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Patricia D. Franklin

University of Massachusetts Medical School

Wenjun Li

University of Massachusetts Medical School

Carol Otis

Arcadia University

See next page for additional authors

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Presenter Information

Patricia D. Franklin, Wenjun Li, Carol Otis, Benjamin Snyder, Milagros C. Rosal, and David C. Ayers

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IMPORTANCE OF CLINICALLY-REFINED MEDICAL AND MUSCULOSKELETAL CO-MORBIDITIES IN REGISTRIES THAT EVALUATE PATIENT-REPORTED OUTCOMES FOLLOWING TKR

Patricia D. Franklin¹; Wenjun Li³, PhD; Carol Otis, PhD; Benjamin Snyder¹, MD MS; Milagros Rosal³, PhD; David C. Ayers¹, MD

UMass Medical School departments of: ¹Orthopedics and Physical Rehabilitation, ²Preventive and Behavioral Medicine, ³Arcadia University

Contact: Patricia D. Franklin, MD MBA MPH, Email: patricia.franklin@umassmed.edu

BACKGROUND: As national joint registries broaden their focus to include patient-reported outcomes, such as pain relief and functional gain, the role of confounding peri-operative complications and co-morbidities must be considered. We hypothesized that emotional, medical, and musculoskeletal co-morbidities influence post-surgical functional gain following primary total knee (TKR) replacement surgery.

METHODS: We performed secondary analyses of comprehensive data from 180 primary TKR patients to evaluate the association of age, sex, body mass index (BMI), pre-operative emotional health (SF36 MCS/metal component score and CES-D depression screen), medical comorbidities (modified Charlson index), and musculoskeletal comorbidities (pain in low back, hips, and knees) on change in pre-to-6 month post-TKR physical function (SF36 PCS/physical component score).

RESULTS: Patients were 68% female with mean age of 65 years, mean BMI of 32. Mean pre-TKR PCS was 32.0 (SE=0.65), mean MCS was 52.0 (SE= 0.46) and 32% reported pre-TKR CES-D score at the mild to moderate depression level. Musculoskeletal comorbidity was scored as percent of patients with moderate or severe pain; 12% had hip pain, 46% contra-lateral knee pain, 27% low back pain, and 12% foot pain. Six percent reported COPD, 7% cardiac conditions, and 3% renal conditions. A multivariate linear regression model showed BMI>30, lower pre-MCS, lower pre-PCS, moderate or severe low back pain, and higher Charlson co-morbidity score, to be significantly ($p<0.05$) associated with poorer 6 month post-TKR PCS (physical function).

CONCLUSION: Pre-operative BMI, emotional health, and medical and musculoskeletal co-morbidities are required to interpret pre-to-post-operative change in physical function. Further understanding of the role of these factors is critical before national registries can analyze and report valid comparisons of patient-reported outcomes.