

Effect of Holistic Nursing Interventions on Maternal Satisfaction about Labour

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Abstract

Pregnancy and labour are coupled experiences, an inseparable and invincible phase of every woman's life. Individual and environmental factors influence satisfaction in childbirth. The study aimed to identify the effect of holistic nursing interventions on maternal satisfaction about labour among women receiving obstetric care from a selected hospital in Kerala. The framework of the present study was based on Katharine Kolcaba's theory of comfort. The research approach was quasi-experimental with a post-test-only comparison group design. The study was conducted at Baby memorial hospital Kozhikode (Kerala) among 164 women with normal vaginal delivery, 80 in the intervention and 84 in the comparison group. The subjects were selected by random sampling of days of two months before and after the intervention from 15 December 2020 to 31 January 2021. Before the intervention, nurses were given training in holistic care during labour. Nurses implemented holistic nursing interventions in the labour room. The data were collected using a patient satisfaction with nursing care quality questionnaire. The study identified a significant increase in maternal satisfaction about labour among women after implementing holistic nursing interventions in the labour room ($p < 0.001$). This study concluded that a holistic nursing approach in intranatal care would benefit women in labour.

Key words: Nursing interventions, Katharine Kolcaba's theory of comfort, Intranatal care

All women love to cherish the experience of pregnancy and labour as it is a special, unique, and novel life event. Every woman expects labour to be a memorable bliss rather than a horror dream. Maternal and newborn care is given great importance globally. Many studies provide robust evidence of improved outcomes for mothers and babies when mothers are supported in labour. Satisfaction of the mother during labour directly influences the health of the mother and baby, the bonding between them, and family relations. The support given to the mother during labour will improve her coping ability; positive thinking about the labour experience increases satisfaction. The studies showed that positive maternal and newborn outcomes include a lower rate of analgesia and anaesthesia use, lower operative birth rates, shorter duration of labour, better APGAR scores, increased maternal satisfaction with the birthing process, improved mother-newborn bonding, effective breastfeeding, and much more (Sauls, 2002; Hodnett et al, 2013).

Need and significance of the study

One of the critical indicators of quality maternal care is maternal satisfaction. A systematic review revealed that good physical environment, cleanliness and availability of adequate human

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resources, medicine and supplies, interpersonal behaviour, privacy, promptness, cognitive care, care and support received, competency of health care providers, emotional support, and health status of mother and newborn were the critical determinants of maternal satisfaction (Hodnett et al, 2013). A holistic approach to nursing care of women in labour is safe and cost-effective (Dossey, 2013). Moreover, it provides autonomy for nurses (Zamanzadeh et al, 2015).

The present caregiving system remains mainly physical and mechanical, not in a holistic way. During the professional experience of the investigators, it was found that many women considered labour a traumatic experience and expressed dissatisfaction about intrapartum care. Hence this study was an attempt to provide a satisfying experience to women in labour through the holistic dealing of the attending nurses, thereby ensuring better satisfaction among women with their childbirth experience. It sought to assess the effect of holistic nursing interventions on maternal satisfaction about labour among women receiving obstetric care from a selected hospital in Kerala.

Objectives

The study endeavoured to:

1. Identify the maternal satisfaction about labour among women receiving obstetric care.

2. Evaluate the effect of holistic nursing interventions on maternal satisfaction about labour among women receiving obstetric care.
3. Identify the association between maternal satisfaction about labour with selected variables.

Review of Literature

Client satisfaction is the major indicator of the quality of health care delivery. It is the measure of care quality and provides valuable insight among healthcare providers about the effectiveness of their care. A study conducted in Iran to identify the relationship between Iranian patients' perception of holistic care and satisfaction with nursing care validates the positive influence of holistic care on patient satisfaction. The study results showed that there was a significant positive correlation between patients' perception of holistic care and overall satisfaction with nursing care ($p \leq 0.01$, $r = 0.032$) (Ng & Luk, 2019).

