

IMPACT OF INTERVENTION PROVIDED ON POSTPARTUM DEPRESSION

Dr. Krishnananda Kamath K.¹, Amrutha Ajith^{2*}, Sudhamshu K. Tantry and Ramakrishna Shabaraya A.³¹Department of Pharmacy Practice, Srinivas College of Pharmacy, Manglore-574143.

*Corresponding Author: Amrutha Ajith

Department of Pharmacy Practice, Srinivas College of Pharmacy, Manglore-574143.

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ABSTRACT

Postpartum depression (PPD) is a common potentially disabling and, in some instances life-threatening condition.^[9] Postpartum depression is tractable to treatment and is readily discernible by a wide range of modalities of which EPDS (Edinburgh Postnatal Depression Scale) scale is prominently used. PPD on the whole poses abrogating impact on physical, emotional and intellectual development of the child leading to incessant complications. The study entails comparison of knowledge and attitude of mothers in their postpartum period, of 6 weeks to 12 months particularly in consideration for the current prevalence. Study that broached in Dakshina Kannada continued with adequate results for 6 months included mothers who were willing to participate, taking into consideration that their postpartum period falls within the margin imperative, mothers who were receiving mental health therapy or who withdrew their consent were excluded. Pre-validated questionnaires and in-person conversations were used to gather data, and Microsoft Excel was used for statistical analysis. Initial stages of the study elucidated poor knowledge and attitude among participants, with a small proportion manifesting considerable understanding of PPD. Further, the study embarked in dividing the participants into two groups of case and control of which the case group underwent intervention criteria using PIL and the later accordingly without interventions. The evaluation of the interventions provided commenced after a two-month period, during which subjects were analysed for improvements. Subsequently, assessing mothers' knowledge and attitude using the same questionnaire post-intervention, it was compared with their knowledge prior to the intervention. A significant improvement in knowledge and attitude was observed among the interventional group. The analysis was conducted using SPSS 28. The study results indicated that the intervention was significantly effective in reducing PPD and enhancing knowledge and attitude regarding PPD.

KEYWORDS: Postpartum depression (PPD), Knowledge, Attitude, Intervention, EPDS.

INTRODUCTION

Postpartum depression (PPD): is a nonpsychotic depressive episode that begins within the first 4 to 6 weeks and seen up to 1 year after childbirth.^[1] A significant percentage of women have symptoms of some kind following childbirth, which are brought on by abrupt hormonal changes together with lack of sleep, stress, loneliness and exhaustion. Symptoms following childbirth are regarded to be normal and inclined which etiolate with time, though the physical and hormonal changes that accompany pregnancy may predispose women to PPD the same can't be expected out of it, women suffering from PPD require specific and individualized treatment regimens depending on its severity.

Untreated PPD disarrays the early mother-infant relationship along with prolonged adverse child outcomes. It has an impact on child's mental and motor development, poor self-regulation, low self-esteem and further hinders cognitive competence of the child.^[3]

Therefore, it is important to identify associated factors for PPD, to diagnose PPD in the early postpartum period to enable immediate and individualized intervention and provide adequate knowledge on PPD.^[4] Understanding the factors that contribute to the prevalence of PPD is crucial to providing the necessary support and resources for those affected.^[6] Substantial percentage of the women population are still unaware of PPD and the risks it predisposes making treatment options available futile. Lacking in knowledge disable this proportion of the women population to be oblivious of the symptoms which present itself during the postpartum period, this is often accompanied with negligence and negative attitude within the support network which extends to her spouse, parents or in-laws creating an aversion in seeking colloquial or professional help.

Women at risk are rarely recognized during pregnancy or in a maternity ward. It is believed that up to 80% of women with PPD do not report the disease and are not diagnosed by their physicians.^[7] Undiagnosed and

untreated Postpartum Depression (PPD) can have long-term negative implications because the episode may be a prelude to recurrent, chronic depression in mothers, even so knowledge and attitude regarding PPD is a completely grave and formidable subject to ponder upon.

