

Efficacy of Pre-operative Physiotherapy and Patient Education on Post-operative Outcomes following Knee Arthroplasty

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ABSTRACT

Introduction: One of the effective interventions that can be used to treat knee Osteoarthritis (OA) is Total Knee Arthroplasty (TKA), since OA is the cause of most disability. Nevertheless, a lot of people complain due to functional impairment and unresolved pain. Prehabilitation is used in an attempt to enhance functional results in the patient before the operation and is composed of therapeutic interventions. Nevertheless, no research has been done in India.

Aim: The study aimed to identify the outcomes of a developed protocol of preoperative physiotherapy and patient education on postoperative outcomes of TKA with a specific focus on pain, Range of Motion (ROM) of the knee, functional mobility, Fear of Falling (FOF), and Length of Stay (LOS) in the hospital.

Materials and Methods: A Randomised Controlled Trial (RCT) involved 20 TKA patients, of whom 10 participated in the experimental group (n=10) that received 1-week-long preoperative physiotherapy and patient education, and a control group (n=10) that received standard postoperative care. At the time of the baseline and 6 weeks after the operation, outcomes measured were pain (Visual Analogue

Scale), ROM (goniometer), functional mobility {Timed Up and Go (TUG) test} and fear of falling {Falls Efficacy Scale-International (FES-I)}. Statistical tests were used based on normal distribution for within (paired t-test) and between group comparisons (unpaired t-test) and non-parametric (Wilcoxon Signed-Rank test and Mann-Whitney U test).

Results: The results of the outcomes indicated a considerable improvement in the parameters of both groups. Nevertheless, the experimental group had much better results in terms of functional independence (TUG test: mean 5.6 s vs 7.5 s, p=0.002) and lower fear of falling (p<0.001). Importantly, the experimental group exhibited a much lesser mean length of stay at the hospitals (5.3 days versus 9.78 days, p<0.001). Groups were not different in pain and ROM.

Conclusion: The experimental preoperative intervention is very effective in broadening relief and functional independence, mental assurance, and medical proficiency by minimising hospitalisation for TKA patients.

Keywords: Prehabilitation, Quality of life, Total knee arthroplasty.

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