

Research Article

Frequency of Follow-Up Visits Among Adult Patients Receiving Outpatient Physiotherapy for Musculoskeletal Conditions: A Cross-Sectional Survey

Nimra Azhar^{a*}, Maryam Maqsood^b

Abstract

Background:

Follow-up visits in physical therapy are crucial for tracking progress and modifying treatment plans as necessary. They usually occur post-initial therapy or upon achieving substantial treatment milestones.

Objective:

To determine the frequency of follow-up visits among adult patients receiving outpatient physiotherapy for musculoskeletal conditions.

Methodology:

The study employed convenience sampling with a sample size of 190 determined via the epi tool. A questionnaire comprising 43 questions across seven sections was utilized to explore adherence to prescribed exercise, barriers, and motivators. The questionnaire, derived from existing literature, featured both open-ended and closed-ended queries. Data collection involved distributing printed questionnaires, with interpreters available for Punjabi and Urdu speakers. Patient confidentiality was strictly maintained. Data analysis utilized SPSS 25.0, employing t-tests and chi-square tests to compare baseline characteristics and differences between groups. Ethical approval was obtained, and informed consent was secured from all participants.

Conclusion:

Study findings indicated a predominance of middle-aged female patients, mostly from urban middle-class backgrounds. Most patients reported fulfilled therapy expectations, with musculoskeletal diagnoses prevalent. A majority expressed intent to continue physiotherapy and recommend it for similar issues.

Keywords: Follow-up visits, adult patients, musculoskeletal Disorder

^{a*}Lecturer Physical Therapy, Yashfeen College Of AHS, Yashfeen Education system, Lahore, Pakistan.

^bLecturer Physical Therapy, Lahore Institute of professional studies, Lahore, Pakistan.

Corresponding author:

Nimra Azhar

Email Address: Nimra.azhar@yes.edu.pk

Date of Submission: 10-01-2023

Revised: 14-02-2023

Accepted: 24-02-2023

INTRODUCTION

Physical therapy follow-up visits are important for monitoring a patient's progress and adjusting treatment plans as needed. These visits typically occur after a patient has completed an initial round of physical therapy or has made significant progress towards their treatment goals (Geerdink et al., 2022). During a follow-up visit, the physical therapist will review the patient's medical records and assess their current condition through a physical exam and interview. Based on this assessment, the therapist may adjust the patient's treatment plan to better meet their needs (Kelly et al., 2022).

Follow-up visits may be necessary for a variety of reasons. For example, patients who have undergone initial physical therapy sessions may benefit from follow-up visits to ensure that their treatment plan is working as expected (Amjad et al., 2022), (Amorese et al., 2022). Patients who are at a high risk of another injury or long-term disability may also benefit from follow-up visits, as physical therapy can help increase range of motion, endurance, and flexibility, but does not guarantee that the same area will not be injured again or that full function will be restored. Follow-up visits can also be helpful for referred patients, as they provide an opportunity for the physical therapist to assess the patient's progress and make any necessary adjustments to the treatment plan (Beresford et al., 2022), (Beresford et al., 2022). During a physical therapy follow-up, the therapist may suggest new techniques or tools to be used during treatment. For example, they may recommend the use of certain exercises or stretches to help the patient improve their strength and flexibility. They may also recommend the use of assistive devices, such as crutches or a cane, to help the patient navigate their daily activities more easily. In some cases, the therapist may also suggest a change in the patient's treatment setting, such as transitioning from inpatient to outpatient care (Cheng et al., 2022), (Cheung et al., 2022).

In general, physical therapy follow-up visits are shorter than initial evaluations, and may last anywhere from 30 minutes to an hour. The frequency of these visits will depend on the patient's individual needs and progress. Some patients may need more frequent follow-up visits, while others may be able to go longer periods of time between visits (Curi et al., 2022), (Dahlerup et al., 2022). Overall, physical therapy follow-up visits are an important part of the treatment process, as they help ensure that the patient is receiving the most effective care possible and making progress towards their treatment goals.

There is evidence to support the importance of physical therapy follow-up visits for monitoring a patient's progress and adjusting treatment plans (Dupuis et al., 2022), (Ekediegwa et al., 2022). A systematic review of the literature published in the *Journal of Orthopaedic & Sports Physical Therapy* found that follow-up visits are an important component of physical therapy care and can help improve patient outcomes. The authors of the review concluded that "follow-up visits are necessary for the therapist to assess patient progress, provide education, and make necessary adjustments to the treatment plan (Gagnon et al., 2023), (Hall et al., 2022).

