



# A Pilot study to examine the impact of Respectful maternity care on pain perception and labour outcome among Parturient women at selected Public health facility at Erode.

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## INTRODUCTION

“The Power of Motherhood” is a classic manual for mothers. One of the first signs of God's omnipotence in our lives is the presence of our mothers. Pregnancy and childbirth are major milestones in the lives of women and families in every nation and culture on earth. Additionally, they represent a period of considerable vulnerability. During this time, the interaction with maternity caregivers and the maternity care system is crucial. The provision of respectful and inclusive care is a crucial component of high-quality maternity care. Women are more likely to have happy delivery experiences when they feel protected, supported, respected, and allowed to participate in shared decision-making.

RMC is an individual-centered approach founded on ethical and human-rights principles that encourages practices that recognize women's preferences as well as women's and newborns' needs.

It is crucial to remember that respectful maternity care goes beyond the absence of abuse. Women cherish receiving high-quality, respectful care. Women prioritize care that honors their culture, values, and beliefs, according to a 2018 qualitative evidence synthesis (which comprised 67 studies from 32 nations). Even though they weren't always able

to do so due to resource or workload limitations, healthcare personnel are aware that respectful care is a crucial component of the delivery of safe, high-quality care. Experiences with maternity caregivers for women can either be uplifting and consoling or cause serious emotional distress and long-lasting harm. In either case, women's memories of their childbirth experiences can last a lifetime.

Globally, there is a lack of data on the effectiveness of RMC treatments and creative strategies that can ease these restrictions and minimize the abuse of birthing women in healthcare institutions.

Respectful and inclusive care, which is clinically safe but, more importantly, feels emotionally and psychologically secure to the woman and her family, is an essential part of high-quality care. Accordingly, care must be respectful, based on local values and knowledge, adapted to the needs of women, and, most significantly, delivered by healthcare professionals who are able to effectively combine their clinical expertise with intercultural sensitivity.

Disrespect and abuse of women during maternity care are problems that have been obscured by a “veil of silence,” and they can significantly impact women’s willingness to seek out life-saving maternity care. In fact, disrespect and abuse in facilities are among the biggest barriers to women seeking maternal health services.

Respectful maternity care service included in delivery guidelines. Inclusion of women in health decision-making committees. So Healthcare providers are to be sensitized to the need and importance of listening to women and providing care with respect and dignity.

## **OBJECTIVES**

- To assess the level of pain perception and labour outcome among parturient women in control group and in experimental group after respectful maternity care
- To determine the impact of respectful maternity care on pain perception and labour outcome in experimental and control group among parturient women in selected health facility
- To correlate the levels of pain perception with labor outcome in experimental and control group among parturient women.
- To find out association between scores of pain perception and labour outcome with selected demographic variables among parturient women in experimental & control group

## **RESEARCH METHODOLOGY**

### **RESEARCH APPROACH**

Quantitative Evaluative approach

**Research Design:** Quasi Experimental Design

## Diagrammatic Presentation of the Quasi Experimental Design

Experimental Group	X	O1
Control Group	-	O1

X - Respectful Maternity care

O1 – Assessment of Pain perception and Labour Outcomes in experimental & control group

### • SETTING OF THE STUDY

Selected Public health facility at Erode

### • VARIABLES

**Independent Variable** - Respectful Maternity Care

**Dependent Variable** - Pain Perception and labor outcomes

### • POPULATION

All the Parturient women

### • SAMPLE

The samples of the study will be parturient women who fulfilled the inclusion criteria in selected public health facility at Erode.

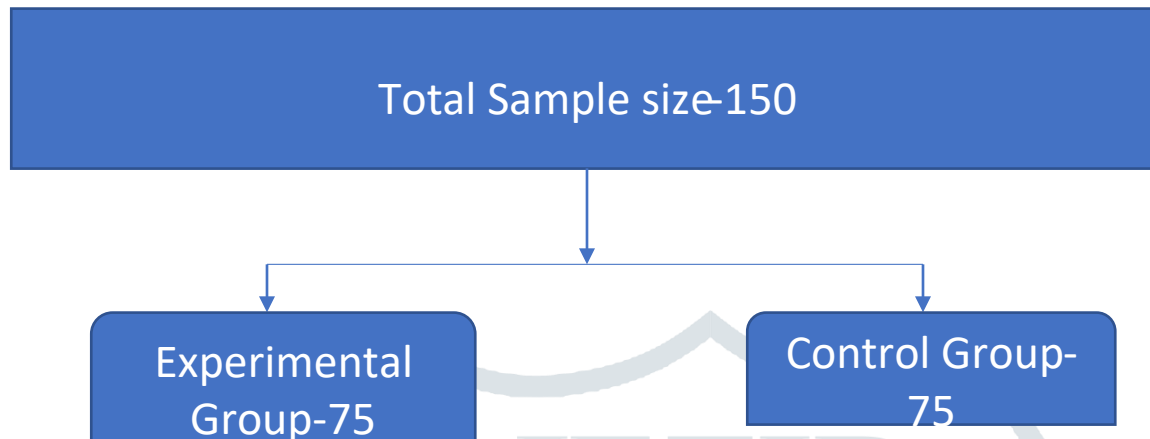
### • SAMPLING TECHNIQUE:

Purposive sampling technique was used to select the sample

## Sample Size

### Quantitative sample size

The sample size comprises of 150 parturient women. The power analysis calculation is based on alpha of 0.05 and expected mean effect size to meet the expected attrition rate at 10%. Power analysis is used to estimate the sample size based on the findings of the previous study with the assumption of 80% Power.



