

# Satisfaction Level with Physical Therapy Following Total Knee Replacement

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## Highlights:

- Study was conducted to check the satisfaction level of physical therapy in 95 patients after total knee replacement
- Likert Scale questionnaire was used to assess the patient satisfaction level
- 80% patients were satisfied with the physical therapy after total knee replacement.

## Abstract:

Knee replacement surgery is becoming popular nowadays due to less calcium and vitamin D levels and indoor living. Avoiding sunlight is making people more prone to knee osteoarthritis. Physical therapy after knee surgery is very important for a speedy recover.

## Objective:

To determine the effects of physical therapy in increasing the satisfaction level of total knee replacement patients

## Methodology:

Data was collected from 95 patients after 4 weeks following total knee replacement in different hospitals of Lahore with age 50-80 years of both genders. Patients underwent physical therapy from day one after surgery. Likert Scale was used to collect data.

## Results:

80% of the patients were very satisfied with the physical therapy after total knee replacement. While few patients still had pain and were less satisfied or dissatisfied.

## Conclusions:

Most of the patients were very satisfied, felt a reduction in pain and improved mobility after with physical therapy following total knee replacement.

## Key words:

Short assessment patient satisfaction, total knee replacement, physical therapy

## Introduction:

Knee joint is a large complex joint of human body. Stabilized by ligaments and further stabilized by strength of muscles connecting knee joint with femur and tibia. Menisci acts as shock absorber and are C shape cartilages.<sup>1</sup> Knee moves in flexion and extension only because it is hinge type synovial joint<sup>2</sup>. Being largest joint in the body, knee suffers in everybody's life at least once in a life time. Most common problem is knee osteoarthritis with high prevalence in old age people due to wear and tear in cartilages of knee, hence, affecting knee movement leading to swelling, stiffness and pain in knee<sup>3</sup>. Patella of knee is also affected due to inside irritation of cartilage called chondromalacia patella exacerbating pain<sup>4</sup>. Knee ligaments damage can be a serious trouble causing instability issues. Knee ligaments are divided into two categories called intra-capsular and extra-capsular<sup>5</sup>. Knee can have multiple problems in every age of life. Knee Pathologies have a big list which can affect normal function, gait and lifestyle of individual even forcing them to leave their job, ending the career of athletes, leaving them in severe agony like pain which make them crippled and immobilized<sup>6</sup>. Knee osteoarthritis is the leading source of elderly disabilities and is a progressive degenerative condition. The knee osteoarthritis prevalence in women is higher and rises with age. Total knee replacement is a widely accepted surgical procedure for severe knee osteoarthritis, with radiographic evidence of joint damage, moderate to severe persistent pain and clinically

significant constraint in quality of life functional activities. Conservative treatments like non-steroid anti-inflammatory medicines, physical therapy and corticosteroid intra-articular treatment play an important role in patient mobility and increasing the life quality<sup>7</sup>. By 2030, there are projections of a 40% increase in the number of people with arthritis who are medically diagnosed as compared to current levels, to almost 76 million or 25% of adults<sup>8</sup>. Following total knee replacement, rehabilitation is critical for the success of surgery. Sustainability focuses on exercise programs to enhance movement, strength, stamina and walking skills. Most studies recommend rehabilitation immediately after hospital discharge<sup>9</sup>. Berg balance scale and timed up and go test were performed on 43 older patients after functional task of 6 minutes walk and stairs climbing. There was no significant difference in stability index score, leading to conclusion that moderate training does not affect stability of older adults<sup>10</sup>. Satisfaction score of patients of total knee replacement was measured to assess the improvement on overall health of patients. It was found that patients become satisfy at 6 to 12 months after surgery depending upon the decrease in pain of patients<sup>11</sup>. Satisfaction does not only rely on range of motions and limitations but also by psychological state of older patients.<sup>12</sup> Lack of harmony between patient discordance and surgeon satisfaction is patient's expectations and complications<sup>13</sup>. Patient satisfaction is important for those who pay for it and neglecting satisfaction of patient brings bad reputation for hospitals and doctors. Combining the overall factors related to patient's satisfaction should be assessed by surgeon<sup>14</sup>. Quality care is connected with satisfaction level of patients admitted in hospital or outpatients visiting hospital after surgeries taking follow-ups and expecting to avoid complications<sup>15</sup>. We hypothesised that pain would be a stronger determinant of satisfaction than function, for a number of reasons. First, pain is usually the primary indication for joint replacement. Secondly,

patients have been shown to have higher expectations of relief from pain when compared with improvements in functional ability after TKR. Thirdly, it is relatively easy for patients to modify their level of activity, change their behaviour and adapt their environment so that functional deficiencies are overcome. By contrast, pain is less amenable to changes in lifestyle and behaviour and often remains a cause of considerable distress.

