Friend[f]	11	44.72±4.33	21.63±5.29	11.54±4.52
Statistical test	KW	14.225	35.294	16.207
	p	.014 a>b,c,d,e,f	.000 d>f>e>b	.006 c>a>d

t: t-test; F: ANOVA test; KW: Kruskal-Wallis test; PSS: Perceived Stress Scale; PMDP: Perception of Motherhood during Pregnancy Subscale; PBDP: Perception of Body during Pregnancy Subscale; SD: Standard deviation.

responsibility of other children and problems aroused with the new pregnancy, and so it was difficult for them to feel ready for motherhood. Babadağlı[26] (2008) found that 78% of the adolescent pregnant group felt ready for pregnancy, Özçalkap[23] (2018) indicated that 92.5% of the pregnant women felt ready for pregnancy, and Evrenol Öçal[24] (2011) found that 91.3% of the pregnant women felt ready for pregnancy.

Of the pregnant women participating in the present study, 39.1% positively perceived the changes related to pregnancy in their bodies, whereas 48.7% perceived these changes both positively and negatively (Table 3). Most of the women who had many pregnancies had difficulty accepting and adapting to their bodies. Each woman has a different body perception as well as emotions and thoughts related to body image. Özçalkap[23] (2018) determined that 67.9% of pregnant women perceived their image as good, 16.5% as normal, and 15.9% as bad. Of the pregnant women, 49.8% positively perceived the changes in their bodies.

The PSS mean score was 42.62±5.01 (Table 4). Scores of PSS-14 range between 0 and 56, so this result indicated pregnant women perceived a high level of stress. Karakoyunlu[27] (2018) found the postpartum PSS mean score was 41.41±5.78, Durmuş[28] (2015) found the PSS mean score was 17.34±6.88 and Pınar et al.[29] (2014) found the PSS mean score was 25.30±5.04. Yehia et al.[30] (2019) conducted a study with 580 pregnant women and found that 74% had a moderate or high level of stress. Similar studies found the stress levels of pregnant women to be moderate or high.

The mean PBDP subscale score was 19.54±5.07 and the mean PMDP subscale score was 13.16±3.96 (Table 4). These results

Table 7. Correlation between scales

Scale		Perceived Stress Scale	Perception of Motherhood During Pregnancy Subscale	Perception of Body During Pregnancy Subscale
Perceived Stress Scale	r_s	1.000	-.182	.034
	p		.006	.608
Perception of Motherhood During Pregnancy Subscale	r_s	-.182	1.000	-.176
	p	.006		.008
Perception of Body During Pregnancy Subscale	r_s	.034	-.176	1.000
	p	.608	.008	

r_s: Spearman Correlation; p<0.05.

indicate the motherhood perception of pregnant women was high while body perception was negative. The highest score is 28 and the lowest score is 7 for the PMDP subscale. A higher score means a higher level of motherhood perception. The highest score is 20 and the lowest score is 5 in the PBDP subscale. A higher score indicates negative pregnancy-related body perception whereas a lower score indicates positive pregnancy-related body perception.[2] Alan Dikmen and Şanlı[31] (2019) conducted a study examining the effect of progressive muscle relaxation exercises on level of distress and pregnancy perception and found mean PMDP scale scores were 26.24±2.24 and mean PBDP scale scores were 8.56±2.94 in the first evaluation of pregnant women in the control group who received no intervention.

A significant difference was found between PSS mean scores based on their number of pregnancies (p<0.05) (Table 6). PSS scores were higher in women with numerous pregnancies because more children cause increased motherhood responsibilities. In the literature, Pınar et al. (2014) found similar results. [25] The number of pregnancies increased the prevalence of anxiety and depression.[21,32,33] Physical and emotional complaints were seen more in women with numerous pregnancies.[34]

