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An experimental study to assess the effectiveness of sitz bath in reduction of episiotomy pain among the postnatal mothers in selected hospital of Kasganj, UP

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Abstract
Background: Episiotomy is a common surgical procedure performed during second stage of labour to enlarge the vaginal introitus and facilitate delivery. Although episiotomy aids in safe delivery of the child, the discomfort of episiotomy is an added concern in the already over stressed situation of puerperium. Episiotomy pain often interferes with even basic daily activities of the postnatal mother. Considering the high rates of episiotomy, following vaginal deliveries, we need to offer patients treatment alternatives for perineal pain, based on scientific evidence.
Objectives: To assess the intensity of episiotomy pain before and after sitz bath among postnatal mothers. To assess the effectiveness of sitz bath on episiotomy pain among the postnatal mothers. To find out the association between effectiveness of sitz bath on episiotomy pain and selected demographic variables.
Method: A quasi-experimental (one-group pretest and posttest) design was used for this study. The sample size consisted of 30 postnatal mothers who had normal delivery with episiotomy. Purposive sampling technique was used to select the samples. Data was collected by using numerical pain scale for assessing episiotomy pain. Intervention (sitz bath) administered for 15-20 minutes, and continued for two days both morning and evening.
Data was analyzed using descriptive and inferential statistics.
Result: In this study, Age wise distribution of samples shows out of 30 majority of samples 17(56.67%) lie in the age group of 24 to 29 years, 10(33.33%) samples lie in the age group of 18 to 23 years, 3(10%) samples lie in the age group of 30 to 35 years and no one sample lies in the age group of more than 35 years of age. Parity wise distribution of the samples shows, that majority of the samples 20(66.67%) were primi mothers and 10(33.3%) of the samples were multiparous mothers in the study. According to the place of residence, majority 19(63.33%) samples were living in rural area and 11 (36.67%) were living in urban area. According to Education, majority of the samples 13(43.33%) were graduate, 12(40%) were higher secondary, 5(16.67%) were high school and no one was illiterate. Nutritional status wise distribution of samples shows that, out of 30 majority 22(73.33%) of them were well nourished, 4 (13.33%) were mal nourished and 4(13.33%) were over nourished. Nature of delivery wise distribution of samples shows, that majority of samples 23(76.67%) had normal vaginal delivery and 7(23.33%) had instrumental delivery. According to the indication of episiotomy, majority 25(83.33%) had rigid perineum, 5(15.67%) had Macrosomia and no one had breech presentation. The effectiveness of the sitz bath therapy is checked by't- value'. The mean score of pretest is 5.367, the mean percentage of the pretest score is 53.67 and standard deviation of the pretest is 1.88. The mean score of the post test is 4.433, the mean percentage of the post test score is 44.33 and standard deviation is 1.77. The mean difference between pretest and post test score is 0.934. The mean percentage difference of the pre and post test score is 9.34. After application of T-test, the T calculated value is 11.7475. I also calculated the degree of freedom (DF) which is 29. Checked T- table value at the level of 0.05% of significance is 2.045, which is less than T calculated value. So, the result shows that the sitz bath therapy was effective on episiotomy wound pain reduction among postnatal mothers. There is a significant difference between pre and post test score of the pain level. There is significant association between the post test and demographic variables (age and parity). And there is no significant association between the posttest and other demographic variables like (place of residence, educational qualification, nutritional status, nature of delivery and indication of episiotomy) at 0.05 level of significance.

Keywords: Sitz bath, episiotomy, pain, post natal mothers, effectiveness

Introduction

Episiotomy is a common surgical planned incision on the perineum and the posterior vaginal wall during the second stage of labour to enlarge the vaginal introitus to facilitate easy and safe delivery of the fetus, to minimize the overstretching and rupture of perineal muscles and fascia and to reduce the stress on the fetal head. Episiotomy is also helpful in reducing duration of second stage of labor. (Dutta, DC, 2007, p. 568) [1]. Every woman who became pregnant have to undergo the process of delivery. Sometimes it may be normal or forceps, vacuum and caesarean section. In normal process of delivery, the baby is delivered per vagina, an episiotomy is performed by health care provider or midwife. (Kapoor, J., and Rita, 2018, p. 92) [2].

