The factors affecting self-esteem, depression and body image of pregnant women in a state hospital in Turkey

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Abstract

Objective: To determine the factors affecting self-esteem, depression and body image of pregnant women at gestational age ≥28 weeks.

Methods: The cross-sectional study was conducted at Atatürk State Hospital, Balikesir, Turkey from April to October 2016, and comprised pregnant women presenting to the Obstetrics and Gynaecology Outpatient Clinic. Data was collected using a questionnaire demographic characteristics, Body Image Scale, Beck Depression Inventory and Rosenberg Self Esteem Scale. Data was analysed using SPSS 22.

Results: Of the 385 women approached, 362(94.0%) participated. Their mean age was 26.0± 5.1 years. Those having graduated from a university and those who were employed had high self-esteem (p<0.05). Women whose husbands were unemployed, who had low family income and got married unwillingly, had low self-esteem and high depressive symptoms (p<0.05). In women whose husbands displayed negative attitudes towards their gaining weight during pregnancy, there was a negative relationship between depression and self-esteem scores (p<0.05), a positive correlation between self-esteem and body image scores (p<0.05), and a negative correlation between their body image and depression scores (p<0.05).

Conclusion: Identification of the factors affecting women's perception of self-esteem, body image and possible depressive symptoms are important for the wellbeing of women and their family.

Keywords: Pregnancy, Body image, Depression, Self-esteem. (JPMA 70: 1159; 2020)

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Introduction

Pregnancy is one of the most special life events in women's life and many physiological, emotional and social changes occur during the period.[1,2] Self-esteem reflects a person's overall subjective emotional evaluation of his own worth, confidence and satisfaction in oneself.[3] In published studies, self-esteem was found to be high in women[4-6] and their partners with higher education, and in women who had a nuclear family, who were employed,[5] who had a planned pregnancy,[4,6] who had higher income,[6,7] women who were satisfied with their partners,[4,5] who were non-smokers,[8] who had high body image perception,[9] who had a good emotional state[7,10] and who were not exposed to violence.[7] Body image is people's positive or negative feelings about their body[11] and is a multi-faceted concept that refers to persons' perceptions of and attitudes towards their own body, including size, shape, appearance and functions.[12] Concerns about body image are often

experienced during pregnancies, and postpartum and menopausal periods.[11] In previous studies, it was stated that perception of body image was low in women who did not exercise during pregnancy,[13-16] overweight people,[13] older women,[6] women with low education,[6,14] women without health insurance,[17] and women with low family income.[6,14,17] In addition, women who were smokers, who were incompatible with their husbands,[5] who had unplanned pregnancy,[6,10,17] who had low self-esteem,[9,18] and who had depressive symptoms[19] and had low body image perception. A study in Thailand found that body image dissatisfaction during the perinatal period was associated with increased depression and anxiety scores.[12]

Depression is characterised by persistent sadness and a loss of interest in activities and can lead to a variety of emotional and physical problems and to an inability to carry out daily activities for at least two weeks.[20] The prevalence of depressive symptoms in pregnancy ranges from 4% to 70.8%.[2,10,20,21] Depression during pregnancy was mostly seen in women aged >30 years,[22] unemployed,[23,24] divorced/separated,[21] lowly educated,[20-22,24] without health insurance,[22,23] with low family income,[20-22,24] living in a rural area,[24]

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smokers,[22,23] and those with a chronic illness.[22-24] Depression was more common in women who had unplanned pregnancy,[2,10,20,21,24] stillbirth,[1] previous history of abortions,[1,2] and obstetric complications during current and previous pregnancies.[1] The body image and self-esteem of pregnant women are affected negatively by the changes experienced in physical appearance due to weight-gain during pregnancy.[10,25] It has been emphasised that self-esteem, body image and depression are related concepts. Depression was found more common in women with lower self-esteem.[10] However, depression was associated with negative body image.[10,19] Although there are many studies conducted on each of these concepts, there is a limited number of studies evaluating self-esteem, body image and depression together during pregnancy.[15,18] The current study was planned to determine the factors affecting self-esteem, depression and body image of pregnant women at gestational age ≥28 weeks in a tertiary care setting.

Subjects and Methods

The cross-sectional study was conducted at Atatürk State Hospital, Balikesir, northwestern Turkey from April to October 2016, and comprised pregnant women presenting to the Obstetrics and Gynaecology Outpatient Clinic for antenatal care. After approval from the ethics committees of Celal Bayar University and of the Balikesir Provincial Health Directorate, the sample size was calculated using Epi-info 2000 software.[26] According to the hospital registration records related to 2015, the total study universe was 4221 pregnant women. The sample of the current study was calculated with 95% confidence level, 5% deviation and 50% unknown prevalence using universal formula.[27] Those included were Turkish speakers aged >18 years with a gestational age of ≥28 weeks who had a healthy pregnancy and no psychiatric problems or chronic diseases. Those with pregnancy complications or not willing to participate were excluded.

