

An Experimental Study to Assess the Effectiveness of Sitz Bath in Reducing the Episiotomy Pain among the Postnatal Mothers Admitted in Jai Prakash Hospital, Bhopal, M.P.

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ABSTRACT

Labour is a wondrous act of nature and unique to every childbearing women. It is transformative and special event in a women's life. It is the magic of creation. The very process of giving birth is the most beautiful one on earth and the mother attains unique capacities and true nobility through childbirth. The present study was conducted to assess the effectiveness of Sitz bath on episiotomy pain reduction among postnatal mothers. The design used was true experimental posttest only design. A total of 60 postnatal mothers (30 postnatal mothers in experimental group) and (30 postnatal mothers in control group) who meet the inclusion and exclusion criteria were selected as samples from Jai Prakash Hospital, Bhopal. The sample were selected by using simple random (table method) sampling techniques. The investigator first introduced herself to the samples and developed rapport with them. After the selection of samples, the interview was being conducted with the instruments.

KEYWORDS: *Sitz Bath, Experimental*

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INTRODUCTION

Labour is a wondrous act of nature and unique to every childbearing women. It is transformative and special event in a women's life. It is the magic of creation. The very process of giving birth is the most beautiful one on earth and the mother attains unique capacities and true nobility through childbirth. The onsets of motherhood present a unique set of physical, emotional and psychological challenges.

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*). It is made both to prevent tearing of the perineum and to release pressure on the fetal head with birth (*Lawsan and Bienstock, 2007*). It is the only procedure in obstetrics is performed without the patient's specific consent. The advantage of an episiotomy is that it

substitutes a clean cut for a ragged tear, minimizes pressure on the fetal head, and may shorten the last portion of the second stage of labour (**Incerpi, 2007**).

Episiotomy rates vary widely worldwide, depending on whether the procedure is used restricvely/ routinely. The worldwide episiotomy rate was 27%, 54% and nulliparous and 6% are multiparous women (WHO 2003). Rates vary from 8% in the Netherlands, 13% in England to 25% in the USA. Among English speaking countries, the US had the highest episiotomy rate, varying greatly from region. One in three mothers who delivered vaginally in the U.S. from 1995 to 2003 had episiotomies In India the birth rate is very high 56% of woman had an episiotomy compare to the 46% of white woman. The difference between these percentages (10%) is measure of the excess frequency of episiotomy in Indian woman.

Varies intervention have been found to reduce episiotomy wound infection and enhance the healing process which include administration of anti-biotic, cleanliness, topical application of ointment, infra-red therapy, sitz bath, performance of Kegal's exercise and perineal care (*Helen et.al 2009*). In edition to all this intervention, complementary therapy has also been added to aid perineal healing.

NEED FOR THE STUDY

Motherhood is a beautiful process, where by mothers safely delivers a child. It is the magic of creation. Care must be given to ensure safe birth. Safe motherhood initiative announced in the year 1987 had set targets to reduce maternal mortality by 50% one decade. The safe motherhood aims at enhancing the quality of life and women through adoption of a combination of health and non± health strategies. Glazers et al (1996), as cited by Calvert and flaming (2000) have addressed the extent and causes of morbidity by self- reported questionnaire. Their conclusions are that maternal postnatal morbidity is extensive and that it is unrecognized by health professional. Midwives have an important role to play in the care of perineal wounds following childbirth. It is important that midwives recognize the need for research based practice.

Episiotomy is an incision made on the perineum during a vaginal delivery to facilitate and explicit delivery and to prevent perineal tear.

Although its use in childbirth has steadily declined in recent decades, literature says in developed countries like United States and United Kingdom, episiotomy rates has decreased to 8% to 10% but actual use remains common in many hospital settings. Our institution being a tertiality care teaching hospital, the incidence of episiotomies per month is approximately 40%- 70 % while the rates of restrictive groups are 27.6%.

perineum with a squeeze bottle and taking a warm shower or a Sitz bath.

