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Effectiveness of video assisted labour process teaching on intrapartum behaviour among primiparturients during active labour

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Abstract

Midwives are the best agents responsible for making labour event as a joyful and cheerful experience to cherish throughout women's life. Reducing anxiety and gaining confidence by enhancing knowledge about childbirth can be considered an important factor in influencing a primiparturient's intrapartum behaviour and birthing experience. Educating the women regarding labour events, roles to be performed during labour process facilitates effective intrapartum coping behaviour.

Methodology: An experimental study was conducted to assess the effectiveness of a video assisted labour process teaching on intrapartum behavior among primiparturients during active labour in selected maternity units of tertiary care hospitals of Western Maharashtra. Total 88 primiparturients having singleton pregnancy at and above 37 weeks of gestation were selected through purposive sampling technique followed by random allocation into experimental (n=44) and control group (n=44) by chit method. Tool used was Intrapartum Behavioural Observation Rating Scale for assessing intrapartum behaviour. Video was administered during latent labour to the primiparturients in experimental group. Intrapartum behavior among primiparturients was assessed during active labour.

Results: The mean intra-partum behavior score increased from 28.45±19.756 in control group to 68.55±21.521 in experimental group ($p < 0.0001$).

Conclusion: Study revealed that video assisted labour process teaching as an effective method of promoting effective intrapartum behavior among primiparturients during active labour. Also, it is a cost effective method and can be used by midwives independently to develop maternal confidence and effective intrapartum coping strategies during labour.

Keywords: Primiparturients, Intrapartum behavior and Video assisted labour process teaching

Introduction

Motherhood is one of the best things to happen in a women's life and the highest honour which she ever receives in her life. The physiological transition from pregnancy to labour involves sequence of events demanding a high degree of adaptations both physically and psychologically^[1]. The experience of childbirth plays a major role in how first-time mothers will develop good self-esteem, positive feelings for the baby, and an easier adjustment to motherhood role and also future child birth experiences^[2].

Nothing brings more joy to a family than the birth of a child^[3]. Having had fantasies about pregnancy and motherhood when confronted with the reality many of them doubt their ability to cope with this great event in their lives^[4]. Inappropriate mental and physical preparation especially among primiparturients regarding the birthing process can leave her in state of anxiety, dilemma and fear of the unknown.

Midwives have an important and significant impact on the labour outcome and birthing experience of women. She is the guardian of eutocia and stimulates the physiological evolution of the pregnancy, birth and postpartum^[5].

Problem statement

Effectiveness of a video assisted labour process teaching on intrapartum behaviour among primiparturients during active labour in selected maternity units of tertiary care hospitals of Western Maharashtra.

Objectives

1. To assess the intrapartum behaviour during active labour in experimental and control group.

2. To compare the intrapartum behaviour between experimental and control group.
3. To assess the association between intrapartum behaviour during active labour with selected demographic variables in both experimental and control group.

Assumption

1. Primiparturients are anxious and fearful of her first experience undergoing childbirth.
2. In latent labour primi parturient is well adjusted to her pregnant status and is willing and receptive to childbirth education
3. Imparting knowledge among primiparturients regarding labour process during latent phase reduces anxiety.
4. Primiparturients undergoing childbirth education during latent phase will demonstrate effective intrapartum coping behaviour.

Hypothesis

- **H₀ (1):** There is no difference in intrapartum behaviour during active labour among experimental and control group
- **H₀ (2):** There is no association between intrapartum behaviour during active labour among primiparturients with selected demographic variables in both

experimental and control group.

Inclusion Criteria

- Primiparturients age >18 years
- Primi parturient at & above 37 weeks POG
- Willing to participate in the study
- Primiparturients women in latent phase of labour

Exclusion Criteria

- All high risk primiparturients with diagnosed risk – Medical/ Surgical/ Obstetric/ gynaecological complications
- Conceived after infertility treatment (ART)
- Diagnosed case of anxiety disorders

Ethical Aspects

- Ethical committee approval obtained
- Informed written consent taken
- Followed ICMR ethical guidelines throughout the study

Methodology

In order to achieve the objectives the approach selected was quantitative and design used was Experimental, Post test Only Control Design. Sample size comprises of 88 primiparturients (44in experimental and 44 in control group) fulfilling the inclusion and exclusion criteria.

