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A Study to Assess the Effectiveness of Therapeutic Touch Massage on Reduction Level of Pain & Anxiety Among Stroke Patients Admitted in Shri Vinoba Bhave Civil Hospital Silvassa, Dadra and Nagar Haveli

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ABSTRACT

BACKGROUND: Stroke is the leading cause of disability worldwide and the second leading cause of death. The Global Stroke Factsheet released in 2022 reveals that lifetime risk of developing a stroke has increased by 50% over the last 17 years and now 1 in 4 people is estimated to have a stroke in their lifetime.

OBJECTIVE: This study aims to assess the effect of therapeutic touch massageon reduction level of pain and anxiety among the stroke patients admitted in ShriVinoba Bhave Civil Hospital, Silvassa.

METHODS: A quantitative quasi experimental research design was adopted and samples were allotted in experimental group (n=25) and control group (n=25) by purposive sampling technique. Sociodemographic and clinical variables data was collected using the self-administered questionaries and pain,anxiety and spasticity assessed by abbey pain scale, Hamilton anxiety scale andmodified Ashworth scale. Respectively, The therapeutic touch massage was performed under the supervision of the investigator for 30 minutes daily for 6 days.

RESULT: The results indicate a significant reduction in pain level after therapeutic touch massage (pretest mean = 9.88, posttest mean = 6.80;t= 6.959,df=48,$p<0.05$) & reduction in anxiety level non-significant change after therapeutic touch massage (pretest = 21.04 , posttest = 18.28 ; df = 48, $p>0.05$).Various Sociodemographic variables showed significant associationwith pretest pain level in experimental group & no significant association were found with pretest anxiety level in experimental group. A positive correlation was found between pretest pain & anxiety in experimental group & control group.

CONCLUSION: Therapeutic touch massage is useful in relieves pain and anxiety, aids in relaxation, relieves the effects of pain and improves sleep.

KEYWORDS: Therapeutic touch massage; pain; anxiety; stroke patients; complementary therapy.

INTRODUCTION:

Stroke is the leading cause of disability worldwide and the second leading cause of death. The Global Stroke Factsheet released in 2022 reveals that lifetime risk of developing a stroke has increased by 50%

over the last 17 yearsand now 1 in 4 people is estimated to have a stroke in their lifetime (WHO, 2022). Despite high quality stroke care, decreased sensorimotor function, anxiety andpain often remain one year after stroke which can lead to impaired health and dependence, as well as higher healthcare costs. Touch massage (TTM) has been proven to decrease anxiety and pain, and improve quality of health in stroke patients to reduced health, where reduced anxiety seems to be the mostpronounced benefit and helpful in healthcare setting & nursing care.

NEED FOR THE STUDY :

According to (Global Data's Pharmaceutical Intelligence Centre) the incidence of stroke in India ranges between 104 and 105/100,000 people per year, with an expected increase in diagnosed incident cases from 6.2 million in 2022 to 6.7 million in 2027, at an annual growth rate (AGR) of 1.7%.

Therapeutic touch massage is important where nurses can be directlynear with patients and can provide alternative therapy nursing actions to overcome physical complaints due to the response of the diseases. TherapeuticTouch was first developed in the 1970s by Dolores Krieger, a professor of nursing at New York University.

OBJECTIVES :

- To assess the pain and anxiety in experimental & control group among stroke patients admitted in Shri Vinoba Bhave Civil Hospital, Silvassa
- To evaluate the effectiveness of therapeutic touch massage on reduction level of pain and anxiety among Stroke Patients admitted in Shri Vinoba Bhave Civil Hospital, Silvassa
- To find out the association between of pain and anxiety with their selectedsociodemographic & clinical variables among Stroke Patients admitted in Shri Vinoba Bhave Civil Hospital, Silvassa
- To find out the relationship between pretest level of pain and anxiety among Stroke Patients admitted in Shri Vinoba Bhave Civil Hospital, Silvassa

ASSUMPTIONS:

- Anxiety and pain are the major stressors for the stroke patients.
- The Touch massage relaxes the mind and body and thereby reducingpain and anxiety among stroke patients
- Selected demographic variables will influence the level of pain and anxiety among the patients with stroke.

HYPOTHESIS :

- H1: There will be significant difference in reduction level of pain & anxiety after therapeutic touch massage in stroke patients among experimental group at 0.05 level of significance.
- H2: There will be significant association between level of pain and anxiety with selected socio demographic & clinical variables among stroke patients at 0.05 level of significance.
- H3: There will be significant relationship between pretest level of painand anxiety among stroke patients at 0.05 level of significance.

