

PERCEPTION OF HEALTH-RELATED FACTORS AND QUALITY OF LIFE AMONG POST-OPERATIVE ADULT ORTHOPEDIC PATIENTS

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Abstract

Background: The goal of orthopedic surgery is to timely restore function to the affected area. The response of the surgery and immobility of the joint leads to increased activity of catabolic, nutritional issues, and loss of muscle mass, which is responsible for the recovery outcome. Many factors affect the health-related factors that impact the quality of life of a patient, such as the patient's gender, age, type of surgery, duration of surgery, presence of other diseases, as well as pain control.

Objective: To determine the perception of health-related factors and quality of life among post-operative adult orthopedic patients

Methodology: The cross-sectional study was conducted from December 2024 to May 2025 in Karachi to determine the perception of health-related factors and quality of life among post-operative adult orthopedic patients. The sample size was 377, and the non-probability purposive sampling technique was used. Data was evaluated by two validated tools: the VAS scale and EQ-5D Health questionnaire. The data was analyzed through SPSS version 23.0.

Result: A total of 377 orthopedic patients were included in this study. The response to the question related to mobility, 75.59% have some issues in walking, 45.88% said they have some issues in self-care, 51.72% had some issues in performing their ADLs, and 47.21% had some discomfort. The severity of pain was around 25.46%, had moderate pain as per the VAS scale.

Conclusion: The Perception of orthopedic patients was extremely anxious, which affects their quality of life in performing ADLs.

INTRODUCTION

Surgeries of the joint started from the replacement of the joint or to repair the fracture of a joint that is

demanded by the body. The goal of orthopedic surgery is to timely restore function to the affected

area.¹ The response of the surgery and immobility of the joint leads to increased activity of catabolic, nutritional issues, and loss of muscle mass, which is responsible for the recovery outcome.² Many studies have proved that good nutritional status depends on the healing of a wound, recovery of the joint, lower infection rate, decreased level of complications, and faster recovery of the function of the joint of an individual.³ There is a major problem in orthopedic patients, which is post-operative infection, especially if an implant is placed in the joint.⁴ These infections may also affect the quality of life of a patient. Most of the orthopedic surgeries focus on the musculoskeletal system, which includes the bones, muscles, cartilage, tendons, ligaments, and connective tissues, and it also deals with the many orthopedic conditions like arthritis, fractures, dislocations, and osteoporotic changes of a joint.⁵

Many factors affect the health-related factors that impact the quality of life of a patient, such as the patient's gender, age, type of surgery, duration of surgery, presence of other diseases, as well as pain control.⁶ Patient characteristics as age-related factors, affect on quality of postoperative recovery. It is possible that the younger patients experienced a more rapid recovery process and were back to their ordinary lives.⁷ The study showed, there is a positive and strong relationship between the time of the assessment of the post-operative patient and the patient's discomfort, individual independence, their emotional status, and the patient's recovery.⁸ The health-related factors can impact the recovery of the patient and reduce their complications. When the individual starts the mobilization of the joint as early as possible, it will improve the recovery of the patient and also improve the healing of the joint.⁹

Arthroscopy of ankle and knee, fracture of hip, knee, ankle, forearm, and laminectomy are the most important orthopedic procedures that need physical therapy treatment after the surgical procedures because physical therapy is a common part of recovery from these procedures.¹⁰ Patients may want to consider the advanced equipment utilized by physical

therapists in outpatient therapy clinics, like a hydrotherapy pool and an anti-gravity treadmill.¹¹ Major joint surgical procedures typically require advanced planning and recovery effort because of the expected time at home in a non-weight-bearing, cast-bound, or immobile post-operative state. Physical therapy has an important role in mobilizing the joint even they perform the physical therapy before and after the surgeries.¹² The study aims to determine the perception of health-related factors and quality of life among post-operative orthopedic patients.