### • CRITERIA FOR THE SELECTION OF SAMPLE

#### Inclusion Criteria:

##### Parturient women,

- with age group between 21 – 35
- only primi gravida mothers
- who are undergoing normal delivery only
  - with 36 weeks of pregnancy are willing to have delivery in same institution
- who are willing to participate in the study
- who are able to respond in Tamil or English

#### Exclusion Criteria:

##### Parturient women,

- who undergo elective caesarian section
- with Forceps delivery
- who comes under high risk pregnancy
- with obstetrical complications

## Method of Data Collection

The data was collected from Primi Parturient women after obtaining permission from authorities. Respectful maternity care given to experimental group mothers. Control group mothers received traditional care. Pain perception measured by Visual analog scale and labour outcome measured by using Observational rating scale.

### Method of data analysis:

Demographic variables in categorical/dichotomous were given in frequencies with their percentages. Pain, maternal outcome and newborn outcome score were given in mean and Standard deviation. Quantitative data difference between experimental and control group was calculated using independent t- test. Qualitative data Difference between experimental and control group was calculated using chi square test. Correlation between Pain, maternal outcome and newborn outcome was calculated using Karl Pearson correlation coefficient method. Association between level of Pain, maternal outcome and newborn outcome score and demographic variables are assessed using chi square test.  $P \leq 0.05$  was considered statistically significant. Statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS, version 22), STATA (version 10).

### TOOL FOR DATA COLLECTION

There are four sections tools will be used. They are

- Section A** : Demographic variables  
**Section B** : Visual Analogue scale  
**Section C** : Observational Rating scale to measure Labour Outcome

## PILOT STUDY MAJOR FINDINGS

### Section A

**Table 1: DEMOGRAPHIC VARIABLES**

Demographic variables		Group				Chi square test
		Experimental group(n=15)		Control group(n=15)		
		n	%	n	%	
Age in years	19-23 years	6	40.00%	8	53.33%	$\chi^2= 1.35$ p=0.51(NS) DF=2
	24-29years	8	53.33%	7	46.67%	
	30-35years	1	6.67%	0	0.00%	
	>35 years	0	0.00%	0	0.00%	
Education	Illiterate	7	46.67%	6	40.00%	$\chi^2= 0.28$ p=0.87(NS) DF=2
	Primary	6	40.00%	6	40.00%	

	Secondary	2	13.33%	3	20.00%	
	Undergraduate	0	0.00%	0	0.00%	
	Postgraduate	0	0.00%	0	0.00%	
Occupation	House wife	5	33.33%	8	53.33%	$\chi^2= 1.22$ p=0.26(NS) DF=1
	Private employee	10	66.67%	7	46.67%	
	Government employee	0	0.00%	0	0.00%	
Religion	Hindu	13	86.67%	13	86.67%	$\chi^2= 0.00$ p=1.00(NS) DF=1
	Christin	2	13.33%	2	13.33%	
	Muslim	0	0.00%	0	0.00%	
Habitant	Urban	11	73.33%	9	60.00%	$\chi^2= 0.60$ p=0.44(NS) DF=1
	Rural	4	26.67%	6	40.00%	
Type of family	Nuclear family	10	66.67%	9	60.00%	$\chi^2= 0.14$ p=0.71(NS) DF=1
	Joint family	5	33.33%	6	40.00%	
Socio Economic Status	Low class	3	20.00%	4	26.67%	$\chi^2= 0.19$ p=0.67(NS) DF=1
	Middle class	12	80.00%	11	73.33%	
	High class	0	0.00%	0	0.00%	
Diet pattern	Vegetarian	3	20.00%	5	33.33%	$\chi^2= 0.68$ p=0.41(NS) DF=1
	Non vegetarian	12	80.00%	10	66.67%	

Above table shows the demographic information of parturient women those who were participated in this study. Similarity of demographic distribution between experimental and control group was assessed using chi square test.

**Table 2: COMARISON OF LEVEL OF PAIN OUTCOME SCORE**

Level	Experimental		Control		Chi square test
	n	%	n	%	
Mild	12	80.00%	0	0.00%	<b><math>\chi^2=22.00</math></b> <b>P=0.001***</b> <b>(S) DF=2</b>
Moderate	3	20.00%	6	40.00%	
Severe	0	0.00%	9	60.00%	
<b>Total</b>	<b>15</b>	<b>100%</b>	<b>15</b>	<b>100%</b>	

S= significant \*\*\*P $\leq$ 0.001 very high significant

Above table shows the level of pain scores between experimental and control group.

In experimental group, 80% of them are having mild level of score, 20.00% of them having moderate level of score and none of them having severe level of score.

In control group, none of them are having poor level of score, 40.00% of them having moderate level of score and 60.00% of them having severe level of score.

Statistically there is a significant difference between experimental and control group. It was assessed using chi-square test.

Level of pain perception	Actual scores	Percentage of scores
Mild	1-4	0-40%
Moderate	5-7	41-70%
Severe	8-10	>70

**Table 3: COMPARISON OF PAIN SCORES BETWEEN EXPERIMENTAL AND CONTROL GROUP**

Group	Pain score		Mean difference	Student independent t-test
	Mean	SD		
Experimental(n=15)	3.73	0.80	3.93	<b>t=12.08</b> <b>p=0.001***(S)</b> <b>DF=28</b>
Control(n=15)	7.67	0.98		

$P \leq 0.01$  very high significant S= significant

Above table compare the pain score between experimental and control group.

