

# The effect of self perineal care versus standard of care on episiotomy wound healing and pain among postnatal mothers in a selected Hospital Bangalore

Muthulaksmi

M.Sc. Nursing, Department of Maternity and Child Health, St. John's College of Nursing, Rajiv Gandhi University,  
PO 34, Bangalore  
Email - nirmalranimuthu@gmail.com,

**Abstract: background:** Most women have some degree of discomfort during the first few postpartum days. One of the common causes of discomfort is episiotomy. Nursing interventions are intended to reduce the discomfort and allow the woman to take care of herself and her baby. Simple interventions that can decrease the discomfort associated with perineal trauma is applying an ice pack, moist or dry or topical applications, cleansing the perineum with a squeeze bottle and taking a warm shower or a sitz bath. The **aim** of this study was to evaluate the effect of self perineal care versus standard of care on episiotomy wound healing and pain among postnatal mothers. The **research design** used for the current study was quasi experimental design. A total of 60 postnatal mothers (experimental and control groups each group consisted of 30 mothers) were recruited purposive sampling technique for this study from the postpartum ward at St.Johns medical college hospital Bangalore. Tools used for data collection consisted of baseline variables, the numerical rating scale (NRS), the standardized REEDA Scale. The **Results** of the study revealed that on day 1 and day 2 there was a significant wound healing among postnatal mothers in experimental and control group on day 1 and day 2 at( $p<0.000$ ) level so there was good wound healing in experimental group than control group on day 1 and day 2. On day 2, day 3 and on the day of discharge there was a significant difference ( $<0.05$  level) between experimental and control group of postnatal mothers. It depicts that there was good wound healing in experimental group than control group. The current study concluded that, women who received and practice self perineal care instructions on episiotomy wound healing during and pain had good wound healing and reduction in pain. The study findings recommended that Self perineal care instructions can be introduced to the women during antenatal period and then it can be used postnatal period, a similar study can be done with large sample size, a similar study can be done in rural setting and similar study can be done to compare the effect of self perineal care and other interventions like cryotherapy, sitz bath, honey application.

**Key Words:** REEDA- Redness, edema, ecchymosis, discharge and approximation, NRS-Numerical rating scale, Postnatal mothers, Self perineal care.

## 1. INTRODUCTION:

Mothers and children represent more than half of the total population in our country. Besides they are vulnerable groups as the morbidity and mortality rate are higher. Delivery of a new baby is one of the happiest times in woman's life. But it also presents both physical and emotional challenges. In India postnatal infection is the third cause of maternal death. It is mainly due to lack of perineal care, breast care and poor intake of diet. Postnatal health practices such as personal hygiene, postnatal diet, postnatal exercises and family planning will promote health and reduce the mortality and morbidity rate. According to the WHO, the number of normal delivery rate being very high 72.3% per thousand births. Following vaginal delivery, the risks of perineal infections range from 2.8% to higher than 20%<sup>1</sup>. Perineal care is usually called "pericare." It means washing the genitals and anal area. Perineal care can be done during a bath or as a separate procedure. Perineal care prevents skin breakdown of perineal area, itching, burning, odour, and infections.

## 2. LITERATURE REVIEW:

Rhode and Barger (2011) expressed the view that if the sutures are not disturbed, he strongly recommends that daily washing with soap and water is sufficient in place of any manipulation.<sup>8</sup> A quasi experimental study regarding the cost effectiveness of self perineal care and aseptic perineal care was done in a hospital at Bhopal (2012). The difference was found statistically significant at  $p < 0.001$ . The study concluded that the self perineal care is effective in episiotomy

wound healing. A quantitative approach with quasiexperimental, non-equivalent control group to assess the knowledge of the postnatal mothers on perineal care in selected hospital of Doiwala, Dehradun, Uttarakhand On 2018 January 17th. The difference was found statistically significant in postpartum day between the two groups  $p < 0.05$  level of significance. The findings of the study revealed that teaching regarding perineal care was effective in enhancing the knowledge of primi mothers in the experimental group. With 75% of home deliveries in India (Park 2000) practicing self perineal care at home enhances self-esteem, Skill, knowledge, ability and confidence among postnatal women.<sup>9</sup> Self perineal care gives the mother a sense of wellbeing, awareness on episiotomy wound infection and responsibility towards the self care which reduces the discomfort, anxiety and allows the mother to take care of herself as well as the baby.

