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### Abstract

**Purpose:** With the ever advancements in the methods of managing Rheumatoid Arthritis, there needs to be a quantifiable value to denote the general perception, but mainly attitude, and beliefs of physical therapists in clinical practice, to ensure optimum physical therapy interventions for disease management. This attitude and belief regarding different intervention methods represents the efficacy of the therapeutic plan of care of each therapist, and the efficiency of the individual method of therapy. The main objective of this investigation is to assess the attitude and beliefs of physical therapists toward Rheumatoid Arthritis and its associated treatment selection.

**Methodology:** Rheumatoid arthritis (RA) is a chronic autoimmune disease that significantly impacts the quality of life of affected individuals. Physiotherapists play a crucial role in the management of RA, yet there is limited research exploring their attitudes and beliefs regarding this condition and its treatment selection. Understanding physiotherapists' perspectives is vital for enhancing the care provided to RA patients. Therefore, this study seeks to investigate the attitudes and beliefs of physiotherapists towards rheumatoid arthritis and their treatment selection practices. A cross-sectional study was conducted, and data was collected from physical therapists having a minimum of 6 months of clinical experience working in private, and public hospitals, clinics, and rehabilitation centers in the

cities of Gujranwala and Gujrat. A sample size of 366 physical therapists was selected for this study using non-probability convenience sampling. What are the attitudes and beliefs of physiotherapists regarding rheumatoid arthritis, and how do these attitudes influence their choices in selecting treatments for RA patients?

**Findings:** In this research study, the results suggested that the majority of respondent physical therapists showed a positive attitude and belief towards the use of Manual Therapy and Electrotherapy as a suitable method of intervention for the management of Rheumatoid Arthritis. A more favorable preference was found for Manual Therapy (38.78%), as compared to Electrotherapy (37.15%).

**Recommendations:** This research was carried out to record the attitudes and beliefs of physical therapists having clinical experience in managing patients with Rheumatoid Arthritis. The results test a positive attitude and belief towards using Manual Therapy and Electrotherapy. This research further found that physical therapists prefer using Manual Therapy slightly more compared to Electrotherapy for the management of Rheumatoid Arthritis.

**Keywords:** *Physical Therapy; Rheumatoid Arthritis; Attitudes and Beliefs; Manual Therapy; Electrotherapy*

## 1.0 INTRODUCTION

Rheumatoid arthritis (RA) is a complex and debilitating disease characterized by chronic inflammation of the joints ultimately leading to joint destruction. It affects approximately 1% of the global population, with women being more commonly affected than men. RA significantly impairs quality of life, leading to disability, reduced mobility, and increased healthcare utilization. It possesses a certain burden on individuals and healthcare systems alike. The pathogenesis of RA has substantially expanded. According to several researchers, RA patients who have a higher body mass index (BMI) have a higher risk of developing RA. <sup>(1)</sup>While pharmacological interventions have shown considerable efficacy in managing RA, a multidisciplinary approach, including physiotherapy, is essential for optimizing patient functional outcomes and quality of life.

Physiotherapists play a crucial role in the management of RA providing interventions such as exercise therapy, patient education, and joint protection techniques. Their attitudes and beliefs toward RA and treatment selections are of paramount importance in delivering effective and patient-centered care. Understanding these perspectives can shed light on the challenges physiotherapists face and facilitate improvements in the delivery of RA rehabilitation services.

Today, several studies have explored healthcare professionals' perceptions of RA; however limited research has specifically focused on physiotherapists' attitudes and beliefs. Therefore, this article aims to provide an in-depth analysis of the existing literature. The objectives of this article are two-fold: to identify and summarize the current knowledge regarding the physiotherapist's attitudes and beliefs towards RA and its treatment selection. Second, to explore the factors influencing these perspectives, such as professional experience, educational background, and access to resources.

By examining the attitudes and beliefs of physiotherapists, we can gain insights into potential barriers and facilitators that influence the implementation of evidence-based practice in RA management. Non-pharmacological resources, such as thermos-therapy, electro-therapy, whole- body vibration, orthosis, and low-level laser therapy (LLLT), have relevance in treating pain and inflammation, preventing tissue degradation, increasing function, and improving quality of life. <sup>(2)</sup>This article will adopt a rigorous systematic approach, including a comprehensive search strategy, eligibility criteria, and data extraction methods.

## 2.0 METHODOLOGY

This is a cross-sectional study conducted from March 2023 to June 2023 at Private and Public Physiotherapists hospitals and clinics including Fazal clinic, including Rehabilitation Center, Jinnah Clinic, Siddique Clinic, City Hospital, Vital Hospital Bhatti Hospital of Gujranwala and Gujrat after obtaining ethical committee permission.

