



ORIGINAL RESEARCH PAPER

Physiotherapy

“THE IMPACT OF PSYCHO-SOCIAL FACTORS IN PHYSICAL REHABILITATION ADHERENCE”

KEY WORDS: Rehabilitation adherence, psycho-social factors, depression, anxiety, social support, motivation, self-efficacy, fear-avoidance, biopsychosocial approach, cognitive-behavioural therapy, socio-economic barriers, physiotherapy

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ABSTRACT

Non-adherence to rehabilitation protocols is a pervasive issue in healthcare, leading to suboptimal recovery outcomes, increased healthcare costs, and long-term functional impairments. This paper explores the impact of psycho-social factors on physical rehabilitation adherence, focusing on both psychological and social determinants. Psychological barriers, such as depression, anxiety, low motivation, and fear of pain, significantly impede patient engagement, while social factors, including family support, socio-economic status, and cultural beliefs, further influence adherence. The paper also highlights the distinction between chronic and acute conditions, with psycho-social factors affecting rehabilitation differently in each context. Additionally, socio-economic considerations, such as financial constraints and health literacy, are examined. To address these barriers, a biopsychosocial approach is recommended, emphasizing the role of physiotherapists in psycho-social assessment and collaboration with mental health professionals. Tailored rehabilitation programs and behavioural interventions, such as cognitive-behavioural therapy (CBT), are suggested to enhance adherence and improve patient outcomes.

INTRODUCTION

Non-adherence to rehabilitation protocols is a significant global health issue that impedes optimal recovery. Patients often fail to follow prescribed regimens, including attending therapy sessions, performing home exercises, and adhering to movement restrictions. This can lead to slower recovery, recurring injuries, and long-term functional impairments, especially in those with musculoskeletal, neurological, and post-surgical conditions. Non-adherence also increases healthcare costs, as it often results in prolonged treatment, further medical interventions, and preventable hospital readmissions. Addressing the root causes of non-adherence is essential to improving rehabilitation outcomes and reducing the burden on healthcare systems.

Importance Of Adherence

Adherence to rehabilitation is crucial for achieving successful recovery. In musculoskeletal rehabilitation, consistent participation aids in the healing of tissues, improves joint mobility, and restores strength. Non-adherence can result in joint stiffness, muscle atrophy, and persistent pain, which hinder return to normal activities. Similarly, in neurological rehabilitation, adherence promotes neuroplasticity, helping the brain reorganize and recover function after injury. For post-operative patients, adherence prevents complications such as deep vein thrombosis, muscle contractures, and joint immobility. Patients who fully engage in rehabilitation often experience faster pain relief, improved physical function, and a higher quality of life.

Psycho-Social Factors

Psycho-social factors play a pivotal role in influencing a patient's adherence to rehabilitation. Psychological factors such as depression, anxiety, fear of pain, and low motivation can significantly reduce patient engagement. For instance, a patient who fears post-operative pain may avoid exercises, fearing harm or discomfort. Depression can result in feelings of helplessness, leading patients to neglect their rehabilitation routines. Self-efficacy, or a patient's belief in their ability to succeed, also affects adherence; those with low self-efficacy may struggle to stay committed to their rehabilitation program.

Social factors are equally important. Patients with a supportive social network are more likely to adhere to rehabilitation, as family and caregivers provide practical assistance, emotional reinforcement, and encouragement to attend therapy sessions. Conversely, social isolation or financial constraints can create barriers to adherence, especially in under-resourced communities. Cultural beliefs about injury or rehabilitation, along with socio-economic status, can further influence a patient's commitment to their recovery process.

Research Gap

Although the role of psycho-social factors in healthcare is increasingly recognized, their impact on rehabilitation adherence remains underexplored. Much of the current research focuses on physical barriers, such as the severity of the injury or the complexity of rehabilitation exercises, while psycho-social dimensions are often overlooked. There is also a lack of standardized tools for measuring the influence of psycho-social factors on adherence, making it difficult to develop consistent intervention strategies. Addressing this gap requires a holistic, biopsychosocial approach that considers physical, mental, and social factors in rehabilitation programs.

