



Effectiveness of Postnatal Support Education Program among Spouses of Primiparous Mothers at Selected Hospitals in Ramanagara District, Karnataka

¹ Varshitha K V, ² Dr. Jamuna P.P, ³ Muhammed Sidan, ⁴ Pradeep Biradar, ⁵ S. Suseela

^{1,3,4} College of Nursing Sciences, Dayananda Sagar University, Bangalore, Karnataka, India

^{2,5} Associate Professor, College of Nursing Sciences, Dayananda Sagar University, Bangalore, Karnataka, India

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KEYWORDS

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ABSTRACT:

Objective: This study aimed to assess the level of preexisting knowledge, regarding Postnatal Support Education Programs among the spouse of the primiparous mother, to evaluate the effectiveness of Postnatal Support Education Programs among spouses of the primiparous mother, to compare the post test scores of experimental group and control group on the Postnatal Support Education Program, to find out the association between the pretest knowledge level of the spouse of a primiparous mother with their selected socio demographic variables.

Methodology: A quasi-experimental research design was used to select 60 primiparous spouses at a selected hospitals in Ramanagara District, Karnataka. Purposive sampling was adopted, 30 participants each assigned to the experimental and control groups randomly. After pretest, the experimental group received a Postnatal Support Education Program while the control group did not receive any educational program. Along with demographic data, Pretest and post test was conducted with a structured knowledge questionnaire to assess the knowledge level. Data were analysed using Distributive statistics and Inferential statistics.

Results: Study findings show significant improvement in knowledge level among spouses in the experimental group than the control group. There was no significant association between pre-interventional knowledge scores and sociodemographic variables of spouses of primiparous mothers in experimental group and control group.

Implication: Findings of this study underscores the importance of postnatal support education program for primiparous mothers. Recommendations include incorporation of postnatal support education program into Nursing curriculums, planning education programs for family members of primiparous mothers and promoting the extended family support.

1. Introduction

Extended family support is support from relatives and others beyond the immediate family, such as grandparents, aunts, uncles, and other relatives, which can provide emotional, practical, and financial assistance to families with young children. -UNICEF⁽¹⁾. Maternal mental health issues, including depression and anxiety, have emerged as a pressing global health concern, affecting millions of women worldwide. These conditions not only impact the mental wellbeing and quality of life of mothers but also have far-reaching consequences for their children, families, and communities.⁽²⁾

WHO states that postnatal depression, also known as postpartum depression (PPD), a mood disorder that occurs after childbirth. It can occur in both men and women and can present with symptoms such as severe sadness, low energy, anxiety, crying spells, irritability, and alterations in sleeping or eating habits.⁽³⁾

Postnatal depression is a serious mental health issue that impacts mothers, infants, and families during the first year after childbirth. Various interventions have been developed to prevent postnatal depression and promote healthy family outcomes.⁽²⁾

The prevalence of maternal mental health issues is alarming, with approximately 1 in 5 new mothers experiencing depression or anxiety. If left unaddressed,



the conditions can lead to severe and long-lasting effects including impaired mother-child relationships, strained family relationships and social connections, reduced economic productivity and participation.⁽²⁾ An international overview of research identifies the role of extended family support in the postnatal period as being highly important. In one study, women who were supported by extended family members were found to have lower levels of postnatal depression.⁽³⁾

In India's postnatal support statistics reveal a concerning picture. According to the National Family Health Survey only forty two percent of women received postnatal care, this indicates a significant gap in postnatal support services. The role of extended family support varies across regions. A study has shown that in rural Karnataka 64.7% of women received postnatal care within two weeks of delivery, often with support from family members. Specific statistics on postnatal support in extended families in Karnataka are scarce. However, a study conducted in rural Karnataka reported that 31.4% of postnatal

women experienced postnatal depression, highlighting the need for increased support.⁽⁴⁾ These findings emphasize the importance of extended family support during the postnatal period, especially in rural areas where availability to formal healthcare services are narrow. The transition to motherhood can be overwhelming and stressful for many women, negatively impacting their emotional wellbeing.⁽⁵⁾

Healthcare professionals play a vital role in supporting new mothers during the postnatal period. By providing personalized emotional support, guidance, and encouragement, alongside clinical care, healthcare professionals can help new mothers build confidence, cope with challenges, and thrive. To ensure consistent and high-quality support, training and leadership are essential for all healthcare professionals.⁽⁶⁾ Providing education to spouses may help to prevent mental health issues and support their transition to parenthood. This systematic review aims to explore the impact of education on fathers, focusing on their mental health after childbirth and the quality of their relationship with their partner⁽⁷⁾. Insufficient social support is recognized as a potential risk factor for postnatal depression, yet inadequate research on this topic is scarce. Healthcare interventions aimed at strengthening women's social

connections, thereby mitigating the risk of postnatal depression, particularly among those most vulnerable.⁽⁸⁾