A significant difference was found between mean PMDP subscale scores and the number of pregnancies (p<0.05), but no significant difference was found with the PBDP subscale (p>0.05) (Table 6). This study found that motherhood perceptions of women with four or more pregnancies were lower than those experiencing three pregnancies. Tokgöz[35] (2018) found that adaptation to motherhood of the women who experienced three or more pregnancies was less than those who had an unintended pregnancy. Unplanned and unintended pregnancies as well as numerous pregnancies affect women's acceptance of pregnancy, which affects their perception of motherhood. This study found the body perception of the women with four or more pregnancies was more negative, however no significant difference was found between groups because this study was conducted with women experiencing three or more pregnancies. As the number of pregnancies increase, deformities in the woman's body also increase and women have difficulty returning to their old form. This may negatively affect the body perception of pregnant women. Similarly, Babacan Gümüş et al.[36] (2011) found that the number of pregnancies caused a significant difference in body image, and women with a third pregnancy had a lower level of body image compared to others. Kumcağız[37] (2012) found a negative relationship between the number of pregnancies and body perceptions; increasing number of pregnancies decreased the body perceptions of pregnant women. Kök et al.[38] (2018) found that women with numerous pregnancies had more negative body perceptions.

A significant difference was found between PSS mean scores and the marriage age of pregnant women (p<0.05) (Table 6). The PSS score of the women who married at 18 and under was higher. Women married at an early age are subjected to responsibilities such as maintaining a marriage and having children before reaching physical or psychological maturity. Previous studies indicate increased anxiety levels of women married at an early age.[33,39]

A significant difference was found between mean PMDP subscale scores and marriage age (p<0.05), but no significant difference was found with the PBDP subscale (p>0.05) (Table 6). The motherhood perceptions of the women married at 19 and older were higher compared to those married at 18 and younger. Marriage at a young age decreased the possibility of a positive perception of motherhood. Uçar[40] (2014) found that the marriage age did not affect the motherhood role, which is different result than the present study.

No significant difference was found between PSS mean scores and status of the pregnancies (planned or not) of pregnant women (p>0.05) (Table 6). This result indicated that women who experienced three or more pregnancies perceived the process to be stressful whether the pregnancies were planned or not. Being pregnant may not always be planned, consciously, or at will. Even if the pregnancy is planned, the women may not adapt to the pregnancy. Women's acceptance of their pregnancy, baby, and motherhood is a process that develops over the course of the pregnancy. Similar to the present study, Durmuş[28] (2015) found no significant difference between the status of the pregnancy (planned or not) and mean PSS scores. Different from the study result, Pınar et al.[29] (2014) found women whose pregnancy was planned had lower levels of stress than those with an unplanned pregnancy.

A significant difference was found between PMDP and PBDP subscale mean scores and the status of pregnancies(planned or not) of the pregnant women ($p<0.05$) (Table 6). This study found the motherhood perceptions and body perceptions of pregnant women with planned/intended pregnancy were higher and more positive, respectively, compared to those having unplanned/unintended pregnancy. Planned/intended pregnancies positively affected motherhood perception and body perception. Women become ready for the motherhood role and successfully cope with their own problems and problems that can occur. Women expect and accept the changes occurring in their body in the planned/intended pregnancies and they have positive body perceptions. Previous studies found that body perceptions of mothers in planned/intended pregnancies are found to be higher than those in unplanned/unintended pregnancies.[20,37,38] Previous studies indicate that planned/intended pregnancies positively affect the motherhood role, which supports this result.[40–42]

A significant difference was found between pregnant women's feeling ready for motherhood and PPS mean scores. Pregnant women who did not feel ready for motherhood had a higher PSS score ($p<0.05$) (Table 7). Pregnant women feeling ready for motherhood had more ability to cope with stress compared to those who did not feel ready. If a mother is ready for motherhood, willingly delivers, loves her baby, and understands the needs of her baby, it is easier for her to establish a positive relationship with her baby. Unplanned/unintended pregnancies caused women to think they were not ready for motherhood. A study found that women with an unplanned pregnancy had an inadequate relationship with their baby compared to women who planned their pregnancy. Women who became pregnant without planning also had difficulty breastfeeding their babies.[43]

A significant difference was found between PSS mean scores and pregnant women's perceptions of the changes in their body ($p<0.05$) (Table 7). Stress scores were higher in the pregnant women who negatively perceived the changes of pregnancy while those who positively perceived the changes had a lower level of stress. Changes occur in the woman's body during pregnancy and the reactions of the women or their husbands may affect body perception. Changes in the body as pregnancy proceeds positively or negatively affect the women. A study found a significant difference between pregnant women's perceiving their body and their being affected from others in perceiving their body.[44]

