

Original Paper

The Relationship Between Social Support and Postpartum Depression



Sayareh Hajipoor¹, Sedigheh Pakseresht^{2*}, Maryam Niknami³, Zahra Atrkar Roshan⁴, Sima Nikandish⁵

1. Midwifery (MSc), School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran.

2. Professor, Social Determinants of Health Research Center, Reproductive Health Research Center, Department of Midwifery, School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran.

3. Instructor, Department of Midwifery, School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran.

4. Associate Professor, Department of Bio-Statistics, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.

5. Midwifery (MSc), School of Nursing and Midwifery, Zanzan University of Medical Sciences, Zanzan, Iran.



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ABSTRACT

Introduction: Postpartum depression is a common and severe problem that has adverse effects on maternal and family health. Social support is one of the determinants of health, and in recent years has received increasing attention, and its overlook is a significant risk factor for postpartum depression.

Objective: This study aimed to determine the relationship between social support and postpartum depression in women referring to comprehensive health centers in Rasht City, Iran.

Materials and Methods: The present study is a cross-sectional, analytical study performed on 300 mothers referred to the comprehensive health service centers in Rasht 2-4 weeks after their deliveries. They were selected by cluster sampling method, which was done systematically within each cluster. The study data were collected using a three-part questionnaire of demographic characteristics, Edinburgh Postpartum Depression Scale (EPDS), and Hopkins social support. The obtained data were analyzed using descriptive and inferential statistics (t-test, Friedman, Mann-Whitney, Kruskal-Wallis, Spearman correlation coefficient, and rank logistic regression).

Results: The results showed that the Mean±SD age of the study mothers was 29±5.3 years. About 63.7% of mothers had low postpartum depression, and their Mean±SD total score of social support was 64.03±16.92. The most support received from the spouses and parents. There was a statistically significant relationship between social support received by mothers after childbirth with education level (P=0.003), job (P=0.001), spouses' job (P=0.001), income (P=0.001), residence status (P=0.043), number of deliveries (P=0.05) and pregnancy desire (P=0.047) and there was a significant inverse correlation between depression score and social support score by spouses (P=0.004, r=-0.167), parents (P=0.002, r=-0.176) and total social support score (P=0.024, r=-0.130). After adjusting for individual social variables, the effect of social support score on the part of the spouses (P=0.001), parents (P=0.006), friends, and relatives (P=0.033) continued to be associated with the severity of depression. Also, the number of deliveries (P=0.05) and h spouses' jobs (self-employed) were significant compared to the unemployed ones (P=0.049).

Conclusion: The results showed a significant and inverse relationship between social support and symptoms of postpartum depression. Although these results show the most support from spouses and parents, the amount of support received in the area of spouses' parents, friends, and relatives were low. It is necessary to draw the attention of midwives and health care providers to mothers and inform them about the importance of social support and its prominent role in reducing postpartum depression.

* Corresponding Author:

Sedigheh Pakseresht, PhD.

Address: Department of Obstetrics, Women Health Promotion, Community Health, School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran.

Tel: +98 (13) 33555056

E-mail: nmjpakseresht@gmail.com

Highlights

- Pregnancy, childbirth, and adapting to the new circumstances of a newborn baby in the family can be considered the most critical stage of a woman's life development.
- Depression is the most common postpartum psychological problem that affects the health of both mother and baby.
- Social support is one of the social determinants of health, and in recent years it has received increasing attention. Social support is directly related to health by improving a person's physical and mental health and reducing the adverse effects of stressors.
- Social support is more than an interpersonal relationship that helps the person mentally and emotionally in times of need. People who provide this help to mothers include family members, friends, neighbors, co-workers, relatives, kin, therapeutic group, and so on.