Another interventional study was conducted in Iran on the effect of supportive communication and educational programmes on women's satisfaction with the childbirth experience. The result showed that the mean satisfaction score in the interventional group was higher than the control group, and it was statistically significant ($p < 0.001$) (Moudi et al, 2019). A randomised two-group controlled clinical trial on the effect of labour support from a close female relative on labour and maternal satisfaction was conducted in Thailand. The satisfaction score for the experimental group and control group was tested using an independent t-test. It indicated a significant difference between groups ($p < 0.01$). The women in the experimental group (M 53.6, SD 8.4) were more satisfied than the control group (Yuenyong et al, 2012).

An RCT was conducted on the efficacy of an educational manual for childbirth companions. The result indicated that companions in the interventional group did support actions more effectively in the intervention group (72 ± 1.8) than in the control group (4.6 ± 2.5) ($p < 0.001$). The satisfaction of women after delivery was assessed, and it showed that women who had companions had more self-control, self-confidence, pleasure, and satisfaction with the experience of childbirth (Teles et al, 2018).

A systematic review and meta-analysis on non-pharmacologic approaches to women's childbirth experience was published in 2019. It was evident that patient-centred non-pharmacological intervention has a positive effect on women's experience of labour (Ghanbari-Homayi et al, 2021).

A quasi-experimental study was conducted regarding supportive care provided by companions during childbirth and its effect on labour progress and maternal satisfaction at Al-Azhar University Hospital labour units. The study group had a shorter duration of labour in the first stage ($p < 0.003$) and second stage ($p < 0.002$); there was better satisfaction (98.7%) with the labour process and the care provided when compared with the maternal satisfaction of the control group (20%) ($p < 0.001$) (Younes et al, 2020).

Methodology

The study aimed to identify the effect of holistic nursing interventions (HNI) on maternal satisfaction about labour. The framework developed for the present study is based on Katharine Kolcaba's theory of comfort (Younes et al, 2020 et al; Khan, 2017). The research design was a quantitative quasi-experimental post-test-only comparison group design. The study was conducted in the pre-labour room, labour room and post-natal wards of Baby Memorial Hospital, Kozhikode city. This institution is a 600-bed, multi-speciality hospital. Women who had normal vaginal delivery in the first 12 hours of the post-natal period were selected for the study. The sample size was calculated on the variable maternal satisfaction based on the finding of Aghlmand et al (2008); 164 subjects who met the inclusion criteria were selected (84 in comparison and 80 in intervention group). In the hospital on average 8 to 10 deliveries per day occur, and among these 4 to 5 were normal vaginal deliveries.

The data collection period was 2 months each for both the comparison group and intervention group. Simple random sampling of days of two months (60 days) was done for both groups. So, 20 days were needed to achieve the estimated sample size of 80 in each group. Days were selected by using the lottery method from 60 days for both groups. All the subjects who met the inclusion criteria on those particular days were included in the study. The tools used consisted of a socio-personal data sheet and a patient satisfaction with nursing care quality questionnaire (PSNCQQ Scale) (Laschinger, et al, 2005). PSNCQQ was a standardised tool with Cronbach α reliability of 0.97.

Holistic Nursing Interventions (HNI)

It includes a group of systematically planned activities to strengthen the nursing care rendered during the intrapartum period and to ensure the provision of quality intrapartum care. It consisted of equipping nurses to render HNI, preparation of women to undergo the labour process and the provision of audio analgesia (music therapy) during labour.

Preparation of nurses included small group (2 to 3) teaching regarding concepts of the holistic

model of health care, holistic nursing practice and the components of holistic intrapartum care. This was imparted through lecture-cum-discussion using power point for 45 minutes duration. Knowledge of nurses, regarding HNI was assessed before and after the session using a questionnaire. The investigator had given support and guidance to nurses to provide holistic intrapartum nursing care. Periodic observation of nurses' activities was done to ensure their competence in HNI using an observation checklist. When the observation checklist score was consistently more than 80 percent, it was considered that nurses were competent to provide HNI. Preparation of women to undergo the labour process included the provision of a self-instructional booklet regarding the preparation of labour for self-learning at the time of admission for labour which helped to orient women regarding preparation for the labour process, newborn care, common procedures performed in the labour room and self-directed relaxation techniques during labour. Audio analgesia consisted of 10 music tracts, which combined seven tracks from Indian instrumental music under the ragas - Kalavathi, Durga, Darbari, and Hansadhvani - with three tracks of Western instrumental music, which is soothing and relaxing and has been used in many studies.