Another study published in the *Journal of Physical Therapy Science* found that follow-up visits can help improve patient compliance with treatment and lead to better outcomes. The authors of the study found that patients who received follow-up visits had a higher rate of adherence to their treatment plan compared to those who did not receive follow-up visits (Marques et al., 2022), (Muluneh et al., 2022).

In addition, research has shown that physical therapy follow-up visits can be beneficial for patients who are at a high risk of another injury or long-term disability. A study published in the *Journal of Orthopaedic & Sports Physical Therapy* found that follow-up visits were associated with a reduced risk of re-injury in patients with ankle sprains (Pazukhina et al., 2022), (Richter et al., 2022). Another study published in the *Journal of Orthopaedic & Sports Physical Therapy* found that follow-up visits were associated with improved outcomes for patients with knee osteoarthritis (Room et al., 2023), (Sobczyk et al., 2022).

Overall, the evidence suggests that physical therapy follow-up visits are important for monitoring a patient's progress, adjusting treatment plans, and improving patient outcomes. The rationale for conducting a study on the frequency of follow-up visits among adult patients receiving outpatient physiotherapy for musculoskeletal conditions is to better understand patterns of care in this population and identify potential barriers to receiving necessary treatment.

Musculoskeletal conditions, such as low back pain, osteoarthritis, and neck pain, are among the leading causes of disability worldwide. Physiotherapy is a commonly used form of treatment for these conditions, and follow-up visits with a physiotherapist are often necessary to monitor progress and adjust treatment plans. However, the frequency of follow-up visits among patients receiving physiotherapy in an outpatient setting is not well understood (Subialka et al., 2022), (Takami et al., 2022).

Understanding the patterns of follow-up visits in this population may inform recommendations for optimal physiotherapy care and help identify potential barriers to receiving necessary treatment. For example, if follow-up visits are found to be infrequent, it may suggest that patients are not fully engaging in their treatment or are experiencing barriers to accessing care. On the other hand, if follow-up visits are found to be frequent, it may suggest that patients are receiving more care than is necessary or that they are experiencing complications that require additional attention.

In addition, examining the relationship between patient demographics and clinical characteristics and follow-up visit frequency may provide insights into potential disparities in care. For example, if certain subgroups of patients (e.g., those of a certain age or with certain comorbidities) are found to have lower rates of follow-up visits, this may suggest the need for targeted interventions to improve access to care (Weise et al., 2022), (Yang et al., 2022).

Overall, a study on the frequency of follow-up visits among adult patients receiving outpatient physiotherapy for musculoskeletal conditions has the potential to inform the development of more effective treatment strategies and address any potential disparities in care.

The study was a cross-sectional survey that was completed in four months. It was conducted in both public and private clinical settings that offered outdoor physiotherapy services. The target population for the study was the general population that had been discharged from physical therapy outpatient care in the previous three years. The inclusion criteria for the study were patients of either gender aged 45 or older who had completed a physical supervised-therapist assessment. The exclusion criteria were patients with cognitive impairments, a history of trauma or fracture, or those who were not willing to participate or sign a consent (Kahere et al., 2022).

METHODOLOGY

The sampling technique for the study was convenience sampling, and the sample size was estimated to be 240 using the epi tool. A questionnaire was used as the data collection tool, which consisted of 43 questions divided into seven parts to determine follow-up to prescribed exercise programs, barriers, and motivators. The questionnaire included both open-ended and closed-ended questions and had been adopted from previous literature.

Data was collected through hands-out questionnaires and a Punjabi and Urdu interpreter was present to help explain questions and collect responses. Patient information was kept confidential and was only used for research-related processing without disclosing personal identity. Data was analysed using the Statistical Package for Social Sciences (SPSS 25.0). T-tests and chi-square tests were applied to analyse baseline characteristics and to assess statistical differences between two groups. The study was approved by the ethical board and informed consent forms were obtained from participating patients.

RESULTS

Table 1 Study Variables

Variable	Mean	Std Deviation
Distance from Physiotherapy Setup	14.27	6.21
Current Number of Visit	6.13	6.03
Intensity of today's completion rehabilitation exercises	4.12	.74
Today's appointment, frequency of patient following instructions/ advice	3.54	.713
Receptiveness of patient to changes in rehabilitation	3.83	.70

The results of the study indicated that the mean distance from the physiotherapy setup was 14.27 ± 6.21 . The mean number of visits was 6.13 ± 6.03 . The intensity of the rehabilitation exercises completed today had a mean of 4.12 ± 0.747 . The mean rating for today's appointment, frequency of following instructions/advice, and receptiveness to changes in rehabilitation was 3.54 ± 0.7132 , 3.83 ± 0.706 , and 3.54 ± 0.7132 , respectively. (Table 1)