RESEARCH DESIGN/METHOD :

In this study Quantitative Quasi Experimental (Pretest-Post-test Control group) Research Design was

selected to evaluate the effectiveness of therapeutic touch massage on the reduction level of pain & anxiety among stroke patientsadmitted in Shri Vinoba Bhave Civil Hospital, Silvassa.
A quantitative quasi experimental research design was adopted and samples were allotted in experimental group (n=25) and control group (n=25) by purposive sampling technique. Sociodemographic and clinical variables data was collected using the self-administered questionaries and pain,anxiety and spasticity assessed by abbey pain scale, Hamilton anxiety scale andmodified Ashworth scale.

VARIABLES :

The variables included in this study are dependent variables and independent variables.**Independent variables:**In this study the therapeutic touch massage was independent variable.**Dependent variables:**In this study the pain and anxiety of stroke patients was dependent variable.
Socio-demographic variables and clinical variables: In this study the extraneous variables were age, gender, education, occupation, income, and type of family.In this study the clinical variables were Duration of illness, family history of stroke, previous history of stroke, any comorbid condition, extremities affectedby stroke,type of stroke and spasticity score.

INCLUSION CRITERIA :

- Stroke patients who are admitted in SVBCH, DNH.
- Age between 30 -70 year & above
- Who having Spasticity score 1+, 2 ,3 (by assessing Modified Ashworthscale)
- The participants voluntarily agreed to participate in the study & signedinformed consent

EXCLUSION CRITERIA:

- Stroke patients with altered level of consciousness
- Patient with stroke who are terminally ill
- The client who under the surgical management

TOOLS USED IN THE STUDY :

STRUCTURED INTERVIEW SCHEDULE QUESTIONARIES

Section I: Socio-Demographic Variables : Age, gender, education, occupation, income & type of family
Section-II: Clinical variable:Duration of illness, family history of stroke, previous hospitalization, any history of comorbid conditions, extremities affected by stroke, typeof stroke and spasticity score.
Section III: Modified Ashworth Scale (MAS): The Ashworth Scale was originally developed in 1964, and modified by Bohannon and Smith in 1987.
The modified Ashworth scale purpose is to grade muscle spasticity. MAS is an assessment that is used to measure the increase in muscle tone.
The Modified Ashworth Scale isa 6-point scale. Scores range from 0 to 4, where lower scores represent normal muscle tone and higher scores represent spasticity.
Section IV: Abbey pain Scale : That contains six questions for measuring pain relief. This scale was developed by (Abbey, et al., 2004). It was used for measurement ofpain in people with dementia & stroke who cannot verbalize. The toolattempts to measure severity of acute pain and chronic pain. It containssix items (vocalization, facial expression, change in body language,behavioural change,

physiological change, and physical changes). Scoring system. Each item is levelled on a four-point scale for severity (Absent: 0; Mild: 1; Moderate: 2; Severe 3). Individual item scores aresummed to arrive at a total score ranging from 0-18. The total score isinterpreted as follows: No pain: 0- 2; Mild: 3-7; Moderate: 8-13;Severe: 14+.

Section V: Hamilton anxiety Scale (HAM-A): It developed by (Hamilton, 1959). It was used for measurement of anxiety state. It contains 14 items that ranged from 0 (not present) 1(mild anxiety) 2 (moderate anxiety) 3 (severe anxiety) 4 (very severeanxiety).Scoring system: Total score range from 0-56, where less than17 indicates mild anxiety, 18- 24 moderate anxiety, 25- 30 severe, morethan 30 very severe.

DATA COLLECTION PROCEDURES:

- Researcher introduced herself to the patient.
- The purpose, need and objective of the research study were explainedto them.A written informed consent about the same was obtained.
- By using interview method (using structured interview schedule questionaries technique),communicated with family members sociodemographic data were collected and show patient case sheet, spasticity score (assessed by Modified Ashworth Scale) clinical variables data was collected.
- Assessed pretest level of pain and anxiety by used Abbey Pain Scale and Hamilton Anxiety Scale among experimental and control group.
- Therapeutic touch massage therapy was given to the experimental group (25 samples) for 30 minutes for 6 days daily.
- The control group was continued with the routine treatment.
- On day 7th post-test level of pain and anxiety among experimental(25samples) and control group (25 samples).

