ORIGINAL ARTICLE

Patient-perceived Barriers to Rehabilitation at Physical Therapy Clinics: A Qualitative Insight

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Abstract

Objective: This study was conducted to investigate patients perceived barriers to rehabilitation. **Methods:** A qualitative study was designed using grounded theory and inductive approach that included a semi-structured interview checklist concerning patients' perceived barriers to physical therapy service. The transcript was analyzed using ATLAS.ti software and a thematic analysis was conducted. Codes were generated and analyzed by semantic linkages and network analysis. **Results:** A total of five themes were identified from qualitative analysis, namely, "treatment results pain," "out-of-pocket expenditure," "low perceived value for money," "unavailability of caregiver," and "unavailability of the therapist." **Conclusion:** Apart from the barriers identified, a novel finding was the perception of intergender treatment as a barrier by female patients. This phenomenon not only has social implications that may contribute adversely to clinical goals for that patient.

Key words: Perception, physical therapy, physiotherapy, qualitative, treatment barriers

INTRODUCTION

Physical therapy is a type of treatment prescribed to patients suffering from diseases that hamper their mobility. It is a type of care that focuses on preventing disability, improving mobility, strengthening muscles, and reducing pain which may improve the quality of life of the patient.[1] Adherence to rehabilitation results in swift recovery. Evidence indicates that patients who strictly adherence to their physical therapy rehabilitation attain their treatment goals better than their non-adherent counterparts.[2,3] Studies have identified rehabilitation adherence as the single most important determinant in achieving treatment outcomes.[4,5]

According to the World Health Organization (WHO),[3] adherence to treatment is the extent to which a patient's behavior corresponds to the recommended treatment.[3-5] Patient behavior may be influenced by certain determinants. In literature, several factors are evident that had determined rehabilitation adherence.[6] These factors may either promote adherence or present as potential barriers to rehabilitation. Several studies have identified out-of-pocket expenditures, appointment times, availability of therapist, and transportation as potential barriers to rehabilitation.[1,3,6]

Musculoskeletal diseases are a leading cause of disability in the world.[7] Studies rank osteoarthritis, gout, and rheumatoid arthritis as the most common causes of disability worldwide.[8,9] More than 50% of the patients in the USA suffering from disease-related disabilities are linked to musculoskeletal conditions.[8,9] Pakistan is located in South Asia with a population of over 200 million and literature indicates that 75% of patients utilize private healthcare services and pay direct medical costs.[10-12]

A study by Naqvi *et al*. reported that patients who attended poliomyelitis rehabilitation perceived financial issues, exhaustive

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treatment attendance, and unavailability of the therapist, as barriers to rehabilitation.[13] Apart from this study, there is a dearth of literature that reports barriers to rehabilitation adherence among Pakistani patients. This study was conducted in Pakistani patients attending physical therapy clinics to investigate qualitatively, the potential barriers to rehabilitation as perceived by patients.

METHODS

Purpose

The purpose of this study was to identify barriers to physical therapy service among patients attending physical therapy clinics.

Venue and duration

A descriptive study was conducted at a hospital in Karachi, Pakistan, in April 2018–June 2018. The study was conducted every day except Sunday (weekend), in the morning time from 10 am to 2 pm and in the evening hours from 5 pm to 9:30 pm.

Design

A qualitative study was designed using grounded theory and an inductive approach that included a semi-structured interview checklist concerning patients' perceived barriers to physical therapy service. The reason to employ a qualitative design was to extract possible barriers to physical therapy services that may not be extracted satisfactorily in other designs. The study was designed as per consolidated criteria for reporting qualitative (COREQ) research guideline.[7]

Participants

Male and female patients of any age who were suffering from any musculoskeletal ailment and were attending physical therapy services at the clinic were invited to participate. Patients who were undergoing post-surgery physical therapy were also included in the stud. Those patients who were attending physical therapy clinic following accident and trauma were also invited. Patients who were not attending physical therapy service currently were excluded from the study. Those who did not consent to participate were also not included in the study.

