

Psychological Risk Factors for Postnatal Depression: A Prospective Study of Iranian Low Income Primigravidae at Health Care Centres

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ABSTRACT

Postpartum depression increases the rate of complications for mother and infant. Few studies on postpartum depression have been undertaken on pregnant women with a low socioeconomic status. The present study aims to recognize the prevalence of postpartum depression and association with risk factors in low socioeconomic populations. Predicting risk factors during pregnancy for postpartum depression are so important. 451 low income pregnant women referred to health care centres, participated in a prospective study. Questionnaires covered demographics and, obstetrics and psychological characteristics were collected by interviews. Edinburgh Postnatal Depression Scale (EPDS) was used to define depression in pregnancy as a sum score ≥ 10 and in postpartum as a sum score ≥ 13 at gestational week 28. The mean participant age was 25 years. Most of them

had moderate perceived stress (61%), low self-esteem (63.2%), low perceived social support (67.6%), and low quality of marital relationship (43.5%). Fear related to childbirth was high in more than half of respondents (50.8%) and 58.9% had prenatal depression. The frequency of postnatal depression was 39% in participants. Those with postpartum depression had lower self-esteem scores, higher perceived stress and higher childbirth related fear in both

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mothers with postpartum depression and mothers without it. The prevalence of depression in pregnancy was higher in low socio-economic primigravida from Iran. The increased risk persisted after adjustment for risk factors.

Keywords: Low income, postpartum depression, psychological characteristics, risk factors

INTRODUCTION

Many women enjoy emotions of motherhood and the roles associated with it. Women usually experience positive feelings and emotions during Pregnancy and childbirth. However, some women consider childbirth as a stressful life event. Adaptation to pregnancy, delivery, and new born care are the some of the most critical and stressful events in a woman's life (Lashkaripour, Noor, Hokmabadi, Sajjadi, & Sarasiyabi, 2012)

One of the most important life stages of a woman is the postpartum period in which the precise diagnosis and treatment of psychological disorder is necessary (Meçe, 2014). Postpartum depression (PPD) is one of the most common debilitating mental disorders in women after giving birth. Postpartum depression is a mental problem which occurs in most cultures around the world (Mounce, 2011).

Postpartum Depression is known by the American Psychiatric Association "as a major depressive disorder, characterized by depressive mood symptoms such as appetite changes, insomnia, decreased energy, low self-esteem, cognitive difficulties and anxiety. Major depressive disorder

with peripartum onset can have their onset either during pregnancy or in the 4 weeks following delivery. Postpartum depression can continue further than one year after giving birth and have a long lasting disadvantageous impact on the woman, her child and the family in most cultures. Fifty percentage of postpartum major depressive episodes actually begin prior to delivery. Prospective studies have demonstrated that mood and anxiety symptoms during pregnancy, as well as the "baby blues" increase the risk for a postpartum major depressive episodes" (American Psychiatric Association, 2013). Postpartum blues happen in most of women after childbirth. If symptoms continue these feelings of sadness and sometimes anxiety can change into postpartum depression and in severe cases, postpartum psychosis (Lindahl, Pearson, & Colpe, 2005).

Postpartum depression is a major public health concern between 5% and 60.8% worldwide, although prevalence of mothers with postpartum depression was 10%-15% in developed high income countries. The prevalence of postpartum depression in Korea was reported 36.3% and 36.7%, 2 weeks and 6 weeks after delivery respectively. The prevalence of postpartum depression is about 8-35% depending on time and tools of measurement (Meçe, 2014)

The variability of prevalence of postpartum depression was demonstrated from almost 0% to 60% in review of 143 studies in 40 countries (Deng, Xiong, Jiang, Luo, & Chen, 2014). A study conducted in Iran showed the prevalence of postpartum

depression was 34.8% and another study reported the prevalence as 40% -16% (Nikpour et al., 2012).

In a meta-analysis in Iran from 41 studies, the prevalence of postpartum depression in unplanned pregnancy was 43% and 45% in mothers with history of depression. The varied incidence of postpartum depression might be because of different diagnostic criteria, time period, assessment tools, genetic vulnerability and differences in socio-demographic and cultural background (Veisani, Delpisheh, Sayehmiri, & Rezaeian, 2013). Therefore, the study of postpartum depression prevalence and risk factors across diverse cultures may help detect women at risk and provide suitable strategy for early intervention.

