Pakistan Journal of Positive Psychology

Print ISSN : 3078-6428 | Online ISSN : 3078-6436
Pakistan Journal of Positive Psychology

Original Article

ROLE OF PERCEIVED SOCIAL SUPPORT IN VULNERABILITY TO PERIPARTUM DEPRESSION AND ANXIETY AMONG EXPECTING MOTHERS OF GILGIT-BALTISTAN

Hira Imtiaz Kiani[a], Ayesha Hina[b], & Owais Ahmad[c*]

[a]PhD Scholar, Department of Behavioral Science, Fatima Jinnah Women University, Rawalpindi. ORCID: https://orcid.org/0009-0009-8309-1991
[b]Department of Psychology, Hazara University, Mansehra, Pakistan. ORCID: https://orcid.org/0009-0000-9419-6128
[c]Lecturer, Iqra National University, Peshawar, PhD Scholar, Department of Psychology, Hazara University, Mansehra, Pakistan. Email: owaisak55@gmail.com. ORCID: https://orcid.org/0009-0001-0706-4256

*Correspondence to: Mr. Owais Ahmad, Lecturer, Iqra National University, Peshawar, PhD Scholar, Department of Psychology, Hazara University, Mansehra, Pakistan. Email: owaisak55@gmail.com. ORCID: https://orcid.org/0009-0001-0706-4256

KEYWORDS
Anxiety, Expecting Mothers, Gilgit-Baltistan, Peripartum Depression, Perceived Social Support

CITE THIS ARTICLE:
Kiani, H. I., Hina, A., & Ahmad, O. (2026). Role of perceived social support in vulnerability to peripartum depression and anxiety among expecting mothers of Gilgit-Baltistan. Pakistan Journal of Positive Psychology, 3(4), 27-34.

ABSTRACT

Perinatal depression is an important mental health problem, and its prevalence is much higher, Pakistan has yet to recognize it. Despite its short- and long-term effects on both mothers' and fetal outcomes, it has received less attention than it deserves in scientific research and clinical practice. This study aims to recognize the relationship between perceived social support and depression and anxiety among expecting mothers living in Ghizer, a remote area of Pakistan. Also, this study analyzes the association of demographics with peripartum depression and anxiety. A total of 100 expecting mothers from different hospitals, clinics, and households were assessed through the Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder Scale (GAD-7), and Multidimensional Scale of Perceived Social Support (MSPSS). Demographic factors were also measured. The prevalence of depression and anxiety varied across three trimesters. There was a significantly negative correlation between perceived social support and depression in the first and third trimesters of pregnancy. There was a significant negative correlation between perceived social support and anxiety in the third trimester of pregnancy. There was a higher risk of anxiety in non-working pregnant women who didn't have routine check-ups. There exists an association between perceived social support and depression and anxiety. Also, there is an association of demographic factors with depression and anxiety during pregnancy. It is concluded that support of family and friends decreases the level of depression during pregnancy.

I. INTRODUCTION

Peripartum depression and peripartum anxiety are both psychological disorders existing amongst pregnant mothers. Perinatal depression is a condition causes at the time of pregnancy in females. According to a World Health Organization (WHO) report in the year 2015, depression is the first causative agent of this type of disability. Females are mostly susceptible in comparison to males. The effect of depression is assessed, with 10-20% of females during pregnancy suffering globally. Prenatal anxiety is disorders cause at the time of pregnancy and later to baby born that include general apprehension, horror disorder, dread, obsessive-compulsive disorder, and post-traumatic stress disorder. Just like depression, mothers are susceptible to anxiety during the time of reproductive stage, which sometimes causes death to both mother and child (Spielberger, 2010). Depression has an impact on

more than seven women at the time of pregnancy and after birth. It is reported that the occurrence of prenatal depression is 7-15%, and post-natal, the frequency is 19-25%. It showed that in lower socio-economic nations, depression at the time of pregnancy is dominant. In Brazil, prenatal depression in females showed that the 38% occurrence of unhappiness in the third month of pregnancy and a 43% prevalence in postnatal females. In Ethiopia, the frequency was 11.8% prenatal and 31.2% postnatal, with all about 25% in Addis Ababa (Grote et al., 2010).