**Aim of the study:** The aim of the study was to compare the effect of self perineal care versus standard of care on episiotomy wound healing and pain among postnatal mothers.

**Hypothesis of the studies:** All hypothesis will be tested at 0.05 level of significance.

**H<sub>1</sub>:** There will be a significant difference in the wound healing of postnatal mothers between experimental and control group.

**H<sub>2</sub>:** There will be a significant difference in the level of pain of postnatal mothers between experimental group and control group.

**H<sub>3</sub>:** There will be a significant correlation between wound healing and pain.

**H<sub>4</sub>:** There will be a significant association between wound healing and selected baseline variables of postnatal mothers.

**H<sub>5</sub>:** There will be a significant association of pain and selected baseline variables of postnatal mothers.

### 3. METHODOLOGY :

**Research design:** Quasi- experimental design posttest only control group.

**Research setting:** The study was conducted at St. John's medical college hospital Bangalore.

**Research sample:** Sample size 30 in each group (experimental and control).

#### Inclusion criteria for sampling

- Postnatal mothers who underwent vaginal delivery with episiotomy.
- Postnatal mothers who are in 1<sup>st</sup> postnatal day.

#### Exclusion criteria for sampling

- Postnatal mothers with 2<sup>nd</sup> and 3<sup>rd</sup> degree of perineal tear and cervical tear
- Postnatal mothers who have sexually transmitted and other infection
- Postnatal mothers who had prolonged labour, difficult labour and instrumental delivery
- Postnatal mothers with Diabetic mellitus.

#### Tools of data collection:

**Demographic data** of subjects such as age, education, occupation, parity, type of episiotomy and duration of labor.

**The Numerical Rating Scale (NRS)** ('0-10' point pain intensity scale) it was used to measure the intensity of perineal pain of postnatal mothers with episiotomy.

**The standardized REEDA Scale** (Redness, edema, ecchymosis, discharge and approximation) it was used to assess postpartum healing of the perineum following an episiotomy repair.

### 4. DISCUSSION:

The aim of the present study was to compare the effect of self perineal care versus standard of care on episiotomy wound healing and pain among postnatal mothers. Results of the current study supported the following investigated hypothesis that women who received self perineal care instructions will experience lower level of postpartum perineal pain and better wound healing progress than those who do not and they have decrease the pain interfering with postpartum women's daily activities.

#### The findings of the present study are discussed under various headings

1. Findings related to baseline variables.
2. Findings related to comparison of episiotomy wound healing of postnatal mothers between experimental group and control group.
3. Findings related to comparison of episiotomy pain of postnatal mothers between experimental and control group.
4. Findings related to correlation between wound healing and pain of postnatal mothers of both groups.

5. Findings related to association between wound healing and selected baseline variables of postnatal mothers of both groups.

6. Findings related to association between wound pain and selected baseline variables of postnatal mothers between experimental and control group.

### 1. Findings related to baseline variables of postnatal mothers

In the present study it shows that the mean age of postnatal mothers was below 25 years in the experimental group i.e 53.3% and in control group i.e 63.3%. Above 25 years were 46.7% in experimental group and 36.7% in control group. 46.3% of postnatal mothers were graduates in experimental group and 46.7% in control group. In both groups majorities were house wives. 56.7% were primigravida and 43.3% were multigravida in experimental group and 60% were primigravida, 40% were multigravida in control group. 100% of them had right Medio lateral episiotomy in both groups. 86.7% of postnatal mothers had the duration of labour 1-6 hours in experimental group and 90% in control group. 13.3% had the duration of labour 6-12 hours in experimental group and 10% in control group.

### 2. Findings related to comparison of episiotomy wound healing of postnatal mothers between experimental group and control group.

In the present study it's found that there is a significant difference in wound healing between experimental group and control group on day 1 and day 2. (day 1  $p < 0.001$ , day 2  $p < 0.000$ ).

