**Effect of Diabetes Self-efficacy on Glycemic Control, Medication Adherence, Self-care Behaviors, and Quality of Life in a Predominantly Low-income, Minority Population**

Rebekah J. Walker, MS; Brittany L. Smalls, MHSA; Melba A. Hernandez-Tejada, MS; Jennifer A. Campbell, BS; Leonard E. Egede, MD, MS

**Objective:** This study examined the effect of self-efficacy on glycemic control, self-care behaviors, and quality of life in low-income, minority adults with diabetes.

**Methods:** Data on 378 participants were examined. Multiple linear regression assessed associations between self-efficacy, hemoglobin A1c, medication adherence, diabetes knowledge, self-care behaviors and quality of life.

**Results:** Self-efficacy had modest correlations with glycemic control ($r = -0.250, p < 0.001$), medication adherence ($r = -0.352, p < 0.001$), diabetes knowledge ($r = 0.118, p = 0.039$), diet ($r = 0.420, p < 0.001$), exercise ($r = 0.220, p < 0.001$), blood sugar testing ($r = 0.213, p < 0.001$), foot care ($r = 0.121, p = 0.032$), and mental health related quality of life ($r = 0.137, p = 0.017$). In the regression model, self-efficacy was significantly associated with glycemic control ($β = -0.104, 95% CI: -0.157, 0.051$), medication adherence ($β = -0.067, 95% CI: -0.090, 0.044$), diet ($β = 0.150, 95% CI: 0.108, 0.191$), exercise ($β = 0.113, 95% CI: 0.065, 0.161$), blood sugar testing ($β = 0.107, 95% CI: 0.049, 0.164$) and mental health related quality of life ($β = 0.112, 95% CI: 0.051, 0.173$).

**Conclusion:** Higher self-efficacy was associated with improved glycemic control, medication adherence, self-care behavior and mental health related quality of life.

**Practice Implications:** Emphasis on self-efficacy is relevant for educational interventions developed for low-income, minority populations. (Etnh Dis. 2014;24[3]:349–355)

**Key Words:** Diabetes Self-efficacy, Glycemic Control, Medication Adherence, Self-care Behaviors, Quality of Life, Low-income Population, Type 2 Diabetes

**INTRODUCTION**

Self-efficacy is a well-studied psychological construct that is consistently associated with health behavior.\(^1^,^2\) As defined by Bandura, self-efficacy is confidence in one’s ability to perform goal-directed behaviors when confronted with impediments.\(^3^,^4\) In patients with type 2 diabetes (T2DM), health behaviors in the form of self-management behavior plays a central role in adequate glycemic control. Many factors influence successful management of T2DM, including self-efficacy.\(^4\) Numerous studies have investigated its role in predicting behavior in patients with diabetes since patient attitudes are strong factors in disease management and self-care.\(^2,^5^–^7\) Results have shown self-efficacy to be more predictive of self-care behaviors than locus of control, coping strategies, perception of relationship with provider, risk awareness, diabetes distress, and autonomous motivation.\(^8^–^10\) Clark indicated that self-efficacy is a very relevant construct when trying to explain adoption of healthy behaviors such as exercise.\(^11\) More recently Schoenthaler et al noted that individuals with chronic diseases and high levels of self-efficacy were more likely to perform healthy behaviors than those with lower self-efficacy.\(^12\) Additionally, lowered efficacy has been particularly problematic in T2DM patients with depression, which increases negative appraisals of one’s capabilities and consequently self-efficacy.\(^12\)

Throughout the self-efficacy literature various measures are used, making comparisons between studies difficult. For this study, we chose a diabetes specific measure, the Perceived Diabetes Self-Management Scale (PDSMS), which is a valid and reliable way to measure diabetes self-efficacy.\(^2\) The 8-item scale asks questions regarding difficulty finding effective solutions to problems with managing diabetes, difficulty in efforts to change, ability to manage one’s disease as well as other people, regularity in planning for managing diabetes, and ability in accomplishing goals with respect to managing diabetes.\(^2\)

In general, the self-efficacy of individuals from disadvantaged or minority populations is typically lower, and this reduced self-efficacy extends to management of chronic illnesses such as diabetes.\(^13\) In development of the PDSMS, Wallston et al found that patients in the highest five income categories had higher self-efficacy scores than those in lower income categories.\(^2\) Specific factors associated with both minority status and low self-efficacy include relatively lower educational level,\(^13\) poor socioeconomic status\(^14,^15\) and being from a historically disadvantaged minority group, who subsequently present with higher rates of complications and mortality, compared with other groups.\(^16\) A number of studies investigating primarily Hispanic populations have indicated an association between increased self-efficacy and improved self-management.\(^17^–^21\) However,