

What Do Patients Expect from Total Knee Arthroplasty: A Qualitative Study

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ABSTRACT

Patient expectations are key predictors of post-total knee arthroplasty (TKA) health outcomes. The expectations dictate the pain levels, functional outcomes, and disability post-surgery. The study aims at exploring pre-operative expectations of patients from TKA. The study sample ($n = 15$) consisted of participants diagnosed with knee osteoarthritis who had opted for elective replacement surgery. The mean (SD) age of the participants was 72.07 (5.7). The principles of the qualitative research approach guided the study's methodology. The primary author conducted face-to-face semi-structured interviews, which were audio-recorded and transcribed verbatim. Each interview lasted for 15–30 min. The transcribed verbatims were thematically analyzed. The participants expected surgery to relieve their pain, improve their functional status, and make them productive for society. They also expected to be socially active and get rid of their medications. Participants lived experiences modulated their expectations. The study findings emphasize that health-care providers must consider the expectations of individuals undergoing surgery. Patients should be educated about realistic goals and attainments from surgery to ensure better post-operative health outcomes.

Key words: Expectations, Knee osteoarthritis, Qualitative research, Total knee arthroplasty
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BACKGROUND

Knee osteoarthritis (OA) is the most common form of arthritis, with a reported prevalence of 28.7% among the Indian population.^[1] At present, there are 654.1 (95% CI, 565.6–745.6) million individuals living with knee OA globally.^[2] Total knee arthroplasty (TKA) is dubbed as an effective and cost-efficient surgical option for end-stage knee OA.^[3–5] Despite a high success rate of TKA, many patients remain dissatisfied with the outcomes.^[6–8] Patients' satisfaction with knee OA depends on various factors, out of which patient expectations play a pivotal role.^[9–11]

There are multiple predictors of patient satisfaction with TKA. The fulfillment of expectations is a crucial predictor of patient contentment.^[10] Expectations may influence patient's post-operative satisfaction levels.^[12,13] The discontent usually results from unmet or inappropriate expectations due to misconception or lack of knowledge regarding the surgery results.^[12] Bourne *et al.* reported that unfulfilled expectations 1-year postoperatively were associated with 10.7 times higher risk of dissatisfaction when compared to expectations fulfilled.^[6]

Unmet expectations can lead to anxiety, fear, and dissatisfaction among the individuals and may predispose patients to increased pain levels post-surgery.^[14,15] Mahomed *et al.* highlighted that pre-operative expectations predicted functional outcomes. Despite the literature emphasizing the importance of patients' expectations, very few studies have explored or evaluated pre-operative expectations.^[10] Given the enormity of the correlation between patient expectations and satisfaction, exploring pre-operative patient expectations may be critical in optimizing patient satisfaction. Therefore, the study tried to address this research gap and aimed at exploring patients' expectations from TKA.

The success of any management strategy is best measured from the patient's perspective.^[11] For this reason, the qualitative approach was chosen to know the expectations of patients from their perspective.

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METHODS

Study Design

The study used a qualitative research paradigm, and the data were collected using semi-structured interviews. This method provides an unobtrusive way of gaining insights and allows participants to express themselves freely.

Participants

Males and females above the age of 45 with a diagnosis of knee OA and scheduled for TKR surgery were included using purposive sampling. The participants must be able to communicate either in Hindi or English. They were recruited from various hospitals of Jalandhar. Participation was voluntary, and a consent form was signed before recruitment. The study protocol was approved by the Institutional Ethics Committee of LPU (LPU/IEC/2018/01/16). Data collection and analysis adhered to ethical principles

described by the World Medical Association Declaration of Helsinki.

Procedure

The primary author conducted face-to-face semi-structured interviews in hospital settings. The interviews began with an explanation of the study's aims and objectives. Participants were asked, "What are your expectations from knee surgery?" An additional question, "What changes do you expect after surgery?" was asked to invite more inputs from the participants. The interviews were audio-recorded and transcribed verbatim. The average duration of the interviews was 15–30 min.

Data Analysis

The authors used an inductive thematic analysis approach as proposed by Braun and Clarke *et al.* to analyze the participants' transcripts.^[16] This approach sets to identify their expectations in the interview data rather than fit the data into an a priori framework. Both the authors analyzed the transcripts separately, and any discrepancy was resolved through discussion. The authors identified the codes as an ongoing process throughout the data collection. The codes were written and clubbed into categories, and finally, broad themes were generated that reflected participants' perspectives.

