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A Quasi Experimental Study To Assess The Effectiveness Of Hand And Foot Massage On Pain And Anxiety Among Postoperative Patients Admitted In Selected Hospitals Hamirpur (H.P.)

[1]Diksha Sharma,[2]Sapna Kumari,[3]Kanika Sharma, [4]Jyoti

[1]Assistant Professor,[2]Assistant Professor,[3]Nursing Student, [4]Nursing Student

[1]Medical Surgical Nursing,

[1]Gautam College of Nursing, Hamirpur, Himachal Pradesh, India

Abstract: Postoperative pain and anxiety are common clinical problems that negatively affect patient recovery. Non-pharmacological interventions such as massage therapy are increasingly used as complementary approaches to improve patient comfort. The present study aimed to assess the effectiveness of hand and foot massage on pain and anxiety among postoperative patients admitted in selected hospitals of Hamirpur (H.P.). A quantitative approach with quasi-experimental research design was adopted. A total of 60 postoperative patients were selected using non-probability convenience sampling and divided into experimental (n=30) and control (n=30) groups. Numerical Pain Rating Scale and Hamilton Anxiety Rating Scale were used for data collection. Hand and foot massage was administered to the experimental group for 15 minutes, twice daily for three consecutive days, while the control group received routine care. The findings revealed a statistically significant reduction in post-test pain and anxiety scores in the experimental group compared to the control group ($p < 0.05$). The study concluded that hand and foot massage is an effective, safe, and economical complementary therapy for reducing pain and anxiety among postoperative patients.

***Index Terms*- Postoperative pain, Anxiety, Hand and foot massage, Complementary therapy**

I. INTRODUCTION

Pain is a multidimensional phenomenon it is very difficult to define & it is more subjective & personal there are no objective measurements so it is nurses' duty to help patients to overcome pain & make them comfortable. Pain is a subjective experience with two complementary aspects: one is a localized sensation in a particular body part; the other is an unpleasant quality of varying Severity commonly associated with behaviors directed at relieving or terminating the experience. Pain has much in common with other sensory modalities (National Academy of Sciences, 1985). First, there are specific pain receptors. These are nerve endings, present in most body tissues that only respond to damaging or potentially damaging stimuli. The hand and foot massage are an appropriate non pharmacological intervention in relieving postoperative pain in patient after surgery. The hand and feet are easily accessible and can be massaged without disturbing the patient's privacy. Pain medicines may be more effective when combined with other pain relief techniques. Massage is the simple way of easing post-operative pain as well as aiding relaxation, promoting a feeling of wellbeing and a sense of receiving good care. Massage is also thought to increase the threshold of pain through the release of endorphin. Massage is recognized as a safe treatment modality without risk or side effect. Massage is an extended form of touch, which results in mutual energy exchange. It soothes pain and produces relaxation

further more pharmacological intervention alone may not address all the factors involved in the conscious experience of pain. Hand and foot massages have the potential to aid surgical pain relief, it is a complementary or adjunctive medical technique, yet there is scant research related to use of massage therapy in post-operative management. Used in tandem with pharmacological treatments, hand and foot massage may have the potential to substantially improve acute pain relief. Varieties of pharmacological and non- pharmacological interventions to enhance optimal pain relief are available; however, patients' responses are individualized. Pain medication is still the current gold standard treatment for postoperative pain relief. Massage therapy is defined as a manipulation of soft tissues by hands to generate positive effects on the function of various systems of the body. In addition, it involves the application of combinations of specialized strokes, rubs, and the application of pressure in varying intensity to the soft tissues of the body in order to relive postoperative pain. Massage is most widely used complementary therapy in nursing practice. Foot massage has many benefits as it provides tranquility and relaxation, improves circulation and rejuvenates the patients' energy. Massage is the simple way of easing post operative pain as well as aiding relaxation promoting a feeling of wellbeing and a sense of receiving good care. Massage is recognized as a safe treatment modality without risk or side effect. Post operative pain can have a significant effect on patient recovery. An understanding of patient attitude and concerns about post operative pain is important for identifying ways healthcare professional can improve postoperative care.

II. HYPOTHESIS

H_0: There will be no significant effect on pain and pain among postoperative patient admitted in selected hospitals in Hamirpur, (H.P.).

H_1: There will be significant effect on pain and pain among postoperative patient admitted in selected hospitals in Hamirpur, (H.P.).

III. MATERIALS AND METHODS

A quasi-experimental research design was used for the study. The research was conducted in selected hospitals of Hamirpur (H.P.). The target population consisted of postoperative patients admitted to surgical wards. A total of 60 patients were selected using convenience sampling technique and allocated into experimental and control groups. Data were collected using a structured socio-demographic questionnaire, Numerical Pain Rating Scale, and Hamilton Pain Rating Scale. Hand and foot massage was administered to the experimental group for 15 minutes twice daily for three days. Ethical permission and informed consent were obtained prior to data collection. Data analysis was performed using descriptive and inferential statistics.

