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## Early Psychological Manifestations and Risk Factors in Puerperal Women.

Satya Deepti Surala\*, K Saraswathi and Swathi Maram.

D. No 30-195/2, Gundaiahgari thota, Chilakaluripet, Guntur District - 522616

### ABSTRACT

Psychological adjustment is a significant part of Puerperium without which motherhood may become a disconcerting period in the mother, baby and the family's life. Our present study also throws more light to this fact. A Simple descriptive study was conducted in a Tertiary Care Hospital in South India to assess the incidence of early psychological manifestations and risk factors in normal puerpera with no known previous psychiatric disorders or conspicuous triggers of the same. It is found in our study that psychological manifestations are a fairly common and sizeable problem as significant numbers of puerperal women were suffering from psychological manifestations. Diagnosing any psychological manifestations, as early as 3 to 5 days post partum enables prompt and timely support and counselling to these needy women. Therefore, obstetricians who are the first contact health care personnel to the puerpera should be aware of the problem which will help notice small signs and thus help in early diagnosis and early intervention which will ultimately help better mother and child health.

**Keywords:** Psychological manifestations, General Health Questionnaire 12 (GHQ), Edinburgh Postpartum depression scale (EPDS), Post partum depression (PPD)

*\*Corresponding author*

## INTRODUCTION

Childbirth is a happy major life event in the life of a woman where she steps into blissful motherhood but for some new mothers who suffer from postpartum depression it can also be a disconcerting time [1].

Women have a lifetime rate of major depression 1.7 to 2.7 times greater than that for men in the National Comorbidity Survey [2-4]. Depression has been identified by the World Health Organization as a major cause of morbidity in the 21st century [5]. The Global Burden of Disease study states that major depression will become the second leading worldwide cause of disease burden by 2020 [6]. Risk of depression increases in some periods of a woman's life and the Puerperium is one of these.<sup>7a</sup> Puerperium also termed "fourth trimester" is the period following child birth during which the body tissues, specially the pelvic organs revert back approximately to the pre pregnant stage both anatomically and physiologically, which lasts for approximately 6 weeks. The woman in this period is termed "puerpera" (Datta). In short, during this time complete physiologic involution and psychological adjustment [7b] (RCOG) takes place.

- During the puerperium, about 85% of women experience some type of mood disturbance [8], for most the symptoms are mild and short-lived.
- Approximately 10%-15% of all new mothers get postpartum depression, which most frequently occurs within the first year after the birth of a child. [9, 10]

Postpartum psychological disorders lead to maternal disability and disturbed mother-baby relationships. [11] Postpartum psychiatry illnesses are typically divided into 3 categories:

1. Postpartum blues – the mildest form of postpartum psychiatric illness
2. Postpartum depression
3. Postpartum psychosis – the most severe form of postpartum psychiatric illness.

This study was designed to evaluate the determinants and prevalence of postpartum psychological disorders in women during the first few days of puerperium who have no previous psychiatric illness and obvious risk factors. The study also helps to find out risk factors thereby preventing the other major psychological manifestations.

## MATERIALS AND METHODS

- a. Study design: A Single Centre, Simple descriptive study.
- b. Place of study : Department of Obstetrics and Gynaecology in collaboration with the Department of Psychiatry, Sree Balaji Medical College and Hospital, Chrompet, Chennai – 44
- c. Study period : one year, from July 2012 to July 2013
- d. Sample size : 500 women delivered consecutively whether Normal Vaginal Delivery, Instrumental Deliveries or Caesarean Sections excluding known case of previous psychiatric disorders, Intrauterine death, Babies born with congenital anomalies, Bad obstetric history, Conception after treatment for infertility and High risk cases like eclampsia, uncontrolled GDM

The purpose of the study was explained to the mother and their family and an informed consent was obtained in their own language.

A proforma was used to collect information regarding:

1. Demographic details
2. Clinical Assessment which included detailed History Taking and Physical Examination.

3. Psychological assessment which included an interview **on day 4** Postpartum [12] by the same observer using **two questionnaires**

S.No	QUESTIONNAIRE	THRESHOLD
1	General Health Questionnaire 12 (Screening Questionnaire)	GHQ-12 >12 [13]
2	Edinburgh Postpartum depression scale	EPDS >10 [14]

The results thus achieved have been critically analysed and presented.

