

Prevalence of depression in pregnant women attending the tertiary care center of rupandehi district: A cross sectional study.

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Abstract

Introduction

Depression during pregnancy can have serious health consequences on maternal and child health. It is one of the most prevalent mental disorders during pregnancy. The study aimed to find out the prevalence of depression in pregnant women attending the tertiary care center of Nepal.

Methodology

We conducted a cross-sectional study among pregnant women visiting Antenatal clinic of Devdaha Medical College, Bhaluhi, Rupandehi, Nepal. Ethical approval was obtained from the Institutional Review Committee of same institute. Data was collected from Jan 2023 to June 2023. The calculated minimum required sample size was 128. The subjects were interviewed with Edinburgh Postnatal Depression Scale (EPDS).

Results

Prevalence of depression was found to be 26.6%. Among depressed and non-depressed patients there was statistically significant difference in planned pregnancy ($p < 0.000$), living with partner currently ($p < 0.001$), and those with ideas of self harm ($p < 0.000$).

Conclusion

Around 26.56% of the sample population scored positive for antenatal depression which was comparable to the results obtained from other lower and middle-income countries. All those concerned with antenatal care need to pay attention and screen for depressive symptoms.

Key Words

Depression, Pregnancy, Self harm

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INTRODUCTION

Depression is the most common mental disorders during pregnancy.¹ A community-based study in South Asia found 25% of pregnant women suffering from depression.² In developing countries systematic review has shown 18.4% prevalence of antenatal depression.³ The prevalence of depression was 13.3 % in pregnant women according to Beck Depression Inventory (BDI) in one of the Nepalese study.⁴ It has been found that depression during pregnancy

have serious health consequences on maternal and child health. Antenatal depression can lead to multiple outcomes like low birth weight babies, premature delivery, inadequate prenatal care, pre-eclampsia, alcohol and substance use, postnatal depression itself and suicidal ideation.⁵⁻⁷

Despite locally available and affordable treatment, depression during pregnancy is persistently under diagnosed and untreated during antenatal care and is largely ignored in developing countries.⁸ Studies on depression in pregnant women are limited from Nepal. Considering the prevalence and consequence of the problem, it is essential to determine the prevalence of depression in pregnant women in Nepal.

The study aimed to find out the prevalence of depression in pregnant women attending the tertiary care center of Nepal.

MATERIALS

This descriptive cross-sectional study was conducted among pregnant women visiting Antenatal clinic of Devdaha Medical College, Bhaluhi, Rupandehi, Nepal. Ethical approval was obtained from the Institutional Review Committee of same institute. Data was collected from Jan 2023 to June 2023. Pregnant females in all trimesters attending ANC and those who give consent were included in the study. Patients suffering from a serious medical illness were excluded from study. First trimester was included up to 1–12 weeks, second trimester 13–28 weeks and third trimester 29–40 weeks. A convenience sampling method was used. The sample size was calculated using the formula:

$$n = Z^2 \times p \times q / e^2 = [(1.96)^2 \times 0.092 \times 0.91] / 0.05^2 = 128$$

Where, n= minimum required sample size

Z= 1.96 at 95 % Confidence Interval (CI)

p= prevalence of depression in pregnant women taken as 9.18%⁹

q= 1-p

e= margin of error, 5%

The calculated minimum required sample size was 128. The questionnaire collected information on demographics and Edinburgh Postnatal Depression Scale (EPDS). EPDS the validated version in Nepali has been used for detection of depression in antepartum and postpartum samples with cut off scores of 13. Nepalese version of EPDS has a sensitivity of 92% and a specificity of 95.6%.¹⁰ Cutoff score was used to categorize depressed (score ≥13) and not depressed (score<13).

Data were entered and analyzed using IBM SPSS Statistics version 24.0. The point estimate was calculated at a 95% CI.

RESULTS

Among 128 patients, prevalence of depression was found to be 26.56%. The mean age of the respondent was 27.27±4.8 years and mean age at marriage was 21.33±3.72 years. Majority of the respondents (66.40%) belonged to age group 20-29 years. Most of the pregnant women were home maker 113(88.28%). Majority of the respondents lived in a joint family and most of them had achieved education upto secondary level. 35.15% had married before 20 years of age. (Table 1)

Table 1: Sociodemographic characteristics of pregnant women (N=128)

Variable		Frequency	Percentage(%)
Age (Mean±SD)		27.27±4.8	
Age at Marriage (Mean±SD)		21.33±3.72	
Age group	<20	4	3.12
	20-29	85	66.40
	30-39	37	28.90
	40 and above	2	1.56
Occupation	Home maker	113	88.28
	Service(job)	7	5.46
	Business	2	1.56
	Student	6	4.68
Education	Illiterate	4	3.12
	Primary level	22	17.18
	Secondary level	69	53.90
	Bachelors	26	20.31
	Master level	7	5.46
Type of family	Nuclear family	39	30.46
	Joint family	89	69.53
Age of Marriage	Below 20 years	45	35.15
	Above 20 years	83	64.84

