

“A STUDY TO ASSESS THE EFFECTIVENESS OF FOOT AND HAND MASSAGE IN REDUCING LEVEL OF POST OPERATIVE PAIN AMONG PATIENTS WITH ABDOMINAL SURGERY AT SELECTED HOSPITAL, NELLORE, AP”

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ABSTRACT

The main objective of the study was to compare the level of postoperative pain among patients who have undergone abdominal surgery between before and after administration of foot and hand massage in experimental group and control group (routine therapy) as measured by numerical pain rating scale. The research design adopted was time series design. A total of fifty abdominal surgery patients who met inclusion criteria were selected by using purposive sampling technique. Foot and Hand massage was administered 3 times a day for consecutive 3 days. In intervention group, 24 (96%) patients had severe pain during pre-test, and 25 (100%) patients had moderate pain on the post-test day one. On day two, 19 (76%) patients had mild pain and on day three, 23 (92%) had mild pain and 6 (24%) had moderate pain. In comparison group 25 (100%) patients had severe pain during pre-test, on the post-test's day one, 25 (100%) patients had severe pain. On day two, 21 (84%) had severe pain and 4 (16%) had moderate pain. On day three, 7 (28%) patients had severe pain and 18 (72%) had moderate pain. None of them experienced no pain even at the third day in both the groups. The overall post-test mean and standard deviation of the intervention group is 3.2 ± 0.066 . The calculated t value is 39.04 which is greater than the table value (3.53) at the level of $p < 0.001$. The foot and hand massage is effective in reducing postoperative pain along with the pain medication among abdominal surgery patients. Foot and hand massage was an effective, inexpensive technique to reduce the post operative pain among abdominal surgery patients.

Keywords: Effectiveness, Abdominal surgery patients, postoperative pain.

INTRODUCTION

Pain is a general term that describes uncomfortable sensations in the body. It stems from activation of the nervous system. Pain can range from annoying to debilitating, and it can feel like a sharp stabbing or a dull ache. Pain can be consistent, can start and stop frequently, or can appear some conditions. People respond to pain differently. Some people have a high tolerance for pain, while others have a low tolerance. For this reason, pain is highly subjective. Massaging the foot and hands stimulates the mechanoreceptors that activate the non-painful nerve fibres, preventing pain transmission from reaching consciousness.

STATEMENT OF THE PROBLEM:

“A STUDY TO ASSESS THE EFFECTIVENESS OF FOOT AND HAND MASSAGE IN REDUCING LEVEL OF POST-OPERATIVE PAIN AMONG PATIENTS WITH ABDOMINAL SURGERY AT SELECTED HOSPITAL, NELLORE, AP.”

OBJECTIVES:

1. To assess the level of postoperative pain among patients who have undergone abdominal surgery.
2. To compare the level of postoperative pain among patients who have undergone abdominal surgery between before and after administration of foot and hand massage in experimental group and control group (routine therapy) as measured by numerical pain rating scale.
3. To compare the post-test level of pain among patients in abdominal surgery between experimental group and control group.
4. To find out the association of pre-test level of pain among patients in experimental group and control group with selected demographic variables.

VARIABLES OF THE STUDY:

In dependent variable:

The independent variables within the study were foot and hand massage administered to postoperative patients who have undergone abdominal surgery.

Dependent variable:

The dependent variable in the study was level of postoperative pain.

ASSUMPTION:

- Level of postoperative pain differs from patient to patient.
- Foot and hand massage can reduce the postoperative pain.

HYPOTHESIS:

- **H₁**- There will be a significant difference in the pre and post-test level of postoperative Pain among patients undergoing abdominal surgery in experimental and control group.
- **H₂**- There will be a significant association of the level of postoperative pain score of patients who have undergone abdominal surgery in experimental and control group with selected demographic variables.

MATERIALS AND METHODS:

Research approach:

In this study, quasi experimental research approach was adopted. In this study intervention group of patients received the foot and hand massage and also comparison

group of patients received routine care.

Research design:

Quasi experimental time series design is was selected by the investigator to conduct the study.

Setting of the study:

This study was conducted in male and female surgical ward, Gastroenterology ward, post operative ward at PSG Hospitals, Peelamedu, NELLORE.

Sampling technique and sample size:

The sampling technique used in this study was purposive sampling technique. The calculated sample size was 50 patients.

Sampling Criteria:

- **Inclusion criteria:**

- Post operative patients who have undergone abdominal surgery.
- Patients who are willing to participate in the study.
- Post operative patient with stable vital signs.

- **Exclusion criteria:**

- Patients who had damaged skin, inflammation, eczema on their hands or feet.