### RESULTS

In this case study of 500 women, the frequency of various factors has been found to be as follows:

#### Frequency Tables

FACTORS	FREQUENCY	PERCENT
<b>Woman's Literacy</b>		
Illiterate	388	77.6
Literate	112	22.4
<b>SE status</b>		
Class 2	12	2.4
Class 3	34	6.8
Class 4	92	18.4
Class 5	362	72.4
<b>Family type</b>		
Extended	122	24.4
Nuclear	378	75.6
<b>Mode of Delivery</b>		
Normal	270	54.0
LSCS	224	44.8
Instrumental	6	1.2
<b>No of Girl children</b>		
None	238	47.6
One	208	41.6
2 or more	54	10.8
<b>Breast Feeding</b>		
Yes	458	91.6
Problems	41	8.2
No	1	.2

**Note:** None amongst the 500 women had any family history of mental illness.

#### Proportion of sample with raised GHQ scores

GHQ class	Frequency	Percent
Normal	394	78.8
Psychological Stress	106	21.2
Total	500	100.0

#### Proportion of sample with raised EPDS scores

EPDS class	Frequency	Percent
Normal	377	75.4
Depressed	123	24.6
Total	500	100.0

**Proportion of sample with both GHQ & EPDS raised**

<b>GHQ + EPDS</b>	Frequency	Percent
Women with raised scores on both GHQ and EPDS	52	10.4

**Relationship of GHQ scores with EPDS scores.**

		EPDS Raised	
		n	%
GHQ Normal	394	71	18.02
GHQ Raised	106	52	49.05

**Association of raised GHQ and EPDS scores with the puerpera's literacy**

<b>WOMAN'S LITERACY</b>	GHQ		EPDS		BOTH	
	n	%	n	%	n	%
Illiterate	87	22.4	74	19.1	39	10.1
Literate	19	17.0	49	43.8	13	11.6
Total	106	21.2	123	24.6	52	10.4
<b>Chi-Square Test</b>		Value		P-Value		
Pearson Chi-Square		41.082		<0.001		

**Association of raised GHQ and EPDS scores with the Socioeconomic Status (SE Status)**

<b>SE STATUS</b>	GHQ		EPDS		BOTH	
	n	%	n	%	n	%
CLASS 2	4	33.3	7	58.3	4	33.3
CLASS 3	10	29.4	11	32.4	7	20.6
CLASS 4	29	31.5	38	41.3	10	10.9
CLASS 5	63	17.4	67	18.5	31	8.6
TOTAL	106	21.2	123	24.6	52	10.4
<b>Chi-Square Test</b>		Value		p-Value		
Pearson Chi-Square		59.28		<0.001		

**Association of raised GHQ and EPDS scores with the Type of Family**

<b>TYPE OF FAMILY</b>	GHQ		EPDS		BOTH	
	n	%	n	%	n	%
Nuclear	50	41.0	34	27.9	25	20.5
Extended	56	14.8	89	23.5	27	7.1
Total	106	21.2	123	24.6	52	10.4
<b>Chi-Square Test</b>		Value		p-Value		
Pearson Chi-Square		39.325		<0.001		

**Association of raised GHQ and EPDS scores with Mode of Delivery**

MODE OF DELIVERY	GHQ		EPDS		BOTH	
	n	%	n	%	n	%
Normal	55	20.4	58	21.5	30	11.1
LSCS	51	10.2	65	13	22	4.4
Instrumental	0	0	0	0	0	0
Total	106	21.2	123	24.6	52	10.4
<b>Chi-Square Test</b>		Value		p-Value		
Pearson Chi-Square		89.056		<0.062		

**Association of raised GHQ and EPDS scores with Number of Girl Children**

No. of Girl Children	GHQ		EPDS		BOTH	
	n	%	n	%	n	%
None	43	18.1	53	22.3	18	7.6
One	43	20.7	55	26.4	24	11.5
2 or more	20	37.0	15	27.8	10	18.5
Total	106	21.2	123	24.6	52	10.4
<b>Chi-Square Test</b>		Value		p-Value		
Pearson Chi-Square		11.347		0.078		

**Uni-variate Logistic Regression for GHQ Score**

Factors	OR	95% CI		p-Value
SE status				
Class 5	1.00			
Class 2	2.373	.693	8.123	0.169
Class 3	1.978	.901	4.340	0.089
Class 4	2.185	1.303	3.664	0.003
Family type				
Extended	1.00			
Nuclear	3.993	2.523	6.319	<0.001
Sex of new baby				
Boy	1.00			
Girl	1.436	0.929	2.218	0.103
Number of Girl children				
None	1.00			
One	1.182	0.738	1.892	0.487
2 or more	2.668	1.402	5.077	0.003

**Multi-variate Logistic Regression for EPDS Score**

Factors	AOR	95% CI		P-Value
Woman's Education				
Illiterate	1.00			
Literate	5.599	1.877	16.699	0.002
SE status				
Class 5	1.00			
Class 2	0.814	0.121	5.468	0.832
Class 3	0.264	0.060	1.166	0.079
Class 4	1.068	0.378	3.019	0.902