A significant difference was found between feeling ready for motherhood, perceiving the changes in the body, and receiving information regarding pregnancy, labor, baby care, etc. and PMDP and PBDP mean subscale scores ($p<0.05$) (Table 7). This study found that pregnant women feeling ready for motherhood, positively perceiving the changes in their body, and receiving information regarding subjects such as labor and baby care had a high level of motherhood and positive body perception. Pregnant women's feeling ready for motherhood and receiving information regarding pregnancy, labor, and baby care positively affected both mother's and baby's health and increased awareness and self-reliance, and therefore motherhood and body perception increased. Women receiving information during pregnancy knew what kind of changes would occur in their body and they were aware that these changes were temporary and had sufficient resources to rehabilitate. A woman's positive perception of the changes in her body increased her perceptions of body and motherhood. Pregnancy increases the acceptance within society and family in addition to giving women the feelings of excellence and trust, therefore pregnant woman positively perceives the changes in her body and her perceptions of motherhood and body perception increase. Previous studies found that pregnant women who feel ready for motherhood, receive information and care during the pregnancy period, and positively perceive the changes in their body had a higher level of body image perception and motherhood perception.[9,10,41,42] Turkey Demographic and Health Survey[22] (2013) data indicated that 97% of women had the assistance of a trained health provider while giving birth within the 5 years.

No significant difference was found between pregnant women receiving information on labor, baby care, etc. and PSS mean scores ($p>0.05$) (Table 7). This may be because the study was conducted with women who experienced numerous pregnancies, and more than half of the women were 33 years old or older. The number of mothers experiencing pregnancy and labor that received information before labor was high; however, they had more experience regarding labor and baby care, so pregnancy did not affect their perceived stress level. A study found that pregnant women aged between 30 and 44, married for more than 5 years, and who had two or more pregnancies were more ready for and experienced less fear about labor compared to others. Advanced aged women's giving birth more made their coping with the next pregnancy process easier.[45]

A significant difference was found between the person who supported pregnant women most during pregnancy and PSS mean scores ($p<0.05$). Women stating that no one supported them during pregnancy had higher stress scores compared to those who received support. Pregnant women receiving insufficient social support had negative psychological effects during pregnancy and after labor. In some societies, women are expected to adapt to pregnancy and motherhood themselves and no intervention is planned regarding the adaptation to the responsibilities and social status. Therefore, women experience a stressful pregnancy and labor process. Kılıçaslan[46] (2008) found that pregnant women's anxiety decreased as their status of receiving support increased. Üst[47] (2012) found that pregnant women receiving social support had a lower level of anxiety.

A significant difference was found between the person providing the most support during pregnancy of the pregnant women and PMDP and PBDP subscale mean scores ($p<0.05$)

(Table 7). Motherhood perception of those receiving support from health personnel during their pregnancy was higher compared to others. The body perception of the women receiving support from their mother-in-law was lower compared to others. Social support positively affects the woman's adaptation to the motherhood role during pregnancy and the postpartum period increased the awareness of her baby and eased her relationship with those around her. The pregnant women felt more relaxed, developed a positive perception of the changes in their body, and had their motherhood perception increased due to the social support they received. Receiving support from her husband, family, and friends plays a significant role in a pregnant woman's ability to adapt to the changes that occur during pregnancy. Pregnant women who did not receive sufficient support from their surroundings and healthcare professional should be in peer to peer communication. Pregnant women should be provided care and information on the changes that occur during pregnancy. Okanlı et al.[1] (2003) found that women receiving sufficient support had an easier post-partum period and became successful in coping with problems. Kök et al.[38] (2018) found that individuals with a positive body perception had more social support.

A weak negative relationship was found between the PSS and PMDP subscales ($p<0.05$) but no relationship was found with the PBDP subscale ($p>0.05$). A negative weak relationship was found between the PBDP and PMDP subscales ($p<0.05$) (Table 8). The study found that pregnant women's perception of motherhood increased with an increase in their stress level of women experienced three and more pregnancies, and their perceptions of the body were not affected. Motherhood perception increased as the body image of the women who experienced three or more pregnancies increased. Positive body perception in pregnant women increased their motherhood perception. Bacacı[10] (2018) found that pregnant women's feeling physically inadequate and poor in health had increased distress. Çırak and Özdemir[48] (2015) found that weight gained during pregnancy did not affect body image perception. Eryılmaz[49] (2017) found that pregnant women showing depressive symptoms negatively perceived their body image. Güney and Uçar[50] (2018) found that a positive body image during pregnancy positively increased a woman's attitude towards breastfeeding during the postpartum period.