Regarding prenatal anxiety, the prevalence of early pregnancy is reported to be 15.04%. Some studies have also reported the prevalence of anxiety in women in other states and cities in China. 2.7% in Ma'anshan City, Anhui Province. 29.4% in Changsha City, Hunan Province; Zhoushan City, Zhejiang, 22.57% (Ji et al., 2025). Several studies in the literature have explored the effect social support has on the outcomes of pregnancy and maternal mental and physical health before and after the gestational period. Women with little social support were more likely to have symptoms of depression during and after pregnancy. In an exploratory, longitudinal study of 80 women from the antenatal period in New Zealand, three interviews were completed in the second and third trimester and seven to nine weeks after delivery. Women who reported less social support from their spouses highlighted a higher likelihood of emotional and behavioral distress (Kearns et al., 2011). Fisher et al. (2012) conducted a systematic review in lower-middle-income countries to analyze the prevalence and causal factors of common perinatal mental illnesses in women. This study suggests that women having complications in intimate partner relationships, though, controlling for the rest of the other factors, reported higher levels of perinatal mental health issues and concerns. Most of the research is done in developed and fast-developing countries, while it remained unrecognized in low-income countries like Pakistan. Literature on the prevalence of peripartum depression as well as peripartum anxiety in both developed and non-developed countries was addressed.

II. METHOD

Participants

A quantitative research design, which was cross-sectional in nature, was used in the present study. The inclusion criteria were expecting mothers of any age willing to participate in the study. Exclusion criteria were based on participants' willingness and their language barrier to participate in the study. Sample was consisting of 100 expecting mothers belonging to the first trimester (N=32), second trimester (N=34), and third trimester (N=34), working (N=55), non-working (N=45), having a nuclear family (N=52) and a joint family (48), from Ghizer, Gilgit Baltistan, using the purposive sampling technique.

Measures

A demographic information was collected by a self-made demographic scale which included basic information of the pregnant women like profession, family system, pregnancy duration, following routine checkups, accessibility to medical facilities, and their monthly income. **[I]** Patient Health Questionnaire (PHQ-9) Scale**:** This questionnaire was established by Spitzer et al. (1990). It is one of the supreme operational tools for mental health and can be utilized as a potent tool to support clinicians in detecting depression. These 9 itemed Likert type scales have four choices ranging from 0 to 4 ratings (never, sometimes, often, and always), respectively. The Urdu version of this scale was used, which has 0.91 Cronbach's alpha and 0.77 split-half reliability, translated by Ahmad et al. (2018). **[II]** Generalized Anxiety Disorder (GAD-7) Scale**:** The Generalized Anxiety Disorder Scale 7 (GAD-7) is a seven-item self-rating scale developed by Spitzer (2006) as a screening tool and severity indicator for GAD. These 7 itemed Likert type scales have four options ranging from 0 to 4, rating never, sometimes, often, and always, respectively. The Urdu version of this scale was used, which has 0.92 Cronbach's alpha and 0.82 split-half reliability, translated by Ahmad et al. (2017). **[III]** Multi-Dimensional Scale of Perceived Social Support (MSPSS) Scale: Multi-dimensional Perceived Social Support Questionnaire was used to evaluate the level of perceived social support among expecting mothers. This scale was developed by Zimet et al. (1990) to assess subjective perceived support from three sources (family, friends, and significant others). The Urdu version of this scale was used, which has a 0.92 Cronbach's alpha, and all three sub-scales were extremely inter-correlated, with correlations ranging from (r=0.65 to r=0.78), translated by Akhtar (2010).

