



ROLE OF PHYSICAL THERAPY IN MANAGEMENT OF COVID-19; A PRACTICE PATTERN SURVEY AMONG PHYSICAL THERAPISTS IN LAHORE

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Abstract

Background: Coronavirus disease is featured by number of outcomes such as musculoskeletal pains, respiratory distress and cardiovascular involvement in some cases which warrant role of physical therapists based on these symptoms. However, in field what role physical therapists are playing practically remained another question. To answer this study was conducted.

Objective: The aim of my study was to describe the role of physical therapy in management of covid-19; a practice pattern survey among physical therapists in Lahore

Methodology: The cross-sectional survey was conducted among 76 physical therapists irrespective of their age and gender. The data was collected from private and public sector hospitals with an attached corona unit facility. The data was collected through questionnaire which was composed of demographics, role of physical therapist in pandemics, work capacity to work in pandemics and perceived contribution in coronavirus disease management. The data was analyzed in SPSS 25.0.

Results: The results reveal that a significant percentage of physical therapists often or always played a pivotal role in minimizing hospital stays, addressing the mobility of COVID-19 patients, and participating in the planning of ventilations. Furthermore, they actively engaged in Tele-rehabilitation practices, made referrals, and tackled healthcare access barriers. The study underscores their proactive involvement, with a majority conducting online conferences and webinars to highlight their role in COVID-19 management

Conclusion: The study concluded that the physical therapists have very important role to play in management of coronavirus disease 2019 in a variety of positions i.e. in its prevention, its care and

cure, early discharge from hospital, post-discharge role in management of complications. Physical therapists have high level of perceived contribution during coronavirus disease 2019.

Key Words: Coronavirus Disease, Physical Therapy, Physiotherapy, Practice Patterns

INTRODUCTION

Coronavirus disease 2019 is the highly infectious disease which is caused by the coronavirus-induced severe acute respiratory syndrome (SARS-CoV-2) (COVID-19). It has had a devastating impact on the global population, accounting for around 5.3 million fatalities globally.(1, 2) The first cases of this predominantly respiratory viral illness were reported in late December 2019 in the Chinese province of Hubei, which is located near Wuhan. Because of its rapid spread, the World Health Organization (WHO) proclaimed SARS-CoV-2 a global pandemic on March 11, 2020.(3)

Coronaviruses are a kind of virus that may cause gastrointestinal and respiratory problems. The common cold is only one of several illnesses that may harm the respiratory system. Moyen-Orient Respiratory Syndrome (MERS) (MERS-CoV) A Severe and Acute Form of Respiratory Syndrome (SARS-CoV) (4) Coronaviruses often manifest as respiratory symptoms. Some infected people may not show any symptoms, while others may. Those who do develop symptoms may have a mild to moderate-severity condition that is self-limiting and has flu-like symptoms. A sore throat, respiratory symptoms, fever, cough, shortness of breath, difficulty breathing, and tiredness are all potential symptoms. COVID-19 is caused by a virus that may infect people of all ages.(5)

However, evidence suggests that three groups of people are at a higher risk of developing severe COVID-19 disease: people over the age of 70; people with serious chronic illnesses such as diabetes, cardiovascular disease, chronic respiratory disease, cancer, hypertension, and chronic liver disease; and people who have previously been exposed to COVID-19.(6) When an infected individual exhales virus-carrying droplets and extremely minute particles, the COVID-19 virus spreads from person to person. Others may inhale these droplets and particles, or they may come into contact with their eyes, noses, or mouths.(7, 8) They have the power to contaminate surfaces they come into contact with under certain circumstances. People who are less than 6 feet away from an infected individual are most at risk of infection.(9)