Conclusion

The study found that pregnant women's perception of motherhood increased with the increase in the stress level of women who experienced three or more pregnancies and their perceptions of the body were not affected. Motherhood perception increased as the body image of the women who experienced three or more pregnancies increased. As a result of the study, midwives and nurses should implement the proper nursing care plan by determining the situations that could affect body perception and motherhood perception (gaining weight, inadequate support, not being able to receive training and information, negative sense of self, etc.). Pregnant women negatively perceiving the changes in their bodies should be told these changes are temporary and they should be provided with more support systems around them. Nurses and midwives working in the gynecology and obstetrics clinic or services where pregnancy tracking occurs should evaluate the body and motherhood perception and level of anxiety and stress of the pregnant women. The anxiety and stress states of the women with histories of numerous or unplanned/unintended pregnancies should be evaluated and counseling and psycho-social support should be provided to those with intense stress or a low level of perception of self.

Conflict of interest: There are no relevant conflicts of interest to disclose.

Peer-review: Externally peer-reviewed.

Authorship contributions: Concept – K.D.B., E.D.A.; Design – K.D.B., E.D.A.; Supervision – K.D.B.; Fundings - E.D.A.; Materials – E.D.A.; Data collection &/or processing – E.D.A.; Analysis and/or interpretation – K.D.B., E.D.A.; Literature search – K.D.B., E.D.A.; Writing – E.D.A.; Critical review – K.D.B.

References

1. Okanlı A, Tortumluoğlu G, Kırpınar İ. Gebe kadınların ailelerinden algıladıkları sosyal destek ile problem çözme becerileri arasındaki ilişki. Anadolu Psikiyatri Dergisi 2003; 4: 98–105.
2. Kumcağız H, Ersanlı E, Murat N. The development of a self-perception of pregnants scale and its psychometric features. J Psy Nurs 2017;8:23–31.
3. Şahin EM, Kılıçarslan S. Son trimester gebelerin depresyon ve kaygı düzeyleri ile bunları etkileyen etmenler. Balkan Med J 2010; 27:51–8.
4. Yanıkkerem E, Altınparmak S, Karadeniz G. Gebelikte yaşanan fiziksel sağlık sorunlarının incelenmesi. Celal Bayar Üniversitesi Manisa Sağlık Yüksekokulu Dergisi 2006;3;35–42.
5. Eskin M, Harlak H, Demirkıran F, Dereboy Ç. Algılanan stres ölçeğinin türkçeye uyarlanması: güvenirlik ve geçerlik analizi. New/Yeni Symposium Journal 2013;51:132–40.
6. Ölçer Z, Oskay U. Yüksek riskli gebelerin yaşadığı stresörler ve stresle baş etme. Hemşirelikte Eğitim ve Araştırma Dergisi 2015;12:85–92.
7. Atasever İ, Sis Çelik A. The validtiy and reliability of Antenatal Perceived Stress Inventory Turkish version: A methodological study. Health Care Tor Women International 2018;39:1–18.
8. Beydağ KD, Mete S. Prenatal kendini değerlendirme ölçeğinin geçerlik ve güvenirlik çalışması. Journal of Anatolia Nursing and Health Sciences 2008;11:16–24.
9. Duncombe D, Wertheim EH, Skouteris H, Paxton SJ, Kelly L. How well do women adapt to changes in their body size and shape across the course of pregnancy? J Health Psychol 2008;13:503–15.
10. Bacacı H, Ejder Apay S. Gebelerde beden imajı algısı ve distres arasındaki ilişki. Düzce Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi 2018;8:76–82.
11. Çakır L, Can H. Gebelikte sosyodemografik değişkenlerin ank-