Data was collected after obtaining written informed consent from the subjects. A four-part questionnaire was used for the purpose. The first part consisted of questions about women's demographic characteristics. Also used was the Turkish version of the Rosenberg Self-Esteem Scale (RSS) which is a 4-point scale having 63 multiple-choice questions (MCQs; 10 of which are used to measure self-esteem.[28] The third part contained the Turkish version of the Body Image Scale (BIS) which consists of 40 items

rated on a 5-point scale ranging from 1 (disagree strongly) to 5 (agree strongly). The lowest and highest possible scores from the scale were 40 and 200 respectively. The higher score reflects more positive body image.[28] The Turkish version of the Beck Depression Inventory (BDI) used had 21 items. Each item is scored between 0 and 3, and the maximum score to be obtained from the instrument is 63. A high total score indicates a high level of depression or severity.[29]

The questionnaires were administered through face-to-face interviews before consultation in a separate room within the outpatient clinic, and it took approximately 40 min.

Data was analysed using the SPSS 22. The normality was assessed with Kolmogorov-Smirnov test. The groups were not homogeneous. Mann Whitney U and Kruskal Wallis tests were used to evaluate the relationship between independent and dependent variables. Spearman correlation analysis was used to determine the relationship involving BIS, RSS and BDI. P<0.05 was considered significant.

Results

Of the 385 eligible women, 362(94%) met the inclusion criteria. The mean age of the sample and their husbands was 26.0±5.1 (range: 19-42) and 30.5±5.3 (range: 18-47) years respectively. Age groups, family income, weight during pre-pregnancy 68.8% and the husbands' attitude towards weight-gain during pregnancy were also noted (Table-1). Overall, 91(25.1%) women had unplanned pregnancies, 10(2.8%) had a history of stillbirth, 31(8.6%) had a history of induced abortion and 56(15.5%) had a history of miscarriage. The mean scores for RSS, BDI and BIS were 0.9±1.0 (range: 0-6), 10.4±6.5 (range: 0-38), and 148.2±22.4 (range: 148.2-200), respectively. Women who were employed and who had graduated from university had high self-esteem (p<0.05). Women who had unemployed husbands, those with low family income, and who got married with their husbands unwillingly had low self-esteem and high depressive symptoms (Table-2). There was a negative, moderate and significant relationship between the RSS and BDI mean scores of the subjects (r=-0.269; p=0.001). A weak positive and significant correlation was determined between their RSS and BIS scores (r=0.185; p=0.001). A negative moderate and significant correlation was found between their BIS and BDI scores (r=-0.291; p=0.001).

Table-1: The relationship between characteristics of women and Rosenberg Self Esteem Scale, Beck Depression Inventory and Body Image Scale.