Episiotomy is a common surgical procedure performed during second stage of labour. The first performance of episiotomy was done in 1742, when perineal incision was made to facilitate difficult deliveries. (Grass, Dunn and stys, 1986) [3]. The problems associated with the procedure, include unsatisfactory anatomical results, increased blood loss, perineal pain and dyspareunia. The muscles of the perineum are involved in many activities like (sitting, walking, squatting, bending, urinating, and defecating). Thus, an incision in this area causes a great deal of discomfort [4]. A sitz bath or hip bath is a bath in which a person sits in water up to the hips. It is used to relieve discomfort and pain. The term sitz bath is derived from the German word Sitz bath, meaning a bath (Bad) in which one sits (sitzen). Sitz baths may either be warm or cool. Warm baths are recommended for reducing the itching, pain and discomfort. An ordinary bathtub can be filled with 3 to 4inches (7.6 to 10.2cm) of hot water about 110°F (43°C), and sat in for 15–20 minutes or until the water cools down. Sitz bath is one of the easiest and more effective way to ease pain and lessen discomfort associated with a painful condition in the pelvic area. (Kapoor, J., and Rita, 2018, p. 92) [5].

Objectives

- To assess the intensity of episiotomy pain before and after sitz bath among postnatal mothers.
- To assess the effectiveness of sitz bath in reduction of episiotomy pain among the postnatal mothers.
- To find out the association between effectiveness of sitz bath on episiotomy pain and selected demographic variables.

Methodology

Study design

In this study, quasi experimental (one group pre-test-posttest) design was adopted.

Study population

Study population comprises of all postnatal mothers with episiotomy of selected setting.

Study area

Study was conducted in Kalawati Hospital Kasganj UP.

Sample size

In this study the Sample size is total 30 postnatal mothers who delivered before 48 hrs by normal vaginal delivery.

Sampling method

In this study convenient purposive sampling technique is used. Convenient purposive sampling technique is a non-probability sampling technique. In which samples are selected due to their convenient accessibility and proximity of the researcher. The subjects are chosen just because of fact that they are very easy to recruit for the study.

Inclusion criteria

- Post-natal mothers who had normal vaginal delivery or instrumental delivery with episiotomy.
- Post-natal mothers with episiotomy who were willing to participate in the study.

Exclusion Criteria

- Those post-natal mothers, who were not willing to participate in the research study.
- Those post-natal mothers, who did not deliver before 48 hrs.
- Post-natal mothers with heavy vaginal bleeding with episiotomy.
- Post-natal mothers with perineal tear, cardiac diseases, gestational diabetes and hypertensive disorders etc.

Data collection tool

The Numerical pain rating scale was used to collect the data from postnatal mothers who delivered before 48 hrs by normal vaginal delivery with episiotomy.

Development of tool

The study tool considered of two section-

Section A: socio- demographic Performa:

Age, parity, place of residence, educational qualification, nutritional status, nature of delivery and indication of episiotomy.

Section B: Visual analog pain scale:

It consists of visual analog scale to assess intensity of episiotomy pain. Visual analog scale comprises of a 10 cm horizontal line with end points marked as “No Pain” and “Worst Possible Pain”.

It consists of following description

No Pain	If the woman marks on 0cm
Mild Pain	If the woman marks between 0-2 cm
Moderate Pain	If the woman marks between 2-4 cm
Severe pain	If the woman marks between 4-6 cm
Very severe pain	If the woman marks between 6-8 cm
Worst possible pain	If the woman marks between 8-10 cm

Data collection

A formal written permission was obtained from kalawati Hospital. The data was collected in the month of October, from 19 October to 19 November 2018. 30 subjects were selected by using convenient purposive sampling technique. The researcher introduced herself to the respondents and explained the purpose of the study and written consent was obtained from each participant. After this the data was

collected through prepared tool. They were assured that their responses would be kept confidential and use only for the research purpose. The collected data was then organized for analysis.

Statistical analysis

The data analysis was done in accordance with the objective of this study. The collected data was tabulated and analyzed by calculating frequency, percentage, mean, mean %, median, standard deviation, chi square test, Paired t- test. The levels of significance chosen were $p<0.05$. Bar graphs, pie charts, column diagrams were used to depict the findings.

