Original Article

Investigating the Relationship between Self-Compassion and Body Image with Postpartum Depression in Women Referring to Health Centres in Iran

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Abstract

Background: Depression is the most important postpartum mental disorder that can lead to irreversible damage to family health if not addressed, including inability to provide maternal care, impaired mother–child relationship, impaired growth, and development of the child, to marital problems, and sometimes the risk of suicide and infant death. The aim of this study was to investigate the relationship between self-compassion and body image with postpartum depression. **Material and Method:** In this study, 150 pregnant women in the third trimester and 6 weeks postpartum completed the Short Form Self-Compassion Questionnaire (SCS-SF), Multidimensional Self-Body Relationships (MBSRQ), and Edinburgh Postpartum Depression Inventory (EPDS). Depending on the type of study, descriptive statistics such as mean, median, and standard deviation were calculated for quantitative, frequency, and relative frequency variables. Kolmogorov–Smirnov test was used to evaluate the normality of the distribution of scores in each questionnaire. Data were analyzed using parametric proportional statistical tests (paired t-test, Pearson correlation, and linear regression) at the level of significance less than 0.05. **Results:** Based on the findings, the relationship between self-compassion and postpartum depression was not significant. Self-kindness had a significant positive relationship, and self-judgement had a significant negative relationship with depression ($p < 0.01$). Body image had a significant predictive effect on postpartum depression ($p < 0.05$). **Conclusions:** Negative body image as a risk factor for postpartum depression should be considered by healthcare providers and used in the prevention and treatment of postpartum depression.

Keywords: *Self-compassion, body image, post partum depression*

Introduction

According to the World Health Organization, maternal mental health is essential in achieving global health goals because it can have potential long-term effects on public welfare and women's socio-economic participation.[1] Accepting the role of mother along with physical fatigue, sleep deprivation, financial problems, and isolation is one of the inherent stressors that all mothers face.[2] Postpartum depression is a serious problem whose prevalence depends on the definition of the disorder, the mother's country of residence, diagnostic tools used, diagnosis threshold, and the period for which its prevalence is determined.[3] According to meta-analyses, the prevalence of depression in the first, second, and third trimesters of pregnancy is 7.4%, 12.8%, and 12%, respectively.[4] In some studies, the prevalence of depression has been estimated at 13-22% at 6-8 weeks postpartum and 10% at 12 weeks postpartum.[5] Clinical manifestations of postpartum depression include sleep disorders, mood swings, changes in appetite, extreme anxiety, sadness, guilt and disability, memory disorders, and suicidal ideation.[6] These symptoms can occur from at least two weeks to one year after delivery.[2]

In a recent study, self-compassion is an adaptive strategy for managing negative thoughts that can lead to depression. Mindfulness and self-compassion-based cognitive therapy interventions can prevent the recurrence of depression.[7] Self-compassion is the tendency to respond to threats through self-compassion, self-acceptance without judgment, and understanding of human commonalities.[8] Some studies have shown that self-compassion and mindfulness were both significant predictors of postpartum depression screening scores.[9] Eldin (2019)

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found a positive and significant relationship between increased levels of self-compassion and decreased levels of depression and anxiety in mothers,[10] which was similar to the results of other studies.[11,12] In comparison, Felder and Lemon (2016) stated that depression in the perinatal period is positively associated with self-judgment and isolation, and negatively associated with self-kindness and human commonalities.[13] Body image is another psychological factor that is very important during pregnancy, which can be associated with postpartum depression.[14] Body image is a combination of cognitive, behavioral, and perceptual factors that play important roles in self-esteem and self-importance.[15] Body image disorders in pregnancy can limit food consumption, reduce self-esteem, cause reluctance to breastfeeding, and even lead to high-risk behaviors such as smoking.[16] Elise and Claire (2019) reported a fourfold higher risk of perinatal depression in women who were dissatisfied with their body image, with 33% of women dissatisfied with their body image experiencing perinatal depression.[17] Numerous other studies have examined the association between body image and depression during pregnancy and postpartum, revealing that negative body image can predict postpartum depression.[18,19] However, in meta-analyses, a small number of studies have reported a weak association between body image dissatisfaction and postpartum depression; indeed, heterogeneity in the design of these studies, the tools used, the evaluation time, and the number of different samples can be effective in the conclusions of these studies.[20]

Self-compassion is a relatively new concept in the field of social and clinical psychology, and body image is one of the psychological factors that are very important during pregnancy. Since no study has been conducted to investigate the relationship between self-compassion and body image in women with postpartum depression, it seems that examining both of these factors in pregnant mothers will help identify factors affecting depression that have not been studied before. Accordingly, the present study was conducted to determine the relationship between self-compassion and body image with postpartum depression in pregnant women in Kermanshah.