Table 2 Demographics

Gender	Frequency	Percent
Male	73	30.4
Female	167	69.6
Age		
41-50 years	132	55.0
51-60 years	108	45.0
Socioeconomic Status		
Upper Class	34	14.2

Middle Class	161	67.1
Lower Class	45	18.8
Residence		
Rural	56	23.3
Urban	184	76.7
Therapy Expectations fulfilled		
Agree	211	87.9
May be	29	12.1
Improvements		
Restored	124	51.7
Improved	86	35.8
Same	25	10.4
Deteriorated	5	2.1
Diagnosis		
MSK	196	81.7
Neurology	20	8.3
Others	24	10.0
Continue therapy session		
Yes	133	55.4
May be	82	34.2
No	25	10.4
Recommend Physiotherapy for your type of problem		
Yes	192	80.0
May be	48	20.0

The results of the study showed that the majority of the patients were female (69.6%) and between the ages of 41-50 (55.0%). The majority of the patients were also middle class (67.1%), lived in urban areas (76.7%), and were diagnosed with musculoskeletal issues (81.7%). A majority of the patients had their therapy expectations fulfilled (51.7%), and the majority said they would continue therapy sessions (55.4%) or recommend physiotherapy for their type of problem (80.0%). There were a small percentage of patients who experienced deterioration in their condition (2.1%) or were unsure about continuing therapy sessions (34.2%) or recommending physiotherapy (20.0%) (Table 2).

DISCUSSION

The results showed that distance from the physiotherapy setup has a mean of 14.27 and a standard deviation of 6.21. The current number of visits has a mean of 6.13 and a standard deviation of 6.032. The intensity of today's completed rehabilitation exercises has a mean of 4.12 and a standard deviation of .74. Today's appointment, frequency of patient following instructions/advice has a mean of 3.54 and a standard deviation of .71. Receptiveness of the patient to changes in rehabilitation has a mean of 3.83 and a standard deviation of .70. These

results suggest that there may be some variability in the distance patients are from the physiotherapy setup, the number of visits they have had, the intensity of their rehabilitation exercises, the frequency with which they follow instructions and advice, and their receptiveness to changes in their rehabilitation. It is possible that these factors could be related to the effectiveness of physiotherapy treatment and may be worth considering when developing treatment plans for patients. Further research would be needed to confirm any potential relationships and to identify potential strategies for addressing any issues that may arise (Gagnon et al., 2023). There is evidence that therapists would prefer to seek informal advice from peers or treat themselves rather than undergo formal examination (Barrett et al., 2013). Only a few therapists were laid off from this group. In reaction to physical therapists did not seem to seek therapy, take time off work, or seek assessment. There is a probability that this behaviour is influenced by cultural influences (Trede et al., 2012). A discussion of the professional culture, which places such a high emphasis on devotion and excellent health that it may be too humiliating for a physical therapist to disclose symptoms, seek aid, or take time off work, might be one approach. A relationship was discovered between ageing and workplace musculoskeletal problems (Thomson et al., 2010). As physical therapists become older, there is a greater demand for solutions that would enable them to continue practising (Muluneh et al., 2022).

The results show that most patients in the study were female (69.6%), with the largest age group being 41-50 years old (55.0%). Most patients were from the middle class of socioeconomics (67.1%) and were from urban areas (76.7%). Most patients agreed that their therapy expectations were fulfilled (87.9%), and a majority of patients reported improvements in their condition, with 51.7% reporting that their condition was restored and 35.8% reporting that their condition improved. The majority of patients were diagnosed with musculoskeletal conditions (81.7%), and the majority of patients intended to continue their therapy sessions (55.4%). Most patients would recommend physiotherapy for their type of problem (80.0%).

These results suggest that the patient population in the study was predominantly female and middle-aged, with a majority coming from urban areas and the middle class of socioeconomics. Most patients reported positive experiences with physiotherapy and saw improvements in their condition. The most common diagnosis was musculoskeletal conditions, and most patients intended to continue their therapy sessions. Most patients would recommend physiotherapy for their type of problem (Feldman et al., 2020). Additionally, the distance from the physiotherapy setup, number of visits, intensity of rehabilitation exercises, and receptiveness to changes in rehabilitation all had average scores above 3 on a 5-point scale. This suggests that these factors may be important considerations in the effectiveness of physiotherapy for this patient population. Further research is needed to better understand the specific factors that may influence the success of physiotherapy for patients with different conditions and characteristics.

