ORIGINAL RESEARCH PAPER
Volume - 9 | Issue - 10 | October - 2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

EFFECTIVENESS OF NURSE LED CHILD BIRTH PREPARATION PROGRAMME UPON BEHAVIORAL RESPONSES AND MATERNAL OUTCOME DURING LABOUR AMONG PRIMI MOTHERS

Gynaecology

Ms. Chanamthabam Roshinibala Devi* — Assistant lecturer, Apollo College of Nursing (Affiliated to the Tamil Nadu Dr. MGR Medical University.*Corresponding Author

Dr. Latha Venkatesan — Principal Apollo College of Nursing (Affiliated to the Tamil Nadu Dr. MGR Medical University.

Ms. Pandiselvi R — Lecturer, Apollo College of Nursing (Affiliated to the Tamil Nadu Dr. MGR Medical University.

ABSTRACT

A behavioural response is a physical and psychological responses or reaction of mothers during labour. Gaining confidence regarding labour by enhancing knowledge about child birth can be considered as an important factor influencing a pregnant to have good coping and women birthing experience. The study was conducted to assess the effectiveness of Nurse Led Childbirth Preparation Programme upon Behavioral Responses and Maternal Outcome during Labour among Primi Mothers. A Quasi Experimental Research Design was utilized to explore the effectiveness of Nurse Led Childbirth Preparation Programme. Seventy mothers were selected for the study using consecutive sampling technique. Data was conducted by using tools such as Observational Rating Scale on Behavioral Responses during Labour and Observational Checklist on Maternal Outcome during labour after obtaining consent. The collected data were statistically analyzed and the results revealed that mean scores of behavioural responses during labour was higher in experimental (M = 56.66 & SD = 13.66) than control (M = 48.03 & SD = 13.05) group of primi mothers. This difference was found to be statistically significant at $p < 0.001$ ($t = 2.638$) and also there was statistically significant difference in maternal outcome such as nature and progress of labour ($x^2 = 7.78$, $p < 0.01$), medication used for pain ($x^2 = 32.9$, $p < 0.001$), the total durations of the labour ($x^2 = 6.59$, $p < 0.05$. The findings indicated that child birth education is needed to the primi mothers, means to positively cope with the stress during labour.

KEYWORDS

Nurses Led Child Birth Preparation Programme, Behavioural Responses, Maternal Outcome, Primi Mothers

INTRODUCTION

"Child birth is a natural phenomenon" Childbirth is one of the greatest events in every woman's life, especially among primi mothers. At this time, the mother needs lots of help for the realization and acceptance of childbirth as a normal physiological phenomenon. Pregnant women experience a range of physical and emotional changes, which may trigger anxiety (Colling. 2011). Primi mothers usually have increased anxiety and concern about labour and the delivery (Jaya Bharathi, 2010).

Childbirth education effectively reduced child birth anxiety and increased desire to vaginal birth. The women who are pregnant for the first time is said to be Primi gravida. They undergo anxiety and stress due to lack of knowledge and can also lead to the inability of Primi mothers to cope up with discomfort (Mintu , 2014). Cochrane meta analysis of mixed 6 studies concluded that nurse led relaxation classes and birth preparation programme for low risk mothers decrease the number of caesarian section. (Gruenat al, 2011). Child birth education was suggested by Byrne e al (2014) as a specific strategy to help reduce anxiety of childbirth and alleviate concerns about labor pain.

Maternal mortality is unacceptably high; about 830 women die from the pregnancy or child birth related complication around the world every day. Between 1990 and 2015, maternal mortality worldwide dropped by 44% between 2016 and 2030, as part of the sustainable development goals, the target is to reduce the global maternal mortality ratio to 70 per 100 000 live births 3.2 by 2030 (WHO) Child birth education has influenced the practice of obstetrics remarkably during the past 50 years.

A meta analysis of review report of nine trials on individual or group antenatal child birth found a lack of high quality evidence, and concluded that the effects of antenatal education remains largely unknown (Sandall, 2007). Recent literature suggests that childbirth education has been historically evaluated in terms of outcomes that do not necessarily demonstrate the value of such program. With the emerging need of a culturally combatable child birth education , the investigator develop and administered a child birth preparation programmed for primi mothers to cope up during pregnancy and during labor to have safe delivery and positive maternal outcome .

