

## ABSTRACT

Diabetes mellitus is a group of metabolic diseases characterized by high blood sugar levels that occur due to abnormal working insulin, insulin secretion or both. Meanwhile, physical activity plays a big role in regulating blood sugar levels in type 2 diabetes mellitus (T2DM) patients. Lack of physical activity is thought to cause a global death and is an independent risk factor for chronic illness. During physical activity, insulin resistance decreases because when muscles contract, membrane permeability increases and glucose can enter the cells.

This study aimed to determine the relationship between physical activity level and the therapeutic success of T2DM patients by looking at the percentage of patients who achieved the requirements for therapeutic success through their physical activity level.

This study's designs are observational, analytic, and *cross-sectional*. The study sample was all T2DM patients in RSUD Dr. Soetomo internal polyclinic with a sample size of 87 people taken by consecutive sampling. Data was collected by direct interviews using the IPAQ questionnaire. This study's variables were the therapeutic success and physical activity level of T2DM patients.

Results showed that at a low level of physical activity, 69.8% of respondents had not met the requirements of therapeutic success, at a moderate level, 56.0% had met the requirements, at a high level, 66.7% had not met the requirements.

In conclusion, there is no relationship between the level of physical activity and the therapeutic success of T2DM patients at RSUD Dr. Soetomo Surabaya ( $p = 0.086$ ).

**Keywords:** physical activity, diabetes mellitus, therapeutic success, *cross-sectional analysis*