

Factors of psychiatric morbidity during perinatal period

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Summary

The presence of psychiatric disorders during perinatal period imposes negative and long-term effect on maternal health and child development as well as normal family environment. The purpose of our study was to investigate the socio-demographic factors associated with psychiatric morbidity during perinatal period. It was a descriptive cross-sectional study conducted among purposively selected 197 perinatal women attending the Obstetrics & Gynaecology Outpatient Department (OPD) of Bangabandhu Sheikh Mujib Medical University and Dhaka Medical College Hospital, Dhaka from August 2012 to July 2013. Data were collected through face-to-face interview by administering a semi-structured questionnaire, containing socio-demographic and other variables and translated Bangla version of Structured Clinical Interview for DSM-IV Axis-I Disorders – Clinician Version (SCID-CV). Majority (79.7%) of the women were included in the age group of 20-34 years. The mean (\pm SD) age of the respondents were calculated as 24.60 (\pm 4.88) years. Rural habitat was predominant (53.6%). A good number (5.1%) of respondents with psychiatric disorders had positive family history of psychiatric illness which was found statistically significant. Majority (7.6%) of the respondents with psychiatric disorders had previous history of psychiatric illness. Women in perinatal period with the risk factors for developing psychiatric disorders need proper psychiatric evaluation to prevent and treat perinatal mental illness.

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Introduction

The perinatal period has been considered as a time of crisis brought about by emotional, psychological and social stress. Some women may be more vulnerable to mental health problems during pregnancy due to a combination of biological, genetic, physiological or social factors.¹ At least one in ten mothers in all levels of society, and regardless of socioeconomic conditions experience clinical depression and/or anxiety before and up to a year after child birth.² In an article it was said that in resource-constrained countries women were protected from experiencing perinatal mental health problems through the influence of social and traditional cultural practices during pregnancy and in the postpartum period.³ Gender of the children plays an important role in perinatal mental disorder in some Asian countries. According to a study in Bangladesh, the risk of common mental disorder was higher among young mothers with female children. It is generally considered more desirable to have male offspring than female offspring.⁴ A study in Pakistan had pointed out that this gender discrimination was strongly associated with psychological morbidity among women in Pakistan.⁵ Well

known obstetric risk factors for perinatal mental health are maternal age less than 18 or greater than 35 years, previous termination, miscarriage, stillbirth, neonatal death, Sudden Infant Death Syndrome (SIDS) or a previous child with a disability, unwanted pregnancy, pregnancy complications, multiple pregnancy etc. Number of previous miscarriages/stillbirths significantly predicts symptoms of depression and anxiety in a subsequent pregnancy, independent of key psychosocial and obstetric factors. This association remains constant across the pre and post natal period, indicating that the impact of a previous prenatal loss did not diminish significantly following the birth of a healthy child.⁶ Socioeconomic deprivations increased the risk of all mental illnesses, although this was more marked in older women.⁷ In joint family, conflict with mother-in-law also predicts the occurrence of postnatal depression and also an important source of household distress in many Asian societies.⁸ Socio-cultural aspect of the immediate puerperium shape maternal emotional wellbeing. For many Hindus, a woman is regarded as impure for 40 days after childbirth and during this time, she and her child should not come out of confinement.⁹ The perinatal period is also very important because of the

recurrence in women with pre-existing serious mental illness.¹⁰ The objective of our study was to find out the relationship between socio-demographic, obstetric and other factors with psychiatric disorders during perinatal period.

Materials and methods

This was a descriptive cross-sectional and hospital-based study conducted among the patients attending the Obstetrics & Gynecology Out-Patient Departments (OPD) of Bangabandhu Sheikh Mujib Medical University (BSMMU) and Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh. The study period was from August, 2012 to July, 2013. Initially 206 women were approached purposively. Among them, 9 did not give their consent. After obtaining informed written consent, a total of 197 women were included. Initially a semi-structured questionnaire (in Bangla) was used to obtain information regarding socio-demographic, obstetric and psycho-social factors. Then, the psychiatric morbidity was assessed by using translated Bangla version of SCID-CV according to DSM-IV-TR by researcher. Data analysis was performed by Statistical Package for Social Sciences (SPSS), version 15. Chi square test, Fisher's Exact test and Student's "t" test were used for analysis. Regression analysis was also done for analysis of relation of age with psychiatric morbidity.