Plain Language Summary

Pregnancy and postpartum are critical times for mothers and their families, and those who experience this stage need more support during this period. Mothers are more vulnerable to stress during this period. The present study was conducted to determine the relationship between social support and postpartum depression in women referring to the comprehensive health service centers of Guilan University of Medical Sciences in Rasht City, Iran. The results of the present study showed that the amount of social support decreases with increasing the number of deliveries and unwanted pregnancies. Also, the amount of social support among friends and acquaintances was less than the other three areas. Therefore, due to the aging population in the country and the need to increase the population growth rate with on time childbirth, it is necessary to improve social support for this vulnerable group. Therefore, education to the family and support of mothers in these four areas (spouses, wife's parents, spouses' parents, and friends and relatives) are recommended. Because of the midwife's close contact with mothers, educating and informing mothers about the symptoms of postpartum depression and screening before and during pregnancy and postpartum, and even educating health liaisons and health workers (in the first level of prevention) seems necessary. Also, media should be used to raise the culture of not stigmatizing depressed patients and informing people in the community (especially family members, friends, and relatives) that depression, like other diseases such as diabetes and high blood pressure, etc., can be treated. And if it is not timely treated, it may have more side effects. So it is necessary to consider postpartum depression a normal outcome and encourage mothers to seek treatment.

Introduction

Pregnancy, childbirth, and adapting to the new circumstances of a newborn baby in the family can be considered the most critical stage of a woman's life development [1, 2]. Pregnancy and postpartum are essential times for mothers and their families [3], and those who are experiencing this stage for the first time need more support during this period [4]. In this period, the mothers endure changes in physical, psychological, economic, and social systems [5], physical care of the baby, attention to growth and development [6, 7], sucking and breastfeeding problems, jaundice, sleep disturbance, baby weight gain, bloating, eye infections and the umbilical cord [8] headache, back pain, urinary

incontinence and the feeling of physical exhaustion [9-11]. The postpartum period is when the mother is confronted with newer roles, patterns, and relationships and is more prone than ever to emotional and mood crises, including depression [12]. This period, as a stage of change in the mother's life, needs readjusting [3].

Depression is the most common postpartum psychological problem that affects the health of mother and baby [4, 13, 14]. Depression is associated with decreased mood and loss of interest, guilt, worthlessness, sleep and appetite disorders, decreased energy, and weakness [15], which can lead to impaired and inability to care for the baby, increase the risk of neonatal homicide and suicide [16-18]. Significant symptoms of postpartum depression include sleep disturbance, lack

of concentration, low self-esteem, deep sadness and frequent cries, feelings of hopelessness and loneliness, feelings of doubt, and suicidal thoughts [4, 18]. The prevalence of depression, especially postpartum depression, is closely related to cultural and social factors, and therefore its frequency in countries and different races are different [1]. The prevalence of postpartum depression in the world is estimated at 10%-15% [19]. In Iran studies, the prevalence of postpartum depression has been reported up to 43.5% [20, 21].

One of the factors that may be associated with postpartum depression is social support [22]. Social support refers to the amount of respect, sense of belonging, love, and affection that a person receives from others [22, 23]. Social support can have a positive interaction with mother self-efficacy and mother-infant attachment [24, 25]. Studies have shown that people who receive adequate social support can adapt better to problems and have a good psychological adjustment [23, 26].

The results of some studies confirm that receiving support from spouse, family and friends have a significant relationship with reducing postpartum depression [4, 13, 19]. The impact of this support has been reported in different races and cultures [13]. Social support plays an essential role in maintaining the psychological health of mothers and infants and the lack of social support is a significant risk factor for postpartum depression [2]. Strong social bonds act as a protection or barrier against depression during pregnancy and delivery [2, 27]. So, this study was conducted to determine the relationship between social support and postpartum depression.

Materials and Methods

The present study is a cross-sectional analytical study of correlation type performed on 300 mothers referred to the comprehensive health centers of Guilan University of Medical Sciences in Rasht City, Iran, 2 to 4 weeks after their deliveries.

The inclusion criteria include full-term pregnancy, singleton, no underlying disease and history of depression in previous pregnancies (based on the self-report), low-risk pregnancy (history of heart disease, diabetes, hypertension, thyroid, etc.), having a healthy baby, no history of hospitalization during the current pregnancy, no recent difficult delivery, no addiction, no use of psychiatric medications before and during the recent pregnancy, and no encounter with unpleasant and stressful events in the last year (such as first-degree death).

