DETERMINANTS AND PATTERN OF POSTPARTUM PSYCHOLOGICAL DISORDERS IN HAZARA DIVISION OF PAKISTAN

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Background: The risk of psychological disorders in women increases during the postpartum period. The major forms of these disorders are post partum psychoses and post partal depression. This study was designed to evaluate the presentation and sociodemographic characteristics of postpartal psychological disorders at Hazara division of Pakistan. **Methods:** This study was carried out over a period of three years at three major cities of Hazara, Pakistan. One psychiatry clinic in each of these cities was selected and record of all the psychiatric patients was kept. All the patients presenting with post partal disorders were included in the study. A proforma was used to collect information about a wide variety of sociodemographic variables and presentation of disease. Frequencies were calculated for different variables. **Results:** 8.66 % (1248) out of 14,400 patients of psychiatric disorders presented with post partal disorders. 60 % out of these 1248 had post partal psychoses while the rest had post partal depression. The majority of our patients with post partal depression were young (20-31years), illiterate (80%), having past history of psychoses/depression (70%), house wives (95%), from rural areas (65%), highly religious (60%), poor (90%), with husband away for job etc. (70%), primipara (80%) and with a live baby born (70%). A number of stressors were identified in 65 % of subjects. **Conclusions:** There is a predictable set of risk factors for post partal psychological disorders in the population of Hazara. Proper identification of these risk factors during antenatal period with collaboration of obstetrician and psychiatrist can reduce the morbidity associated with this group of disorders.

Keywords: Post Partal Psychoses, Post Partal Depression, Postpartum psychological disorders,

INTRODUCTION

Women are at an increased risk for first onset of major depression from early adolescence until their mid-50s and have a lifetime rate of major depression 1.7 to 2.7 times greater than that for men**.** Risk of depression increases in some periods of a woman's life and the postnatal period is one of these.[1] Among a wide range of reasons a unique one is hormonal changes during the postpartum period that increase the incidence of depression in this period.[2]

The birth of a child can be a joyous and exciting time, but following childbirth, some women may experience postpartum disorders that can adversely affect a woman's mental health. Mothers commonly experience what is called "the baby blues," mood swings that are the result of high hormonal fluctuations that occur during and immediately after childbirth. They may also experience more serious mental health disorders such as Postpartum Depression (PPD), Birth-related post-traumatic stress disorder, Postpartum anxiety and/or panic disorder, Postpartum Obsessive-Compulsive Disorder (OCD) or a severe but rare condition called postpartum psychosis (PPP).

Postpartum psychological disorders lead to maternal disability and disturbed mother-infant relationships.[3] Approximately 10%-15% of all new mothers get postpartum depression, which most frequently occurs within the first year after the birth of a child.[4,5] Postnatal depression (PPD) refers to a non-psychotic depressive episode that begins in or extends into the postpartum period.[6] Childbirth is a strong risk factor for psychosis. Studies have suggested that the risk for psychosis, especially affective psychosis, is highly increased during the first 30 days after delivery.[7] Postpartum Psychosis (PPP) is the most severe and, fortunately, the rarest postpartum disorder. It occurs in about 1 out of 1000 women who give birth. Onset is sudden and usually occurs within the first 2-3 weeks. Symptoms of PPP are much exaggerated and involve a loss of touch with reality.

The presentation of these disorders does not vary much in different parts of the world; however, prevalence, incidence and the risk factors associated with these disorders vary depending upon the characteristics of different study populations.

This study was designed to evaluate the determinants and presentation of post partal psychological disorders in Hazara Division of Pakistan.

MATERIAL AND METHODS

This study was carried out over a period of three years (January 01, 2000 to December 31, 2002) at three major cities of Hazara Division that is Haripur, Mansehra and Abbottabad. All these three cities are the district headquarters. Patients from the rural areas have a trend to come to the health care facilities of these major cities. One psychiatric clinic in each city with maximum patient turnover per week was selected.

Total patients attending these clinics with all psychiatric problems were recorded. All the patients diagnosed to have post partum depression were included in this study and a proforma was used to collect relevant data about each case.

