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Original Article

Assessment of Perinatal Anxiety and Depression: A Cross-sectional Study in a Peripheral Military Hospital in Bangladesh

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Abstract:

Introduction: Perinatal anxiety (PNA) and perinatal depression (PND) during pregnancy is associated with several adverse maternal and child outcomes, such as postpartum depression, preterm birth, low birth weight and subsequent developmental and mental health challenges in children.

Methods: This cross-sectional study was conducted at Combined Military Hospital (CMH) Ghatail among randomly selected 209 perinatal women from June 2022 to October 2022. Data were collected through face-to-face interview using a pre-tested semi-structured questionnaire with validated and reliable tools.

Results: The mean (±SD) age of the respondents was 25.75 (3.97) with predominantly (53.6%) higher secondary school certificate qualified. Majority (60.3%) had <1 child and >90% availed the antenatal checkup. Among the 209 respondents, 39.2% and 36.4% had perinatal anxiety and depression respectively. Perinatal anxiety was significantly associated with family type (χ^2= 2.96; p<0.05), no of children (χ^2= 3.61, p<0.05), history of pregnancy induced hypertension (PIH) (χ^2= 4.17, p<0.05) and history of edema during pregnancy period (χ^2= 6.01, p<0.05). perinatal depression was significantly associated with age group (χ^2=5.67, p<0.05), religion (χ^2=3.73, p<0.05), history of edema during pregnancy (χ^2= 3.85, p<0.05), support from the family members (χ^2= 2.80, p<0.05) and place of stay during pregnancy period (χ^2=4.86, p<0.05).

Conclusion: Perinatal anxiety and depression are common which needs incorporation of appropriate screening program during antenatal period.

Key words: Pregnancy, Perinatal anxiety, Perinatal depression, Combined Military Hospital.

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Introduction:

In the life cycle of a women, pregnancy and postnatal period are two of the most vulnerable time periods when both physiological and psychological changes occur, leading to an increased risk of both physical and mental health issues. These health issues have an impact not only on the maternal health and pregnancy outcomes but also on the short- and long-term developmental trajectories of the child.[1] In the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems the perinatal period is defined as commencing at 22 completed weeks (154 days) of gestation (the time when birthweight is normally 500 grams) and ends seven completed days after birth.[2] Perinatal mental health is being considered as a major public health issue which is recognized by the World Health Organization (WHO); at least one in ten women has a serious mental health problem during pregnancy or in the year after birth. As a result of pregnancy, new emotional, social, financial and physical challenges impose considerable mental health issue on mothers. Additionally, the pre and post-natal periods have significant impacts on future physical, mental and cognitive development of off spring. children of mothers with perinatal mental illness

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are exposed to higher risks of low birth-weight, reduced child growth, intellectual, behavioral and socioemotional problems.[3] It is being established that during the period of pregnancy, one fourth of the pregnant women are affected by a mental disorder with one-twelfth experiencing one of these disorders for the first time. Over the last few decades, several studies have been carried out on perinatal anxiety (PNA) disorder and it is revealed that about 4-39% of pregnant women are diagnosed with anxiety disorder and prevalence rates are even higher if comorbid disorders are also considered.[4]

PNA is a prevalent mental health concern during pregnancy. Diagnostic and Statistical Manual of Mental Disorders 5th Edition (DSM-V) recognizes various categories of anxiety disorders, each with different clinical presentations. During various stages of pregnancy, generalized anxiety disorder is one of the common mental health problems that occurs with a higher rate but a considerable amount of variation in anxiety during pregnancy cannot be explained by generalized anxiety or explained as a comorbidity with depression. As a result, pregnancy- related anxiety may constitute a discrete entity that is not fully captured by other common mental health issues. PNA during pregnancy is associated with several adverse maternal and child outcomes, such as postpartum depression, preterm birth, low birth weight and subsequent developmental and mental health challenges in children. Available data suggest that PNA may be more strongly associated with maternal and child outcomes than general anxiety or depressive symptoms are and may predict these outcomes more accurately. For instance, in a multicenter prospective cohort study of spontaneous preterm birth, Kramer et al. examined a large number of stressors and measures of psychological distress among 5337 women in Canada. After adjustment for medical and obstetric risks, perception of pregnancy risk, and depression, only perinatal anxiety was consistently and independently associated with spontaneous preterm birth. In another study, Blair et al. compared the trajectories of perinatal anxiety at five time points during pregnancy with general anxiety. The results indicated that PNA predicted child negative affectivity, but no association between child outcomes and the level or trajectory of state anxiety was detected.[5]