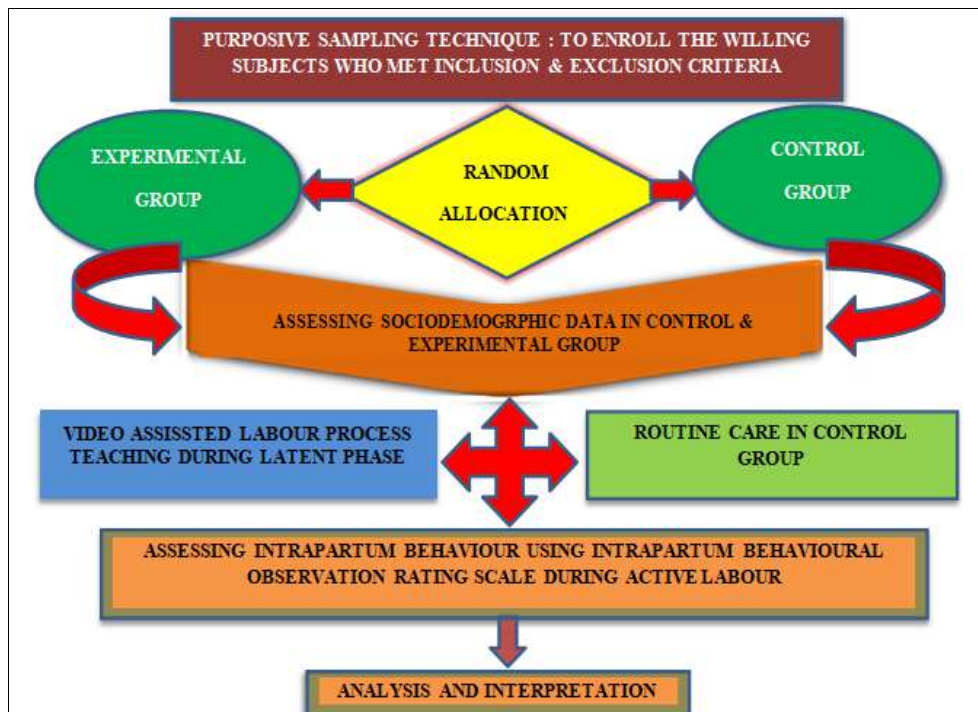


Fig 1: Schematic representation of research methodology

The tool had two sessions. Intrapartum behavior was assessed using three point observational scale always, sometimes, never.

Table1: Description of tool

Section	Content	Item No	Score
Section A	Socio demographic and obstetric characteristics	7	-----
Section B	Intrapartum Behavioural Observation Rating Scale	50	Total Score = 100
	• First stage of Labour	1-26	>75=Excellent Behaviour
	• Second stage of Labour	27-42	50-75=Good Behaviour
	• Third stage of Labour	43-46	25-50=Average Behaviour
	• Fourth stage of Labour	46-50	<25=Poor Behaviour

Based on the calculation of Content Validity Index (CVI) of each item by the experts, the statements in the tool was accepted, rejected and modified before final preparation of the tool. Equivalence was established by the inter rater reliability test for Intrapartum Observational Behaviour

Rating Scale. The calculated Cohen’s Kappa value for Intrapartum Behavioural Observation Rating Scale is 0.737 which represents substantial agreement among raters. Video assisted labour process teaching for primiparturients was administered during latent phase of labour.