Understanding Psycho-Social Factors

Psycho-social factors encompass both psychological (mental and emotional) and social (environmental and relational) influences. These factors are critical in determining a patient's engagement with rehabilitation. For instance, a highly motivated patient with strong social support is more likely to adhere to their rehabilitation program, whereas someone experiencing depression or social isolation may struggle to stay engaged.

The interaction between psychological and social factors is significant. A patient's mental health can be influenced by their social environment, and vice versa. For example, a patient suffering from anxiety may withdraw from social interactions, exacerbating their isolation and further affecting their mental well-being. Similarly, social stressors such as financial difficulties can increase psychological

strain, reducing the likelihood of adherence.

Chronic vs. Acute Conditions

Psycho-social factors affect rehabilitation adherence differently in chronic versus acute conditions. Chronic conditions like arthritis or chronic pain syndromes often lead to long-term management rather than short-term recovery. Patients with chronic conditions may experience frustration, depression, or feelings of hopelessness, making it difficult to stay committed to rehabilitation. Social isolation and financial strain can further reduce adherence, as patients may lack the resources or support needed to continue therapy.

In contrast, patients with acute injuries, such as fractures or post-surgical recovery, often have a shorter rehabilitation window. During this period, adherence is critical for full recovery. However, psychological factors such as fear of pain or re-injury can still impact adherence, even in the short term. Social support is also essential during acute rehabilitation, as patients often rely on family members for transportation or assistance with exercises. Addressing these psycho-social barriers can improve adherence and ensure a faster recovery.

Psychological Factors and Rehabilitation Adherence

1. Stress And Anxiety

Stress is a significant factor that can hinder adherence. Patients may feel stressed about their recovery progress or fear re-injury, leading them to avoid rehabilitation exercises. This avoidance behaviour delays recovery and can worsen physical limitations. Anxiety, particularly in therapy settings, can also make rehabilitation feel overwhelming, causing patients to skip sessions or participate half-heartedly.

2. Depression

Depression negatively impacts motivation, making patients less likely to engage in rehabilitation. Those with depression often feel overwhelmed by the effort required, leading to dropout or irregular participation. Negative self-perception and feelings of helplessness further decrease adherence, as patients may believe their recovery efforts are futile.

3. Motivation And Self-Efficacy

Self-efficacy—the belief in one's ability to succeed—is critical to rehabilitation adherence. Patients with high self-efficacy are more likely to engage in rehabilitation and persevere through challenges, while those with low self-efficacy may doubt their ability to recover and disengage from therapy. Motivation, whether internal or external, also plays a key role. Patients who are intrinsically motivated, driven by personal goals, tend to adhere better than those motivated solely by external pressures.

4. Fear Of Pain Or Re-Injury

Fear-avoidance behaviours are common among patients recovering from painful injuries. Patients may avoid rehabilitation exercises due to fear of pain or re-injury, which in turn delays recovery and reinforces their fear. Coping strategies, such as cognitive reframing and relaxation techniques, can help patients manage their fear and improve adherence.

Addressing Psycho-Social Barriers in Rehabilitation

To improve adherence, healthcare providers must take a biopsychosocial approach that addresses both the physical and psycho-social dimensions of rehabilitation. Interventions such as psychological counselling, social support programs, and patient education can help patients overcome psycho-social barriers. For example, teaching patients coping mechanisms for managing pain or fear can improve their confidence and willingness to engage in rehabilitation. Similarly, involving family members in the rehabilitation process can provide the emotional and practical support patients need to stay committed to their recovery.

The Role Of Social Support In Rehabilitation Adherence

Social support is crucial in rehabilitation adherence, providing emotional, logistical, and motivational help that enhances a patient's commitment to their treatment. The involvement of family, friends, caregivers, and peers positively influences adherence, which can lead to better recovery outcomes.

1. Family And Friends

Family and friends play a significant role in motivating patients. Emotional support from loved ones often makes the difference between persevering in rehabilitation or giving up during difficult times. For instance, a patient recovering from surgery might feel more confident with consistent family support. Beyond emotional backing, family members often help manage daily logistics, such as providing transportation or assisting with home exercises. However, patients lacking this support may face challenges, underscoring the importance of healthcare providers identifying these gaps and connecting patients with professional or community-based resources.