In India, the overall rate of episiotomy was 40.6% among the midwives performed episiotomies at a lower rate (21.4%), faculty (33.3%) and private care providers (56.6%). The need for the Sitz bath during episiotomy is represented by a reduction of mean score from 4.1 to 0.15 and standard deviation from 0.66 to 0.3. The findings of the study consistent with the findings.

Episiotomy pain often interferes with basic daily activities for the woman such as walking, sitting, passing urine and defecating and also negatively impacts on motherhood experiences.

Episiotomy wound care starts immediately after suturing the wound in order to reduce pain and heal wound. There are some general treatments for perineal care such as cold packs and ice packs applied to perineum for the first 24 hours. Kegal exercises are taught by nurses to strengthen the pelvic floor muscles and it speeds up the wound healing process.

Apart from all the important significant therapy hot application [Sitz bath with potassium permanganate 1 gram] is widely used in many different hospital settings and proved effective in managing the episiotomy wound pain and healing and also in minimizing secondary complications.

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OBJECTIVES:-

To determine the effects of Sitz bath in episiotomy pain reduction measured by Numerical pain scale among the postnatal mothers in experimental group.

To determine the effects of routine care in episiotomy pain reduction measured by Numerical pain scale among the postnatal mothers in control group.

To compare the effectiveness of Sitz bath in episiotomy pain reduction measured by Numerical pain scale among the postnatal mothers in experimental and control group.

To identify the relationship between episiotomy pain reduction and selected variables of postnatal mothers.

HYPOTHESIS:-

H₁ .There will be a significant difference in the effectiveness of Sitz Bath in episiotomy pain reduction among the postnatal mothers in experimental and control group.

H₂ - There will be significant association between the episiotomy pain reduction and selected demographic variable such as age, education, occupation, parity, activity, method of rupture of membrane.

OPERATIONAL DEFINITIONS:-

Effectiveness:-

In this study, effectiveness refers to the extent to which Sitz bath has produced desirable effect on episiotomy pain reduction.

Sitz Bath:-

It is a clean procedure with warm water in a basin given to the postnatal mothers to immerse episiotomy wound for 15-20 mts, 1-3 times a day.

Episiotomy:-

It refers to the surgical incision made on the perineum, either on the right or left medio lateral aspect during the II stage of labour, to enlarge the vaginal introitus, to facilitate easy an safe delivery.

Pain:-It refers to feeling of distress on episiotomy wound among postnatal mothers during puerperium.

Postnatal mothers:-It refers to mothers who have undergone normal vaginal delivery with episiotomy.

ASSUMPTION

1. Sitz bath may fasten the episiotomy wound healing process and simultaneously reduce the pain.
2. Sitz bath aids in reducing the infection.

DELIMITATION

- The study will be limited to the postnatal mothers with episiotomy wound.
- The study will be limited to the mothers who have normally delivered in selected hospitals.
- Data collection period is limited for 6 weeks.

RESEARCH METHODOLOGY

- Research methodology is a way to systematically solve the research problem. In this chapter the investigator discusses the Research approach, Research design, Variables, Setting, Population, Sample, Sample size, Sampling technique, Criteria for data collection, Description of the tool, Plan for data analysis and production of human rights.

RESEARCH APPROACH

An evaluative research approach was used in this study.

RESEARCH DESIGN

True experimental research design (posttest only design) was used in this study.

E	R	X	O2
C	R	-	O2

E-Experimental group

C-Control group

R-Randomization

X-Treatment [Sitz bath by potassium permanganate]

O2-Post test for both group

VARIABLES

Independent variable: Sitz bath.

Dependent variable: Episiotomy pain

Demographic variables: Age of the mother in years, Education, Occupation, Parity, Activity, Method of rupture of membranes.