METHODOLOGY

The cross-sectional study was done among the orthopedic patients of Karachi. The data was collected from seven districts (south, north, east, west, Malir, central, Korangi) of Karachi from Dec 2024 to May 2025. The sample size of 377 was calculated from Raosoft.com software. To select the research participants for the study the non-probability purposive sampling was used. The inclusion criteria of the study were both male and female genders, the age group 40 to more than 71 years, and having fracture experience in the past 6 months to 1 year. The exclusion criteria consist of those orthopedic patients who were suffering from illness, cognitive impairment, and who were not willing to participate in the study. The VAS (visual analogue score) was used to calculate the severity of pain, and the EQ-5D Health questionnaire was used to assess the health related quality of life of orthopedic patients in which demographic information of research participants with questions related to their current quality of life after experienced fracture was asked from the research participants. The analysis of data was done by SPSS version 23.0 software.

RESULT

A total of 377 post-operative orthopedic patients were included in this study. The demographic information of the research participants, including age, gender, their intake of calcium, prior fracture, and their comorbid, is shown in Table no:1

Table No.1: Demographical data

S.no.	Variables	Frequency (%)
1	Age 40-50	74 (19.62%)

	51-60 61-70 >71	112 (29.70%) 103 (27.32%) 88 (23.34%)
2	<u>Gender</u> Male Female	163 (43.23%) 214 (56.76%)
3	<u>Calcium intake 1,200 mg/d</u> Yes No	231 (61.27%) 146 (38.72%)
4	<u>Prior Fracture</u> Yes No	176 (46.68%) 201 (53.31%)
5	<u>Comorbidities</u> Yes No	246 (65.25%) 131 (34.74%)

When we asked a question to the research participants regarding the health-related quality of life questions from the EQ-5D Health Questionnaire. The question related to mobility, in which 285 (75.59%) participants responded that they have some issues with walking.

The question asked of the participants about their self-care, and the participants responded about: 173 (45.88%) said that they have some issues in doing washing and dressing.

When we asked a question regarding performing their

ADLs (activities of daily living). They responded that about 195 (51.72%) had some issues in performing their ADLs.

The question asked of the research participants related to facing discomfort, and the participants responded that about 178 (47.21%) had faced some discomfort.

When we asked a question about whether they felt anxious or not. Most of the participants responded that 70 (18.56%) were extremely anxious, as shown in

Table no 2:

Table No.2: EQ-5D Health Questionnaire

S.no.	Measure of health-related quality of life	F (%)
1.	<u>Mobility</u> No issue during walking Some issues in walking Bed bound	64 (16.97%) 285 (75.59%) 28 (7.42%)
2.	<u>Self-Care</u> No issues with self-care Some issues with washing/dressing Unable to wash/dress oneself	119 (31.56%) 173 (45.88%) 85 (22.54%)
3.	<u>Activities</u> No issues with ADLs Some issues with performing ADLs Unable to perform ADLs	104 (27.58%) 195 (51.72%) 78 (20.68%)
4.	<u>Discomfort</u> No discomfort Some discomfort Extreme discomfort	89 (23.60%) 178 (47.21%) 110 (29.17%)
5.	<u>Anxiety</u>	

Not anxious	164 (43.50%)
Moderately anxious	143 (37.93%)
Extremely anxious	70 (18.56%)

We measured the pain severity according to the VAS (Visual Analog Scale). And most of the research

participants, around 96 (25.46%), had moderate pain. The remaining scoring is shown in Figure No. 1

