Original Research Article

Effect of supportive therapy on the incidence of post-partum depression

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ABSTRACT

Background: Postpartum non-psychotic depression (PND) is the most common complication of childbirth with approximately 10-42% prevalence across the globe. Especially in rural south Indian population, fear of stigma, superstitions, poverty and poor medical access by the pregnant women leads to a large number of un-diagnosed and poorly treated cases of post-partum depression. Objective of study was to study the effect of Supportive therapy on the incidence of post-partum depression in women attending the Obstetrics Department of SDUMC, Kolar using the Edinburgh Depression Rating Scale and to compare the findings with that with a control population.

Methods: 200 ladies in their second trimester of pregnancy were taken up for the study; 100 out of these were psycho-educated about the risks and signs of Post-partum depression and subjected to supportive therapy sessions. On the 5th day after their delivery, they were assessed using the Edinburgh Postnatal Depression Scale (EPDS). The other 100 patients (control group) were directly interviewed using the EPDS on day 5 post-partum.

Results: The overall depression among treatment group (17 %) is significantly lower when compared to the control group (41 %). The Mean depression score of treatment group (5.41) was significantly lower when compared to control group (8.65) which is statistically significant. Amongst the treatment group, marital status, occupation, education and bad obstetric history were found to have a significant influence on depression.

Conclusions: The overall depression among treatment group (17 %) is significantly lower when compared to the control group (41 %). The Mean depression score of treatment group (5.41) was significantly lower when compared to control group (8.65) which is statistically significant. Amongst the treatment group, marital status, occupation, education and bad obstetric history were found to have a significant influence on depression.

Keywords: Post-partum depression, Perinatal metal health, Supportive therapy

INTRODUCTION

Postpartum non-psychotic depression (PND) is the most common complication of childbirth with approximately 10-42% prevalence across the globe.[1-4] PND is characterised by depressive episodes with anhedonia, insomnia and increased fatigue experienced by mothers up to 6 weeks post-partum[1]. Multifactorial aetiology namely demographic, economic, psychosocial, obstetric and medical risk have been cited. Factors like birth of girl child, traditional rituals, financial burden, domestic violence, lack of education, employment or social support and obstetric and medical complications have be named as major risk factors in South East Asian countries.[2-6] Especially in rural south Indian population, fear of stigma, superstitions and sheer poverty leads to a large number of un-diagnosed and poorly treated cases of post-partum depression. PND and its risk factors have been explored by many authors in Indian setting.[2-4] Several studies have explored various pharmacologic as well as psychosocial interventions to prevent and treat PND.[7-15] Scant research has been conducted so far in local study setting especially with non-pharmacological interventions. On the other hand there are several factors

limiting the use of pharmacologic methods in the new mothers including fear of exposure to the infant through breast milk, metabolic changes and various other concerns.[8] There is also the harsh reality that 34-65% mothers avail no ante-natal check-ups in many parts of our country and as less as only 35% avail hospital care for child-birth.[12] Hence, in view of paucity of research among rural mothers in local setting, the limited ante-natal facilities and the benefit of ante-partum intervention on the outcome of PND, this study aimed to elicit the effect of supportive therapy and psycho-education on the incidence and its socio-demographic correlates socio-demographic, obstetric and pregnancy outcome predictors of PND among postnatal women in rural part of Kolar district, Karnataka state, India and compare the findings with that of a control population.

METHODS

This study was conducted in Obstetric clinic of the Department of Obstetrics and Gynecology of Sri Devraj Urs Medical College situated in rural part of Kolar district, Karnataka state, India from June to November 2015. The hospital caters to the need of nearby villages and talukas and linked with many government health programmes for the benefit of rural poor.

Inclusion criteria

All patients in their 2nd trimester of pregnancy attending the Obstetrics Department of SDUMC, Kolar.

Exclusion criteria

- Any anticipated obstetric complications or frank psychiatric history or on psychotropic medications or mental retardation or cognitive impairment
- Unwilling to participate in the study or attend at least 5 sessions of supportive therapy sessions.

Patients in their 2nd attending the Obstetric department of SDUMC, Kolar. Total number of study subjects were 100 cases and 100 controls.

Purposive sampling method was used for sample selection. Systematic random sampling method for sample selection was employed. The sample size was estimated based anticipated 31.4% prevalence of post-partum depression from a previous study and expecting a difference of 55% reduction in the prevalence among controls (17.2%), with 95% confidence interval and to detect a difference of 17.2 the sample size estimated to be 92 per group.[2] Expecting a non-response rate of 10% the final sample size calculated per group was 100. A similar number of closely matched control subjects were taken.

Study tool was Edinburgh Depression Rating scale (EPDS). Design of the study was Descriptive Interventional type.