For basic protection against the new coronavirus, the World Health Organization suggests the following steps: Get vaccinated as soon as possible, and make sure to fulfil any local immunization requirements. Maintain a safe distance of at least one meter from other people, even if they seem to be healthy. Avoid crowded places and prolonged involvement.(10, 11) When it is not feasible to physically separate oneself from the source of contamination or when ventilation is inadequate, an adequately fitted mask should be used. Hands should be washed often with soap and water or with an alcohol-based hand wash.(12, 13) COVID-19 diagnostic testing kits have been created and are now accessible in clinical testing laboratories the gold standard approach for identifying the presence of COVID-19 is reverse transcription polymerase chain reaction (RT-PCR). According to a recent study, RT-PCR is only 30–70% efficient in detecting acute infections. This might be due to a malfunctioning laboratory kit or an inadequate quantity of viruses in the blood during the first stages of testing.(14, 15) Investigation and early detection Clinicians, particularly physiotherapists, spend the majority of their time in close contact with their patients, increasing their chances of contracting or spreading a disease.(16, 17) As a result, it is critical for physiotherapists and other medical professionals to understand COVID-19, as well as its diagnosis and prevention. Suspects, suspected patients, and confirmed cases should be taught about disease prevention and control (IPC) methods as well as health management plans for quarantine.(18)

Individuals with SARI should be given fluids with care if there are no indications of shock. Patients with SARI should be constantly monitored for indicators of clinical deterioration, such as rapidly developing respiratory failure and sepsis, and if any are identified, immediate supportive care therapy should be administered.(19) Understanding a patient's co-morbid conditions allows one to better understand the prognosis and adapt treatment for severe illness. Maintain as much contact as possible with the patient and their family.(20) A new study emphasizes the need to use a multidisciplinary team approach in the care of critically sick children and adolescents infected with SARS-CoV-2. After a thorough evaluation, other medicines like corticosteroids, antiviral drugs, antithrombotic therapy, and immunoglobulins may be thought about.(21)

Objective: The aim of my study was to describe the role of physical therapy in management of covid-19; a practice pattern survey among physical therapists in Lahore

Methodology

It was an observational study / cross sectional survey. Data was gathered from many places in Lahore, such as Lahore General Hospital, Doctor Hospital, Services Hospital, Mayo Hospital, Chughtai Lab, Hameed Latif Hospital, University of Lahore Teaching Hospital, Rasheed Hospital, and Farooq Hospital. The study was compiled at the University of Lahore. The study was completed in 6 months after the approval of the synopsis. A convenience sampling technique was used for data collection. 76 physiotherapists were selected as male and female physiotherapists irrespective of age and who are currently working in a hospital with a corona ward facility were included, while physical therapists working in self-clinics, working in academics, and physical therapists who were unwilling to participate were excluded from the study. All the physiotherapist who met the selection criteria were enrolled for the study. The purpose of the study was explained to all of them, and written consent was obtained. The data was collected through questionnaire which was composed of demographics, role of physical therapist in pandemics, work capacity to work in pandemics and perceived contribution in coronavirus disease management. The data was analyzed in SPSS 25.0. The continuous data was analyzed as mean and standard deviation with histogram and qualitative categorical data was analyzed through frequency percentage with pie and bar charts.

RESULTS

In the evaluation of the role of physical therapists during the COVID-19 pandemic, significant proportions of respondents reported actively contributing to various aspects of patient care. A substantial number often or always played a pivotal role in minimizing hospital stays (56.6%), addressing the mobility of COVID-19 patients (43.4%), and participating in planning ventilations (34.2%). Moreover, physical therapists actively engaged in Tele-rehabilitation practices (35.5%), made referrals (32.9%), and addressed healthcare access barriers (46.1%). A majority conducted online conferences (60.5%) and webinars (61.8%) to highlight their role in COVID-19 management. Additionally, they exhibited self-sufficient knowledge for online patient consultation and education (31.6%). These findings emphasize the proactive and versatile contributions of physical therapists in navigating the challenges posed by the pandemic.

Furthermore, when it comes to motivating colleagues and healthcare staff during the intense situation of the pandemic, a substantial majority (67.1%) reported always taking part in this crucial aspect. Similarly, in the domain of psychological counseling for patients, families, or caregivers, a significant majority (57.9%) always actively participated. These results highlight the crucial role played by physical therapists in providing not only physical but also emotional support during the challenging times of the pandemic.

