

## Factors Affecting the Extent of Utilization of Physiotherapy Services among Orthopedic Consultants in Lahore, Pakistan

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### **ABSTRACT**

#### **BACKGROUND**

Physiotherapy (PT) is among that healthcare professions which is rapidly growing among professions. Societal attitudes, perceptions and knowledge directly influence the acceptance of any profession.

#### **OBJECTIVE**

To investigate the opinions, attitudes and experiences of orthopedic consultants towards Physical Therapy services and to identify the factors affecting the extent of utilization of physiotherapy services in Lahore.

#### **MATERIALS AND METHODS**

A cross sectional study was conducted among 162 orthopedic consultants of government and private hospitals in Lahore with the help of a questionnaire. This study was completed in 6 months. The Convenient sampling technique was used. The study population was selected according to the inclusion criteria. Informed consent was taken before taking data.

#### **RESULTS**

A total of 162 participants was selected. The mean age of participants was  $32.5 \pm 8.4$ . 147 male and 18 female participants were selected from both government and private settings ranging experience from 1 to 20 years. Orthopedics attitude towards physiotherapy services is that they agreed the importance of physiotherapy in secondary care as 84.8% respond to this question, but they did not agreed for direct access, treatment and reassess the patients as they think that physiotherapists have a lack of knowledge and skills to assess and treat patients as 74.5% responded to it.

#### **CONCLUSION**

Many factors were affecting the extent of utilization of physiotherapy services among orthopedic consultants, but the most prominent factor was that consultants think that physiotherapist's have a lack of skills and knowledge to assess and treat patients.

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## **KEYWORDS**

Orthopedic surgeons; Attitude, knowledge; Physiotherapist; physician

## **INTRODUCTION**

Throughout the 20<sup>th</sup> century our views of life and healthcare profession has drastically changed [1]. Physiotherapists help people in achieving maximum long term health benefits to maximize the effects of this multidisciplinary approach [2].

There are differences in the reference rate for physical therapy both at functional and clinical levels [3-6]. In addition, societal attitudes, perceptions and knowledge directly influence the acceptance of any profession [7]. Variations have been seen through primary, secondary and tertiary healthcare setups [8]. Physiotherapy (PT) is among that healthcare professions which is rapidly growing among professions [9]. It is considered as a primary health profession as the need of PT services increased in rehabilitation programs [10].

According to the world health confederation of physiotherapy (WCPT), Physiotherapy is concerned with maximizing and identifying quality of life by promotion, prevention, intervention, and rehabilitation by merging physical, mental and emotional wellbeing [11]. Medical professionals are currently working together with physiotherapist to provide patients with the best available treatments [12].

In fact, there is a need to acknowledge the professional expertise of each other in order by teaching them to prevent loss of mobility and by conducting various fitness and wellness programs to maintain a healthy lifestyle [13].

For instance, research has not fully clarified the underlying factors regarding physical therapy referral deviation. Although evidence indicates that physician attributes like knowledge of treatment facilities and PT perceptions may illustrate the remnant variability in referral rates [14-18].

Physical therapists are movement experts that maximize standard of living through patient education, exercise prescription and modalities application as APTA mentions [19] APTS'S vision 2020 promote autonomous practice of physiotherapists and defend it with evidence that PT'S have enough anatomy knowledge and expert skills to do autonomous practice [20].

Evidence-based practice (EBP) is a new trend in clinical practice. Mostly physiotherapists are practicing EBP but still they are facing difficulties in profession recognition. Most physicians and public are unaware about the importance of PT services therefore this has a direct effect on utilization of physical therapy services [21]. The gap in the literature was that, a recent study by Al Eisa et al. suggest that seventy five percent of doctors has not referred any patients to physiotherapy clinics in Saudi Arabia or rarely referred patients to them [22].

Another study carried out by Kristine. R. Archer et al tells that orthopedic surgeons send patients mainly on expectations for sensory and motor outcomes improvement. Surgeons do not consider them as to treat pain, but a mindset of home based rehabilitation is also impacting upon direct referral rates [18].