For the purpose of the present study, 100 ante-natal patients in their 2nd trimesters were taken after obtaining their duly signed informed consents. Information related to their socio-demographic characteristics, detailed account of their menstrual and obstetric history, including bad obstetric history, past and present medical illnesses, family details and psychosocial stressor were recorded in a specially pre-designed proforma. Detailed psycho-education about post-partum depression, its prevalence and presentation explained to them and doubts if any were clarified. They were made to undergo Supportive Psychotherapy throughout their antenatal period in the form of 30-minute therapy sessions conducted fortnightly. Each patient had to undergo a minimum of 5 such sessions. Following their delivery on the 5th day post-partum, the Edinburgh postnatal depression rating scale was administered and scores were recorded.

For the 100 controls, they were subjected to their normal ANC evaluation monthly once in their second trimester and once every fortnight in their third trimester without any psychological intervention. On Day 5 post-partum, they too underwent evaluation for post-partum depression with the EPDS.

Supportive psychotherapy

Supportive therapy aims to improve, reinforce, or sustain a patient's physiological well-being or psychological self-esteem and self-reliance.[16] For the purpose of our study, Supportive therapy was administered in the form of 30-minute sessions conducted by a trained Psychiatrist or a Psychologist following the patient's monthly ANC check-ups at the Department of Obstetrics. Each case had to attend a minimum of 5 such sessions. Given the patients' state of being and cited difficulty in frequently attending Psychotherapy sessions, the focus was more on a now-and here approach, with the sessions aiming at educating the patient and her family, improving coping and problem-solving skills, allaying mood symptoms and raising her self-esteem.

Edinburgh postnatal depression scale (EPDS)

EPDS is one of the most widely used self-report instrument used to screen Depression in post-natal and ante-natal period.[17-19] It is a 10 item self-reported scale based on 1 week recall, designed to screen PND in the community. Each item is rated from 0 to 3, yielding a total score of 0–30. Seven of its items are reverse-scored.[19] In India, the Kannada (local language) version of EPDS has been validated to detect antenatal depression, and found to have a sensitivity of 100% and specificity of 84.9%, at a cut-off score of ≥10.[18] For this study, a cut-off score of ≥10 on Kannada version of EPDS was used to diagnose PND. It was pre tested by the authors on 10 postnatal mothers to ensure that questions were easily understood by mothers and responses were correctly interpreted by the author. Woman with EPDS

score of ≥13 was taken up for further Psychiatric evaluation.

Statistical analysis

The collected data was coded and analysed using SPSS 22 software. Mean, standard deviation and confidence interval have been used to present all the quantitative measures. The mean depression scores of study group was compared using Independent student t test and

significance of difference in proportions and the association was done by Chi-square test. P value ≤0.05 was considered as statistically significant.

RESULTS

200 patients satisfying the inclusion and exclusion criteria were taken up for the study during their post-natal visits during the study period, 100 of whom who had received intervention during their antenatal visits.

Table 1: Comparison of mean depression scores of treatment versus control groups.

Group	N	Minimum	Maximum	Mean	Std. Deviation
Treatment group	100	0	25	5.41	4.506
Control group	100	0	21	8.65	5.802

Table 2: In correlation to mean and standard deviation.

EDPS	N	Minimum	Maximum	Mean	Std. Deviation
0 to 9	142	0	9	4.16	2.926
10 to 12	23	10	12	10.91	0.848
>13	35	13	25	16.11	2.665

Table 3: Comparing the treatment and control group findings.

EDPS scores	Treatment group	Control group	Total	P-value
0 to 9	83	59	142	
10 to 12	10	13	23	0.001
>13	7	28	35	
Total	100	100	200	

The overall depression among the treatment group (17%) is significantly lower when compared to the control group (41%) (p= 0.001).

The Mean depression score of treatment group (5.41) was significantly lower when compared to control group (8.65) which is statistically significant.

Table 4: Independent t test.

	Group	N	Mean	Std. deviation	P value
EPDS	Treatment group	100	5.41	4.506	0.001
	Control group	100	8.65	5.802	

Table 5: Socio-demographic characteristics of cases and controls.

Characteristic	Cases			Control		
	EPDS<10	EPDS>10	P value	EPDS<10	EPDS>10	P value
Age (in years)	87	13	0.958	64	36	0.213
Married life (in years)	87	13	0.467	64	36	0.030
Marital status	87	13	0.009	98	2	0.542
Domicile	87	13	0.542	64	36	0.040
Income	87	13	0.674	64	36	0.960
Occupation	87	13	0.001	98	2	0.605
Religion	87	13	0.807	64	36	0.220
Education	87	13	0.028	98	2	0.303
Family type	87	13	0.845	64	64	0.171

Table 6: Life events and family factors in cases and control.

