ORIGINAL ARTICLE

FREQUENCY OF PSYCHOSOCIAL FACTORS LEADING TO MATERNAL DEPRESSION

MOTI RAM BHATTIA[1], ZOOBIA RAMZAN[2], ANIL KUMAR[3], BHAGWANI[4], WASHDEV[5], RAZA-UR-RAHMAN[6]

[1]Assistant Professor &Head, Deptt. of Psychiatry, PMUSH, Nawabshah.
[2]Assistant Professor, Deptt. of Psychiatry, Dr A Q Centre IBS, DIMC, DUSH, Karachi.
[3]Assistant Professor &Head, Deptt. of Psychiatry, JDMC, Karachi.
[4]Demonstator, Deptt. of community Medicine, PMUSH, Nawabshah.
[5]Assistant Professor, Deptt. of Psychiatry, Dr A Q Centre IBS, DIMC, DUSH, Karachi.
[6]Ex-chairman & Head, Deptt. of Psychiatry, DMC/CHK, DUSH, Karachi.

CORRESPONDENCE: DR. MOTI RAM BHATTIA, E-mail: drbhatia_pn@yahoo.com

Submitted: September 01, 2019
Accepted: December 18, 2019

ABSTRACT

OBJECTIVE
To determine the frequency of various psychosocial factors leading to maternal depression.

STUDY DESIGN
Cross-sectional descriptive study

PLACE AND DURATION OF THE STUDY
This study was conducted in outpatient department of Paediatric unit 1, Dow University of Health Sciences & Civil Hospital Karachi in the duration of 22-Sep-2014 to 22-Mar-2015.

SUBJECTS AND METHODS
Each mother registered in the study was screened for maternal depression through Edinburgh postnatal depression scale (EPDS). Suspected cases of depressed mothers were interviewed through (CIS-R) scale. The severity of depression among these depressed mothers was quantified through Hamilton depression rating scale (HAM-D). Out of 350, 258 fulfilled our inclusion criteria.

RESULTS
The mean age of enrolled participants was 22.3±5 years. Majority of the mothers were younger than 25 years (n=153, 59.3%). Level of education of the participants which showed that half of the mothers (n=124, 48.1%) included in sample were uneducated followed by primary education (n=103, 39.9%). Parity showed that more than half of the mothers (n=145, 56.2%) in this sample were Primipara. Feeding pattern of the mothers showed that 84.5% (n=218) of the mothers were bottle feeding their children. On further analysis of severity of depression by HAMD score, it was observed that 86 had mild depression, 163 had moderate and 9 had severe depression.

CONCLUSION
There is need of public awareness regarding early marriages, breast feeding and educating young women, so that prevalence of maternal depression can be reduced.

KEY WORDS
Maternal Depression, EPDS, CIS-R, HAMD, Pediatri

INTRODUCTION

Being a mother is a difficult role for every woman. It is challenging even for the most educated, successful and mothers with supporting partners. Emotional distress and parenting issues result in maternal depression and adverse long term outcomes[1]. In women there is 21.3% lifetime prevalence of a major depressive disorder which is twice the prevalence rate in men. National comorbidity data suggested that women have highest rates of depression during child bearing years. This predisposition is due to hormonal imbalances along with genetic and psychological factors. Psychosocial factors include sex specific role stress, victimization, non-supporting role of spouse and poor social status of women as the major contributors to maternal depression[2].

Different phases of reproductive cycle have increased susceptibility to depression such as depression during pregnancy, post-partum maternal depression and menopausal depression. Severe depression during post-partum period requiring hospital admission is more prevalent as compared with non-child bearing women of same age[3]. Depressive illness during the post-partum period can be debilitating if left untreated. It can affect child care and mother's marital relationship. Long term adverse effects of depressive illness in mothers can lead to behavioural, cognitive and interpersonal problems and further serious outcomes[4]. Despite increasing awareness about post-partum psychiatric disorders over the years, Post-partum mood and anxiety disorders remain unclear and undiagnosed by the physicians. The paediatric care professionals have routine encounter of the mother and baby, they can identify the disease.

Analysing the long-term detrimental outcomes of post-partum psychiatric disorders in several domains, screening and surveillance programs should be introduced. Also the paediatric health care individuals should be taught to manage maternal psychiatric illness within the setting[5]. A meta analysis conducted in 2011 identified that major risk factors for depression are lack of social support by co-parent, past medical history of depression, depression during pregnancy, poor marital relationship, severe infant illness, low self-esteem and any recent stressful event. Other minor risk factors attributable for this include complications during pregnancy and low socio-economic conditions[6]. Research into this area has played a vital

role in identifying the key processes behind the illness. Experiences of women with post-partum depression reveal that women try to compensate for the loss of control over conditions[7]. The concept behind post-partum depression is the discrepancy between expectations and reality of motherhood, further conditions are worsened by overthinking, anxiety, lack of interest in hobbies and loss of positive emotions[8].