2. Caregivers

Professional caregivers, such as rehabilitation nurses, are vital in maintaining adherence. They help establish routines, ensure proper exercise performance, and provide emotional support. Caregivers also monitor progress, which is especially helpful for those with chronic conditions. However, caregiver burnout can diminish the quality of care, making respite care and support groups important for maintaining effective caregiving.

3. Peer Support And Group Rehabilitation

Group rehabilitation fosters motivation and adherence through peer encouragement and shared goals. Studies show that patients in group settings tend to have better outcomes than those undergoing rehabilitation alone. However, competition within groups may discourage slower-progressing patients, requiring facilitators to maintain a supportive and inclusive environment.

4. Cultural Beliefs And Social Norms

Cultural backgrounds shape patient attitudes toward rehabilitation. Some patients may prioritize traditional remedies, potentially leading to non-adherence. Additionally, stigmas around disabilities or mental health can hinder rehabilitation. Healthcare providers must be culturally sensitive and create a non-judgmental environment that fosters open communication.

Socio-Economic Considerations In Rehabilitation Adherence

Socio-economic factors, such as financial constraints, insurance coverage, employment, and education, significantly affect adherence to rehabilitation programs.

1. Financial Barriers

Rehabilitation can be costly, making it difficult for patients from lower socio-economic backgrounds to adhere to treatment. Financial challenges can lead to missed sessions and incomplete recovery. Addressing these barriers requires policy interventions, such as offering subsidized rehabilitation services.

2. Health Insurance And Coverage

Health insurance influences access to rehabilitation services. Patients with comprehensive coverage are more likely to adhere, while those without may struggle with out-of-pocket costs. This can lead to non-adherence and poorer recovery outcomes.

3. Employment Status And Job-Related Concerns

Work-related stress, time constraints, and job security fears can reduce adherence, particularly for patients in demanding jobs. Employers can support adherence by offering flexible work schedules and paid sick leave, while healthcare

providers should account for these challenges when designing rehabilitation plans.

4. Educational Level And Health Literacy

Patients with higher education tend to have better health literacy, making them more likely to understand and follow rehabilitation plans. Healthcare providers can bridge gaps in understanding by using simple, clear instructions, visual aids, and follow-up discussions.

Behavioural Aspects And Adherence In Physical Rehabilitation

1. Patient Education And Understanding

Clear communication about rehabilitation tasks and their benefits is essential for improving adherence. When patients understand how exercises help long-term recovery, they are more likely to follow through. Tailoring communication to the patient's literacy level and using visual aids can enhance comprehension.

2. Personal Health Beliefs

Personal beliefs about recovery can impact adherence. Some patients may believe their condition will heal naturally, devaluing the need for rehabilitation. Healthcare providers should address these misconceptions by educating patients on how rehabilitation can prevent complications and improve long-term outcomes.

3. Cognitive-Behavioural Patterns

Procrastination, avoidance, and learned helplessness are common barriers to adherence. Cognitive-behavioural therapy (CBT) can address these patterns by helping patients focus on long-term benefits and setting achievable goals.

4. Behavioural Interventions

Interventions like CBT and motivational interviewing (MI) can improve adherence. CBT addresses negative thinking, while MI helps patients explore their motivations for rehabilitation. Behavioural contracts and verbal encouragement also reinforce engagement.

Barriers To Adherence In Rehabilitation

1. Psychological Barriers

Fear, low motivation, depression, and pain can impede adherence. For example, a stroke patient might miss therapy due to depression. Healthcare providers can mitigate these barriers by offering reassurance, pain management, and mental health support.

2. Social Barriers

Social isolation or lack of family support can negatively affect adherence. Patients who live alone or in underserved areas may struggle to attend therapy sessions. Healthcare providers should involve families in the rehabilitation process and connect patients with community resources to enhance support.

3. Practical Barriers

Practical challenges such as time management, transportation, and access to equipment can hinder adherence. Patients balancing work, family, and rehabilitation often miss appointments or exercises. Offering flexible appointments, tele-rehabilitation, and home-based services can help alleviate these challenges.

