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The Association between Food Insecurity, Glycemic Control, Self-Care, and Quality of Life in Adults with Type 2 Diabetes

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ABSTRACT

Food insecurity is the inability to obtain adequate nutritious food. Therefore, the study assessed the relationship between food insecurity, glycemic control, self-care behaviors, and quality of life in adults with type 2 diabetes (T2DM).

Cross sectional study of 356 adults with T2DM recruited from an academic medical center and a veterans affairs medical center. The independent predictor was food insecurity, and the outcomes were glycosylated hemoglobin A1c, self-care behaviors, and quality of life (QOL). Logistic regression was used to assess the independent factors associated with food insecurity. Multiple linear regression was used to assess the association between food insecurity and outcomes. Stata was used for the analyses.

The majority (88%) was ≥ 50 years old, male (70%), and non-Hispanic black (55%). Thirty-five percent were food insecure. Compared to those who had <high school education, those with >16 years of education were less likely to be food insecure (Odds ratio (OR) 0.25; 95% Confidence Interval (CI) 0.07, 0.92). Compared to those making <\$10,000, those with income levels of \$20,000-\$34,999 (OR 0.31; 95% CI 0.13, 0.74) and \geq \$35,000 (OR 0.15, 95% 0.06, 0.38) were less likely to be food insecure. In adjusted modeling, food insecurity was marginally associated with glycemic control (β coefficient = -0.41; 95% CI -0.85, 0.02), and not significantly associated with self-care behaviors or QOL.

In this sample of adults with T2DM, food insecurity was significantly associated with education and income and marginally associated with glycemic control. Further research is needed to assess the relationship between these factors.

Keywords: Food Insecurity, Type 2 Diabetes, Glycemic Control

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