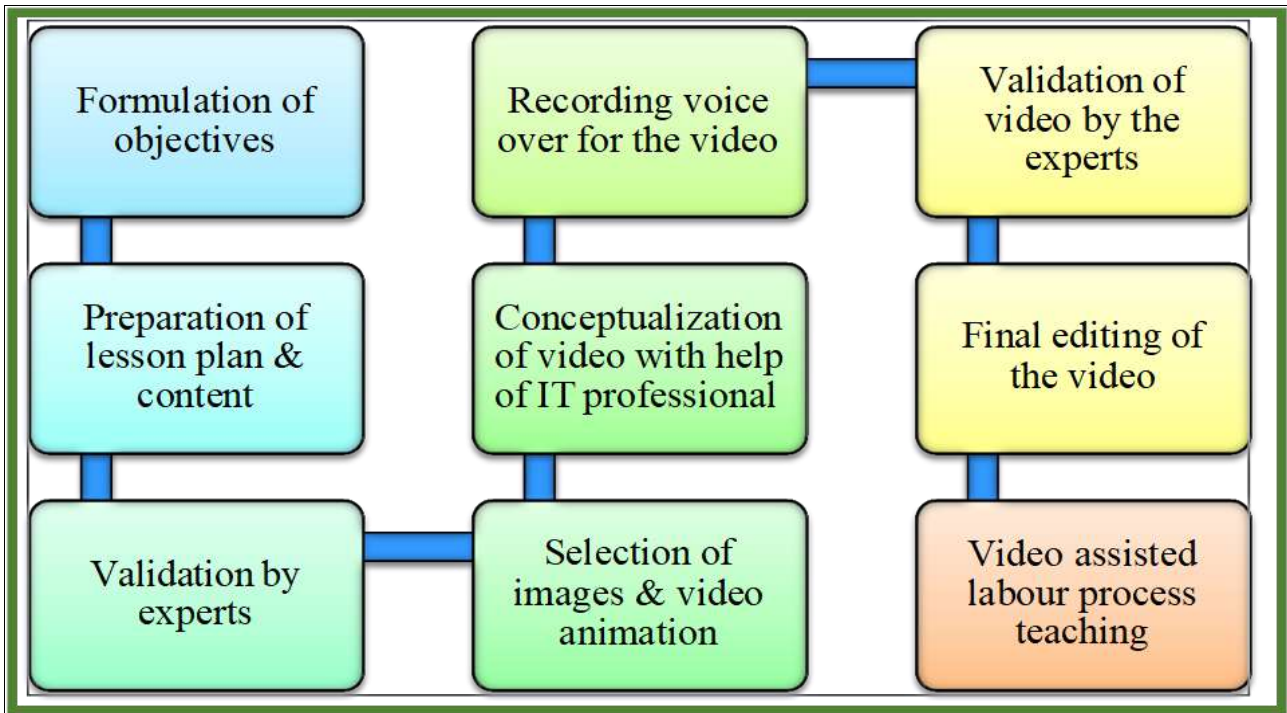


Fig 2: Steps of Video development

The duration of the video teaching is 6 min with the voice over by researcher and video assisted labour process teaching was conducted by nursing officer in charge of labour room. The research was approved by the

administrative authorities. Informed consent was taken from all the study participants during the study.

Results

Table 2: Distribution of subjects as per socio demographic variable

Socio-Demographic Variable	Parameter	Experimental (n=44) Frequency (%)	Control (n= 44) Frequency (%)
Age(Years)	18 – 23	18(40.9)	30(68.2)
	24 – 29	21(47.7)	11(25)
	30 – 35	3(6.8)	3(6.8)
	>35	2(4.5)	0
Level of education	Secondary	16(36.4)	11(25)
	Higher secondary	9(20.5)	27(61.4)
	Graduate & above	19(43.2)	6(13.6)
Occupation	House wife	37(84.1)	35(79.5)
	Govt. employee	0	3(6.8)
	Private employee	7(15.9)	6(13.6)
Type of family	Nuclear	11(25)	13(29.5)
	Joint	33(75)	31(70.5)
No of antenatal visits	<4	2(4.5)	4(9.1)
	>4	42(95.5)	40(90.9)
Period of Gestation in completed weeks	38	5(11.4)	7(15.9)
	39	18(40.9)	28(63.6)
	40	14(31.8)	9(20.5)
	>40	7(15.9)	0
Any prior information Regarding labour process	Yes	25(56.8)	27(61.4)
	No	19(43.2)	17(38.6)
Sources of information	Family members	18(40.9)	12(44.4)
	Antenatal visit	0	1(3.7)
	Online antenatal Training programmes	7(15.9)	14(31.8)
	No	19(43.2)	17(38.6)