This disorder reveals as symptom like: sadness and crying, sleep disorders, changes in appetite, fear of injury, serious concerns about the baby, mood swings, lack of interest in daily activities, sense of doubt, difficulty in concentrating, thoughts of death and suicide (Beck, 2002). Feelings of disappointment in severe cases of postpartum depression can be life threatening and increase the likelihood of suicide; it causes 20% of maternal deaths in the time after giving birth. Furthermore, 36% of these women had fear of hurting the baby, 34% had low level of attachment to the baby and unexpectedly, in postpartum psychosis, child suicide intention has been reported. These signs have severe consequences on family health (Hung, Lin, Stocker, & Yu, 2011).

Therefore, vulnerable pregnant women for postpartum depression should be

identified before childbirth to receive proper postnatal care and treatment. However, the development of screening programs as well as designing evidence-based prevention programs requires principled collection of scientific documentations (Ghaedrahmati, Kazemi, Kheirabadi, Ebrahimi, & Bahrami, 2017; Veisani et al., 2013).

Mental disorder is a major public health problem. After coronary heart disease, depression will be second cause of experienced disability by 2020. Postpartum psychosis has a range of estimated incidences of one to four cases per 1000 deliveries (Jamshidimanesh, Tehrani, Hosseini, Alizadeh, & Lahoni, 2013).

Recent studies suggest that perinatal psychological disorders do not depend to culture: these affect pregnant women in every culture and from every socioeconomic characteristic (Oppo et al., 2009).

A lower socioeconomic status and obstetrics and medical history are associated with increased rates of postpartum depression. The relationships with her mother and father, marital satisfaction/relationship, marital status, social support self-esteem; life stress, and history of previous depression were all identified risk factors which have already been discussed (Beck, 2002; Oppo et al., 2009). However, having an unwanted unplanned pregnancy, multiparity, maternity blues, neonate care stress (health problems in infant) and infant temperament were also found to be predictors of postpartum depression (Lara, Navarrete, & Nieto, 2016; Veisani et al., 2013).

Postpartum depression can be due to some background factors such as; history of depression and postpartum depression; depression, anxiety and sadness during pregnancy and difficult labor and delivery (Earls, 2010). Fear of childbirth, caesarean section and first pregnancy were other robust predisposing factors for postpartum depression (Räisänen et al., 2013). In severe cases, postpartum depression can result in with suicide and infanticide. The main reasons to early detection and managing postpartum depression are high prevalence, many complications, and convenience treatment of postpartum depression (Siu, Leung, Ip, Hung, & O'hara, 2010). Postpartum depression may occur due to significant family distress as well as stress in marital relationship. In severe cases, postpartum depression can result in suicide and infanticide. High prevalence, complications, and convenient treatment of postpartum depression are the main factors leading to early detection and management of the disorder (Siu et al., 2010).

Based on Iranian studies about postpartum depression, women keep their feelings and quiet instead of declaring their problems so their depressive symptoms are under-reported, therefore, the screening and diagnosis of postpartum depression by healthcare providers are mainly necessary (Veisani et al., 2013).

Studies aiming to determine the prenatal risk factors for postpartum depression in low economic Iranian women are comparatively scarce and old. The results of this study serve as a plan to change health policy in perinatal psychiatric services and mental health service during pregnancy.

MATERIALS AND METHODS

This survey was a cross-sectional study in primigravidae which refers to community health care centres for prenatal care in Hamadan city. Four community clinics were selected randomly by simple random sampling in Peri-urban area. Firstly all eligible pregnant women were selected in each health care centres; secondly the potential participants were selected randomly by stratified sampling.

Participants

The sampling population was all primigravidae in a low socioeconomic level in peri-urban community who referred to the health care centres that provide the antenatal services.

620 participants were assessed, 415 of them matched with the inclusion criteria. Participants' eligibility was determined through inclusion criteria that identified primigravidae who were between 18-35 years of age, gestational age between 28-32 week of pregnancy, and completed primary school and could fill the questionnaires related to this study. The participants who had a history or present medical and psychiatric disorders were excluded in this study. Current obstetric problem is in the exclusion criteria.

Eligible primigravidae who decided to contribute to the study signed a written consent form. From this total, 415 (80%) were assessed during pregnancy and through 6 months postpartum.