Loneliness and social isolation of mothers due to migration into foreign country or city after child birth leads to depression[9]. In African American and black Caribbean's, there are beliefs that postpartum depression is due to moral failure, thus the stigma worsens the condition. Cultural beliefs like stigma for mental health issues, husband's non-helping behaviour with the child, female carrying multiple responsibilities of household and child restricts women to seek help[10].

Adolescent pregnancies with financial constraints predispose young girls to depression and suicide. Interventions should be part of obstetric care provided in these susceptible groups[11]. The results of a survey conducted in Sindh using AKUADS for screening of depression in mothers revealed that in mothers with depression 23% of children were abnormal and 23.5% children were borderline. Hence, maternal depression is also linked to child's psychological well-being further adding to its significance[12]. The objective of this study is to determine the frequency of various psychosocial factors leading to maternal depression.

SUBJECTS AND METHODS

Participants

Sample size for this cross-sectional descriptive study conducted in outpatient department of Paediatric unit 1, Dow University of Health Sciences & Civil Hospital Karachi was calculated by non-probability purposive sampling and 258 mothers were included. Inclusion criteria for the study is mothers of 18 to 40 years with depression diagnosis as defined in operational definition, having previous history of depression for more than 6 months, Hamilton depression score >8. Women with learning disability and psychiatric co-morbidity other than depression and women with any co-morbid like hypertension, ischemic heart disease, renal disease and neurological disorders were excluded. All mothers attending paediatric outpatient department were registered in this study.

Instruments

The demographic data and information about feeding of child and parity was taken on semi-structured proforma. Each mother registered in the study was screened for maternal depression through Edinburgh postnatal depression scale (EPDS). Suspected cases of depressed mothers were interviewed through (CIS-R) scale. Mothers scoring more than 12 on CIS-R scale were diagnosed as suffering from depressive disorder. The severity of depression among these depressed mothers was quantified through Hamilton depression rating scale (HAM-D).

Procedure

After obtaining ethical approval, mothers were registered for study after informed consent. Each mother registered in the study was screened for maternal depression through Edinburgh postnatal depression scale (EPDS). Out of 350, 258 fulfilled our inclusion criteria. Data were entered and analysed by SPSS version 20.0.

RESULTS

Approximately 2% (<10) of those approached did not agree to take part, most usually because they were returning to stay with their families in a rural area and would not re-attend the hospital or clinic for the first infant health check. Most were married, two were divorced. Most of the women in this study had given birth to either a first or second baby or only 50/258 to a fourth child. The mean age of enrolled participants was 22.3±5 years. Majority of the mothers were younger than 25 years (n=153, 59.3%). Level of education of the participants showed that half of the mothers (n=124, 48.1%) included in sample were uneducated followed by primary education (n=103, 39.9%). Parity of the sample showed that more than half of the mothers (n=145, 56.2%) in this sample were Primipara. Feeding pattern of the mothers can be seen in graph-2 that showed that 84.5% (n=218) of the mothers were bottle feeding their children. On further analysis of severity of depression by HAMD score it was observed that 86 had mild depression, 163 had moderate and 9 had severe depression.

Stratification of psychosocial factor based on severity of depression: The results of stratification were summarized in (Table 1). Young age, Primipara, low education and bottle feeding were identified as psychosocial factors leading to maternal depression.

Table 1
Stratification of psychosocial factors based on severity of depression (n=258)

Variables	Mild depression (n=86)	Moderate depression (n=163)	Severe depression (n=9)
Age of mothers			
18-25 Years	54 (62.8)	86 (52.8)	7 (77.8)
26-40 Years	32 (37.2)	77 (47.2)	2 (22.2)
Level of education			
Uneducated	41 (47.7)	78 (47.9)	5 (55.6)
Primary	30 (34.9)	69 (42.3)	4 (44.4)
Secondary	12 (14.0)	8 (4.9)	0
Graduate	3 (3.5)	8 (4.9)	0
Parity			
Primipara	65 (75.6)	133 (81.6)	7 (77.8)
Multipara	21 (24.4)	30 (18.4)	2 (22.2)
Feeding history			
Bottle feeding	74 (86.0)	140 (85.9)	4 (44.4)
Breast feeding	12 (14.0)	23 (14.1)	5 (55.6)

