Prevalence of musculoskeletal pain and its association with body mass index and physical activity level among patients with type 2 diabetes mellitus at the National Hospital of Sri Lanka

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Musculoskeletal (MSK) complications are prevalent in individuals with type 2 diabetes mellitus (T2DM). This study sought to assess the prevalence of MSK pain, its association with body mass index (BMI) and physical activity and identify the most affected body regions among patients with T2 DM at the Diabetes Clinic of the National Hospital of Sri Lanka (NHSL). This descriptive cross-sectional study involved 297 participants with T2DM, recruited using systematic random sampling from the NHSL Diabetes Clinic. It included both genders aged 18-69 diagnosed with T2DM for at least one year. Data were collected via self-administered questionnaires, using the Nordic Musculoskeletal Questionnaire for MSK pain assessment and the International Physical Activity Level Questionnaire (IPAQ-SF) for physical activity levels. Height and weight measurements were used to calculate BMI, and data analysis utilized descriptive statistics and chi-square tests. Most participants (78%) reported experiencing MSK pain in the past week or past year, with the knee joint being the most affected (52.5%, n=156). Chi-square tests indicated a significant link between BMI and MSK pain over the past year, as well as knee pain in the past week and past year. However, physical activity levels were not significantly associated with MSK pain in any region during those timeframes. MSK pain is common in T2DM patients, particularly in the knee region. There is a notable link between BMI and MSK pain in the past year. Regular assessments and proper treatment guidance for MSK complications are recommended. Additionally, raising awareness about maintaining a healthy weight is key to managing these issues in T2DM patients.

Keywords: *Prevalence of musculoskeletal pain*, *Type 2 diabetes mellitus*, *Body mass index*, *Physical activity level*