A women's ability to enjoy life and self-care can be disrupted by an anxiety disorder. It is being proved by several studies that PNA disorder and adverse pregnancy outcome such as preterm birth, low birth weight, and postpartum depression are strongly associated.[3]

Perinatal depression (PND), is probably the most common mental health disorder in women that can be defined as the depression in women during pregnancy or within 12 months of delivery and is a significant mental and public health problem. Many adverse sequelae for the woman, her family and children are associated with PND such as poor maternal-fetal attachment, adverse neonatal outcomes (low birth weight, preterm birth, small for gestational age), early childhood developmental delays, or relationship strain. Studies show the prevalence of OND ranges from 15 to 35% with an average of around 19 % in low- and middle- income countries. In other parts of the world, it is around 25 % which may vary with different geographical and socioeconomic factors. The major risk factors for PND among women include past history of depression, presence of anxiety, marital difficulties or lack of a partner, lack of social support and recent major life events. Poverty, substance abuse, previous abortion, unplanned pregnancy, family violence, ambivalence towards the pregnancy and history of abuse may also contribute.[1]

By using established diagnostic criteria and standardized tools, the routine assessment for perinatal anxiety and depression can be diagnosed at an early stage which could facilitate appr4opriate management and optimizes the outcomes pregnant women and their offspring. At the same time healthcare providers (HCPs) who attended the women during pregnancy and postpartum need to know the risk factors and signs and symptoms associated with perinatal anxiety and depression for its early identification and needed treatment to the perinatal women. Perinatal anxiety and depression have been explored by many authors in Bangladesh with both rural and urban setting however, no such research is being conducted so far in a military hospital setting. In view of

paucity of research among selected women reported in a secondary military hospital setting and to aid the early diagnosis of perinatal anxiety and depression, this study aimed to assess the perinatal anxiety and depression among the women attending Combined Military Hospital (CMH) Ghatail, Tangail in Bangladesh.

Material and Methods:
This cross-sectional study was conducted from June 2022 to October 2022 at the Combined Military Hospital (CMH) Ghatail. Randomly selected 209 perinatal women were included in this study with an objective to assess the perinatal anxiety and depression in pregnant and post-partum period. Data were collected from the perinatal women through face-to-face interview using a pretested semi-structured questionnaire. Prior to data collection, informed written consent were obtained from the respondents. Ethical approval for the study was granted from the competent authority of CMH Ghatail and neither any intervention nor invasive procedure were given. The study instrument comprised a semi-structured questionnaire which includes demographic, gynecological and obstetrics related information, including age, education, monthly income, residence, no of children, antenatal checkup, previous history of abortion, D&C and support from family members among others. Respondent's anxiety and depression were assessed through Perinatal Anxiety Screening Scale (PASS) and Edinburgh Postnatal Depression Scale (EPDS) respectively. Perinatal Anxiety Screening Scale (PASS) is one of the validated and widely used scales for measuring perinatal anxiety of women which has good psychometric properties. There are 31 items in PASS with no reverse item. Using 4 points rating Likert scale, participants were asked to rate their degrees of agreement of 31 different conditions. The 4-point Likert scale range from not at all (0) to almost always (3) with higher score indicates a high level of perinatal anxiety. The possible range of PASS score is 0-93. Basing on the PASS scores, the state of anxiety was classified as asymptomatic (0-20), mild-moderate symptoms (21-41 and severe symptoms (42-93) with a cut of score 26.[6, 7] Assessment of depression among the respondents were done using Edinburgh Postnatal Depression Scale (EPDS). The validated Bangla version of EPDS is a 10-item questionnaire, scored from 0 to 3 (higher score indicating more depressive symptoms). The instrument was validated in Bangladesh for postpartum use (EPDS-B) and showed a sensitivity of 89% and specificity of 87% at the cutoff score 10. This cutoff score was used to categorize depressed (score>10) and nondepressed (score <10) states [8], [9]. Both PASS and EPDS demonstrates good reliability in the present study with a Cronbach's alpha of 0.95 and 0.82 respectively. Data processing and analyses were done using Statistical Package for Social Sciences (SPSS) version 23. Frequencies, percentage, mean and standard deviation (SD) were used for descriptive statistics. Chi-square analyses was performed to estimates the relationship between anxiety and depression with sociodemographic attributes of the respondents. A two-tailed $p < .05$ was considered statistically significant.

