



A STUDY TO EVALUATE THE EFFECT OF PLANNED NURSING INTERVENTION ON BIO PHYSIOLOGICAL HEALTH PARAMETERS AMONG MOTHERS AFTER ELECTIVE CAESAREAN SECTION ADMITTED IN GOVERNMENT HOSPITAL, POLLACHI.

(Boost Your Biophysical Score: Postnatal Workouts for C-Section Moms)

Prof. Dr. Magarani Balachandar, RN RM, Ph.D

Department of OBG in Nursing,
Sree Abirami College of Nursing, Coimbatore, India.

*Corresponding Author: Prof. Dr. Magarani Balachandar, Email: magaranis@gmail.com

Abstract

This study aimed to assess the impact of planned nursing interventions on biophysiological health parameters in mothers following elective cesarean sections. The study's primary goal was to evaluate the effect of planned nursing intervention on bio physiological health parameters among mothers after elective caesarean section. The conceptual frame work for the study was based on Wiedenbach's helping art of clinical nursing theory . Using a quasi-experimental methodology with a post-test-only control group design, the study was conducted in the pre- and post-operative wards of the Government Hospital in Pollachi. The study sample included 60 mothers (30 in the experimental group and 30 in the control group), who were chosen using non-probability purposive sampling. To evaluate biophysiological health parameters (incisional pain, wound status, vital signs, respiratory function, GI function, urinary function, lochia, condition of lower extremities, and breastfeeding) five days after surgery, the experimental group was given planned nursing interventions and observed. The results were then compared to those of the control group. The tools employed included an interview schedule to gather socio-demographic and obstetrical information, a numerical pain rating scale to evaluate the experience of incisional pain, the Southampton wound grading system to examine wound status, and observation checklists to evaluate biophysical health parameters. The results demonstrated significant differences in respiratory function ($p < 0.05$), gastrointestinal function ($p < 0.05$), lochia ($p < 0.05$), and the condition of the lower extremities ($p < 0.05$) between the two groups. Additionally, there was a significant association ($p < 0.05$) between incisional pain and selected variables such as gravid status and previous history of cesarean section. The results have important implications for nursing research, education, administration, and practice.

Keywords: *Planned nursing intervention, Biophysiological health parameters, mothers after elective CS, Wiedenbach's clinical nursing theory*

INTRODUCTION

Childbirth is not just a physical event; it affects a woman's confidence, self-esteem, and perspectives on life. A caesarean section is a surgical method of delivering a baby through an incision made in the mother's abdomen and uterus. Women who have had a caesarean section often face more challenges compared to those who have vaginal deliveries. These challenges include longer hospital stays, post-operative pain, delayed mobility, and various complications such as breastfeeding difficulties and bonding issues with their newborns. Recovery after abdominal surgery can be hindered by pain and fatigue. Post-operative complications can occur right away or later, and include issues that affect overall health. The risk of complications increases with immobility, emphasizing the need for prompt and thorough post-operative care, including early movement. Teaching women exercises and providing support during recovery may help prevent complications following a caesarean section. Despite potential benefits, many women do not practice early ambulation due to pain.

Given the rising rates of caesarean sections, particularly in countries like India, the role of nurses is crucial in helping patients regain independence and activity levels, which can speed up recovery and reduce complications. Globally, caesarean section rates have increased significantly, primarily for the benefit of the fetus rather than the mother. It is important to recognize that while caesarean sections may pose greater risks for the mother, complications from vaginal births can affect the infant more.

Common complications from caesarean births for mothers include adverse reactions to anesthesia, organ injuries, infections, and blood clots. Long-term, women may face the risk of complications in future pregnancies. Several studies have shown an increase in maternal morbidity due to surgical deliveries, highlighting issues like wound infections and various aches and pains after surgery.

Research has found that early ambulation post-surgery can help reduce fatigue, improve recovery, and positively impact overall health. Studies also indicate that pre-operative education plays a crucial role in enhancing post-operative outcomes. Teaching patients how to breathe deeply and move effectively can lead to better recovery experiences.

The investigator's clinical observations revealed that many patients' families were hesitant to allow them to ambulate after surgery due to a lack of knowledge about post-operative care. Many patients faced complications that could be alleviated through appropriate early exercises. Despite its benefits, early ambulation is often undervalued in hospitals. Therefore, the investigator aims to assess how planned nursing interventions, including teaching deep breathing, abdominal exercises, leg exercises, and breastfeeding techniques, can improve health outcomes for mothers after elective caesarean sections.

OBJECTIVES OF THE STUDY

1. To assess the biophysiological health parameters among mothers after elective caesarean section.
2. To evaluate the effect of planned nursing intervention on biophysiological health parameters among mothers after elective caesarean section.
3. To find out the association between biophysiological health parameters and selected variables among mothers after elective caesarean section.

HYPOTHESES

H1- There is a significant difference in the mean score of bio physiological health parameters between experimental and control Group.