Material and Method

This study was a cross-sectional descriptive correlational study. In this study, body image, self-compassion, and postpartum depression were considered as the main variables. The statistical population in this study included all women referring to health centers in Kermanshah in 2020. To determine the sample size, the formula of the correlation between two quantitative traits in the studied population has been used. According to the confidence factor of 95% and the power of 90%, the minimum sample size for the study was estimated to be 150 people. A total of 150 pregnant women completed the researcher's questionnaires in person in two stages of the third trimester of their pregnancy and six weeks after delivery. Using a stratified sampling method from among the six districts of Kermanshah city, a number of health centers were randomly selected, and random and purposeful sampling was done in these centers. Participants were selected between January 2020 and March 2020, and all of them completed the informed consent form. Inclusion criteria included women between the ages 20 and 35, with no psychological, medical, or obstetric problems and with no experience of severe stressful events in the last nine months. Exclusion criteria included emergency cesarean section, hospitalization of the mother or infant in the hospital, and dissatisfaction with participation in the continuation of the study. Participants, who referred to selected health centers for postpartum care at least one month after delivery, were evaluated to determine whether they did not meet the exclusion criteria.

The Edinburgh Postnatal Depression Scale (EPDS) was used to assess the severity of postpartum depression symptoms. This questionnaire consists of 10 questions with a score of 0-3 for each question. A lower score is a sign of better mental health, and with an increase in the subject's score, the likelihood of postpartum depression is higher. In the present study, Cronbach's alpha coefficient for the questionnaire was 0.70. In order to assess the degree of self-compassion, the short form of the Self-Compassion Scale-Short Form (SCS-SF) was used. This questionnaire has six two-dimensional factors: self-kindness (Cronbach's alpha 0.80), self-judgment (Cronbach's alpha 0.70), human commonalities (Cronbach's alpha 0.90), isolation (Cronbach's alpha 0.72), mindfulness (Cronbach's alpha 0.82), and extreme replication (Cronbach's alpha 0.8). Each question is given a score of 0-5, for which a higher score is indicative of a greater self-compassion. This questionnaire is scored on a 5-point Likert scale from "strongly disagree = 1" to "strongly agree = 5." A higher score in this questionnaire means a greater degree of self-compassion in the individual.

In this study, the subject's mental assessment of her body was measured based on the score obtained from the Multidimensional Body–Self Relationships Questionnaire (MBSRQ). (MBSRQ). The questions of the MBSRQ are based on a 5-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"). The maximum score of this questionnaire is 230, and getting a higher score means a better body image. The reliability of the questionnaire was 0.88 by the retest method and at least 0.70 for the subscales of the questionnaire. Data analysis was performed using IBM SPSS statistical software version 23 at both descriptive and inferential levels. Descriptive statistics such as mean, median, and standard deviations; frequency and relative frequency were calculated for quantitative variables. To evaluate the normality of the score distribution of each questionnaire, the Kolmogorov–Smirnov test was used, and the data were analyzed using proportional parametric statistical tests (paired

t-test, Pearson correlation, and linear regression) at the significance level of 0.05.

Ethical considerations

The present study is the result of a research project approved by Kermanshah University of Medical Sciences with ethical code IR.KUMS.REC.1398.412. The details and objectives of the study were explained to the participants, and their consent was obtained before the start of the study. The principles of confidentiality and anonymity were explained to each participant.

Results

In this study, the number of eligible subjects was 150 pregnant women with a mean age of 28.60 (4.50) years. The mean gestational age was 32.40 (4.08), and the majority of subjects (52%) had high school education. Table 1 shows the mean and standard deviation of the dependent and independent variables of the research by study stages (third trimester and six weeks postpartum).