The study which was conducted in EI Minia general hospital Egypt in 2012, to evaluate the effect of self perineal care instructions on episiotomy pain and wound healing among postpartum women was supporting the findings of present study. The result of the study revealed that there was a statistically significant difference of wound healing between experimental and control group on day 2 and the day of discharge at  $p < 0.001$  level. Another study had been conducted on 2012 at Manipal hospital Bangalore, to assess the effect of self perineal care on episiotomy wound healing. The study finding showed that there was better wound healing comparing to standard of care on day 2,3 and the day of discharge ( $p < 0.05$  level).

Another study conducted at Ibn AL-Balady Maternity hospital, Al-ruffsa, Baghdad (2009) to assess the effectiveness of instruction oriented intervention study for primipara women upon episiotomy and self perineal care. The study result showed that day 1, 2 and the day of discharge at  $p < 0.05$  level.

### 3. Findings related to comparison of episiotomy pain of postnatal mothers between experimental and control group.

In the present study on day 2, 3 and the day of discharge there was a significant difference between pain in the episiotomy site. The study result showed the pain reduction was high in self perineal care group than standard of care group. The pain mean score on day 2 in experimental group  $3.10 \pm 1.398$  and control group  $3.50 \pm 1.270$  ( $p < 0.000$ ). On the 3<sup>rd</sup> day  $0.53 \pm 0.973$  in experimental group and control group  $3.50 \pm 1.737$  ( $p < 0.000$ ). On the day of discharge  $0.00 \pm 0.000$  in experimental group and control group  $1.27 \pm 1.311$  ( $p < 0.000$ ). The similar study which was conducted in EI Minia general hospital Egypt (2012). The result of the study revealed that there was a statistically significant difference of pain score between experimental and control group on day 1,2 and the day of discharge at  $p < 0.001$  level.

### 4. Findings related to correlation between wound healing and pain of postnatal mothers of both groups

The present study showed that weak correlation between wound healing and pain on day 1 ( $r'$  value 0.193) and negative correlation on day 2 ( $r'$  value 0.112) in experimental group and control group had moderate correlation on day 2 ( $r'$  value 0.553) and weak correlation on day 3 ( $r'$  value 0.238).

### 5. Findings related to association between wound healing and selected baseline variables of postnatal mothers of experimental group and control group.

**Experimental group:** The present study showed that there was no association between wound healing and selected Baseline variables of age, education, occupation, parity, type of episiotomy and duration of labor in experimental group. A study done at Egypt, it was showing the association of wound healing in experimental group with age and education at  $p < 0.05$  level of significance.

Another study which was conducted to evaluate the effectiveness of structured teaching programme (STP) regarding perineal care among primi mothers. The study findings showed that there was wound healing with age and education at 0.05 level of significance.

**Control group:** In the present study there was no association between wound healing and selected baseline variables of postnatal mothers in control group.

A study conducted at Egypt (2012) to evaluate the effect of self perineal care instructions on episiotomy pain and wound healing among postpartum women and showed that there was an association between wound healing and education in control group at  $p < 0.05$  level of significance.

## **6. Finding related to association of pain in selected baseline variables of postnatal mothers of experimental group and control group**

**Experimental group:** The present study showed that there was an association between pain and selected baseline variables such as age and occupation in experimental group at 0.05 level of significance. There was no association between other baseline variables like education, parity, type of episiotomy and duration of labor in experimental group. A similar study done at El Minia general hospital in Egypt. It was showing that there was an association of pain with age, education and occupation at  $p < 0.05$  level of significance in experimental group.

Another study which was conducted to evaluate the effectiveness of structured teaching programme (STP) regarding perineal care among primi mothers also supporting the present study. The study findings presented that there was an association between pain and education at 0.05 level of significance

**Control group:** The present study showed that there was no association between pain and selected baseline variables except occupation at ( $p < 0.001$ ) level of significance in control group.

A study conducted in Egypt (2012) to evaluate the effect of self perineal care instructions on episiotomy pain and wound healing among postpartum women. The study showed that there was an association between wound healing and education in control group at  $p < 0.05$  level of significance.

A study which was conducted to evaluate the effectiveness of structured teaching programme (STP) regarding perineal care among primi mothers. The study findings shows that there was no association between pain and selected baseline variables at  $< 0.05$  level of significance.

