



Effectiveness of Warm Compress on Pain Among Primi Mothers with First Stage of Labour Admitted in Labour Room

Preeti Bahuguna¹, Laxmi Kumar², Gomathi B²

¹M.Sc. Nursing Student, ²Assistant Professor
Himalayan College of Nursing, SRHU, Dehradun, India

ABSTRACT

A quantitative quasi experimental with time series design study was undertaken to assess the effectiveness of warm compress on pain among primi mothers with first stage of labour admitted in labour room of selected hospital, Dehradun, uttrakhand. The study was conducted on 60 primi mothers which were randomly divided into two groups (30 in each experimental group and control group) and samples were selected through purposive sampling technique. The study was explained to participants and consent was taken. The data was collected by Wong baker facial pain scale to assess pain. Warm compress was administered for 15 minutes at half an hour interval till the mother was in the labour room for experimental group. After each intervention assessment of pain was done for both groups at four times. The result showed that there was no significant difference between both the groups at baseline pain score $p = 0.88$ whereas there was significant difference between both the groups at after 45 minutes, after 90 minutes, after 135 minutes and after 180 minutes pain score was $p = 0.0001$. The study concluded that warm compress were cheap and easy to use by everyone, even it can also be used in the home care setting by the mother's attendant and also it shows effective outcome of pain reduction. Based on the finding it is advisable to the staff nurses and the student to use this method in the practice areas to reduced the pain of the mother during childbirth.

Keyword: Effectiveness, warm compress, pain, primi mothers, first stage of labour, labour room.

I. INTRODUCTION

The childbirth experience is an important process in every woman's life.¹ Pain in labour is nearly universal

experience for the child bearing woman. A warm compress is one of the non-pharmacological method which is used to maintenance of body temperature and to improve the circulation of the body area.²

NEED OF STUDY

Pain is a complex phenomenon which is difficult to understand. It is an abstract and unpleasant feeling which is individual specific.³ It has been observed that nurses & midwives pay a little attention to manage labor pain and they should do their routine nursing care assessment as hourly vital signs assessment and hourly fetal heart rate monitoring without attention to labor pain. They see labor pain as natural phenomena occur to each woman.⁴ one of the popular non-pharmacological techniques is heat therapy applied to the sacral-perineal area during labor. Because heat dilates blood vessels and raises blood flow, it can influence the transmission of pain impulses and can increase collagen elasticity.⁵

PROBLEM STATEMENT

“A Study to assess the effectiveness of warm compress on pain among primi mothers with first stage of labour admitted in labour room of selected hospital, Dehradun, Utrakhand.”

OBJECTIVES

1. To assess the effectiveness of warm compress on pain by comparing experimental and control group.
2. To find the association between pain with their selected personal profile.
3. To assess the opinions of mothers regarding warm compress in experimental group.

HYPOTHESES

All hypotheses were tested at $p < 0.05$ level of significance

H₁ – There would be significant reduction in the mean pain score among primi mothers in experimental group than in control group.

H₂– There would be significant association between pre interventional pain score with selected personal profile of primi mothers.

II. METHODOLOGY

The research design used in this study was quasi experimental with time series design. The study was conducted at Himalayan Hospital, Dehradun, Uttarakhand. 60 primi mothers were randomly assigned into 30 in experimental and 30 in control group through purposive sampling technique. The data was collected by Wong baker facial pain scale to assess pain. Women were explained the procedure and purpose of the study & written informed consent was taken. Warm compress was administered for 15 minutes at half an hour interval till the mother was in the labour room for experimental group. After each

III. RESULT

The analysis and interpretation of the observation are given in the following section.

3.1 Section I:

Description of personal profile of study participants

intervention assessment of pain was done for both groups at four times. The data were collected with the help of various tools consisting:

Section A. Personal profile:

consists of Age, Educational status, Occupational status, Area of living, Type of family, Presentation of fetus, Gestational age, Onset of labour and Life style pattern.

Section B. Wong baker facial pain scale

Section C. Opionionnaire:

To assess the opinion of experimental group regarding warm compress.