DISCUSSION

Although pregnancy is a positive event, some mothers exhibit sad and depressive behaviour after child birth. Females of reproductive age have higher risk of developing depression than men of the same

age[15]. For mothers, pregnancy, delivery and caring for neonate is a stressful situation and post-partum depression exacerbates the condition. Females with lower socioeconomic status and non-supportive spouse are more prone to post-partum depression due to adverse life events and mental stress. Due to limited resources they have limited access to better health care services[16]. Severity of depression is different before and after pregnancy, women have significant degree of depression in the first year after birth[17]. A meta analysis of 59 studies has reported that 28% of Pakistani women are depressed, varying rates have been shown in local studies[18]. Maternal depression affects the care of the baby and alters social, cognitive and behavioural aspects of the mother. Psychological stress of mothers affects the parenting skills and ultimately alters child's wellbeing[19]. Mothers who have depressed have decreased engagment with their children and negative parenting skills. All these have detrimental effects on child mental and physical health. Various studies have proved that effects of maternal depression extend beyond childhood. There is higher risk of developing depression, substance abuse and behavorial disorders in children of depressed mothers[20]. A study conducted in Italy showed that higher prevalence of maternal depression was found among females <25 years of age as compared with females >25 years of age. Various other studies have reported higher rates of depression for young mothers due to less stress coping skills and rejected from their families[21].

Women with higher education levels have higher self-esteem, better stress coping skills and higher intellect, so education level is a major predictor for maternal depression. In one study it has been showed that women with a lower level of education had higher rate of maternal depression (60.0% and 35.9%) compared with those with a higher level of education (24.7%). Feeding attitudes and maternal moods were closely linked, but each contributed independently and uniquely to different aspects of breastfeeding, especially at 6 months[22]. The risk of PD was lower in breast-feeding mothers than in bottle-feeding mothers (23.7% vs. 32.4%) [23]. Can breast feeding lead to decreased rates of maternal depression? The question is still debateable. Higher rates of maternal depression are found in primiparas than multiparas. It could be due to the fact that benefits of maternal depression are profound in multiparas. At the Centre for Epidemiological Survey-Depression scale (CES-D). After controlling for several possible confounding variables, breast-feeding by multiparas was associated with significantly decreased odds of having depression compared with bottle-feeders (OR = 0.41, CI 0.19–0.87, p = 0.02); however, no risk reduction from breast-feeding was evident among primiparas[24]. Evidence based medicine has suggested that symptomatic treatment only is not effective in the management of maternal depression. Treatments targeting the mother-infant relationship to buffer the devastating effects of post-partum depression are need of the hour. Mother infant psychotherapies and interventions provide excellent results, hence improving short term and long term outcomes of the condition[25].

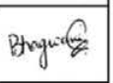
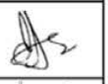
CONCLUSION

It was concluded from this study that illiterate, primipara, young aged mothers who bottle fed their infants were most likely to suffer from depression. There is need of public awareness regarding early marriages, breast feeding and educating young women so that the prevalence of maternal depression can be reduced.

