



“EFFECTIVENESS OF FOOT MASSAGE IN REDUCING POST OPERATIVE PAIN AMONG PATIENTS UNDERGONE CAESAREAN SECTION IN SELECTED HOSPITAL OF GUWAHATI, ASSAM.”

Nursing

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ABSTRACT

Background: Pain has found to be a major problem after surgery, including caesarean section; post caesarean pain is one of the common cause of acute pain in obstetrics, although pain relief and other measures are still inadequate in many cases and leads to patients dissatisfaction, caesarean births are more common than most surgeries. The study aimed to evaluate the effectiveness of foot massage in reducing post operative pain, to determine the level of pain and to evaluate its effectiveness of foot massage in reducing post operative pain.

Objective: To evaluate the effectiveness of foot massage on post operative among patients undergone caesarean section in experimental group.

Methods And Materials: A quantitative research approach with quasi experimental non equivalent control group design was used in this study. 60 patients were selected using purposive sampling technique and who fulfill the inclusion criteria of the study. Data was collected using self administered questionnaires for demographic variables, Visual Analogue Scale (VAS) for pain assessment, and standard protocol on steps of foot massage. Data was analyzed using descriptive and inferential statistics.

Results: In experimental group majority of the participants in the pre test majority 19 (63.3%) moderate level of post operative pain and in the post test, majority 29(96.7%) of the participants has moderate level of post operative pain. Mean pre test score (7.13), post test mean (5.53), median pre test (7) post test (5) mode pre test (7) post test (5), S.D pre test 0.973, post test 1.074. while in control group majority 17(56.7%) of the participants in the pre test has moderate level of post operative pain and 13(43.3%) has severe level of operative pain and in the post test, majority 27(90%) of the participants has moderate level of post operative pain. Mean pre test score (7.33), post test mean (6.53), median pre test (7) post test (7) mode pre test (7) post test (7), S.D pre test 0.922 post test 0.900

Effective of foot massage on post test level of pain in experimental group shows that the mean post test in experimental group (5.53) and the mean post test in control group (6.53). The 't' value was found to be significant as it is less than the tabulated value ($t^* = 2.0017$) at the level of significance at $p < 0.05$. Clearly, it was found that the post test score was lower in experimental group than the post test score in control group.

Conclusion: The findings of the study support the need of implementing foot massage to post operative pain among patients undergone caesarean section. It is a non pharmacological, simple intervention and cost effective without any adverse effect. Therefore, the results proved that the foot massage was effective in reducing post operative pain among patients undergone caesarean section.

KEYWORDS

INTRODUCTION

Pain is a multidimensional phenomenon and is therefore difficult to define. It is a personal and subjective experience, and no one experience pain in exactly the same manner. Persistent postoperative pain is an unpleasant sensory and emotional experience for patients following surgery. It is thought to be caused by nerve injury, which induced high-intensity pain in the first days of surgery. Post-surgical pain is a complex response to tissue trauma during surgery that stimulates hypersensitivity of the central nervous system. Pain is one of the major discomforts which drives post C-section mothers to seek help. C-section do not eliminate the pain of labor, they often do not eliminate the pain of delivery either. Effective pain control is best achieved through a combination of both pharmaceutical and non-pharmaceutical therapies. Foot massage has been practiced in many cultures for centuries to promote health and well-being. Today, massage is considered as a complementary and alternative medicine used by millions to relieve pain, reduce stress and anxiety, rehabilitate injuries and boost general health.

OBJECTIVE

To assess the effectiveness of foot massage in reducing postoperative pain among patients undergone caesarean section in selected hospitals of Guwahati, Assam.

MATERIAL AND METHODS

An ethical clearance has been obtained from institutional ethical committee. The study was Quasi- Experimental Research Design (Non- equivalent control group design). The study was carried out in Post-Operative Gynecological ward Unit I – Unit IV for both the experimental and control group of Gauhati Medical College Hospital, (GMCH) Assam. Formal permission were taken from Principal of GMCH and Professor and Head of Department of Obstetrics and Gynaecology Department of (GMCH) Assam. Formal permission was taken from concerned hospital authorities. The study participants were

selected by purposive sampling technique. Written permission was obtained from the study participants after explaining the objectives of the study. All the post-operative caesarean sections patients who are from 0-2nd post-operative day. In that 60 samples who satisfies the inclusion criteria will be recruited and assigned 30 in the Experimental group and 30 in Control group. The participant was assured of confidentiality, autonomy, decision making and dignity of the data obtained. Data collected from post caesarean Gynaecological ward (Unit I-IV), data was collected from 4th February – 2nd March 2019 i.e. (28 days)

On the 1st week of the first day of data collection general information about the units and number of patient present in the ward was enquired. On the first 15 days data collection was done among (control group i.e. 30 participants). A pre-test was conducted by administering demographic data and the level of pain was assessed using Visual Analogue Scale (VAS) carrying routine care without foot massage and the post test was done after 45 minutes using VAS. While in (experimental group i.e. 30 participants) pre test was conducted by administering demographic data and the level of pain was assessed using Visual Analogue Scale (VAS). Foot massage was given by using olive oil for 10-15 minutes to each participants of experimental group and post test was conducted after 45 minutes.