### Methodology:

Data was collected from 95 patients after 4 weeks following total knee replacement in different hospitals of Lahore with age 50-80 years of both genders. Patients were taking physical therapy and from day one after surgery. Likert Scale was used to collect data. Data was tabulated and analyzed by using SPSS version 21. Patients having co-morbidities along with were excluded and patients with unilateral and bilateral knee replacement surgery were included.

### Results:

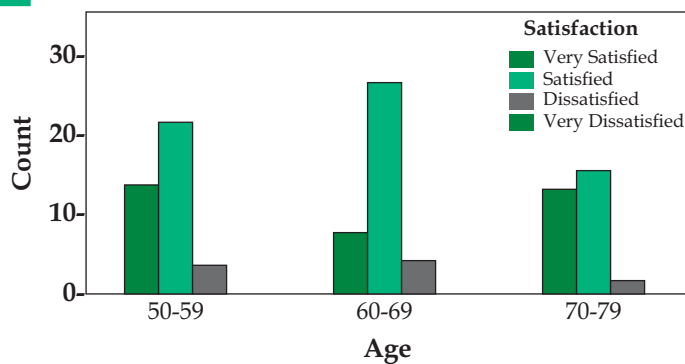
19% patients were very satisfied with physical therapy recovery after total knee replacement, 61% were satisfied and remaining dissatisfied (Table 2, Figure 1). Less satisfied and dissatisfied patients still had pain. Mean age of patients was  $62.93 \pm 9.14$  years with minimum value of 50 years and maximum value of 79 years (Table 1).

Age (Years)	Frequency (%)
50-59	37(39.0)
60-69	35(36.8)
70-79	23(24.2)
Total	95(100)

**Table 1:** Age wise grouping of patients

Lickert Scale	Frequency (%)	Percent
Very Satisfied	18	19.0
Satisfied	58	61.0
Dissatisfied	17	18.0
Very Dissatisfied	2	2.0
Total	95	100

**Table 2:** Grouping according to satisfaction of patients



**Figure 1:** Satisfaction level of patients among age groups

### Discussion:

Patient satisfaction is integral part of surgery. Expectations and complications of patients and burden of number of surgeries in a day by surgeons lead to discordance between surgeon and patient. Patient satisfaction level is the happiness and comfort of patient. Patient healthcare experience at hospital and willingness to recommend a friend or family defines the performance of healthcare facility providers<sup>14</sup>. Measuring satisfaction is becoming the protocol of hospitals to provide and understand the better healthcare facilities which are demands and expectations of patients. They reflect the overall health of patient including psychomotor satisfaction<sup>15</sup>. Net promoter scale has been using nowadays to assess the satisfaction outcome of the patient for the company. It gives a limited information about the patient's overall health and is less valid than other satisfaction measuring tools<sup>16</sup>. Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scale can also be used to assess patient's satisfaction<sup>17</sup>. Patient's expectation form was used to measure the satisfaction level of total knee replacement patients along with WOMAC and Short Form (SF-36). Patients with better satisfaction score, perform better on WOMAC and SF-36. It shows satisfaction level has co-relation with functional score. Patient overall health includes emotional and physical performance. These factors help to predict the outcome of surgeries<sup>18</sup>. There are a few predictors of surgery outcome, including

preoperative satisfaction level and postoperative dissatisfaction level. Patient early postoperative dissatisfaction is due to pain and discomfort and high demands of patients. As the time increases, patient satisfaction level rises<sup>19</sup>. Katia *et al.*, in 2013 studied the level of satisfaction among total knee replacement patients. It was found that patients with improved functional outcome are more satisfied<sup>20</sup>. Patient satisfaction was measured by 4-point Likert scale with options including 100 points for very satisfied, 75 points for somewhat satisfied, 50 points for somewhat dissatisfied and 25 points for dissatisfied. Patients with primary or secondary osteoarthritis were included. There was 85% satisfaction level among patients. Reliable and valid short four point scale was used for measuring satisfaction. Greater the post operation month, greater the satisfaction level<sup>21</sup>. Knee injury and osteoarthritis outcome score (KOOS) scale was used to assess the satisfaction level. Before operation readings showed high level of anxiety and depression while after 3 to 6 months of operation, patients satisfaction level increased<sup>22</sup>. In 2018, 83% patients had 80% satisfaction level among total knee replacement patients while dissatisfaction was higher among pre operative patients<sup>22</sup>. Old age patient take time to get satisfied and found 80% satisfaction level among total knee replacement patients<sup>23</sup>. Patient satisfaction measured by KOOS scale was not affected by age, sex, symptoms and comorbidities<sup>24</sup>. Cynthia *et al.*, found the satisfaction level in total knee replacement patients. She found that 80% patients were more satisfied with their surgery. She listed the predictors of satisfaction and dissatisfaction among patients.<sup>25</sup>

### Conclusions:

Most of the patients were very satisfied with physical therapy following total knee replacement. Patients still having pain were less satisfied or dissatisfied.

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