Instruments

Participants completed a questionnaire including socio-demographic, psychological and pregnancy-related questions.

Self-esteem

Primigravidae filled the Rosenberg Self-Esteem Scale (RSES) which was translated and validated to Farsi (Shapurian, Hojat, & Nayerahmadi, 1987).

The Rosenberg Self-Esteem Scale was made of Ten items with Likert scales from 0-3 (strongly disagree to strongly agree), with higher whole scores showing greater self-esteem.

Perceived Stress

The Perceived Stress Scale (PSS) is an assessment tools to show stress in one's life. It was translated and validated to Farsi (Maroufizadeh, Zareiyani, & Sigari, 2014).

The PSS consists of 10 items and five-choice Likert scales from (1-5) 'very often' to 'never'. Higher full scores show more individually perceived stress.

Marital Relationship Quality

The Revised Dyadic Adjustment Scale (RDAS) assesses marital satisfaction. This scale was translated and validated to Farsi (Isanezhad, Ahmadi, & Farajzadegan, 2012).

The RDAS is made of 14 items and a 6-choice response from (0-5) from completely true to not true at all. Higher complete scores present better marital satisfaction.

Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS 42) was applied to assess perceived social support. The MSPSS was translated and validated to Farsi version (Bagherian-Sararoudi, Hajian, Ehsan, Sarafraz, & Zimet, 2013).

The perceived support was evaluated by 12 items that came from important people, friends and family. Replies are a 7-point (from 1-7) Likert scale from 'very strongly disagrees' to 'very strongly agree'. Greater total scores present stronger indications of social support.

Fear Related to Childbirth

Fear was assessed through the revised version of the Fear-of-Childbirth Questionnaire (Cronbach's alpha 0.72). The original questionnaire was revised to suit a Finnish population by Saisto 2001. The 30-item instrument was used for data collection on fear in pregnancy. This questionnaire was revised from a 10- item questionnaire of Saisto 2001 which consisted of shared fears during pregnancy (Saisto, Salmela-Aro, Nurmi, & Halmesmaki, 2001). This questionnaire included general fear, fears regarding the health and life of the baby, fear of childbearing process (pain, reproductive system injuries, death during childbearing, failure to keep control during childbirth, inability to give birth and lack of trust in the staff assisting in childbirth) becoming a mother, newborn's care, or adjustment in marital and family relations due to childbirth (Matinnia et al., 2016)

To improve the scale precision more than two answers (Yes and No), the Likert Scale was chosen about fear related to childbirth. The range of score was from 0-150 for 30 items. The greater the score, the higher the fear related to childbirth (Faisal, Matinnia, Hejar, & Khodakarami, 2013; Matinnia et al., 2015).

Edinbuurgh Postnatal Depression Scale (EPDS)

The questionnaire was designed to detect depression from 6 weeks in postpartum. It has 10 items. The score of the Edinburgh Scale is between 0 and 30, and score 12 and more are considered postpartum depression. In the present study, Cronbach's alpha coefficient for the Edinburgh questionnaire was 0.70.

Validity of this questionnaire has been evaluated in several countries and its reliability was also confirmed (Alpha was 88%) by Cox, Holden, & Sagovsky (1987).

An Iranian study in 2007 on 100 women was used to determine postpartum depression and to determine the reliability of this questionnaire. The Cronbach's alpha was 77% and 86% in 6-8 weeks and 12-14 weeks of postpartum respectively.

In this study, the score of 13 and above was considered postpartum depression, and depressed mothers were referred to a psychiatrist to confirm their depression and receive effective treatment and follow up. The sensitivity of this measure ranges from 68 to 85%, and the specificity varies from 78 to 96% when compared to a diagnosis established through a diagnostic interview (Cox et al., 1987).

Analysis of the Data

The socio-demographic and psychological characteristics of all applicants were reported. A binary logistic regression analysis was run with the psychological factors (RSE, PSS, RDAS, MSPSS, fear associated with childbirth, prenatal postpartum depression) to predict the best risk factor for depression. The level of significance was fixed at 0.05 for all tests. The SPSS version 21.0 was used to analysis the data.