Sampling strategy and sample size

The patients were enrolled randomly using their appointment token number. Every patient with an even number was invited to participate. The sequence was changed the next day, that is, odd-numbered patients were invited to participate. This strategy ensured a randomized selection and eliminated bias.

Interviewers

The interviewer was a male pharmacist and a female physical therapist, with a bachelor's degree and a minimum of 1 year work experience.

Interview checklist

The interview checklist contained questions related to patient's demographic information, namely, age, educational and employment status, and monthly family income. The checklist also contained questions relating to medical information such as presenting complaints and medical insurance coverage as well as a probing question of the perceived barrier to physical therapy service.

Interview process

The interview was conducted face to face and in the physical therapy consultation room for confidentiality and clarity of the recording. The average duration of the interview was around 6 min. An audiorecorder was used to record the interview. The recording was transcribed verbatim, rechecked for any error using simultaneous audio playing and the final transcript was shown to the patients.

Translation process

After Urdu validation, the transcripts were translated into the English language by two independent researchers with experience in rehabilitation services and teaching. The translation was conducted using standard guidelines for translation. The draft was then subjected to peer review by two academic professors. The final English transcript was analyzed line by line by two researchers. At this step, the English transcript was deemed validated.

Data integrity and credibility

To improve data integrity and credibility, a team of independent researchers analyzed the data and a third researcher acted as a peer reviewer to confirm the accuracy of the analysis. Verbatim quotes were translated into English and were reported to support the themes that emerged.

Data analyses

The English transcript was analyzed using ATLAS.ti Scientific Software Development GmbH, version 8.1.29.0 and a thematic analysis was conducted.[14] Codes were generated and analyzed by semantic linkages and network analysis. Descriptive statistics were performed using the Statistical Package for the Social Sciences (SPSS) version 24.0. Means and standard deviations were calculated for continuous

variables, whereas the frequencies and percentages were determined for the categorical variables.

Ethics approval and consent

The study was approved by the concerned hospital in Karachi under approval no. CH-03-18. All participants were briefed about the objectives of the study and written consent was obtained.

RESULTS

Of the total of 396 patients, male patients were 116 (29.3%) and females were 280 (70.7%). Around one-third of the patients, 124 (31.3%) were employed and more than half of patients, 212 (53.5%) had a monthly family income of more than PKR 50,000. Most of the patients, 320 (80.8%) had no insurance coverage. A quarter of patients suffered from arthralgia and other painful conditions. The participant information is tabulated in Table 1.

Patients highlighted a variety of barriers to adhere to physical therapy. The most frequently mentioned barrier was treatment resulted in pain (47.61%) followed by exhaustive treatment attendance (29.27%) and delayed results (6.51%) [Figure 1]. Qualitative analysis revealed several themes acting as barriers to physical therapy.

Theme 1: Pain associated with therapy

The first theme identified was the treatment resulted in pain as most patients (47.6%) mentioned this as a barrier alone or in

Table 1: Participants' information

Variables	Sample (*n*)	Percentage (%)
Age group		
Adolescents (up to 18 years)	28	7.1
Adults (up to 65 years)	340	85.9
Geriatrics (above 65 years)	28	7.1
Gender		
Male	116	29.3
Female	280	70.7
Employment		
Employed	124	31.3
Unemployed	80	20.2
Household	160	40.4
Retired	32	8.1
Monthly family income		
<10,000 PKR (USD 81.4)	16	4
10,001–25,000 PKR (USD 203.6)	44	11.1
25,001–50,000 PKR (USD 407.2)	124	31.3
>50,000 PKR (USD 407.2)	212	53.5
Insurance coverage		
Full coverage	52	13.1
Partial coverage	24	6.1
No insurance coverage	320	80.8
Illness categories		
Arthralgia and other painful conditions	104	26.3
Chronic inflammatory musculoskeletal disorders	60	15.2
Accident, trauma, bone fracture, and post-surgery therapy	28	7.1
Sciatica, nerve compression, spasms, and sprains	76	19.2
Carpel tunnel syndrome, adhesive capsulitis, and tendonitis	92	23.2
Kyphosis and scoliosis	8	2
Disability related to primary illness (stroke and epilepsy)	28	7.1