ANALYSIS AND FINDINGS :

The study findings based on the objectives have been organized and finalized according to the plan of data analysis and presented under the following sections:

SECTION-A: Frequency & percentage distribution of samples according to their selected sociodemographic & clinical variables among experimental and control groups

SECTION-B:

1. Frequency & percentage distribution of samples according to theirlevel of pain among experimental and control groups.
2. Frequency & percentage distribution of samples according to theirlevel of anxiety among experimental and control groups.

SECTION-C:

1. Effectiveness of pretest and posttest regarding therapeutic Touch Massage on reduction of pain and anxiety among Stroke Patients in experimental group
2. Comparison between experimental and control group regarding therapeutic touch massage on reduction level of pain and anxiety

SECTION – D:

1. Association between pre-test level of pain with their selectedSociodemographic & clinical variables among experimental group

2. Association between pre-test level of anxiety with their selected Sociodemographic & clinical variables among experimental group
3. Association between pre-test level of pain with their selectedSociodemographic &clinical variables among control group
4. Association between pre-test level of anxiety with their selectedSociodemographic & clinical variables among control group

SECTION – E: Relationship between pretest level of pain and anxiety amongexperimental & control group

SECTION: A Frequency & percentage distribution of samples according to their selected sociodemographic & clinical variables among experimental and control groups :

Table 1 Frequency & percentage distribution of samples according to theirselected sociodemographic & clinical variables among experimental and control groups (=50).

SR NO	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP (n=25)		CONTROL GROUP(n=25)	
		F	%	F	%
1	**Age**				
	a) 30 – 50 Years	4	16%	5	20%
	b) 51-70 Year	12	48%	11	44%
	c) 71 Year & Above	9	36%	9	36%
2	**Gender**				
	a) Male	19	76%	17	68%
	b) Female	6	24%	8	32%
3	**Education:**				
	a) Professional Degree	2	8%	1	4%
	b) Graduate	3	12%	2	8%
	c) Intermediate/Diploma	1	4%	1	4%
	d) High School	5	20%	3	12%
	e) Middle School	5	20%	6	24%
	f) Primary School	5	20%	8	32%
	g) Illiterate	4	16%	4	16%
4	**Occupation Status:**				
	a) Professional	2	8%	2	8%
	b) Semi-Professional	2	8%	1	4%

	Clerical/Shop/Farmer	2	8%	3	12%
	Skilled Worker	2	8%	1	4%
	Semi-Skilled Worker	5	20%	3	12%
	Unskilled Worker	6	24%	7	28%
	Unemployed	6	24%	8	32%
5	**Income: (In Rupees)**				
	a) > 184,376	0	0 %	0	0%
	b) 92,191-184,376	1	4%	1	4%
	c) 68967-92,185	3	12%	2	8%
	d) 46095-68961	4	16%	4	16%
	e) 27654-46089	6	24%	4	16%
	f) 9232-27648	5	20%	5	20%
	g) ≤ 9226	6	24%	9	36%
6	**Type of Family:**				
	Nuclear	8	32%	8	32%
	Joint	10	40%	12	48%
	Extended	7	28%	5	20%
7	**Duration of Illness:**				
	Recently Diagnosed	9	36%	9	36%
	Stroke	4	16%	5	20%
	1-6 Months	5	20%	5	20%
	7-12 Month	7	28%	6	24%
	1 Year Above				
8	**Family History of Stroke:**				
	Yes	6	24%	6	24%
	No	19	76%	19	76%
9	**Previous History of Stroke:**				
	Yes	12	48%	16	64%
	No	13	52%	9	36%
10	**Any History Comorbid Conditions**	17	68%	14	56%
	A) Yes	8	32%	11	44%
	B) No				

11	**Extremities Affected by Stroke**				
	Monoplegia	4	16%	3	12%
	Hemiplegia	7	28%	10	40%
	Paraplegia	8	32%	6	24%
	Diplegia	4	16%	1	4%
	Quadriplegia	2	8%	5	20%
12	**Type of Stroke**				
	Ischemic	25	100%	24	96%
	Hemorrhagic	0	0%	1	4%
	Transient IschemicStroke	0	0%	0	0%
	Cryptogenic Stroke	0	0%	0	0%
	Brain Steam Stroke	0	0%	0	0%
13	**Spasticity Score**				
	0	0	0%	0	0%
	1	0	0%	0	0%
	1+	8	32%	0	0%
	2	9	36%	0	0%
	3	8	32%	16	64%
	4	0	0%	9	36%

Age: Both groups show diverse age representation, with anotable percentage in the 51- 70 years range.**Gender:** Male participants predominate in both groups.