SETTING

This study was conducted among the postnatal mothers admitted at Jai Prakash hospital, Bhopal. Jai Prakash Hospital is a 550- bedded District hospital situated in Tulsi Nagar, Bhopal. It has its maternity department which is 100 – bedded, and an average of 100 normal deliveries is done per month.

POPULATION

The population consisted of postnatal mothers at a Jai Prakash hospital, Bhopal.

SAMPLE

In this study the postnatal mothers who had delivered by normal vaginal deliveries with episiotomy.

SAMPLE SIZE

The sample consists of 60 postnatal mothers. [Experimental group 30samples and Control group-30 samples]

CRITERIA FOR SAMPLE SELECTION

INCLUSION CRITERIA

- Postnatal mothers who are willing to participate in the study.
- Postnatal mothers who can understand Hindi.

EXCLUSION CRITERIA

- Postnatal mothers who have done L.S.C.S and assisted vaginal delivery.
- Postnatal mothers who have received analgesics and antibiotics.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

Tool comprised of 2 parts

Part-I: Demographic variables such as Age of the mother in years, Education, Occupation, Parity, Activity and Method of rupture of membranes.

Part-II: Numerical pain rating scale to assess the pain reduction.

DATA ANALYSIS

This chapter deals with the description of sample characteristics, analysis and interpretation of data collected from postnatal mothers on episiotomy wound healing and pain reduction in experimental and control group.

This chapter represents the organization of data, and the collection of data. It was interpreted by using descriptive and inferential statistics method. The data was coded and analyzed as per the objective of the study.

Section A: Description of demographic profile of the sample

This section deals with distribution of participants according to the demographic characteristics. The

obtained data on demographic profile are described under the following sub heading which age, education, occupation, parity, activity, method of

rupture of membrane. The data was analyzed by using descriptive statistic and are summarized in terms of frequency and percentage.

Sec-A: Description of socio demographic variables of postnatal mothers.

Table-1: Frequency and percentage distribution of postnatal mothers on experimental and control group.
n=30+30=60

Demographic variables	Experimental		Control	
	Frequency	percentage	Frequency	Percentage
1.Age in years				
<19	6	24	4	16
20 – 24	10	40	13	52
25 – 29	5	20	5	20
30 – 35	4	16	3	12
2.Education				
Illiterate	9	36	4	16
Primary school	7	28	7	28
High school	5	20	10	40
Graduate	4	16	4	16
3.Occupation				
Employed	14	56	11	44
House Wife	11	44	14	56
4.Parity				
Primiparous	13	52	12	48
Multiparous	12	48	13	52
5.Activity				
Sedentary	9	36	4	16
Moderate	10	40	5	20
Heavy	6	24	16	64
6.Method of rupture of membrane				
Artificial	12	48	13	52
Spontaneous	13	52	12	48

The graph depicts that the majority of respondents 40% in experimental group belongs to age group of 20-24years, followed by <19years with 24% , another 20% belongs to 25-29 years and rest of the 16% belongs to 30-35 years. In control group majority (52%) postnatal mothers belongs to 20-24years, followed by 25-29years with 20%, another 16% belongs to <19 years and the rest of 12% belongs to 30-35 years.

SECTION – II

This section deals with the findings related to effectiveness of Sitz bath in episiotomy pain reduction measured by Numerical pain scale.

Objective

To determine the effects of Sitz bath in episiotomy pain reduction measured by Numerical pain scale.

Table – 2: Distribution of Numerical pain scores of participants in experimental group
N=30

Score	Days				
	Day1	Day2	Day3	Day4	Day5
Maximum	6	5	3	2	1
Minimum	4	3	1	0	0
Mean	5	3.8	2	1.2	0.64
Median	5	4	2	1	1
SD	0.76	0.87	0.82	0.87	0.49

The above table indicates that as day's progresses from Day1 to Day5, the maximum score reduces from 6 to 1 and minimum score reduces from 4 to 0. This denotes that application of Sitz bath has significant influence in episiotomy pain reduction. This is represented by a reduction of mean score from 5 to 0.64 and SD from 0.76 to 0.49.