IV. RESULTS AND DISCUSSION

Demographic Variable

According to age in both groups; 18(60%) patients from experimental group and 11(36.7%) patients from control group are belongs to age group 20-30 years, 5(16.7%) patients from experimental group and 10(33.3%) patients from control group are belongs to age group 31-40 years, There are no patients in the category of 41-50 years in experimental group and 5(16.7%) patients from control group are belongs to 41-50 years ,7(23.3) patients from experimental group and 4(13.3%) patients from control group are belongs to age group of above 50 years.

According to gender in both groups; 5(16.7%) patients from experimental group and 7(23.3%) patients from control group are male, 25(83.3%) patients from experimental group and 23(76.7%) patients from control group are female.

According to weight in both groups; 6(20.0%) patients from experimental group and 3(10.0%) patients from control group are belongs to category of 40-50kg, 14(46.7%) patients from experimental group and 17(56.7%) patients from control group are belongs to category of 51-60kg, 8(26.6%) patients from experimental group and 7(23.3%) patients from control group are belongs to category of61-70kg

,2(6.7%) patients from experimental group and 3(10.0%) patients from control group are belongs to category of above 70kg.

According to occupation in both groups; 3(10%) patients from experimental group and 7(23.3%) patients from control group are belongs to category of self employed, 4(13.3%) patients from experimental group and 11(36.7%) patients from control group are belongs to category of private sector, There are no patients from experimental group are in the category of public sector worker and 6(20.0%) patients from control group are belongs to the category of public sector, 23(76.7%) patients from the experimental group and 6(20%) patients from control group are unemployed.

According to area of residence in both groups; 27(90%) patients from experimental group and 23(76.7%) patients from control group are from rural areas, 3(10%) patients from experimental group and 7(23.3%) patients from control group are from urban areas.

According to diet in both groups; 16(53.3%) patients from experimental group and 18(60%) patients from control group are belongs to vegetarian category, 4(13.3%) patients from experimental group and 10(33.3%) patients from control group are belongs to non-vegetarian, 2(6.7%) patients from experimental group and 1(3.3%) patients from control group are belongs to vegan, 8(26.7%) patients from experimental group and 1(3.3%) patients from control group are eggetarian.

According to monthly income in both groups; 1(3.3%) patients from experimental group and 5(16.7%) patients from control group are belongs to category of ₹59,795-₹79,755, 4(13.3%) patients from experimental group and 10(33.3%) from control group are belongs to category of ₹39,830-₹59,794, 5(16.7%) patients from experimental group and 9(30.0%) patients from control group are belongs to ₹23,869- ₹39,829, 20(66.7%) patients from experimental group and 4(13.3%) patients from control group belongs to category of ₹7,989-₹23,869. There are no patients from experimental group in the category of ₹<7,988 and 2(6.7%) patients from control group belongs to category of ₹<7,988.

According to exercise in both groups; 1(3.3%) patients from experimental group and 4(13.3%) patients from control group do exercise daily, 2(6.7%) patients from experimental group and 6(20.0%) patients from control group do exercise twice a week, 1(3.3%) patients from experimental group and 5(16.7%) patients from control group do exercise 3-4 times, 26(86.7%) patients from experimental group and 15(50.0%) patients from control group never did any kind of exercise.

According to pain experience in both groups; 18(60.0%) patients from experimental group and 12(40%) patients from control group belongs to the category of experienced acute pain and 18(60%) patients from experimental group and control group shows that they had experienced chronic pain.

According to surgery in both groups; 6(20.0%) patients from experimental group and 9(30%) patients from control group had surgery in the past, 24(80.0%) patients from experimental group and 21(70.0%) patients from control group had no surgery in the past.

According to chronic disease in both groups there are no patients from experimental group and 7(23.3%) from control group had chronic diseases like hypertension, diabetes etc. 24(80%) patients from experimental group and 23(76.5%) patients from control group have no chronic diseases.

According to medication in both groups; 2(6.7%) patients from experimental group and 5(16.7) patients from control group taking medications, 28(93.3%) patients from experimental group and 25(83.3%) patients from control group not taking any kind of medications.

Table 1 depicts the frequency and percentage distribution of postoperative patients based on age, gender, weight, occupation, area of residence, diet, monthly income, exercise, pain experience, surgery, chronic diseases & medication.

In the experimental group, 17 patients (56.7%) had mild pain. In the control group, 18 patients (60.0%) had mild pain. In the experimental group, 13 patients (43.3%) had moderate pain. In the

control group, 12 patients (40.0%) were in this category. In the experimental group, 0 patients (0.0%) had severe pain. Similarly, in the control group, 0 patients (0.0%) fell into this category.