H2 -There is a significant association between bio physiological Health parameters and selected variables.

MATERIALS AND METHODS

A quantitative experimental approach was chosen to study the effects of planned nursing interventions on the health of mothers after elective caesarean sections. The selected research design is quasi-experimental with non-equivalent control group, meaning there is no random assignment to groups. The independent variable is the planned nursing intervention, while the dependent variables include various health parameters like pain, wound status, vital signs, and other functions in post-surgery. Total number of 60 mothers aged 20-40 who have undergone elective caesarean sections were selected by using non - probability purposive sampling method and placed in control and experimental groups. Data collection was done for the period of six weeks by using semi-structured interview for sociodemographic and obstetric data, a pain rating scale, and observation check lists for health parameters and breastfeeding over five days, while the experimental group received additional nursing interventions like Physical exercises were taught to the case group including proper deep breathing, effective coughing, limb movement, changing position in bed and leaving bed . The assessment included direct supervision and return demonstrations of exercises post-surgery. Data collection for both groups followed a structured procedure ensuring consistent and systematic measurement. The time taken varied between the two

groups due to the nature of interventions provided. The experimental group received planned nursing intervention and observed five days postoperatively for assessing biophysiological health parameters (incisional pain, wound status, vital signs, respiratory function, GI function, urinary function, lochia, condition of lower extremities, breast feeding) and findings were compared with the control group.

MAJOR STUDY FINDINGS

Table :1 Distribution of participants based on pain and wound status.

N=60

Biophysiological health parameters	Control group(n=30)		Experimental group(n=30)	
	F	%	F	%
Pain				
Mild	0	0	1	3.3
Moderate	24	80	28	93.3
Severe	6	20	1	3.3
Wound status				
Satisfactory healing	30	100	30	100

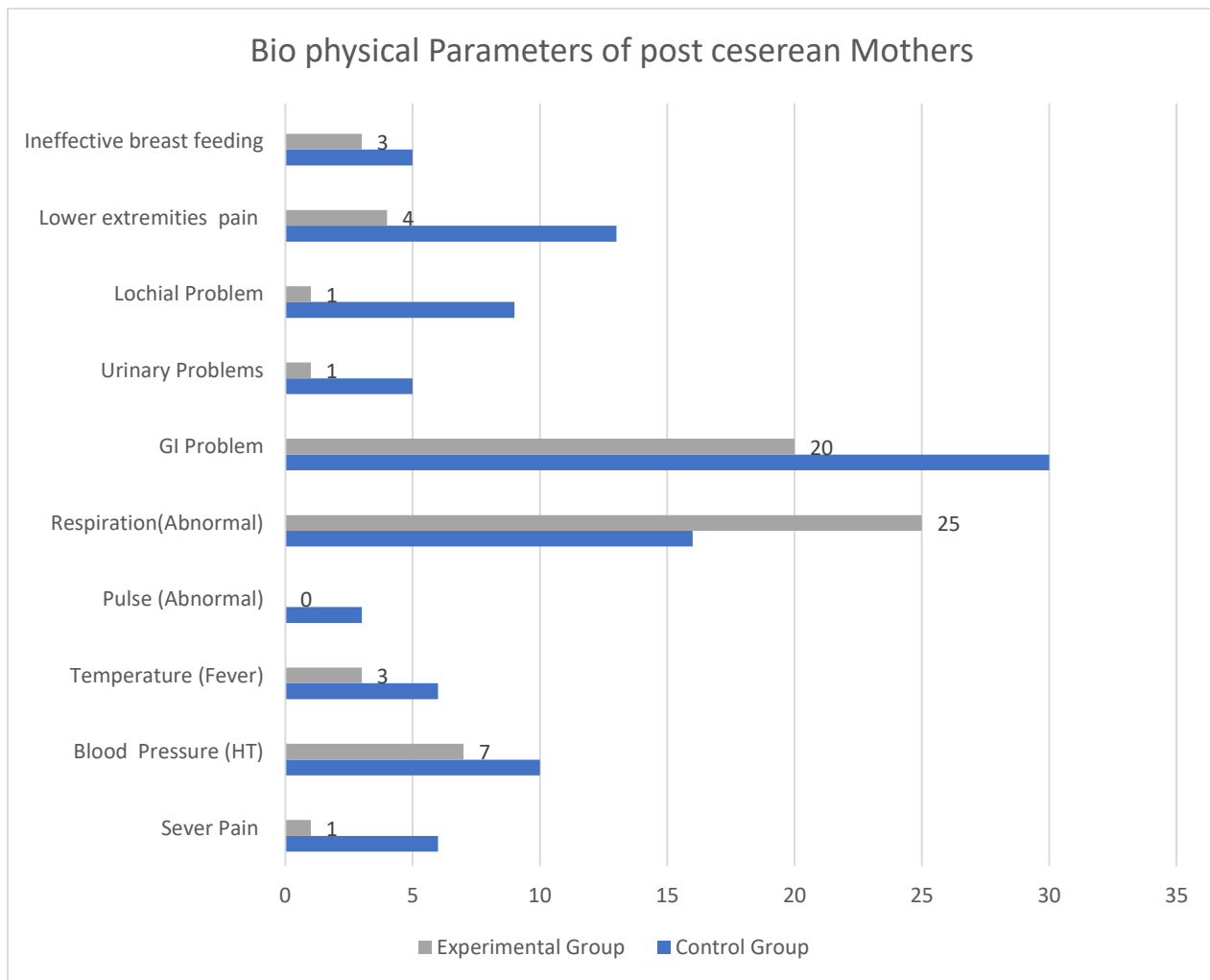
The data revealed in table 6 depicts that 93.3% of the participants in the experimental and 80 % of participants in the control group had moderate pain. All participants in the control and experimental group had satisfactory wound healing.