The major entries included age, age at marriage, address (remote, rural with better facilities, urban, Posh) education level (illiterate to Postgraduate), employment status of mother (housewife, employed), monthly income of the family (three slabs <Rs.5000, Rs.5000-Rs.10000, >Rs.10,000), family system (joint family or not), presence of husband (always, weekends, monthly, yearly or more), education of husband (illiterate to post graduation), employment of husband, religiosity level (Mild, Moderate, highly), children before this delivery, sex of the alive children, days since delivery, mode of delivery, place of delivery, sex of the recent born and number of babies born (single, twin, multiple).

It also included detail about present or past illnesses and treatment. The presenting complaints were carefully recorded. The same proforma was used for follow up of the cases to record treatment outcome. Three types of management plans were used that included only psychotropics, cognitive behavioural therapy and ECT + Psychotropics(for psychoses). Descriptive statistics were used to summarize the data and present frequencies.

RESULTS

Out of 14,400 patients seen over a period of 3 years 1248 (8.66%) were having post partum disorder. Out of these 749 (60%) had Post Partum Psychoses, while 499 (40%) had Post Natal Depression. The presenting complaints of these patients are given in table-1. More than one complaint was present in 98% of the psychoses patients and in 92% of depression patients.

All cases of post partal psychoses occurred within 20-40 days of delivery. While post partal depression cases occurred 4 to 6 months after delivery. Eighty (80)% subjects were cured, 15% were lost to follow up while 5% ended up with chronic illness. The cure time for Post partum psychoses ranged from 8-12 weeks, while for Post Natal Depression it was from 16 to 24 weeks.

Past history of psychiatric illness was present in 70% of patients with post partum psychoses and in 25% of patients with post natal depression. Family history of psychiatric illness was present in 20% of patients with post partum psychoses and in 10% patients with post partal depression.

Table-1: Frequency (%) of presenting complaints

Post Partal Psychoses (n = 749)	
Disorganised behaviour	75%
Disorderly talk	45%
Paranoid Delusion	40%
Hallucination	15%
Homicidal thoughts	02%
Post Partal Depression (n = 499)	
Weeping & Crying	80%

Fixed depressed mood	70%
Anhedonia	50%
Hopelessness	20%
Hallucination (Depressed content)	10%
Suicidal thoughts	08%

** More than one complaint was present in most of the subjects.*

The age range of these patients was from 20-31 years. The age range at marriage was 17-30 years. Out of these 95% (1186) were house wives. 80% (998) were Illiterate while 10% were educated upto primary. Only 2% were graduate or more.

65% (811) came from rural areas. 60% lived in the joint family houses. 60% came from highly religious families, 30% from moderate and the rest from mildly religious background. 3% were second wives of the husband.

Table-2: Pattern of Stressors in the subjects of Post Partal Disorders

(Descending order of frequency)

Could not be identified	35 %
Previous baby very young	15 %
Pressure for son	12%
Difficult pregnancy	08%
Baby different from 'ideal'	08%
Physical abuse	06%
Poor relationship with partner	05%
Adverse events during pregnancy	05%
Financial problems	02%
Problems with in laws	02%
Childcare stress	01%
Inability to breast feed	01%

Husbands of 28.04% (350) ladies were unemployed. 90% had total family income of less than Rs 5000 per month while only 2% had income more than Rs 10000 per month. Husbands of 70% of these ladies were not living full time with them due to job in another place or other reason. Of these 35% visited once a year or even after that, 5% visited monthly while 30% weekly.

60% delivered at home while the rest at a health care facility. Among the 40% delivered in hospital 56% were Cesarean sections. In 70% of the cases a live baby was born, while in 25% of the cases Post Partal Disorder followed a still birth or death of the baby. 5% cases were associated with abortion. Post Partal Disorder followed a twin (or more) delivery in 4% of the subjects. The baby born was female in 55% of the subjects.

80% had no children before, 15% had one child (out of which 85% were female children) while the rest 5% had two or more children (with 7% girls alone, 3% boys alone and the rest 90% mixed). 9% had unwanted pregnancy. 12% had a precious baby.