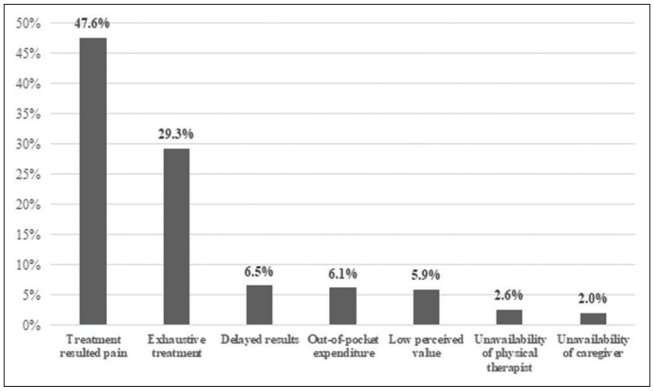

Figure 1: Percentage coverage of patient-perceived barriers to rehabilitation adherence

combination with others. It was also associated with another barrier, that is, an exhaustive treatment that was mentioned as a barrier by almost a third (29.3%) of participants. Some quotes from patients are presented below:

"I feel stressed in a session of exercise and, feel low too, it is hard to stay up in long sessions." (F 19).

"Very strenuous exercise, daily visits are difficult." (M 21).

Theme 2: Out-of-pocket expenditure

The second theme identified was the out-of-pocket expenditures as some patients (6.1%) reported the direct costs attributed to physical therapy as a barrier. Some exemplary quotes from patients are presented below:

"It is a very costly treatment, time consuming and painful." (F 34)

"Expensive therapy, daily visits, painful session. I cannot bear the expense." (M 49)

"It is a very expensive treatment and, is difficult to adhere to it." (M 51).

Theme 3: Low perceived value for money

Some patients (5.9%) identified low perceived value for money as a barrier to physical therapy. This was also associated with another barrier, that is, delayed treatment results. It was mentioned by 6.5% of patients as a sole barrier and in combination with others. Some quotes from patients are presented below:

I had multiple appointments, still no results. Its total waste of money!" (F 23)

(It is quite painful, very expensive without any outcomes.) (M 18)

(Zero motivation to undergo costly exercises that are pain and with the delayed result.) (M 87).

Theme 4: Unavailability of the therapist

Few female patients (2.6%) perceived the unavailability of female physical therapists as a barrier to undergoing physical therapy. Some quotes are presented below:

(Female patients should not be seen by a male therapist, the female patients must be attended by female staff only, it is difficult to find female staff! There are no female physical therapists available. I cannot accept a male therapist). F (104)

(I do not attend my session if the female therapist is busy or not available. I find it very uncomfortable to be touched by a male therapist). F (230)

Theme 5: Unavailability of caregiver

Unavailability of caregiver was mentioned as a barrier to attending physical therapy by a few patients (2%). Some quotes from patients are presented below:

(Daily visits to the clinic sometimes get hectic and difficulty if there is no one to take me there. I sometimes miss my session due to this reason.) (F 55)

(I must wait for my father or brother to take me to the clinic. Sometimes, they are late from work and are too tired due to which I miss my session) (F 91)

The quotations were coded. A total of 196 quotations were coded as "treatment resulted in pain" and 116 were coded as "exhaustive treatment attendance." Twenty-six quotations were coded as "delayed results" and 24 as "out-of-pocket expenditures." Twenty-three quotations were coded as "low perceived value for money" while 10 were coded as "unavailability of caregiver." Eight quotations were coded as "unavailability of caregiver." The number of quotations exceeds the total number as the quotations had a combination of barriers coded [Figure 2].

DISCUSSION

Adherence to physical therapy is important to ensure timely recovery from diseases that reduce a patient's mobility. Studies have reported that appropriate and timely physical therapy improves patient's mobility, quality of life, and post-treatment recovery as well as prevented disease-associated disability.[13-16] We interviewed a large sample of patients with several musculoskeletal conditions. Our study adhered to the COREQ guidelines for reporting qualitative research. The results highlighted that almost similar barriers were perceived by patients with several musculoskeletal conditions. These were the strengths of our study.