siyete ve depresyon düzeyleri ile ilişkisi. Turkish Family Physician 2012;3:35–42.
12. Özkan A, Arslan H. "Gebeliğe Karar Verme, Fizyolojik Yakınmaları Algılama ve Eğitim Gereksinimleri. Zeynep Kamil Tıp Bülteni 2007;38:155–61.
13. Taşkın L. Doğum ve Kadın Sağlığı Hemşireliği. 8th ed. Ankara: Sistem Ofset Matbaacılık; 2007. p. 85–105.
14. Çapık A, Ejder Apay S, Sakar T. Gebelerde distres düzeyinin belirlenmesi. Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi 2015;18:196–203.
15. Özdemir N, Kariptaş E, Yalçın S. "Gebelik sayısı ile durumluk ve sürekli kaygı düzeyi arasındaki ilişkilerin doğum öncesinde ve doğum sonrasında değerlendirilmesi", III. Uluslararası Multidisipliner Çalışmaları Sempozyumu (ISMS) Program ve Bildiri Özet Kitabı. Ankara: 2017. p. 149.
16. Akın Ö. Gebelik stresini değerlendirme ölçeğinin Türkçe geçerlik ve güvenirlik çalışması. [Yüksek Lisans Tezi] Ordu: Ordu Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Anabilim Dalı; 2012.
17. Chang SR, Chao YM, Kenney NJ. I am a woman and i'm pregnant: body image of women in Taiwan during the third trimester of pregnancy. Birth 2006;33:147–53.
18. Hodgkinson EL, Smith DM, Wittkowski A. Women's experiences of their pregnancy and postpartum body image: a systematic review and meta-synthesis. BMC Pregnancy Childbirth 2014;14:330.
19. Dağlar G, Nur N. The relationship between anxiety and depression level and coping styles with stress of pregnant women. Cumhuriyet Med J 2014;36:429–41.
20. Gözüyeşil EY, Şirin A, Çetinkaya Ş. Gebe kadınlarda depresyon durumu ve bunu etkileyen etmenlerin incelenmesi. Fırat Sağlık Hizmetleri Dergisi 2008;3:13–7.
21. Ejder Apay S, Özdemir F, Özorhan EY, Sakar T. Erzurum'daki kadınların gebelik sayısına ve aralığına etki eden faktörlerin incelenmesi. Ankara Sağlık Bilimleri Dergisi 2015;45–64.
22. Türkiye Nüfus Sağlık Araştırması. 2013 Ana Raporu. Retrieved: January 25, 2019, from
1. http://www.hips.hacettepe.edu.tr/tnsa2013/rapor/TNSA_2013_ana_rapor.pdf.
23. Özçalkap N. Adıyaman il merkezindeki gebelerin gebelik ve anneliğe uyumlarının karşılaştırılması. [Yüksek Lisans Tezi]. Hasan Kalyoncu Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Anabilim Dalı, 2018.
24. Evrenol Öçal S. Adölesan gebelerin gebelik, doğum ve anneliğe uyumları ve etki eden faktörler. [Yüksek Lisans Tezi]. Ege Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Anabilim Dalı, 2011.
25. Şirin F. Adölesan yaşta doğum yapan kadınların gebelik, doğum ve doğum sonu döneme ilişkin özellikleri. [Yüksek Lisans Tezi]. İstanbul Medipol Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Anabilim Dal, 2016.
26. Babadağlı B. Gebelik yaşının gebelikte yaşanan fizyolojik ve psikolojik değişikliklere etkisi. Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi 2008;11:96–105.
27. Karakoyunlu Ö. Doğum eyleminde yaşanan ağrı, stres ve kortizolün emzirme başarısına etkisi. [Yüksek Lisans Tezi]. Atatürk Üniversitesi, Sağlık Bilimleri Enstitüsü, Ebelik Anabilim Dalı, 2018.
28. Durmuş E. Gebelerin anksiyete, algılanan stres ve depresif belirti durumlarının incelenmesi. [Yüksek Lisans Tezi]. Medipol Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Anabilim Dalı, 2015.
29. Pınar ŞE, Arslan Ş, Polat K, Çiftçi D, Cesur B, Dağlar G. Gebelerde uyku kalitesi ile algılanan stres arasındaki ilişkinin incelenmesi", Dokuz Eylül Üniversitesi Hemşirelik Yüksekokulu Elektronik Dergisi 2014;7:171–7.
30. Yehia DBM, Malak MZ, Al-Thwabih NN, Awad RR, Al-Ajouri ES, Darwish SS, et al. Psychosocial factors correlate with fatigue among pregnant women in Jordan. Perspect Psychiatr Care 2020;56:46–53.
31. Alan Dikmen H, Şanlı Y. Progresif Kas Gevşeme Egzersizlerinin Gebelerin Distres Düzeyi ve Gebelik Algısına Etkisi. DEUHFED 2019;12:186–98.
32. Arslan B, Arslan A, Kara S, Öngel K, Mungan MT. Gebelik anksiyete ve depresyonunda risk faktörleri: 452 olguda değerlendirme. Tepecik Eğitim Hastanesi Dergis 2011;21:79–84.
33. Çalışkan D, Oncu B, Köse K, Ocaktan MF, Özdemir O. Depression scores and associated factors in pregnant women: a community based study in Turkey. J Psychosom Obstet Gynecol 2007;11:1–6.
34. Sunal, N. Demiryay, A. Gebe Kadınların algıladıkları fiziksel ve emosyonel yakınmalar. Fırat Sağlık Hizmetleri Dergisi 2009;4:99–110.
35. Tokgöz MG. Prenatal dönemdeki kadınların gebeliğe ve annelik rolüne uyumlarının ve etkileyen faktörlerin değerlendirilmesi. [Yüksek Lisans Tezi]. İstanbul Medipol Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Anabilim Dalı, 2018.
36. Gümüş AB, Çevik N, Hataf SH, Biçen Ş, Keskin G, Tuna AM. Gebelikte benlik saygısı ve beden imajı ile ilişkili özellikler. Anadolu Tıbbi Araştırmalar Dergisi 2011;1:7–14.
37. Kumcağız H. Gebe kadınlarda beden algısı ve benlik saygısının bazı değişkenlere göre incelenmesi. International Journal of Human Sciences 2012;9:691–703.
38. Kök G, Güvenç G, Bilsel H, Güvener A. Gebelik döneminde kadınların beden algısı farklılık gösterir mi? Hemşirelikte Eğitim ve Araştırma Dergisi 2018;15:209–14.
39. Irmak BD. Yüksek kaygı ve depresyon düzeyinin evlilik yaşamı ile ilişkisinin değerlendirilmesi. [Yüksek Lisans Tezi]. Işık Üniversitesi, Sosyal Bilimler Enstitüsü, Klinik Psikoloji, 2017.
40. Uçar H. Gebelerin psikososyal sağlık durumları ile annelik rolü arasındaki ilişki. [Yüksek Lisans Tezi]. Atatürk Üniversitesi, Sağlık Bilimleri Enstitüsü, Ebelik Anabilim Dalı, 2018.
41. Koç Ö, Özkan H, Bezmezci H. Annelik rolü ve ebeveynlik davranışı arasındaki ilişkinin değerlendirilmesi. İzmir Dr. Behçet Uz Çocuk Hastanesi Dergisi 2016;6:143–50.
42. Taner S. Planlanmamış gebeliklerin doğum sonrası erken dönemdeki annelik davranışına etkisi. [Yüksek Lisans Tezi]. Adnan Menderes Üniversitesi, Sağlık Bilimleri Enstitüsü Hemşirelik Anabilim Dalı, 2014.
43. Karaçam Z, Şen E, Amanak K. Effects of unplanned pregnancy on neonatal health in Turkey: a case-control study. Int J Nurs