The content validity of the tool was ensured by giving the tool to experts in the field of nursing and medical. Reliability of tool was established by inter observation method with Karl Pearson test. The reliability of Wong baker facial pain scale was $r = 0.84$.

Table no. 1: Frequency and percentage distribution of personal profile of study participants.

N= 60

S. No.	Personal profile	Experimental Group		Control group		Homogeneity	
		Freq.	%	Freq.	%	χ^2	p-value
1.	Age (in years)					0.901	0.371*
	a) 19-27 years	22	73.3	22	73.3		
	b) 28-36 years	08	26.7	08	26.7		
2.	Educational status					6.825	0.271*
	a) No formal education	02	6.67	00	0		
	b) Primary education	02	6.67	04	13.33		
	c) Secondary education	07	23.33	07	23.33		
	d) Graduation & above	19	63.33	19	63.34		
3.	Occupational status						0.225*
	a) Housewife	23	76.67	26	86.67		
	b) Working	07	23.33	04	13.33		
4.	Area of living						0.678*
	a) Urban	18	60	22	73.33		
	b) Rural	12	40	08	26.67		
5.	Type of family						1.000*
	a) Nuclear	08	26.67	07	23.33		
	b) Joint	22	73.33	23	76.67		
	c) Extended	00	0	00	0		

6.	Presentation of fetus						
	a) Cephalic presentation	25	83.33	28	93.33	1.417	1.000*
	b) Breech presentation	04	13.34	02	6.67		
	c) Transverse presentation	01	3.33	00	0		
d) Oblique presentation	00	0	00	0			
7.	Gestational age (in weeks)					0.472	0.639*
	a) < 37 weeks	11	36.7	09	30		
	b) > 37 weeks	19	63.3	21	70		
8.	Onset of labour					0.475	0.713
	a) Spontaneous	13	43.33	14	46.67		
	b) Induced	17	56.67	16	53.33		
9.	Life style pattern					1.414	1.000*
	a) Sedentary	3	10	2	6.67		
	b) Moderate	22	73.33	21	70		
	c) Severe	5	16.67	7	23.33		

$df_1=3.84$ at $p<0.05$ level of significance

Chi-square test, * Fisher's exact test, • Yate's correction test and × Independent t-test

Table No. 1 shows majority of the mothers (73.3%) in experimental group and control group were 28-36 years of age. Educational status shows majority of the mothers (63.33%) in experiment group and control group were graduated & above. Occupational status shows majority of the mothers (76.67%) in experiment group & (86.67%) in control group were housewives. Area of living shows majority of the mothers (60%) in experimental group & (73.33%) in control group were from urban area. Type of family shows majority of the mothers (73.33%) in experiment group & (76.67%) in control group were from joint family. Presentation of fetus shows most of the mothers (83.33%) in experiment group & (93.33%) in control group were with cephalic presentation. Gestational age shows majority of the mothers (63.3%) in experimental group & (70%) in control group were > 37 weeks. Onset of labour shows majority of the mothers (56.67%) in experiment group & (53.33%) in control group were undergone induction of labour. Life style pattern

shows majority of the mothers (73.33%) in experiment group & (70%) in control group were with moderate pattern.

Chi square test, Fishers exact test, Yate's correction test and Independent t-test were performed to find the homogeneity between experimental and control groups. It revealed that there was no significant difference between experimental and control groups in terms of distribution of age ($t=0.901$; $p=0.371$), educational status ($\chi^2 = 6.825$; $p = 0.271$), occupational status ($p = 0.225$), area of living ($p = 0.678$), type of family ($p = 1.000$), presentation of fetus ($\chi^2 = 1.417$; $p = 1.000$), gestational age ($t=0.472$; $p=0.6/7439$), onset of labour ($\chi^2 = 0.475$; $p = 0.713$), and life style pattern ($\chi^2 = 1.414$; $p = 1.000$).

Hence it can be interpreted that the study participants in experimental and control group were homogenous.