Procedure

Expecting mothers in the inclusion criteria were approached by visiting hospitals, clinics, and households. Approval was taken from the participants, and a letter of acceptance given by university review boards was shown to authorities of hospitals and clinics to assemble data. The instructions and research materials were given in the Urdu language. To overcome resistance by the participants because of the researcher's gender, a female assistant was inducted with the researcher so that in case of any resistance from the male researcher, the female assistant could collect data. Analysis was done using SPSS version 30. Frequencies were calculated to measure the prevalence of anxiety and depression among expecting mothers. Correlation between levels of depression and sub-scales of perceived social support and correlation between levels of anxiety and sub-scales of perceived social support for each cohort were analyzed. Differences along demographic variables such as age, duration of pregnancy, monthly income, and family system were also analyzed through independent t-test. One-way ANOVA was used to analyze the income group differences.

Ethical Consideration

Informed consent was obtained from the participants, in which the researchers assured that participation in the study is totally voluntary and there is no physical or psychological risk at any point in the study.

III. RESULTS

Table I: Frequency of Depression in First, Second and Third Trimesters as Measured by PHQ-9 (N=100)

Prevalence of depression in the first trimester			
S. no	Range	f (%)	Interpretation
1.	0-4	4(12.5)	Minimal or none
2.	5-9	14(43.75)	Mild
3.	10-14	9(28.12)	Moderate
4.	15-19	4(12.5)	Moderately severe
5.	20-27	1(3.12)	Severe
Prevalence of depression in the second trimester			
1.	0-4	8(23.5)	Minimal or none
2.	5-9	8(23.5)	Mild
3.	10-14	14(41.17)	Moderate
4.	15-19	2 (5.88)	Moderately severe
5.	20-27	2(5.88)	Severe
Prevalence of depression in the third trimester			
1.	0-4	9(26.47)	Minimal or none
2.	5-9	12(35.29)	Mild
3.	10-14	8 (23.5)	Moderate
4.	15-19	4 (11.76)	Moderately severe
5.	20-27	1(2.94)	Severe

The prevalence of depression in three trimesters (Table1) shows that 28.12 % of the women in the first three months of pregnancy reported moderate depression, and 12.5% reported moderately severe depression. While most of the women have indicated mild depression 43.75%), 12.5% of women reported minimal or no depression. There is a comparatively higher prevalence of moderate depression (41.17%) in second-trimester pregnant women. prevalence of mild and minimal or no depression is equal (23.5%), while 5.88 % of women reported moderately severe depression and severe depression (5.88%) during the second trimester. The prevalence of mild depression (35.29%) is higher among women of the third trimester, followed by minimal or no depression (26.47 %) and moderate (23.5%) depression in the third trimester of pregnancy.

Table II: Frequency of Anxiety in First, Second and Third Trimesters as Measured by GAD-7 (N=100)

Prevalence of anxiety in first trimester			
S. no	Range	f (%)	Interpretation
1.	0-4	13(40.64)	Minimal or none
2.	5-9	10(31.25)	Mild
3.	10-14	8(25)	Moderate
4.	15 and above	1(3.12)	Severe
Prevalence of anxiety in the second trimester			
1.	0-4	11(32.35)	Minimal or none
2.	5-9	12(35.29)	Mild
3.	10-14	8(23.5)	Moderate
4.	15 and above	3(8.82)	Severe
Prevalence of anxiety in third trimester			
1.	0-4	10(29.41)	Minimal or none
2.	5-9	10(29.41)	Mild
3.	10-14	11(32.35)	Moderate
4.	15 and above	3(8.82)	Severe

As shown in Table 2, the first trimester pregnant women indicated minimal or no prevalence of anxiety (40.64%), and 31.25% of these reported mild anxiety in their first months of pregnancy, while 25% reported moderate anxiety. While 35.29% of women reported mild anxiety and 32.35 % of those indicated minimal or no anxiety, 23.5% reported moderate anxiety, and 8.82% reported severe anxiety in the second trimester of pregnancy. Whereas there is equal prevalence of minimal and mild anxiety (29.41%) in the third trimester of pregnancy. There is relatively higher prevalence of moderate anxiety (32.35%) in these women. While 8.82% of them reported severe anxiety during the third trimester of pregnancy.