Experimental group are having 3.73 pain score and control group are having 7.67 pain score, so the difference is 3.93 score, this difference is large and statistically significant. It was tested using student independent t-test.

**Table 4: MATERNAL OUTCOME**

Maternal outcome		Group				Chi square test
		Experimental(n=15)		Control(n=15)		
		n	%	n	%	
Duration of Labour	16-18 Hours	0	0.00%	15	100.00%	$\chi^2 = 30.00$ $p = 0.001^{***}(S)$ DF=2
	13-15 Hours	9	60.00%	0	0.00%	
	10-12 Hours	6	40.00%	0	0.00%	
Cervical Dilatation	<0.5 cm/Hour inactive phase	0	0.00%	10	66.67%	$\chi^2 = 16.67$ $p = 0.001^{***}(S)$ DF=2
	0.5cm/Hour in active phase	10	66.67%	5	33.33%	

	1cm/Hour in active Phase	5	33.33%	0	0.00%	
Uterine Contractions	Mild contractions	0	0.00%	9	60.00%	$\chi^2= 15.00$ $p=0.001^{***}$ (S) DF=2
	Moderate contractions	10	66.67%	6	40.00%	
	Severe contractions	5	33.33%	0	0.00%	
Fetal heart rate	<110 or>170 beats/minute	0	0.00%	12	80.00%	$\chi^2= 20.00$ $p=0.001^{***}$ (S) DF=1
	110 or170 beats/minute	15	100.00%	3	20.00%	
	120-160 beats/minute	0	0.00%	0	0.00%	
Fetal Movement	<10 movements in 12 hours	0	0.00%	12	80.00%	$\chi^2= 22.00$ $p=0.001^{***}$ (S) DF=2
	10 movements/12 Hours	6	40.00%	3	20.00%	
	3 movements / Hour	9	60.00%	0	0.00%	
Presence of Episiotomy	Episiotomy with first degree tear	0	0.00%	0	0.00%	$\chi^2= 12.86$ $p=0.001^{***}$ (S) DF=1
	Present without tear	0	0.00%	9	60.00%	
	Absent	15	100.00%	6	40.00%	
Perineal tear	2 nd degree tear	0	0.00%	1	6.67%	$\chi^2= 5.17$ $p=0.08$ (NS) DF=2
	1 st degree tear	4	26.67%	9	60.00%	
	Absent	11	73.33%	5	33.33%	
Maternal fatigue	Moderate	0	0.00%	8	53.33%	$\chi^2= 19.81$ $p=0.001^{***}$ (S) DF=2
	Mild	4	26.67%	7	46.67%	
	Absent	11	73.33%	0	0.00%	
Blood loss in labour	>600ml	0	0.00%	0	0.00%	$\chi^2= 26.25$ $p=0.001^{***}$ (S) DF=1
	500-600 ml	0	0.00%	14	93.33%	
	<500 ml	15	100.00%	1	6.67%	
Mode of Delivery	Emergency Caesarean section	0	0.00%	2	13.33%	$\chi^2=1$ 0.19 $p=0.001^{***}$ (S) DF=2
	Vaginal delivery with Ventouse	8	53.33%	13	86.67%	
	Normal vaginal delivery with episiotomy	7	46.67%	0	0.00%	
Separation& Expulsion of placenta	Incomplete separation& incomplete expulsion after delivery of fetus	0	0.00%	0	0.00%	$\chi^2= 12.85$ $p=0.001^{***}$ (S) DF=1
	Complete separation& incomplete expulsion after delivery of fetus	6	40.00%	15	100.00%	
	Complete separation & expulsion after delivery of fetus	9	60.00%	0	0.00%	
Involution of uterus	Fundus descends<1 cm/day	0	0.00%	8	53.33%	$\chi^2= 30.00$ $p=0.001^{***}$ (S) DF=2
	Fundus descends1 cm/day	0	0.00%	7	46.67%	
	Fundus descends 1.5 cm/day	15	100.00%	0	0.00%	
Vital signs	Elevated temperature, Increased Pulse& Normal BP	0	0.00%	0	0.00%	$\chi^2= 0.15$ $p=0.69$ (NS) DF=1
	Elevated temperature, Normal BP& Pulse	10	66.67%	11	73.33%	
	Normal temperature,BP& Pulse	5	33.33%	4	26.67%	
Conscious states	Unconscious	0	0.00%	0	0.00%	$\chi^2= 1.22$ $p=0.27$ (NS) DF=1
	Semiconscious	5	33.33%	8	53.33%	
	Alert &Oriented	10	66.67%	7	46.67%	

Above table compares the maternal outcome between experimental and control group of parturient women. There is a significant difference between experimental and control group



outcomes except Perineal tear, Vital signs, Conscious states. Statistical significance was calculated using chi square test.

**Table 5: COMARISON OF LEVEL OF MATERNAL OUTCOME SCORE**

Level	Experimental		Control		Chi square test
	n	%	n	%	
Poor	0	0.00%	0	0.00%	<b><math>\chi^2=8.57</math></b> <b>P=0.01**</b> <b>(S) DF=1</b>
Fair	3	20.00%	11	73.33%	
Good	12	80.00%	4	26.67%	
<b>Total</b>	<b>10</b>	<b>100%</b>	<b>10</b>	<b>100%</b>	

S= significant \*\*P<0.01 highly significant

Above table shows the level of maternal outcome score between experimental and control group. In experimental group, none of them were having poor level of score, 20.00% of them had moderate level of score and 80% of them had good level of score.

In control group, none of them are having poor level of score, 73.33% of them had moderate level of score and 26.67% of them had good level of score.