## **5. ANALYSIS:**

### **Description of baseline variables of postnatal mothers**

#### **Experimental group**

Shows that majority of the postnatal mothers were belong to less than 25 years in both groups. 43% were graduates in Experimental group and 47% in control group and most of them were housewife in both groups 83.3% in experimental group and 80% in control group. **Control group:** It depicts that most of the mothers are primigravida in both groups experimental as well in control group that 56.7% in experimental group and 60% in control group. 100% of the mothers had Right Medio lateral episiotomy and majority had 1-6 hours of duration of labor in experimental group 86.7% and 90% in control group.

**Comparison of episiotomy wound healing of the postnatal mothers between experimental group and control group.**  $H_1$  There was a significant difference in wound healing between experimental group and control group on day 1, and day 2.

**Comparison of pain score of episiotomy wound of the postnatal mothers between experimental group and control group :** In day 2, 3 and on the day of discharge there was a significant difference between pain score in experimental group and in control group.

#### **Description of correlation between wound healing and pain in experimental group.**

$H_3$ : There was weak correlation between wound healing and pain in experimental group in day 1 and negative correlation in day 2.

#### **Description of correlation between wound healing and pain in control group.**

$H_3$ : There was moderate correlation between wound healing and pain in control group which was statistically significant on day 2. Weak correlation on day 3 there was no correlation on the day of discharge.  $H_3$  was accepted except 3<sup>rd</sup> day.

#### **Description of association between wound healing and selected baseline variables of postnatal mothers in experimental group.**

$H_4$ : There was no association between wound healing and selected baseline variables of postnatal mothers in experimental group.  $H_4$  was rejected.

#### **Description of association between pain and selected baseline variables of postnatal mothers in experimental group.**

$H_5$ : There was an association between pain and selected variables like age and occupation of postnatal mothers in experimental group. There was no association between pain and selected variables like education, parity, Duration of hours of postnatal mother in experimental group.  $H_5$  was accepted only in age and occupation variables.



**Description of association of wound healing in selected baseline variables of control group in postnatal mothers.** H<sub>4</sub> There is no association between wound healing and selected baseline variables of postnatal mothers in control group. H<sub>4</sub> is rejected.

## 6. FINDINGS:

In the present study, the data collected from 60 subjects, 30 in each group in that 53.3% of subjects were less than 25 years of age in experimental and 63.3% were less than 25 years of age in control group and Majority of the subjects that 43.3% in experimental group and 46.7% in control group had completed diploma/ graduate, 80% were house wife 60% were primigravida, 100% subjects have under gone right medio lateral episiotomy in both group and 90% subjects had 1-6 hours duration of labour in both groups. There was a significant in the episiotomy wound healing of the postnatal mothers in experimental and control group on day 1 and day 2 ( $p < 0.000$ ) level. There was no significant deference on day 3 and the day of discharge, portrays that wound healing was good in experimental group than control group on day 1 and day 2. There was a similar wound healing process in day 3 and the day of discharge. On day 1 there was no significant difference of episiotomy pain of postnatal mothers in experimental and control group. On day 2, day 3 and on the day of discharge there was a significant difference ( $< 0.05$  level on day 2. On day 3. week correlation and the day of discharge there was no correlation between wound healing and pain in control group. No significant association between wound healing and selected baseline variables of age, education, occupation, parity, types of episiotomy and duration of labor in both groups. There was a significant association between pain and selected variables like age  $p < 0.05$  level on day 2. On day 3 week correlation and the day of discharge there was no correlation between wound healing and pain in control group. There was no significant association between wound healing and selected baseline variables of age, education, occupation, parity, types of episiotomy and duration of labor in both groups. There was a significant association between pain and selected variables like age  $p < 0.044$  and occupation  $p < 0.028$  and there was no association between pain and other variables like education, occupation, parity, type of episiotomy and duration of labor in experimental group. There was an association of pain and selected baseline variable like occupation in control group  $p < 0.028$  and there was no association between pain and other variables like education, parity, type of episiotomy and duration of labor. **The findings** indicate that self perineal care offers better episiotomy wound healing than standard of perineal care. Women should be encouraged by the nurses and midwives to undertake stringent perineal hygiene, which assist the reducing of risk of contamination and develop wound healing.