SECTION – III

This section deals with the findings related to effectiveness of routine care episiotomy pain reduction measured by Numerical pain scale.

Table – 3: Distribution of Numerical pain scores of participants in control group

Score	Days				
	Day1	Day2	Day3	Day4	Day5
Maximum	6	5	7	6	8
Minimum	4	3	2	1	0
Mean	5.04	3.92	4.88	3.96	4.16
Median	5	4	5	4	4
SD	0.79	0.81	1.59	1.67	2.56

The table-3 depicts that as day's progresses from Day1 to Day5 the maximum score increased from 6 to 8. This denotes that application of routine care is not much effective as Sitz bath.

SECTION – IV

This section deals with the findings related to comparison of effectiveness of Sitz bath and routine care on episiotomy pain reduction.

Table – 4: Effectiveness of Sitz bath and Routine care on episiotomy pain reduction.

N=30+30

Days	Experimental group			Control group			t value
	Mean	SD	Mean%	Mean	SD	Mean%	
Day 1	5	0.76	33.3	5.04	0.78	33.6	0.20
Day2	3.8	0.86	25.1	3.92	0.81	26.13	0.61
Day3	2	0.81	13.3	4.88	1.58	32.53	7.76*S
Day4	1.2	0.86	8	3.96	1.67	26.4	6.54*S
Day5	0.64	0.48	4.2	4.16	2.56	27.73	7.17*S

Note: S*- Significant at 5% level (i.e. $P < 0.05$)

The table-4 depicts that in the experimental group on Day1 the mean is 5 and when it reaches to Day 5 mean scores reduced to 0.64. In control group Day1 mean is 5.04 and on Day5 mean scores reduced to 4.16. There is mean percentage of Day 1 in experimental group is 33.3 and on Day5 mean percentage reduced to 4.2 and 33.6 on Day1 in control group and Day5 shows small Differences as 27.73. The obtained 't' value on Day 3 (7.76), Day4 (6.54) and Day5 (7.17) is found to be significant so the research hypothesis is accepted. This reveals that episiotomy pain reduction is faster in experimental group than in control group.

Section – V

This section deals with the association between demographic variables and Numerical pain score among postnatal mothers in experimental and control group.

Table – 05: Association between demographic variables and Numerical pain score in Experimental group.

Demographic variables	No	%	Pain score of the participants				chi-square
			Moderate		Severe		
			No	%	No	%	
1.Age in years							
<19	6	24	1	11	5	31	8.87
20 – 24	10	40	7	78	3	19	3df
25 – 29	5	20	1	11	4	25	S*
30 – 35	4	16	0	0	4	25	
2.Education							
Illiterate	9	36	3	33	6	38	
Primary school	7	28	2	22	5	31	3.61
High school	5	20	2	22	3	19	3df
Graduate	4	16	2	22	2	13	NS

3.Occupation							
Employed	14	56	4	44	10	63	3.73
House Wife	11	44	5	56	6	37	1df NS
4.Parity							
Primipara	13	52	4	44	9	56	3.45
Multipara	12	48	5	56	7	44	1df NS
5.Activity							
Sedentary	9	36	4	44	5	31	3.53
Moderate	10	40	3	33	7	44	2df NS
Heavy	6	24	2	22	4	25	
6.Method of rupture of membrane							
Artificial	12	48	5	56	7	44	3.45
Spontaneous	13	52	4	44	9	56	1df NS

Note: S*- Significant at 5% level (i.e. $P < 0.05$); NS-Not significant at 5% level ($p > 0.05$)

Data presented in experimental group shows there was a significant association found between Age in years ($\chi^2=8.87$) and there was no significant association between other variables. They are education ($\chi^2=3.61$), occupation ($\chi^2=3.73$), Parity ($\chi^2=3.45$), Activity ($\chi^2=3.53$) and Method of rupture of membrane ($\chi^2=3.45$).