Statistically there is a significant difference between experimental and control group. It was assessed using chi-square test.

#### Maternal outcome Score Interpretation

Good maternal outcome	>31.5	Above 75
Fair maternal outcome	21 – 31.5	50 - 75
Poor maternal outcome	< 21	Below 50

**Table 6: COMPARISON OF MATERNAL OUTCOME SCORES BETWEEN EXPERIMENTAL AND CONTROL GROUP**

group	Maternal outcome		Mean difference	Student independent t-test
	Mean	SD		
Experimental(n=15)	36.20	1.74	11.80	

Control(n=15)	24.40	1.50		<b>t=19.88</b> <b>p=0.001***(S)</b> <b>DF=28</b>
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$P \leq 0.01$  very high significant S= significant

Above table compare the maternal outcome scores between experimental and control group.

Experimental group are having 36.20 maternal outcome score and control group are having 24.40 maternal outcome score, so the difference is 11, 80 score, this difference is large and statistically significant. It was tested using student independent t-test.

**Table 7: NEWBORN OUTCOME**

New-born Outcome		Group				Chi square test
		Experimental(n=15)		Control(n=15)		
		n	%	n	%	
APGAR score	3-5	0	0.00%	12	80.00%	$\chi^2= 20.00$ p=0.001***(S) DF=1
	5-7	15	100.00%	3	20.00%	
	8-10	0	0.00%	0	0.00%	
Temperature	32.0°C – 35.9°C	0	0.00%	6	40.00%	$\chi^2= 17.14$ p=0.001***(S) DF=2
	36.0°C – 36. 4°C	5	33.33%	9	60.00%	
	36.5°C – 37.5°C	10	66.67%	0	0.00%	
Birth weight	<2000grams	0	0.00%	1	6.67%	$\chi^2= 2.20$ p=0.33(NS) DF=2
	2000 -2500 grams	9	60.00%	11	73.33%	
	>2500 grams	6	40.00%	3	20.00%	
Comfort	Neutral	0	0.00%	0	0.00%	$\chi^2= 3.39$ p=0.07(NS) DF=1
	Comfortable	6	40.00%	11	73.33%	
	Very Comfortable	9	60.00%	4	26.67%	
Quality of breast attachment	Average	0	0.00%	5	33.33%	$\chi^2= 23.33$ p=0.001***(S) DF=2
	Good	2	13.33%	10	66.67%	
	Excellent	13	86.67%	0	0.00%	
Frequency of feeding	3-4/day	0	0.00%	6	40.00%	$\chi^2= 15.60$ p=0.001***(S) DF=2
	5-7/day	6	40.00%	9	60.00%	
	8-12Feedings/Day	9	60.00%	0	0.00%	

Above table compares the newborn outcome score between experimental and control group of parturient women. There is a significant difference between experimental and control group newborn outcomes except Birth weight, comfort. Statistical significance was calculated using chi square test.

**Table 8: COMARISON OF LEVEL OF NEWBORN OUTCOME SCORE**

Level	Experimental		Control		Chi square test
	n	%	n	%	
Poor	0	0.00%	0	0.00%	<b><math>\chi^2=13.93</math></b> <b>P=0.001***</b> <b>(S) DF=1</b>
Fair	2	13.33%	12	80.00%	
Good	13	86.67%	3	20.00%	
<b>Total</b>	<b>15</b>	<b>100%</b>	<b>15</b>	<b>100%</b>	

S= significant \*\*P<0.01 highly significant

Above table shows the level of newborn outcome scores between experimental and control group.

In experimental group, none of them are having poor level of score, 13.33% of them having moderate level of score and 86.67% of them having good level of score.

In control group, none of them are having poor level of score, 80.00% of them having moderate level of score and 20.00% of them having good level of score.

Statistically there is a significant difference between experimental and control group. It was assessed using chi-square test.

Newborn outcomes	Actual scores	Percentage
Poor	< 9	Below 50
Fair	9-13.5	50 - 75
Good	>13.5	Above 75

**Table 9: COMPARISON OF NEWBORN OUTCOME SCORES BETWEEN EXPERIMENTAL AND CONTROL GROUP**

group	newborn outcome		Mean difference	Student independent t-test
	Mean	SD		
Experimental(n=15)	15.13	1.30	4.66	<b>t=10.77</b> <b>p=0.001***(S)</b> <b>DF=28</b>
Control(n=15)	10.47	1.06		

$P \leq 0.01$  very high significant S= significant

Above table compare the newborn outcome score between experimental and control group.

Experimental group are having 15.13 newborn outcome score and control group are having 10.47 newborn outcome score, so the difference is 4.66 score, this difference is large and statistically significant. It was tested using student independent t-test.

Objective 2: To determine the impact of respectful maternity care on pain perception and labour outcome in experimental and control group among parturient women in selected health facility.

**Table 10: EFFECTIVENESS RESPECTFUL MATERNITY CARE ON PAIN SCORE**

	Max score	Mean score	%Mean score	Percentage of pain reduction score
Experimental	10	3.73	37.30%	39.40%
Control	10	7.67	76.70%	

Above table shows the effectiveness of Respectful Maternity Care.

In experimental group, reduced 39.40% more pain reduction score than control group; it shows the effectiveness of the study.

**Table 11: EFFECTIVENESS RESPECTFUL MATERNITY CARE ON MATERNAL OUTCOME**

	Max score	Mean score	%Mean score	Percentage of gain difference score
Experimental	42	36.20	86.19%	28.09%
Control	42	24.40	58.10%	

Above table shows the effectiveness of Respectful Maternity Care.