Data Collection

The data collection period was from 15/1/2020 to 31/1/2021. The study started with the comparison group. After getting informed consent from subjects, questionnaires on socio-personal data and the PSNCQQ scale were given. 84 subjects were included in the comparison group for two months. During this period, the researcher also assessed nursing care delivery in the labour room using an observation checklist. From 1/9/2020 to 31/11/2020 (three months), the researcher implemented HNI in the labour room.

There were 24 nurses in the labour room and pre-labour room. The researcher equipped the nurses to implement HNI for women in labour based on the protocol prepared by the investigator. At the same time, all the women admitted for labour in the hospital were provided with a self-instructional booklet regarding labour preparation at the time of admission for self-learning. Audio analgesia was provided using a centralised music system in the labour room throughout 24 hours of the day during the study period. During this period researchers observed the nursing care quality in the labour room using an observation checklist. When the score of the checklist was consistently more than 80 percent for a week, it was inferred that nurses were well equipped in the implementation of HNI. Then only data collection among the intervention group was

started. Data were collected in the intervention group same as a comparison group. That was from 1/12/2020 to 31/1/2021. There were 80 subjects in the intervention group.

Ethical consideration: The institutional ethical committee of Baby Memorial Hospital approved the study on 5 May 2017.

Results

The study was conducted on 164 subjects, 84 in the comparison group and 80 in the intervention group. Socio-personal characteristics of subjects showed that the highest percentage (45.2%) of subjects in the comparison group was in the age group of 23- 26 years, and the highest rate (36.3%) of subjects in the intervention group was in the age group of 27- 30 years. More than half (56.0%) of the subjects in the comparison and intervention groups (63.7%) belonged to the nuclear family. The majority of subjects (72.6%) in the comparison group and intervention group (82.5%) had completed the degree programme. Most subjects (70.2%) in the comparison group and intervention group (70.0%) were homemakers. The highest percentage of subjects in the comparison and intervention group was primipara (41.7% and 40.0%, respectively). More than half of the subjects in the comparison and intervention group had no previous history of hospital stay in the present hospital (51.2% and 56.5%, respectively). The highest percentage of subjects (39.8%) in the comparison group revealed that they selected the present hospital because it was near their home. More than half of the subjects (53.8%) in the intervention group indicated they preferred the current hospital for its excellent reputation. Groups were homogenous in all aspects of demographic variables (χ^2 test).

Table 1: Frequency and percentage distribution of maternal satisfaction score of women undergoing labour (n₁= 84, n₂= 80)

Grading	Comparison group			Intervention group	
	Score	Frequency	Percentage	Frequency	Percentage
Poor	<66	19	22.6	-	-
Good	66-87	54	64.3	-	-
Excellent	88-115	11	13.1	80	100

The data about maternal satisfaction with labour among women who received obstetric care indicated that in the comparison group, only 13.1 percent of subjects were in the excellent category. But in the intervention group, 100 percent of the subjects were in the excellent category (Table 1).

Table 2: Item-wise analysis of PSNCQQ scale among subjects in comparison and intervention groups (n₁= 84, n₂= 80)

Sl. No.	Items	Comparison group		Intervention group	
		Excellent/Strongly agree		Excellent/Strongly agree	
		f	%	f	%
1	Information you were given	5	6.0	75	93.8
2	Instructions	10	11.9	73	91.3
3	Ease of getting information	5	6.0	73	91.3
4	Information given by nurses	2	2.4	74	92.5
5	Informing family or friends	4	4.8	66	82.5
6	Involving family or friends in your care	2	2.4	69	86.3
7	Concern and caring by nurses	10	11.9	68	85.0
8	The attention of nurses to your condition	7	8.3	65	81.3
9	Recognition of your opinions	4	4.8	70	87.5
10	Consideration of your needs	6	7.1	72	90.0
11	The daily routine of nurses	3	3.6	68	85.0
12	Helpfulness	4	4.8	68	85.0
13	Nursing staff response to your calls	4	4.8	70	87.5
14	Skill and competence of nurses	7	8.3	66	82.5
15	Coordination of care	6	7.1	69	86.3
16	Restful atmosphere	4	4.8	67	83.8
17	Privacy	5	6.0	69	86.3
18	Discharge instructions	4	4.8	70	87.5
19	Coordination of care after discharge	4	4.8	72	90.0
20	Overall quality of care and services	6	7.1	77	96.3
21	Overall quality of nursing care	1	1.2	77	96.3
22	In general, how would you rate your health	3	3.6	76	95.0

In the comparison group for all items of the PSNCQQ scale, very few subjects (<12 %) were in the excellent category (Table 2). However, in the intervention group, most subjects were in the excellent (> 80 %) category.