Pract 2010;16:555–63.
44. Yağmur Özorhan E, Pasinlioğlu T. Gebelerin gebelik sürecinde beden imajını algılama durumlarının belirlenmesi. Maltepe Tıp Dergisi 2012;4:16.
45. Demirbaş H, Kadıoğlu H. Prenatal dönemdeki kadınların gebeliğe uyumu ve ilişkili faktörler. MÜSBED 2014;4:200–6.
46. Şahin EM, Kılıçarslan S. Son trimestırdaki gebelerin depresyon ve kaygı ile bunları etkileyen etmenler. Balkan Med J 2010;27:51–8
47. Üst ZD, Pasinlioğlu T. Primipar ve multipar gebelerde doğum ve doğum sonu döneme ilişkin endişelerin belirlenmesi. Journal of Health Sciences and Professions 2015;2:306–17.
48. Çırak A, Özdemir F. Adölesan gebelerde beden imajı algısının belirlenmesi. Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi 2015;18:3.
49. Eryılmaz S. Gebelikte beden imajı ve depresif davranışlar arasındaki ilişkinin belirlenmesi. [Yüksek Lisans Tezi]. Eskişehir Osmangazi Üniversitesi, Sağlık Bilimleri Enstitüsü, Ebelik Anabilim Dalı, 2014.
50. Güney E, Uçar T. Gebelikteki beden imajının emzirme tutumu ve doğum sonu emzirme sürecine etkisi. Zeynep Kamil Tıp Bülteni 2018;49:49–53.