Education: Varied educational backgrounds, with a significantproportion having at least a high school education.**Occupation Status:** Diverse occupational roles, including professional, clerical/shop/farmer, and unemployed.

Income: Participants span various income brackets, with a concentration in the "27654 - 46089" range.**Family Structure:** Joint families are more prevalent than nuclear or extended families.**Duration of Illness:** Significant representation of recently diagnosed stroke cases.**Family History of Stroke:** A balanced distribution between those with and without a family history of stroke.**Previous History of Stroke:** A higher percentage in the experimental group has a previous history of stroke.**Comorbid condition:** A majority in both groups have a historyof comorbid condition such as hypertension, DM, Coronary artery disease, arthritis etc.**Extremities Affected by Stroke:** Hemiplegia and paraplegia are prominent in both groups.**Type of Stroke:** Predominantly ischemic strokes in both groups.**Spasticity Score:** Varied scores, with '1+' being significant.

SECTION :B Frequency & percentage distribution of samples according to their level of pain & anxiety among experimental and control groups.

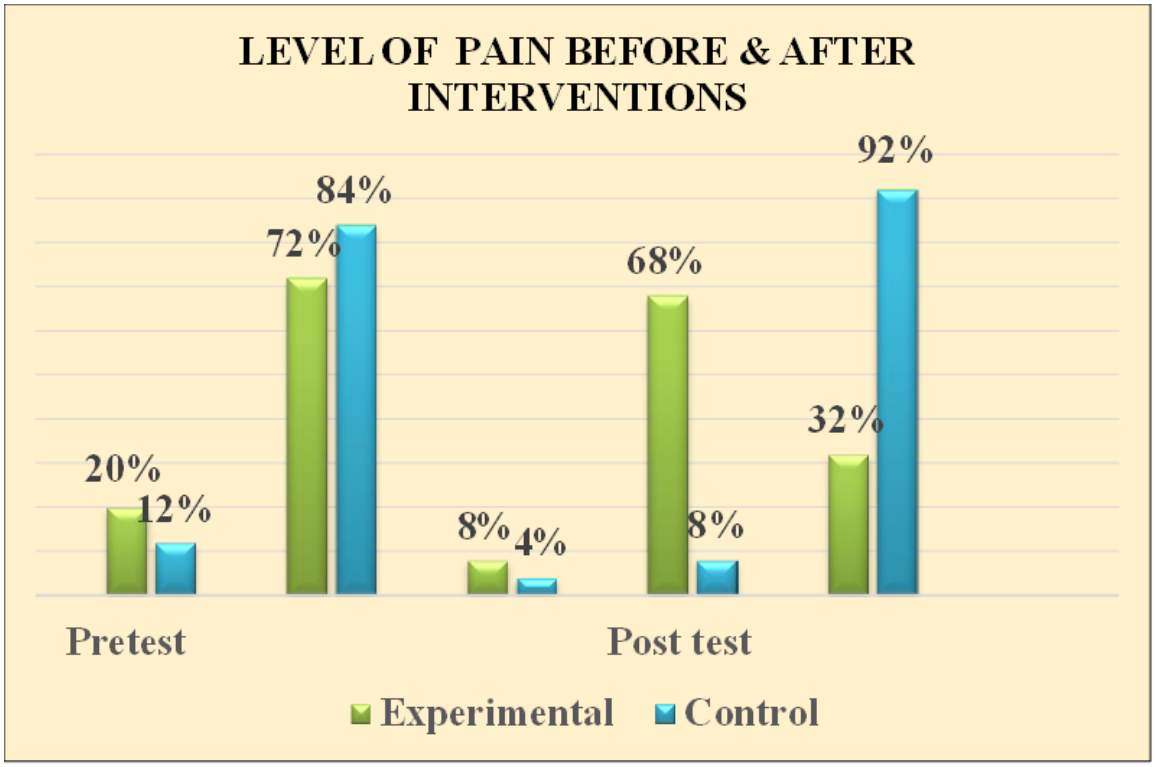

FIGURE : (i)Frequency & percentage distribution of samples according to their level of pain among experimental and control groups.

