

## Evaluation of Post Partum Depression in Rawalpindi/Islamabad Pakistan

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### Abstract

**Introduction:** Depression in pregnancy has adverse health outcomes for mothers and children. The aim of this study was to determine prevalence of Post partum depression PPD in our part of the world; correlate the risk with obstetric and demographic variables including family support, emotional response towards pregnancy and level of education of couple.

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**Study design:** Observational case-control and retrospective.

### Materials and Methods

**Inclusion criteria:** Women having their babies delivered in QIH or SSH; those who attending for their baby's vaccination at 4 to 12 weeks post partum.

**Exclusion criteria:** Comprised those having previous psychiatric illness.

Data was collected by interviewing females 4-12 weeks postpartum. PPD symptoms were defined as present when subjects had an Edinburgh Postnatal Depression Scale score of 10 or higher. Variables included were age, education, family setup, parity, baby's sex, emotional response towards baby.

Results: A total of 380 women participated, prevalence of PND was among 88 of them i.e., 23%. Elderly and professional women are at a higher risk 38.46%; those showing a negative emotional response 39% are more likely to experience PND. However social support from joint family system has shown to decrease risk to 20 % as compared to those live separately.

**Conclusion:** As in other Islamic cultures; social support from a joint family system plays a significant role in reducing risk of PND.

**Keywords:** Post natal depression; Social support; Emotional reaction; Stressful life

**Abbreviations:** PND: Postnatal Depression; DSM: Diagnostic Statistical Manual; PPD: Postpartum Depression; QIH: Quaid-e-Azam International Hospital Islamabad; EPDS: Edinburgh postnatal depression scale; SPSS: Statistical Package for Social Sciences

### Introduction

WHO-UNFPA has clearly identified maternal mental health as fundamental in attaining The Millennium Development Goals. Postnatal depression (PND) is a significant public health issue [1]. Postpartum depression encompasses disorders ranging in severity from baby blues to postpartum psychosis [2] and is considered to be a major public health issue which affects 10%-15% of mothers in western,

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economically developed societies [3]. Diagnostic Statistical Manual of Mental Disorders (DSM-IV) show that the start of postpartum depression is in the first 4 weeks after childbirth [4]. Postpartum blues are very short in duration and may not require formal treatment but supportive care only. Depending on the severity of the disorder, it can last longer for 3 to 6 months, is more debilitating and requires medical care. In rare cases postpartum psychosis may require psychiatric care.

Women experiencing postpartum depression (PPD) appear to be unhappy, irritable, and unable to cope with responsibilities; have negative feelings about themselves and their children; are anxious; have low libido; have marital problems; experience difficulties managing household tasks; are tearful; have physical symptoms, sleep and appetite disturbances; and display obsessional behavior. The quality of life for such women and their families is severely compromised, which can result in marital breakdown. In the most severe cases, women report fear of hurting themselves or their newborns [5]. Postnatal depression and anxiety have consistently been demonstrated to have adverse impact on maternal-infant interaction and attachment [6] and its subsequent affects on children's health, development and behavior are also well documented [7].

The aetiology of postpartum depression is still unclear, there is no single cause but several predisposing risk factors may be important, including psychological, social and biological. Among psychosocial causes, recent stressful events, lack of social support, and a history of depression after a previous pregnancy, during present pregnancy or at other times have been strongly associated with postpartum depression. Women who suffered from depression during pregnancy were found to have a five times higher risk of developing postpartum depression, and women with anxiety during pregnancy were found to have a three times higher risk [8].

We cannot yet be certain of the biological level mechanisms that alter the genotypic and phenotypic response to perinatal adversity but the triggering of genetic, neuroendocrine and physiological mechanisms by psychological and nutritional stress are regarded as strong contenders [9]. The results of a preliminary investigation suggest that genetic polymorphisms in HTR2A, the gene encoding the 5HT2A receptor, may be associated with postpartum depression [10].

It is predicted that non-communicable diseases including mental disorders in developing countries would increase many folds by 2020 [11]. But research on psychological morbidity, particularly puerperal psychosis and depression, may help us meet the challenge for assessing and reducing global burden of the disease.

Few studies related to postnatal depression are reported from South Asia, information from Pakistan is limited. This study intends to add to the existing knowledge about PPD and associated risk factors in Pakistan.

The aim of this study was to investigate the prevalence of postpartum depression and its associated factors in women of Islamabad and Rawalpindi city of Pakistan; as well as the assessment of relationship between depression and variables such as maternal age, education, family support, and emotional response to pregnancy outcome was one of the other objectives of the present study.

### Methodology

The study was observational case-control and retrospective; it was conducted at the Quaid-e-Azam International Hospital Islamabad (QIH) and Al Sadiq-Saad Shaheed Hospital Rawalpindi, Pakistan, from March 2014 to June 2014 (3 months). It was approved by Ethical Committee of QIH .