RESULTS

Characteristics of the participants: The range of primigravidae age was between 18-34 years and the average age was 25 years. 35.7% (161) of participants had secondary educational level and were Muslim and Fars, 66.5% (300) and 92.1% (415). Most of the mothers 61.2% (276) were not employed (Housewife) and 43.9% of their husbands were non-Professional employees.

The majority 43.6% (197) of family income was between 5,000,000-1,000,000 Rials (one Rial=0.00048 USD). 36% (162) of participants had access to insurance (Table 1).

More than half of them 67.2 % (303) had planned pregnancies, and 32.8% (148) had unwanted pregnancies. More than half (54.8%) had vaginal delivery and only one third (33%) of them had chosen elective caesarean section and 12.2% had emergency caesarean section. The majority of them 78.5% were satisfied with their baby's gender (Table 2).

Most of the primigravidae had moderate perceived stress (61%), low

self-esteem (63.2%), low perceived social support (67.6%) and low quality of marital relationship (43.5%). Fear related to childbirth was high in majority

of respondents (50.8%) and 58.9% had prenatal depression. The frequency of postnatal depression was 39% in participants (Table 3).

Table 1
Socio-demographic characteristics of participants (N = 451)

Socio-demographic	n(%)
Age	
18-22	106 (23.5)
23-26	195(43.2)
27-30	123(27.3)
>30	27(6)
Ethnicity	
Fars	300(66.5)
Kord	37(8.2)
Lor	25(5.5)
Tork	87(19.2)
Education	
Primary School	81(18)
Secondary School	161(35.7)
High School Diploma	95(21.1)
Bachelor Degree or Higher	114(25.3)
Occupation	
Non Professional Employee	143(31.7)
Self-Employed	32(7.1)
Housewife	276(61.2)
Income(Rials/month)*	
≤5,000,000	104(23.1)
5,000,000– 10,000,000	197(43.6)
10,000,000– 15,000,000	107(23.7)
≥15,000,0000	43(9.6)
Insurance	
Yes	162(36)
No	289 (64)

Table 2
Obstetric characteristics of participants (N = 451)

Obstetric Characteristics	n(%)
Plan of pregnancy	
Planned pregnancy	303(67.2)
Unplanned pregnancy	148 (32.8)
Mode of delivery	
Vaginal delivery	149 (33)
Elective Caesarean section	247 (54.8)
Emergency Caesarean section	55 (12.2)
Satisfaction of the baby gender	354(78.5)

Table 3
Psychological characteristics of participants (N = 451)

Psychological Characteristics	n(%)
PSS	
Mild	115(25.5)
Moderate	61(13.5)
Severe	275(61)
RSES	
Low	258(63.2)
High	166(36.8)
MSPSS	
Low	146(32.4)
High	308(67.6)
RDAS	
Low	196(43.5)
Moderate	132(29.3)
Good	123(27.3)
Fear related to pregnancy	
Low	109(24.2)
Moderate	113(25.1)
High	229(50.8)
Prenatal Depression	
Yes	280(58.9)
No	171 (41.1)
Postnatal Depression	
Yes	275(61)
No	176(39)

Table 4
Logistic regression analysis of socioeconomic and obstetric characteristics for postpartum depression

Variables	B	S.E	Wald	P-value	OR	CI 95%
Age	-2.11	1.833	3.7	0.05	1.15	1-1.32
Secondary school (reference)			4.31	0.23		
High School Diploma	0.1	0.5	0.04	0.84	1.11	0.42-2.93
Bachelor Degree or Higher	0.9	0.63	2.07	0.15	2.58	0.74-9.04
Housewife(reference)			9.87	0.02*		
Non Professional Employee	1.81	0.87	4.34	0.04*	6.38	1.1-33.19
Self-Employed	0.73	0.75	0.96	0.33	1.8	0.48-9.05
Education						
Primary School			5.051	0.168		
Secondary School	0.601	0.303	3.938	0.04*	1.825	1.01-3.3
High School Diploma	0.222	0.371	0.358	0.55	1.248	0.6-2.58
Bachelor Degree or Higher	0.211	0.368	0.328	0.57	1.235	0.6-2.54
Husband Age	0.13	0.08	2.5	0.11	1.13	0.97-1.33
Unemployed (reference)			1.58	0.66		
Non Professional Employee	0.2	0.85	0.01	0.81	1.22	0.23-6.43
Self-Employed	0.64	0.82	0.68	0.44	1.9	0.38-9.48
Income						
>12,000,0000 (reference)			3.56	0.42		
<4,000,000	-1.71	0.59	8.53	<0.001	5.54	1.76-17.5
4,000,000– 8,000,000	-0.816	0.32	7.37	0.007	2.256	1.255-4.0
8,000,000– 12,000,000	-0.36	0.56	0.4	0.31	0.7	0.23-2.12
Having Medical Insurance	-0.18	0.47	0.14	0.71	1.84	0.34 -2.11
Unplanned pregnancy (reference)			1.62	0.02		
Unplanned pregnancy	-2.7	0.82	10.94	0.001*	0.07	0.01-0.33
Mode of delivery						
Vaginal delivery(reference)			3.67	0.05		
Elective Caesarean section	0.35	0.17	4.46	0.03*	1.41	1.03-1.96
Emergency Caesarean section	0.6	0.19	10.38	0.001*	1.82	1.26-2.6
Satisfaction of the baby gender	0.35	0.18	3.63	0.06	1.42	0.99-2
Constant	-17.89	5.47	10.69	0.001	0.000	