Intra-partum behaviour score during active labour in experimental group shows that 40.9% obtained excellent, 36.4% good, 15.9% average and 6.8% obtained poor intrapartum behaviour score. Intrapartum behaviour score during active labour among primiparturients in control group revealed that 59.1% had scored below 25, 29.5% had scored between 26-50, 6.8% scored in between 51-75 and only 4.6% scored above 75 intrapartum behaviour score.

Table 3: Assess the intra-partum behaviour during active labour in experiment group

Behaviour score	No of cases	Percentage
0 – 25 (Poor)	3	6.8
26 – 50 (Average)	7	15.9
51 – 75 (Good)	16	36.4
76 – 100 (Excellent)	18	40.9
Total	44	100

Table 4: Assess the intra-partum behaviour during active labour in control group

Behaviour score	No of cases	Percentage
0 – 25 (Poor)	26	59.1
26 – 50 (Average)	13	29.5
51 – 75 (Good)	3	6.8
76 – 100 (Excellent)	2	4.5
Total	44	100

Table 5: Comparison of intrapartum behaviour in experimental and control group

Parameter	Experimental		Control		MW test Z Value	P Value
	Mean	SD	Mean	SD		
Intrapartum behavior score	68.55	21.521	28.45	19.756	6.50	<0.0001