Ethical clearance and informed consent

Institution's ethical review committee's permission was taken. Written permission was obtained from the ethical committee of Kalawati hospital, Kasganj after explaining the type and purpose of the study.

The purpose of the study was explained and written consents were obtained from the concerned subjects. The responses of the participants were kept confidential.

Results

Findings related to socio-demographic variables

It was found that

- 17(56.67%) samples were in the age group of 24 to 29 years, 10(33.33%) sample were in the age group of 18 to 23 years, 3(10%) samples were in the age group of 30 to 35 years, and no one was in the age group of more than 35 years of age.
- The majority 20(66.67%) samples were primi mothers and 10(33.3%) samples were multiparous mothers.
- The majority 19(63.33%) samples were living in rural area and 11(36.67%) were living in urban area.
- 13(43.33%) samples were graduate, 12(40%) were higher secondary, 5(16.67%) were high school and no one was illiterate.
- Out of 30 majority 22(73.33%) of them were well nourished, 4(13.33%) were mal nourished and 4(13.33%) were over nourished.
- The majority of samples 23(76.67%) had normal vaginal delivery, 7(23.33%) had instrumental delivery.
- The majority of samples 25(83.33%) had rigid perineum, 5(15.67%) had Macrosomia and no one had breech presentation.

Findings related to significant difference between pre and post test

- The mean score of pre-test is 5.367, the mean percentage of the pre-test score is 53.67, the median score of pre-test is 5.75 and standard deviation of the pre-test is 1.88.
- The mean score of the post test is 4.433, the mean percentage of the post test score is 44.33, the median of the post test is 5 and standard deviation is 1.77.
- The mean difference between pre-test and post test score is 0.934.
- The mean percentage difference of the pre and post test score is 9.34.
- The standard deviation difference of the pre and post-test is 0.11.
- There is a significant difference between pre and post test score of the pain level.

Findings related to significant association between post-test and demographic variables

Significant association is check by chi square test.

- There is significant association between the posttest and demographic variables (age and parity)
- There is no significant association between the posttest and other selected demographic variables like (place of residence, educational qualification, nutritional status, and nature of delivery and indication of episiotomy) at 0.05 level of significance.

Discussion

The findings of the present study have been discussed in accordance with the objectives of this study.

The first objective of the study was to assess the intensity of episiotomy pain before and after sitz bath among postnatal mothers. The pre-test mean score was 5.367 and post-test mean score was 4.433. Hence, it was concluded that posttest mean pain score was found lower than the pre-test mean score. The findings revealed that postnatal mothers had higher pain level before sitz bath and lower pain level after sitz bath.

The second objective of the study was to assess the effectiveness of sitz bath in reducing the episiotomy pain. The effectiveness was checked by the paired t test. The t test calculated value was 11.7475 and degree of freedom was 29. We checked t table value at the level of 0.05% of significance that is 2.045 which is less than the t calculated value. The third objective of the study was to find out the association between effectiveness of sitz bath on episiotomy wound pain reduction and selected demographic variables such as age of the mother, parity, place of residence, educational qualification, and nutritional status, nature of delivery and indication of episiotomy.

Table 1: Showing the frequency and percentage distribution of postnatal mothers as per their socio-demographic variables.

S.no.	Sample Characteristics	Frequency	Percentage
1	**Age (in years)-**		
	a). 18-23 years	10	33.33
	b). 24-29 years	17	56.67
	c). 30-35 years	3	10
	d). More than 35 years	0	0
2	**Parity**		
	a). Primigravida	20	66.67
	b). Multigravida	10	33.3
3	**Place of residence**		
	a) Rural	19	63.33
	b) Urban	11	36.67
4	**Educational qualification-**		
	a) Illiterate	0	0
	b) High school	5	16.67
	c) Higher secondary	12	40
	d) Graduate	13	43.33
5	**Nutritional status**		
	a) Well nourished	22	73.33
	b) Mal nourished	4	13.33
	c) Over nourished	4	13.33
6	**Nature of delivery**		
	a) Normal vaginal delivery	76.67	23
	b) Instrumental delivery	23.33	7
7	**Indication of episiotomy**		
	a) Macrosomia	5	16.67
	b) Rigid perineum	25	83.33
	c) Breech presentation	0	0