The sampling was done by cluster sampling method selected from 20 comprehensive health service centers and 41 bases in the north, south, east, and west and the center of Rasht City, Iran. Out of these centers, 20 clusters were selected by systematic random method. Since the number of people covered by the comprehensive health service centers was almost equal, the number of samples was selected equally from each group of 15 people for 5 months (from July to October 2018). The required sample size was obtained 300, based on a preliminary study on 20 mothers with the characteristics of the studied units and the relationship between postpartum depression and social support ($r=0.2$) with a 95% confidence, 80% test power, and 10% drop of samples.

The study data were collected using a three-part questionnaire and through interviews with samples. The first part of the maternal and infant demographic questionnaire included mother's age, mother's education, occupation, spouse's occupation, income, place of residence, residence status, number of deliveries, number of abortions and stillbirths, sex of the baby, type of delivery, birth weight, number of pregnancy care and type of pregnancy.

The second part consisted of the standard Hopkins social support questionnaire [28], which measures the amount of social support after childbirth with 44 items. This questionnaire was designed by Hopkins (2008) and had 4 domains: social support from the partner (spouse) (items 1-13), mother's parents (items 14-23), spouse's parents (items 24-31), friends and relatives (items 32-44) and is scored on a 5-point Likert scale from never=0, rarely=1, sometimes=2, most of the time=3, and always=4. Besides, items 6, 8, 9 have inverse scoring. The total score of the questionnaire is between 0 and 176. Higher scores indicate more social support. Matching scores in different domains of spouse, parents, spouses' parents, friends, and relatives have been balanced and reported from 0 to 100. To determine the scientific validity of the social support questionnaire, the content validity method was used, and its Persian version was provided to 10 faculty members of related fields. Accordingly, the CVR (content validity ratio) was more than 0.62, and the CVI (content validity index) was more than 79%. To determine the internal consistency of the instrument, a preliminary study was performed on 20 individuals with the inclusion criteria, and the internal consistency was confirmed by determining the alpha coefficient ($\alpha=0.78$).

The Edinburgh Postpartum Depression Scale (EPDS) questionnaire was designed in 2006. Ahmadi Kani as-

sessed its psychometrics in Iran [16]. The questionnaire consists of 10 questions that allow the diagnosis of depression within 2 to 4 weeks after delivery, and its score ranges between 0 and 30, and a score of 12 or more is considered as postpartum depression. Also, the score was divided between 0-10 (mild), 10-20 (moderate), and 20-30 (severe). Questions 4, 2, 1 are scored from 0 to 3, and questions 10, 9, 8, 7, 6, 5, 3 are scored from the Likert scale of 3 to 0.

The social support score did not follow the normal distribution in general according to the Komolov Smirnov and Shapiro-Wilk tests. To analyze the data, descriptive statistics indicators and Friedman, Mann-Whitney U, Kruskal-Wallis tests, the Spearman correlation coefficient, and logistic regression model were used and conducted in SPSS version 21. A P value of less than 0.05 was considered significant.

Results

The results showed that the Mean \pm SD age of mothers was 29 \pm 5.3 years, birth weight was 3346 \pm 408.68 g and the frequency of receiving antenatal care was 7.7 \pm 2.7 times. Other personal and social characteristics of the samples are presented in Table 1. Comparing the statistical indicators of adjusted scores of social support in general and separate domains, the results showed that according to the Friedman test, the scores of different domains of social support have a statistically significant difference ($P=0.001$), which is the highest social support score was on the part of the spouse with a mean of 77.96 \pm 14.98, and the lowest was related to the friends and relatives with an average of 48.5 \pm 24.8. In general, the mean \pm SD social support score in the samples was 64.03 \pm 16.9 (Table 2).