Table III: Correlation between Depression and Perceived Social Support and its sub-scales for first Trimester (N=32)

Scales	M	SD	1	2	3	4	5
PHQ-9	10.03	4.84	1				
MSPSS	7.06	4.19	-.32	1			
SOS	64.96	11.81	-.31	.81**	1		
FRSS	20.96	5.90	-.03	.67**	.32	1	
FSS	21.37	4.90	-.36*	.73**	.41*	.24	1

Note: SOS=Significant Others Support, FSS=Family Support, FRSS=Friends Support significant at .05*, **significant at 0.01

The above table shows a negative correlation between depression and family support (-.36*). This indicates that during the first trimester of pregnancy, the increase in family support decreases depression.

Table IV: Correlation between Depression and Perceived Social Support and its sub-scales for Second Trimester (N=34)

Scales	M	SD	1	2	3	4	5
PHQ-9	8.85	5.43	1				
MSPSS	62.00	15.44	-.34*	1			
SOS	21.35	5.46	-.26	.86**	1		
FRSS	19.67	5.79	-.34*	.87**	.57**	1	
FSS	20.97	6.03	-.31	.93**	.75**	.74**	1

The above table shows a negative correlation between measured depression and sub-scales of MSPSS. This indicates that an increase in social support, especially support from friends (-.34*), decreases depression in women with third trimester pregnancy.

Table V: Correlation between Depression and Perceived Social Support and its Sub-Scales for Third Trimester (N=34)

Scales	M	SD	1	2	3	4	5
GAD-7	7.70	4.92	1				
MSPSS	62.00	15.44	-.46**	1			
SOS	21.35	5.46	-.32	.86**	1		
FRSS	19.67	5.79	-.44**	.87**	.57**	1	
FSS	20.97	6.03	-.47**	.93**	.75**	.74**	1

The above table shows a negative correlation between measured anxiety and subscales of MSPSS. This indicates that during the third trimester of pregnancy, the increase in family support decreases anxiety (-.47**). Likewise, more support from friends also decreases the level of anxiety

Table VI: Work Status Differences in Depression, Anxiety, and Perceived Social Support (N=100)

	Working (n= 56)		Non-working (n= 44)				95% CI		
Variables	M	SD	M	SD	t	p	LL	UL	Cohen's d
PHQ	8.64	4.88	10.38	5.36	-1.67	0.09	-3.80	0.32	-
GAD	6.67	4.32	8.5	4.96	-1.92	0.05	-3.70	0.05	.39
PSS	64.73	14.89	60.79	14.25	1.34	0.18	-1.87	9.75	-

The mean scores of both working and non-working women show significant mean differences in anxiety of expecting mothers only. The significant differences in mean scores for working women (M= 6.67, SD=4.32) and non-working (M= 8.5, SD= 4.96) on GAD show that non-working mothers have a relatively higher level of anxiety as compared to working mothers. The difference is statistically significant at the two-tailed 5 % level.

Table VII: Routine Check-Up Differences in Depression, Anxiety and Perceived Social Support (N=100)

	Routine checkup (n= 57)		No Routine checkup (n= 43)				95%CI		
Variables	M	SD	M	SD	t	p	LL	UL	Cohen's d
PHQ	8.75	5.00	10.27	5.27	-1.46	.14	-3.59	.54	-
GAD	6.26	4.32	9.09	4.69	-3.08	.00	-4.65	-1.00	.62
PSS	69.73	8.43	54.06	16.41	5.71	.00	10.18	21.15	.20

The significant differences in mean score for expecting mothers who have routine check-ups (M= 6.26, SD=4.32) and expecting mothers having no routine check-ups (M= 9.09, SD= 4.69) on GAD show that expecting mothers having no routine check-up have a relatively higher level of anxiety as compared to those having routine check-ups. The mean differences of expecting mothers with routine check-up (M= 69.73, SD=8.43) and expecting mothers with no routine check-up (M=54.06, SD=16.41) on perceived social support show that expecting mothers who have their routine check-ups have relatively high perceived social support as compared to those who do not have regular check-ups.