Non-probability convenient sampling was employed with a sample of n=366 individuals. All the practicing physiotherapists with a degree of 5 years were included having experience of at least 6 months, who must have treated one or more rheumatoid arthritis patients.

Undergraduates of DPT were significantly excluded from the data collection procedure with those physiotherapists who have not treated even a single patient of Rheumatoid Arthritis. A cross-sectional survey was conducted from 366 individuals of Gujranwala. Physiotherapists were included. The study was completed within 4 months after approval of the synopsis. Undergraduates were excluded. The research instruments used in this study included the basic demographics; name, gender, age, occupation, and individual living conditions. Data was collected through self-

made questionnaires. Physiotherapist attitude and belief towards Rheumatoid arthritis and its treatment selection. A pilot study was also conducted.

Mean and standard deviations were calculated from Statistical Package of Social Sciences (SPSS) version 23.0.0 in the case of normal data. Categorical data were displayed in frequencies and percentages. For the significance, appropriate statistical tests were applied. P value  $\leq 5$  were considered significant values. All the tables and multiple bar charts were constructed using spss.

### 3.0 FINDINGS

Out of the selected 366 participants in this research, 217 participants were male constituting 59.29%, while 149 were female, constituting 40.71% of the overall sample size of the total sample of 366, all participants were Doctor of Physical Therapy graduates of a 5-year program with a minimum clinical experience of 6 months or more according to the inclusion criteria.

In the questionnaire, the participants were asked to express their clinical beliefs and attitudes regarding the physical therapy treatment of patients with Rheumatoid Arthritis. This shows that the items in this questionnaire show lower agreement between the measured items, showing a low internal consistency among the items being measured.

The domain of Attitudes consists of the following statements from the questionnaire which include the activeness of the patient being supervised by an expert physical therapist and the importance of physical therapy for patients with rheumatoid arthritis. The mean responses for the following statements were as follows, where a mean of 160 physical therapists (43.7%) of the sample sizes strongly agreed with the statements presented in the questionnaire. Whereas a mean of 175 (47.8%) chose Agree, a mean of 31 (8.5%) of the sample opted for the option of Neutral. There were response options of Disagree and Strongly Disagree within this domain.

In the domain of Beliefs, consisting of the following statements regarding the education of the patient to monitor their health by themselves towards a successful goal, physical therapy as a useful tool to manage Rheumatoid Arthritis, and application of any management strategy for Rheumatoid Arthritis. From the collected responses, a mean of 88 (24%) of the sample opted for Strongly Agree, 231 (63.1%) chose to Agree, 47 (12.8%) selected Neutral, whereas there were no respondents who chose Disagree or Strongly Disagree from the given statements within this domain.

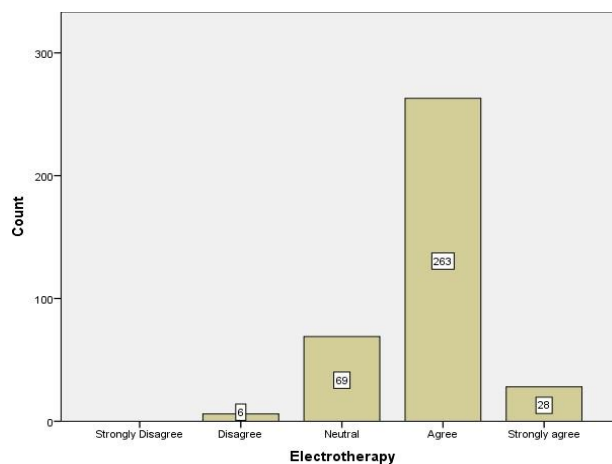
In the domain of Electrotherapy, consisting of the following statements regarding the positive impacts of electrotherapy as a management pillar in the physical-therapeutic management of Rheumatoid Arthritis, their application of TENS, their use of heating modalities, therapeutic Ultrasound, and LASER to Rheumatoid Arthritis patient. From the collected responses of the sample population, a mean result was calculated in which 28 (7.7%) physical therapists strongly Agreed, 263 (71.9%) Agreed, 69 (18.9%) physical therapists were neutral, and 6 (1.6%) chose to disagree. There were no respondents who opted for the option of Strongly Disagree within this domain.

