DEVELOPMENT AND VALIDATION OF THE LIFESTYLE SELF-EFFICACY SCALE FOR LATINOS WITH DIABETES (LSESLD)

Objectives: To develop and validate a self-efficacy measure of diabetes self-management, the Lifestyle Self-Efficacy Scale for Latinos with Diabetes (LSESLD), designed for low-income, Spanish-speaking Latinos with diabetes.

Design: Quantitative and qualitative methods.

Setting: Community health centers in central and western Massachusetts.

Participants: Low-income Latinos (N=252) enrolled in a randomized diabetes self-management intervention trial.

Measures: Construct validity, internal consistency, sensitivity to change over time.

Results: The LSESLD demonstrated good internal consistency (Cronbach’s alpha = .85), reasonable construct validity (moderate, significant associations between the LSESLD and validated measures of diabetes knowledge, dietary intake, physical activity, blood glucose self-monitoring, and HbA1c values), and sensitivity to intervention-related changes over time.


Key Words: Diabetes, Self-Efficacy, Self-Management, Scale, Latinos, Low-income

INTRODUCTION

Type 2 diabetes (hereafter referred to as diabetes) is a growing epidemic in the United States and the world, contributing to significant premature disability, morbidity, and mortality and resulting in staggering costs associated with excess medical care expenditures and reduced productivity. The prevalence of diabetes among Latino adults in the United States (11.8%) is disproportionately higher than non-Latino White adults (7.1%). Additionally, Latinos with diabetes tend to exhibit poor glycemic control, resulting in higher rates of diabetes-related complications and mortality compared to non-Latino whites.

Effective diabetes management includes consistent access to and receipt of preventive services as well as patient adherence to diabetes self-management (DSM) behaviors. The American Diabetes Association (ADA) guidelines recommend DSM as integral to effective diabetes care. Specific DSM behaviors include self-monitoring of blood glucose (SMBG), regular physical activity, and consumption of a high quality diet, characterized by a balanced consumption of fiber, fruits, vegetables, whole grains, legumes, low-fat milk, and fish and low consumption of saturated fat, trans fat, cholesterol and sugar.

Many factors contribute to successfully managing diabetes, including diabetes-related knowledge; skills to adhere to specific behavioral prescriptions; and self-efficacy, defined as confidence in one’s ability to achieve behavioral goals. Self-efficacy, a key construct in social cognitive theory (SCT), is a strong predictor of behavior change. DSM self-efficacy is associated with diabetes-related knowledge, increased engagement in DSM behaviors, and improved glycemic control among populations with diabetes. Thus, enhancing patients’ DSM self-efficacy is thought to be critical to successful DSM and glucose control.

To date, there are relatively few studies that examine the role of self-efficacy in improving DSM among Latino populations, particularly among Caribbean Latinos. Furthermore, a validated DSM self-efficacy scale that is culturally and linguistically appropriate for low-income Latinos currently does not exist. The availability of such a scale would be particularly useful for identifying specific areas for intervening to enhance DSM adherence. Our study addresses this gap by developing and testing the psychometric properties of the Lifestyle Self-Efficacy Scale for Latinos with Diabetes (LSESLD), a novel instrument designed to measure DSM self-efficacy among low-income, Spanish-speaking, Caribbean Latinos with diabetes. While not a rigorous psychometric study, the development and validation of the LSESLD is a practical, translational study that leveraged existing resources from the Latinos En Control Trial, a randomized trial targeting DSM among low-income, Caribbean Latinos with diabetes, to develop a tailored scale for the target population.

Specific aims of our study included developing items for the LSESLD and evaluating the LSESLD for internal consistency, construct validity, and sensitivity to change in self-efficacy over time. We hypothesize that the LSESLD is: 1) positively correlated with validated measures of related constructs, including diabetes knowledge, dietary intake, physical activity, and SMBG; 2) negatively correlated with hemoglobin A1c (HbA1c) levels; and 3) sensitive to change in self-efficacy, with change scores on the LSESLD expected to be greater among intervention participants than control participants from baseline to follow up.