## **LITERATURE REVIEW**

Mansour Abdullah Al Shehri et al performed a cross sectional study in 2017 to find the factors that affect the extent to which doctors in Saudi Arabia use physiotherapy services. To evaluate attitudes, opinions and experiences of healthcare professionals towards physiotherapy services and to target specific factors that affect the level to which physiotherapy services have been used in Saudi Arabia (SA). The Sample size was taken 108 physicians and outcome measurement tool were three questionnaires. Data was collected by anonymous online surveys.

Clinicians in physiotherapy should try to change the negative attitudes of doctors in promoting awareness of the importance of services of physiotherapy [23].

Kristin R. Archer et al has undertaken a cross sectional study in 2007 to find referral factors, by orthopedics for PT services in patients with traumatic lower extremity injury. The motive for the research was to assess the physician's influence and practical attributes on reference for PT in patients with injury to lower extremity. Results suggest that surgeons refer patients for physical therapy on expectations of somatic and mechanical outcomes, but they ignore the factor of pain relief and behavioral recovery aspects [24].

Moreover, low referral rates may be recognized to a preference for surgeon-instructed home rehabilitation program. Elizabeth Cottrell Et.al conducted a study in 2010 to find general physicians behaviors concerning chronic knee pain exercises varying methodologies and twenty questionnaires were used to measure GP behavior. Exercise should be used for chronic knee pain and osteoarthritis of the knee was recommended by 99% of GPs and other 29% believed to give the rest as management approach. Hence, Reference frequency for exercise advice or physiotherapy was lower [25].

Einas S. Al. Eisa et al. [22] Performed a cross sectional study in 2016 to find physiotherapy awareness, perceptions and beliefs of doctors who work in Saudi Arabia. 315 members of the Saudi health commission were sent 22 item questionnaire for this study. This study highlights the need for physicians to arrange different seminars and lectures on physiotherapy effectiveness in different illness to change perceptions of physicians towards physiotherapy.

Fritz et al conducted a randomized clinical trial to find Primary Care Management with or without Early Physical Therapy for Acute Low Back Pain. A randomized trial

involving two hundred and twenty participant age ranges 18-60 years. Results support early physical therapy in patients with acute, low back pain as cost-effective relatively after one year [26].

Stacie. J. Fruth and Steve Wiley conducted a comparative study in 2016 to find department of emergency physician impressions of physical therapist practice. Doctors and hospital residents of emergency staff were invited to complete a level I trauma hospital survey. This study suggests that medical professionals defends physical therapist orders for multiple musculoskeletal situations in emergency triads, indicating that direct patient care to emergency physical therapists could be deemed for such conditions [27].

Zainab Al. Mohammedali et al. organized a cross sectional study in 2016 to find respiratory physiotherapy's emerging role. Profile of nurses and doctors perceptions in Saudi Arabia was taken. Sample size was 284 and study conducted via 23 items questionnaire. According to doctors and nurses of S.A, Respiratory Physiotherapy was positively regarded and this highlight the need and importance of physiotherapy role in respiratory care [28].

Karen Hurtubise et al. conducted a study in 2016 to find a design, framework and assessment of an orthopedic monitoring clinic for children with CP. It was an experimental study where clinic models formed and performed Results shows that physiotherapists led orthopedic monitoring clinic models provides. Kids with CP and their parents with increased access to health care without altering the quality of healthcare perceived [29].

Darren marks et al conducted a comparative study in 2017 to find Substitution of doctors with physiotherapists in the management of common musculoskeletal disorders. The aim of this study was to determine the impact of replacing doctors with physiotherapists in the management of common musculoskeletal disorders on patients and health

services.14 trials conducted. Results were unclear about Physiotherapists provide a professional alternative to doctors for musculoskeletal disorder [30].

## **OBJECTIVE**

To determine the opinions, attitudes and experiences of orthopedic consultants towards Physical Therapy services and to identify the factors affecting the extent of utilization of physiotherapy services in Lahore.

### ***Rationale***

Physiotherapy is a rapidly growing and well known healthcare profession in public. As awareness increases among the public about physiotherapy patients prefer exercises over medicines and surgery, which has direct influence in the declining of patient visits to orthopedic consultants as well as the referral rates .This study will help us to determine the opinions, beliefs and attitudes of orthopedic consultants regarding physical therapy services and will highlight the associated factors which may affect the extension of use of physiotherapy services .After this study, we will be able to know consultants reviews about referring patients to physiotherapist.