Table – 6: Association between demographic variables and Numerical pain score in Control group.

Demographic Variables	No	%	Pain score of the participants				chi-square
			Moderate		Severe		
			No	%	No	%	
1.Age in years							
<19	4	16	3	27.27	1	7.143	3.52
20 – 24	13	52	5	45.45	8	57.14	3df
25 – 29	5	20	1	9.091	4	28.57	NS
30 – 35	3	12	2	18.18	1	7.143	
2.Education							
Illiterate	4	16	1	9.091	3	21.43	4.59
Primary school	7	28	2	18.18	5	35.71	3df
High school	10	40	7	63.64	3	21.43	NS
Graduate	4	16	1	9.091	3	21.43	
3.Occupation							
Employed	11	44	5	45.45	6	42.86	0.02
House Wife	14	56	6	54.55	8	57.14	1df NS
4.Parity							
Primipara	12	48	4	36.36	8	57.14	1.02
Multipara	13	52	7	63.64	6	42.86	1df NS
5.Activity							
Sedentary	4	16	4	36.36	0	0	6.18
Moderate	5	20	2	18.18	3	21.43	2df S*
Heavy	16	64	5	45.45	11	78.57	
6.Method of rupture of Membrane							
Artificial	13	52	6	54.55	7	50	0.05
Spontaneous	12	48	5	45.45	7	50	1df NS

Note: S*- Significant at 5% level (i.e. $P < 0.05$); NS-Not significant at 5% level ($p > 0.05$)

Data presented in control group shows there was a significant association found between Activity ($\chi^2=6.18$) and there was no significant association between other variables. They are Age in years ($\chi^2=3.52$) education ($\chi^2=3.61$), occupation ($\chi^2=3.73$), Parity ($\chi^2=3.45$), and Method of rupture of membrane ($\chi^2=3.45$).

DISCUSSION

The present study was intended to find out the effectiveness of Sitz bath on episiotomy pain reduction. The findings of the study have been

discussed based on the objectives of the study and findings of other similar studies.

The findings of the study are discussed under the following headings:

- Description of demographic characteristics
- Effectiveness of Sitz bath in episiotomy pain reduction
- Effectiveness of routine care on episiotomy pain reduction
- Comparison of effectiveness of Sitz bath in episiotomy pain reduction among experimental and control group
- Association between selected variables with effectiveness of Sitz bath on episiotomy pain reduction

CONCLUSION

The present study was conducted to assess the effectiveness of Sitz bath on episiotomy pain reduction among postnatal mothers. The design used was true experimental posttest only design. A total of 60 postnatal mothers (30 postnatal mothers in experimental group) and (30 postnatal mothers in control group) who meet the inclusion and exclusion criteria were selected as samples from Jai Prakash Hospital, Bhopal. The sample were selected by using simple random (table method) sampling techniques. The investigator first introduced herself to the samples and developed rapport with them. After the selection of samples, the interview was being conducted with the instruments.

- Majority of respondents 40% in experimental group belongs to age group of 20-24years and in control group majority (52%) postnatal mothers belongs to same category.
- Majority of respondents 36% in experimental group were illiterate and in control group majority 40% had high school education.
- Majority of 56% of the postnatal mothers were employed and in control group majority of mothers (56%) were housewives.
- In the experimental group most of the mothers (52%) were primiparous and in the control group most of the mothers (52%) were Multiparous.
- In the experimental group majority of mothers 40 % had moderate activity and in the control group majority of the mothers had heavy activity (64%)
- In the experimental group majority of mothers method of rupture of membrane was spontaneous and in the control group majority of mothers 52 % had artificial rupture of membrane.
- As day's progresses from Day1 to Day5, the maximum score reduces from 6 to 1 and minimum score reduces from 4 to 0. This denotes that application of Sitz bath has significant

influence in episiotomy pain reduction. This is represented by a reduction of mean score from 5 to 0.64 and SD from 0.76 to 0.49.