In the domain of Manual Therapy intervention, consisting of the following statements regarding massage therapy, isometric exercises, isotonic exercises, isometric in combination with isotonic exercises, Cyrx mobilization techniques, Mulligan mobilization techniques, the positive impact of manual therapy, and manual therapy in combination with electrotherapy interventions for patients with Rheumatoid Arthritis. From the collected responses of the sample population, a mean result

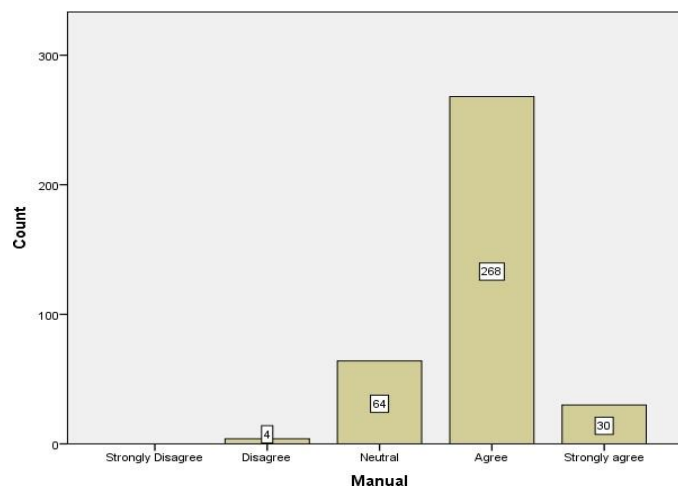
was calculated in which a mean of 30 (8.2%) of the sample opted to Strongly Agree with the statements, a mean of 268 (73.2%) chose to Agree with the prompts, a mean of 64 (17.5%) selected the option of Neutral, and a mean of 4 (1.1%) chose to Disagree with the given statements. There were no respondents who opted for the option of Strongly Disagree within this domain.

Within the domains of Attitudes and Electrotherapy interventions, in the most common overlapping response opted by the participants within these two variables was Agree, with 121 (33.06%) out of the sample of 366 participants. The second most selected overlap of responses between these two variables was of Strongly Agree which was 15 (4.09%) of the total population responded with Strongly Agree. The final value within this cross-tabulation with the third highest overlap was Neutral, in which 4 (1.09%) out of the total sample opted for Neutral.

Within the domains of Attitudes and Manual Therapy interventions, the most common overlapping response opted by the participants within these two variables was Agree, with 127 (34.69%) out of the sample of 366 participants. The second most selected overlap of responses between these two variables was of Strongly Agree which was 15 (4.09%) of the total population responded with Strongly Agree. The final value within this cross-tabulation with the third highest overlap was Neutral, in which 8 (2.18%) out of the total sample opted for Neutral.



*Figure1: Frequency Distribution of Electrotherapy*



*Figure2: Frequency Distribution of Manual Therapy*

**Table 1: Frequency Distribution of Electrotherapy**

		Frequency	Percent
Disagree		6	1.6
	Neutral	69	18.9
Valid	Agree	263	71.9
	Strongly agree	28	7.7
<b>Total</b>		<b>366</b>	<b>100.0</b>

**Table 2: Frequency Distribution of Manual Therapy**

		Frequency	Percent
Disagree		4	1.1
	Neutral	64	17.5
Valid	Agree	268	73.2
	Strongly agree	30	8.2
<b>Total</b>		<b>366</b>	<b>100.0</b>

## Discussion

RA was previously thought to be only predominantly prevalent in European and North American countries, solely due to a lack of prevalence research in South Asian and other surrounding countries. This misconception has since been deemed inaccurate due to recent studies measuring the prevalence of RA in Pakistan, such that 8 in every 1000 persons have been diagnosed with RA in Pakistan (3). Furthermore, North Pakistan showed a higher number of cases compared to South Pakistan, and was also higher among rural populations as compared to urban populations, with females more affected than men who were unemployed, with the highest number of cases found from the city of Karachi (4,5).

In a research study from 2019, an assessment tool was designed and used to measure the knowledge of RA among individuals diagnosed with the disease, called the Rheumatoid Arthritis Knowledge Assessment Scale (RAKAS) which tested the knowledge of patients with RA. There is however little research done addressing the knowledge, attitudes and beliefs of physical therapists in Pakistan, or in terms of RA management preferences. This research showed that only 48.7% of the population knew about the disease whereas on average, 55.01% of people had a sound knowledge about the disease and its effects on functional ability and impairments caused by it (6).

This general knowledge within the Pakistani community holds a benefactor for physical therapists in the management of RA. Early diagnosis is a key element in these outcomes, with minimal waste of time, also ensuring cost-effective management for RA (7-10). This mutual understanding between the patient and the physical therapist also involves the rheumatologist to also have a positive attitude and belief in physical therapy interventions, as it is most beneficial for the outcome and management of the patient if all three involved members have a sound knowledge, understanding, and acknowledgment of the effects and efficacy of Manual Therapy and Electrotherapy, especially for pain management and prevention (11-13).