Comparing the minimum and maximum values of each variable using paired t-test showed that the score of self-compassion and body image did not differ significantly (p-value > 0.05), but the mean score of depression decreased significantly (p-value < 0.00). As in Table 2, the relationship between the scales of depression, body image, and self-compassion using the Pearson correlation test showed a significant inverse relationship between depression score in the third trimester and six weeks after delivery ($p < 0.05$). There was a direct and significant relationship between body image score and self-compassion in the third trimester and six weeks after delivery ($p < 0.05$). In Table 3, the relationship between self-compassion and its subscales with depression using Pearson correlation showed no significant relationship between self-compassion and depression in the third trimester of pregnancy and six weeks after delivery ($p > 0.05$). In investigating the relationship between subscales of self-compassion, self-kindness had a significant positive relationship, and self-judgement had a significant negative relationship with depression ($p < 0.01$). Based on the linear regression findings in Table 4, in the third trimester of pregnancy, the regression model was significant ($p < 0.05$ and F = 11.80). Findings showed that body image has a significant predictive effect on depression ($p < 0.05$), meaning that 12.80% of the variance of depression is explained by body image. Also, the findings of the regression showed that the regression model was not significant six weeks after delivery ($p > 0.05$ and F = 1).

Discussion

According to the results of this study, the relationship between self-compassion and depression in the third trimester and six weeks after delivery was not significant. Self-compassion had no significant effect in predicting postpartum depression. The results of this study are not consistent with the results of some related studies. Narimani (2015) in 330 pregnant women expressed a significant inverse relationship between the level of self-compassion and depression one month after delivery.[12] Fourianalistyawati (2018) reported a significant association between self-compassion and depression in the third trimester of pregnancy.[21]

Based on the results of this study, a negative and significant relationship was found between the components of self-kindness and depression, while a positive and significant relationship was found between the component of self-judgment and depression. Felder (2016) reported that depression was positively associated with self-judgment and isolation and negatively correlated with self-kindness and human commonality.[13] The correlation between all

Table 1: Mean and standard deviation of self-compassion, body image, and depressive symptoms variables in the third trimester and six weeks after delivery

Variable		Mean (SD)	Minimum	Maximum
The third trimester of pregnancy	Self-compassion	36.9 (5.10)	30	49
	Body image	160.3 (19.40)	113	195
	Symptoms of depression	9.08 (3.80)	1	23
Six weeks after delivery	Self-compassion	37 (6.61)	24	55
	Body image	159 (24.30)	114	202
	Symptoms of depression	3.4 (2.11)	0	9

Table 2: Correlation coefficients of body image, self-compassion, and depression in the third trimester and six weeks after delivery

variable	Self-compassion	Body image	Symptoms of depression
Self-compassion	-0.11*	0.13	0.08
Body image	-0.37**	0.21**	0.00
Symptoms of depression	-0.05	0.17*	0.27**

*p<0.01 **p<0.05. ***Pearson correlation coefficient was used

Table 3: Self-compassion correlation coefficients and its subscales with depression in the third trimester and six weeks postpartum

Variable	1	2	3	4	5	6	7	8
Self-compassion (total score)	1	0.32**	0.66**	0.62**	0.46**	0.37**	0.72**	0.08
Self-kindness	0.56**	1	-0.01	-0.08	0.00	0.04	0.02	-0.01
Self-judgment	0.12	-0.25**	1	0.32**	0.25**	0.07	0.43**	0.09
Human commonalities	0.39**	0.01	0.16*	1	-0.04	0.41**	0.40**	0.05
Isolation	0.71**	0.31**	-0.08	0.19*	1	-0.21**	0.47**	0.20*
Mindfulness	0.42**	0.22**	0.05	-0.15	0.03	1	-0.05	-0.28**
Extreme replication	0.29**	-0.02	-0.35**	-0.07	0.31**	-0.19*	1	0.19*
Depression (total score)	-0.05	-0.34**	0.30**	-0.05	-0.06	0.04	0.06	1

*p<0.01 **p<0.05. ***Pearson correlation coefficient was used. ****Bold correlation values are for the third trimester of pregnancy

Table 4: Standard multiple regression coefficients for predicting maternal postpartum depression symptoms according to self-compassion variables and body image

Dependent variable	Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	*R*	R^2	Adjusted *R* Square	95.0% Confidence Interval for B
	B	Std. Error	Beta						
Self-compassion*	0.01	0.05	0.01	0.20	0.83	0.37	0.13	0.12	-0.10 _0.12
Body image*	-0.07	0.01	-0.37	-4.83	0.00				-0.10 _0.04
Self-compassion**	0.02	0.02	0.08	1	0.31	0.15	0.02	0.01	-0.02 _0.07
Body image**	0.01	0.00	0.13	1.60	0.09				-0.00-0.02