Characteristics of women	n (%)	Rosenberg Self Esteem Scale			Beck Depression Inventory			Body Image Scale			
		Mean±SD	Median	Test and p value	Mean±SD	Median	Test and p value	Mean±SD	Median	Test	p value
Age group of women											
18-23 (years)	89 (24.6)	1.0±1.1	1		10.7±7.3	9	KW=1.109	148.6±23.4	149		
24-29 (years)	166(45.8)	0.9±1.1	1		9.8±6.1	9	p =0.182	148.6±20.9	149.5	KW=0.334	
30-34 (years)	72 (9.9)	0.8±0.8	1	KW=6.369	11.2±6.1	10		147.3±22.9	150.5	p=0.954	
≥35 (years)	35 (9.7)	1.3±1.0	1	p=0.095	11.2±6.3	11		146.9±26.1	150		
Education level of women									1		
Primary school	173 (47.8)	1.1±1.1	1	KW=12.472	10.6±6.7	10	KW=0.308	49.3±22.5	150	KW=0.691	
High school	96 (26.5)	0.8±0.9	1	p=0.002	10.5±6.5	9	p=0.857	146.1±21.8	149	p=0.708	
University	93 (25.7)	0.7±0.9	0		10.0±5.9	9		148.4±22.8	150		
Employment status of women											
Employed	95(26.2)	0.6±0.7	1	MWU=3.774	10.8±6.7	10	MWU=-1.571	148.0±22.3	149	MW=-0.388	
Unemployed	267 (73.8)	1.1±1.1	0	p=0.001	9.5±5.5	8	p=0.116	148.8±22.4	150	p=0.698	
Age group of husband											
18-23 (years)	23 (6.4)	1.2±1.2	1		11.8±8.7	9		146.3±20.4	149		
24-29 (years)	144 (39.8)	1.0±1.1	1	KW=6.994	9.9±6.5	9	KW=4.684	150.4±22.5	149.5	KW=2.184	
30-34 (years)	105 (29.0)	0.7±0.8	1	p=0.072	9.9±5.4	10	p=0.196	149.1±19.2	150	p=0.535	
≥35 (years)	90 (24.9)	1.2±1.1	1		11.6±6.8	10.5		147.5±21.3	147.5		
Education level of husband											
Primary school	146 (40.3)	1.0±1.0	1	KW=2.492	11.0±6.4	10	KW=3.436	151.0±23.0	151		
High	117 (32.3)	0.9±1.1	1	p=0.288	10.2±6.7	9	p=0.179	144.3±23.2	146	KW=4.190	
University	99 (27.3)	0.9±1.0	1		9.9±6.2	9		149.0±20.2	150	p=0.123	
Employment status of husband											
Employed	346 (95.6)	0.9±1.0	1	MWU=-2.878	10.2±6.0	9	MWU=-2.878	148.5±22.4	149.5	MWU=-1.102	
Unemployed	16 (4.4)	2.0±1.7	2	p=0.004	16.9±10.9	11.5	p=0.004	143.0±21.6	148.5	p=0.270	
Pre-Pregnancy body mass index											
Underweight	36(9.9)	1.0±1.1	1	KW=0.180	11.6±8.2	7		150.9±18.8	157		
Normal	205(56.6)	0.9±1.1	1	p=0.981	10.4±6.4	8.5	KW=0.260	146.9±22.2	148.5	KW=3.313	
Overweight	86(23.8)	0.9±1.1	1		10.2±6.5	9	p=0.967	151.5±23.2	151	p=0346	
Obese	34(9.7)	0.8±0.7	1		9.7±4.1	10		144.9±24.6	148		
Satisfaction status of pre-pregnancy weight											
Satisfied	257 (71.0)	1.0±1.0	1	MWU=-0.052	10.3±6.5	9	MWU=-0.918	149.0±22.7	150	MWU=-1.195	
Unsatisfied	105 (29.0)	0.9±1.9	1	p=0.959	10.8±6.5	10	p=0.359	146.3±21.5	147	p=0.232	

SD: standard deviation; KW: Kruskal Wallis test; MWU: Mann Whitney U test.

Discussion

The factors affecting self-esteem, depression and body image of pregnant women were evaluated by the current study. In recent years, obesity has become one of the biggest health problems throughout the world and it is common in women of childbearing age.[30] In the study, the majority of the women were overweight 86(23.8%) and obese 34(9.7%) according to the pre-pregnancy body mass index (BMI). Pre-pregnancy overweight/obesity prevalence ranged from 13.6% in China to 61.7% for American Indians/Alaska Natives,[31] Brazilians[30] and 86.3% for Samoans.[31] In the current study, 51(14.1%) women scored >17 on the BDI, indicating antenatal depression. The rates were between 4% and 32.9% worldwide.[2,21,24] As the findings indicate, the prevalence of antenatal depression may vary in women with different cultural backgrounds. It is important to ask pregnant women about their depressive symptoms from health providers in order to give supportive care. In the present study, there was no statistically significant relationship between the BDI score and employment and education status of the participants, but there was a significant correlation between employment status of their husbands. In some studies, whose findings were compatible with the findings of the present one, BDI scores were low in women who had employed husbands.[22] Unlike the results of these studies, high depression scores were found on unemployed women in Turkey and[23,24] Switzerland,[21] and in women with lower education.[21,24] Similar to our findings, studies indicate that depression was more common in pregnant women with low income.[22,24] In the study, the BDI score was high in women who got married unwillingly and had incompatibility in marriage. In a systematic review, it was

Table-2: The relationship between characteristics of women and Rosenberg Self Esteem Scale, Beck Depression Inventory and Body Image Scale.