Results:
The final sample included 209 women in their perinatal period with a mean (SD) age of 25.75 (3.97) years. More than half (53.6%) of the study sample was higher secondary school certificate examination qualified with 94.7% were Muslim. More than two-third (77.5%) of the women were homemakers with 45.9% of the respondents having monthly income <25000 Taka with a mean (SD) of 26349.28 (8848.48) taka. More than half (53.6%) belonged to joint family with average (SD) family members were 5.58 (2.50). average of the husbands were 32.05 (4.46) years (Table I).

Table I: Sociodemographic Characteristics of the respondents (n=209)

Attributes	Frequency (%)
Age group in years	
<25	108 (51.7)
>26	101 (48.3)
Mean (±SD)	25.75 (±3.97)
Min – Max	18 – 37
Educational Qualification	
Below SSC	16 (7.7)
SSC	41 (19.6)
HSC	112 (53.6)
Graduate and above	40 (19.1)
Religion	
Islam	198 (94.7)
Hindu	11 (5.3)
Occupation	
Govt. Job	12 (5.7)
House Wife	162 (77.5)
Student	35 (16.8)
Monthly family income in taka	
<25000	96 (45.9)
25001-30000	63 (30.1)
>30001	50 (23.9)
Mean (±SD)	26349.28 (±8848.48)
Minimum – maximum	4000 – 50000

Attributes	Frequency (%)
Type of family	
Nuclear	97 (46.4)
Joint	112 (53.6)
Family member group	
<4	79 (37.8)
5 – 6	68 (32.5)
>7	62 (29.7)
Mean (SD)	5.58 (2.50)
Min – max	1 – 20
Type of residence	
Pucca	107 (51.2)
Kancha	26 (12.4)
Semi-pucca	76 (36.4)
Place of residence	
Urban	70 (33.5)
Rural	139 (66.5)
Age group of husbands in years	
<30	98 (46.9)
>31	111 (53.1)
Mean (SD)	32.05 (4.46)
Min – mix	24 – 44

In regards to the pregnancy related information, it was revealed that two-third (60.3%) respondents had <1 children and 90.4% had their antenatal checkup during pregnancy period with 26.8% of the respondents visited antenatal clinic for more than 4 times. Less than one-third (27.3%), 11.0%, 5.3% respondents had history of abortion, D &C operation and IUD respectively. More than half (56.0%) respondents stayed with their husband during the pregnancy period and 93.3% got full support from their family members (Table II).

Table II: Pregnancy related information among the respondents (*n=209*)

Attributes	Frequency (%)
No of children	
<1	126 (60.3)
>2	83 (39.7)
Mean (SD)	1.29 (0.92)
Min - max	0 – 3
Antenatal checkup	
Yes	189 (90.4)
No	20 (9.6)
Frequency of antenatal checkup (n=189)	
Single time	05 (2.4)
Two times	15 (7.2)
Three times	55 (26.3)
Four times	56 (26.8)
>four times	58 (27.8)
Mean (SD)	3.42 (1.50)
Convulsion during pregnancy	
Yes	03 (1.4)
No	206 (98.6)
Stay during pregnancy period	
With husband	117 (56.0)
With parents	53 (25.4)
With in-law's house	39 (18.7)
Time of pregnancy	
Antepartum	77 (36.8)
Post-partum	132 (63.2)

Attributes	Frequency (%)
History of abortion	
Yes	57 (27.3)
No	152 (72.7)
History of D & C	
Yes	23 (11.0)
No	186 (89.0)
History of IUD	
Yes	11 (5.3)
No	198 (94.7)
Diabetes during pregnancy	
Yes	19 (9.1)
No	190 (90.9)
Hypertension during pregnancy	
Yes	10 (4.8)
No	199 (95.2)
Edema during pregnancy	
Yes	50 (23.9)
No	159 (76.1)
Support during pregnancy period	
Yes	195 (93.3)
No comment	14 (6.7)
History of previous psychiatric problem	
Yes	02 (1.0)
No	207 (99.0)

Among the 209 respondents, 39.2% and 36.4% were above the cutoff point for the perinatal anxiety and depression respectively (Table-3).

Table III: Distribution of PASS and EPDS score among the respondents (*n=209*)

Attributes	Frequency (%)
Level of Perinatal Anxiety	
No anxiety	127 (60.8)
Having Anxiety	82 (39.2)
Level of Perinatal Depression	
No depression	133 (63.6)
Having depression	76 (36.4)

In regards to the relationship between perinatal anxiety with sociodemographic attributes of the respondents, statistically significant ($p<0.05$) difference was found in respondents of joint family, having <1 children, suffering from pregnancy induced hypertension (PIH) and edema (Table V).

