



MOBILITY MASTERS MATERNAL SATISFACTION DURING PARTURITION.

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Abstract

Background: Labor and delivery are normal physiological processes. This study is a non-pharmacological method to evaluate the effectiveness of mobility on parturition, maternal satisfaction and fetal outcome in labor room. Traditionally women were mobile in their comfort, but with an advance in science and technology, women are bound to labor table to monitor women and fetus by health care provider.

Methods: A pretest posttest control group design was adopted for the study and 60 primi parturient women who were in active labor without maternal and fetal complications were chosen who reported to labor room at Swami Dayanand Hospital Delhi. Validated and reliability tested structured tools were used to assess the parturition, maternal satisfaction and neonatal outcome after 24 hours of delivery.

Results: The result revealed that mobility intervention during 1st stage of labour was having significant effect on parturition ($p=.03$); and maternal satisfaction ($p=.001$). The neonatal outcome between the experimental and control groups were not significantly different.

Conclusion: Mobility was mastering maternal satisfaction during parturition and enhancing labor pain, reducing the duration of the first stage of labor with better maternal and foetal outcome that can be adopted as labor room guidelines during active labor.

Keywords: Mobility, labor progress, primi parturient, the first stage of labor

Introduction

Positive pregnancy experience and delivery is a dream for every woman, to achieve this, laboring women must be the center of care, enhancing their experience of pregnancy ensuring that babies have the best possible start in life. To achieve this goal we need innovative, evidence-based approaches to women in labor, that must aim for minimum intervention providing safety for mother and newborn. Modern Obstetrics has brought important advances in laboring process, that has reduced maternal and perinatal mortality, it has changed the way society looks upon parturition, but this does not necessarily mean that all measures are beneficial for mother and child. This study is one of the objectives of the pilot study.

Material and methods

Design and setting

A two-group post-test only design was adopted for this study which was conducted in the labor ward of a tertiary care Swami Dayanand Hospital Delhi.

Population, sample and sampling

The target population was primiparous women at 36-41 weeks of gestation, with single viable fetus, intact amniotic membrane and without any diagnosed maternal or fetal complications. Sixty women who reported to the labor room during the data collection period and fulfilled the inclusion and exclusion criteria were consecutively selected as study sample.

Instruments

The tools for data collection included a tool for measuring the socio demographic characteristics along with the clinical and obstetrical history of the women. Parturition of the women were assessed with the help of an observational tool comprising of two sections. Section A comprised of a checklist where the perineal outcome of the women was observed after delivery and scored by the researcher. It included observing the perineum in six aspects, namely 1st and 2nd degrees of tear, oedema, valval hematoma, episiotomy and any other perineal trauma. Women were given a score of 1 each for the absence of injuries in these 6 aspects. Therefore, the maximum possible score in Section A was 6. The Section B of this tool comprised of a checklist where the researcher noted the presence or absence of complications like Ante partum haemorrhage, intra partum and post-partum haemorrhage, presence of prolonged duration of labour (more than 20 hours between start of contraction and delivery of baby) and requirement of medical intervention for the birth of the baby.

The tool for measuring maternal satisfaction with labour and delivery comprised of three sections. The first section was regarding the mother's satisfaction regarding her perineal outcome, the second section was about her experience of pain and other events during labor and the last section was regarding the mother's experience with the new born baby, whether she faced any issue with initiating or maintaining breastfeeding. The total score of this tool ranged between 0-20 where higher score depicted higher level of satisfaction.

The content validity of the tools was checked by 8 experts in the field of Obstetrics and Gynecology, Nursing, child health and community health. The reliability of the observational tools was assessed through inter-rater reliability tests between the researcher and another independent observer, where both the researcher and the observer independently and simultaneously applied the instruments on the same patient on two occasions. There was 100% agreement between the researcher and the observer on both the occasions.

Data collection

Data was collected during the month of October-November 2021 from 60 consecutive women admitted in the labor ward and fulfilling the inclusion and exclusion criteria. Allocation of women to experimental and control group was done by recruiting women to the groups on alternate days of the week. The mobility intervention was carried out by the researcher for the experimental group who encouraged and supported the women in the first stage of labour to walk on the floor for approximately

20 minutes followed by a rest period of 10 minutes in left lateral position. The participant’s vital signs and the foetal heart rate was monitored at regular intervals and the expectant mother was allowed to rest whenever she felt the need. The duration and frequency of mobility was recorded in a mobility chart. WHO Partograph was also maintained during this period. The parturition, maternal and neonatal outcomes were assessed within after 24 hours of delivery.