Characteristics of women	n (%)	Rosenberg Self Esteem Scale			Beck Depression Inventory			Body Image Scale			
		Mean±SD	Median	Test and p value	Mean±SD	Median	Test and p value	Mean±SD	Median	Test	p value
Type of family											
Nucleus	286 (79.0)	0.9±1.0	1	MWU=-0.224	9.9±6.1	9	MWU=-2.863	149.1±23.0	149	MWU=0.995	
Extended	76 (21.0)	1.0±1.2	1	p=0.822	12.6±7.3	11	p=0.004	145.0±19.7	150	p=0.320	
Perceived income level											
Low	73 (20.2)	1.5±1.4	1		12.9±7.9	11		143.4±20.5	146		
Middle	250 (69.0)	0.8±0.9	1	KW=16.699	9.9±5.8	7	KW=9.869	149.8±23.2	151	KW=6.270	
High	39 (10.8)	0.7±0.9	0	p=0.001	9.1±6.4	9	p=0.007	146.8±19.2	148	p=0.043	
Willing marriage											
Yes	354 (97.8)	0.9±1.0	1	MWU=-5.026	10.1±6.1	9	MWU=-3.928	148.6±22.3	150	MWU=-1.629	
No	8 (2.2)	4.4±1.0	4.5	p=0.001	23.2±8.2	22.5	p=0.001	132.2±23.6	149.5	p=0.103	
Marital adjustment											
Yes	313 (86.5)	0.9±.1.0	1	MWU=-1.691	9.4±5.6	16	MWU=-6.296	149.2±22.0	147	MWU=-1.893	
No	49 (13.5)	1.3±1.4	1	p=0.09	16.9±8.0	9	p=0.001	142.0±24.4	150	p=0.058	
Smoking during pregnancy											
Yes	42 (11.6)	0.9±1.2	1	MWU=0.723	13.1±7.4	9	MWU=-2.400	140.6±28.0	149	MWU=-1.133	
No	320 (88.4)	0.9±1.0	1	p=0.470	10.1±6.3	12	p=0.016	149.2±21.4	150.5	p=0.257	
Using alcohol during pregnancy											
Yes	15 (4.1)	0.9±1.0	1	MWU=-1.835	17.0±9.8	9	MWU=2.687	148.9±21.6	150	MWU=-1.646	
No	347 (95.9)	2.1±2.2	2	p=0.067	10.2±6.1	15	p=0.007	131.8±32.2	135	p=0.100	
Exercise status during pregnancy											
Yes	231 (63.8)	0.9±1.0	1	MWU=1.408	9.9±6.0	9	MWU=1.444	150.3±22.9	151	MWU=2.466	
No	131 (36.2)	1.1±1.2	1	p=1.159	11.3±7.2	10	p=0.149	144.5±20.9	148	p=0.014	
The attitude of the husband to the weight taken during pregnancy											
Positive	249 (68.8)	1.0±1.1	1		9.8±6.1	9		147.9±21.2	150		
Negative	26 (7.2)	1.7±1.4	2	KW=15.210	15.7±8.5	14.5	KW=-15.874	132.3±28.4	129	KW=12.512	
No effect	87 (24.0)	0.6±0.8	1	p=0.001	10.9±5.9	10	p=0.001	154.1±21.7	150	p=0.002	
Current pregnancy status											
Unintended	271 (74.9)	0.9±1.0	1	MWU=-1.611	9.7±5.9	9	MWU=-3.495	149.9±22.7	150	MWU=-2.556	
Intended	91 (25.1)	1.2±1.3	1	p=0.107	12.7±7.5	11	p=0.001	143.1±20.5	145	p=0.011	

SD: standard deviation; KW: Kruskal Wallis test; MWU: Mann Whitney U test.

found that the depression score was high in pregnant women who were not compatible with her husbands.[1] In the current study, the BDI mean score was significantly higher in women with unintended pregnancies. The findings are consistent with those in literature.[10,20,21,24] In the present study, the mean BDI score was significantly higher in women who smoked and used alcohol which is in accordance with literature.[22] Depressive symptoms are more common in pregnant women who use alcohol and smoke. Pregnant women should adopt a healthy lifestyle starting from the pre-conception period. The importance of regular antenatal follow-up during pregnancy should be explained to them. Health workers should be aware of groups at risk of depression and regular follow-up of pregnant women with depressive symptoms during antenatal care is important. A study in Turkey[5] reported high mean RSS score (0.9). In literature, RSS scores vary between 1.02 and 1.64.[4,10] Women having higher RSS scores in the present study was probably due to their