IV.DISCUSSION

This study evaluated the prevalence of depression and anxiety among expecting mothers in a sample of expecting mothers in Ghizer, Gilgit-Baltistan, Pakistan. The sample represents the expecting mothers of Ghizer. According to the current study, the frequency of depression in the 1st trimester of pregnancy was measured by PHQ-9 (n=32). Results showed that 28.12 % of the mothers with 1st trimester of gestation presented moderate depression, and 12.5% were stated to have moderate-severe depression. Whereas many females indicated mild depression, 43.75% and 12.5 % of mothers had no depression. The sum of percentages from moderate to severe depression in

the first trimester of pregnancy is 43.74 % that is relatively high. However, a study conducted by (Ayamolowo et al., 2019) showed that over one-third (44.2%) of the participants did not indicate depression, 14.2% presented as mild depression, 11.7% showed uncertain clinical depression, 19.9 % had a moderate level of depression, and 10.0% reported severe depression. The occurrence of depression in the 2nd trimester of pregnancy was measured by PHQ-9 (n=34). A high occurrence of a modest level of depression (41.17%) in second-trimester pregnant women. prevalence of mild and minimal or no depression is equal (23.5%), while 5.88 % of women reported moderately severe depression and severe depression (5.88%) during the second trimester. A cumulative percentage of prevalence of depression in the 2nd trimester of pregnancy is higher than that of the 1st and 3rd trimesters (53.93 %). It indicates that women in the 2nd trimester experience a higher level of depression in Ghizer. It could be because expecting mothers have a social burden on them and they are expected to perform household chores during pregnancy. During the second trimester, expecting mothers do not have routine check-ups; they either have a check-up during the 1st or 3rd trimester of pregnancy.

Whereas in the third trimester, the prevalence of mild depression (35.29%) is higher among women, followed by minimal or no depression (26.47 %) and moderate depression (23.5%). Adding the cumulative percentage from moderate to severe depression, it is reported that expecting mothers experienced 38.2 % depression in the third trimester of their pregnancy. It can be said that during the third trimester, expecting mothers get more social support, so they report lower depression as compared to expecting mothers in the 2nd trimester. Some studies have shown that depressive episodes occur more frequently during the first and third trimester of pregnancy, compared with the second, possibly because the most vulnerable women are more likely to experience stress when they are coping with the new event of becoming mothers, and when they are about to deliver and start a new life (Marchesi et al., 2009). The current study regarding anxiety during pregnancy reveals that many females showed mild anxiety, whereas pregnant mothers have severe anxiety at the time of gestation. The occurrence of anxiety in the first trimester was measured by GAD-7 (n=32). The first trimester pregnant women indicated minimal or no prevalence of anxiety (40.64%), and 31.25% of these reported mild anxiety in their first months of pregnancy, while 25% reported moderate anxiety. If we calculate the percentage of frequencies with moderate and severe levels, it shows that overall, 28 % of the expecting mothers experience anxiety in their first trimester of pregnancy.

