

Maternal Depression and Its Associated Factors among the Mothers at Narayanganj in Bangladesh

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Abstract

Maternal depression is becoming a serious public health concern in the world day by day. The purpose of the current study was to assess the maternal depression and its associated factors among the mothers of Narayanganj city in Bangladesh. A cross-sectional study was conducted in six different areas at Narayanganj in Dhaka among 377 mothers having children of five to ten years between the periods of May, 2019 to September, 2019. The respondents were selected by simple random sampling method. All data analysis was done by using IBM SPSS version 20.0. The mean age of the pregnant women was 26±4 years. It was found that about 77% of mothers had high depressive symptoms whereas 10.7%, 6.63% and 6.36% of mothers had moderate, mild and no depressive symptoms, respectively. It was observed that family income, family size, age of children and age at marriage were significantly ($p < 0.05$) associated with maternal depression status. Further investigations might be carried out to assess the effect size of the associated factors mentioned above.

Keywords: Maternal depression, mothers, children, associated factors.

DOI: 10.7176/JHMN/102-06

Publication date: September 30th 2022

Introduction

Today world, a major public health concern is maternal depression [1]. In top 5 disabling disorders worldwide, depression is one [2]. Depression is the 2nd leading cause of disability, women aged 15-44 years. Some evidence suggests that the prevalence rate of maternal depression is higher in low and middle income countries [3]. Different studies confirmed that at the 1st month of pregnancy the prevalence of maternal depression is highest, gradually decreased at 6 months and then remain stable until 36 months [4]. Ten percent of mothers experienced depression and estimated that 1 in 10 children experiencing a depressed mother in any given year was revealed by a cross sectional analyses among 8916 U.S. civilian mothers [5]. Inevitable psychosocial and hormonal changes during pregnancy can trigger the depressive symptoms of mother [6]. Almost one fifth of women had depression during their postpartum period is proved by meta analyses studies of developed countries [7]. External and internal both factors have been found to be related with maternal depressive symptoms. The prevalence rate of postpartum depressive symptoms among women in high income countries is approximately 10% [7] and in low and middle income countries is 20% approximately [8]. About 54% depressive symptoms mothers exposure to intimate partner violence and experiencing antenatal depressive episodes also [9]. Unintended pregnancy [10], lack of social support [11], high rates of relapse of depression [12], low to medium socioeconomic status are the most common risk factors for maternal depressive symptoms. For the development of maternal depression marital relation condition is a potential risk factor have been shown by many authors, like problem in romantic relationship such as marital instability and low level of maternal and marital support [13, 14]. Lack of social support from peer, stressful life can also foster the subsequent phenomena of maternal depression [15]. Some other research also reported that the effect of maternal depression is higher in nulliparas compared to multiparas [16]. Lack of psychosocial and emotional adjustment with the family is also significant risk factor for maternal depressive symptoms [17]. Poor general health, lower social support, single,

unemployed, black race, age 18-24 had higher prevalence rate of both acute and chronic depression [4]. Young and socioeconomically disadvantaged mothers have the greater risk than others and the rate is 25% [18]. Studies proved that maternal depression significantly impaired mother's care taking capacity that may lead to adverse outcomes of infants and children's psychological development, intellectual competence, psychosocial functioning and physical well-being [19]. So the main goal of this study is to examine the prevalence rate of maternal depressive symptoms and to evaluate associated potential risk factors for maternal depressive symptoms.

Materials & Methods

Study design and study area

A cross-sectional study was conducted among selected mothers based on inclusion criteria at six different areas of Narayanganj city. The areas were as follows: Horgaon, Dohorgaon, Golakandail, Doyerkandail, Mohna and Saughat.

Sampling technique and sample size

About 377 respondents were included in the study by simple random sampling technique. The following formula was used to calculate the sample size [20]:

$$\text{Sample size} = \frac{z^2 \times p(1-p)}{e^2}$$

Considering 39.4% depression prevalence in urban lower and middle-income families of Bangladesh [21] and a 5% margin of error and 95% level of significance. The calculated sample size was 366. Adding 5% non-response rate and other issues, about 377 mothers were finally included in the study.