RESULTS

A total of 15 interviews were conducted, and the transcripts were thematically analyzed to identify themes. There were nine females and six males' participants with a mean (SD) age of 72.07 (5.7) years; the other demographic characteristics of the participants are depicted in Table 1. Four broad themes emerged after thematic analysis representing participants' expectations from the surgery. The themes are described below with supporting quotes from the participants. The quotes are denoted with age, gender, and work responsibilities; the name has been avoided due to ethical constraints.

Pain Relief

Majority of patients experienced severe knee pain and expected to get relieved from pain after surgery. They suffered from pain

for years, took medicines with no beneficial effects. The intensity of pain aggravated with time, and it had affected the lives of many patients. They started to lose hope. When these patients' felt no relief from medications, the surgery came down as their last option.

I have knee pain and a deformed knee for 10 years. I am taking medicines for the same. However, I feel no relief. I expect surgery to get rid of my knee pain (70 years, female, homemaker).

I have knee pain for 8 years, and it is on and off. I took different forms of medicine to get relief. I took Homeopathic medication also. However, I felt no relief or just temporary relief. As I do not have much expectation, my primary motive is to get rid of pain and crepitus (75 years, male, retired).

I was diagnosed with OA 20 years back without any history of injury. A doctor prescribed medicines, and I took those medicines. I felt relieved when I took them. I continued with farming after taking painkillers. With time, the effect of drugs washed off. Therefore, I decided to go for surgery as I want my pain to decrease (75 years, male, farmer).

Improved Activities of Daily Living

Patients reported trouble while performing daily activities such as washing clothes, utensils, farming, and tailoring. They had difficulty in walking, stair climbing, and sitting. It was not easy to sit down in the washroom and cross-legged properly.

Their expectations were shaped by the things they found challenging to do. Most of them desired to do things like they did in pre-knee OA era. They were motivated with their decision to undergo surgery and were looking forward to something good.

Hmm. I think when I am done with my surgery, then I can walk like before. Post-surgery if I will be to walk, then according to me, surgery will be successful (82 years, male, retired).

After knee pain issue, it is difficult for me to walk. I expect surgery to let me walk independently, go out, and visit gurudwara (60 years, female, homemaker).

I have trouble walking and transferring weight on my knees. I have faced so much difficulty. I expect from surgery that I should be able to do my household work like I used to do. I should be able to walk normally without any pain. I also wish I could sit on floors again (70 years, female, homemaker).

I have decided to go for surgery so that I can live a hail and healthy life in the coming years. I want to get well soon and work like before. I expect to be able to go to gurudwara again alone (69 years, female, homemaker).

I have pain and difficulty in walking for long for almost 5–6 years. If I talk about expectations from the surgery, I should be able to walk at least half a kilometer. In the future, I should be able to sit down on the floor and cook (68 years, female, homemaker).

I hope God will help me. I expect that I should be able to walk normally. I want to continue my agricultural work if I will be fine. I want to live a normal healthy life (75 years, male, farmer).

Knee OA has even affected my functional activities. I used to do tailoring, where I used to stitch 3–4 clothes daily. However, I cannot sew now. I expect that I would be able to continue with my stitching post-surgery (68, female, homemaker)

Improved Social Participation

There was a lack of socialization in patients with KOA which led to anxiety and depression. Patients' condition worsened with time as

Table 1: Characteristics of the participants

Patient identification number	Age (years)	Gender	Occupation
1	75	Male	Retired
2	82	Male	Retired
3	70	Female	Homemaker
4	74	Female	Homemaker
5	69	Female	Homemaker
6	73	Female	Homemaker
7	75	Male	Retired
8	60	Female	Homemaker
9	71	Female	Homemaker
10	64	Male	Farmer
11	68	Female	Homemaker
12	69	Female	Homemaker
13	76	Female	Homemaker
14	75	Male	Farmer
15	80	Male	Farmer

KOA became a barricade in their social life. However, they wanted to attend parties, family functions, or get together with their friends and colleagues. On the other hand, after surgery, older patients are expected to roam outside for a short distance, going for a morning or an evening walk without any discomfort.

I want to get well soon and want to work like before. I want to go and roam outside. I never go out because of pain (74 years, female, homemaker).

I do not have much expectation from surgery. Before, I used to go out and used to ride bike. After surgery, I want to go out independently and be able to ride the cycle (80 years, male, farmer).

I am having knee pain for 10 years now, and medicines never helped adequately. I expect from surgery that I can walk independently and go out of my home to meet people (82 years, male, retired).

I want to walk and go out of my home without a walker and join my peers (76 years, female, homemaker)

Less or No Medications

Patients disliked medicines due to its short-term effects and harmful side effects. They had tried numerous alternative therapies in addition to allopathic medicines; however, all in vain. They wanted to be free from medications lifelong, though; they knew that medicines were needed post-surgery for the initial few days.