In experimental group, gained 28.09% better maternal outcome than control group, it shows the effectiveness of the study.

**Table 12: EFFECTIVENESS RESPECTFUL MATERNITY CARE ON NEWBORN OUTCOME**

	Max score	Mean score	%Mean score	Percentage of gain difference score
Experimental	18	15.13	84.06%	25.89%
Control	18	10.47	58.17%	

Above table shows the effectiveness of Respectful Maternity Care.

In experimental group, gained 25.89% better newborn outcome than control group, it shows the effectiveness of the study.

Objective 3: To correlate the levels of pain perception with labor outcome in experimental and control group among parturient women.

**TABLE 13: CORRELATION BETWEEN PAIN SCORE, MATERNAL OUTCOME AND NEWBORN OUTCOME (EXPERIMENTAL)**

	Correlation between	Mean score Mean±SE	Karl pearson Correlation coefficients	Interpretation
<b>Experimental group</b>	pain score Vs maternal outcome score	3.73±0.80 36.20±1.74	r= - 0.34 P=0.01**	There is a significant negative Fair correlation between pain score and maternal score. It means pain reduction score increases their maternal outcome score increases fairly

	pain score Vs newborn outcome score	3.73±0.80 15.13±1.50	r= -0.36 P=0.001***	There is a significant negative fair correlation between pain score and newborn score. It means pain reduction score increases their newborn outcome score increases fairly
	maternal outcome score vs new-born score	36.20±1.74 19.63±1.30	r= 0.54 P=0.001***	There is a significant positive moderate correlation between maternal outcome score and new born outcome score. It means maternal outcome increases their new born outcome score also increases moderately

**TABLE 14: CORRELATION BETWEEN PAIN SCORE, MATERNAL OUTCOME AND NEWBORN OUTCOME (CONTROL)**

	Correlation between	Mean score Mean±SE	Karl pearson Correlation coefficients	Interpretation
<b>control group</b>	pain score Vs maternal outcome score	7.67±0.98 24.40±1.50	r= -0.26 P=0.05*	There is a significant negative Fair correlation between pain score and maternal score. It means pain reduction score increases their maternal outcome score increases fairly
	pain score Vs newborn outcome score	7.67±0.98 10.47±1.06	r= -0.28 P=0.01**	There is a significant negative fair correlation between pain score and newborn score. It means pain reduction score increases their newborn outcome score increases fairly
	maternal outcome score vs new-born score	24.40±1.50 10.47±1.06	r= 0.37 P=0.01**	There is a significant positive fair correlation between maternal outcome score and new born outcome score. It means maternal outcome increases their new born outcome score also increases fairly

#### Interpretation for r-value

Karl pearson correlation coefficient is denoted by "r"

"r" always lies between -1 to +1

0.0 – 0.2 poor correlation

0.2 - 0.4 fair correlation

0.4 - 0.6 moderate correlation

0.6 – 0.8 substantial correlation

**0.8** - 1.0 strong correlation

Table15: ASSOCIATION BETWEEN LEVEL OF PAIN SCORE AND WOMEN DEMOGRAPHIC VARIABLE(Experimental)

Demographic variables		PAIN score						N	Chi square test
		Mild		Moderate		Severe			
		n	%	n	%	n	%		
Age in years	19-23 years	5	83.33%	1	16.67%	0	0.00%	6	$\chi^2= 0.41$ p=0.82(NS) DF=2
	24-29years	6	75.00%	2	25.00%	0	0.00%	8	
	30-35years	1	100.00%	0	0.00%	0	0.00%	1	
	>35 years	0	0.00%	0	0.00%	0	0.00%	0	
Education	Illiterate	5	71.43%	2	28.57%	0	0.00%	7	$\chi^2= 0.86$ p=0.65(NS) DF=2
	Primary	5	83.33%	1	16.67%	0	0.00%	6	
	Secondary	2	100.00%	0	0.00%	0	0.00%	2	
	Undergraduate	0	0.00%	0	0.00%	0	0.00%	0	
	Postgraduate	0	0.00%	0	0.00%	0	0.00%	0	
Occupation	House wife	2	40.00%	3	60.00%	0	0.00%	5	$\chi^2= 7.50$ p=0.01**(S) DF=1
	Private employee	10	100.00%	0	0.00%	0	0.00%	10	
	Government employee	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	10	76.92%	3	23.08%	0	0.00%	13	$\chi^2= 0.57$ p=0.44(NS) DF=1
	Christin	2	100.00%	0	0.00%	0	0.00%	2	
	Muslim	0	0.00%	0	0.00%	0	0.00%	0	
Habitant	Urban	8	72.73%	3	27.27%	0	0.00%	11	$\chi^2= 1.36$ p=0.24(NS) DF=1
	Rural	4	100.00%	0	0.00%	0	0.00%	4	
Type of family	Nuclear family	9	90.00%	1	10.00%	0	0.00%	10	$\chi^2= 1.88$ p=0.17(NS) DF=1
	Joint family	3	60.00%	2	40.00%	0	0.00%	5	
Socio economic status	Low class	1	33.33%	2	66.67%	0	0.00%	3	$\chi^2= 5.10$ p=0.02*(S) DF=1
	Middle class	11	91.67%	1	8.33%	0	0.00%	12	
	High class	0	0.00%	0	0.00%	0	0.00%	0	
Dietary Pattern	Vegetarian	2	66.67%	1	33.33%	0	0.00%	3	$\chi^2= 0.42$ p=0.52(NS) DF=1
	Non Vegetarian	10	83.33%	2	16.67%	0	0.00%	12	

Above table shows the association between level of pain score and women demographic variable. Private employees and middle class women were having more mild score.