INSTRUMENTSANDTOOLFORDATACOLLECTION:

Section A: Demographic data

Section B: Surgical details

Section C: Pain assessment

TABLE-1: Frequency and percentage distribution of abdominal surgery patients in intervention and comparison group according to demographic variables:(N=50)

Demographic variables	Intervention group n=25				Comparison group n=25			
	Male	%	Female	%	Male	%	Female	%
Age and gender (Age in years)								
20-30years	-	-	1	4%	-	-	4	16%
31-40years	2	8%	3	12%	2	8%	2	8%
41-50years	3	12%	5	20%	2	8%	3	12%
51-60years	7	28%	4	16%	4	16%	-	-
61-70years	-	-	-	-	5	20%	3	12%

Education				
Primary school	7	28%	7	28%
Middle School	5	20%	5	20%
High school	4	16%	5	20%
Higher secondary	4	16%	7	28%
Graduate	5	20%	1	4%
Occupation				
Housewife	13	52%	10	40%
Coolie	9	36%	10	40%
Business	2	8%	-	-
Teacher	1	4%	1	4%
Driver	-	-	4	16%

Table: 1- shows that among 50 patients, majority of the patients 15 (60%) were in age group between 51-60 years this comprised of 11 (44%) patients in intervention group and 4 (16%) patients in comparison group. Thirteen patients were in age group of 41-50 years of age group. majority of patients were male 25(50%) comprising 12(24%) patients in intervention group and 13(26%) patients in comparison group. among 50 patients, 14 patients (56%) had only primary education comprising 7(28%) patients in intervention group and 7(28%) patients in comparison group. majority of patients were house wife (92%) comprising 13 (52%) patients in intervention group and 10(40%) in comparison group.

Table-2- Comparison of post test level of post-operative pain among abdominal surgery patient between intervention group and comparison group using independent „t“ test

H₁ – There will be a significant difference in the post test level of post-operative pain among patients with abdominal surgery experimental group and comparison group **n= 50**

Posttest	Intervention group	Comparison group	Calculated 't' value	Table value
	Mean± SD	Mean± SD		
Day1	4.5 ± 0.53	8.09 ± 0.486	39.04***	3.53
Day2	3 ± 0.70	7.43 ± 0.288		
Day3	2.1 ± 0.59	6.91 ± 0.413		
Over all mean and SD	3.2 ± 0.066	7.41 ± 0.395		

Note:***-significant at the level of p<0.001.

Table 2- describes that overall mean value of intervention group is 3.2 which greater than the mean of comparison group. The standard deviation of intervention group is 0.066 and the comparison group the standard deviation is 0.395. The calculated t value is 39.04 which is greater than the table value (3.53). Thus, the null hypothesis is rejected.

TABLE 3: Association between the pretest levels of post-operative pain selected demographic variables among intervention group of abdominal surgery patient.

H2: There will be a significant association of the level of postoperative pain score of patients who have undergone abdominal surgery in experimental group with selected demographic variable. n=25

Demographic variables	Intervention group				df	Calculate d χ^2 value	Tabulated value
	Moderate		Severe				
	f	%	f	%			
AGE							
20-30years	-	-	1	4	3	3.311	7.81(N.S)
31-40years	1	4	5	20			
41-50years	-	-	7	28			
51-60years	-	-	11	44			
61-70years	-	-	-	-			
GENDER							
Male	-	-	12	48	1	0.958	3.84(N.S)
Female	1	4	12	48			
EDUCATION							
Primary school	-	-	6	24	4	8.65	9.48(N.S)
Middle school	1	4	4	16			
High school	-	-	4	16			
Higher secondary	-	-	5	20			
Graduate	-	-	5	20			
OCCUPATION							
Housewife	1	4	11	44	3	1.118	7.81(N.S)
Coolie	-	-	9	36			
Business	-	-	3	12			
Teacher	-	-	1	4			
Driver	-	-	-	-			

Note-NS: Non significant at the level of $p < 0.05$

Table 3 Revealed that there was no significant association between the pretest level of post-operative pain in selected demographic variables like age, gender, education, occupation. Hence the alternative hypothesis was rejected and accepted null hypothesis. Thus age, gender, education. Occupation does not associated with level of post-operative pain among abdominal surgery patients.

SUMMARY AND CONCLUSION:

The findings of the study showed that Foot and hand massage was effective and complementary in reduction of postoperative pain (3.2 ± 0.066 / $p < 0.001$) in the intervention

group as compared to the comparison group who received only pain medication (7.41 ± 0.395 / $p < 0.001$).

Nursing implications:

The present study has implications for nursing practice, nursing education, nursing administration and nursing research.

Nursing practice:

- Nurses can implement the practice of foot and hand massage in reducing postoperative pain among abdominal surgery patients in clinical and community settings.
- Nurses can assess the postoperative pain using numerical pain rating scale on daily basis.

Nursing education:

Continuing education among staff nurses will help to promote and update their knowledge on administration of foot and hand massage for reducing post operative pain among abdominal surgery patients.

Nursing administration:

Nursing administrators can motivate nurses to use foot and hand massage in their clinical practice for postoperative abdominal surgery patients.\

Nursing research:

Randomized clinical trials could be under taken so that the validity of the results can be increased and it can be incorporated into the evidence based nursing practice.

Recommendation for future study:

- The similar study can be conducted in large group of population
- A study to assess the effectiveness of foot and hand massage in reducing postoperative patients undergoing other than abdominal surgery.

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