Results

Out of 197 respondents, 116 were from Dhaka Medical College Hospital and 81 from BSMMU. The study identified the socio-demographic characteristics of the respondents including age, educational level, habitat, socio-economic condition, religion, family pattern, number of female child. It also included obstetric and other relevant clinical information such as, family history of psychiatric illness, previous history of psychiatric illness and physical illness. The findings of the socio-demographic characteristics are presented in Table 1.

Among the respondents, 52.3% were multipara and 5.1% grand multipara. About two third (68.5%) of respondents visited OPD during antepartum period. More than one third patient had previous history of miscarriage/abortion or still birth. Among the respondents, most had no female child (60.4%) and 13.2% had more than two female children. Current pregnancy was planned in majority (60.4%) of the respondents. Most of the women (84.3%) had no family history of psychiatric illness. Some respondents (8.1%) presented with previous history of psychiatric disorder (Table 2).

Psychiatric disorder was present in 14.2% of the respondents (Figure 1). Proportion of mood disorder was 6.1%, psychotic disorder 4.5% and other disorders 3.6%. Major depressive disorder was found most frequent (3.6%) among all psychiatric disorders. Co-morbid diagnosis was present in one respondent.

Table 1: Distribution of the socio demographic characteristics of the patients (n=197)

Characteristics	Frequency	Percentage
Age (in years)		
<20	30	15.2
20-34	157	79.7
>34	10	5.1
Mean (±SD)	24.60 (±4.88)	
Habitat		
Urban	133	67.5
Rural	64	32.5
Religion		
Islam	182	92.4
Hindu	15	7.6
Education		
Up to primary	51	25.9
Secondary & higher secondary	127	64.5
Graduate and above	19	9.6
Occupation		
House wife	175	88.8
Service	19	9.6
Others	3	1.5
Monthly family income (Taka)		
Upto 10000	70	35.5
10001-15000	56	28.4
More than 15000	71	36.0
Family Pattern		
Nuclear	97	49.2
Joint	100	50.8

Table 2: Distribution of respondents according to obstetric history (n=197)

Characteristics	Frequency	Percentage
Time of visit		
Ante partum	135	68.5
Post partum	62	31.5
Parity		
Primipara	84	42.6
Multipara	103	52.3
Grand multipara	10	5.1
H/O abortion/ miscarriage/ stillbirth		
Present	70	35.5
Absent	127	64.5
Number of female children		
>2	26	13.2
≤2	52	26.4
None	119	60.4
Current pregnancy		
Planned	119	60.4
Unplanned	78	39.6

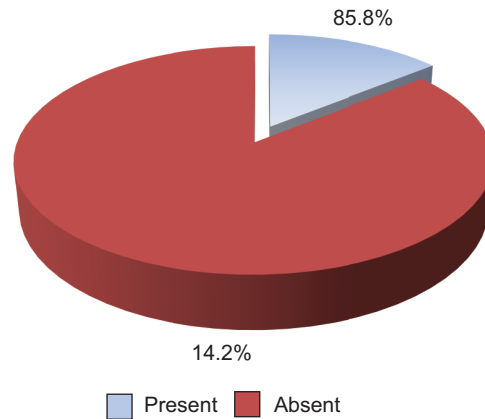


Figure 1: Psychiatric disorders among the respondents (n=197)

Psychiatric disorders were common among the 20-34 years age group (12.2%) (Table 3). There was significant difference in the age distribution of the respondents in t-test ($p < 0.05$).

Majority (7.6%) of the women with psychiatric disorders were from rural background. Odds ratio was 2.83 (1.25-6.38, 95% CI). The difference in habitat distribution was statistically significant ($p < 0.05$).