OBJECTIVES

1. To determine the effectiveness of nurse led child birth preparation programme upon behavioural responses during labour among control and experimental group of primi mothers.
2. To determine the effectiveness of nurse led child birth preparation programme upon maternal outcome among control and experimental group of primi mothers.

HYPOTHESES

Ho1: There will be no significant difference in behavioural response scores during labour between control and experimental group of primi mothers.

Ho2: There will be no significant difference in maternal outcome between control and experimental group of primi mothers.

METHODS AND METERIALS

This study was conducted after obtaining ethical clearance from IEC of the institution and permission from concerned authorities of the city. The study was conducted using Quasi Experimental Research Design at two selected hospitals, Chennai. Samples of 70 primi mothers who volunteered and consented to participate in the study were recruited. All these women were voluntarily enrolled in the study. Content validity was checked by the experts. Reliability was checked by doing pilot study among 10 primi mothers. This primi mothers were assigned 35 in control and 35 in experimental group who were between 36 – 40 weeks of gestation with low risk pregnant women and expected normal delivery were selected in the study using consecutive sampling technique. Those participants who underwent emergency LSCS and came after 6cm of cervical dilatation were excluded. Therefore, the final sample size was 67 and was considered for analysis, with 32 in experimental group and 35 in control group.

Data collection

Data was collected in different setting to avoid contamination of samples. An assurance was given regarding nurses led child birth preparation programme before the data collection procedure was initiated. After initial introduction the researcher obtained written consent from the selected mothers to participate in the study. The waiting room of the antenatal OPD was used for taking classes regarding child birth preparation programme. The experimental group of primi mothers were received the classes regarding Child Birth Preparation which includes ideas about child birth, labour process, coping technique, breastfeeding was explained to the mothers using

lecture method, power point and pamphlets. After one week of intervention researcher met the same mothers and reviewed the same intervention followed by pamphlets on child birth preparation was distributed in experimental group of primi mothers. At the time of the delivery Observational Rating Scale on Behavioural Responses during Labour was used to observe the physiological and psychological behavioural responses of primi mothers during labour through observational method. After the delivery Observational Checklist was used to assess the Maternal Outcome. Confidentiality was maintained throughout the study. Collected data was analyzed based on the objectives.

Tools

Data was conducted by using tools such as Demographic Variable Proforma, Obstetrical Variable Proforma, Observational Rating Scale on Behavioral Responses during Labour, Observational Checklist on Maternal Outcome through self administration method and observational method.

Observational Rating Scale on Behavioral Responses during Labour

Observational Rating Scale on Behavioral Responses during Labour used to observe the behaviour responses of the primi mothers during labour. The instrument consists of 30 items regarding physiological and psychological behaviour in all stage of labour. It is 4 point rating scale (Never 0, Sometimes – 1, Often – 2, Always – 3) scoring was given based on the responses of the mothers. Score from each item range from 0 – 3. A total score is obtained by adding numerical responses for each item. The obtainable score range from 0 – 90.obtained score was interpreted as poor responses (<40%) moderate responses (40- 60%) and good responses (>60%), i.e. higher the score better good responses. *Observational Checklist on Maternal Outcome*

Observational Checklist on Maternal Outcome was used to assess the health status of the mother and outcome after delivery. The instrument consist of nature and progress of labour, medication used for pain relieving, mode of delivery, nature of the vaginal delivery, total duration of the labour, nature of expulsion of placenta, presence of maternal complication.

RESULTS

Regarding demographic variables, Majority of the primi mothers were aged between 20-27 yrs (74.28%, 75%), Hindus (65.63%, 40%), Graduates (91.43%, 78.13%), Professional workers (68%, 40%), living as nuclear family (77.14%, 53.13%) and from urban area (68.57%, 87.50%) in control and experimental group of primi mothers respectively.

With regard to obstetrical variables (figure: 1), majority of the primi mothers were in between 36-37 weeks of gestation (68.57%, 59.37%) in control and experimental group respectively.

