

## ABSTRACT

### Innovative Approach to Diabetes Prevention: Utilization of a Multimedia Based Diabetes Prevention Program to Encourage Adherence to Lifestyle Modifications in Prediabetic Adults for Prevention of Type 2 Diabetes Mellitus

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The purpose of this doctoral project is to determine if the integration of a multimedia based education for diabetes prevention will encourage prediabetic adults to actively engage in making lifestyle changes that result in greater adherence to lifestyle modification ( i.e. diet and exercise) and reduction of blood glucose levels in efforts to decrease the development of T2DM and its associated medical, psychological and financial burdens to the patient, family, community, and society as a whole. A quasi-experimental, quantitative design which included male and female adults between the ages of 21-64 years old with prediabetes in a community clinic was utilized. Prediabetes was defined as a glycated hemoglobin A1c between 5.7%-6.4%. Intervention involved three module diabetes prevention educational sessions delivered via multimedia. The control group received usual care for a diagnosis of prediabetes that consisted of brief diet and exercise patient education. The intervention group received the aforementioned multimedia diabetes prevention education. Reductions in weight and glycated hemoglobin A1c measurements were observed, the *p*-value demonstrated that the implementation of a multimedia based diabetes prevention program made no statistically significant differences between both the control and intervention groups in this project. Alternative formats for the delivery of diabetes prevention education have the potential to promote adherence to lifestyle modifications.

*Keywords:* innovation, leadership, prediabetes, lifestyle modification program