

## Abstract

**Background:** Diabetes mellitus (DM) is a group of metabolic disorders in which there are high blood sugar levels over a prolonged period of time. Untreated DM or poorly managed DM potentially lead a patient to long-term health complications such as foot ulcers, amputations, kidney disease, vascular disease, and even death. DM ranks seventh in the United States (U.S.) as a leading cause of death. DM is a condition that is commonly treated in the primary care setting. Diabetes self-management education is an important element of ensuring effective DM management.

**Purpose:** The purpose of this DNP project was to educate the nurse practitioners (NPs) in the implementation of DSME and telehealth measures for DM patients and improve patient care through implementation of DSME telehealth (Aikens, Aron, & Piette, 2015).

**Methods:** The self-care theory by Dorothea Orem was the applicable theory to this project by determining areas of self-care deficits that existed in the diabetic population and providing telehealth education in regards to these identified areas. Self-care deficit is the main reason that patients progress from chronic conditions like diabetes to complications like amputations, foot ulcers, kidney disease, or even mortality (Buckley et al., 2015). There was an intervention group and another group that did not receive intervention. Pre-and-post implementation patient diabetes questionnaires (PDQs) were completed by the nurse practitioners on their patients. Data analysis was conducted between pre and post implementation to determine improvements in diabetes self-care management based on telehealth program provided by the nurse practitioners.

**Results:** Telehealth DSME was effective and provided a means for the NPs to improve their diabetic education techniques. The scores between the pre-implementation and post-implementation showed an increase in knowledge and self-care practices of the patients.

*Keywords:* diabetes, telehealth, self-care deficit, diabetes self-management education