Table 2(a): Showing the pre-test score of mean, median, standard deviation, and mean percentage was calculated by visual Analog pain scale on intensity of episiotomy pain before sitz bath among postnatal mothers

Scores	Mean	Mean percentage	Median	S.D.
Pre-test (x)	5.367	53.67	5.75	1.88

Table 2(b): Showing the post test score of mean, median, standard deviation, and mean percentage was calculated by visual Analog pain scale on intensity of episiotomy pain after sitz bath among postnatal mothers

Scores	Mean	Mean percentage	Median	S.D.
Post-test (y)	4.433	44.33	5	1.77

Table 3: Showing effectiveness of sitz bath on episiotomy wound pain reduction among postnatal mothers by comparing pre-test and post-test pain scores.

Scores	Mean score	Mean %	S.D.	d=(x-y)	Difference %	t-value	Inference
Pretest (x)	5.367	53.67	1.88	0.934	9.34	11.7475 Df-29	<p 0.005 level 2.045
Posttest (y)	4.433	44.33	1.77				

Table 4: Showing significant difference between Pre-Test and Post Test Score

Scores	Mean score	Mean %	Median	S. D	d=(x-y)	SD(d)	Difference %	t-value	Inference
Pre-test (x)	5.367	53.67	5.75	1.88	0.934	0.11	9.34	11.7475	Significant Difference
Post-test (y)	4.433	44.33	5	1.77					

Table 5: Showing association between the post-test pain scores and selected demographic variables

S. No.	Demographic Variables	F	%	Post-Test Pain Score		Chi square	P-value
				> Median	≤ Median		
				N0.	NO.		
1	**Age(in years)-**						
	a). 18-23 years	10	33.33	8	2	8.265 Df-3	p>0.05 level 7.82
	b).24-29 years	17	56.67	6	11		
	c). 30-35 years	3	10	0	3		
	d). More than 35 years	0	0	0	0		
	Result						**S***
2	**Parity**						
	a). Primigravida	20	66.67	14	6	13.12	p>0.05 level 3.84
	b). Multigravida	10	33.3	0	10	df-1	
	Result						**S***
3	**Place of residence-**						
	a) Rural	19	63.33	7	12	1.96	p>0.05 level 3.84
	b) Urban	11	36.67	7	4	df-1	
	Result						**N.S***
4	**Educational qualification**						
	a) Illiterate	0	0	0	0	0.481 df-3	p>0.05 level 7.82
	b) High school	5	16.67	2	3		
	c) Higher secondary	12	40	5	7		
	d) Graduate	13	43.33	7	6		
	Result						**N.S***
5	**Nutritional status**						
	a) Well nourished	22	73.33	11	10	4.1 df-2	p>0.05 level 5.99
	b) Mal nourished	4	13.33	3	2		
	c) Over nourished	4	13.33	0	4		
	Result						**N.S***
6	**Nature of delivery**						
	a) Normal vaginal delivery	76.67	23	10	13	0.4	p>0.05 level 3.84
	b) Instrumental delivery	23.33	7	4	3	df-1	
	Result						**N.S***
7	**Indication of episiotomy**						
	a) Macrosomia	5	16.67	3	2	0.4 df-2	p>0.05 level 5.99
	b) Rigid perineum	25	83.33	11	14		
	c) Breech presentation	0	0	0	0		
	Result						**N.S***

N.S*- Not Significant S*- Significant

Conclusion

The episiotomy wound pain is the main problem of postnatal mothers in the puerperium. The present study was conducted in order to find out the effectiveness of sitz bath in reducing episiotomy pain. Administration of sitz bath was found to be effective in reducing episiotomy pain, the result showed significant difference between the mean scores of pain in group before and after administration of sitz bath and result was demonstrated using paired‘t’ test analysis. The computed chi- square test showed that there is significant association between the posttest and demographic variables (age and parity), there is no significant association between the posttest and other selected demographic variables like (place of residence,

educational qualification, nutritional status, nature of delivery and indication of episiotomy) at 0.05 level of significance.

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Declarations
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Ethical approval: The study was carried out after obtaining approval from the institutional ethical committee of Kailash institute of nursing and paramedical sciences knowledge park-3 Greater Noida

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