An education program postpartum requires the complementary intervention of an extended family support for couples to address these barriers. Education is offered to new parents on extended family bonding, communication skills, and conflict resolution. Furthermore, the program provides new parents with the knowledge and skills necessary in gaining extended family support such as management skills on how to effectively communicate with family members and negotiate support from them. All these benefits notwithstanding, many couples face barriers to accessing extended family support. Such barriers may include lack of communication, conflict, and unrealistic expectations. In fact, many new parents may not know how to access such support or may feel uncomfortable asking for such help.⁽¹²⁾

The anticipated outcomes of this study include the creation of a postnatal support education program aimed at enhancing extended family support especially among spouse, an assessment of the program's effectiveness in fostering this support, and the identification of both barriers and facilitators that influence extended family support among couples. This study is significant because it could lead to better health outcomes for new parents and their families. By encouraging support from extended family members, the research aims to alleviate stress, anxiety, and depression that many new parents experience during the postnatal period. Additionally, it underscores the crucial role of extended family support during this time, highlighting the necessity for policymakers and healthcare providers to focus on this element of postnatal care.⁽¹¹⁾

The effectiveness of a postnatal supportive education program in enhancing concern on social support, maternal self-efficacy, and stress in primiparous women. Hence, postpartum support education programs are recommended to be taken into account with the involvement of spouses in the postpartum care process and come up with strategies to enhance the awareness among extended family members and their role in improving maternal and infant health.⁽¹³⁾



2. Objectives

- To assess the level of preexisting knowledge, regarding Postnatal Support Education Programs among the spouses of the primiparous mother attending selected hospitals in Ramanagara district.
- To evaluate the effectiveness of Postnatal Support Education Programs among spouses of the primiparous mother at selected hospitals in Ramanagara District.
- To compare the post test scores of the experimental group and control group on the Postnatal Support Education Program.
- To find out the association between the pretest knowledge level of the spouses of a primiparous mother with their selected socio demographic variables.

3. Hypothesis

H0-There will be no significant difference between the level of knowledge among spouses of the primiparous mothers before and after the Postnatal Support Education Program.

H1-There will be significant improvement on the level of knowledge among spouses of the primiparous mothers after the implementation of the Postnatal Support Education Program.

H2- There will be significant association between the pretest knowledge level of the spouses of a primiparous mother with their selected socio demographic variables.

4. Methodology

The present study adopted a **quantitative research approach** with a **quasi-experimental research design**, aimed at evaluating the effectiveness of a Postnatal Support Education Program among spouses of primiparous mothers. Sixty participants were selected through purposive sampling and equally assigned to experimental (n=30) and control (n=30) groups. The independent variable for this study was the structured Postnatal Support Education Program, while the dependent variable was the level of postnatal support knowledge among the spouses. Data were collected using a structured questionnaire comprising sociodemographic details and 25 items assessing

knowledge related to postnatal support. Knowledge levels were categorised as inadequate (<40%), moderate (40–80%), and adequate (>80%). The intervention consisted of flashcards, video-assisted teaching, demonstrations, and group discussion provided only to the experimental group, whereas the control group continued to receive routine hospital care.

After obtaining consent and administering the pretest, the intervention was delivered to the experimental group, and post-test assessment was conducted on the day of discharge. Data were analysed using descriptive statistics to summarise sociodemographic characteristics and inferential statistics to evaluate the intervention's effectiveness. A paired t-test measured the difference between pre- and post-test knowledge levels in the experimental group, while an unpaired t-test compared post-test scores between experimental and control groups. Further, the association between postnatal support knowledge and selected sociodemographic variables was tested using chi-square and Fisher's exact probability test. The study setting was CDSIMER Hospital, a multispecialty tertiary care facility in Ramanagara District, Karnataka, providing an appropriate environment for identifying eligible

5. Results

Section-I: Distribution on Sociodemographic Variables of the Spouses of Primiparous Mothers in Control Group and Experimental Group

N=60

Sociodemographic variables	Control	Experimental
	No. (%)	No. (%)
Age in years		
22-26	3(10.0)	12(40.0)
27-31	22(73.3)	15(50.0)
32+	5(16.7)	3(10.0)
Level of education		
Illiterate	-	-
Primary education	-	17(56.7)
Secondary education	12(40.0)	7(23.30)
Diploma courses	10(33.30)	4(13.3)
Graduation and above	8(26.7)	2(6.7)