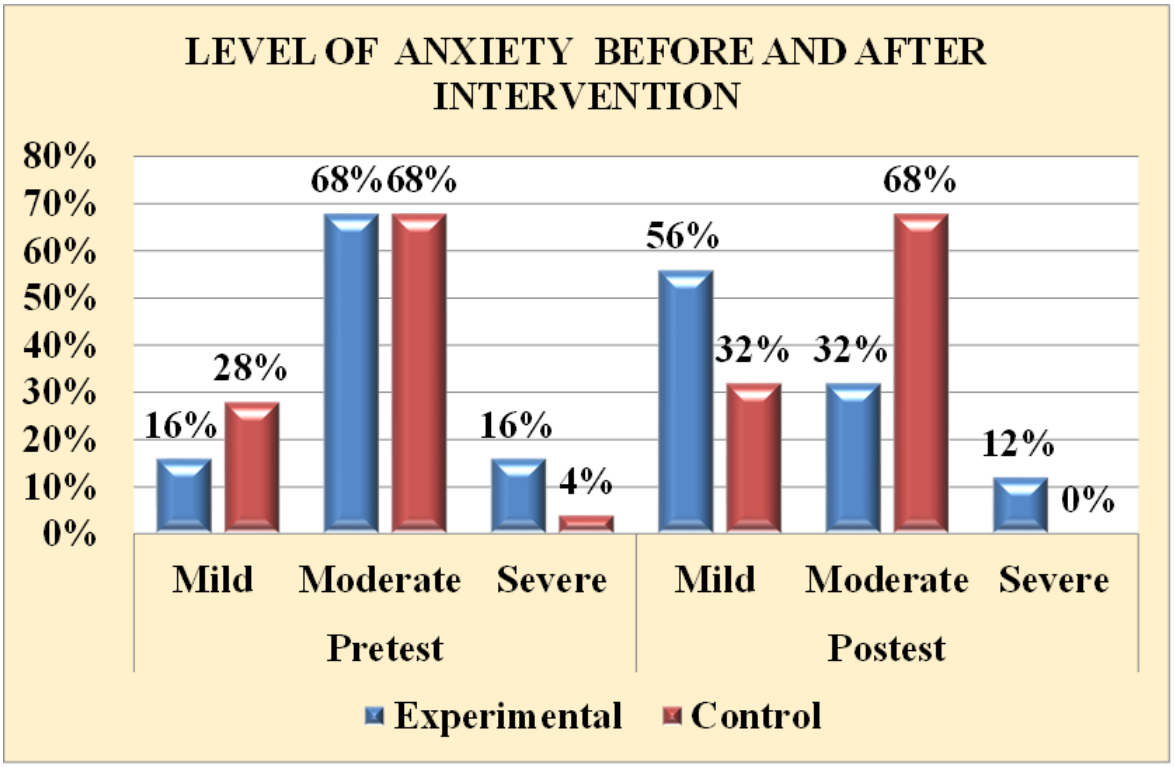

FIGURE : (ii)Frequency & percentage distribution of samples according to their level of anxiety among experimental and control groups.

SECTION :C Effectiveness of pretest and posttest regarding therapeutic Touch Massage on reduction of pain and anxiety among Stroke Patients in experimental group and Comparison between experimental and control group regarding therapeutic touch massage on reduction level of pain and anxiety

Table 2 . Effectiveness of therapeutic touch massage on reduction level of pain & anxiety among experimental group & control group

Variables	Level of Pain	Test	Mean	SD	MD	Paired t test	df	Inference Tabulated Value
Level ofPain	Experimental Group	Pretest	9.88	2.55	3.08	6.005**	24	S 2.492
		Post Test	6.80	2.14				
	ControlGroup	Pretest	10.16	2.07	0.28	-0.803	24	NS 2.492
		Post-Test	10.44	1.50				
Level of Anxiety	xperimentalGroup	Pretest	21.04	3.27	2.76	5.438**	24	S 2.492
		Post-Test	18.28	3.69				
	ControlGroup	Pretest	19.32	2.89	0.32	1.995	24	NS 2.492
		Posttest	19.00	2.70				

Table 3. comparison between experimental group & control group regarding therapeutic touch massage on reduction of pain & anxiety