### ***Operational Definition***

#### **Validity**

The internal consistency yields a value of 0.698.

#### **Reliability**

It was as divided in three parts:

Attitudes towards physiotherapy services: 0.887

Factors that may affect the extent of use of PT services:  
0.529

Opinions and experiences towards PT services: 0.678

## **MATERIAL AND METHODS**

### ***Study design***

Descriptive Cross sectional

### ***Study duration***

This study was completed in 6 months.

### ***Settings***

Research included orthopedic consultants in private and government hospitals in Lahore, Pakistan.

### ***Sample Size***

Sample size was 162

### ***Sampling technique***

Convenient sampling technique

### ***Eligibility criteria***

#### ***Inclusion criteria***

Participants were orthopedic consultants working in private and government sector in Lahore with both genders having more than five years of experience.

#### ***Exclusion criteria***

Internee students and Postgraduate residents were excluded.

### ***Data Collection Tool***

The following material included in seven questions to investigate demographic data: personal data, ethnicity, gender, workplace and expertise. A questionnaire has 3 parts:

First one contains perceptions towards physiotherapy services: Likert scale with seven items ranging from strongly disagreeing (1) to strongly agree to ascertain orthopedic consultants ' attitudes towards physiotherapy services in Lahore.

Physiotherapy experiences and opinions, including seven items with two answers to each question, yes or no. Factors related to the extension of use of physiotherapy services which includes five items regarding possible factors that may affect PT services in Lahore with three answer options

(1) Yes, (2) no, (3) unsure.

**Data collection procedure**

The study population was selected according to the inclusion criteria. Informed consent was taken before taking data. The rationale of the study was elaborated to orthopedic practitioners and detailed information of questionnaire was given. Major part of the data were collected by visiting orthopedic departments of government and private hospitals and remaining data was

collected by online Google forms which were e-mailed/WhatsApp to practitioners.

**Statistical Analysis**

Data was analyzed by SPSS version 22 quantitative variables were calculated through frequency and percentage qualitative variables were calculated through mean and standard variation.

**RESULTS**

Age	Minimum	Maximum	Mean	SD
	24	65	32.5	8.4

**Table 1:** Age.

Variable		Frequency n=165	Percentage
<b>Gender</b>	Male	147	89.1
	Female	18	10.9
<b>Work Setting</b>	Government	82	49.7
	Private	83	50.3
<b>Work Experience</b>	1 - 5 years	40	24.2
	6 - 10 years	57	34.5
	11 - 15 years	46	27.9
	16 - 20 years	22	13.3

**Table 2:** Socio-demographic profile.

A total of 165 orthopedic consultants participated in the study. The mean age of participants was 32.5 ± 8.4. Out of

total, 147 were males and 18 were females. Participants were selected both from government and private settings.

Attitude	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Physiotherapy services have a vital role in secondary care	70(42.4%)	70(42.4%)	15(9.1%)	1(0.6%)	8(4.8%)
Physiotherapists have no experience of human anatomy	4(2.4%)	35(21.2%)	40(24.2%)	64(38.8%)	22(13.3%)
Patients have the right to direct access to physiotherapists without referral	16(9.7%)	56(33.9%)	29(17.6%)	40(24.2%)	24(14.5%)
Physiotherapists can independently prescribe rehabilitation or exercise programs for patients	18(10.9%)	74(44.8%)	14(8.5%)	40(24.2%)	19(11.5%)
Physiotherapists are well-qualified and can be trusted to provide care to patients	21(12.7%)	72(43.6%)	24(14.5%)	44(26.7%)	3(1.8%)
Physiotherapists can effectively reassess patients for further investigation when necessary	10(6.1%)	56(33.9%)	44(26.7%)	47(28.5%)	8(4.8%)
Physiotherapists should be allowed to attend some surgical procedures	16(9.7%)	24(14.5%)	43(26.1%)	19(11.5%)	63(38.2%)

**Table 3:** Opinion and Experiences.

**In response to question no.1**

70(42.4%) participants responded strongly agree, 70(42.4%) were agree, 15(9.1%) were neutral, 1(0.6%)

were disagree, and 8(4.8%) were strongly disagree.