Table 3 indicated that the mean maternal satisfaction score was higher among subjects in the intervention group (111.88 ± 3.70) than the mean maternal satisfaction score among subjects in the comparison group (73.74 ± 11.83). There was a significant difference in the mean maternal satisfaction score (t=26.973, p< 0.001) among subjects in the comparison and intervention groups. It was inferred that HNI was effective in improving maternal satisfaction about labour.

There was no association between the maternal satisfaction score of subjects in the comparison group with selected demographic variables such as age ($\chi^2 = 3.055$, p> 0.05), educational qualification ($\chi^2 = 1.338$, p> 0.05), occupation ($\chi^2 = 2.659$, p>0.05) and number of deliveries ($\chi^2 = 1.192$, p> 0.05).

A significant association between the maternal satisfaction score of subjects in the intervention group and with number of deliveries ($\chi^2 = 10.288$, p <0.05). However, there was no association between the maternal satisfaction score of subjects in the intervention group with selected demographic variables such as age ($\chi^2 = 2.376$, p> 0.05), educational qualification ($\chi^2 = 1.371$, p> 0.05) and occupation ($\chi^2 = 6.451$, p>0.05).

Discussion

The present study findings showed maternal satisfaction about labour among women who received HNI during labour had better satisfaction than the comparison group (t=26, 973, p <0.001). The study findings were incongruence with evidence of previous studies conducted.

The result of the randomised study to identify the effect of patient-centred care on women's satisfaction with childbirth experience (Zamanzadeh et al, 2015) indicated that the mean

Table 3: Significance of difference in the mean maternal satisfaction score among subjects in the comparison and intervention groups (n₁= 84, n₂= 80)

Groups	Mean	SD	Mean difference	Independent 't' value	p-value
Comparison group	73.74	11.83	38.14	26.973	<0.001***
Intervention group	111.88	3.70			

*** Significant at 0.001 level

maternal satisfaction score in the intervention group was higher than the control group ($p < 0.001$). Another study by Yuenyong et al on the effect of labour support from close relatives on labour and maternal satisfaction also revealed the importance of individualised care during labour to improve maternal satisfaction ($p < 0.01$) (Ng & Luk, 2019). The findings of the present study were also supported by a randomised trial on the efficacy of educational manuals for childbirth companions (Moudi et al, 2019). Systematic review and meta-analysis on non-pharmacologic approaches to the experience of women's childbirth experience (Yuenyong et al, 2012) support the present study interventions and findings. The same study findings were reported in a randomised trial on the effect of a formalised approach on birth outcomes (Moudi et al, 2019). The congruence with the other study findings indicates the generalisability of the present study.

Nursing Implications

Holism has come into healthcare delivery for a long. However, the actual implementation of the core aspects of holistic care has yet to happen. All nurses should be equipped to provide holistic care to all women who come to them for care. Holistic, collaborative intrapartum care is considered to be the most effective approach for providing safe and comfortable labour, and thereby positive feelings and better satisfaction among women during pregnancy and labour. The nursing students also have to be trained in patient-centred care and holistic nursing interventions to improve their ability to provide quality care to women in labour. The nursing care system should shift to more holistic approaches to make pregnancy and labour a less traumatic experience.

Recommendations

Randomised controlled trials can be conducted to evaluate the effectiveness of holistic nursing interventions compared to standard care.

The impact of different types of holistic nursing interventions on maternal satisfaction and labour outcomes can be investigated.

Future research could explore the impact of holistic nursing interventions on the experiences of healthcare providers who deliver obstetric care.

Conclusion

The study on the effect of HNI on maternal satisfaction about labour showed that HNI positively influenced maternal satisfaction about labour. The study findings could be incorporated into nursing practice for better maternal-foetal outcomes.

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