REFERENCES

1. Taylor ZE, Conger RD. Promoting strengths and resilience in single - mother families. Child development. 2017;88(2):350-8.
2. Sultana S, Khabita M, Sultana N, Fatima S, Adil MS. A SURVEY TO ASSESS KNOWLEDGE OF PUBLIC ON MULTIPLE DISEASES: DEPRESSION, DIABETES & HYPERTENSION.
3. Robertson E, Grace S, Wallington T, Stewart DE. Antenatal risk factors for postpartum depression: a synthesis of recent literature. General hospital psychiatry. 2004;26(4):289-95.
4. Silverman ME, Reichenberg A, Savitz DA, Cnattingius S, Lichtenstein P, Hultman CM, et al. The risk factors for postpartum depression: A population - based study. Depression and anxiety. 2017;34(2):178-87.
5. Umylny P, German M, Lantiere A. Treating postpartum mood and anxiety disorders in primary care pediatrics. Current problems in pediatric and adolescent health care. 2017;47(10):254-66.
6. Abrams LS, Curran L. Maternal identity negotiations among low-income women with symptoms of postpartum depression. Qualitative Health Research. 2011;21(3):373-85.
7. Abrams LS, Dornig K, Curran L. Barriers to service use for postpartum depression symptoms among low-income ethnic minority mothers in the United States. Qualitative health research. 2009;19(4):535-51.
8. Beck CT. Predictors of postpartum depression: an update. Nursing research. 2001;50(5):275-85.
9. Collins CH, Zimmerman C, Howard LM. Refugee, asylum seeker, immigrant women and postnatal depression: rates and risk factors. Archives of women's mental health. 2011;14(1):3-11.
10. Parvin A, Jones CE, Hull SA. Experiences and understandings of social and emotional distress in the postnatal period among Bangladeshi women living in Tower Hamlets. Family Practice. 2004;21(3):254-60.
11. Osok J, Kigamwa P, Vander Stoep A, Huang K-Y, Kumar M. Depression and its psychosocial risk factors in pregnant Kenyan adolescents: a cross-sectional study in a community health Centre of Nairobi. BMC psychiatry. 2018;18(1):136.
12. Nadeem S, Rafique G, Chachar YS. Maternal depression: A major risk factor for psychosocial wellbeing among preschoolers. Asian journal of psychiatry. 2018;37:85-9.
13. Donohue JM, Pincus HA. Reducing the societal burden of depression. Pharmacoeconomics. 2007;25(1):7-24.
14. Tomlinson M, Grimsrud AT, Stein DJ, Williams DR, Myer L. The epidemiology of major depression in South Africa: results from the South African stress and health study. South African Medical Journal. 2009;99(5).
15. Mosack V, Shore ER. Screening for depression among pregnant and postpartum women. Journal of Community Health Nursing. 2006;23(1):37-47.
16. Kahn RS, Zuckerman B, Bauchner H, Homer CJ, Wise PH. Women's health after pregnancy and child outcomes at age 3 years: a prospective cohort study. American Journal of Public Health. 2002;92(8):1312-8.
17. Leiferman J. The effect of maternal depressive symptomatology on maternal behaviors associated with child health. Health Education & Behavior. 2002;29(5):596-607.
18. Husain N, Bevc I, Husain M, Chaudhry I, Atif N, Rahman A. Prevalence and social correlates of postnatal depression in a low income country. Archives of women's mental health.

2006;9(4):197-202.
19. Seedat S, Stein DJ, Carey PD. Post-traumatic stress disorder in women. CNS drugs. 2005;19(5):411-27.
20. Luoma I, Tamminen T, Kaukonen P, Laippala P, Puura K, Salmelin R, et al. Longitudinal study of maternal depressive symptoms and child well-being. Journal of the American Academy of Child & Adolescent Psychiatry. 2001;40(12):1367-74.
21. Hudson DB, Elek SM, Campbell-Grossman C. Depression, self-esteem, loneliness, and social support among adolescent mothers participating in the new parents project. Adolescence. 2000;35(139):445.
22. Galler JR, Harrison RH, Ramsey F, Chawla S, Taylor J. Postpartum feeding attitudes, maternal depression, and breastfeeding in Barbados. Infant Behavior and Development. 2006;29(2):189-203.
23. Currò V, De Rosa E, Maulucci S, Maulucci ML, Silvestri MT, Zambrano A, et al. The use of Edinburgh Postnatal Depression Scale to identify postnatal depression symptoms at well child visit. Italian Journal of pediatrics. 2009;35(1):32.
24. Klier CM, Muzik M, Dervic K, Mossaheb N, Benesch T, Ulm B, et al. The role of estrogen and progesterone in depression after birth. Journal of psychiatric research. 2007;41(3-4):273-9.
25. Nylen KJ, Moran TE, Franklin CL, O'hara MW. Maternal depression: A review of relevant treatment approaches for mothers and infants. Infant Mental Health Journal: Official Publication of The World Association for Infant Mental Health. 2006;27(4):327-43.

Sr.	Author Name	Affiliation of Author	Contribution	Signature
1	**Dr. Moti Ram Bhattia**	Asst. Prof. & Head of Psychiatry Department, PMUSH, Nawabshah.	Conception, Data collection, Data entry, Data analysis, Literature search, Manuscript writing	
2	**Dr. Zoobia Ramzan**	Asst. Prof., Psychiatry Dept. Dr A Q Khan Centre IBS, DIMC, DUSH, Karachi.	Help in Data collection & Data entry	
3	**Dr. Anil Kumar**	Asst. Prof. & Head of Psychiatry Dept., JDMC, Karachi.	Help in literature search & manuscript writing	
4	**Dr. Bhagwani**	Demonstator, Community Medicine Dept., PMUSH, Nawabshah.	Help in Statistics	
5	**Dr. Washdev**	Asst Prof., Psychiatry Dept., Dr A Q Khan Centre IBS, DIMC, DUSH, Karachi.	Peer Review	
6	**Prof. Raza-ur-Rahman**	Ex-Chairman & Head, Dept. of Psychiatry, DMC/CHK, DUSH, Karachi.	Supervised and Analysis manuscript writing