The frequency of anxiety in the second trimester as measured by GAD-7(n=34). 35.29% of women reported mild anxiety, and 32.35 % of those indicated minimal or no anxiety, while 23.5% reported moderate anxiety and 8.82% reported severe anxiety in the second trimester of pregnancy. Adding up the percentage of moderate and severe levels of anxiety, it is concluded that 31.7% of expecting mothers reported anxiety, which shows the prevalence of anxiety in the 2nd trimester of pregnancy. The Rate of anxiety in the third trimester as measured by GAD-7 (n=34). There is an equal prevalence of minimal and mild anxiety (29.41%) in the third trimester of pregnancy. There is a relatively higher prevalence of moderate anxiety (32.35%) in these women. While 8.82% of them reported severe anxiety during the third trimester of pregnancy. Overall, the percentage of moderate and severe anxiety in the third trimester is higher as compared to 1st and 2nd trimester of pregnancy, i.e., 41 %. Expecting mothers experienced higher anxiety in the third trimester of pregnancy as compared to the first and second trimester, since as the delivery time comes closer, they become more anxious, thinking about any complications during delivery. This finding is like that found by other researchers in studies conducted in Italy (Giardinelli et al., 2012) and in Australia (Rallis et al., 2017). Higher anxiety rates in the third trimester of gestation may be related to the closeness to delivery, considering that the third trimester of gestation is particularly demanding for women due to this proximity (Souza et al., 2015). The current findings showed a significant negative correlation between measured depression and subscales of PSS. This indicated that during the first trimester of pregnancy, the increase in family support decreases depression (-.36*). Likewise, more support from significant others also decreases the level of depression.

Previous studies have shown that women who report moderate and high social support during pregnancy are significantly less likely to report depressive symptoms (Dibaba et al., 2013). Lack of social support constitutes an important risk factor for the well-being of pregnant mothers and adversely affects the outcome of pregnancy. An increase in social support, especially support from friends (-.34*), decreases depression in women in the third trimester of pregnancy. Mean values reflect that depression and anxiety are relatively higher in non-working

women compared to working ones. Like what is shown in the literature, the risk of anxiety in pregnancy was higher among pregnant women who did not perform paid work activities (Gourounti e al., 2013). Mean, standard deviation, and independent sample t-test of routine check-up on depression, anxiety, and social support reflect that women who do not visit for routine check-ups show relatively higher depression and anxiety. In parallel to the current study, a previous study revealed that depression during pregnancy has been associated with poor attendance at antenatal clinics, substance abuse, and low birth weight, all of which can lead to neonatal morbidity and mortality (Field et al., 2006). One-way ANOVA analysis of monthly income showed that people with monthly income had a statistically significant difference. Expecting mothers who had low monthly income (M= 11.37, SD= 5.39) reported high anxiety as compared to those who had high monthly income (M= 6.52, SD= 4.63).

Limitations

Due to a lack of resources and time, this research data was collected from only a few areas of the region, so the findings cannot be generalized much. Cultural barriers might have influenced the present study in reporting social support. Many societal and cultural expectations are associated with becoming a mother that might have compelled mothers to underreport depression as well as anxiety.

V. CONCLUSION

There is a significant correlation between perceived social support and depression and anxiety. There is also an association between demographic factors and depression and anxiety. Social support during pregnancy plays a vital role in reducing mental health issues and helps expecting mother in coping with difficult situations. More family support can minimize the level of depression during different trimesters of pregnancy. Thus, the support of friends and family has a positive effect on pregnancy.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Funding

The author received no funding from any organizations.

VI.REFERENCES

Ahmad, S., Hussain, S., Akhtar, F., & Shah, F. S. (2018). Urdu translation and validation of PHQ-9, a reliable identification, severity and treatment outcome tool for depression. *JPMA. The Journal of the Pakistan Medical Association*, *68*(8), 1166–1170. https://pubmed.ncbi.nlm.nih.gov/30108380/

Ahmad, S., Hussain, S., Shah, F. S., & Akhtar, F. (2017). Urdu translation and validation of GAD-7: A screening and rating tool for anxiety symptoms in primary health care. *JPMA. The Journal of the Pakistan Medical Association*, *67*(10), 1536–1540. https://pubmed.ncbi.nlm.nih.gov/28955070/

Akhtar, A., Rahman, A., Husain, M., Chaudhry, I. B., Duddu, V., & Husain, N. (2010). Multidimensional scale of perceived social support: Psychometric properties in a south Asian population. *Journal of Obstetrics and Gynaecology Research*, *36*(4), 845–851. https://doi.org/10.1111/j.1447-0756.2010.01204.x