different socio-demographic characteristics. In the study, it was determined that self-efficacy was low in women who had low level of education and income, and in women who were unemployed and had unemployed husbands. Similar to the results of the present study, some studies in Turkey[5,6] and in Brazil[4] emphasised that as the educational status of women increased, so did their self-esteem, which suggests that women whose education level is high have high self-efficacy scores. Therefore, increasing the education and employment status of women will contribute to the improvement of women's social status. In studies from Turkey[6] and the United States,[7] it was stated that women with high family income level had high self-esteem. The findings of the study are parallel to the findings of studies conducted in Brazil,[4] indicating that there was no statistically significant relationship between women's self-esteem scores and their age. Similar to the present study, there are some studies indicating that there was no statistical relationship between the RSS score and the

current pregnancy status (unintended/intended).[5,6] However, there are also other studies showing that the RSS scores were higher in women with intended pregnancies.[4] In the study, there was no statistically significant relationship between marital adjustment and RSS score. However, in studies conducted in Turkey and Brazil, it was stated that pregnant women who had compatible marriages had high self-esteem.[4,5] This may be due to the socio-cultural characteristics of the regions where the studies were conducted and the status of the women. In the pre-pregnancy period, some interventions can improve women's self-esteem and enable them to perceive pregnancy more positively, which would provide a positive impact on women's mental health. Parallel to the findings of a study from Brazil,[3] the current study showed women whose husbands had negative attitudes towards their gaining weight during pregnancy had low self-esteem and low body perception. Therefore, provision of psychosocial support during antenatal care is extremely important. In addition, it is necessary to raise women's partners' awareness of psychosocial changes occurring during pregnancy and possible effects of these changes. In the current study, there was no statistically significant relationship between the participants' exercise status, smoking, alcohol use and their mean score for the RSS. Likewise, it has been reported that self-esteem was low in women who used alcohol during their pregnancies in the USA[7] and in pregnant women who were smokers in France.[8] In the present study, the mean BIS score was 148.2 In previous studies, the score was between 101.4 and 176.5.[6,9,17] A study in Iran said half of the pregnant women were not satisfied with their body image and that social pressure had a negative effect on their perception of body.[10] Similar to our findings, studies conducted in Turkey and Brazil[14,17] said there was no relationship between BIS scores and variables such as age, education and employment status of women and their husbands.[5,17] In the present study, the mean BIS score was low in women with low income. The findings are similar to the results of other studies in Turkey.[6,17] Parallel to a systematic review, it was found that body perception was adversely affected in pregnant women with low socioeconomic, education and income levels.[14] In studies from Turkey[6,17] and Iran,[10] the scores of body perception were high in women who had planned pregnancy. The finding is similar to the results of the current study. Contrary to a study from Turkey,[25] we found no correlation between pre-pregnancy BMI and the participants' body perception scale scores. In the present study, the negative attitude of the spouse towards the weight gained during pregnancy had a negative effect on BIS score. In a qualitative study in Australia, it was found that women were worried about not being able to regain

their pre-gestational body image due to their weight.[15] Similar to the findings of this study, the study in Australia[13] found that BIS scores were high in pregnant women doing physical activities. Low body image is more common among pregnant women who lead a sedentary lifestyle during pregnancy. A systematic review emphasised that pregnant women who exercised a lot were more satisfied with their body image.[16] Providing women with education and counselling about the importance of exercise during the preconception and antenatal period, and encouraging them to perform physical activity during prenatal and postpartum period can help them have a positive body image. In the current study, there was a negative correlation between depression scores and self-esteem / body image scores. This finding agreed with the findings of other studies.[10,19] Pregnant women perceive their bodies unattractive during the pregnancy period, which negatively affects their self-esteem. A study in Iran stated that there was a significant positive relationship between pregnant women's body image satisfaction and psychological wellbeing.[18] In a study conducted in Brazil, body image index, depression score and self-esteem were found to affect the body image.[3] A systematic review pointed out that the BDI score was high in women with low body image.[14] The findings revealed a significant negative relationship between depression and body image / self-esteem. Hence, improvement of the mental health of pregnant women is of great importance. Women should be informed of physical changes during pregnancy to help them better accept changes in their body. Therefore, early diagnosis and treatment of pregnant women who have depressive symptoms can create a positive cycle for these variables and can increase the level of self-esteem and body image perception. It was also emphasised that the development of self-esteem is very important for women to have healthy psychology, and that negative body image affects their self-esteem adversely.[28]

Limitations

Although the study is not community-based, it is the first study to evaluate the self-esteem, depression and body image of pregnant women in Balikesir.

Conclusion

Low income level and negative attitudes of the spouse towards the weight gained during pregnancy negatively affected women's self-esteem, body image and depression scores. Women who had low socio-economic background had higher depression score and low self-esteem. Women with unintended pregnancy had low body perception and high depression scores. As the self-esteem score decreased, the body image score decreased and the depression score increased.

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