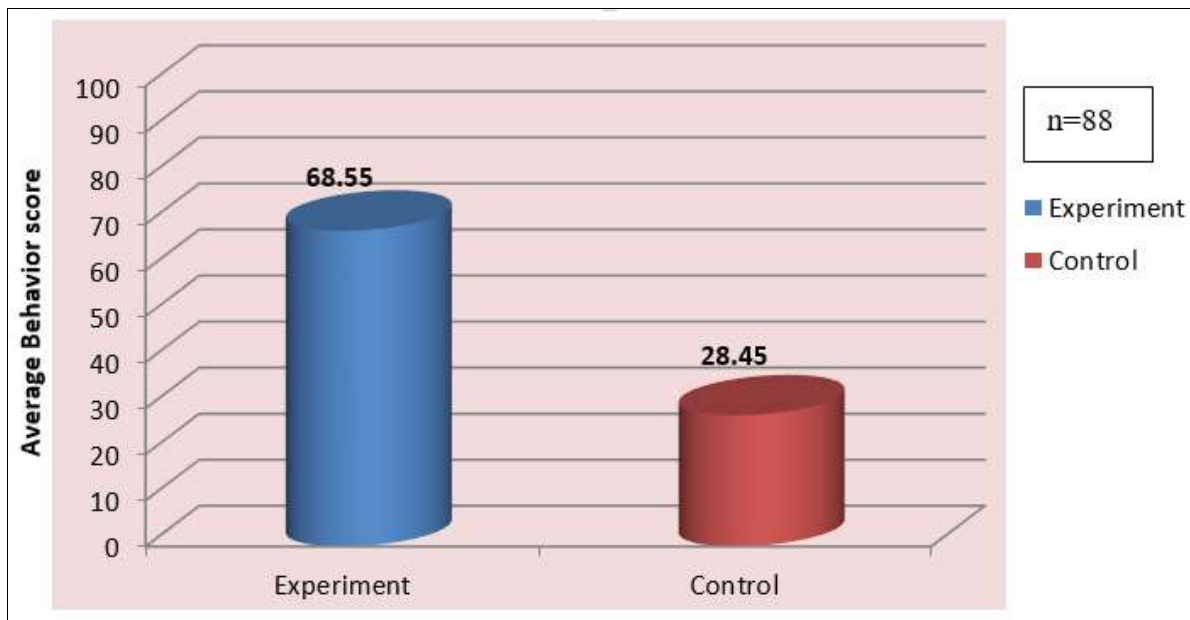


Fig 3: Comparison of intrapartum behaviour in experimental and control group

Comparison of intra-partum behaviour in experimental and control group revealed that mean behaviour score is 68.55 with SD 21.521 in experimental group whereas the mean behaviour score in control group is 28.45 with SD 19.756

which proves the effectiveness of video assisted labour process teaching in promoting the effective intrapartum behaviour in experimental group.

Table 6: Association of intrapartum behavior with selected demographic variables

S. N	Socio Demographic Variable	Experiment Group		Null Hypothesis	Control Group		Null Hypothesis
		F- Value P- Value	Z- Value P- Value		F- Value P- Value	Z- Value P- Value	
1.	Age	F= 0.68 P= 0.51	-	Accepted	F= 0.32 P= 0.73	-	Accepted
2	Educational Qualification	F= 0.66 P= 0.52	-	Accepted	F= 3.21 P= 0.05	-	Rejected
3	Occupation	-	Z= 0.80 P= 0.42	Accepted	-	Z= 1.28 P= 0.29	Accepted
4	Type Of Family	-	Z= 0.75 P= 0.46	Accepted	-	Z= 0.06 P= 0.95	Accepted
5	No. Of Visits	-	Z- 1.58 P- 0.11	Accepted	-	Z= 0.16 P= 0.87	Accepted
6	POG	F- 0.34 P- 0.79	-	Accepted	F= 5.87 P= 0.006	-	Rejected
7	Prior Information	-	Z- 0.23 P- 0.82	Accepted	-	Z= 0.92 P= 0.36	Accepted

In majority there was no association between socio-demographic variables of the study with intrapartum behaviour except level of education and period of gestation in control group. Since the computed F value of ANOVA for level of education and period of gestation is 3.21 and 5.86 at level of significance $p=0.05$ and $p=0.006$ respectively, there is statistical significant association of level of education and period of gestation with intrapartum behaviour in control group.

Discussion

The findings are in line with the study conducted by Podder L to assess the effectiveness of video assisted child birth education Programme on knowledge, intra-partum behaviour, maternal and foetal outcome among 350 primigravida mothers and associate the findings with demographic variables. The analysis revealed that average intra-partum behaviour score of experimental group was 98 and 79.8 for control group. Z-value for this comparison was 12.7 which was statistically significant at the level of significance $p = 0.000$, which was less than 0.05 [1].

The study outcomes were congruent with the study conducted by Wan Yimlp in 2009 conducted to test the effectiveness of an educational intervention to improve women's ability to cope with childbirth. The independent samples t-test showed that the experimental group reported a significantly higher level of coping behaviour during labour than the control group [mean for experimental group was 48.94 (SD 7.9) vs. 44.99 (SD 0.91) for control group; $t(133) = 2.92$, CI: 1.27–6.65, $p < 0.01$]. This revealed that the

experimental group was able to demonstrate higher level of self-efficacy for childbirth and greater performance of coping behaviour during labour [6].