**In response to question no.2**

4(2.4%) participants responded strongly agree, 35(21.2%) were agree, 40(24.2%) were neutral, 64(38.8%) were disagree, and 22(13.3%) were strongly disagree.

**In response to question no.3**

16(9.7%) participants responded strongly agree, 56(33.9%) were agree, 29(17.6%) were neutral, 40(24.2%) were disagree, and 24(14.5%) were strongly disagree.

**In response to question no.4**

18(10.9%) participants responded strongly agree, 74(44.8%) were agree, 14(8.5%) were neutral, 40(24.2%) were disagree, and 19(11.5%) were strongly disagree.

**In response to question no 5**

21(12.7%) participants responded strongly agree, 72(43.6%) were agree, 24(14.5%) were neutral, 44(26.7%) were disagree, and 3(1.8%) were strongly disagree.

**In response to question no 6**

10(6.1%) participants responded strongly agree, 56(33.9%) were agree, 44(26.7%) were neutral, 47(28.5%) were disagree, and 8(4.8%) were strongly disagree.

<b>Opinion and Experience</b>	<b>Yes</b>	<b>No</b>
1. Have you worked with a physiotherapy or rehabilitation team?	132(80%)	33(20%)
2. Have you discussed the need for physiotherapy interventions with your colleagues?	131(79.4%)	34(20.6%)
3. Are you confident enough to refer your patients to a physiotherapist?	137(83%)	28(17%)
4. Have you communicated with a physiotherapist regarding a patient's care?	146(88.5%)	17(10.3%)
5. Do you think physiotherapists create a good awareness about physiotherapy services?	121(73.3%)	43(26.1%)
6. Do you have enough information about physiotherapy services?	112(67.9%)	52(31.5%)
7. Would you like to know more about physiotherapy services?	139(84.2%)	24(14.5%)

**Table 1:** Opinion and experience.

<b>Factors</b>	<b>Yes</b>	<b>No</b>	<b>Unsure</b>
1. The health status of my patients worsened when physiotherapy interventions were used	34(20.6%)	120(72.7%)	10(6.1%)
2. The lack of physiotherapist's skills and knowledge to assess and treat patients	123(74.5%)	37(22.4%)	1(0.6%)
3. I have limited knowledge regarding the types of physiotherapy services that can be provided	92(55.8%)	69(41.8%)	0(0%)
4. There is no cooperation between me and the physiotherapist	65(39.4%)	97(58.8%)	0(0%)
5. Hospital policy prohibits the use of physiotherapy services in certain conditions	42(25.5%)	98(59.4%)	21(12.7%)

**Table 4:** Factors Affecting the Extent of Utilization of Physiotherapy Services Among Orthopedic.

**In response to question no. 7**

16(9.7%) participants responded strongly agree, 24(14.5%) were agree, 43(26.1%) were neutral, 19(11.5%) were disagree, and 63(38.2%) were strongly disagree.

Out of total 132 (80%) participants responded yes to question no.1.Out of total 131 (79.4%) participants responded yes to question no. 2. Out of total 137 (83%) participants responded yes to question no. 3. Out of total 146 (88.5%) participants responded yes to question no. 4.

Out of total 121 (73.3%) participants responded yes to question no. 5.

Out of total 112(67.9%) participants responded yes to question no.6.Out of total 139 (84.2%) participants responded yes to question no. 7.

Out of total 165 participants which respond to question no.1: 34(20.6%) think that health status worsened after physiotherapy session. 123(74.5%) think that physiotherapist's skills and knowledge is not enough to assess and treat patients. 92(55.8%) think that, they have limited knowledge regarding physiotherapy services that

can be provided. 65(39.4%) think that “There is no cooperation between them and the physiotherapist”. 42(25.5%) think that, “Hospital policy prohibits the use of physiotherapy services in certain conditions”.

