A STUDY TO ASSESS THE LEVEL OF ANXIETY AND STRESS AMONG PATIENTS UNDERGONE KNEE REPLACEMENT SURGERY IN SELECTED HOSPITALS, BATHINDA, PUNJAB

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ABSTRACT

Total knee arthroplasty represents a major advance in the treatment of degenerative joint disease. It provides excellent restoration of joint function and pain relief. Following total knee replacement (TKR) surgery, patients frequently experience intense levels of pain, stress, and anxiety that may reduce their self-efficacy and thus affect their postoperative recovery. Aim of the study was to assess the level of anxiety and stress among patients undergone knee replacement surgery. In the present study exploratory descriptive design was used to conduct the study. The subjects were selected by Non probability Convenience sampling technique. The tool used for data collection was Burns anxiety inventory and structured stress scale on the 72hrs after the surgery of patients. The result indicated the level of anxiety among patients undergone knee replacement surgery was 29(48.33%) of patients had borderline anxiety, 29(48.33%) patients had mild anxiety, 2(3.33%) patients had moderate anxiety. The Level of stress among patients undergone knee replacement surgery. 24 (40%) of patients had mild stress, 1(1.67%) had moderate stress. In present study association of variables was evaluated by using chi square and revealed that level of anxiety is associated with gender of patients (0.033) at the level of 0.05 The findings revealed statistically significant association(<0.05) between the level of anxiety and stress.

KEYWORDS: *Anxiety, Assess, Knee Replacement Surgery, Level, Stress*

INTRODUCTION

Joint arthroplasty constitutes a major advance in the treatment of chronic refractory joint pain. It is indicated in patients for whom conservative medical therapy has failed. Total Knee and Total Hip Arthroplasty (TKA and THA) are two common surgeries that reduce pain and improve function and quality of life in patients with knee and hip disorders.[1]

Total arthroplasty of the knee continues to be among the most common and successful major elective surgical procedures. The aging of the population has resulted in a significant increase in the demand for this procedure. This is due, in part, to an increase in patient expectation for high functional capacity into the later decades of life despite the presence of a painful degenerative joint condition. Additionally, the success of knee arthroplasty in alleviating arthritis[2]

Osteoarthritis is the commonest underlying condition for both TKA and THA. Other conditions leading to TKA and THA include inflammatory arthritis, fracture, dysplasia, malignancy and others. Though there are some differences in outcomes of TKA and THA due to differences in anatomy of the joint and underlying disease conditions, most patients

achieve significant long-lasting improvement with these procedures.[1]

Other major causes of debilitating pain include meniscus tears, cartilage defects, and ligament tears. Debilitating pain from osteoarthritis is much more common in the elderly. Knee replacement surgery can be performed as a partial or a total knee replacement. In general, the surgery consists of replacing the diseased or damaged joint surfaces of the knee with metal and plastic components shaped to allow continued motion of the knee. The operation typically involves substantial postoperative pain, and includes vigorous physical rehabilitation. The recovery period may be 6 weeks or longer and may involve the use of mobility aids (e.g. walking frames, canes, crutches) to enable the patient's return to preoperative mobility.[3]

More than 15 crore Indians suffer from knee problems, out of which about 4 crore patients need total knee replacement (TKR), imposing a huge health burden on the country. In contrast, in china, about 6.5 crore people suffer from knee problems- less than half the number in india. The incidence of knee arthritis among Indians is 15 times times higher than that in western nations. This is because of the genetic predisposition of Indians towards knee arthritis, and a life style that results in overuse of the knee joints.[4]

The link between patients' emotional status and outcomes has been highlighted in orthopedic areas such as spine, trauma, sports medicine, joint reconstruction and upper extremity surgery. "Patients with lower emotional health have a greater risk of less functional improvement after surgery. Patients at risk for low emotional health span traditional patient demographics, such as age, gender or socioeconomic background. "However, patients at risk tend to be anxious, have low grade depression, less coping skills and less social support. The patients may also lack coping skills and have a tendency toward poor social support. Patients at risk for suboptimal functional improvement after surgery due to emotional issues can be identified preoperatively.[5]

Anxiety is defined as the presence of "fear or nervousness about what might happen".When this fear produces behavioral and physiological changes, the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, denotes this as anxiety disorder.[6]

Anxiety is characterized by feelings of worry, panic, and fear that aren't in line with a particular situation. While knee replacement is a major surgical procedure, feelings of anxiety shouldn't overwhelm after surgery. However, patients may experience anxiety because they fear that their pain may not subside or worry that their mobility may not improve.[7]

Stress is a conscious or unconscious psychological feeling or physical condition resulting from physical or mental 'positive or negative pressure' that overwhelms adaptive capacities. It is a psychological process initiated by events that threaten, harm or challenge an organism or that exceed available coping resources and it is characterized by psychological responses that are directed towards adaptation. Stress is wear and tear on the body in response to stressful agents.[8]

Surgery is a stressful experience that alters patients' emotions, cognition, and physiology. However, much of the research on surgery-related stress has focused on patients' self-report of anxiety symptoms or recent life stress, neglecting the fact that activation of physiological stress systems can impact individuals' sensitivity to painful stimuli. Levels of stress hormones are altered among individuals with chronic pain conditions such as rheumatoid arthritis or fibromyalgia. Although patients with OA do not differ from pain-free controls in resting levels of Hypothalamus Pituitary Axis derived hormones, arthroplastic surgery is a potent stimulator of both the Sympathetic Nervous System and HPA axis. Research suggests that stress hormone levels in the acute aftermath of arthroplastic surgery (i.e., 4 hours post-incision) are negatively

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correlated with in-hospital assessments of recovery (e.g., the time required to walk 10 m).[9]

      Considering all the above facts it is very essential to conduct this study to determine the level of anxiety and stress among patients who undergone knee replacement surgery.