Ayamolowo, S. J., Olajubu, A. O., & Akintola, F. E. (2019). Perceived social support and depression among pregnant and child-rearing teenagers in Ile-Ife, Southwest Nigeria. *African Journal of Midwifery and Women's Health*, *13*(4), 1–9. https://doi.org/10.12968/ajmw.2018.0033

Dibaba, Y., Fantahun, M., & Hindin, M. J. (2013). The association of unwanted pregnancy and social support with depressive symptoms in pregnancy: Evidence from rural southwestern Ethiopia. *BMC Pregnancy and Childbirth*, *13*(1). https://doi.org/10.1186/1471-2393-13-135

Field, T., Diego, M., & Hernandez-Reif, M. (2006). Prenatal depression effects on the fetus and newborn: A review. *Infant Behavior and Development*, *29*(3), 445–455. https://doi.org/10.1016/j.infbeh.2006.03.003

Fisher, J., Cabral de Mello, M., Patel, V., Rahman, A., Tran, T., Holton, S., & Holmes, W. (2011). Prevalence and determinants of common perinatal mental disorders in women in low- and lower-middle-income countries:

A systematic review. *Bulletin of the World Health Organization*, *90*(2), 139–149H. https://doi.org/10.2471/blt.11.091850

Giardinelli, L., Innocenti, A., Benni, L., Stefanini, M. C., Lino, G., Lunardi, C., Svelto, V., Afshar, S., Bovani, R., Castellini, G., & Faravelli, C. (2011). Depression and anxiety in perinatal period: Prevalence and risk factors in an Italian sample. *Archives of Women's Mental Health*, *15*(1), 21–30. https://doi.org/10.1007/s00737-011-0249-8

Gourounti, K., Anagnostopoulos, F., & Lykeridou, K. (2013). Coping strategies as psychological risk factor for antenatal anxiety, worries, and depression among Greek women. *Archives of Women's Mental Health*, *16*(5), 353–361. https://doi.org/10.1007/s00737-013-0338-y

Grote, N. K., Bridge, J. A., Gavin, A. R., Melville, J. L., Iyengar, S., & Katon, W. J. (2010). A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Archives of General Psychiatry*, *67*(10), 1012. https://doi.org/10.1001/archgenpsychiatry.2010.111

Ji, K.-M., Li, Z.-Z., Min, H., Sun, L.-P., & Zhao, Y. (2025). The trajectory and influencing factors of fear of childbirth in third trimester primiparas: A prospective longitudinal study. *Journal of Advanced Nursing*, *81*(8), 4712–4722. https://doi.org/10.1111/jan.16636

Kearns, R. A., Neuwelt, P. M., Hitchman, B., & Lennan, M. (2007). Social support and psychological distress before and after childbirth. *Health & Social Care in the Community*, *5*(5), 296–308. https://doi.org/10.1111/j.1365-2524.1997.tb00126.x

Marchesi, C., Bertoni, S., & Maggini, C. (2009). Major and minor depression in pregnancy. *Obstetrics & Gynecology*, *113*(6), 1292–1298. https://doi.org/10.1097/aog.0b013e3181a45e90

Souza, M. G. de, Vieira, B. D. G., Alves, V. H., Rodrigues, D. P., Leão, D. C. M. R., & Sá, A. M. P. de. (2015). Concern of primiparous women with regard to labor and birth. *Revista de Pesquisa Cuidado É Fundamental Online*, *7*(1), 1987–2000. https://doi.org/10.9789/2175-5361.2015.v7i1.1987-2000

Spielberger, C. D. (1966). Theory and research on anxiety. *Anxiety and Behavior*, 3–20. https://doi.org/10.1016/b978-1-4832-3131-0.50006-8

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Archives of Internal Medicine*, *166*(10), 1092. https://doi.org/10.1001/archinte.166.10.1092

Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990). Psychometric characteristics of the multidimensional scale of perceived social support. *Journal of Personality Assessment*, *55*(3–4), 610–617. https://doi.org/10.1080/00223891.1990.9674095