Table16: ASSOCIATION BETWEEN LEVEL OF PAIN SCORE AND WOMEN DEMOGRAPHIC VARIABLE(control)

Demographic variables		PAIN score						N	Chi square test
		Mild		Moderate		Severe			
		n	%	n	%	n	%		
Age in years	19-23 years	0	0.00%	4	50.00%	4	50.00%	8	$\chi^2= 0.71$ p=0.40(NS) DF=2
	24-29years	0	0.00%	2	28.57%	5	71.43%	7	
	30-35years	0	0.00%	0	0.00%	0	0.00%	0	
	>35 years	0	0.00%	0	0.00%	0	0.00%	0	
Education	Illiterate	0	0.00%	2	33.33%	4	66.67%	6	$\chi^2= 0.42$ p=0.82(NS) DF=2
	Primary	0	0.00%	3	50.00%	3	50.00%	6	
	Secondary	0	0.00%	1	33.33%	2	66.67%	3	
	Undergraduate	0	0.00%	0	0.00%	0	0.00%	0	
	Postgraduate	0	0.00%	0	0.00%	0	0.00%	0	
Occupation	House wife	0	0.00%	3	37.50%	5	62.50%	8	$\chi^2= 0.05$ p=0.83(NS) DF=1
	Private employee	0	0.00%	3	42.86%	4	57.14%	7	
	Government employee	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	0	0.00%	5	38.46%	8	61.54%	13	$\chi^2= 0.10$ p=0.76(NS) DF=1
	Christin	0	0.00%	1	50.00%	1	50.00%	2	
	Muslim	0	0.00%	0	0.00%	0	0.00%	0	
Habitant	Urban	0	0.00%	3	33.33%	6	66.67%	9	$\chi^2= 0.42$ p=0.52(NS) DF=1
	Rural	0	0.00%	3	50.00%	3	50.00%	6	
Type of family	Nuclear family	0	0.00%	4	44.44%	5	55.56%	9	$\chi^2= 0.19$ p=0.66(NS) DF=1
	Joint family	0	0.00%	2	33.33%	4	66.67%	6	
Socio economic status	Low class	0	0.00%	3	75.00%	1	25.00%	4	$\chi^2= 2.78$ p=0.10(NS) DF=1
	Middle class	0	0.00%	3	27.27%	8	72.73%	11	
	High class	0	0.00%	0	0.00%	0	0.00%	0	
Dietary Pattern	Vegetarian	0	0.00%	2	40.00%	3	60.00%	5	$\chi^2= 0.00$ p=1.00(NS) DF=1
	Non Vegetarian	0	0.00%	4	40.00%	6	60.00%	10	

Above table shows the association between level of pain score and women demographic variable. None of the variable had significant association.



**Table17: ASSOCIATION BETWEEN LEVEL OF MATERNAL OUTCOME SCORE AND WOMEN DEMOGRAPHIC VARIABLE (Experimental)**

Demographic variables		Maternal outcome score						N	Chi square test
		Poor		Fair		Good			
		n	%	n	%	n	%		
Age in years	19-23 years	0	0.00%	1	16.67%	5	83.33%	6	$\chi^2= 0.42$ p=0.81(NS) DF=2
	24-29years	0	0.00%	2	25.00%	6	75.00%	8	
	30-35years	0	0.00%	0	0.00%	1	100.00%	1	
	>35 years	0	0.00%	0	0.00%	0	0.00%	0	
Education	Illiterate	0	0.00%	2	28.57%	5	71.43%	7	$\chi^2= 0.86$ p=0.65(NS) DF=2
	Primary	0	0.00%	1	16.67%	5	83.33%	6	
	Secondary	0	0.00%	0	0.00%	2	100.00%	2	
	Undergraduate	0	0.00%	0	0.00%	0	0.00%	0	
	Postgraduate	0	0.00%	0	0.00%	0	0.00%	0	
Occupation	House wife	0	0.00%	1	20.00%	4	80.00%	5	$\chi^2= 0.00$ p=1.00(NS) DF=1
	Private employee	0	0.00%	2	20.00%	8	80.00%	10	
	Government employee	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	0	0.00%	3	23.08%	10	76.92%	13	$\chi^2= 0.58$ p=0.45(NS) DF=1
	Christin	0	0.00%	0	0.00%	2	100.00%	2	
	Muslim	0	0.00%	0	0.00%	0	0.00%	0	
Habitant	Urban	0	0.00%	2	18.18%	9	81.82%	11	$\chi^2= 0.09$ p=0.77(NS) DF=1
	Rural	0	0.00%	1	25.00%	3	75.00%	4	
Type of family	Nuclear family	0	0.00%	3	30.00%	7	70.00%	10	$\chi^2= 1.88$ p=0.17(NS) DF=1
	Joint family	0	0.00%	0	0.00%	5	100.00%	5	
Socio economic status	Low class	0	0.00%	2	66.67%	1	33.33%	3	$\chi^2= 5.10$ p=0.02*(S) DF=1
	Middle class	0	0.00%	1	8.33%	11	91.67%	12	
	High class	0	0.00%	0	0.00%	0	0.00%	0	
Dietary Pattern	Vegetarian	0	0.00%	0	0.00%	3	100.00%	3	$\chi^2= 0.94$ p=0.33(NS) DF=1
	Non Vegetarian	0	0.00%	3	25.00%	9	75.00%	12	

Above table shows the association between level of maternal outcome and women demographic variable. Middle class women were having more good score.