Appraisal of knowledge and attitude among mothers regarding PPD is a crucial and significant step that paves way into early detection and necessitated intervention for the subject. Thus, assessing knowledge and attitude among population together with remedied intervention is important in minimising the ignorance and casual attitude towards PPD, bringing about a revolutionary change which includes better education, individualized care, greater acceptance and prominent reduction of problem faced by mothers of today.

OBJECTIVE

- To analyse the impact of intervention provided on Postpartum Depression (PPD).

METHODOLOGY

Study design: A community based interventional study was carried out to assess the impact of intervention provided regarding PPD among mothers residing in Mangaluru, Dakshina Kannada, Karnataka state in India conducted for a duration of 6 months from March 2023 – August 2023.

Ethical clearance: The study protocol was approved by the Institutional Ethics Committee (IEC) of Srinivas Institute of Medical Science, Mukka, Mangaluru. In addition, written informed consent was obtained from all the participants in this study.

Inclusion criteria

- Mothers willing to participate
- Mothers in Postpartum period (6 weeks to 1 year of delivery)

Exclusion criteria

- Mothers undergoing any psychiatric treatment.

Methodology: Required information was collected using questionnaire after subjects were given information regarding the study and confidential statement of respondents' information, depression status using Edinburgh's Postnatal Depression scale. Data was collected using Data Collection Form, Prevalidated Questionnaire, Edinburgh Postnatal Depression Scale (EPDS) and through direct interaction with the patient at their homes. All the data (s) were kept confidential. The average time needed to answer the questionnaire and complete the session was between 20- 30 minutes. Data collected was recorded and analysed using SPSS 28. The descriptive statistics were produced for all variables and data was represented using tables and charts. Inferential statistic was done using Chi-square and Student-t test with level of significance at 5% (0.05). Participants were explained about study and consent was obtained. EPDS scale was used to assess whether a mother is suffering from PPD. The participants having EPDS score having ≥ 10 were categorized randomly into control group and intervention group. Intervention group was provided intervention using a PIL.

RESULTS

Socio Demographic Characteristics of Study Participants

The research included 131 participants in total, 116 of mothers had an EPDS score of ≥ 10 , suggesting PPD. All 131 participants were married and 129 of them could read and write, while only 2 were illiterate. The majority of participants were between the ages of 20 – 29 (61%), among the study participants, 86 were living in joint and 45 in nuclear families, among the participants. 61 people were employed, and 70 were housewives. The sociodemographic information of the participants shown in Table 1.

Table 1: Socio-demographic profile of study subjects.

Variable	Responses	Frequency	Percentage (%)
Age	<20	9	6.87
	21-30	80	61.06
	31-40	39	29.77
	>40	10	7.63
Education	Illiterate	2	1.52
	Primary	8	6.10
	High school	21	16.03
	Graduation	100	76.33
Occupation	Employed	61	46.53
	Housewife	70	53.43
Domicile	Rural	75	57.25
	Urban	56	42.74
Type of family	Joint	45	34.35
	Nuclear	86	65.64
Planned pregnancy	Yes	73	55.72
	No	58	44.27
Mode of delivery	C- section	58	44.27
	Vaginal	73	55.72

Gender of baby	Female	71	54.19
	Male	60	45.8
Preference regarding baby	As expected,	35	26.71
	No preference	63	48.09
	Not as expected	33	25.19
Pregnancy outcome	Healthy	115	87.77
	Sick	16	12.21
Baby feeding practices	Breastfeeding	68	51.9
	Formula feeding	11	8.39
	Animal milk	7	5.34
	Mixed	45	34.35

The depressed mothers (EPDS score ≥ 10) (n=116) were randomly divided into intervention (n=58) and control (n=58) group. Only the intervention group was provided with PIL.

Evaluation of the effects of the intervention on the status of PPD was repeated after 2 months. Subjects were analyzed and observed for signs of improvement using the same questionnaire.