The results showed that the status of postpartum depression symptoms in this study was 67.3% mild and only 11% severe (Figure 1). Between the score of depression and the score of social support from the spouse ($P=0.004$, $r=-0.167$), parents ($P=0.002$, $r=-0.176$), and the score of total social support ($P=0.024$, $r=-0.130$), there was a significant inverse correlation. Still, the relationships between the spouse's parents, friends, and relatives were not significant (Table 3). The results also showed that the depressive status in terms of age ($P=0.008$), spouse's occupation ($P=0.015$), and type of pregnancy ($P=0.05$) had a statistically significant difference (Table 4). In addition, the results showed that the relationship between social support score and income ($P=0.001$, $r=0.292$) and the number of deliveries ($P=0.022$, $r=-0.132$) was statistically significant.

Multiple analysis of the correlation between the scores of social support areas and depression using the logistic regression model of rank by modulating the effects of individual social and pregnancy variables (adjusted model) showed the score of social support by the spouse (OR=0.96, CI: 0.94-0.98, $P=0.001$), parents (OR=0.98, CI: 0.97-1, $P=0.006$), friends and relatives (OR=1.01, CI: 1-1.03, $P=0.033$) were associated with the severity of depression, as well as the number of deliveries (OR=0.67, CI: 0.45-1.01, $P=0.005$) and the occupation of spouses (self-employed) versus the unemployed (OR=0.24, CI: 0.06-1, $P=0.049$) have been predictors of postpartum depression (Table 5).

Discussion

The results of the present study showed that the prevalence of postpartum depression symptoms was mild in most of the studied units. However, Ghaljeh reported the prevalence of postpartum depression in a study in Najafabad, Isfahan Province, Iran, as mild in only one-third of the samples [29]. The observed differences can be due to the variation in the prevalence of postpartum depression in different cultures and races, indicating its relationship with cultural and social factors. It may also be due to differences in the tools used and measuring time of depression and the most importantly, because of differences in the research communities.

The results of the present study also showed that the Mean \pm SD total score of social support was 64.03 \pm 16.9. The Mean \pm SD total score of social support was reported 69.3 \pm 9 by Nago [30], 64.63 \pm 8.13 (6 weeks after delivery) by Gao [31], and 66.4 \pm 9.1 (4 weeks postpartum) by Li [32]. The tools used by these researchers were similar to the tools used in this study. Nazari [33] reported the Mean \pm SD total score of social support as 96 \pm 24.7 (4 weeks after delivery), and Shafiee [34] reported 92.02 \pm 21.49. In the present study, mothers participated who delivered their first to third children, while in the theoretical research community, only multiparous mothers participated. In the Shafiee study, the mothers with premature infants participated. Or perhaps because social support is a multidimensional concept, the results may also be influenced by the environment in which the information was collected.

During pregnancy and the first few weeks after childbirth, support for mothers in Iran is traditionally high by their relatives. But in general, and after 40 days post-delivery, mothers and children are faced with the new world alone, a situation that is less noticeable in multipara mothers because people think that they already

Table 1. Comparison of total social support score in terms of individual-social variables and pregnancy in the studied mothers

Variables	No.	Mean±SD	Median	Sig.
Age (y)	<25	83	63.09±16.48	0.270**
	26-30	96	65.87±17.61	
	31-35	92	64.54±16.76	
	>35	26	59.03±16.02	
Education	Primary	19	61.75±19.75	0.003**
	High school	50	59.55±15.67	
	Diploma	115	61.67±17.04	
	Academic	116	68.68±15.94	
Job	Employed	38	77.11±14.76	0.001**
	Housewife	262	62.14±16.39	
	Manual worker	56	59.26±16.52	
Spouse's job	Employee	70	71.43±15.06	0.001**
	Self-employed	167	62.89±17.09	
	Unemployed	7	55.44±10.56	
Income (\$)	<250	88	59.16±15.57	0.001**
	250-500	114	61.27±64.44	
	>500	98	71.62±16.17	
Housing	Owned	159	66.30±16.14	0.043**
	Rental	131	61.78±17.39	
	Live with family	10	57.61±19.02	
Number of deliveries	1	166	66.34±34.17	0.05**
	2	108	60.90±16.07	
	3	26	62.30±15.98	
Type of childbirth	Cesarean section	206	64.70±16.55	0.429*
	Normal Vaginal Delivery	94	62.56±17.70	
Gender of the baby	Girl	143	64.65±16.02	0.620*
	Boy	157	63.47±17.74	
Type of pregnancy	Wanted	263	64.88±16.72	0.047*
	Unwanted	37	58.03±17.35	

* Mann Whitney U test; ** Kruskal-Wallis.