I have opted for surgery because of my pain. Medicines used to work for me from time to time, but now they do not affect me. I do not want to take pills lifelong. Surgery is my last option (80 years, male, farmer).

I do not like taking medicines daily. Wherever I go, I take my medication with me so that I could be pain-free. However, if I go for surgery, I wish to take significantly fewer medicines in the future (75 years, male, farmer).

I experience severe pain in both my knees and feel that they can no longer bear my weight. I cannot stand for long and perform any household activity. I have taken Ayurvedic medicines for my problem; yet got no relief. As I have tried every possible medicinal method, now I want to get rid of them; I expect to be fit soon post-surgery (73 years, female, homemaker).

I have severe pain in my right knee..... I have taken medicines but did not get any relief. I want to perform all my activities like before. To do so, I need to be cured, which I feel medicines would not do. I cannot see any other option left for my problem other than surgery. I want to be medicine free! (76 years, female, homemaker).

DISCUSSION

The study explores the expectations of participants who are scheduled for elective total knee replacement surgery. The study's main findings suggest that hopes of the participants with regard to ADLs are akin to patients in Western society. However, there are several key differences in the type of activities in the Indian context. For example, women wished that they could sit and cook, go to religious places, while men longed to resume their agricultural activities.

"Walking" was the most focused activity by every participant, though they attributed it to different tasks. The participants certainly believed that it will enrich their social lives if they walk without pain post-surgery. The activities mentioned by the participants were similar as described in the International

Classification of Functioning, Disability, and Health (ICF) activity domains. The activity and participation limitations were found to be influenced by contextual factors.

Majority of the participants used walking aids and wanted to get rid of them. There was difference in expectations of men and women in terms of activities, which may be attributed to the sociocultural context of India. Men expected to return to their work, whereas females wanted to resume their household chores. The United Nations Fund for Population Activities reports the status of the elderly in Punjab with a high number of working older men (21%), while only 5% older women worked.^[17]

The hallmark of knee OA is pain, and it is the driving force for patients to seek care.^[18,19] The majority of the participants had been living with chronic pain. They hoped that the surgery would ease their pain and their life will return to normal. The expectation of getting rid of pain is propelled by the fact that pain had affected every aspect of their lives. Previous published qualitative literature has shown that pain shapes patients' experiences.^[20-22] The participants' lived experiences influenced the pre-operative expectations, and they wanted to be freed from the issues that bothered them.

Eventually, participants wanted to leave behind their pain medications. The pain medications helped them initially, though they had a meager effect as the disease progressed. Furthermore, they had lost hope in the drugs and could see surgery as the possible solution to get rid of it. The participants were quite aware that medicines are not the cure and cannot be taken forever. This finding was unique, has not been reported by other studies, and is usually not assessed by the questionnaires measuring expectations.

Our results are comparable to previous literature. Yoo *et al.* studied expectations from TKA among Korean patients using an established survey form. Most of their study participants expected pain relief, improvement in functional activities, and psychological well-being.^[23] Another similar study reports that older adults undergoing TKA expect improvement of pain, basic functional activities, and general well-being.^[24]

Lingard *et al.* suggested in their study that patient expectations regarding TKA differ among countries. They found expectations varied among the USA, the UK, and Australian participants.^[12] The differences in expectations can be attributed to many reasons. Primarily, the living standards, health system, and culture can have different impacts on the lives of people living with knee OA. Second, human expectations are shaped by habits, customs, and beliefs. In the present study, high emphasis was made on social life, which is different from the findings of Lingard's *et al.*, however, similar to Yoo *et al.* findings, hence, demonstrating a variation in expectations among countries.^[12,23]

The study results must be debated in light of its limitations and strengths. The major limitation was that participants were recruited from a specific geographical area of an urban city in Punjab, India. This will limit transferability of the findings, although we believe that our participants reflected the clinical population of knee OA pan India. Study participants had lived with knee OA for years before making a conscious decision to get operated on.

The strength of our study was the use of a qualitative approach which allowed participants to express their choice of expectations and was not confined to a set of questions as is done with questionnaire-based surveys. Moreover, to the best of

our knowledge, this is the first qualitative study among the Indian population which evaluated expectations.

CONCLUSIONS

Participants in the study had high expectations from the TKA and believed that they would be able to restart their daily routine after the surgery. The study findings highlight that expectations are highly individualistic in nature, so following a person-centered approach may be more beneficial in addressing patients' expectations. Future studies may develop a framework for the measurement of patient expectations as a measurable construct. Moreover, expectations are shaped by participants lived experiences.

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