Among 128 pregnant women 28 (21.9%) belonged to first trimester, 53 (41.4%) belonged to second trimester and 47 (36.7%) belonged to third trimester. 98 (76.6%) participants were those with less than ten years of duration of marriage. 52 (40.6%) respondents were primi-gravid. 91 (71.1%) of the respondents current pregnancy was planned whereas 37 (28.91%) had unplanned pregnancy. 33 (25.8%) of respondents had history of abortion. Most of them had vaginal delivery in past and majority of the respondents 100 (78.1%) were currently living with their partner. (Table 2)

Table 2: Pregnancy related variable (Characteristics of pregnant women) (N=128)

Variable		Frequency	Percentage(%)
Trimester	First	28	21.87
	Second	53	41.40
	Third	47	36.71
Duration of marriage	Less than 10 years	98	76.56
	More than 10 years	30	23.43
Gravida	Primi	52	40.62
	Multi	76	59.37
Current Pregnancy	Planned	91	71.09
History of Abortion	Present	33	25.78
Mode of delivery in past pregnancy	Vaginal	57	44.53
	Instrumental	2	1.56
	Lower Segment Caesarean Section	18	14.06
	not valid	51	39.84
Living with partner currently	Yes	100	78.12
Selfharm/suicidal ideas	Present	27	21.09
Depression	Present	34	26.56

Table 3: Association of depression and different variables

Variable		Depression		P-value
		Present	Absent	
Gravida	Primi	14(41.17)	38	0.548
	Multi	20(58.8)	56	
Planned pregnancy	Planned	13(38.23)	78	0.000*
	Unplanned	21(61.76)	16	
History of abortion	Present	5(14.70)	28	0.064
	Absent	29(85.29)	66	
Living with partner currently	Yes	19(55.88)	81	0.001*
	No	15(44.11)	13	
Self harm	Present	25(73.52)	2	0.000*
	Absent	9(26.47)	92	

*p-value <0.01

Among those with depression 25(73.52%) had self harm ideas and 5(14.75%) had history of abortion in past and 21(61.76%) had unplanned current pregnancy. Majority were multigravida 20(58.8%). Among depressed and non-depressed patients there was statistically significant difference in planned pregnancy, living with partner currently, and those with ideas of self-harm [Table 3].

DISCUSSION

The prevalence of depression was 34 (26.56%) in our study which is higher than the study conducted in Mumbai which reported 9.18%. In this study the BDI (Beck Depression Inventory) was used to assess depression. Our findings are in line with the findings from studies in Pakistan² which showed 25% ,western studies¹¹ which reported 22% and in middle east country which reported 27.5%.¹² A review study in Low middle income country of 51 different studies reported 25.3% pooled prevalence.¹³

A recent study from Nepal had reported 13.3% prevalence of depression⁴ where BDI was used as tool to assess for depression. Another Nepalese study reported 18% of the pregnant women with depressive symptoms who visited public health facility for Antenatal care check-up.¹⁴ In this study the EPDS cut-off score ≥ 10 was used. A hospital-based study carried out in Eastern Nepal using Hamilton-Depression Scale, reported that half of the pregnant women had some form of depression.¹⁵ These differences in prevalence observed in multiple studies done in within the country or other country might be due to differences in the type of instrument and cut off score used, cultural differences, differences in perception of mental health, differences in socioeconomic environments, levels of social support or its perception, as well as biological vulnerability factors.¹⁶

In our study 21(61.76%) had unplanned current pregnancy

which was also statistically significant. Unplanned pregnancy has been reported a significant factor for antepartum depression.¹⁷ An unplanned pregnancy may itself act as a stressful event for women.¹⁸

Our study showed 5(14.70%) had history of abortion. Studies have shown that previous experiences of spontaneous or elective abortion had caused anxiety and depression in subsequent pregnancy.¹⁹ However, our study did not show any significant association. Experience in previous pregnancy whether positive or negative could influence their mental state in current pregnancy.²⁰

Among those who were depressed prevalence of self harm ideas was 25(73.52%) in our study. This is in contrasts with the study conducted at Bangladesh which reported 14% of depressed pregnant women having thoughts of self-harm during the pregnancy.²¹ Prevalence of suicidal ideation in our study was 27(21.091%) which was statistically significant ($p < 0.05$). Epidemiological study conducted in United States²² in a hospital setting demonstrates that suicidal ideation may be detectable in a percentage ranging from 13.1 to 33.0 % of pregnant women.

Our study showed significant association between living together with husband as a protective factor against depressive symptoms. These findings are in line with the findings from other study which showed that family/social support during pregnancy plays a significant role in predicting women's emotional status in the antepartum period.²³ There are few limitations in our study. Our study had smaller sample size of pregnant women and information was collected only from a single hospital. Thus, findings from this study might not be generalizable to all the pregnant women in the community.

CONCLUSION

Results from the study showed that around 26.56% of the sample population scored positive for antenatal depression which was comparable to the results obtained from other lower and middle-income countries. All those concerned with antenatal care need to pay attention and screen for depressive symptoms.

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CONFLICT OF INTEREST

None

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