Inclusion and exclusion criteria

Mothers having children of 5-10 years of age and agreed to participate in this study. Mothers with clinical ailment were excluded from the study.

Study period

The whole study was conducted between May 2019 and September 2019 which includes the formation of questionnaires, data collection, and analysis as well as reporting of findings.

Assessment of maternal depression

Depression was assessed by the Bangla version of the CES-D Feeling Questionnaire (20 questions) [22]. The score was 0 to 60 and the score was divided into four separate categories;

- No depressive symptoms score 0 to 16,
- Mild depressive symptoms score 17 to 19,
- Moderate depressive symptoms score 20 to 24, and
- High depressive symptoms score 25 to 60.

Assessment of food security

Household food security was assessed by the Bangla version of the Household Food Insecurity Access Scale (HFIAS) version.3 [23].The scale has 9 questions about food availability in the previous 30 days. The scale score range is 0 to 27 and the score is categorized into 4 categories (1= Food Secure, 2=Mildly Food Insecure Access, 3=Moderately Food Insecure Access, 4=Severely Food Insecure Access) according to USAID guideline.

Data collection and analysis

Data regarding socio demographic and economic condition, maternal depression, food security status were collected from a pre-tested questionnaire. All data analysis was done by using IBM SPSS version 20.0.

Results & Discussions

Figure 1 shows the areas from where the respondents were collected. They were collected from six different regions of Narayanganj. Among them 6.1% from Dohorgaon, 11.4% from Doyerkandail, 24.1% from Golakandail, 18.3% from Horgaon, 24.9% from Mohna and 14.9% from Saughat in Narayanganj, Dhaka, Bangladesh.

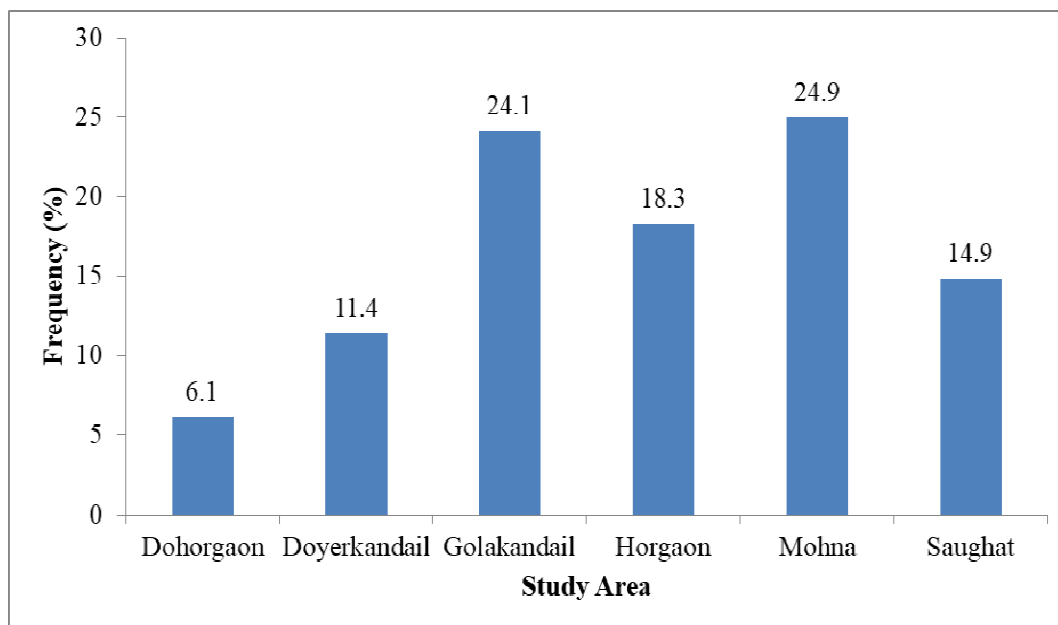


Figure 1: Respondents by the study area

Table 1 shows the socio-demographic characteristics of the study population where the majority of the population practice Muslims (88.3%) and few were Hindu (11.7%) religion. There were 269 (71.4%) mothers who got married before they were 18 and 108 (28.6%) were after 18 years of age. 73.5% of families had 1 earning member, 20.7% had 2, 4% had 3 and 0.3% had 4 earning members. Most of the families had 2 children (41.1%), 29.4% were had 3 children, 14.6% had 4 children and 14.9% had only 1 child. 88.3% of the families were nuclear (3-6 members), 11.1% were large families (more than 6 members), and a few (0.5%) were a single parent (1 child and either had father or mother). Moreover, about 11.7% were lower, 54.4% were lower-middle and 34.0% were middle-class families.