## 7. RESULT :

### Baseline variables of postnatal mothers

In the present study it shows that in table 1 the mean age of postnatal mothers was below 25 years in the experimental group i.e 53.3% and in control group i.e 63.3%. Above 25 years were 46.7% in experimental group and 36.7% in control group. 46.3% of postnatal mothers were graduates in experimental group and 46.7% in control group. In both group majority were house wives. 56.7% were primigravida and 43.3% were multigravida in experimental group and 60% were primigravida, 40% were multigravida in control group. 100% of them had right Medio lateral episiotomy in both groups. 86.7% of postnatal mothers had the duration of labour 1-6 hours in experimental group and 90% in control group. 13.3% had the duration of labour 6-12 hours in experimental group and 10% in control group

### comparison of episiotomy wound healing of postnatal mothers between experimental group and control group.

There is a significant difference in wound healing between experimental group and control group on day 1 and day 2. (day1  $p < 0.001$ , day 2  $p < 0.000$ ).

### Comparison of episiotomy pain of postnatal mothers between experimental and control group.

On day 2, 3 and the day of discharge there was a significant difference between pain in the episiotomy site. The study result showed the pain reduction was high in self perineal care group than standard of care group. The pain mean score on day 2 in experimental group  $3.10 \pm 1.398$  and control group  $3.50 \pm 1.270$  ( $p < 0.000$ ). On the 3<sup>rd</sup> day  $0.53 \pm 0.973$  in experimental group and control group  $3.50 \pm 1.737$  ( $p < 0.000$ ). On the day of discharge  $0.00 \pm 0.000$  in experimental group and control group  $1.27 \pm 1.311$  ( $p < 0.000$ ).

**Correlation between wound healing and pain of postnatal mothers of both groups:** The study showed that weak correlation between wound healing and pain on day 1 ( $r'$  value 0.193) and negative correlation on day 2 ( $r'$  value 0.112) in experimental group and control group had moderate correlation on day 2 ( $r'$  value 0.553) and weak correlation on day 3 ( $r'$  value 0.238).

**Association between wound healing and selected baseline variables of postnatal mothers of experimental group and control group:** No association between wound healing and selected Baseline variables of age, education, occupation, parity, type of episiotomy and duration of labor in experimental group and there was no association between wound healing and selected baseline variables of postnatal mothers in control group.

**Association of pain in selected baseline variables of postnatal mothers of experimental group and control group:**  
 There was an association between pain and selected baseline variables such as age and occupation in experimental group at 0.05 level of significance. There was no association between other baseline variables like education, parity, type of episiotomy and duration of labor in experimental group and there was no association between pain and selected baseline variables except occupation at ( $p < 0.001$ ) level of significance in control group.

**8. RECOMMENDATIONS:**

Self perineal care instructions can be introduced to the women during antenatal period and then it can be used postnatal period.

- A similar study can be done with large sample size.
- A similar study can be done in rural setting.
- A similar study can be done to compare the effect of self perineal care and other interventions like cryotherapy, sitz bath, honey application etc.

**Comparison of episiotomy wound healing of the postnatal mothers between experimental group and control group.**

**Table 1: Range, mean, standard deviation and test of significance of wound healing**

**n=60**

Variables	Experimental group				Control group				Independent 't' test	p value
	Maximum score	Range	Mean	SD	Maximum score	Range	Mean	SD		
Day 1	15	0-3	.43	.898	15	0-3	2.13	2.063	4.138	.000 S
Day 2	15	0-1	.03	.183	15	0-3	1.03	1.299	4.174	.000 S
Day 3	15	0	.00	.000	15	0-1	.17	.592	1.542	0.129 NS
On the day of discharge	15	0	.00	.000	15	0	0.03	.183	1.000	0.321 NS