Middle socio-economic condition (56.8%) and Islam as religion (96.4%) were found predominant in respondents with psychiatric disorders. Among patients with psychiatric

disorders, 92.9% were housewives and 64.3% were from joint family. In this study it was found that majority (7.6%) of the respondents had previous history of psychiatric illness (Table 5). Odds ratio was 26.70 (9.25-77.09, 95% CI). These findings were statistically significant ($p < 0.05$).

Among the respondents, 15.7% had family history of psychiatric illness. About one third (5.1% of total respondents) of them developed psychiatric disorders (Table 6). Odds ratio was 3.91 (1.56-9.61, 95% CI). This association was found statistically significant ($p < 0.05$).

Table 3: Distribution of respondents according to age and psychiatric disorders (n=197)

Age (in years)	Psychiatric disorders				Total		p value
	Present		Absent		N	%	
	N	%	N	%			
<20	2	1.0	28	14.2	30	15.2	0.402*
20-34	24	12.2	133	67.5	157	79.7	
>34	2	1.0	8	4.1	10	5.1	
Total	28	14.2	169	85.8	197	100.0	
Mean ± SD	26.61 ± 5.11		24.27 ± 4.78		24.60 ± 4.88		0.019**

Table 4: Distribution of respondents according to habitat and psychiatric disorders (n=197)

Habitat	Psychiatric disorders				Total		p value*
	Present		Absent		N	%	
	N	%	N	%			
Urban	13	6.6	120	60.9	133	67.5	0.010
Rural	15	7.6	49	24.9	64	32.5	
Total	28	14.2	169	85.8	197	100.0	

Table 5: Distribution of respondents according to previous H/O psychiatric illness and current psychiatric disorders (n=197)

Previous H/O psychiatric illness	Psychiatric disorders				Total		p value*
	Present		Absent		n	%	
	N	%	N	%			
Present	15	7.6	7	3.6	22	11.2	0.001
Absent	13	6.6	162	82.2	175	88.8	
Total	28	14.2	169	85.8	197	100.0	

Table 6: Distribution of respondents according to family H/O psychiatric illness and psychiatric disorders (n=197)

Family H/O psychiatric illness	Psychiatric disorders				Total		p value*
	Present		Absent		n	%	
	N	%	N	%			
Present	10	5.1	21	10.7	31	15.7	0.004
Absent	18	9.1	148	75.1	166	84.3	
Total	28	14.2	169	85.8	197	100.0	

Discussion

Most (79.7%) of the respondents was from the age range of 20-34 years with the mean age of 26.60 (± 4.88) years. Psychiatric disorders were also found maximum (12.2%) in this age group with the mean age of 26.61 (± 5.11) years. Recently it has been reported that psychiatric disorders in women occur most frequently during the age range of 18-45 years.¹¹ This trend of age differs from the result of a study done in India which showed that women older than 35 years were at two times greater risk of having psychiatric disorders than women aged 19 or less.¹² In other study it was found that teenagers with pregnancy were more vulnerable to develop psychiatric disorders (27.6%).¹³ Another study found no association between Common Perinatal Mental Disorder (CPMD) and maternal age.¹⁴ Thus, the over-representation of this particular age group in this study does not seem to be a selection bias.

The result reflected the rural predominance among the respondents. It signifies that rural women were suffering more from psychiatric morbidity than urban women of perinatal period. Urbanization contributed by better availability of health facilities and greater awareness of people which help them to have appropriate treatment facilities. This finding is consistent with some other studies.^{7,15} About 64.5% study population were from secondary and higher secondary level of education. Among them 8.1% respondents had psychiatric disorders. One study in India showed that the risk of Common Perinatal Mental Disorders (CPMD) was lower among women with more