Sociodemographic variables	Control	Experimental
	No. (%)	No. (%)
Occupation		
Unemployed	1(3.3)	12(40.0)
Private job	12(40.0)	13(43.3)
Government job	11(36.7)	3(10.0)
Self-employed	6(20.0)	2(6.7)
Marital status		
Single	-	-
Married	30(100)	30(100)
Divorced	-	-
Widow	-	-
Number of children		
1	30(100)	30(100)
2	-	-
3 and more	-	-
Monthly income in rupees		
< ₹10,000	1(3.3)	6(20.0)
₹10,001-20,000	5(16.7)	9(30.0)
₹20,001-30,000	19(63.3)	15(50.0)
> ₹30,001	5(16.7)	-
Proximity to extended family		
Same household	30(100)	30(100)
Same city or town	-	-
Different city or town	-	-
Different state or country	-	-
Previous experience with postnatal support		
Yes	-	-
No	30(100)	30(100)

The sociodemographic data showed that the majority of spouses in both the control and experimental groups belonged to the age group of 27–31 years. Most participants in the control group had completed secondary education, whereas a higher proportion of the

experimental group had received only primary education. In terms of occupation, most respondents in both groups were privately employed, with a small proportion being unemployed or government employees. The majority of participants in both groups earned a monthly income ranging between ₹20,001–30,000 and all were married with one child. Additionally, all respondents stayed in the same household as their extended family and none had prior exposure to postnatal support education.

SECTION-II: DATA ON THE PRETEST KNOWLEDGE REGARDING POSTNATAL SUPPORT EDUCATION PROGRAM AMONG SPOUSE OF PRIMIPAROUS MOTHERS IN CONTROL GROUP AND EXPERIMENTAL GROUP.

N=60

Pretest knowledge level	Control [No (%)]	Experimental [No (%)]
Adequate	0(0%)	3(10.0)
Inadequate	4(13.3)	16(53.3)
Moderate	26(86.7)	11(36.7)

The pretest results of the control group revealed that 86.7% of participants had a moderate level of knowledge while 13.3% had inadequate knowledge, with none showing adequate awareness before the intervention. In comparison, the experimental group demonstrated poorer baseline knowledge, where 53.3% had inadequate knowledge, 36.7% had moderate knowledge, and only 10% had adequate knowledge prior to receiving the intervention.

SECTION- III: DATA ON EVALUATING THE EFFECTIVENESS OF POSTNATAL SUPPORT EDUCATION PROGRAM AMONG SPOUSES OF PRIMIPAROUS MOTHERS

Table 5.3: Significance of Postnatal Support Education Program in Control group

N=30

Paired T-test For Control Group					
Control Group	Mean	Std. Deviation	t-value	Df	Sig. (2-tailed)
Pretest	13.13	2.675	-3.930	29	0.000*
Post Test	15.67	2.940			



The paired t-test for the control group showed a statistically significant improvement in knowledge from pre-test to post-test, with the mean score increasing from 13.13 (SD = 2.675) to 15.67 (SD = 2.940). The obtained

t-value of -3.930 (df = 29) and p-value of 0.000* confirm that this difference is statistically significant at the 95% confidence level.

Table 5.4: Significance of Postnatal Support Education Program

N=30

Paired T test for Experimental Group					
Experimental Group	Mean	Std. Deviation	t-value	Df	Sig. (2-tailed)
Pretest	11.33	5.750	-7.824	29	0.000*
Post Test	20.50	2.636			

The paired t-test for the experimental group showed a statistically significant improvement in knowledge, with the mean score increasing from 11.33 (SD = 5.750) in the

pre-test to 20.50 (SD = 2.636) in the post-test (t = -7.824, df = 29, p = 0.000*), confirming effectiveness at the 95% confidence level.

SECTION – IV: DATA ON COMPARISON OF THE POST TEST SCORES OF EXPERIMENTAL GROUP AND CONTROL GROUP ON POSTNATAL SUPPORT EDUCATION PROGRAM FOR SPOUSES OF PRIMIPAROUS MOTHERS.

N=60

Independent T test							
Groups		Mean	Std. Deviation	F	t-value	Df	Sig. (2-tailed)
Scores	Experimental	20.50	2.636	0.984	6.704	58	0.000*
	Control	15.67	2.940		6.704	57.322	0.000

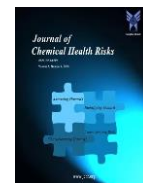
The independent t-test results showed that the experimental group had a significantly higher post-test mean score (20.50, SD = 2.636) compared to the control group (15.67, SD = 2.940), with a t-value of 6.704 and p-

value of 0.000*, indicating statistical significance at the 95% confidence level. Levene's test (F = 0.984, p > 0.05) confirmed that the assumption of equal variances was met.