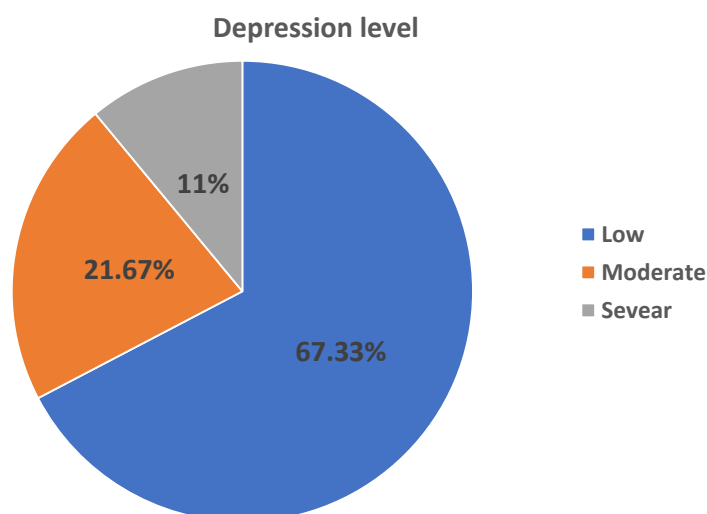


Figure 1. Frequency distribution of postpartum depressive symptoms in the studied mothers

have experience more than in primiparous mothers [34]. Hung also reported that the level of social support decreases from the first to the sixth week after delivery [9]. The similarity of the results of the Gao study may also be due to the traditional Chinese culture, as in Eastern societies, women have a significant and high position in the family, and the majority of families with different situations and cultures support women during pregnancy and postpartum [31]. Also, supporting the wife creates self-esteem, respect, and safety during pregnancy and postpartum [35].

Another result of the present study is comparing the total social support score in terms of personal-social with pregnancy variables in mothers regarding educational level, job, spouse's job, income, residence status, number of deliveries, and pregnancy type. In Shafiee study, there was no statistically significant relationship between education level, mother's job, and social support, while they reported a significant relationship between social support and spouse's job, number of deliveries, and family economic status [34], which the present study consistent with it. The results of the Cheng study in the United States showed a significant relationship between social support and the number of deliveries and employment [36]. In Bakhtiyari study, social support was not significantly related to education and employment [26]. Vaezi also did not report a significant relationship between social support with education level, employment, and pregnancy type [19], which the present study is not consistent with them. Saberi also reported that social support was unrelated to residence status [22], which is inconsistent with the current study result. This difference may be related to the culture of the research community and the research tools. Shafiee

[34] and Azimi [35], in their study, also reported a significant relationship between social support and income that the present study is consistent with their results.

There was a statistically significant relationship between depressive status and age, spouse's occupation, and type of pregnancy. As mothers within an age range of 26-30 years and with the occupation of spouses (employee) and type of pregnancy (wanted) had the lowest rate of depression. Strelow in the United States, on the other hand, has shown that younger mothers, aged 15-24 years (compared to older mothers of 25-29 years), are less prone to depression [37]. Guin [38] also stated that mothers within an age range of 36-40 years reported the highest rate of depression, and those within a range of 20-25 years had the lowest. Differences in the results may be due to unwanted pregnancy or lack of family support, which has increased the chances of postpartum depression.