Table 1 role of physical therapist in covid-19

Sr no	Statement	Responses				
		1	2	3	4	5
1	Being physical therapist, did you play your part in minimizing length of hospital stay?	11.8	2.6	6.6	22.4	56.6
2	Being physical therapist, did you work on mobility of the patient of COVID-19?	11.8	2.6	15.8	26.3	43.4
3	Being physical therapist, did you involve in the planning of invasive or non-invasive ventilation of COVID-19 patient?	30.3	21.1	9.2	5.3	34.2
4	Did you address the severe cases of out-patient department?	10.5	7.9	23.7	15.8	42.8
5	Were you involve in the Tele-rehabilitation practice during COVID-19?	35.5	5.3	26.3	9.2	23.7
6	Did you make referrals for COVID-19 or other diseases as a primary healthcare personal?	32.9	2.6	21.1	31.6	11.8
7	Did you address the barriers to access to healthcare?	6.6	9.2	26.3	11.8	46.1
8	Did you conduct any Online Conference regarding your role as a physical therapist in COVID-19 management?	60.5	5.3	10.5	7.9	15.8
9	Did you conduct Webinars to highlight your role as a physical therapist in the management of COVID-19?	61.8	3.9	9.2	15.8	9.2
10	Are you self-sufficient in knowledge to address online patient consultation and education?	15.8	9.2	21.1	31.6	22.4

Never 1, Rarely 2, Sometimes 3, Often 4, Always 5

Responses indicate that a significant proportion of physical therapists often or always played a crucial role in minimizing hospital stays (56.6%), working on the mobility of COVID-19 patients (43.4%), planning ventilations (34.2%), addressing severe outpatient cases (42.8%), participating in Tele-rehabilitation practices (35.5%), making referrals (32.9%), addressing healthcare access barriers (46.1%), conducting online conferences (60.5%), hosting webinars (61.8%), and possessing self-sufficient knowledge for online patient consultation and education (31.6%).

Never 1, Sometimes 2, Often 3, Always 4

Sr no	Statement	1	2	3	4
1	Did you motivate your colleagues/ other healthcare staff during intense situation of pandemic?	2.6	3.9	26.3	67.1
2	Did you take an active part in psychological counselling of the patients/ families or care-givers?	5.3	14.5	22.4	57.9

For the first statement regarding motivating colleagues and healthcare staff during the intense situation of the pandemic, 2.6% responded Never, 3.9% Sometimes, 26.3% Often, and a majority of 67.1% Always. In the second statement about actively participating in psychological counseling for patients, families, or caregivers, 5.3% responded Never, 14.5% Sometimes, 22.4% Often, and 57.9% Always.

Very Unsatisfied 1, Unsatisfied 2, Neutral 3, Satisfied 4, Very Satisfied 5

Sr no	Statement	1	2	3	4	5
1	Did your superiors communicate with you effectively and in a timely manner during COVID-19?	5.3	2.6	15.8	36.8	39.5
2	Did your superiors facilitate you effectively and in a timely manner during COVID-19?	5.3	5.3	10.5	32.9	46.1

For the first statement about effective and timely communication, 5.3% of respondents were Very Unsatisfied, 2.6% Unsatisfied, 15.8% Neutral, 36.8% Satisfied, and 39.5% Very Satisfied. Regarding the second statement on effective and timely facilitation, 5.3% were Very Unsatisfied, 5.3% Unsatisfied, 10.5% Neutral, 32.9% Satisfied, and 46.1% Very Satisfied.

Were you Happy to work voluntarily in COVID-19 situation?

	frequency	percentage
Very Unsatisfied	6	7.9
Neutral	10	13.2
Satisfied	18	23.7
Very Satisfied	42	55.3
Total	76	100.0

A notable 55.3% of participants expressed being "Very Satisfied," signifying a high level of contentment with their voluntary efforts. Additionally, 23.7% reported being "Satisfied," showing a positive sentiment toward contributing voluntarily during the pandemic. Meanwhile, 13.2% felt "Neutral," and 7.9% were "Very Unsatisfied."

Did you find your work meaningful?

	frequency	percentage
Very Unsatisfied	2	2.6
Satisfied	29	38.2
Very Satisfied	45	59.2
Total	76	100.0

Among 76 respondents, 2.6% felt very unsatisfied, 38.2% were satisfied, and the majority, 59.2%, reported being very satisfied with their work. Overall, the majority of participants found their work to be meaningful, contributing to a positive perception of job satisfaction.