Table 5
Logistic regression analysis of psychological characteristics for postpartum depression

Variables	B	S.E	Wald	P-value	OR	CI 95%
PSS	-0.45	0.13	11.5	0.001	0.96	0.93-9.81
RSES	0.24	0.59	0.165	0.68	1.024	0.91-1.15
MSPSS	0.35	0.17	4.46	0.03	1.41	1.03-1.96
RDAS	0.31	0.18	3.09	0.08	1.37	0.97-1.93
Fear related to pregnancy	0.01	0.07	10.67	<0.0001	1.82	1.26-2.6
Prenatal Depression	0.06	0.1	12.4	<0.0001	2.14	1.69-2.71
Constant	-15.56	4.81	10.48	<0.001	0.000	

DISCUSSION

A total (62.3%) of the 451 primigravidae had postpartum depression. The significant result of the current study was that those who with postpartum depression also reported upper levels of perceived stress and had lesser self-esteem.

The research questions included the prevalence and aimed to determine the predictive risk factors for postpartum depression. The prevalence of postpartum depression was 39% in primigravidae with low socioeconomic status. The prevalence was reported between 5% and 60.8% worldwide. Based on the results of systematic literature reviews, the postpartum depression prevalence is about 23% in Korean pregnant women (Ryu, Kim, & Lee, 2010), during the first month after childbirth 6.5-12.9% and the third month 19.2% (Youn & Jeong, 2011),

In another systematic review and meta-analysis of studies about postpartum depression, based on the Beck depression inventory (BDI) and Edinburgh Postnatal Depression Scale (EPDS), the prevalence of postpartum depression in Iran was 24.3% (95% CI: 21.0–27.7) and 25.3% (95% CI: 22.7–27.9), respectively (Veisani et al., 2013). This prevalence is lower than findings of the current study; this can be due to differences in socioeconomic level and different tools of measurement. This prevalence, however, is highly possible to be an underestimation. The studies showed that about 50% of women after childbirth with postpartum depression do not report

any negative feelings arising from it nor do they complain about their emotions to health care provider (Youn & Jeong, 2011).

Predicting postpartum depression: Binary logistic regression analysis was run to predict the postpartum depression. All statistical analysis is shown in Table 3. In current study postpartum depression was predicted more in participants who were nonprofessional employees, had low income, unplanned pregnancy and elective or emergency caesarean section while participants' age, level of education, husband's age and job and medical insurance were excluded from the equation. Postpartum depression also was predicted by higher perceived stress, lower perceived social support, and higher fear related to pregnancy and prenatal depression, although self-esteem and quality of marital relationship were omitted from the equation of prediction postpartum depression.

Some of the socio-demographic factors (age, educational level, occupation, income) which were non-significant or non-strong predictors in previous postpartum depression were significant in the current study (Lara, Navarro, & Navarrete, 2010; Robertson, Celasun, & Stewart, 2008).

There was not a significant association between women's age and postpartum depression. Most previous studies had shown this correlation (Azamani et al., 2016). Age had a significant relationship with postpartum depression in Asian and African surveys (Shrestha, Pradhan, Tran, Gualano, & Fisher, 2016) but many studies showed no significant relationship. These contradicting

results indicated the need for further studies to investigate relationship between the mother's age and postpartum depression in women with low socioeconomic level in developing countries (Azamani et al., 2016; Pereira & Passos, 2015).