*Depression (third trimester). **Depression (6 weeks postpartum)

subscales of self-compassion and depression during perinatal was significant, whereas in the study of Pereira (2016), only self-judgment, self-compassion, and isolation had a predictive effect on depression in the second trimester of pregnancy.[9] Fonseca (2019) reported a higher rate of self-compassion in the study of risk factors for postpartum depression in women who did not have symptoms of postpartum depression and anxiety than depressed and anxious women. The relationship between self-compassion and depression existed only in moderate to low levels of self-compassion.[22] In an interventional study, Zhang (2020) reported that increasing self-compassion levels in pregnant women effectively reduced postpartum depression.[23]

Considering that the present study is correlational and that the predictor variable cannot be the main cause of the criterion variable, it seems that in future studies, it is better to investigate the influence of other psychological variables such as emotional intelligence and cognitive emotion regulation, and the fear of self-compassion with depression. Not examining the relationship between demographic variables and its relationship with the rate of depression and self-compassion is one of the limitations of the present study. It seems that the use of questionnaires due to the complexity of the questions can lead to biases, and in future studies, it would be better to use the interview method to assess the degree of self-compassion. Differences in the type of study, that is, cross-sectional, are another limitation of the study. On the other hand, differences in the sample sizes, type of study, study time, and follow-up of mothers during pregnancy and postpartum in the mentioned studies can be effective in the results of these studies.

Examining the second goal of the present study showed that body image has a significant inverse effect on depression. In the third trimester of pregnancy, 12.8% of the variance of depression is explained by body image. Nevertheless, there is a significant relationship between body image and depression in the third trimester and six weeks after delivery. Han (2016) achieved similar results, in which body image could be effective in predicting postpartum depression, regardless of weight and BMI.[24]

Chan (2020) examined the relationship between physical dissatisfaction and depression in a longitudinal and retrospective study of 6 months before pregnancy, the first trimester, the second trimester, the third trimester, and six weeks postpartum. The results showed that physical dissatisfaction before and during pregnancy had a positive and significant association with prenatal depression.[19] Roomruang Wong (2017) did not find any significant relationship between the mean body image score in the third trimester of pregnancy and six weeks after delivery, which is consistent with the present study's findings.[25] Since, based on recent studies, obese or overweight women were more concerned about their body appearance than lean women, the relationship between BMI and depression can be studied. However, the results of many studies on the predictive effect of body image on the variance of postpartum depression are consistent with the present study.[13,15,18]

In the meta-analyses, contradictory studies have been reported that require further investigations about the effects of body image on the rate of depression during pregnancy and postpartum. Maternity and the study's type can affect

the findings of the research.[26] It seems that the study of socio-economic factors such as income, employment status, level of self-confidence and social support, a complete history of midwifery including the number of pregnancies, willingness or unwillingness to pregnancy, history of abortion, and calculation of the body mass index and its relationship with body image and depression are some of the limitations of the present study. In addition, the level of self-confidence and support of the spouse is related to the individual's perception of the body image.[26] Low self-esteem can affect postpartum depression by affecting one's body image.[27] The study of these two factors is suggested in future studies.

Since in some studies, self-compassion has played a mediating role in relation to body image and depression, it is a preventive factor against negative body image by modifying thoughts and feelings related to the body,[16] qualitative studies on the self-compassion and body image relationship in women with depression seem to be beneficial.

Based on the results of the present study, the average depression in the third trimester of pregnancy and six weeks after delivery showed a significant difference. Because the symptoms of postpartum depression may occur from 2 weeks to one year after delivery and the subjects in the present study were examined six weeks after delivery, it may have affected the results of the study. On the other hand, the majority of subjects (52%) had high school education, and the mean age was 28.60 (3.50) According to some studies, the mother's level of education and age can be considered as effective factors influencing the rate of postpartum depression.[4,28,29] The study of the relationship between these variables and depression was not one of the objectives of the present study.

It seems that it would be better to study other factors related to depression in the prenatal period, in addition to age and level of education, including previous history and number of abortions, maternal employment status, maternal income, willingness or unwillingness to pregnancy, living with or without a spouse, and ownership status in further studies. On the other hand, some factors related to depression, especially among Asian women, including problems with the husband's family, dissatisfaction with the sex of the baby, financial problems and poverty, lack of social support, and dissatisfaction with and conflict in marital life need further investigation.[29]

Conclusion

According to the results of the present study, it can be stated that depression is associated with some components of self-compassion, including self-kindness and self-judgment. On the other hand, body image can be a predictor of postpartum depression. These two components can be effective in interventions in the field of psychology and other research studies to reduce the rate of postpartum depression.

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Conflicts of interest

Nothing to declare.

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