Comparison Groups	Mean	SD	Mean Difference	t-test score	df	Sig
Pretest Pain	9.88	2.55	0.28	0.425	48	S
Experimental & Control Group	10.16	2.08				
Posttest Pain	6.80	2.14	3.64	6.959		S
Experimental & Control Group	10.44	1.50				
Pretest Anxiety	21.04	3.27	1.72	1.968	48	S
Experimental & Control Group	19.32	2.90				
Posttest Anxiety	18.28	3.69	0.72	0.786		S
Experimental & Control group	19.00	2.71				

SECTION:D Association between pre-test level of pain & anxiety with their selected Sociodemographic & clinical variables among experimental group & control group

TABLE.4 ASSOCIATION BETWEEN PRE-TEST LEVEL OF PAIN WITH THEIR SELECTED SOCIODEMOGRAPHIC/CLINICAL VARIABLES AMONG EXPERIMENTAL GROUP		
Demographic Variable	**χ^2 value**	**Level of Significance**
Age in Years	22.53	S
Gender	7.94	S
Education	36.11	S
Occupation	28.28	S
Income	26.69	S
Type of family	18.18	S
Duration of illness	15.96	S
Family History of Stroke	19.82	S
Previous History of Stroke	7.86	S
Any History of Comorbid condition	6.61	S
Extremities affected by Stroke	44.52	S
Spasticity score	17.18	S

TABLE 5. ASSOCIATION BETWEEN PRE-TEST LEVEL OF PAIN WITH THEIR SELECTED SOCIODEMOGRAPHIC/CLINICAL VARIABLES AMONG CONTROL GROUP		
Demographic Variable	**χ^2 value**	**Level of Significance**
Age in Years	15.29	S
Gender	3.55	NS
Education	30.35	S
Occupation	27.08	S
Income	13.11	NS
Type of family	11.19	S
Duration of illness	9.127	NS
Family History of Stroke	10.90	S
Previous History of Stroke	3.505	NS
Any History of Comorbid condition	3.741	NS
Extremities affected by Stroke	29.04	NS
Spasticity score	9.22	NS

TABLE.6 ASSOCIATION BETWEEN PRE-TEST LEVEL OF ANXIETY WITH THEIR SELECTED SOCIODEMOGRAPHIC/CLINICAL VARIABLES AMONG EXPERIMENTAL GROUP		
Demographic Variable	**χ^2 value**	**Level of Significance**
Age in Years	5.055	NS

Gender	1.861	NS
Education	15.60	NS
Occupation	8.33	NS
Income	6.82	NS
Type of family	4.15	NS
Duration of illness	6.220	NS
Family History of Stroke	1.538	NS
Previous History of Stroke	2.49	NS
Any History of Comorbid condition	1.75	NS
Extremities affected by Stroke	7.543	NS
Spasticity score	3.334	NS

TABLE.7 ASSOCIATION BETWEEN PRE-TEST LEVEL OF ANXIETY WITH THEIR SELECTED SOCIODEMOGRAPHIC/CLINICAL VARIABLES AMONG CONTROL GROUP

Demographic Variable	χ^2 value	Level of Significance
Age in Years	15.29	S
Gender	3.554	NS
Education	30.35	S
Occupation	27.08	S
Income	13.11	NS
Type of family	11.19	S
Duration of illness	9.127	NS
Family History of Stroke	10.90	S
Previous History of Stroke	3.505	NS
Any History of Comorbid condition	3.741	S
Extremities affected by Stroke	29.04	S
Spasticity score	9.226	NS

SECTION – E :

Table no :08 RELATIONSHIP BETWEEN PRE TEST LEVEL OF PAIN AND ANXIETY

Correlation	Mean	SD	R Value
Pretest Pain (Experimental group)	9.88	2.55	
Pretest Anxiety (Experimental group)	21.04	3.27	0.59 NS
Pretest pain (Control group)	10.16	2.07	0.2865 S
Pre test pain (Control Group)	19.32	2.89	

Table 08 Show the results of the Pearson's correlation in the pretest of Painand Anxiety indicated that there was a positive relationship between Pain and Anxiety, r = 0.0592, p = 0.779 in experimental group and in control group positive relationship between Pain and Anxiety, r = 0.2865,p = 0.43683)

CONCLUSION: This study results suggest that after therapeutic touch massage in the experimental group decreasing level of pain & anxiety. It can be concluded that the therapeutic touch massage is useful in

decreasing the level of pain & anxiety among stroke patients. Therapeutic touch can be used as a cost-effective complementary therapy for the management of the stroke patients and can be practiced at home

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