Depressive symptoms were assessed in all women who reported to hospital between 4-12 weeks for routine postpartum follow-up or otherwise till 12 weeks post delivery; and among those attending for their baby's vaccination at 8 to 12 weeks post partum. Those who were known to have any previous psychiatric illness were excluded from this study.

All of the objectives and requirements for this study were formally explained to the women in their native language, written consent was obtained. Confidentiality was assured through the anonymity of the questionnaire. All collected data was used only for study purposes.

A proforma was developed, completed and analysed. It was in the form of a questionnaire divided into three parts: the first part dealt with sociodemographic variables, which include age, education, and occupation; the second part contained obstetric history variables. The third part of the questionnaire contained Edinburgh postnatal depression scale EPDS. It is a self-administered questionnaire and consists of 10 questions on the mother’s feelings over the last seven days. This measure has been used widely and is a validated tool designed to be specific to the postpartum period [12]. Participants who scored 10 or higher on the EPDS were considered as possible PPD cases, and those who scored less than 10 were considered normal. The sensitivity and specificity of the EPDS have been found to be 75% and 97% respectively [13].

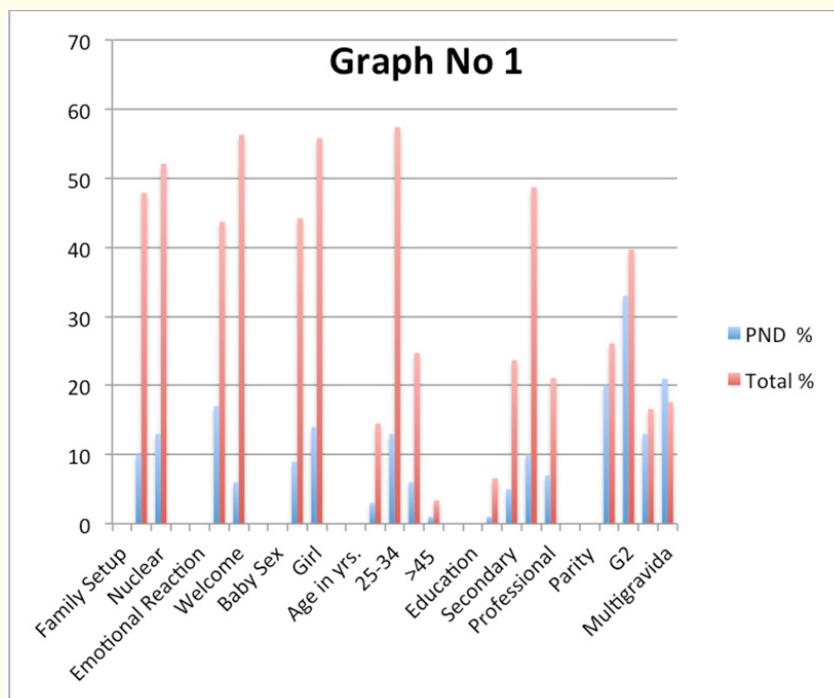
**Statistical analysis**

All the data collected was analyzed through the statistical program of Statistical Package for Social Sciences (SPSS) Version 22.Exel was also used.

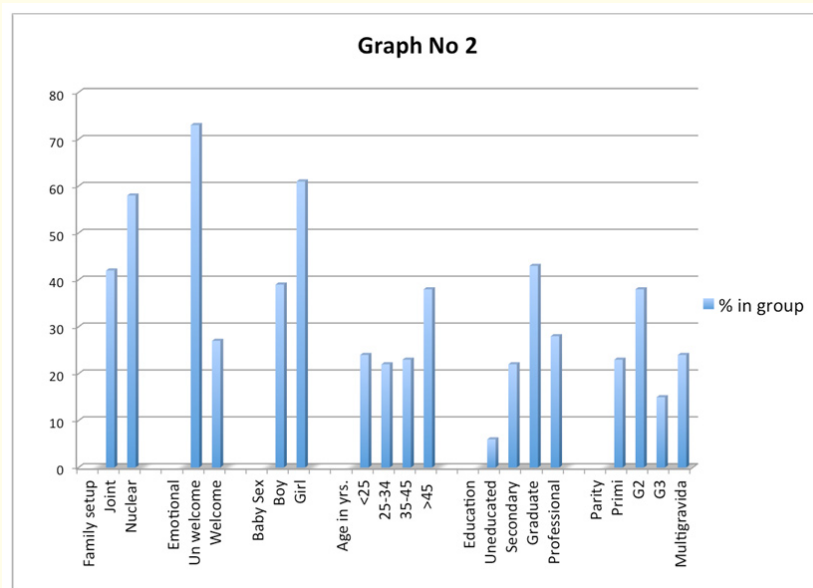
**Results**

A total of 380 postpartum females were included in this study; only 88 of them were found to have Post Natal Depression thus prevalence was (23%).

