

## **EFFECTIVENESS OF WAX THERAPY VERSUS CRYOTHERAPY ON PAIN AMONG PATIENTS WITH RHEUMATOID ARTHRITIS AT GOVERNMENT GENERAL HOSPITAL, CHROMEPET**

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### **ABSTRACT**

Pain is the body's warning system, alerting that something is wrong. The International Association for the study of pain defines it as an unpleasant experience associated with actual or potential tissue damage to a person's body. Most forms of arthritis are associated with pain that can be divided into two general categories: acute and chronic. Chronic pain is common in people with rheumatoid arthritis, which ranges from mild to severe and can last a lifetime. Rheumatoid Arthritis is an inflammatory disease of the synovial, or lining of the joint, results in pain, stiffness, swelling, joint damage, and loss of function of the joints. Inflammation most often affects joints of the hands and feet and tends to be symmetrical (occurring equally on both sides of the body). This symmetry helps distinguish rheumatoid arthritis from other forms of the disease.

**KEYWORDS:** Potential Tissue Damage, Person's Body, Inflammatory Disease & Joint Damage

### **INTRODUCTION**

**WHO (2011)** reported that Rheumatoid Arthritis is a chronic systemic disease that affects the joints, connective tissues, muscle, tendons and fibrous tissue. It tends to strike during the most productive years of adulthood, between the ages of 20 and 40, and is a chronic disabling condition often causing pain and disability

### **STATEMENT OF THE PROBLEM**

A study to assess the effectiveness of Wax therapy Vs Cryotherapy on pain among patients with Rheumatoid Arthritis at Government General Hospital, Chrompet.

### **OBJECTIVES**

- To assess the pre test level of pain in Experimental Group I (Wax therapy) & Experimental Group II (Cryo therapy)
- To assess the posttest level of pain in Experimental Group I (Wax therapy) & Experimental Group II (Cryotherapy)
- To compare the pretest & posttest level of pain in Experimental Group I (Wax therapy) & Experimental Group II (Cry therapy)
- To associate the post test level of pain in Experimental Group I (Wax therapy) & Experimental Group II (Cryotherapy) with their selected demographic variables.

## RESEARCH HYPOTHESIS

**H<sub>1</sub>**-There is a significant difference between the pretest levels of pain in Experimental Group I (Wax therapy) and Experimental Group II (Cryotherapy).

**H<sub>2</sub>**-There is a significant difference between the post tests levels of pain in Experimental Group I (Wax therapy) and Experimental Group II (Cryotherapy).

**H<sub>3</sub>**-There is a significant difference between pretest and post test level of pain in Experimental Group I (Wax therapy) and Experimental Group II (Cryotherapy).

**H<sub>4</sub>**-There is a significant association between post tests levels of pain among Experimental Group I (Wax therapy) and Experimental Group II (Cryotherapy).

## ASSUMPTIONS

- Rheumatoid arthritis patient experiences pain which can lead to substantial loss of functioning and mobility if not adequately treated.
- Wax therapy will have some impact in reducing pain and prevents from loss of functioning and mobility.
- Cryotherapy will reduce discomfort, limit progression of tissue edema and muscle spasm.

## RESEARCH METHODOLOGY

### Research Approach

The research approach used was quantitative in nature, considered to be most appropriate for the study.

### Research Design

The research design adopted in this study was quasi-experimental design, two group's pre and post test design which was used to assess the effectiveness of wax therapy and cryotherapy on pain among patients with rheumatoid arthritis.

**Table 1**

Group	Pretest	Intervention	Posttest
EXPERIMENTAL GROUP-I(Wax therapy)	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>
EXPERIMENTALGROUPII(Cryotherapy)	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>

### Setting

The study was conducted in Government General Hospital, Chrompet. The recent statistics showed that approximately 150 patients with rheumatoid arthritis attended orthopedic outpatient clinic in a month. The setting was chosen on the basis of feasibility in terms of availability of adequate samples and the co-operation extended by the management and the health team members.

### Population

Population refers to entire summations that meet the designated inclusion criteria. The study population comprises of all patients who are diagnosed with Rheumatoid Arthritis.

### **Sample**

The study sample comprised patients with rheumatoid arthritis who fulfilled the inclusive criteria.

### **Sample Size**

The sample size of the study is 60, out of which 30 will be allotted to Experimental Group I (wax therapy) and 30 to Experimental Group II (cryotherapy)

### **Sampling Technique**

The sampling technique used for the study is Non probability purposive sampling technique. Clients who fulfill the inclusion criteria were selected as sample.