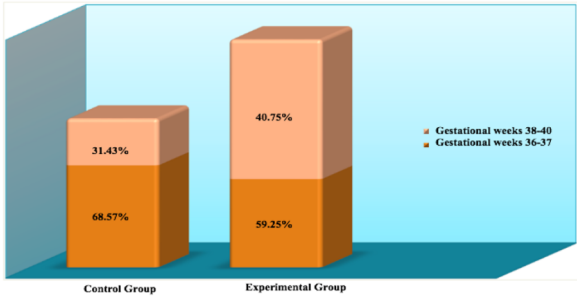

Fig 1: Percentage Distribution of Gestational Weeks in Control and Experimental Group of Primi Mothers

In control group only 28% of the primi mothers had good behavioral responses during labour, whereas in experimental group majority of the mothers had good behavioral responses (78.12%) during labour.

Table 1 revealed that, there was a significant difference in mean scores of behavioural responses between control (M = 48.03 & SD = 13.05) and experimental group (M = 56.66 & SD = 13.66) of primi mothers during labour with't' value of 2.638 at p< 0.001.. Hence, null hypothesis **Ho1** "There will be no significant difference in behavioural response scores during labour between control and experimental group of primi mothers was rejected".

Table 1: Comparison of Mean and Standard Deviation of Behavioural Responses Scores during Labour between Control and Experimental Group of Primi mothers.

Group	Max score	Mean	SD	Mean diff	Independent 't' test	p value
Control (n = 35)	90	48.03	13.05	(9.59)	2.638	p<0.001
Experiment (n=32)	90	56.66	13.66			

In experimental group majority (59.37%) of the mothers had spontaneous progress of labour and did not use any pain medication during labour (81.25%). Whereas in control group only 25.7% of them had spontaneous progress of labour and 88.57% of the mothers had used pain medication during labour. There was a difference noted in total duration of labour among 48.5% of them in control group and in experimental group 28% of primi mothers were in labour for more than 12 hours.

And also in (Table: 2), there was a significant difference between control and experimental group of primi mothers in maternal outcome such as nature and progress of labour (x^2 = 7.78, df = 1, at p< 0.01), medication used to relieve pain (x^2 = 32.9, at p< 0.01), the total durations of the labour (x^2= 6.59, df = 1, at p< 0.05). However there was a significant difference in maternal outcomes between control and experimental group of primi mothers. Hence, null hypothesis **Ho2** "There will be no significant difference in maternal outcome between control and experimental group of primi mothers was rejected".

Table: 2 Comparison of Maternal Outcome between Control and Experimental Group of Primi Mothers.

Maternal Outcome	Control Group (n = 35)		Experimental Group (n = 32)		x^2 Value & df	p value
	f	%	f	%		
Nature and Progress of Labour						
Progress spontaneously	9	25.71	19	59.37	7.78	p< 0.01
Augmented by other Method	26	74.28	13	40.62	df=1	
Medication Used for Pain						
Epidural/ IM/ IV	31	88.57	6	18.75	32.9	p<0.001
No medication	4	11.4	26	81.25	df=1	
Mode of Delivery						
Normal vaginal delivery	25	71.42	27	82.37	1.70	p> 0.05
Instrumental delivery	10	28.57	8	25	df=1	
Total Duration of the Labour						
Upto 12 hrs	18	51.42	23	53.12	6.59	p< 0.05
More than 12 hrs or<6 hr	17	48.57	9	28.12	df=1	
Nature and Expulsion of Placenta						
Spontaneous expulsion	8	22.85	8	22.85	0.04	p> 0.05
Assisted expulsion	27	84.37	24	75	df=1	
Presence of Maternal Complication						
Yes	1	2.85	0	0		
No	34	97.14	32	100	-	-

DISCUSSION

The study was undertaken to assess the effectiveness of nurse led childbirth preparation programme upon behavioral responses, and maternal outcome during labour among primi mothers. Study findings revealed that, in experimental group majority of the mothers had good behavioral responses (78.12%) during labour and there was statistically significant difference in mean scores of behavioural responses between control (M = 48.03 & SD = 13.05) and experimental group (M = 56.66 & SD = 13.66) of primi mothers during labour (t = 2.638, p < 0.001).

Mary (2017), conducted a study to assess the effectiveness of selected mind body interventions upon the level of anxiety related to childbirth and labour outcomes among antenatal women. The study took place at antenatal clinic of selected hospitals at Bangalore. 50 primi antenatal women (n=25) with 32-33 weeks of gestation was selected. Experimental group performed the selected mind body interventions (Active visualization with Birth Affirmations, yogic breathing and relaxation) for 4 weeks. The results showed that there was a significant statistical difference between pre-test and post-test level of anxiety related to childbirth and anxiety symptoms. While comparing the labour outcomes, there was a significant statistical difference between experimental and control groups. It helps to quiet the mind, which in turn calms the body.