Physiotherapist's Role in Addressing Psycho-Social Factors

Physiotherapists play a critical role in managing not just physical injuries but also the psycho-social factors that affect rehabilitation adherence. A holistic, patient-centred approach that integrates psycho-social assessment is essential for improving outcomes.

1. Comprehensive Patient Assessment

Physiotherapists must assess both physical and psycho-

social factors, including mental health, social environment, and motivation. Standardized tools like the Beck Depression Inventory (BDI) and Tampa Scale for Kinesio phobia can help identify psychological distress. Evaluating motivation and self-efficacy is also important, with tools like the Patient Activation Measure (PAM) guiding tailored interventions.

2. Collaboration With Mental Health Professionals

For patients facing significant psycho-social challenges, physiotherapists should collaborate with mental health professionals such as psychologists and social workers. A multidisciplinary approach can better address barriers to recovery by integrating physical and psychological care. For example, combining physical therapy with cognitive-behavioural therapy (CBT) has shown positive results in patients with chronic pain.

3. Tailored Rehabilitation Programs

Individualized rehabilitation programs that account for a patient's psycho-social circumstances are more effective. For patients with psychological barriers, adjusting the intensity of exercises and incorporating stress-relief techniques can improve adherence. Culturally sensitive care also helps tailor programs to each patient's beliefs and needs.

CONCLUSION

Addressing psycho-social factors is essential to improving rehabilitation adherence. Physiotherapists should adopt holistic approaches that consider both physical and psycho-social aspects of patient care.

Recommendations

- **Holistic Approach:** Physiotherapists should assess both physical and psycho-social factors and monitor mental well-being throughout rehabilitation.
- **Mental Health Screening:** Incorporating mental health screening into assessments can help identify conditions like depression and anxiety that interfere with adherence.
- **Continuous Education:** Ongoing education about psycho-social factors and cultural competence is essential for physiotherapists to recognize and address barriers effectively.

Future Research Directions

- **Longitudinal Studies:** More research is needed on the long-term effects of psycho-social interventions on rehabilitation adherence.
- **Emerging Technologies:** Virtual reality (VR) and artificial intelligence (AI) may offer tools to address psycho-social barriers and should be explored further.
- **Socio-Economic Disparities:** Research into how socio-economic factors intersect with psycho-social challenges can guide interventions like subsidized services to improve adherence.

Final Thoughts

By adopting a holistic, patient-centred approach, physiotherapists can better support patients and enhance adherence to rehabilitation programs. This will lead to improved outcomes and a higher quality of care.

REFERENCES:

1. Patient Involvement with Home-Based Exercise Programs: Can Connected Health Interventions Influence Adherence? By Argent R, Daly A, Caulfield B JMIR Mhealth Uhealth 2018;6(3): e47. DOI: 10.2196/mhealth.8518. URL: <https://mhealth.jmir.org/2018/3/e47>
2. Barriers to adherence to home-based pulmonary rehabilitation among patients with chronic obstructive pulmonary disease in Iran: a descriptive qualitative study. By: Ramin Sami Kobra Salehi, Marzieh Hashemi Shila Haghighat, Vajihe Atashi. BMJ Open: first published as 10.1136/bmjopen-2023-073972 on 6 October 2023. BMJ Open 2023;13: e073972. doi:10.1136/bmjopen-2023-073972 URL: <https://bmjopen.bmj.com/content/bmjopen/13/10/e073972.full.pdf>
3. Article -8 Strategies for Improving Patient Outcomes - Recruitment & Retention - by Dropstat. Los Angeles, CA URL: <https://dropstat.com/blog/recruitment-retention/improving-patient-outcomes/>
4. Article - Rehabilitation - Published 22 April 2023 by World Health Organization (WHO) URL: <https://www.who.int/news-room/fact-sheets/>

detail/rehabilitation

5. Article -Explaining Risk Adjustment and its Relevance to Medical Coding. Published on 4 February 2024 by Grady Andersen & MoldStud Research Team. MoldStud. URL: <https://moldstud.com/articles/p-explaining-risk-adjustment-and-its-relevance-to-medical-coding>