The stressor could not be identified in 35% subjects while it was identified in the rest 65% of cases (Table-2).

DISCUSSION

A meta-analysis of 84 studies of 1990s decade found thirteen significant predictors of PPD. These were (in descending order of importance) prenatal depression, self esteem, childcare stress, prenatal anxiety, life stress, social support, marital relationship, history of previous depression, infant temperament, maternity blues, marital status, socioeconomic status and unplanned/unwanted pregnancy.[5]

Most of the presenting complaints of our patients have been reported from elsewhere. The associated factors and stressors are different in different parts of the world. We did not calculate Odds Ratio or correlations for any of the factors therefore we cannot label them as risk factors however we have some unique features of our results. These included a high frequency of postpartal disorders in relation to religiosity, illiteracy and husbands being away. On the other hand only 55 % cases were associated with birth of female child which is less than most of studies reported from similar populations. Similarly relationship with the partner, child care stress and inability to breast feed were not that big problem as has been reported from else where.

In a study by Agrawal *et al*. in India past history of post partum psychosis was present in 8.3% cases. A majority of patients had unspecified functional psychosis and developed psychosis after the birth of first child. They found a positive correlation between the birth of female child and psychosis. Majority of their cases developed psychosis within first 2 weeks after delivery.[8]

In a cohort of rural South India incidence of post-partum depression was 11%. Low income, birth of a daughter when a son was desired, relationship difficulties with mother-in-law and parents, adverse life events during pregnancy and lack of physical help were risk factors for the onset of PPD. Depression occurred as frequently during late pregnancy and after delivery as in developed countries, but there were cultural differences in risk factors.[9]

In a study by Gross *et al.* significant risk factors included partner-associated stress, physical abuse during pregnancy, and not breast-feeding.[10] A study in Lebanon reported overall prevalence of PPD to be 21%. Lack of social support and prenatal depression were significantly associated with PPD.[11]

The independent variables associated with postnatal depression reported by Sierra Manzano *et al.* were age of mother, poor or very poor economic situation, personal history of disturbed states of mind, being anaesthetised during birth and family dysfunction.[12]

An African study of PPP reported mean age to be 23.6 years, majority of primiparous women with parity of between one and three children. Organic psychosis was found in four fifths of the mothers and schizophrenia in 8.1%. A high rate of early onset puerperal psychosis (3.2/1000 (births), predominantly in young primiparous women, was found.[13]

The prevalence of PPD in Nepalese women was found to be surprisingly similar to the results of numerous studies in developed countries. Despite poor living conditions, PPD is no more common than the background depression rate amongst Nepalese women.[14]

The factors affecting the prevalence of PPD in a Turkish study were the number of living children, living in a shanty, being an immigrant, serious health problems in the baby, previous psychiatric history, psychiatric disorder in the spouse, and having bad relations with the spouse and his parents.[2]

In an interesting study by Josefsson *et al.* the strongest risk factors for PPD were sick leave during pregnancy and a high number of visits to the antenatal care clinic. Complications during pregnancy, such as hyperemesis, premature contractions, and psychiatric disorder were more common in the postpartum depressed group of women.[15]

A recent study in India reported detection of Depressive disorder in 23% of the mothers at 6-8 weeks after childbirth. 78% out of these patients had history of clinically substantial psychological morbidity during the antenatal period. More than one-half of the patients remained ill at 6 months after delivery. Economic deprivation and poor marital relationships were important risk factors for the occurrence and chronicity of depression. The gender of the infant was a determinant of postnatal depression; it modified the effect of other risk factors, such as marital violence and hunger.[16]

The estimated rate of major depressive disorder during the postpartum period among women in an American study was between 6.5% and 8.5%. Only 50% of the depressed women reported onset following birth. In this study Bottle-feeding and not living with one's spouse were associated with depression at the first evaluation; persistent depressive symptoms were linked with the presence of other young children at home.[3]