Table 2 Distribution of participants based on vital signs

N=60

Vital Signs	Control Group		Experimental Group	
	F	%	F	%
Blood pressure				
Normal	20	66.6	23	76.6
Hypertension	10	33.3	7	23.3
Temperature				
Normal	24	80	27	90
Hyperthermia	6	20	3	10
Pulse				
Normal	27	90	30	100
Tachycardia	3	10	0	0
Respiration				
Normal	30	100	30	100

The data presented in table 7 depicts that 33.3 % of participants in the control group and 23.3 % of participants in the experimental group were hypertensive .20 % of participants in control group and 10 % of participants in the experimental group had hyperthermia. 10 % of participants in the control group and no participants in the experimental group had tachycardia.

Figure :1 The Biophysiological health parameters in the experimental and control group.**Table :2 Significance of difference in the biophysiological health parameters in the experimental and control group**

N=60					
Biophysiological Parameters	Group		χ^2 value	df	P Value
	Control	Experimental			
	(n=30)	(n=30)			
Pain					
Mild	0	1	4.87	2	0.87
Moderate	24	28			
Severe	6	1			
Vital signs					
Blood pressure					
Normal	20	23			
Abnormal (hypertension)	10	7	0.739	1	0.28
Temperature					
Normal	24	27	1.17	1	0.23
Abnormal (hypothermia)	6	3			
Pulse					
Normal	27	30	3.15	1	0.11
Abnormal (tachycardia)	3	0			

Respiratory problems					
Present	14	5	6.23	1	0.01*
Absent	16	25			
GI problems					
Present	30	20	12	1	0.001*
Absent	0	10			
Urinary problems					
Present	5	1	2.96	1	0.097
Absent	25	29			
Lochia -problems					
Present	9	1	7.6	1	0.006*
Absent	21	29			
Lower extremities Problems					
Present	13	4	6.64	1	0.01*
Absent	17	26			
Breast feeding					
Effective	25	27	0.57	1	0.44
Ineffective	5	3			

*Significant at <0.05 level

The study analyzed participants in two groups: a control group and an experimental group. In the control group, 36. 7% of participants were aged 20-29, and 33. 3% were aged 30-34. In the experimental group, 43. 3% were aged 25-29, and 30-34. Most participants were Hindu, with 63. 3% in the control group and 60% in the experimental group. Education levels showed that 46. 7% of participants in both groups had higher secondary education. The majority of participants were homemakers, with 66. 7% in the control group and 93. 3% in the experimental group. A larger portion of participants in both groups had prior cesarean sections. In both groups, a high percentage of cesarean sections were due to maternal reasons. Most participants experienced moderate pain, and both groups had satisfactory wound healing. Health issues were noted, with 33. 3% of participants in the control group and 23. 3% in the experimental group being hypertensive, while hyperthermia and tachycardia were more common in the control group. Issues like dysuria and passing clots were more prevalent in the control group. Breastfeeding effectiveness was high in both groups. The study revealed significant differences in gastrointestinal problems, respiratory issues, lochia issues, and problems with lower extremities between the two groups. Planned nursing interventions improved mothers' respiratory and gastrointestinal functions. However, there were no meaningful differences in pain, vital signs, urinary function, and breastfeeding between groups after the intervention, although associations were found between caesarean section indications and pain levels.

CONCLUSION

The following conclusions are drawn from the current study. After an elective cesarean section, intentional nursing actions helped to elicit favorable changes in mothers' biophysiological health parameters. Planned nursing interventions improve mothers' respiratory function, gastrointestinal function, and lower extremity condition following elective CS. It also aids in alleviating the lochia issues. It had no effect on the vital signs, wound status, incisional pain, urinary function, or breastfeeding. Gravid status and the reason for the current CS with pain were the only notable connections between biophysiological health parameters and socio-demographic, obstetric, and biophysical factors.

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CONFLICT OF INTEREST

I hereby declare that, I have no conflicts of interest to disclose.

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