There is also a significant inverse correlation between postpartum depression and social support from the spouse and the parents. Shafiee's study [34], reported that social support could be effective in increasing the mental health of mothers, and its ignorance by the family, life partner, and mother had the greatest impact on maternal depression, which is in line.

The results of the present study, after adjusting the personal, social, and fertility variables in women, a relationship was found between social support from spouse, parents (inverse), friends, and relatives (direct) and the severity of depression. Noury [23] also showed a negative correlation between depression and social support; however, mothers who receive higher social

Table 2. Comparison of statistical indicators of adjusted scores of social support received in general by domains

Areas of Social Support and Total Score	Mean±SD	Median	Sig.*
Social support from the spouse	77.96±14.98	78.85	0.001
Social support from parents	72.65±22.89	75	
Social support from the spouse's relatives	55.95±28.08	56.25	
Social support from relatives and friends	48.45±24.85	44.23	
Total social support	64.03±16.92	63.92	

* Friedman test.

support from friends and family experienced less postpartum depression. This relationship was significant with the number of deliveries and the spouses' occupation (self-employed versus the unemployed). Shafiee [34] also concluded a statistically significant relationship between social support and the spouse's job because social support is defined as the amount of love, companionship, and attention of family members, friends, and others. Awareness of the sources of support causes people to believe that they have the help of others to change a situation or event [15].

One of the limitations of this study is the self-report of mothers who may, in some cases, have refused to state the facts. It has also been a one-step study and failed to review the continuity of social support. This study was performed on urban mothers referring to comprehensive health service centers in Rasht City. Due to the cultural factor, rural mothers may experience different

environmental stresses after giving birth. The rate of postpartum depression in them may also be different. Therefore, it is suggested that a similar comparative study be performed in rural and urban mothers.

The results of the present study showed that the amount of social support decreases with increasing the number of deliveries and unwanted pregnancies. Also, the amount of social support among friends and acquaintances was less than the other three areas. Therefore, due to the aging population in the country and the need to increase the population growth rate with on-time childbirth, it is necessary to improve social support for this vulnerable group with the help of the Ministry of health. Also, these measures should be guided and supported by family members, relatives, spouse s, friends, midwives, and comprehensive health centers. Therefore, education to the family and support of mothers in these four areas (spouse, wife's parents,

Table 3. Correlation of depression symptoms score with social support scores, its domains (n=300)

The Correlation Coefficient Between the Score of Depression and the Score of Social Support Areas		
Social support from the spouse	The correlation coefficient	-0.167
	Sig.	0.004
Social support from the parents	The correlation coefficient	-0.176
	Sig.	0.002
Social support from the spouse's relatives	The correlation coefficient	-0.096
	Sig.	0.098
Social support from relatives and friends	The correlation coefficient	-0.007
	Sig.	0.907
Total score of social support	The correlation coefficient	-0.130
	Sig.	0.024

* Spearman's rho.

Table 4. Comparison of depressive symptoms in terms of individual-social variables and pregnancy of the studied mothers