Comparison of EPDS scores of controls and intervention group

Significant improvement was observed in the intervention group, whereas no changes were observed in the control group. The p-values were found to be significant at $p < 0.05$, indicating that the intervention implemented was effective in reducing PPD. Table 2 shows comparison of EPDS scores in control and intervention group.

Table 2: Pre and Post Comparison of EPDS scores in Both Groups.

EPDS	Control (n=58)		Intervention (n=58)		P-value
	Pre (n=58)	Post (n=58)	Pre (n=58)	Post (n=58)	
Depressed (≥ 10)	58 (100%)	58 (100%)	58 (100%)	17 (29.3%)	<0.005
Not depressed (< 10)	0	0	0	41 (70.70%)	

Comparison knowledge of control and intervention group

Assessment of the knowledge of mother using the same questionnaire post-intervention and compared it with their knowledge prior to the intervention. A significant improvement in knowledge was observed among the

intervention group and shown in the table 3. The analysis was conducted using specialized social science statistical software for knowledge assessment. The obtained p-value were highly significant at $p < 0.05$, sustaining the effectiveness of the intervention in reducing PPD and enhancing knowledge regarding PPD.

Table 3: Pre and Post Comparison of Knowledge in Both Groups.

Knowledge	Control (n=58)		Intervention (n=58)		p-value
	Pre (n=58)	Post (n=58)	Pre (n=58)	Post (n=58)	
Poor	30 (52%)	30 (52%)	29 (50%)	0	<0.05
Moderate	26 (44.8%)	26 (44.8%)	25 (43.1%)	19 (32.7%)	
Good	2 (3.20%)	2 (3.20%)	4 (6.9%)	39 (67.9%)	

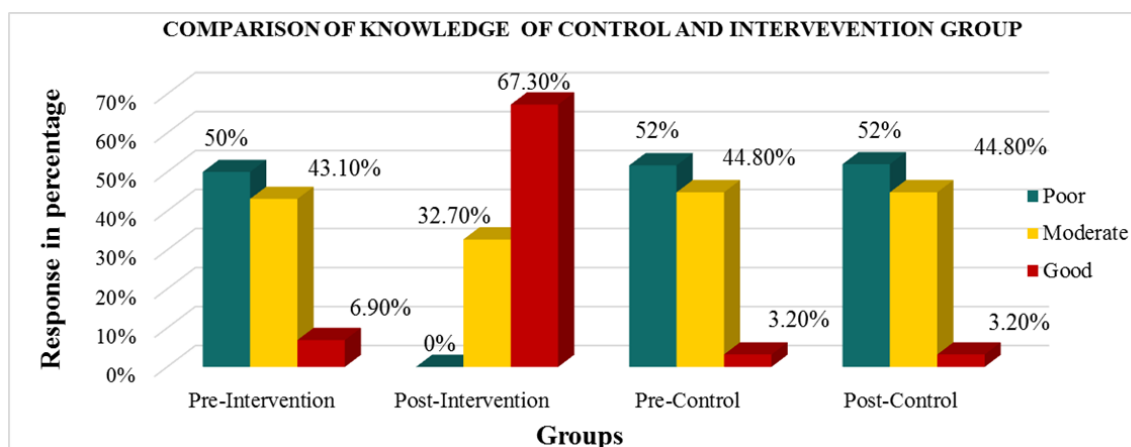


Fig 1: Comparison of knowledge of control and intervention group.

Comparison of pre and post intervention of attitude

The study report showed significant improvement in attitude was found in the intervention group, which is shown in Table 4. The obtained p-value were highly

significant at $p < 0.05$, sustaining the effectiveness of the intervention in reducing PPD and enhancing attitude regarding PPD.

Table 4: Pre and Post Comparison of Attitude in Both Groups.