Table V: Relationship between sociodemographic information and perinatal anxiety (n=209)

Variables	PASS score		□ 2	p value
	No anxiety	Having anxiety		
Age group in years				
<25	70 (33.5)	38 (18.2)	1.5	0.21
>26	57 (27.3)	44 (21.1)		
Educational qualification				
Class 8	12 (5.7)	4 (1.9)	5.30	0.15
SSC	20 (9.6)	21 (10.0)		
HSC	73 (34.9)	39 (18.7)		
Graduate and above	22 (10.5)	18 (8.6)		
Religion				
Islam	119 (56.9)	79 (37.8)	0.70	0.40
Hindu	8 (3.8)	3 (1.4)		
Occupation				
Government job	6 (2.9)	6 (2.9)	1.53	0.46
Home maker	102 (48.8)	60 (28.7)		
Student	19 (9.1)	16 (7.7)		
Monthly family income				
<25000	61 (29.2)	37 (16.7)	0.67	0.71
25001-30000	36 (17.2)	27 (12.9)		
>30001	30 (14.4)	20 (9.6)		
Type of family				
Nuclear	65 (31.1)	32 (15.3)	2.96	0.05*
Joint	62 (19.7)	50 (23.9)		
Number of family members				
<4	51 (24.4)	28 (13.4)	1.42	0.49
5-6	42 (20.1)	26 (12.4)		
>7	34 (16.3)	28 (13.4)		
Type of residence				
Pucca	60 (28.7)	47 (22.5)	2.82	0.24
Kancha	19 (9.1)	7 (3.3)		
Semi-pucca	48 (23.0)	28 (13.4)		
Place of residence				
Urban	35 (16.7)	29 (13.9)	2.46	0.29
Rural	87 (41.6)	22 (24.9)		
Sub-urban	5 (2.4)	1 (0.5)		
No of children				
<1	70 (33.5)	56 (26.8)	3.61	0.05*
>2	57 (27.3)	26 (12.4)		
Antenatal checkup				
Yes	117 (56.0)	72 (34.4)	1.07	0.30
No	10 (4.8)	10 (4.8)		
Frequency of antenatal checkup				
<3 times	62 (29.7)	33 (15.8)	1.48	0.22
>4 times	65 (31.1)	49 (23.4)		
History of abortion				
Yes	34 (16.3)	23 (11.0)	0.04	0.84
No	93 (44.5)	59 (28.2)		
History of D & C				
Yes	14 (6.7)	9 (4.3)	0.	0.99
No	113 (54.1)	73 (34.9)	00	
History of IUD/still birth				
Yes	6 (2.9)	5 (2.4)	1.80	0.66
No	121 (57.9)	77 (36.8)		
History of GDM				
Yes	12 (5.7)	7 (3.3)	0.05	0.82
No	115 (55.0)	75 (35.9)		
History of PIH				
Yes	3 (1.4)	7 (3.3)	4.17	0.04*
No	124 (59.3)	75 (35.9)		
History of edema				
Yes	23 (11.0)	27 (12.9)	6.01	0.01*
No	104 (49.8)	55 (26.3)		
Support of family and others				
Yes	119 (56.9)	76 (36.4)	0.08	0.77
No comments	8 (3.8)	6 (2.9)		
Stay during pregnancy and post-partum period				
With husband	73 (34.9)	44 (21.1)	1.12	0.57
With parents	29 (13.9)	25 (11.5)		
With in-laws	25 (12.0)	14 (6.7)		

Relationship between major depressive disorder and sociodemographic attributes revealed statistically significant (<0.05) difference among the respondents of age group of >26 years, believers of Islam, suffering from edema, having support from family members and stay during pregnancy and postnatal period (Table VI).

Table VI: Relationship between sociodemographic information and perinatal depression (n=209)

Variables	EPDS score		□ 2	p value
	No depression	Having depression		
Age group in years				
<25	77 (36.8)	31 (14.8)	5.67	0.01*
>26	56 (26.8)	45 (21.5)		
Educational qualification				
Class 8	9 (4.3)	7 (3.3)	3.43	0.33
SSC	22 (10.5)	19 (9.1)		
HSC	77 (36.8)	35 (16.7)		
Graduate and above	25 (12.0)	15 (7.2)		
Religion				
Islam	123 (58.9)	75 (35.9)	3.73	0.05*
Hindu	10 (4.8)	1 (0.5)		
Occupation				
Government job	5 (2.4)	7 (3.3)	2.89	0.23
Home maker	104 (49.8)	58 (27.8)		
Student	24 (11.5)	11 (5.3)		
Monthly family income				
<25000	64 (30.6)	32 (15.3)	0.74	0.68
25001-30000	39 (18.7)	24 (11.5)		
>30001	30 (14.4)	20 (9.6)		
Type of family				
Nuclear	65 (31.1)	32 (15.3)	0.89	0.34
Joint	68 (32.5)	44 (21.1)		
Number of family members				