Table 1: Socio-demographic characteristics of the respondents (n=377)

Variables	Frequency (n)	Percentage (%)	
Religion	Muslim	333	88.3
	Hindu	44	11.7
Age at marriage	Before 18	269	71.4
	After 18	108	28.6
No. of earning member	One	277	73.5
	Two	78	20.7
	Three	15	4.0
	Four	6	1.6
	Six	1	0.3
No. of children	One	56	14.9
	Two	155	41.1
	Three	111	29.4
	Four	55	14.6
Family type	Single parent	2	0.5
	Nuclear family	333	88.3
	Large family	42	11.1
Economic status	Lower	44	11.7
	Lower middle	205	54.4
	Middle	128	34.0

Figure 2 revealed that 6.4% had low depressive symptoms, 6.6% had mild depressive, 10.1% had moderate depressive symptoms and 76.7% had high depressive symptoms.

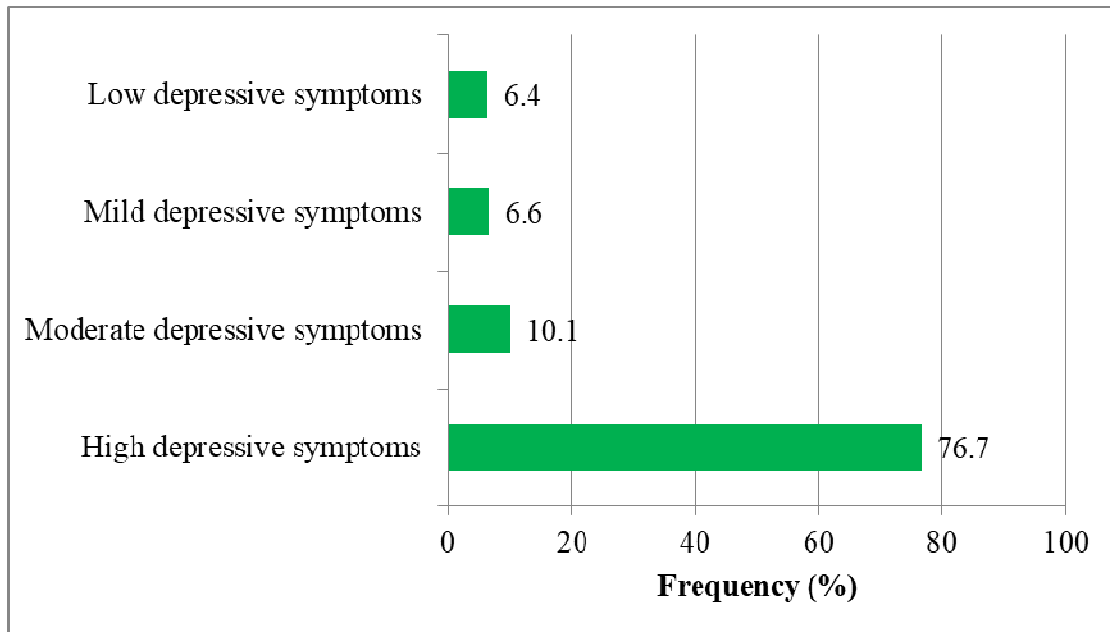


Figure 2: Maternal depression status of the respondents

According to USAID, household food insecurity assessment scale (HFIAS) those who score 0-1, 2, 3 and 4 are called food secure, mild food insecure, moderate food insecure and severe food insecure respectively. Where we have found 75.90% food secure, 12.50% mild insecure, 2.1% moderate insecure and 9.50% severe insecure among 377 households.