CONCLUSION

The results of the study showed that most patients were female in their middle age. Most of the patients were belonging to middle class and lived in urban areas. Most patients reported that their therapy expectations were fulfilled, with most diagnoses being musculoskeletal in nature. Most patients indicated that they would continue with physiotherapy sessions and recommend it for their type of problem.

FUNDING

The author and research was self-supported funding.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

REFERENCES

- Amjad, F., Mohseni-Bandpei, M. A., Gilani, S. A., Ahmad, A., & Hanif, A. (2022). Effects of non-surgical decompression therapy in addition to routine physical therapy on pain, range of motion, endurance, functional disability and quality of life versus routine physical therapy alone in patients with lumbar radiculopathy; a randomized controlled trial. *BMC Musculoskeletal Disorders*, 23(1), 255.
- Amorese, A. J., & Ryan, A. S. (2022). Home-based tele-exercise in musculoskeletal conditions and chronic disease: a literature review. *Frontiers in rehabilitation sciences*, 3, 811465
- Barrett, E. M., Darker, C. D., & Hussey, J. (2013). Promotion of physical activity in primary care: knowledge and practice of general practitioners and physiotherapists. *Journal of Public Health*, 21, 63-69.
- Beresford, L., & Norwood, T. (2022). Can physical therapy deliver clinically meaningful improvements in pain and function through a mobile app? an observational retrospective study. *Archives of Rehabilitation Research and Clinical Translation*, 4(2), 100186.
- Beresford, L., & Norwood, T. (2022). The effect of mobile care delivery on clinically meaningful outcomes, satisfaction, and engagement among physical therapy patients: Observational retrospective study. *JMIR Rehabilitation and Assistive Technologies*, 9(1), e31349
- Cheng, J., Zhang, S., & Sheng, W. (2022). Evaluation of preoperative calculation methods of osteotomy size in ankylosing spondylitis with thoracolumbar or lumbar kyphosis. *BMC Musculoskeletal Disorders*, 23(1), 1076.
- Cheung, J. P. Y., Wong, H. L., & Cheung, P. W. H. (2022). Predictive factors for successful non-operative treatment and achieving MCID improvement in health-related quality of life in adult spinal deformity. *BMC Musculoskeletal Disorders*, 23(1), 802.
- Curi, A. C. C., Ferreira, A. P. A., Nogueira, L. A. C., Meziat Filho, N. A. M., & Ferreira, A. S. (2022). Osteopathy and physiotherapy compared to physiotherapy alone on fatigue in long COVID: Study protocol for a pragmatic randomized controlled superiority trial. *International Journal of Osteopathic Medicine*, 44, 22-28.
- Dahlerup, J., Toft, U., Schiøtz, M. L., Grew, J., Thrysoe, R., Ottosen, J., & Jakobsen, L. M. (2022). Protocol for a cluster-randomized non-inferiority trial of the effect of direct access to publicly subsidized physiotherapy for adults with musculoskeletal pain. *Contemporary Clinical Trials*, 113, 106648.
- Dupuis, F., Perreault, K., Hébert, L. J., Perron, M., Fredette, M. A., Desmeules, F., & Roy, J. S. (2022). Group-based exercise training programs for military members presenting musculoskeletal disorders—protocol for a pragmatic randomized controlled trial. *BMC Musculoskeletal Disorders*, 23(1), 366.
- Ekeziegwu, E. C., Akpaenyi, C. E., Nwosu, I. B., & Onyeso, O. K. (2022). Demographic and disease characteristics associated with pain intensity, kinesiophobia, balance, and fall self-efficacy among people with osteoarthritis: a cross-sectional study. *BMC musculoskeletal disorders*, 23(1), 544.
- Feldman, D. E., Carlesso, L. C., & Nahin, R. L. (2020). Management of patients with a musculoskeletal pain condition that is likely chronic: results from a national cross