Section II: Analysis based on the objectives

3.2 Objective 1:

To assess the effectiveness of warm compress on pain by comparing experimental and control group.

Table no. 2: Comparison of level of pain scores between and within experimental and control group.

Groups	Pain score (Mean ± SD)					F value (p value)*
	Baseline	After 45 minutes	After 90 minutes	After 135 minutes	After 180 minutes	
Experimental group	6.20 ± 1.606	2.60 ± 1.070	2.80 ± 1.126	2.40 ± 0.814	2.13 ± 0.507	68.822 (0.0001)
Control group	6.13 ± 1.814	6.13 ± 1.570	5.87 ± 1.479	6.20 ± 1.324	7.07 ± 1.143	4.214 (0.007)
t- value (p value)†	0.151 (0.881)	10.187 (0.0001)	9.033 (0.0001)	13.397 (0.0001)	21.612 (0.0001)	

†Independent t- test* Repeated measure ANOVA test

$t_{58} = 2.00$ at $p<0.05$ level of significance

The t-test revealed that there was no significant difference between both the groups at baseline pain scores whereas there was significant difference between both the groups at after 45 minutes, after 90 minutes, after 135 minutes and after 180 minutes pain score.

Hence, the null hypothesis was rejected and the research hypothesis was accepted. Thus it can be interpreted that experimental group have rapidly decrease the level of pain as compared to the control group. It showed that experimental group intervention is effective to reduce pain level.

3.3 Objective 2: To find the association between pain with their selected personal profile.

The study result shows that there was no significant association between personal profile and pain. Hence the null hypothesis was accepted and the research hypothesis was rejected. Thus it can be interpreted that personal profile did not have any influence on pain score of primi mothers.

3.4 Objective 3: To assess the opinions of mothers regarding warm compress in experimental group.

Table No. 12: Frequency and percentage distribution of Oppinionnaire of mothers regarding warm compress in experimental group.

N= 30

S. No.	Opinion	Strongly Agree		Agree	
		Freq.	%	Freq.	%
1.	I felt safe when receiving the warm compress.	24	80	6	20
2.	I felt comfortable during the time of warm compress.	24	80	6	20
3.	I felt relief from pain after receiving warm compress.	16	53.33	14	46.67
4.	I accepted the warm compress during severe pain.	15	50	15	50
5.	I can share this experience with others.	19	63.33	11	36.67
6.	I can recommend this method to others.	17	56.67	13	43.33

Most of the mothers 80% were strongly agree, whereas 20% were agree with opinion of “felt safe when receiving the warm compress”. Most of the mothers 80% were strongly agree whereas 20% were agree with opinion of “felt comfortable during the time of warm compress”. Majority of the mothers 53.33% were strongly agree whereas 46.67% were agree with opinion of “felt relief from pain after receiving warm compress”. Equal numbers of the mothers 50% were strongly agree whereas 50% were agree with opinion of “accepted the warm compress during severe pain”. Majority of the mothers 63.33% was strongly agree whereas 36.67% were agree with opinion of “share this experience with others”. Majority of the mothers 56.67% were strongly agree whereas 43.33% were agree with opinion of “recommend this methods to others”. Hence it can be inferred that opinions of mother regarding warm compress was satisfied.

IV. DISSCUSION

The present study was aimed to assess the effectiveness of warm compress on pain among primi mothers with first stage of labour admitted in labour room.

The present study revealed that there was no significant difference between both the groups at baseline pain score whereas there was significant difference between both the groups at observation 1, observation 2, observation 3 and observation 4 pain score. Thus it can be interpreted that experimental group have rapidly decrease the level of pain as compared to the control group.

Result of **Ahmed F A** (2014) showed the similar findings that there was no statistically significant differences were found between groups prior to intervention. The study group had significantly lower pain and anxiety levels when compared with the control group.

CONCLUSION

The study concluded that warm compress were not only cost effective but also easy to apply and shows a better effect on pain. Based on this it is advisable for nursing staff to be able to implement measures to reduce pain during labor, including by way of warm compresses.

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