

Summary of research proposal LROI



Title:

Can latent class analysis identify subgroups of mental, social and pathophysiological factors (phenotypes) associated with varying levels of incapability in patients who underwent shoulder arthroplasty? A Retrospective LROI database study

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Abstract:

Prior studies have shown that factors such as unhelpful thoughts and distress about symptoms are associated with variation in symptom intensity and magnitude of incapability quantified using Patient Reported Outcome Measures (PROMs). The purpose of this retrospective cohort study is to identify statistical groupings of mental health, social health, and pathophysiological factors and measure their association with measures of pain intensity and magnitude of incapability. We will address the following questions: (1) Can latent class analysis identify distinct statistical groupings (biopsychosocial phenotypes) of categorized mental, social, and physical factors in patients choosing primary total shoulder arthroplasty for idiopathic glenohumeral osteoarthritis? (2) Are the identified statistical groupings associated with distinct levels of pain intensity and magnitude of incapability. We will study adult patients with glenohumeral arthritis that chose primary total shoulder arthroplasty for idiopathic osteoarthritis from the LROI database. With a latent class analysis we will identify statistical groupings. Mental health will be represented by the EQ5D index score categorized as low distress, mild distress and high distress. Social health will be represented by income related to geographical location and pathophysiology by Walch classification in 3 categories. We will analyse the associations between identified statistical subgroups (phenotypes) and pre-operative pain intensity and preoperative magnitude of capability

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