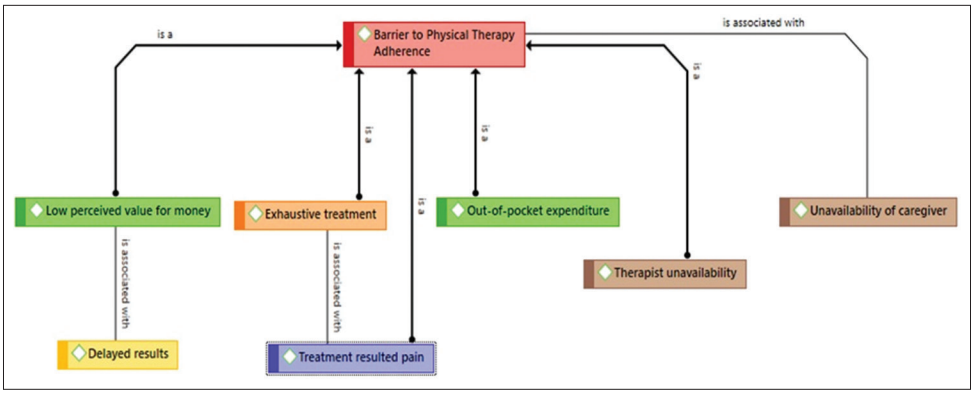

Figure 2: Semantic linkages of the studied codes

The patient mentioned post-treatment pain as a major barrier to treatment. This is in line with the findings that pain resulted from physical therapy may be perceived as a barrier.[17] Studies highlight the importance of counseling patients to prevent abstaining from treatment due to pain.[17,18] Understanding of the patient's pain perception, beliefs and experiences are important as therapists have to provide patient-centered advice and counseling to reinforce the importance of therapy and minimize the fear or anxiety of pain for the greater goal of achieving a health outcome.[19,20] Patients could be advised to initiate a treatment gently and gradually increasing the intensity of exercise with treatment progression.[1,3] Apart from cognitive approach, that is, advice and counseling, the treatment resulted in pain could be managed using over-the-counter analgesics, ice and heat compress treatments and massage therapy, that would ease painful condition.[21-23]

Out-of-pocket expenditure was also mentioned as a barrier to physical therapy by patients. It is defined by the WHO as the direct cost paid by the patients to the health-care institution for the use of health services.[24] Both developed and developing countries require these costs to sustain their health-care systems. Pakistan's health-care spending is roughly USD 36.8 which is very low and a third of patients rely on private health-care services.[11,12] Most patients bear out-of-pocket expenditure as the cost of treatment. Naqvi *et al.* reported out-of-pocket expenditures as a barrier to physical therapy in poliomyelitis patients.[13] The direct cost attributed to physical therapy for a disabling disease such as poliomyelitis over USD 11,000. Paying such a high cost of treatment becomes very difficult for patients with a nominal income.[12]

The unavailability of female physical therapists was mentioned by female patients as a barrier. This was previously reported by Naqvi *et al*. from the caregivers of poliomyelitis patients as well as physical therapists in Pakistan.[13] The treatment of female patients by male physical therapists may be perceived as provocative and uncomfortable by some females considering the societal norms and culture.[13] Patients in our study also reported the unavailability of the caregiver as a barrier to undergoing physical therapy. Social support, family needs, and transportation often act as barriers to physical therapy.[6,20] There is also a need to be informed of the patients' difficulties in adhering to their treatment and devise patient-centered strategy such as flexible schedule, engaging other patients with similar therapy together for social support, and arranging a home visit to overcome these problems.[19-21,25]

CONCLUSION

The most common barrier to undergo physical therapy was post-treatment pain and suffering. Delayed results also contributed to the former and acted as a sole barrier. Out-of-pocket expenditure, low perceived value for money, and exhaustive treatment attendance were also identified as barriers. A novel finding was the perception of intergender treatment as a barrier by female patients. This phenomenon not only has social implications that may contribute adversely to clinical goals for that patient.

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