**Multi-variate Logistic Regression for GHQ Score**

Factors	AOR	95% CI	P-Value
SE status			
Class 5	1.00		
Class 2	0.858	0.045	16.435
Class 3	2.393	0.579	9.891
Class 4	4.613	1.937	10.989
Family type			
Extended	1.00		
Nuclear	12.063	5.103	28.519
Sex of new baby			
Boy	1.00		
Girl	3.666	1.044	12.872
Number of Girl children			
None	1.00		
One	0.427	0.036	2.917
2 or more	1.668	1.029	3.789
Breast Feeding			
Yes	1.00		
Problems	0.333	0.020	5.512

**Uni-variate Logistic Regression for EPDS Score**

Factors	OR	95% CI	P-Value
Woman's Education			
Illiterate	1.00		
Literate	3.300	2.102	5.182
SE status			
Class 5	1.00		
Class 2	6.164	1.898	20.018
Class 3	2.106	0.979	4.529
Class 4	3.098	1.893	5.070
Breast Feeding			
Yes			
Problems	57.881	17.47	191.77

**DISCUSSION**

Labour and child birth are natural events. It is a unique experience in a woman's life. But, due to any number of reasons ranging from support of the family, course of the antenatal period to the delivery itself and the adjustments that need to be made to accommodate the baby into the daily schedule can make the woman stressed out.

Our study demonstrates the prevalence of psychological manifestations in puerperal women with various variables.

In 500 puerperal women, 106 (21.2%) had raised GHQ scores indicating psychological stress, 123 (24.6%) had raised EPDS scores indicating depression and 52 (10.4%) had raised scores on both the questionnaires.

In the 394 women with GHQ normal scores, 71 (18.02%) had raised EPDS scores. p-Value <0.05 statistically significant.

The current study brings out various factors which are suggestive of emotional (mood) disturbances which are not uncommon among women after childbirth.

1. The Women's literacy: In the present study, Literate women were 5.5 times more prone for depression than illiterate women.
2. Socioeconomic class: In the present study, there is more chances of depression of women in socioeconomic class 4.
3. Family type: In the present study, it was found that depression was fairly common in Nuclear families as compared to Extended families.
4. Mode of delivery: In the present study, no significant relevance was found between psychological stress and mode of delivery.
5. No. of girl children: In the present study, there was a significant relation between number of girl children and post partum psychological stress. Women with 2 or more girl children were 1.6 times more prone for psychological stress. And women with the present baby being a girl were 3.6 times more prone for psychological stress.
6. Breastfeeding: In the present study, raised GHQ and EPDS scores did not affect the breastfeeding.

Our study has several limitations. The sample size is relatively small to study a problem of these proportions. The study was conducted in a hospital setting and may have introduced a selection bias, since the study findings relates to women attending maternity health care services, and may differ from women who are outside the health care system or deliver at home especially in rural areas. Moreover, the Relative Mental Health Service Gap (proportion of persons who can be expected to be in need of services, but do not reach any specialist mental health services), being in the range of 82% to 96%.<sup>15</sup>

Therefore, the results may not be broadly representative of other periurban and rural settings in India. It is recommended that further research be conducted in the community, with women who have very limited resources and access to health care.

### CONCLUSION

The literature has rich evidence of having association between post partum period and psychological disturbances, very often, depressive stage. Our present study also throws more light to this fact.

It is found in our study that psychological manifestations are a fairly common and sizeable problem as significant numbers of puerperal women were suffering from psychological manifestations.

Since in India, the obstetrician is the first contact person to the puerpera, it becomes imperative for them to be aware and well trained in

- Counselling by talking to the puerpera empathetically while keeping on open eye for any signs and symptoms of mood disorders and
- In the administration of the questionnaires related to mental health like GHQ 12 and EPDS which simple, easy and self- administered questionnaire that can be applied in the OP setting by Obstetricians themselves as early as from the antenatal period to the immediate postpartum and again 6 weeks of postpartum.

Diagnosing any psychological manifestations, as early as 3 to 5 days post partum enables prompt and timely support and counselling to these needy women. The family can be counselled to give support so that the woman can adjust better and sooner to the new phase in her life. This support will improve the patients' attitude, the mother-child bond along with interpersonal relations within the family especially the partner as well as long term mental health. Referral to a specialist should be considered, if essential.

Threat to divorce and suicide risk though rare and only present in mostly severe postpartum depression or psychosis, are still real problems which should be kept in mind all through the process.

The Obstetricians are in a unique position where they can help women in the better experience of motherhood for both the woman and her family just by being aware of the psychological manifestations in puerperal women as “the eye cannot see what the mind does not know”. Happy motherhood is a woman’s right.

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