**Table18: ASSOCIATION BETWEEN LEVEL OF MATERNAL OUTCOME AND WOMEN DEMOGRAPHIC VARIABLE (control)**

Demographic variables		Maternal outcome score						N	Chi square test
		Poor		Fair		Good			
		n	%	n	%	n	%		
Age in years	19-23 years	0	0.00%	5	62.50%	3	37.50%	8	$\chi^2= 1.03$ $p=0.31(NS)$ DF=2
	24-29years	0	0.00%	6	85.71%	1	14.29%	7	
	30-35years	0	0.00%	0	0.00%	0	0.00%	0	
	>35 years	0	0.00%	0	0.00%	0	0.00%	0	
Education	Illiterate	0	0.00%	5	83.33%	1	16.67%	6	$\chi^2= 3.07$ $p=0.21(NS)$ DF=2
	Primary	0	0.00%	5	83.33%	1	16.67%	6	
	Secondary	0	0.00%	1	33.33%	2	66.67%	3	
	Undergraduate	0	0.00%	0	0.00%	0	0.00%	0	
	Postgraduate	0	0.00%	0	0.00%	0	0.00%	0	
Occupation	House wife	0	0.00%	6	75.00%	2	25.00%	8	$\chi^2= 0.02$ $p=0.88(NS)$ DF=1
	Private employee	0	0.00%	5	71.43%	2	28.57%	7	
	Government employee	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	0	0.00%	10	76.92%	3	23.08%	13	$\chi^2= 0.64$ $p=0.42(NS)$ DF=1
	Christin	0	0.00%	1	50.00%	1	50.00%	2	
	Muslim	0	0.00%	0	0.00%	0	0.00%	0	
Habitant	Urban	0	0.00%	7	77.78%	2	22.22%	9	$\chi^2= 0.22$ $p=0.63(NS)$ DF=1
	Rural	0	0.00%	4	66.67%	2	33.33%	6	
Type of family	Nuclear family	0	0.00%	6	66.67%	3	33.33%	9	$\chi^2= 0.51$ $p=0.48(NS)$ DF=1
	Joint family	0	0.00%	5	83.33%	1	16.67%	6	
Socio economic status	Low class	0	0.00%	3	75.00%	1	25.00%	4	$\chi^2= 0.01$ $p=0.93(NS)$ DF=1
	Middle class	0	0.00%	8	72.73%	3	27.27%	11	
	High class	0	0.00%	0	0.00%	0	0.00%	0	
Dietary Pattern	Vegetarian	0	0.00%	4	80.00%	1	20.00%	5	$\chi^2= 0.17$ $p=0.68(NS)$ DF=1
	Non Vegetarian	0	0.00%	7	70.00%	3	30.00%	10	

Above table shows the association between level of maternal outcome score and women demographic variable. None of the variables had significant association.

**Table19: ASSOCIATION BETWEEN LEVEL OF NEWBORN OUTCOME SCORE AND WOMEN DEMOGRAPHIC VARIABLE(Experimental)**

Demographic variables		newborn outcome score						N	Chi square test
		Poor		Fair		Good			
		n	%	n	%	n	%		
Age in years	19-23 years	0	0.00%	0	0.00%	6	100.00%	6	$\chi^2= 2.02$ p=0.36(NS) DF=2
	24-29years	0	0.00%	2	25.00%	6	75.00%	8	
	30-35years	0	0.00%	0	0.00%	1	100.00%	1	
	>35 years	0	0.00%	0	0.00%	0	0.00%	0	
Education	Illiterate	0	0.00%	2	28.57%	5	71.43%	7	$\chi^2= 2.64$ p=0.27(NS) DF=2
	Primary	0	0.00%	0	0.00%	6	100.00%	6	
	Secondary	0	0.00%	0	0.00%	2	100.00%	2	
	Undergraduate	0	0.00%	0	0.00%	0	0.00%	0	
	Postgraduate	0	0.00%	0	0.00%	0	0.00%	0	
Occupation	House wife	0	0.00%	1	20.00%	4	80.00%	5	$\chi^2= 0.29$ p=0.59(NS) DF=1
	Private employee	0	0.00%	1	10.00%	9	90.00%	10	
	Government employee	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	0	0.00%	2	15.38%	11	84.62%	13	$\chi^2= 0.36$ p=0.55(NS) DF=1
	Christin	0	0.00%	0	0.00%	2	100.00%	2	
	Muslim	0	0.00%	0	0.00%	0	0.00%	0	
Habitant	Urban	0	0.00%	2	18.18%	9	81.82%	11	$\chi^2= 0.84$ p=0.34(NS) DF=1
	Rural	0	0.00%	0	0.00%	4	100.00%	4	
Type of family	Nuclear family	0	0.00%	1	10.00%	9	90.00%	10	$\chi^2= 0.29$ p=0.59(NS) DF=1
	Joint family	0	0.00%	1	20.00%	4	80.00%	5	
Socio economic status	Low class	0	0.00%	1	33.33%	2	66.67%	3	$\chi^2= 1.30$ p=0.25(NS) DF=1
	Middle class	0	0.00%	1	8.33%	11	91.67%	12	
	High class	0	0.00%	0	0.00%	0	0.00%	0	
Dietary Pattern	Vegetarian	0	0.00%	1	33.33%	2	66.67%	3	$\chi^2= 1.30$ p=0.26(NS) DF=1
	Non Vegetarian	0	0.00%	1	8.33%	11	91.67%	12	

Above table shows the association between level of newborn outcome score and women demographic variable. None of the variables had significant association.