In the experimental group, 19 patients (63.3%) had mild anxiety. In the control group, 22 patients (63.3%) fell into this category. In the experimental group, 11 patients (36.7%) had moderate anxiety. In the control group, 8 patients (26.7%) fell into this category. In the experimental control, 0 patients (0.0%) had severe anxiety. Similarly, in the control group, 0 patients (0.0%) were found in this category. In the experimental group, 0 patients (0.0%) had very severe anxiety, and the control group also had 0 patients (0.0%) in this category.

Table 1: Distribution of sample according to their socio-demographic variables

N=60

Variable	Options	Experimental Group		Control Group	
		Percentage	Frequency	Percentage	Frequency
Age	20-30years	60%	18	36.7%	11
	31-40years	16.7%	5	33.3%	10
	41-50years	0%	0	16.7%	5
	50aboveyears	23.3%	7	13.3%	4
Gender	Male	16.7%	5	23.3%	7
	Female	83.3%	25	76.7%	23
	Others	0.0%	0	0.0%	0
Weight	40-50kg	20.0%	6	10.0%	3
	51-60kg	46.7%	14	56.7%	17
	61-70kg	26.6%	8	23.3%	7
	70abovekg	6.7%	2	10.0%	3
Occupation	PrivateSector	13.3%	4	36.7%	11
	PublicSector	0.0%	0	20.0%	6
	Unemployed	76.7%	23	20.0%	6
Area of residence	Rural	90%	27	76.7%	23
	Urban	10%	3	23.3%	7
Diet	Vegetarian	53.3%	16	60%	18
	Non-Vegetarian	13.3%	4	33.3%	10
	Vegan	6.7%	2	3.3%	1
	Eggetarian	26.7%	8	3.3%	1
Monthly Income	₹59,795-₹79,755	3.3%	1	16.7%	5
	₹39,830-₹59,794	13.3%	4	33.3%	10
	₹23,819-₹39,829	16.7%	5	30.0%	9
	₹7,989-₹23,869	66.7%	20	13.3%	4
	₹<7,988	0%	0	6.7%	2
Exercise	Daily	3.3%	1	13.3%	4
	Twiceaday	6.7%	2	20.0%	6
	3-4times	3.3%	1	16.7%	5
	Never	86.7%	26	50.0%	15
PainExperience	Acute	50.0%	18	40.0%	12
	Chronic	50.0%	18	60.0%	18
Surgery	Yes	20.0%	6	30.0%	9
	No	80.0%	24	70.0%	21
ChronicDiseases	Yes	0%	0	23.3%	7
	No	100%	30	76.7%	23
Medication	Yes	6.7%	2	16.7%	5
	No	93.3%	28	83.3%	25

Table 2 depicts the frequency and percentage distribution of pre-test level of pain.

Table 2: Frequency & Percentage distribution of pre-test level of pain

PAINLEVEL	EXPERIMENTALGROUP	CONTROLGROUP
MILD(1-3)	17 (56.7%)	18 (60.0%)
MODERATE(4-6)	13 (43.3%)	12 (40.0%)
SEVERE(7-10)	0 (0.0%)	0 (0.0%)

Table 3 depicts the frequency and percentage distribution of pre-test level of anxiety

Table 3: Frequency & Percentage distribution of pre-test level of anxiety

PAINLEVEL	EXPERIMENTALGROUP	CONTROLGROUP
MILD(0-14)	19 (63.3%)	22 (73.3%)
MODERATE(15-28)	11 (36.7%)	8 (26.7%)
SEVERE(29-42)	0 (0.0%)	0 (0.0%)
VERYSEVERE(43-56)	0 (0.0%)	0 (0.0%)

Table 4 depicts the frequency and percentage distribution of post-test level of pain.

Table 4: Frequency & Percentage distribution of post-test level of pain

PAINLEVEL	EXPERIMENTALGROUP	CONTROLGROUP
MILD(1-3)	26 (86.7%)	20 (66.7%)
MODERATE(4-6)	4 (13.3%)	10 (33.3%)
SEVERE(7-10)	0 (0.0%)	0 (0.0%)

Table 5 depicts the frequency and percentage distribution of post-test level of anxiety.

Table 5: Frequency & Percentage distribution of post-test level of anxiety

PAINLEVEL	EXPERIMENTALGROUP	CONTROLGROUP
MILD(0-14)	28 (93.3%)	25 (93.3%)
MODERATE(15-28)	2 (6.7%)	5 (16.7%
SEVERE(29-42)	0 (0.0%)	0 (0.0%)
VERYSEVERE(43-56)	0 (0.0%)	0 (0.0%)

V. FINDINGS RELATED TO ASSOCIATION BETWEEN PAIN AND ANXIETY SCORES WITH SOCIO-DEMOGRAPHICS VARIABLES

There were significant association between Age, gender, weight with pain variable and there were significant association between age, monthly income with anxiety variable. (*p < 0.05).

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