Marina Jones N V *et al.* (2018) conducted a true experimental study to assess the Effectiveness of video assisted teaching regarding labour process on anxiety and pain perception among primi parturient mothers at government general hospital, Kancheepuram district. The sample size for the study was 60 primi parturient mothers, out of which, 30 of them were allotted to study group and 30 to control group. Standardized Zung self-rated anxiety scale was adopted to assess the anxiety level of primi parturient mothers. Visual analogue categorical numerical pain scale was used to assess the pain perception of primi parturient mothers. With respect to the pretest level of anxiety of primi parturient mothers in study group, 12(40%) of them were normal, 7(23.3%) had mild to moderate level of anxiety, 11(36.7%) had marked to severe level of anxiety. Considering the control group, 5(16.7%) were normal; 12(40%) had mild to moderate level of anxiety 10(33.3%) had marked to severe level of anxiety and 3(10%) had extreme level of anxiety. The study results showed that, there was statistically significant difference found in posttest level of anxiety and pain perception among primiparturient mothers between study and control group at $p=0.001$ level. The findings were concordant with the results of the present study which revealed video assisted labour process teaching was effective in promoting intrapartum behaviour during active labour at level of significance $p < 0.0001$ [3].

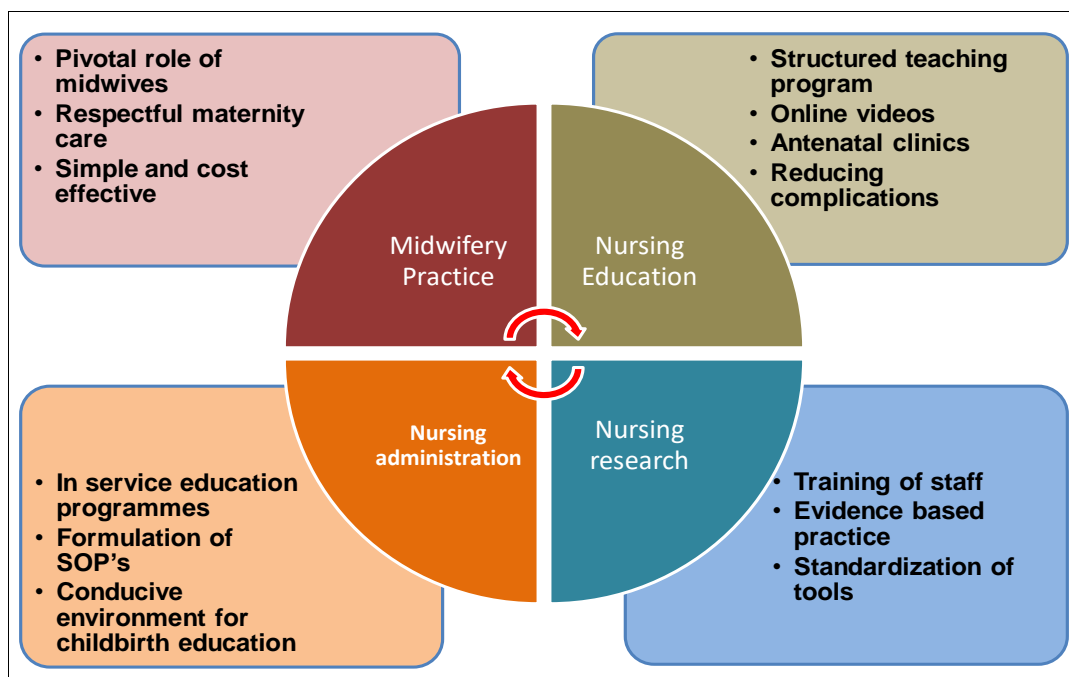


Fig 4: Implications of the study

Strength of the Study

- Double blinded study
- Video assisted teaching tool – effective in promoting intrapartum behaviour
- Cost effective and can be used independently by the midwives
- Promoting nursing led programmes

Limitations of the Study

- Permission to conduct study in various tertiary level hospitals setting was not granted in view of Covid 19 pandemic. Hence tertiary level hospital was selected conveniently.
- Purposive sampling was adopted to enrol the study subjects as the number of cases reported to labour was comparatively less than previous years due Covid 19 pandemic.

Conclusion

The present study results revealed that video assisted labour Process teaching administered during latent labour among primiparturients was effective in promoting positive intrapartum behaviour during active labour. There is a statistically significant association of level of education and period of gestation with intrapartum behavior. This is a clinically significant study recommended to be incorporated in evidence based practice to enhance the maternal and fetal outcome.

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