<4	52 (24.9)	27 (12.9)	1.18	0.53
5-6	45 (21.5)	23 (11.0)		
>7	36 (17.2)	26 (12.4)		
Type of residence				
Pucca	63 (30.1)	44 (21.1)	4.37	0.11
Kancha	21 (10.0)	5 (2.4)		
Semi-pucca	49 (23.4)	27 (12.9)		
Place of residence				
Urban	35 (16.7)	29 (13.9)	3.86	0.14
Rural	93 (44.5)	46 (22.0)		
Sub-urban	5 (2.4)	1 (0.5)		
No of children				
<1	82 (39.2)	44 (21.1)	0.28	0.59
>2	51 (24.4)	32 (15.3)		
Antenatal checkup				
Yes	119 (56.9)	70 (33.5)	0.39	0.53
No	14 (6.7)	6 (2.9)		
Frequency of antenatal checkup				
<3 times	59 (28.2)	36 (17.2)	0.18	0.67
>4 times	74 (35.4)	40 (19.1)		
History of abortion				
Yes	33 (15.8)	24 (11.5)	1.12	0.29
No	100 (47.8)	52 (24.9)		
History of D & C				
Yes	13 (6.2)	10 (4.8)	0.56	0.45
No	120 (57.4)	66 (31.6)		
History of IUD/still birth				
Yes	5 (2.4)	6 (2.9)	1.66	0.19
No	128 (61.2)	70 (33.5)		
History of GDM				
Yes	13 (6.2)	6 (2.9)	0.21	0.65
No	120 (57.4)	70 (33.5)		
History of PIH				
Yes	4 (1.9)	6 (2.9)	2.54	0.11
No	129 (61.7)	70 (33.5)		
History of edema				
Yes	26 (12.4)	24 (11.5)	3.85	0.05*
No	107 (51.2)	52 (24.9)		
Support of family and others				
Yes	127 (60.8)	68 (32.5)	2.8	0.05*
No comments	6 (2.9)	8 (3.8)		
Stay during pregnancy and post-partum period				
With husband	67 (32.1)	50 (23.9)	4.86	0.05*
With parents	37 (17.7)	16 (7.7)		
With in-laws	29 (13.9)	10 (4.8)		

Discussion:

Combined Military Hospital Ghatail is a 300 bedded hospital, rendered treatment facilities to the entitled serving and retired armed forces personnel including their families. It comprises a well-equipped gynecology and obstetrics department where families of all entitled personnel reported. On an average, everyday about 10-15 pregnant women got themselves admitted at the indoor department as well as 15 to 30 postpartum women reported to the outdoor department for their consultations which allow us to collect the data from the respondents very smoothly. In those circumstances, we aimed to conduct this comparative study to assess the level of anxiety and depression among the pregnant and postpartum women.

Our findings revealed that respondents age, income, religion, family size etc. showed similarity sometimes with national findings of Bangladesh Health and Demographic Survey (BDHS) of 2017[7] and in few cases differed due to regional variation or due to the study process. Finding of our study revealed that the age, religion, educational qualification, occupation, family type and size of the respondents were consistent with the study conducted by Nasreen HE. et al, Rasheda BM et al, Zarghami M. et al.[10,11,12]

Our study revealed that 39.2% of the perinatal women were suffering from perinatal anxiety which is dissimilar to the findings of the study conducted by Misri S et al which either may be due to the recruitment process, study design or geographical variations.[13] It is shown in the previous study that the screening for perinatal anxiety disorder by PASS identified near about 68% of the women with anxiety which is also dissimilar with our study.[14]Rubertsson C et al revealed 15.6% of the pregnant women were suffering from anxiety disorder during early pregnancy which is also dissimilar to our study.[15] The findings of anxiety disorder in our study revealed almost similar findings from the study conducted by Uguz F et al[16] , Felice E et al[17], Borri C et al [18], Andersson L et al [19], Adewuya AO et al[20]Fairbrother, N. et al[21] and Ali NS et al[22]. Another study conducted in rural China by Jiang Q. et al[23] revealed prevalence of perinatal anxiety of 23% which is also dissimilar with our findings.