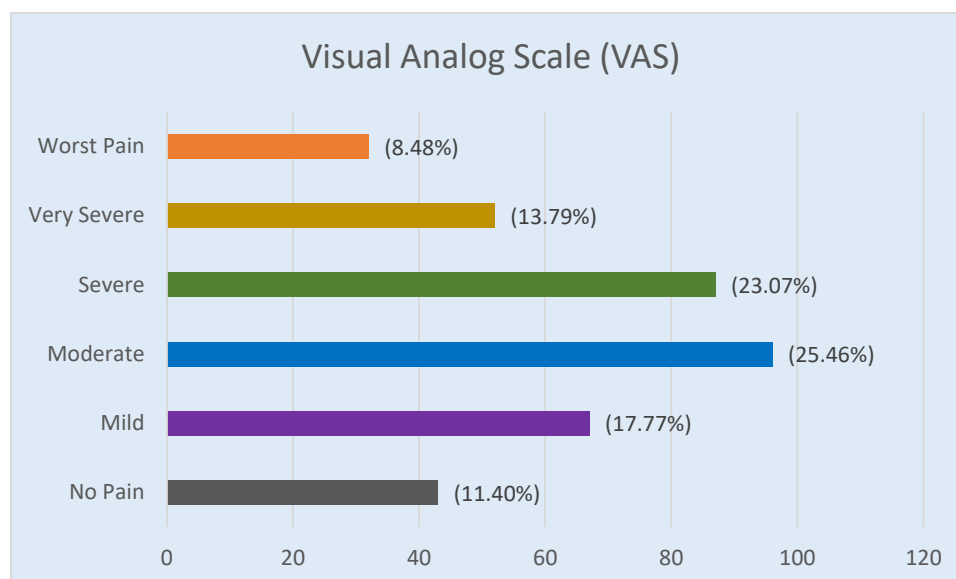


Figure No.1: Visual Analog Scale

DISCUSSION

Orthopedics is a field that is related to the surgical procedures of joints, bones, and other soft tissues like muscles, tendons, ligaments, and meniscus.¹³ The role of orthopedic surgeons is to diagnose the real problem and suggest the required type of management to prevent further problems and to treat the problem through conservative as well as non-conservative management strategies.¹⁴ The patients having orthopedic surgery need specialized care in which physical therapy plays a vital role to help the patient return to normal function and improve their quality of life by providing rehabilitation right after the surgery.¹⁵

A research study reported, the history of prior fractures can increase the probability of recurrent fractures, especially when the fracture was caused due to osteoporosis, and also when the previous fracture was at the same or nearby anatomical position.¹⁶ In the current study, the research participants had a prior fracture before the current orthopedic surgery, about 46.68%

A study revealed, the comorbid conditions of patients can cause a higher rate of complications, increase the hospital stay, and also affect the outcome of rehabilitation because they hinder the way of healing process, as per nature, particularly in orthopedic fracture cases and older patients.¹⁷ In comparison to this in our study, around 65.25% of our research participants have already diagnosed comorbidities which affect their quality of life.

Among the research participants, the quality of life was affected in the mobility perspective, which caused 75.59% issues after surgery. In this research, participants similar to this study reported that, in orthopedic fracture cases, early mobilization is an important part of recovery, especially after surgical procedures. In the early mobilization physical therapy team takes part to introduce exercises that help them to restore their movements, counsel them on the preventive measures to reduce the risk of further complications after the trauma and surgical procedure.¹⁸

Orthopedic fractures can affect daily routine, including self-care and other activities, which can slow down the recovery process.¹⁹ From our study, The activities of daily living was also affected after the orthopedic surgery among the research participants about: 51.72% and self care was disturbed in: 45.88%. A research report, all types of fractures can cause psychiatric issues, especially anxiety. The affected patients can be seriously disturbed due to trauma, and it also increases the fear of fall among the orthopedic patients, which causes an increased risk of immobility and complications²⁰. In our study, the level of anxiousness was found to be 18.56%.

Research reported that the presence of pain associated with fracture is common; it can be intense in the acute phase of injury, and if the problem persists, it can become chronic pain.²¹ in our study, the severity of pain according to the VAS (Visual Analog Scale). And most of the research participants had moderate pain, around 25.46%. Another study suggested, the management of fracture pain is a multifactorial part of treatment, which can be initiated with pharmacological treatment, mainly using opioid medications.²² And early mobilization can also play a crucial role in reducing pain, reducing fear of fall, and restoring mobility of orthopedic patients²³

CONCLUSION

The perception of orthopedic patients after ongoing the surgical procedure was extremely anxious, and their quality of life them was facing discomfort while performing walking, self-care care and other activities of daily living. The severity of pain was found to be at a moderate level among the majority of orthopedic patients having different surgical procedures. Therefore, the recommendation of physical therapy as well as counseling by specialized orthopedic rehabilitation physical therapists can improve the severity of pain as well as the consequences of anxiety related to the disruption in the quality of life for them.

S CONTRIBUTION

FHK: Idea, Concept, Manuscript Writing

MA: Designing and Manuscript Writing

EYK: Literature Search and Results Writing

AD: Manuscript Writing and Data Collection

UBA: Data Collection and Resources

RR: Interpretation of Results

SRB: Review and Editing

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