OBJECTIVES

Primary Objective

- To assess the level of anxiety among patients undergone knee replacement surgery by using standardized Burns Anxiety Inventory scale.
- To assess the level of stress among patients undergone knee replacement surgery by using structured stress scale.
- To find the association between level of anxiety, and level of stress among patients undergone knee replacement surgery.

Secondary Objectives

- To find the association between level of anxiety and their selected socio demographic variables.
- To find the association between level of stress and their selected socio demographic variables.

Conceptual Framework

The Conceptual framework selected for this study was based on general system theory by Ludwig Von Bertalanffy (1968).

Design

A Non experimental descriptive design was used in present study.

Sample

60 patients who undergone knee replacement surgery were selected by using non probability convenience sampling technique.

METHODS

A non experimental descriptive design was used to conduct the study. The tool used for data collection was Burns anxiety inventory and structured stress scale to assess the level of anxiety and stress among patients who undergone knee replacement surgery. Data was collected from the samples by administering structured interview schedule after obtaining consent from participants. Each day around 2-3 patients were interviewed and each session lasted for 30 -40 minutes and it took a period of 4 weeks to complete the study.

RESULTS

The result indicated the level of anxiety among patients who undergone knee replacement surgery

- 29(48.33%) of patients had borderline anxiety.
- 29(48.33%) patients had mild anxiety,
- 2(3.33%) patients had moderate anxiety
- None patient had severe, extreme anxiety.

Mean and Standard Deviation Findings

<div align="center">Table 1</div>

Level of Anxiety	Minimum Score	Maximum Score	Mean	S.D
	6	26	11.9667	4.46822

Table 1 it can be inferred from the table that knee replacement patients had mild anxiety after surgery. The mean score for the level of anxiety was 11.9667 with S.D for the level of anxiety was 4.46822.

The Level of stress among patients who undergone knee replacement surgery

- 35(58.33%)of patients had no stress
- 24 (40%)of patients had mild stress
- 1(1.67%) had moderate stress

<div align="center">Table 2</div>

Level of Stress	Minimum Score	Maximum Score	Mean	S.D
	3	20	9.3667	3.58890

N=60

Table 2 shows mean score of the level of stress among patients who undergone knee replacement surgery. The mean score of level of stress was 9.3667 with S.D for level of stress was 3.58890.Patients were having mild stress.

There was significant association between the level of anxiety and stress (.000) at P value 0.05 level of significance. Therefore H_1 research hypothesis was accepted

Table 3: Association between the Level of Anxiety and Level of Stress among Patients Who Undergone Knee Replacement Surgery

Anxiety Category	Stress Category			n	χ2	df	P Value
	No	Mild	Moderate				
Borderline	23	6	0	29	39.050	4	.000[s]
Mild	12	17	0	29			
Moderate	0	1	1	2			
Total	35	24	1	60			

N=60

Table 3 shows the association between level of anxiety and stress among patients undergone knee replacement surgery. The findings revealed statistically significant association (<0.05) between the level of anxiety and stress.
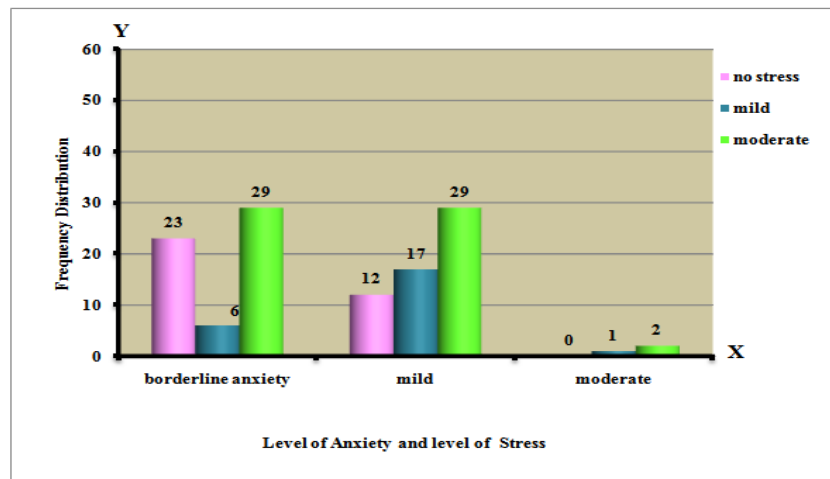

<div align="center">**Figure 1.**</div>

There was no significant association between the level of anxiety with their selected socio demographic variables Therefore H₂research hypothesis was accepted.

There was a significant association of the level of stress with the sex of patients (male) who undergone knee replacement surgery (0.033) at >0.05 level of significance. H₃research hypothesis was rejected.

CONCLUSIONS

Based on the above findings, recommendations were drawn for the Nursing service, administration, education and research regarding level of anxiety and level of stress among patients who undergone knee replacement surgery. The study findings revealed that there was a significant association between level of anxiety and their selected socio demographic variables was significant with gender (Male), of the patients who undergone knee replacement surgery, other demo graphic variable were not significant. The association between level of stress and their selected socio demographic variables was no significant among patients who undergone knee replacement surgery.

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