The Determinant Factors Associated With Hba1c In Type 2 Diabetes Mellitus Patients: Medication Adherence, Quality Of Life And Nutritional Status (Sumbersari Primary Health Center, Jember Regency)

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ABSTRACT

Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disease characterized by elevated blood glucose levels due to impaired insulin production or action. Inadequate management, such as poor medication adherence, reduced quality of life, and suboptimal nutritional status, can contribute to the development of T2DM. This study aims to determine the association between medication adherence, quality of life, and nutritional status with HbA1c levels among T2DM patients at the Sumbersari Primary Health Center. This research is an analytic quantitative study involving 79 subjects selected by accidental sampling. Data collection included measurements of body weight and height, as well as the use of the WHOQOL-BREF and MMAS-8 questionnaires. Bivariate analysis was performed using the Fisher exact test, and multivariate analysis was conducted with logistic regression.

The bivariate analysis showed that medication adherence was significantly associated with HbA1c ($p = 0.000$), nutritional status ($p = 0.023$), and quality of life, including the physical domain ($p = 0.001$), psychological domain ($p = 0.001$), social domain ($p = 0.001$), and environmental domain ($p = 0.000$). Multivariate analysis identified quality of life as the most dominant factor associated with HbA1c, although none of the variables reached statistical significance, likely due to interactions or overlapping effects among the variables. Quality of life was divided into four domains, with the social domain showing the highest odds ratio ($OR = 6.447$), followed by the physical domain ($OR = 3.917$), psychological domain ($OR = 2.697$), and environmental domain ($OR = 1.531$). In conclusion, there is an association between medication adherence, quality of life, and nutritional status with HbA1c levels among patients with T2DM, with quality of life emerging as the most dominant risk factor.

Keywords: *Medication Adherence, Quality of Life, Nutritional Status, HbA1c, Type 2 Diabetes Mellitus*