### **Development and Description of Tools**

The tool consists of 2 parts

**Section A:** Demographic variables.

**Section B:** Rheumatoid Arthritis Pain Scale.

## **SECTION-A: DEMOGRAPHIC DATA OF PAIN AMONG PATIENTS WITH RHEUMATOID ARTHRITIS**

The demographic characteristics consisted of 9 variables such as Age, Sex, Body weight, Marital status, Work pattern, Education, Occupation, Family history, Duration of pain.

## **SECTION-B: RHEUMATOID ARTHRITIS PAIN SCALE**

Rheumatoid Arthritis pain Scale was used to assess the pain among patients with rheumatoid arthritis. It consisted of 24 items that measure the descriptions of pain, pain severity and pain interference. Total score was 144.

### **SCORING OF THE SCALE INCLUDES**

- Mild - 97-144
- Moderate - 49-96
- Severe - 1-48

### **INTERVENTION**

**Wax therapy**

**Cryotherapy**

### **PLAN FOR DATA ANALYSIS**

Analysis of data was done by descriptive and inferential statistics.

### **Descriptive Statistics**

- Percentage and frequency distribution can be used to determine the demographic variables and level of pain

- Percentage and frequency distribution and mean standard deviation will be used to assess the level of pain

### Inferential Statistics

- Unpaired 't' test to compare the pretest and post test level of pain among patients with Rheumatoid Arthritis in Experimental Group I (Wax therapy) and Experimental Group II (Cryotherapy).
- Paired 't' test to compare the pre test and post test level of pain among patients with Rheumatoid Arthritis in Experimental Group I (Wax therapy)
- Paired 't' test to compare the pre test and post test level of pain among patients with Rheumatoid Arthritis in Experimental Group II (Cryo therapy).
- Chi-square is used to analyze the association of demographic variables with the post level of pain among patients with Rheumatoid Arthritis in experimental group I (wax therapy) and experimental group II (cryotherapy).

## FINDINGS OF THE STUDY

### Section A: Frequency and Percentage Distribution of Pre Test Level of Pain in Experimental Group I (Wax Therapy) and Experimental Group II (Cryotherapy)

**Table 2: Frequency and Distribution of Pre Test Level of Pain in Experimental Group I (Wax Therapy) and Experimental Group II (Cryotherapy)**

Level of Pain	Experimental Group I (Wax Therapy)		Experimental Group II (Cryotherapy)	
	Frequency	Percentage	Frequency	Percentage
Severe	30	100	30	100
Moderate	0	0	0	0
Mild	0	0	0	0

### Section B: Frequency and Percentage of Post Test Levels of Pain in Experimental Group I (Wax Therapy) and Experimental Group II (Cryotherapy)

**Table 3: Represents Frequency and Percentage of the Post Test Level of Pain in Experimental Group I (Wax Therapy) and Experimental Group II (Cryotherapy) N = 30+30**

Level of Pain	Experimental Group I (Wax Therapy)		Experimental Group II (Cryotherapy)	
	Frequency	Percentage	Frequency	Percentage
Severe	0	0	1	3.3
Moderate	15	50	24	80.0
Mild	15	50	5	16.7

### Section C: Comparison of Post Test Level of Pain in Experimental Group I (Wax Therapy) and Experimental Group II (Cryotherapy)

**Table 4: Comparison of Post Test Level of Pain in Experimental Group I (Wax Therapy) and Experimental Group II (Cryotherapy) N = 30+30**

Group	Post test		Un paired t Test
	Mean	SD	
Experimental Group I (wax therapy)	88.23	13.69	t = 3.35 P = 0.001 <b>Significant</b>
Experimental Group II (cryotherapy)	74.87	15.31	

**Section D: Comparison of Pre and Post Test Level of Pain in Experimental Group I (Wax Therapy) and Experimental Group II (Cryotherapy)**

**Table 5 (A): Comparison of Pre and Post Test Level of Pain in Experimental Group I (Wax Therapy N = 30+30)**

Group	Experimental Group I (Wax Therapy)		Paired t Test
	Mean	SD	
Pre test	41.93	3.94	t = 18.25 P = 0.001 <b>Significant</b>
Post test	88.23	13.69	

**Table 5 (B): Comparison of Pre and Post Test Level of Pain in Experimental Group II (Cryotherapy N = 30+30)**

Group	Experimental Group II (Cryotherapy)		Paired t Test
	Mean	SD	
Pre test	42.03	5.68	t = 12.63 P = 0.001 <b>Significant</b>
Post test	74.87	15.31	

**CONCLUSIONS**

The present study assessed the effectiveness of wax therapy versus cryotherapy on pain among patients with rheumatoid arthritis at Government General Hospital, Chrompet. The results of the study concluded that wax therapy were more effective than cryotherapy in reducing pain.

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