**S- Significance, NS- Non Significance**

**Comparison of pain score of episiotomy wound of the postnatal mothers between experimental group and control group.**

**Table 2: Range, mean, standard deviation and test of significance of pain score.**

**n=60**

Variables	Experimental group				Control group				t value	P value
	Maximum score	Range	Mean	SD	Maximum score	range	Mean	SD		
Day 1	10	6-9	7.10	0.712	10	7-9	7.73	.868	2.11	0.43 NS
Day 2	10	2-6	3.10	1.398	10	4-8	5.80	1.270	8.42	0.000 S
Day 3	10	0-3	0.53	0.973	10	0-6	3.50	1.737	9.54	0.000 S
On the day of discharge	10	0	0.00	0.000	10	0-4	1.27	0.311	5.52	0.000 S

**S –Significance, NS – Non significance.**

**Description of correlation between wound healing and pain in experimental group.**

Table 3: Mean, Standard deviation and test of significance of wound healing and pain.  
 n=30

Variables	Mean	SD	Karl Pearson correlation co-efficient ('r' value)	'p value
<b>Experimental group</b>				
<b>DAY 1</b>				
• REEDA score	0.43	0.898	0.193	0.308
• Pain score	2.87	0.346		
<b>DAY 2</b>				
• REEDA score	0.03	0.183	- 0.112	0.556
• Pain score	1.27	0.450		
<b>DAY 3</b>				
• REEDA score	0.00	0.000	-	-
• Pain score	0.27	0.450		
<b>On the day of discharge</b>				
• REEDA score	0.00	0.000	-	-
• Pain score	0.00	0.000		

**Description of correlation between wound healing and pain in control group.**

Table 4: Mean, standard deviation and test of significance of wound healing and pain.  
 n=30

Variables	Mean	SD	Karl Pearson co-efficient 'r' value	'p value
<b>CONTROL GROUP</b>				
<b>DAY 1</b>				
• REEDA score	2.13	2.063	-	-
• Pain score	3.00	0.000		
<b>DAY 2</b>				
• REEDA score	1.03	1.299	0.553	0.001
• Pain score	2.37	0.556		
<b>DAY 3</b>				
• REEDA score	0.17	0.592	0.238	0.206
• Pain score	1.53	0.571		
<b>On the day of discharge</b>				
• REEDA score	0.03	0.183	0.095	0.617
• Pain score	0.67	0.661		

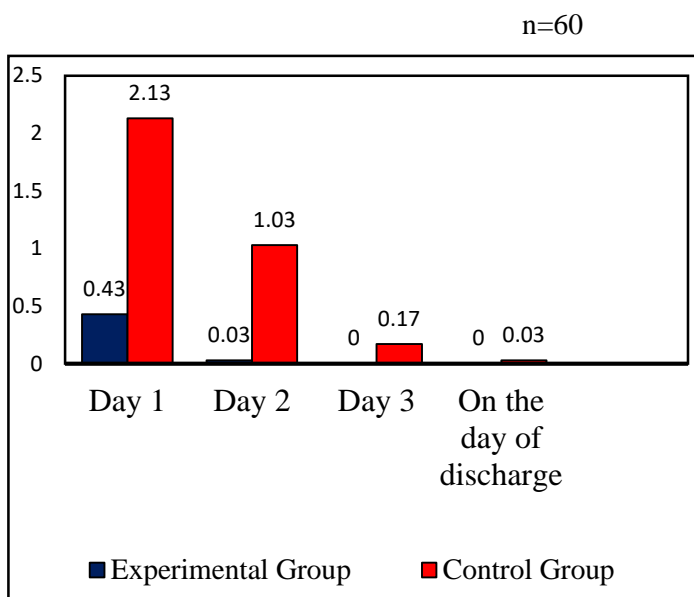


Figure 1: Mean score of episiotomy wound healing of postnatal mothers between experimental group and in control group.