Those living in nuclear family setup had a considerably higher incidence 51 cases contributing 26% of those having PND as compared to those living in a joint family, 37 patients i.e., 20%. A negative emotional reaction to pregnancy is seen to be associated with a very high risk of PND; 63 out of 166 cases (39%); whereas only 25 out of 214 (11%) cases who welcomed their baby were sufferers. Incidence was comparatively higher in those who delivered female babies in their last delivery 54 (25%) as compared to those delivering a male baby 34 (20%) (Figure 1).



The mean age of participants was 35.5 years (range 18-45 years) (Standard Deviation  $\pm$  6.2). PPD was highest among 45 years age group, 5 out of 13 participants (38.46%). Among the females who participated in the study 25, were illiterate, 5 cases (20%) had PND. A number of 80 were employed professional women, PND was prevalent among 25 (31%) of them. In this study 67 patients were multigravida; 21 of them (31%) had PND whereas in all other groups 20-22% were sufferers.



### Discussion

Most mothers experience symptoms which are mild, transient and resolve spontaneously after a few days with support. For 10-15% of new mothers, the symptoms are more persistent and disabling.

The findings suggest that the mother’s age is a predictor of PND; the older the mothers, the lower their levels of PND; Existing estimates for the prevalence of PND in all populations of adolescent mothers ranges from 16% to 44% [14]. In this study it was found to be 24% at < 25 years, 22% at 25 to 34 years age, 23% at 35 to 44 yrs age group. However situation was different in elderly, > 45 years age group, in these PND was found to be much higher 5 of 13 cases (38.4%). These findings are consistent with other studies [15].

Emotional response is another factor having impact women who welcome their pregnancy and its outcomes are safer than those who unwelcome the situation. Consistent with my findings International research studying the relationship between unintended pregnancy and postpartum depression has generally found a higher likelihood of postpartum depression among mothers with unintended and unwanted births [16].

The association between social support and depression during pregnancy has been confirmed by studies from both developing and developed countries. Findings highlight the importance of social support in decreasing perceived stress and symptoms of PPD in women [17].

A significant geographic difference of the prevalence of PPD [18] was also observed. Compared to Rawalpindi, Islamabad had relatively higher prevalence rates, accounting for 40.4% and 59.6% respectively. In Pakistan more studies need to be conducted as we have social and cultural differences in our four provinces of the country.

PND	Yes	%	No	%	Total
Family Setup	88	23%	292	77%	380
Joint	37	10%	145	40%	182
Nuclear	51	13%	147	37%	198
Emotional Reaction	88	23%	292	77%	380
Un welcome	64	17%	102	30.5%	166
Welcome	24	6%	190	44.5%	214
Baby Sex	88	23%	292	77%	380
Boy	34	9%	134	40%	168
Girl	54	14%	158	37.5%	212
Age in yrs.	88	23%	292	77%	380
<25	13	3%	42	38%	55
25-34	48	13%	170	39%	218
35-45	22	6%	72	38.5%	94
>45	5	1%	8	31%	13
Education	88	23%	292	77%	380
Uneducated	5	1%	20	40%	25
Secondary	19	5%	71	39.5%	90
Graduate	38	10%	146	39.5%	185
Professional	25	7%	55	34.5%	80
Parity	88	23%	292		380
Primi	20	10%	79	40%	99
G2	33	11%	117	38.5%	151
G3	13	10.5%	50	39.5%	63
Multigravida	21	15.5%	46	34.5%	67

The negative and long term consequences of PND necessitate early detection and management of mothers at risk [19]. There is growing evidence that PND can be effectively treated and possibly prevented [20]. Screening should become routine by using the EPDS 5 days postpartum for early detection and management; routine postpartum clinical evaluation visits also has been shown to be feasible [21]; well-child visits are another opportunity.

A psychiatrist and a social worker must attend a postnatal care unit to advise mothers who may be at risk to develop not only PPD. Taking a psychiatric history of pregnant women in antenatal care units are important to know the mothers at risk for developing puerperal psychiatric disorders as they need extra support.

### Conclusion

PND is a major public health issue has an impact on maternal and child health; thus needs more emphasis in terms of screening, identification of high risk cases, early detection and management. Since socio-cultural factors play a major role in causation of PPD these should be aimed for; higher literacy and improved socio-economic status are positive factors. Improved quality of care, reduce maternal morbidity due to depression and neglect. More studies are required in our part of the world to identify factors responsible and rectification of the underlying cause.

Post Natal Depression	Age	Education	Parity	Family setup	Emotional Reaction	Baby Sex
Mean	39.000	12.000	3.000			
N	2	2	2	2	2	2
Std. Deviation	7.0711	2.8284	1.4142			
no Mean	35.410	12.448	2.203			
N	290	290	290	290	290	290
Std. Deviation	6.1052	3.9730	1.0069			
yesMean	35.920	12.909	2.420			
N	88	88	88	88	88	88
Std. Deviation	6.4811	3.8346	1.1009			
Total Mean	35.547	12.553	2.258			
N	380	380	380	380	380	380
Std. Deviation	6.1892	3.9335	1.0334			

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