Event/ factor	Cases			Control		
	EPDS<10	EPDS>10	P value	EPDS<10	EPDS>10	P value
Consanguinity	87	13	0.386	64	36	0.837
Physical illness	87	13	0.635	64	36	0.992
Substance use	87	13	0.509	64	36	0.187
Miscellaneous factors	87	13	0.698	64	36	0.251
Psychosocial stressor	87	13	0.756	64	36	0.035

Table 7: Obstetric history of cases and control.

History	Cases			Control		
	EPDS<10	EPDS>10	P value	EPDS<10	EPDS>10	P value
Period of gestation	87	13	0.294	64	36	0.007
Gravid	87	13	0.890	87	13	0.768
Parity	87	13	0.706	98	2	0.902
Abortion	87	13	0.031	98	2	0.029
Dead	87	13	0.674	64	36	0.552
Living issues	87	13	0.522	64	36	0.18
Mode of delivery	87	12	0.879	64	36	0.811
Status	87	12	0.042	64	36	0.668

The lower mean scores in treatment group can be attributed to Supportive therapy and psycho-education given. Among the cases, occupational status proved to have a significant influence on depression. The difference in proportion of severe depression between various occupational groups was found to be statistically significant.

Among the controls, only 2% of the total who are house-wives had severe depression. Educational status of the cases also had a significant influence on the outcome. The difference in proportion of severe depression among the various educational groups was statistically significant. In the control group, only 2% (who had primary education and graduates) had severe depression. Bad obstetric history in the form of abortions significantly influenced the EPDS score. The difference in proportion of severe depression among the patients with bad obstetric history was statistically significant. A similar trend was observed in the control group as well.

DISCUSSION

Main findings

A large portion of the control group who came for follow-up in their fourth to tenth week of postpartum was found to have post-partum depression. The overall depression among treatment group (17%) is significantly lower when compared to the control group (41%). This value is comparable with other studies that found a prevalence (26.3-31.4%) using the EPDS scale in hospital as well as community-based settings.[2,3] The Mean depression score of treatment group (5.41) was significantly lower when compared to control group (8.65) which is statistically significant. A similar trend was noted in a Turkish semi-urban population where mean EPDS score of 258 pregnant women was found to be 9.5($\pm$5.2) without any intervention.[5] This finding indicates the effectiveness of the interventional methods in the form of educating the patients and supportive psychotherapy during the antenatal check-ups. Similar trends have been reflected in studies adopting non-pharmacological intervention techniques ranging from cognitive behavioural therapy (CBT), psychological debriefing and peer support.[11-15]

One study revealed that Depression scores with EPDS scale reduced in the most symptomatic women steadily by over 50% over the total time course of 4 months of follow-up but there were no differences in improvement between the intervention (receiving CBT) and control groups(educated with information booklets on PND), indicating that even the simplest form of psycho-education may even prove useful in prevention of PND in literate populations.[11] Amongst the treatment group, marital status, occupation, education and bad obstetric history were found to have a significant influence on depression. Maternal age, gender of the child or of previous children, adverse life events and perceived social and environmental support have been found to show similar trend in previous studies.[2-6]

The difference in proportion of severe depression between the various sub-groups was found to be statistically significant. This finding bears serious implications as Depression is heralded as the leading cause of disability worldwide. It negative affect the

children born to these mothers owing to impaired mother-infant bonding, rejection or even abusive behavior in some unfortunate cases.[7]

Interpretations

In rural settings like ours where pregnant mothers have poor access to medical care and rarely come for ANC check, screening them for post-partum depression and educating them while they come for their ANC check-ups is one fool-proof way to detect ante-natal and post-natal depression.

Nonpharmacological preventive methods will go a long way in preventing PND as mothers are reluctant to receive pharmacological interventions due to fear of side-effects to the child or self and also the associated stigma. We also observed that education and employment in mothers act as a protective factor against post-natal depression.

Limitations of study were:

- A relatively a small sample was studied in our study. 34% of the mothers have no access to a single ANC check-up.12 Therefore results would apply to women attending hospitals/clinics and cannot comment on those who do not receive postnatal care. Nonetheless, the present study gives valuable hints to practicing obstetricians and primary care physicians in resource constrained rural India for early identification and apt preventive intervention for women at risk of PND.
- Women with abortion or stillbirth did not come for follow up during the study period. Therefore we could not study their association with PND.
- EPDS is a screening tool for PND and not confirmatory.
- Follow-up is a limitation as the women tend to discontinue postnatal check-ups shortly following the birth of their child.

CONCLUSION

Antenatl vigilance including educating pregnant women and their families about postpartum depression and subjecting them to supportive therapy sessions during their ANC visits helps in curbing the incidence of post-natal depression.

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