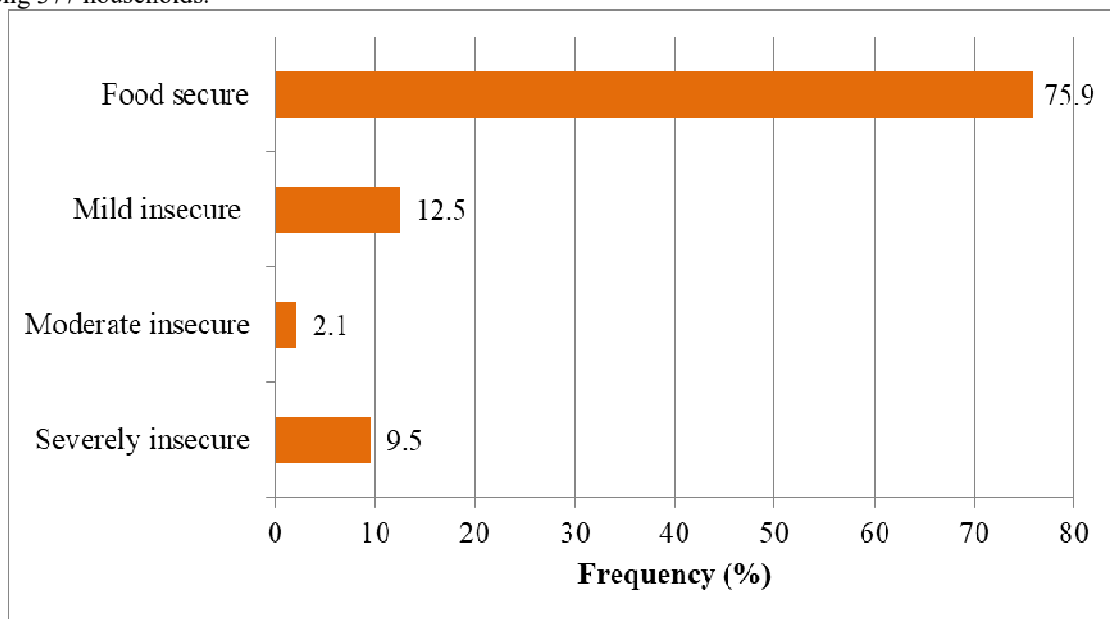


Figure 3: Food security status of the respondents

Table 2 depicts the association between various socio demographic and economic variables and the depression status of the respondents. It was observed that respondents from lower and lower-middle income families had more high depressive symptoms than those of middle-income families. Moreover, it was also found that family type, age of children and age at marriage were significantly associated with maternal depression ($p < 0.05$). On the contrary, it was observed that food security was not associated with maternal depression in the current study.

Table 2: Association between maternal depression and various socio demographic characteristics of the respondents

Variables		Maternal Depression Status				P-value*
		No depressive symptoms	Mild depressive symptoms	Moderate depressive symptoms	High depressive symptoms	
Economic condition of the family	Lower	1	10	17	72	< 0.05
	Lower-middle	18	7	14	61	
	Middle	29	21	9	41	
Family type	Single parent Nuclear	4	5	12	79	< 0.05
	Joint	6	7	60	27	
Age of children (In years)	5- 7	15	19	27	39	< 0.05
	8-10	34	26	18	22	
Age at marriage	Adolescent	11	6	49	34	< 0.05
	Adult	18	27	32	23	
Food security	Food insecure	31	23	17	29	> 0.05
	food secure	36	29	13	22	

*p-values were obtained from chi-square test and p<0.05 is considered as significant

Conclusions

It can be concluded from the study that family income, family size, age of children and age at marriage are significantly associated with maternal depression status. Further investigations might be carried out to assess the effect size of these associated factors.

Acknowledgements

The authors gratefully acknowledge Primeasia University, Department of Public Health Nutrition for the opportunity they had to conduct this study. The authors acknowledge the technical criticisms and suggestions made by the seminar participants on the study, particularly Farzana Sultana Bari, Associate Professor, Department of Public Health Nutrition. We would like to show our regard to “icddr,b” especially Dr. Jena Hamadani, Senior Scientist, Maternal and Child Health Department (MCHD) and Dr. Imrul Hasan, Assistant Scientist (MCHD), icddr,b.

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