A PPD study at New Zealand found several non-obstetric risk factors for the development of postnatal depression at 8 weeks postpartum. They were sociodemographic (up to technical college level education, rented housing, receiving a pension/ benefit), personality (those who described themselves as either nervy, shy/selfconscious, obsessional, angry or a worrier), psychiatric history: (familial history of mental illness, personal history of depression or anxiety or a history of depression in the participant's mother) and recent life-events (major health problem, arguments with partner and friends/relatives).[17]

In a cohort study at HongKong PPD was associated with depression during pregnancy, elevated depression score at delivery, prolonged postnatal 'blues', temporary housing accommodation, financial difficulties, two or more induced abortions, past psychiatric disorders, and an elevated neuroticism score. Postnatal depression was more likely if the spouse was disappointed with the gender of the newborn.[18]

Low social support, a personal history of mood disorder and a past history of postnatal depression were all strongly associated with postnatal depression in a study by Webster *et al*.[19]

Risk factors identified in a study by Nielsen *et al.* included psychological distress in late pregnancy, perceived social isolation during pregnancy; high parity and a positive history of prepregnancy psychiatric disease. This study like our study found no association between pregnancy or delivery complications, and postpartum depression.[20]

A study of an Israeli cohort found that immigrant status was the most potent demographic predictor for PPD. This finding supports the role of stressful life events in the etiology of PPD.[21] The same study (reported in another paper) found that lack of social support, marital disharmony, depressive symptoms during pregnancy, history of emotional problems and prolonged infant health problems were most predictive of PPD.[22]

The characteristics of PPD population of a study in Toledo were: mean age 30.13±4.63, rural setting, 56% had basic schooling, 32% had psychiatric history, and 44% had family history of depression. Their profile of women with PPD was: medium-low educational level, personal and family history of depression.[23]

The risk factors associated with PPD found in a Spanish study were obsessive-compulsive disorder, premenstrual dysphoric disorder, previous major depression, maternity blues, young age and lower educational grade.[24]

In a study of pre and post natal depression at Brazil it was reported that Black women predominated among pre and postnatally depressed subjects. Postnatal depression was associated with lower parity.[25]

In a study from Switzerland most significant factors were socio-professional difficulties, multiparity, deleterious life events, depressive mood prior to delivery, early mother-child separation and negative birth experience.[26]

In a study of socio-psychological and obstetric risk factors for PPD conducted in Japan, high depression scores on EPDS were correlated with primiparity, premature delivery, difficult labor, experience of life events and worries about baby care.[27]

The accepted ‘norms’ of a certain population for PPD can change. For example epidemiological studies in the 1980s suggested that depression was rare in the Chinese population

and there was no postpartum depression among Chinese women. However after two decades of socioeconomic transformation it was found in a recent study conducted at Hong Kong that depression may no longer be rare in the Chinese population.[28]

In our study the magnitude of problem at 8.66% of all psychiatric patients speaks for itself about the gravity of situation. A very high percentage of psychoses out of the total post partal patients is a unique feature that has not been reported from anywhere else. Our perception is this that the number of psychoses was high only because clinics selected were specialist clinics and only gravely ill subjects were brought there. The patients with minor ailments have a trend to get treatment from GPs, otherwise there is no reason for this much large number of psychoses patients.

Our study is a unique study in our area but there are a lot of limitations of this study. The first one is that it is a simple descriptive study. We were unable to get the record of all births to calculate frequency of post partal psychological disorders out of all births as has been done in most of the studies in other countries. The main reason for this was that no centralized reliable birth record is available in these cities of Hazara division. Another limitation was our inability to scale the depression on Edinburgh Depression Scale (EPDS) that has now become an 'integral' requirement of this type of studies. Nevertheless we are sure that the findings of this study will help develop future studies on this very important psychiatric ailment.

These findings indicate that early identification of women at risk for PPD is feasible, and that consideration should be taken of subgroups that may be at heightened risk, or for whom risk factors play different roles. An objective psychosocial assessment during pregnancy improves recognition of women at risk for postnatal depression. Detection of women at risk for developing postnatal depressive symptoms can be done during late pregnancy. Antenatal care clinics constitute a natural and useful environment for recognition of women with depressive symptoms.

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