Variables		No. (%)			Sig.
		Depressive Condition			
		Low	Moderate	Major	
Age (y)	<25	49 (59)	23 (27.7)	11 (13.3)	0.008**
	26-30	76 (79.2)	14 (14.6)	6 (6.3)	
	31-35	55 (59.8)	24 (26.1)	13 (14.1)	
	>35	22 (75.9)	4 (13.8)	3 (10.3)	
Education	Primary	14 (73.7)	3 (15.8)	2 (10.5)	0.616**
	High School	34 (68)	10 (20)	6 (12)	
	Diploma	73 (63.5)	26 (22.6)	16 (13.9)	
	Academic	81 (69.8)	26 (22.4)	9 (7.8)	
Job	Employed	30 (78.9)	7 (18.4)	1 (2.6)	0.071*
	Housewife	172 (65.6)	58 (22.1)	32 (12.2)	
Spouse's job	Manual worker	31 (55.4)	16 (65.6)	9 (16.1)	0.015*
	Employed	51 (72.9)	13 (18.6)	6 (8.6)	
	Self-employed	118 (70.7)	33 (19.8)	16 (9.6)	
	Unemployed	2 (28.6)	3 (42.9)	2 (28.6)	
Income (\$)	<250	62 (70.5)	16 (18.2)	10 (11.4)	0.670**
	250-500	73 (64)	28 (24.6)	13 (11.4)	
	>500	67 (68.4)	21 (24.4)	10 (10.2)	
Housing	Owned	120 (75.5)	26 (16.4)	13 (8.2)	0.07*
	Rental	76 (58)	37 (28.2)	18 (13.7)	
	Live with family	6 (60)	2 (20)	2 (20)	
Number of of deliveries	1	103 (62)	44 (26.5)	19 (11.4)	0.072**
	2	83 (76.9)	13 (12)	12 (11.1)	
	3	16 (61.5)	8 (30.8)	2 (7.7)	
Type of childbirth	Cesarean section	140 (68)	44 (21.4)	22 (10.7)	0.722*
	Normal Vaginal Delivery	62 (66)	21 (22.3)	11 (11.7)	
Gender of the baby	Girl	105 (73.4)	22 (15.4)	16 (11.2)	0.064*
	Boy	97 (61.8)	43 (27.4)	17 (10.8)	
Type of pregnancy	Wanted	182 (69.2)	55 (20.9)	26 (9.9)	0.05*
	Unwanted	20 (54.1)	10 (27)	7 (18.9)	

* Mann -Whitney U test; ** Kruskal-Wallis test.

Table 5. Multivariate analysis of the relationship between social support and depression in the adjusted model of the effects of individual and social variables and pregnancy in the adjusted logistic regression model

Variables	Regression Coefficient Estimation	SE	Sig.	OR	95% CI	
					Lower	Upper
Social support from the spouse	-0.038	0.009	0.001	0.96	0.94	0.98
Social support from parents	-0.019	0.007	0.006	0.98	0.97	1
Social support from the spouse's parents	-0.005	0.006	0.434	1	0.98	1.01
Social support from relatives and friends	0.014	0.007	0.033	1.01	1	1.03
Number of deliveries	-0.400	0.208	0.055	0.67	0.45	1.01
Spouse job	Manual worker	-1.015	0.756	0.179	0.36	1.60
	Employee	-1.155	0.762	0.130	0.32	1.40
	Self-employed	-1.430	0.727	0.049	0.24	1
	Unemployed (Reference)					

spouse parents, and friends and relatives) are recommended. Obviously, postpartum depression will decline by increasing the social support.

Therefore, midwives should be in close contact with mothers in hospitals and comprehensive health service centers, in informing about the symptoms of postpartum depression and screening before or during pregnancy and after delivery and even educating health liaisons and health workers (in the first level of prevention) who are responsible for health education and care at this level. They can identify vulnerable mothers and refer them to doctors and take action to prevent them at higher levels.

Also, media can raise the culture of not stigmatizing depressed mothers and informing people in the community (especially family members, friends, and relatives) that postpartum depression can be treated like other diseases such as diabetes and high blood pressure, and so on. Failure to treat in time may lead to more complications, so it is necessary to consider postpartum depression a normal outcome and encourage mothers to seek treatment.

Ethical Considerations

Compliance with ethical guidelines

Ethical permission was obtained from the Research Ethics Committee of Guilan University of Medical Sciences (Code: IR.GUMS.REC.2018.121 on 2/4/2018).

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Authors contributions

Concept: Sedigheh Pakseresht, Sayareh Hajipoor, Marayam Niknami, Zahra Atrkar Roushan; Writing the original draft: Sedigheh Pakseresht, Sayareh Hajipoor, Marayam Niknami, Zahra Atrkar Roushan and Sima Nikandish; Data collection: Sayareh Hajipoor; Data analysis: Sedigheh Pakseresht, Sayareh Hajipoor, Marayam Niknami, Zahra Atrkar Roushan, Sima Nikandish; Reviewing the final edition: All authors.

Conflict of interest

The authors declared no conflict of interest.

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