Data analysis

Data analysis was carried out using MS excel. All continuous data were normally distributed and were expressed in Mean ± standard deviation (SD). Categorical data were expressed in frequencies. Inferential statistical tests of independent t test with unequal variance were used to test the difference in mean on the outcome variables.

Results

Table 1: Comparison of complications and medical interventions during delivery among the two groups

Complications /medical interventions	Experimental (n=30)	Control (n=30)
Prolonged labor	-	12
Caesarian section	01	03
Assisted delivery	02	03

Table 1 shows that none of the participants in the experimental group experienced prolonged labor whereas 12 of the participants in the control group experienced prolonged labor. The number of women required medical intervention like caesarean section or assisted delivery was also more in the control group in comparison to the experimental group. As none of the participants in both the groups experienced any hemorrhage or any other complications during labor and delivery it is not depicted in the table.

Table 2: Comparison of Perineal outcome score of experimental and control groups

Perineal outcome score	Experimental	Control	t test	dof	p value
Mean	5.3	5.1	2.25	58	0.03*
SD	0.48	0.31			

p<.05*

Table 2 shows the perineal outcome score of both the groups which was measured by examination and observation of the women’s perineum after delivery for signs of hematoma, tear, injury, and local bleeding. The perineal outcome score of the experimental group (Mean:5.3) is found to be better than that of the Control group (Mean: 5.1). This difference in the mean of the two groups is found to be statistically significant with p=.03. This indicates that the perineal outcome among the participants who underwent mobility intervention is significantly better than the perineal outcome of the control group.

Effect of mobility on Maternal Satisfaction

The maternal satisfaction was measured among all the participants in both the groups after 24 hours of delivery. Maternal satisfaction included the total of scores regarding her perineal outcome, experience of pain and other events during labor and the scores regarding the mother’s experience with the new born baby, whether she faced any issue with initiating or maintaining breastfeeding.

Table 3: Comparison of Maternal satisfaction scores between experimental and control groups

Maternal satisfaction	Experimental	Control	t test	dof	p value
Mean	19.2	18.5	4.37	58	0.001*
SD	0.66	0.57			

p< .001* significant

Table 3 shows that a two-tailed for independent group was used to test for differences in satisfaction score among women in experimental and control groups. The t test revealed that the mean satisfaction score in the experimental group (M: 19.2) was significantly more than the mean satisfaction score (Mean: 18.5) in the control group with $t(58) = -4.37, p = .001$. This indicates that the mobility intervention was effective in improving maternal satisfaction.

Discussion

This study was conducted among 60 primiparous women at 36-41 weeks of gestation, with single viable fetus, intact amniotic membrane and without any diagnosed maternal or fetal complications admitted in the labor room of a tertiary care Delhi Municipality hospital with the objective of testing the effectiveness of mobility during the first stage of labor on parturition, maternal satisfaction and neonatal outcome. The results of the study suggests that mobility intervention was significantly effective in the parturition and maternal satisfaction among the women in the experimental group in comparison to the women in the control group.

The American College of Obstetrics and Gynecologists in their 2017 committee guidelines for approaches to limit interventions during labor and birth has underscored that frequent position changes, ambulation and upright positions have beneficial effect for both the mother and the foetus without any known deleterious effect.¹ This finding is in accordance with a study which found that walking during labor helped the women in the experimental group to shorten their duration of labor.² The World Health Organization has been strongly recommending mobility, and upright position for augmentation of labor although the organization has acknowledged that the evidence in support of mobility is still weak.³

The result of this study also showed that mobility during the first stage of labor had a significant effect on maternal satisfaction. This finding is in concurrence with a number of studies in literature. A study conducted in South India reported similar findings where the participants exposed to ambulation reported having high level of satisfaction with their birthing and delivery experience.⁴ In another study 40% of the women who were allowed to ambulate during their first stage of labor expressed that mobility as a practice protocol should be adopted in the labor rooms and 50% of them wanted to recommend the practice of mobility to their friends and relatives as they felt less pain and discomfort by ambulating during the first stage.⁵ In this study maternal satisfaction and experience with childbirth is significantly affected by mobility intervention. This finding is noteworthy as a positive birthing experience, facilitated by mobility, can lead to improved mental well-being, confidence in future pregnancies, and a stronger bond with the child.

Being a pilot trial, this study could not follow all the protocols of a RCT. Based on the findings of this study it can recommended that mobility during the first stage of labor be accepted as a practice protocol in the labor rooms for women with uncomplicated pregnancies and labor.

Conclusion

The present study concludes that there is significant effect of Mobility during the active first stage of labour on the parturition and maternal satisfaction. It also indicates that mobility intervention is a safe intervention that can be adopted by midwives in the labour room.

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