SECTION – V; DATA ON THE ASSOCIATION BETWEEN PRETEST KNOWLEDGE OF SPOUSE OF PRIMIPAROUS MOTHERS AND THEIR SELECTED SOCIODEMOGRAPHIC VARIABLES IN CONTROL GROUP

N=30

Demographic Details		Pretest Control Group		Df	Fisher's Exact	p- value
		Inadequate	Moderate			
Age	22 - 26	0	3	2	0.884	0.719
	27 - 31	4	18			
	32+	0	5			
Education level	Illiterate	0	0	2	0.468	1.000
	Primary education	0	0			
	Secondary education	2	10			
	Diploma course	1	9			
	Graduation and above	0	0			



Demographic Details		Pretest Control Group		Df	Fisher's Exact	p- value
		Inadequate	Moderate			
Occupation	Unemployed	0	1	3	1.556	0.841
	Private job	1	11			
	Government job	2	9			
	Own business	1	5			
Monthly income in rupees	<= 10000	1	0	3	4.883	0.224
	10001 - 20000	0	5			
	20001 - 30000	3	16			
	30001+	0	5			

The analysis of demographic variables in the control group using Fisher's Exact Test revealed no significant association between age, education level, occupation, or monthly income and pre-test knowledge levels. Participants aged 27–31 years, those with secondary education, and private employees showed higher proportions of moderate knowledge, but these trends were not statistically significant. Similarly, monthly income did not influence knowledge levels, despite most

participants earning ₹20,001–30,000 demonstrating moderate knowledge. Variables such as marital status, number of children, proximity to extended family, and previous experience with postnatal support could not be tested for association as all participants shared identical responses. Overall, the results indicate no statistically significant relationship between demographic characteristics and pre-test knowledge levels in the control group.

SECTION – VI; DATA ON THE ASSOCIATION BETWEEN PRETEST KNOWLEDGE OF SPOUSE OF PRIMIPAROUS MOTHERS AND THEIR SELECTED SOCIODEMOGRAPHIC VARIABLES IN EXPERIMENTAL GROUP

N=30

Demographic Details		Pre-test Experimental group			Df	Fisher's Exact	p- value
		Adequate	Inadequate	Moderate			
Age	22 - 26	2	8	2	4	4.501	0.333
	27 - 31	1	6	8			
	32+	0	2	1			
Education level	Illiterate	0	0	0	6	9.720	0.072*
	Primary education	1	10	6			
	Secondary Education	0	3	4			
	Diploma course	0	3	1			
	Graduation and above	2	0	0			
Occupation	Unemployed	0	5	6	6	6.067	0.406
	Private job	3	6	3			
	Government job	0	2	0			
	Self- employed	0	3	2			



Demographic Details		Pre-test Experimental group			Df	Fisher's Exact	p- value
		Adequate	Inadequate	Moderate			
Monthly income in rupees	<= 10000	0	4	2	4	2.997	0.600
	10001-20000	1	3	5			
	20001-30000	2	9	4			
	30001+	0	0	0			

The demographic analysis for the experimental group using Fisher's Exact Test revealed no significant association between participants' characteristics and their pre-test knowledge levels. Age was not associated with knowledge (Fisher's Exact = 4.501, $p = 0.333$), and although participants with primary education showed a higher proportion of inadequate knowledge, the association between education level and knowledge was not statistically significant (Fisher's Exact = 9.720, $p = 0.072$). Similarly, occupation showed no significant relationship with knowledge adequacy (Fisher's Exact $p = 0.406$, Df = 6), and monthly income also demonstrated no association (Fisher's Exact = 2.997, $p = 0.600$). Since all participants had the same responses for marital status, number of children, proximity to extended family, and previous postnatal support exposure, no association could be calculated for these variables. Overall, the demographic variables were not significantly associated with pre-test knowledge levels in the experimental group.

6. Discussion

The findings of the present study indicate that the pre-existing level of knowledge among spouses of primiparous mothers regarding postnatal support was generally low, particularly in the experimental group, where a majority demonstrated inadequate understanding prior to the intervention, which is consistent with similar studies conducted in Northern Ghana (2024) ⁽¹⁴⁾ and Nadiad (2024), showing insufficient baseline awareness on postnatal and newborn care. The implementation of the Postnatal Support Education Program led to a marked improvement in knowledge among participants in the experimental group, as evidenced by the statistically significant increase in mean post-test scores compared to the control group, demonstrating the program's effectiveness.⁽¹⁵⁾ These findings align with earlier

research conducted in Hajar Hospital (2014), where spousal education positively influenced postpartum outcomes and mother–infant bonding. The comparative post-test analysis further underscores the impact of the intervention, as the experimental group significantly outperformed the control group, verifying that structured educational inputs can substantially enhance awareness and preparedness for postnatal support⁽¹⁶⁾. Additionally, the study found no significant association between pretest knowledge levels and selected sociodemographic variables in either group, which aligns with previous literature (China, 2024) suggesting that knowledge gains are more strongly influenced by targeted educational interventions rather than demographic characteristics. Thus, the overall results affirm that structured postnatal support education programs are both relevant and effective in improving the knowledge levels of spouses of primiparous mothers, irrespective of their sociodemographic background.⁽¹⁷⁾

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