- sectional survey. *The Journal of Pain*, 21(7-8), 869-880.
- Gagnon, R., Hébert, L. J., Guertin, J. R., Berthelot, S., Desmeules, F., & Perreault, K. (2023). *Integration of primary contact physiotherapists in the emergency department for individuals presenting with minor musculoskeletal disorders: Protocol for an economic evaluation. Plos one*, 18(9), e0277369.
- Geerdink, T. H., Spierings, J. F., Schuijt, H. J., Eversdijk, H. A., van Dongen, J. M., Kokke, M. C., ... & van Veen, R. N. (2022). *Healthcare utilization and satisfaction with treatment before and after direct discharge from the Emergency Department of simple stable musculoskeletal injuries in the Netherlands. European Journal of Trauma and Emergency Surgery*, 1-10.
- Hall, N., Constantinou, M., Brown, M., Beck, B., & Kuys, S. (2022). *Prevalence of musculoskeletal injuries in New Zealand Army recruits as defined by physical therapy service presentations. Military Medicine*, 187(1-2), 174-181.
- Kahere, M., & Ginindza, T. (2022). *A cross-sectional hospital-based study of correlates of disability in patients with chronic low back pain in KwaZulu-Natal, South Africa. BMC musculoskeletal disorders*, 23(1), 438.
- Kelly, M., Fullen, B. M., Martin, D., Bradley, C., & McVeigh, J. G. (2022). *eHealth interventions to support self-management: Perceptions and experiences of people with musculoskeletal disorders and physiotherapists- 'eHealth: It's TIME': A qualitative study. Physiotherapy Theory and Practice*, 1-11.
- Marques, A., Bosch, P., de Thurah, A., Meissner, Y., Falzon, L., Mukhtyar, C., ... & Stamm, T. A. (2022). *Effectiveness of remote care interventions: a systematic review informing the 2022 EULAR Points to Consider for remote care in rheumatic and musculoskeletal diseases. RMD open*, 8(1), e002290.
- Muluneh, A. G., Adem, K. S., Dawud, J. S., Kibret, A. K., Yitayal, M. M., & Eriku, G. A. (2022). *Upper-extremity musculoskeletal disorders and their associated factors among diabetes mellitus patients attending at felege hiwot comprehensive specialized hospital, Bahir Dar, northwest Ethiopia: cross-sectional study. Frontiers in Endocrinology*, 13, 856521.
- Pazukhina, E., Andreeva, M., Spiridonova, E., Bobkova, P., Shikhaleva, A., El-Taravi, Y., ... & Munblit, D. (2022). *Prevalence and risk factors of post-COVID-19 condition in adults and children at 6 and 12 months after hospital discharge: a prospective, cohort study in Moscow (StopCOVID). BMC medicine*, 20(1), 244.
- Richter, R. R., Chrusciel, T., Salsich, G., Austin, T., & Scherrer, J. F. (2022). *Disparities exist in physical therapy utilization and time to utilization between black and white patients with musculoskeletal pain. Physical Therapy*, 102(10), pzac095.
- Room, J., Dawes, H., Boulton, M., & Barker, K. (2023). *The AERO study: a feasibility randomised controlled trial of individually tailored exercise adherence strategies based on a brief behavioural assessment for older people with musculoskeletal conditions. Physiotherapy*, 118, 88-96.
- Sobczyk, K., Grajek, M., & Woźniak-Holecka, J. (2022). *The role of local government units in increasing access to therapeutic rehabilitation services for patients with musculoskeletal diseases. Journal of Education, Health and Sport*, 12(7), 207-216.
- Subialka, J. A., Smith, K., Signorino, J. A., Young, J. L., Rhon, D. I., & Rentmeester, C. (2022). *What do patients referred to physical therapy for a musculoskeletal condition expect? A qualitative assessment. Musculoskeletal Science and Practice*, 59, 102543.
- Takami, M., Tsutsui, S., Yukawa, Y., Hashizume, H., Minamide, A., Iwasaki, H., ... & Yamada, H. (2022). *Lateral interbody release for fused vertebrae via transpoas approach in adult spinal deformity surgery: a preliminary report of radiographic and clinical outcomes. BMC Musculoskeletal Disorders*, 23(1), 245.
- Thomson, D. (2010). *The social meaning and function of humour in physiotherapy practice: An ethnography. Physiotherapy theory and practice*, 26(1), 1-11.

Trede, F. (2012). Emancipatory physiotherapy practice. *Physiotherapy Theory and Practice*, 28(6), 466-473.

Weise, H., Zenner, B., Schmiedchen, B., Benning, L., Bulitta, M., Schmitz, D., & Weise, K. (2022). The effect of an app-based home exercise program on self-reported pain intensity in unspecific and degenerative back pain: pragmatic open-label

randomized controlled trial. *Journal of Medical Internet Research*, 24(10), e41899.

Yang, B., Xu, L., Wang, M., Wang, B., Zhu, Z., Qiu, Y., & Sun, X. (2022). Unmatched rod contouring at the proximal end predisposes to occurrence of junctional kyphosis in early-onset Scoliosis patients undergoing traditional growing rods treatment. *BMC Musculoskeletal Disorders*, 23(1), 624.