During the data analysis, we found that 38.78% of the respondents opted for ‘Strongly Agree’ or ‘Agree’ with the positive effects of Manual Therapy for RA, whereas 2.18% of respondents held a

neutral stance on these positive outcomes. Similarly, a study conducted by S. Kumar, a physical therapist, concluded that RA patients who were given Tibio-Femoral traction as a means of Manual Therapy benefited more compared to those who were not given Manual Therapy. The degree of improvement was measured using the AROM of knee flexion with respect to the degrees of motion increased. Such that, patients who were given Manual Therapy were found to have a 15.01° increased active flexion, compared to those who were not.

Another group that was tested in this research was those individuals who were given Electrotherapy for the management of RA, which showed a 12.42° increase after electrotherapy intervention (14). The responses collected in our current research show that 37.15% of physical therapists believe Electrotherapy is a useful means for RA management, who opted for 'Strongly Agree' or 'Agree'. Both these findings of increased AROM of knee flexion indicate that both Manual Therapy and Electrotherapy interventions are beneficial to RA patients, however, Manual Therapy yielded better outcomes (15). These values represent that the knowledge and attitudes of physical therapists who believe Manual and Electrotherapy are useful interventions are in line with clinical evidence.

Another study in which Manual Therapy showed better results as compared to Electrotherapy was done by S. S. Ali, in which a decrease in pain and stiffness with the addition of an increase in functional activity was shown using a decreased score on the Western Ontario and McMaster Universities Arthritis (WOMAC) index, translated into Urdu. The overall improvement was found to be significant in the Manual Therapy group as well as the Electrotherapy group, though the Manual Therapy group has superior improvement in comparison to the Electrotherapy group (16). These outcomes were coherent with the attitudes and beliefs of physical therapists from this current study.

A research study from 2020 by M. W. Romanowski explains that Manual Therapy, mainly post-isometric relaxation, and joint mobilizations, has great clinical benefits in RA. In this study, 46 participants were included in this study. The degree of improvement was measured via the Visual Analogue Scale (VAS) at the end of the therapy. In the primary outcome measure, participants were assessed via a health assessment questionnaire and there was no difference in both the manual therapy group and control group. After the therapeutic intervention, the experimental group was found to have a substantial decrease in VAS as compared to the control group. These findings further solidify the positive attitude and belief towards Manual Therapy, ensuring the proper utilization of these methods as an effective method of RA management (17).

Strong evidence holds up the contribution of physical therapy while managing RA. The purpose of the study was to establish useful disease-related knowledge and skills to link them with clinical guidelines to calculate the professional development (PD) of physical therapists in the management of RA. According to the results, when physical therapists were asked about managing Rheumatoid Arthritis patients, 41.7% were unable to identify early symptoms of RA. Showing moderate knowledge about those physical therapists who are aware. 52.5% of physical therapists were not confident about their knowledge regarding RA and 77.5% were not aware of proper treatment and evidence-based practice about skills and interventions specified for rheumatoid arthritis.

These statistics show that a greater lack of positive attitude and belief towards RA was found within this research as compared to the findings of this current research. Only 65.6% of physical

therapists were well aware of RA in terms of knowledge and were confident to manage a patient from starting to onwards, which also reflects the attitude and belief towards RA management conducted and measured by A. M. Briggs, which was further reinforced by S. McKenna with respect to responses generated by physical therapists and physical therapist assistants in Ireland in regards to management of RA (18,19).

Having a grip on basic knowledge 45.1 to 93.5% and 71.1 to 95.2% of the participants agreed upon the need for PD. While 70% of the participants reported they would be interested or very interested in accessing PD related to RA (19). These values in relation to the findings of this current research show that knowledge, positive attitudes, and beliefs are important factors towards managing the patient of RA. Any lack of knowledge makes a physical therapist question their intervention strategies, while physical therapists having good attitudes and beliefs can aid in the perception and detection of early symptoms as well as total management of RA.

#### **4.0 CONCLUSION AND RECOMMENDATIONS**

##### **Conclusion**

The outcomes of this current research may be summarized by denoting an overall positive attitude and belief in the efficacy and reliability of Electrotherapy, as well as Manual Therapy as methods of management of RA. Although both domains on Manual Therapy and Electrotherapy showed a positive attitude and belief towards their use in RA management, it was also found that physical therapists/respondents from this current research believed more in Manual Therapy than they did in the effects of Electrotherapy.

##### **Recommendations**

- i. There is great need for research towards the development and guidance of physical therapists towards exercise and implementation of proper physical therapy plan of care on patients with Rheumatoid Arthritis.
- ii. There is also a strong need to extract similar research in regards to the management of Rheumatoid Arthritis from within other health care disciplines in order to provide the patient with a multi-disciplinary, holistically designed plan of care.
- iii. Collecting similar data from other geographical regions and cities from within Pakistan will expand the database for this topic.

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