The most noticeable factor was educational level which significantly raised the risk of postpartum depression. These results were consistent with the findings of studies in Brazil (Alvarado et al., 2000; Silva, Valongueiro, de Araújo, & Ludermir, 2015) and studies from Latin America (Almanza-Muñoz, Salas-Cruz, & Olivares-Morales, 2011; Alvarado et al., 2000; deCastro, Hinojosa-Ayala, & Hernandez-Prado, 2011) and postpartum women in some other developing countries (Lara et al., 2016). As educational level is a significant predictor of community health, it shapes occupation and income level as well, which are related to access to health care. The educational levels have an effect on knowledge, cognitive skills and also analytical abilities, coping with stress (Cutler & Lleras-muney, 2006).

The frequency of postpartum depression in housewife women was more than employed women in the current study. The result of a study in Malaysia is also consistent with the present study (Lara et al., 2016).

In this study, the relationship between mode of delivery and postpartum depression was significant. In caesarean delivery, the rate of postpartum depression was more than vaginal delivery. However Chaya and colleagues showed that postpartum

depression in vaginal delivery was higher than caesarean section (Matinnia et al., 2017; Mazaheri et al., 2014). On one hand, some studies showed that postpartum depression after caesarean delivery was higher than normal delivery (20, 28), on the other hand, the results of the Iranian study reported no association between the postpartum depression and the mode of delivery.

Risky pregnancy is also associated with an increased risk of postpartum depression. These include situations that cause emergency caesarean section or hospitalization during pregnancy (Ghaedrahmati et al., 2017).

The prevalence of postpartum depression was higher for emergent caesarean delivery. The most important duties of health care provider and health policy makers are planning appropriate prenatal education regarding an informed choice of the delivery type and any complications of each method. They must educate pregnant women and increase their knowledge and change their attitudes about safe delivery (Haque, Namavar, & Breene, 2015).

In current study the prenatal depression was a significant predictor for postpartum depression. In contrast the study on Chinese women (2004) who struggled with their mother-in-laws suggested that low quality in marital relationship, past history of depression and prenatal depression were not significant in postnatal depression (Leigh & Milgrom, 2008) The findings of Bonnie was consistent with current study which showed the risk of postpartum

depression was increased by having past history of depression (Siu et al., 2010). The review study also recognised prenatal depression as common during pregnancy and it was expected to be a significant risk factor for postpartum depression. Reports are shown that prenatal depression is associated with postpartum depression (Place, 2013). Not surprisingly, findings in most studies are parallel; the risk factors for postpartum depression included a past history of psychological disorders, prenatal depression, stress and anxiety, a poor marital relationship, low social support, and traumatic life events (Rubertsson, Wickberg, Gustavsson, & Rådestad, 2005).

Although many studies in different cultures mentioned depression in pregnancy as a strong predictor of postpartum depression (Sherin, Yusuff, Tang, Binns, & Lee, 2014) screening of depression during pregnancy is not efficient and is only occasionally arranged for pregnant women in the prenatal care centres in Asian countries such as Iran. In our study, 451 women 176 (39%) were depressed during their pregnancy. Routine and precise screening for prenatal depression and referral to mental health services for treatment should be included in the routine maternal care with the purpose of preventing postpartum depression.

Two meta-analyses highlighted prenatal depression, marital dissatisfaction, insufficient social support and life stress as major risk factors (Hale et al., 2010). Another research showed that marital dissatisfaction and lack of social support were risk factors for depression during

pregnancy and in the postpartum period (Leigh & Milgrom, 2008; Tzilos, Zlotnick, Raker, Kuo, & Phipps, 2012).

CONCLUSION

Although Asian women were more likely to be depressed, have a low self-esteem and high perceived stress scores and fear related to childbirth, a history of prenatal depression and fear related to childbirth were independent risk factors for depression. Data also suggests that a low level of social support may exacerbate the increased risk observed in low income mothers. However, unmeasured variables such as cultural factors may also contribute to the risk status.

In summary, our findings showed the potential for improving mental health among low income pregnant women by improving socioeconomic and psychological conditions and facilitating integration.

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