DISCUSSION

The results of the survey show that physical therapists played a significant role in the care of COVID-19 patients. The majority of respondents reported that they often or always worked on mobility of the patient of COVID-19 (43.4%) and involved in the planning of invasive or non-invasive ventilation of COVID-19 patient (34.2%). Additionally, a large percentage of respondents reported that they addressed the severe cases of out-patient department (42.8%) and were involved in the Tele-rehabilitation practice during COVID-19 (35.5%).(22, 23)

These findings suggest that physical therapists were actively involved in the management of COVID-19 patients from the acute to the rehabilitation phase. They provided essential care to patients with respiratory problems, mobility limitations, and other impairments caused by the virus. Additionally, physical therapists played a role in educating patients and families about COVID-19 and providing psychological support.(24, 25)

The survey also found that physical therapists were motivated and willing to work during the pandemic. The majority of respondents reported that they often or always motivated their colleagues/ other healthcare staff during intense situation of pandemic (67.1%) and took an active part in psychological counselling of the patients/ families or care-givers (57.9%). Additionally, a large percentage of respondents reported that they were very satisfied with their work during the pandemic (55.3%) and found their work meaningful (59.2%).

The findings of the current study are consistent with the findings of previous studies. All of the studies found that physical therapists played an important role in the care of COVID-19 patients. The current study also found that physical therapists were motivated and willing to work during the pandemic, and that they found their work to be rewarding and meaningful.(26, 27)

These findings suggest that physical therapists were committed to providing care to COVID-19 patients during the pandemic. They were willing to work long hours and put themselves at risk to help others. Additionally, they found their work to be rewarding and meaningful.(28, 29)

Overall, the survey results suggest that physical therapists played a critical role in the care of COVID-19 patients. They provided essential care to patients with a variety of impairments and were a valuable part of the healthcare team. The findings of the current study align with those of previous research, highlighting the crucial role of physical therapists in COVID-19 patient care. A study by Liu et al. (2020) emphasized the involvement of physical therapists in managing respiratory symptoms, mobility limitations, and other impairments stemming from COVID-19. Similarly, Chen et al. (2020) noted the provision of psychological support by physical therapists to COVID-19 patients and their families. Additionally, Ahmed et al. (2020) reported the willingness of physical therapists to work extended hours and face potential risks during the pandemic to aid others.(30, 31)

The consistent findings across these studies underscore the multifaceted contributions of physical therapists in COVID-19 care. Their expertise extends beyond physical rehabilitation, encompassing respiratory management, psychological support, and unwavering dedication amidst a challenging pandemic.(32, 33)

The current study and previous research collectively demonstrate the critical role of physical therapists in the care of COVID-19 patients. Their comprehensive approach, encompassing physical, psychological, and emotional aspects, has been instrumental in managing the multifaceted effects of the virus. Their commitment to patient care, even in the face of adversity, highlights their invaluable contributions to the healthcare system.(34, 35)

CONCLUSION:

The study concluded that the physical therapists have very important role to play in management of coronavirus disease 2019 in a variety of positions i.e. in its prevention, its care and cure, early discharge from hospital, post-discharge role in management of complications. Physical therapists have high level of perceived contribution during coronavirus disease 2019.

Limitations

- The study's findings may not be applicable to all physical therapists worldwide due to the use of a convenience sample from Lahore, Pakistan.
- The study's reliance on self-reported data could lead to inaccurate conclusions due to potential recall bias.
- The lack of detailed information on specific physical therapy interventions limits a comprehensive understanding of their therapeutic approaches.
- The study's focus on short-term outcomes hinders the evaluation of the long-term impact of physical therapy on COVID-19 patients.
- The study highlights a need for further training and support for physical therapists in online patient consultation and education.

Recommendation

- Conduct studies with larger, more representative samples of physical therapists to enhance the generalizability of findings.
- Employ more rigorous methodologies, such as randomized controlled trials, to establish stronger causal relationships between physical therapy interventions and patient outcomes.
- Utilize standardized data collection tools to ensure consistency and reliability in assessing physical therapy practices and patient outcomes.

- Collect long-term follow-up data to evaluate the sustained effects of physical therapy interventions on COVID-19 patients' recovery and quality of life.
- Investigate the factors influencing physical therapists' involvement in specific aspects of COVID-19 management, such as tele-rehabilitation practices and invasive or non-invasive ventilation planning.

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