

Association of Health Literacy and Nutritional status assessment with glycemic control in adults with yype 2 diabetes mellitus

ABSTRACT

While the role of medical and nutrition factors on glycemic control among adults with type 2 diabetes mellitus (T2DM) has been well-established, the association between health literacy (H.L.) and glycemic control is inconsistent. This study aims to determine the association of H.L. and nutritional status assessments with glycemic control in adults with type 2 diabetes mellitus. A total of 280 T2DM respondents (mean (SD) age = 49.7 (10.3) years, Glycated hemoglobin (HbA1c) = 9.9 (2.6) %, and Body Mass Index = 32.7 (15.1) kg/m²) were included in this study. A short-form Test of Functional Health Literacy in Adults (S-TOFHLA) assessed the H.L. levels. Nutritional status assessments included client history, glycemic control, anthropometric, and biochemical data. The mean (S.D.) H.L. score was 45.7 (24.6), with 56% of the respondents had inadequate H.L. Inadequate H.L. was more common among those females; housewives, low education, received oral antidiabetic therapy, and shorter diabetes duration. Respondents with inadequate H.L. were significantly older and had higher HbA1c than those with marginal and adequate H.L. Meanwhile, respondents with inadequate and marginal H.L. levels had significantly higher total cholesterol, LDL-cholesterol, and systolic blood pressure than the respondents with adequate H.L. Low H.L. scores, self-employment status, received dual antidiabetic therapy (insulin with oral agents), received insulin alone, and had higher fasting blood glucose explained about 21% of the total variation in HbA1c (adjusted R² = 0.21; p < 0.001). Respondents with inadequate H.L. had poor glycemic control. The H.L. scores, together with nutritional status assessments, were the factors that predicted poor glycemic control among adults with T2DM.

Keyword: Health literacy; S-TOFHLA; Type 2 diabetes mellitus; Glycemic control; Iraq