59.37% of the mothers had spontaneous progress of labour and did not use any pain medication during labour (81.25%) and there was statistically significant difference between control and experimental group of primi mothers in maternal outcome such as nature and progress of labour ($x^2 = 7.78$, $p < 0.05$), medication used for pain ($x^2 = 32.9$, $p < 0.05$) the total durations of the labour between control and experimental group of primi mothers ($x^2 = 6.59$, $p < 0.05$).

The above finding is consistent with the findings of Khresheh (2018), who conducted an exploratory, descriptive study to implement and evaluate the proposed childbirth preparation programme. Out of the 107 sample of mothers the effectiveness of the program was noticed through the improvement of pregnancy outcomes. The results showed that the mothers who attended the education had an increased sense of control over the childbirth process, and it increased the benefits and duration of breastfeeding and knowledge of family planning. The study also showed a high rate of participants' satisfaction and suggestions of improved pregnancy outcomes. The impact of child birth education on pregnancy anxiety and pregnancy outcomes is promising; midwives and nurse play an important role to enhance better pregnancy outcomes. The study recommends further evaluate studies on the use of alternative interventions at reducing pregnancy – specific anxiety and improving birth outcomes.

Recommendations

Conducting on a large sample to generalize the results by using true experimental study for the higher level of evidence. A comparative study can also be conducted between rural and urban primi mothers and also between primi and multi gravida mothers.

Conclusion

Childbirth education prepares pregnant women for delivery and alley theirs and anxiety related to child birth. Study analysis showed that after intervention there was a significant difference in behavioural responses during labour and maternal outcome. So, Nurse Led Child Birth Preparation Programme was found to be effective to cope up during child birth and enabled them to have safe delivery. There was a less used pain relieving drugs and the total duration of labour was also reduced among the primi mothers who were attended the nurse led child birth preparation programme.

Therefore, from the study it can be concluded that Nurse Led Child Birth Preparation Programme prepares the primi mothers for the process of labour and child birth. It also helps them to feel relaxed during the whole process of labour, thus having a favorable maternal outcome. Hence the health care professional especially nurse play vital role in incorporation of child birth preparation programme for primi mothers to achieve safe and comfortable and happy child birth.

REFERENCE

1. Annamma Jacob, "A comprehensive text book of midwifery" 1st edition Jaypee Publishers, New Delhi, pp.607-614
2. Byrne, J., Hauck, Y., Fisher, C., Bayes, S., & Schutze, R. (2014). Effectiveness of a mindfulness- based childbirth education pilot study on maternal self-efficacy and fear of childbirth. Journal of midwifery & women's health, 59(2), 192-197.
3. Colling wood J, Anxiety in pregnancy available at http;// Psychocentral.com/ lib/2010/ anxiety in pregnancy. Accessed on 1st sep 2011
4. Gagnon, A. J., & Sandall, J. (2007). Individual or group antenatal education for childbirth or parenthood, or both. Cochrane database of systematic reviews, (3).
5. Jaya Bharathi, B. Effective Nursing Interventions on Pain during labour among primi mothers. TMAI The Nursing Journal of India, June 2010, Vol.CIMO.6
6. Khresheh, R., Almalik, M., Owies, A., & Barclay, L. (2018). Implementation of a childbirth preparation program in the maternal and child health centres in Jordan. Midwifery, 61, 1-7.
7. Khunpradit, S., Tavender, E., Lumbiganon, P., Laopaiboon, M., Wasiak, J., & Gruen, R. L.(2011). Non-clinical interventions for reducing unnecessary caesarean section. Cochrane Database of Systematic Reviews, (6).
8. Mary, A., Latheef, F., & Vijayaraghavan, R. (2017). Effectiveness of selected mind body interventions on anxiety related to childbirth and labour outcomes.
9. Mintu, K. (2014). Effectiveness of virtual labour process upon knowledge and anxiety level regarding labour process among primigravid mothers (Doctoral dissertation, Apollo College of Nursing, Chennai).
10. www.who.int>sdg>targets.