Attitude	Control (n=58)		Intervention (n=58)		P-value
	Pre (n=58)	Post (n=58)	Pre (n=58)	Post (n=58)	
Poor	25 (43.10%)	25 (43.10%)	24 (43.10%)	0	<0.005
Moderate	23 (39.65%)	23 (39.65%)	27 (39.65%)	6 (10.34%)	
Good	10 (17.24%)	10 (17.24%)	7 (12.06%)	52 (89.65%)	

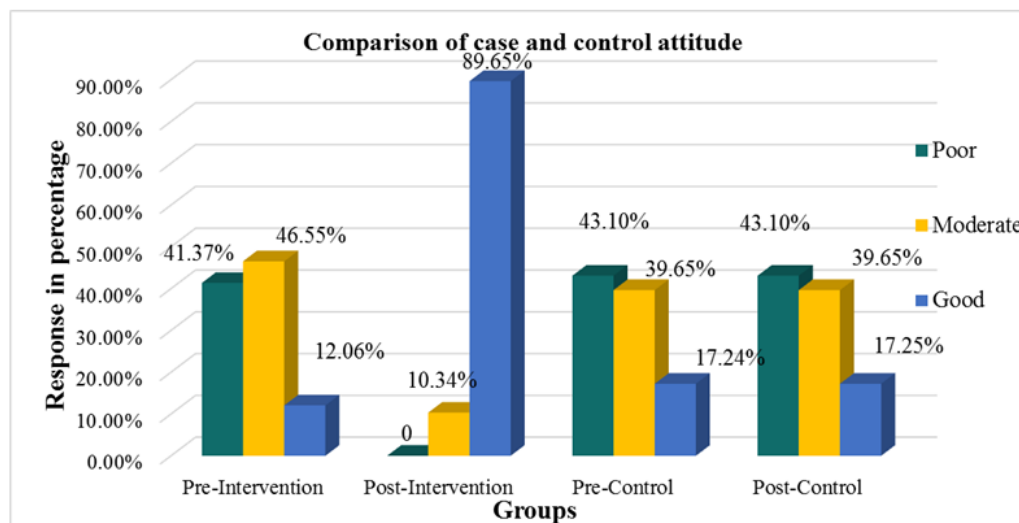


Fig 2: Comparison of case and control attitude.

DISCUSSION

The study aimed at providing intervention by educating mothers on PPD. Majority of the population had good knowledge compared to pre-intervention. This implies that after intervention majority of the population were aware of the symptoms, hormonal status, anxiety being an issue of concern, need for psychological intervention being of prominent importance and the possible lifestyle implication and uncertainties during the period of PPD (p -values < 0.05), indicating that the intervention implemented was effective in improving knowledge.

The data collected showed eminent improvement in attitude of mothers to PPD after intervention with an augmentation in preponderance of subjects showing good attitude than the previous statistics prior to intervention. This implies positive attitude towards PPD on the basis of: change in perception of PPD being just tiredness and normalising the difficulties, perception of women needing to be strong enough to deal with PPD without treatment. A p -value of < 0.05 shows significance indicating that intervention implemented was effective in improving attitude.

The present study thus concluded having significant association between knowledge and attitude with PPD which is similar to studies conducted by Olubodun. T *et al.*, and Branquinho. M *et al.* Post intervention phase of the study showed immense improvement in knowledge

and attitude specifying an unmet need for educating mothers regarding PPD and its staidness.^[4] This can be achieved by further developing governmental and non-governmental support and interventional programmes for women with Postpartum depression. Early detection methods for PPD and increased accessibility of via telehealth and other means can help save mothers from exacerbations and prolongation of symptoms.^[6]

CONCLUSION

Postpartum depression is a common, potentially disabling and excruciating condition to find one self in. PPD is detectable in routine practice and is acquiescent to treatment options by vast modalities available though knowledge about PPD plays as prime factor for all the mentioned amenities. This study commenced with participants having poor knowledge and negative attitude towards PPD with very scare percentage showing positive results. Further stages of the study preceded with interventions and educating the participants on PPD. Thus, a comparison with pre-intervention and post-intervention phase showed that appropriate intervention and education of depressed mothers can help them cope with the disease reducing severity, improving the quality of life.

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