## **DISCUSSION**

Physiotherapy is a rapidly growing field in Pakistan. Like every developing field medical professionals, especially orthopedic consultants have diversity in their attitudes, opinions and knowledge regarding physiotherapy services which is effecting extent of utilization of physiotherapy services in Lahore. The recent study was obtained to find Orthopedics attitudes towards physiotherapy services, Orthopedics opinions and experiences towards physiotherapy services and potential factors that may affect the extent of utilization of physiotherapy services (based on Orthopedics beliefs) in Lahore. The study found that orthopedic consultants’ attitudes towards the physiotherapy profession was relatively low. Furthermore, this study highlight quite noticeable factor which may have negatively impacted on the extent of utilization of physiotherapy services.

The present research found that orthopedic consultants attitude towards physiotherapy services in Lahore as results showed that 84.4% respondents agreed on the importance of physiotherapy services in secondary care and 44.7% orthopedics agreed on direct access to a physiotherapist without referral. A similar study conducted by Alperin and Laufer et al. indicated that doctors accept their role in secondary care but they did not accept direct access without referral or guidance by doctors [31]. Britain and Americans are enjoying autonomous practice without physicians’ referrals [32].

56.8% agreed that physiotherapists can independently prescribe a rehabilitation program for patients and 58.6% felt that physiotherapists are trusted to provide care to patients as they are well qualified whereas in a previous study by Mansour Alsehri et al physicians behavior for

physiotherapy services in Saudi arabia was merely low. In another study by Al Mohammed Ali et al. found that physicians had positive attitudes regarding respiratory physiotherapy in SA, which indicate that physiotherapy as team work is more acceptable by physicians than individual practice. In contrast Vargehese and Kutty who found that 47.5% of medical doctors had negative perceptions for the role of physiotherapists and also reported that medical officers aged from 27 to 45 years were having negative beliefs compared to young doctors aged 22-26 years [2].

83% participants said yes in response to referring patients confidently to physiotherapists but they are not well aware of the physiotherapy services as only 67.9% respond yes to this question and 73.3% think that physiotherapist create awareness about their services and 84.3% think they would be happy to know more about physiotherapy services which is quite good than previous studies as Mansur alsehari et al. that shows that half of the respondents think that physiotherapists did not create a reasonable awareness and advertisement about physiotherapy services [23]. jonas and Karthikeyan studies showed same results as 96% of their respondents thought the same way as they would be pleased to know more about physiotherapy services [33].

In contrast Odunaiya et.al comes out with the same point that lack of knowledge about physiotherapy services also impacted negative effect towards referral system as physicians are not well aware of the services provided by physiotherapist [34].

The latest research identified several potential factors that restrict the use of physiotherapy services by orthopedic consultants as the most prominent and highlighted factor is the lack of skills and knowledge to evaluate and treat patients as the results showed that 74.5 percent of respondents said yes to this issue, followed by limited knowledge of the types of physiotherapy services at 55.8%

agreed on it that lack of cooperation between orthopedics and physiotherapist is shown by 39.5 respondents.

In similar studies by Mansur alsehari et.al stated same Potential factors stated by clinicians were the lack of physiotherapist skills and knowledge to evaluate and treat patients 55.3%, driven by insufficient practitioner knowledge of the types of physiotherapy services 44.5% and lack of physiotherapist collaboration 40.7%.

### **CONCLUSION**

Many factors were affecting the extent of utilization of physiotherapy services among orthopedic consultants, but the most prominent factor was that consultants think that physiotherapists have a lack of skills and knowledge to assess and treat patients.

### **LIMITATIONS OF THE STUDY**

1. Small sample size.
2. Lack of cooperation by study population.

### **RECOMMENDATIONS**

1. There is need to change the negative attitude of orthopedic consultants by giving proper understanding and awareness of physiotherapy services by physiotherapists.
2. It is responsibility of every single physiotherapist to ensure evidence base practice and create awareness among doctors and the general public.
3. In addition, further research is recommended on barriers of cooperation and communication among orthopedic consultants and physiotherapist.

### **DECLARATION**

We acknowledge the support of our parents and teachers. Both authors made similar contributions to the study. The research received no financial assistance or funding. There are no conflicts of interest or any ethical issues. Informed consent was taken from all participants and data were collected pro forma. Anonymity was protected throughout.

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