**Table20: ASSOCIATION BETWEEN LEVEL OF NEWBORN OUTCOME AND WOMEN DEMOGRAPHIC****VARIABLE(control)**

Demographic variables		newborn outcome score						N	Chi square test
		Poor		Fair		Good			
		n	%	n	%	n	%		
Age in years	19-23 years	0	0.00%	7	87.50%	1	12.50%	8	$\chi^2= 0.60$ p=0.44(NS) DF=2
	24-29years	0	0.00%	5	71.43%	2	28.57%	7	
	30-35years	0	0.00%	0	0.00%	0	0.00%	0	
	>35 years	0	0.00%	0	0.00%	0	0.00%	0	
Education	Illiterate	0	0.00%	4	66.67%	2	33.33%	6	$\chi^2= 2.50$ p=0.28(NS) DF=2
	Primary	0	0.00%	6	100.00%	0	0.00%	6	
	Secondary	0	0.00%	2	66.67%	1	33.33%	3	
	Undergraduate	0	0.00%	0	0.00%	0	0.00%	0	
	Postgraduate	0	0.00%	0	0.00%	0	0.00%	0	
Occupation	House wife	0	0.00%	7	87.50%	1	12.50%	8	$\chi^2= 0.61$ p=0.44(NS) DF=1
	Private employee	0	0.00%	5	71.43%	2	28.57%	7	
	Government employee	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	0	0.00%	10	76.92%	3	23.08%	13	$\chi^2= 0.58$ p=0.45(NS) DF=1
	Christin	0	0.00%	2	100.00%	0	0.00%	2	
	Muslim	0	0.00%	0	0.00%	0	0.00%	0	
Habitant	Urban	0	0.00%	8	88.89%	1	11.11%	9	$\chi^2= 1.11$ p=0.28(NS) DF=1
	Rural	0	0.00%	4	66.67%	2	33.33%	6	
Type of family	Nuclear family	0	0.00%	7	77.78%	2	22.22%	9	$\chi^2= 0.07$ p=0.79(NS) DF=1
	Joint family	0	0.00%	5	83.33%	1	16.67%	6	
Socio economic status	Low class	0	0.00%	4	100.00%	0	0.00%	4	$\chi^2= 1.36$ p=0.24(NS) DF=1
	Middle class	0	0.00%	8	72.73%	3	27.27%	11	
	High class	0	0.00%	0	0.00%	0	0.00%	0	
Dietary Pattern	Vegetarian	0	0.00%	4	80.00%	1	20.00%	5	$\chi^2= 0.00$ p=1.00(NS) DF=1
	Non Vegetarian	0	0.00%	8	80.00%	2	20.00%	10	

Above table shows the association between level of newborn outcome score and women demographic variable.

None of the variables had significant association.

## Discussion

From the findings it can be concluded that in experimental group, 80% of the parturient women were having mild level of pain score, 20.00% of them having moderate level of score and none of them having severe level of Pain

perception score. In control group, none of them were having poor level of score, 40.00% of them had moderate level of score and 60.00% of them had severe level of pain perception score. So statistically there is a significant difference between experimental and control group. It was assessed using chi-square test. In experimental group, 39.40% more pain reduction score than control group; it shows the effectiveness of the study.

In experimental group, none of them were having poor level of maternal outcome score, 20.00% of them had moderate level of maternal outcome score and 80% of them had good level of maternal outcome score. In control group, none of them were having poor level of maternal outcome score, 73.33% of them had moderate level of maternal outcome score and 26.67% of them had good level of maternal outcome score. Experimental group were having 36.20 maternal outcome score and control group were having 24.40 maternal outcome score, so the difference is 11, 80 score, this difference is large and statistically significant. It was tested using student independent t-test. In experimental group, gained 28.09% better maternal outcome than control group, it shows the effectiveness of the study.

In experimental group, none of them were having poor level of newborn outcome score, 13.33% of them had moderate level of newborn outcome score and 86.67% of them had good level of score. In control group, none of them are had poor level of newborn outcome score, 80.00% of them had moderate level of newborn outcome score and 20.00% of them had good level of score. Experimental group were having 15.13 newborn outcome score and control group were having 10.47 newborn outcome score, so the difference is 4.66 score, this difference is large and statistically significant. It was tested using student independent t-test. In experimental group, gained 25.89% better newborn outcome than control group, it shows the effectiveness of the study.

There is a significant negative Fair correlation between pain score and maternal score. It means if pain reduction score increases their maternal outcome score also increases fairly.

There is a significant negative fair correlation between pain score and newborn score. It means if pain reduction score increases their newborn outcome score also increases fairly.

In experimental group, there is a significant positive moderate correlation between maternal outcome score and new born outcome score. It means if maternal outcome increases their new born outcome score also increases moderately.

In control group there is a significant positive fair correlation between maternal outcome score and new born outcome score. It means if maternal outcome increases their new born outcome score also increases fairly.

In experimental group, private employees and middle class women are having significant association with the levels of pain score. In control group, there is no association between Pain score with their socio demographic variables.

In experimental group, Middle class women are having significant association with level of maternal outcome. In control group, there is no association between maternal outcome score with their socio demographic variables.

## CONCLUSION

Pilot study was carried out to check the feasibility and to identify weaknesses in a study. Based on the results of the pilot study, it can be concluded that the Respectful maternity care was successful in reducing labor pain and improving the outcomes for mothers and newborns. The impression of pain and the outcome of labor are positively impacted by respectful maternity care.

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