- As days progresses from Day1 to Day5 the maximum score increased from 6 to 8. This denotes that application of routine care is not much effective as Sitz bath.
- In the experimental group on Day1 the mean is 5 and when it reaches to Day 5 mean scores reduced to 0.64. In control group Day1 mean is 5.04 and on Day 5 mean scores reduced to 4.16. There is mean percentage of Day1 in experimental group is 33.3 and on Day5 mean percentage reduced to 4.2 and 33.6. On Day1 in control group and Day5 shows small difference as 27.73. The obtained 't' value on Day 3(7.76), Day4 (6.54) and Day5 (7.17) is found to be significant so the research hypothesis is accepted. This reveals that episiotomy pain reduction is faster in experimental group than in control group.
- In Experimental group, shows there was a significant association found between In Experimental group, shows there was a significant association found between Age in years ($\chi^2=8.87$) and there was no significant association between other variables. They are education ($\chi^2=3.61$), occupation ($\chi^2=3.73$), Parity ($\chi^2=3.45$), Activity ($\chi^2=3.53$) and Method of rupture of membrane ($\chi^2=3.45$).
- In control group, shows there was a significant association found between activity ($\chi^2=6.18$) and there was no significant association between other variables. They are Age in years ($\chi^2=3.52$) education ($\chi^2=3.61$), occupation ($\chi^2=3.73$), Parity ($\chi^2=3.45$), and Method of rupture of membrane ($\chi^2=3.45$).

Implication of the study

The findings of the study have several implications for nursing practice, nursing administration, nursing education and nursing research.

Nursing practice:

The nurse plays a vital and major role in the health care delivery system. Nurse midwives have an important role to play in the care of perineal trauma due to episiotomy. She is the one who works in the immediate environment with the patients and hence there she has all the opportunity to identify the needs and problems. Each nurse midwife should provide one to one comprehensive care to clients to prevent long term puerperal complications. There is a need for the nurses to teach the clients regarding perineal hygiene and the effects of Sitz bath on episiotomy

wound healing and pain reduction. If women are given a clear explanation as to why perineal care is important, they do it well. Perineal care is an easy procedure to learn and the mother can be instructed to carry it out herself as soon as she is ambulatory.

Nursing Administration:

- The nurse administrator should look into the need for organizing in-service and continuing nursing education programs for staff nurses in order to update their knowledge regarding episiotomy care.
- Nursing administration must awaken to the fact that patient education is a necessity and should provide resources in terms of manpower, money and material.

Nursing Education:

- Nursing curriculum should be equipped with knowledge and skills to prepare efficient and skillful nurses to provide quality nursing care.
- Nursing students should be given updated knowledge on recent practices and trends of episiotomy care.
- Nurses will be required to provide more in-depth education on self-care practices to patient.

Nursing Research:

- Use of research findings should become a part of the quality assurance evaluation to evaluate individual performance as a whole.
- The study will motivate initial researchers to conduct the study on large scale.
- Selected care measures to protect the perineum may reduce the maternal morbidity. It is a topic that requires further evaluation through well designed and implemented research.

Suggestions:

- Adequate nurse-patient ratio should be maintained in the labour room and postnatal wards for the provision of quality care to individual patients.
- Organize team conferences to discuss the issues related to episiotomy care.
- Continuing education programs could keep the nurses working in maternity wards updated with necessary knowledge with regard to recent trends in episiotomy care.

Recommendations:

- The same study could be undertaken with samples to show strong statistical association.
- Study conducted in different hospitals can reveal a better picture and confirm the findings of the present study.

Limitations:

- Getting adequate sample takes time.
- Procedure is time consuming.
- Exact intervals to begin perineal care after delivery in both the groups could not be strictly maintained.
- The study was confined to a small number of participants which limits generalizations.
- There was observational checklist which did not give information regarding personal experience of the woman.

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