education.¹⁶ Another study in rural area of Bangladesh revealed that highest respondents had primary education.¹⁷ This inconsistent finding might be due to the difference of selection of study places. In the view of economic condition, more (7.1%) psychiatric disorders were found in the income group more than 15000 TK. It may indicate that those relatively higher income groups seek help more from hospital rather than traditional healer. However, some studies found economic difficulties or a low income was associated with a higher risk of suffering a CPMD.¹⁸ The study clearly documented that psychiatric disorders were highest among Muslims. The result showed 13.7% cases with the religion of Islam and 0.5% from Hindu. The finding was somehow usual in comparison with the Muslim/non-Muslim distribution of the population of our country which is 92.4% and 7.6% respectively, reported in population census in 2012.¹⁹ Distribution of psychiatric disorders by occupation found that housewives were most (13.2%) and rests (1%) were service-holders. About similar result was found in a Saudi Arabian study.¹⁵ The risk of CPMDs was lower among women with a permanent or secure job.²⁰ Respondents from joint family were 50.8% and from nuclear family 49.2%. Among respondents with psychiatric morbidities, more (9.1%) were from joint family. This finding was compatible with other studies on prevalence and determinants of common perinatal mental disorders in women in low- and lower-middle-income countries.^{4,20} On the other hand, another study in our country showed that joint family acts as a protective factor against antenatal anxiety and depressive symptoms.²¹ In

some studies it was revealed that the risk of common perinatal mental disorder was increased among women who wanted a son but gave birth to a daughter or whose parents-in-law preferred a male baby²⁰ or who already had at least two daughters.²² In this study, no significant association was found between psychiatric disorders and women having two or more female children. Among the respondents, 135 were ante partum and 62 were postpartum cases. Among them, 18 (8.6%) and 10 (5.6%) respondents were suffering from psychiatric disorders respectively. Relatively small proportion of respondents had come during postpartum period. The reason behind this disproportion of sample may be the cultural bar to go outside home before a certain period of childbirth. Such type of belief is also evident in some other cultures.⁹ No risk or association was seen with adverse reproductive events including unplanned pregnancy, past pregnancy losses/ prior still birth, number of gravidity or parity and coincidental medical problems. However, other studies found significant association between psychiatric disorder and among these factors.^{20,23} The current study revealed strong relationship between history of psychiatric illness in family members and the development of psychiatric disorders ($p < 0.004$, OR = 3.91 (5.6-9.61, 95% CI). In a study, it was evident that episodes of puerperal psychosis occurred in 74% parous women with bipolar disorder who had a family history of puerperal psychosis in a first-degree relative.²⁴ Other study showed that postpartum depressed women's first-degree relatives had a much higher lifetime prevalence of mood-related disorders than the population at large, which indicated a potential genetic or familial component.²⁵ In our study, majority (7.6%) of the respondents diagnosed as having psychiatric disorder also had previous history of mental illness and in some cases prior history of hospitalization with significant statistical difference ($p < 0.001$). The odds of increased risk of those having past history of psychiatric disorder was very high (OR=26.70; 9.25-77.09, 95% CI). It indicates that perinatal period is vulnerable for exacerbation of mental illness. It may be due to discontinuation of psychotropic drugs to avoid probable foetal harm or hormonal fluctuation or other psychosocial factors. This association supports the finding of other study, which observed the links between perinatal psychiatric disorder and previous psychiatric disorder.¹⁰

Although optimum care had been tried by the researcher in every steps of this study, still there are some limitations. Purposive sampling technique was followed in this study, so there could be some selection bias. The study was conducted in two selected tertiary level hospitals of Dhaka city with relatively small sample size. So, the study population may not be representative of the entire women with perinatal period of the country and limits the generalization of the results. One

of the important limitations of the study was relatively small sample size of postnatal period in comparison with antenatal group.

Conclusion

Rural background, past history of psychiatric illness and positive family history of psychiatric illness are among the significant risk factors to develop psychiatric disorders in perinatal period. Women in perinatal period with the risk factors need proper psychiatric evaluation. This will help to identify psychiatric disorders at early stages and to intervene to prevent and treat perinatal mental illness among high-risk women in tertiary level hospital.

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