Our study revealed that 36.4% women suffers from perinatal depression which is almost similar to the study conducted by Azad R et al though the location of the study and study design were dissimilar[24]. But previous study conducted by Raghavan V et al found dissimilar results[1]. It may be due to the place of the study and tools used which accounts for these variations. Another study conducted by Chandran M et al at Tamil Nadu, India revealed 30.8% perinatally depressed women which is near about similar to our study[25]. A systemic

review conducted by Villegas L. et al[26] revealed that the overall combined prevalence of perinatal depression among the women of developing countries were 31.3% and they also revealed the prevalence in rural Bangladesh was 22% and 26.3% in rural Iran. All the findings were not consistent with our study which is may be due to study sample, tools used and geographical distribution of the study place. Another study conducted in rural China by Jiang Q. et al[23] revealed prevalence of perinatal depression of 23% which is also dissimilar with our findings. Apart from this, several hospitals and community-based studies in India have reported lower prevalence of perinatal depression ranging from 11% to 23%[27]. Very wide range of prevalence of perinatal depression has been reported in studies from China (11%), United Arab Emirates (15.8%), Zimbabwe (16%), Brazil (20.7%), South Africa (34.7%), and Pakistan (40%). [28, 29, 30, 31] Basing on these findings, our study may have overestimated the prevalence of perinatal depression. It may be due to the use of EPDS which is a screening tool but not confirmatory. Other reasons for the variations in prevalence of perinatal depression could be attributed to the use of different study tool and technique, socio-cultural norms and study place.

In our study, almost none of the women had either previous history of any psychiatric disorder or any family history of psychiatric disorder which is similar to the study conducted by Chandran M. et al.[25]

Our study revealed a statistically significant (<0.05) relation between perinatal anxiety and type of family, no of children, history of pregnancy induced hypertension and edema during pregnancy whereas no significant relation was found with age, education, religion, occupation, family income, place and type of residence, support during pregnancy which is similar to the study conducted by KharaS et al[32]. A study conducted by Rasheda Begum *et al,*[11] revealed that trimester, education, family income and level of hemoglobin were associated with perinatal anxiety which is not consistent with our study. It may be due to the study design and tools used during the data collection process.

In regards to the relation with perinatal depression, we revealed a statistically significant (<0.05) association with age group, religion, history of edema during pregnancy, support from the family members and stay during perinatal period. A study conducted by Zarghami M. et al and Biratu A. et al revealed that parenting support during pregnancy was a strong predictor for perinatal depression which is similar to our study.[12, 33]

Our study revealed a statistically significant relation between age and perinatal depression which is similar to the study conducted by Tamanna T. et al[34] but dissimilar with the findings of the study conducted by Azad R. et al[24].

Our study has several strengths. It is one of the cross-sectional studies conducted in a secondary military hospital with adequate sample size selected randomly to achieve maximum representativeness of the study. We took the response from the respondents by face-to-face interview which gives the exact state of anxiety and depression among the perinatal women; we used two standardized instruments to elicit perinatal anxiety and depression. Another strength of our study was the use of nationally and internationally recognized and widely practiced validated Bangla version of PASS and EPDS scale.

Our study is not free from limitations as well. First, it was conducted in a secondary military hospital where only selective women are entitled to get the treatment which appears selection bias and poor generalizability of the study results. Second, the self-reported anxiety and depressive symptoms might differ from clinically-diagnosed symptoms which may increase the chances of overestimation. Third, both PASS and EDPS are not a diagnostic aid; it is used only for screening purpose. Making a diagnosis of perinatal anxiety and depression based on PASS and EDPS scale without psychiatric examination is difficult. Fourth, major life events and possible comorbid diagnosis such as maternal autonomy and decision-making role, gender violence, intimate partner violence etc. were not assessed. Fifth, it was a hospital-based study in which prevalence cannot be determined, self-reported nature of the responses which might be a reason for high frequency of anxiety and depression.

Conclusion:
It has been revealed from our study that anxiety and depression are common during perinatal period attended in CMH Ghatail. Therefore, incorporation of appropriate screening for anxiety and depression in antenatal programs and providing practical support to women during pregnancy should be undertaken. The study indicates the necessity of integrating mental health with existing maternal and child health program to ensure the health of both mother and baby.

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Conflicts of interest
The authors declare that they have no conflict of interest.

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