RESULTS

Frequency and percentage distribution of patients undergone caesarean section according to demographic characteristic.

The finding of the study revealed that Demographic variables findings of the samples (Experimental group) that majority of post-operative caesarean section patients i.e. 12(40 %) were in the age group of 24-26 years. 9 (30%) were in the age group of 21-23 years, 8(26.7%) were in the age group of 18-20 years, 1(3.3%) were in the age group of 27yrs and above. Among the religion, majority 15 (50%), of

the post caesarean section patients are muslims followed by 13 (43.3%) hindu. In the study sample it is seen that majority 24 (80%) of the post caesarean patients had qualification up to primary education. Among the occupation, 26(86.7%) of the post caesarean patients were housewife. According to their monthly income majority 20(66.6%) earned Rs 5001-10,000. According to number of previous deliveries, majority 14(46.7%) had one previous deliveries, followed by none 16(53.3%). According to the type of previous deliveries, majority 16(53.3%) had normal deliveries followed 11(36.7%) any other (forceps/episiotomy/ventouse). Among the study sample number of caesarean section, shows that majority 20(66.7%) had no previous caesarean section. **Demographic variables findings of the samples (Control group)** that majority of post-operative caesarean section patients i.e. 11(36.7 %) were in the age group of 24-26 years, 9 (30%) were in the age group of 18-20 years, 7 (23.3%) were in the age group of 21-23 years, 3(10%) were in the age group of 27yrs and above. Among the religion, majority 15 (50%), of the post caesarean section patients are muslims followed by 13 (43.3%) hindu. In the study sample it is seen that majority 16 (53.3%) of the post caesarean patients had qualification up to primary education followed by secondary education 12 (40%) and 2(6.7%) higher education. Among the occupation, shows that majority 25(83.3%) of the post caesarean patients were housewife, followed by 5(16.7%) were private employee. According to their monthly income shows that majority 15(50%) earned Rs 5001-10,000, and 15(50%) earned Rs 10,001-15,000. According to number of previous deliveries, majority 22(73.3%) had none previous deliveries and 8(26.7%) had one number of previous deliveries. According to the type of previous deliveries, majority 22(73.3%) had normal deliveries followed 6(20%) any other (forceps/episiotomy/ventouse) and 2(6.7%) caesarean section. Among the study sample number of caesarean section, shows that majority 24(80%) had no previous caesarean section and followed by one 6(20%).

Table 1: Mean, Median, Mode, Standard Deviation, Standard Error Mean (experimental group and control group)

GROUP		MEAN	MEDIAN	MODE	S.Error Mean	S.D
Experiment al group	Pre test	7.13	7	7	.178	0.973
	Post test	5.53	5	5	.196	1.074
Control group	Pre test	7.33	7	7	.168	0.922
	Post test	6.53	7	7	.164	0.900

Table1 Depicted that in the experimental group pretest total mean score is 7.13, median is 7, mode is 7, S.E is .178 and S.D is 0.973 whereas, post test total mean score is 5.53, median is 5, mode is 5, S.E is .196 and S.D is 1.074. While, in the control group reveals that pretest total mean score is 7.33, median is 7, mode is 7, S.E is .168 and S.D is 0.922 whereas, post test total mean score is 6.53, median is 7, mode is 7, S.E is .164 and S.D is 0.900

Table 2: Pre test and post test level of pain among patients undergone caesarean section in experimental group and control group

GROUP		MEAN	S.D	t value	df value	p value
Experimental group	Pre test score	7.33	.922	.817	58	.417
Control group	Pre test score	7.13	.973			
Experimental group	Post test score	5.53	1.074	-3.909	58	.000*
Control group	Post test score	6.53	0.900			

Table2 Depicted that in the pre test scores in both the groups i.e. Experimental and Control Group there was no statistical significant difference in the level of pain. While, in the post test scores there was a statistical significant improvement in the level of pain where mean post test score of experimental group mean post test score (5.53), S.D 1.074, and control group mean post test score 6.53, S.D 0.900, with 't' value -3.909 at $p < 0.05$

The 't' test carried out in order to examine the intervention in terms of secured score depicted in the above table where 't' (58) = -3.909 for pain.

The table indicates that 't' value was found to be significant as it is less than the tabulated value ($t_{58} = 2.0017$) at the level of significance at

$p < 0.05$. Clearly, it was found that the post test score was lower in experimental group than the post test score in control group.

DISCUSSION

OBJECTIVE I

To assess the level of post-operative pain among patients undergone caesarean section.