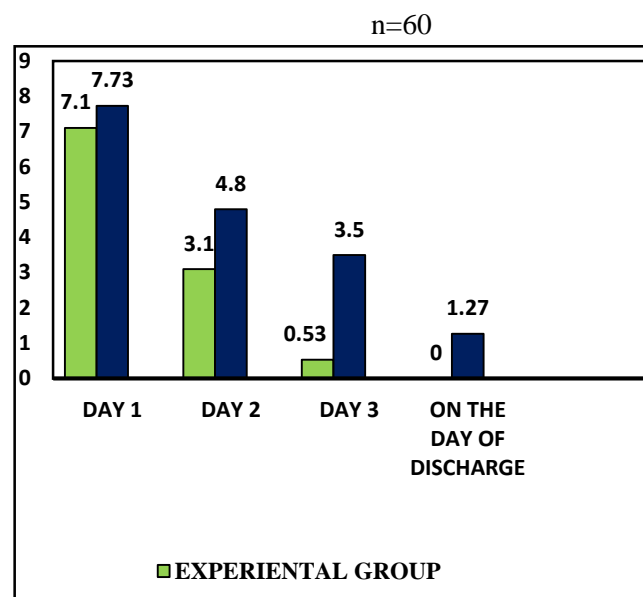


Figure 2: Mean pain score of postnatal mothers in experimental group and control group

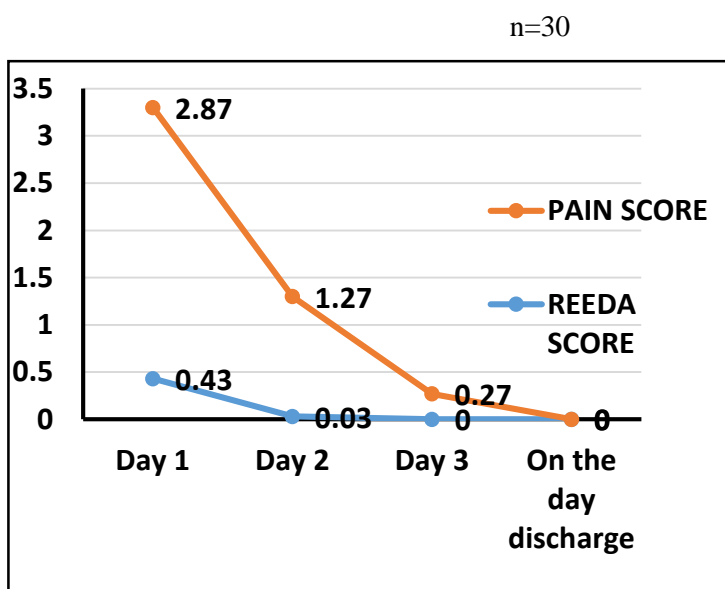


Figure 3: Correlation between wound healing and pain in Experimental group.

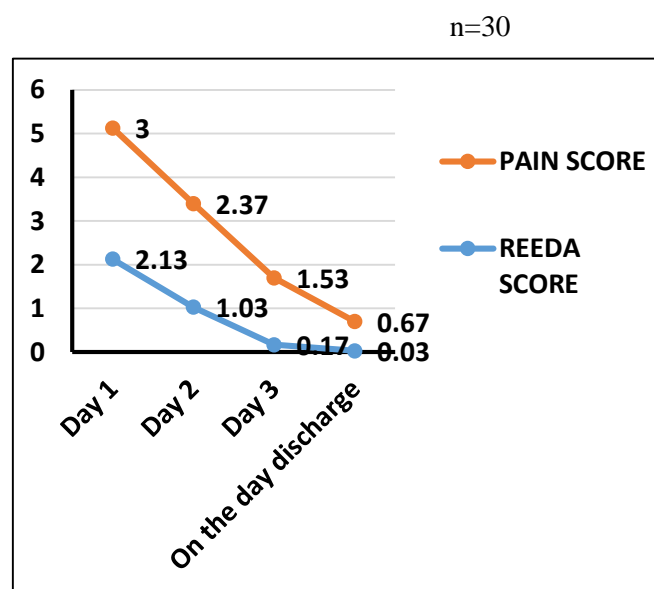


Figure 4: Correlation between wound healing and pain in Control group.

## 9. CONCLUSION:

Effective postnatal period is an important phase in the mother's life. Postnatal care is one of the most important maternal health cares for not only prevention of impairment and disabilities but also reduction of maternal mortality. The postnatal care includes a woman in her role as mother and forms the back bone of the family. The findings indicate that self perineal care offers better episiotomy wound healing than aseptic perineal care. Although antibiotics are thought to be important in preventing infection, aseptic perineal care is too impractical and difficult to sustain in the perineum. Women should be encouraged by the nurses and midwives to undertake stringent perineal hygiene, help reducing the risk of contamination and enhance wound healing.



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