The present study evaluates that in experimental group majority of the participants in the pretest majority 19 (63.3%) moderate level of post-operative pain and in the post test, majority 29(96.7%) of the participants has moderate level of post-operative pain Mean pretest score (7.13), posttest mean (5.53), median pre test (7) post test (5) mode pre test (7) post test (5), S.D pretest 0.973, posttest 1.074.

In control group majority 17(56.7%) of the participants in the pre test has moderate level of post-operative pain and 13(43.3%) has severe level of operative pain and in the post test, majority 27(90%) of the participants has moderate level of post-operative pain. Mean pre test score (7.33), post test mean (6.53), median pre test (7) post test (7) mode pre test (7) post test (7), S.D pre test 0.922 post test 0.900. Another study conducted by Wang HL, Keck JF. (2004) showed that foot and hand massage after surgery reduced post-operative pain, findings reported decreases in pain intensity from 4.65 to 2.35 ($t = 8.154$, $p < .001$) and in pain distress from 4.00 to 2.35 ($t = 5.683$, $p < .001$). Statistically significant decreases in sympathetic response to pain. This pain was reduced by the intervention, thus supporting the effectiveness of massage in post-operative pain management.

OBJECTIVE II

To develop a standard protocol on steps of foot massage.

A standard protocol on foot massage was developed through extensive literature and journals. The different steps of foot massage were implemented during the data collection. It was found that in the present study the administration of the tool was effective in reducing post-operative pain among caesarean patients.

A study conducted by Vijaya Puthusseril (2006) "Special foot massage" as a complimentary therapy in palliative care. The results of the study "effectiveness of a 10 minutes foot massage on 87 subjects among cancer patients and it was found to have a significant immediate effect on the perception of pain, nausea and relaxation when measured with a Visual Analogue Scale. They recommended the use of foot massage as a complimentary therapy and as a relatively simple nursing intervention for patient experiencing nausea and pain related to cancer experience.

OBJECTIVE III

To evaluate the effectiveness of foot massage on post-operative among patients undergone caesarean section in experimental group.

The pre test score of the experimental and control group mean pre test 7.33, S.D .922, post test score (5.53), S.D 1.074, and control group mean pre test 7.13, S.D .973, mean post test score 6.53, S.D 0.900, t value -3.909, at $p < 0.05$ level i.e. 95% Effective of foot massage on post test level of pain in experimental group shows that the mean post test in experimental group (5.53) and the mean post test in control group (6.53). The 't' value was found to be significant as it is less than the tabulated value ($t_{58} = 2.0017$) at the level of significance at $p < 0.05$. In comparison between the post test of both the group it was found that, the post test score was lower in experimental group than the post test score in control group. Hence, H_1 is accepted. It can be concluded that foot massage was effective in reducing the post-operative pain among patients undergone caesarean section.

Another study conducted by Deepshikha (2016) A Quantitative Quasi experimental non randomized control group research design shows that the difference between pre and post-interventional level of post-operative pain was statistically significant in the experimental group, at $p < 0.001$. In control group statistical significance was not noted. It describes statistically significant difference in post-interventional level of pain between experimental and control group at the level of $p < 0.001$, whereas no difference in pre-interventional level of pain. It clearly denotes that level of post-operative pain is reduced among mothers in experimental group. The chi square value between the groups shows a statistical significance at the level $p < 0.001$ for level of pain. The comparison of the level of sleep was statistically significant improvement in the level of sleep at the level of $p < 0.001$ in the experimental group between pre and post intervention. There was statistically significant difference at the level of $p < 0.001$ post-

interventionally between experimental and control group, where as no statistically significant difference seen pre-intervention ally between both groups. This indicates improvement in the level of sleep in experimental group after the intervention.

The above findings consistent with the finding of the quasi experimental study conducted by Sachitha preema fernandas (2013) to assess the effectiveness of foot reflexology on post-operative mothers in maternity hospital, Mangalore. An evaluative approach was used for the study. The sample consisted of 60 post caesarean mothers by simple random sampling technique and assign 30 samples each into experimental and control group. Pain assessed by numerical pain rating scale. Foot reflexology was provided 15 minutes each day after 8 hours of administration of analgesics for 5 days. The results shows that on the 1st day pre test in the experimental group majority 29(96.7%) of the subjects had severe pain, 1(3.3%) had moderate pain which was reduced after foot reflexology to 22(73.3%) had moderate pain and 8(26.7%) severe pain. It was proved that the foot reflexology was effective in reducing the post-operative pain among post caesarean mothers.

CONCLUSION

The present study concluded that, among the sample (N=30) in the experimental group the finding reveals that there was a difference in the mean pre test and post test score. Thus, it can be stated that the foot massage was effective in reducing post-operative pain among post-operative caesarean section patients. The findings of the study are consistent with the literature and have strong support from some other studies in the country and across the world. Based on the finding of the present study it concluded that, foot massage is proved to be the paramount measure to improve post-operative level of pain.

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