



Innovative Diabetes Patient Education for Better Blood Sugar Control

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Background

- Type 2 diabetes is a chronic disease associated with elevated levels of sugar in the blood.
- The increase healthcare spending involved in managing complications of diabetes, and the need for patient's better quality of life requires good control of diabetes.
- According to National Diabetes Statistics Report (NDSR), about 29.1 million people who are 9.3% of the United States (US) population have diabetes disease.
- There are 21.0 million people, who are currently diagnosed, 8.1 million people are undiagnosed (NDSR, 2014).

Purpose of Study

- To develop an innovative diabetes patient education to help patients learn self-management skills for better glucose control
- The goal was to educate diabetic patients on glucose control through a sustainable dietary plan, weight control education, for better glucose levels

The Question Guiding Inquiry (PICOT)

In patients with type 2 diabetes (P) how effective is an innovated diabetic patient education, focusing on diet and weight management (I) in controlling diabetes and improving blood glucose numbers (O) over a 6 week period (T)

Methodology

- **Study Design:** A non- experimental randomization design pilot project.
- **Population:** Thirty (30) participants from a rural community clinic in the mid-western, United States participated in the pilot study.
- **Ages:** 20 to 65
- All participants were diagnosed with type 2 Diabetes
- 50% of the participants were male
- 50% were female

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Methodology

Institutional Review Board Approval:

- This Study was approved by Wilkes University IRB where investigator enrolled as a Doctorate Student
- Written permission to carry out the project was received from the institution where the project was conducted
- **Informed consent:** Participants were given an invitational letter; they completed and returned an informed consent for this pilot study.
- Participants completed a demographic form; and had their pre-blood sugar, pre-weight and pre-BMI taken and documented

Methodology

Participants:

- Signed consent forms and fill demographic information
- Were given a pre-test
- Received bi-weekly face to face teaching sessions, on diet plans that mainly focused on weight loss, exercise, and blood sugar control
- Received weekly telephone follow up calls by the investigator
- Were also encouraged to exercise 30 minutes at least 5 times per week
- At the end of 6 weeks, weights, BMI's and blood sugars were rechecked and compared with previous values.
- Participants were given a posttest and a confidence test

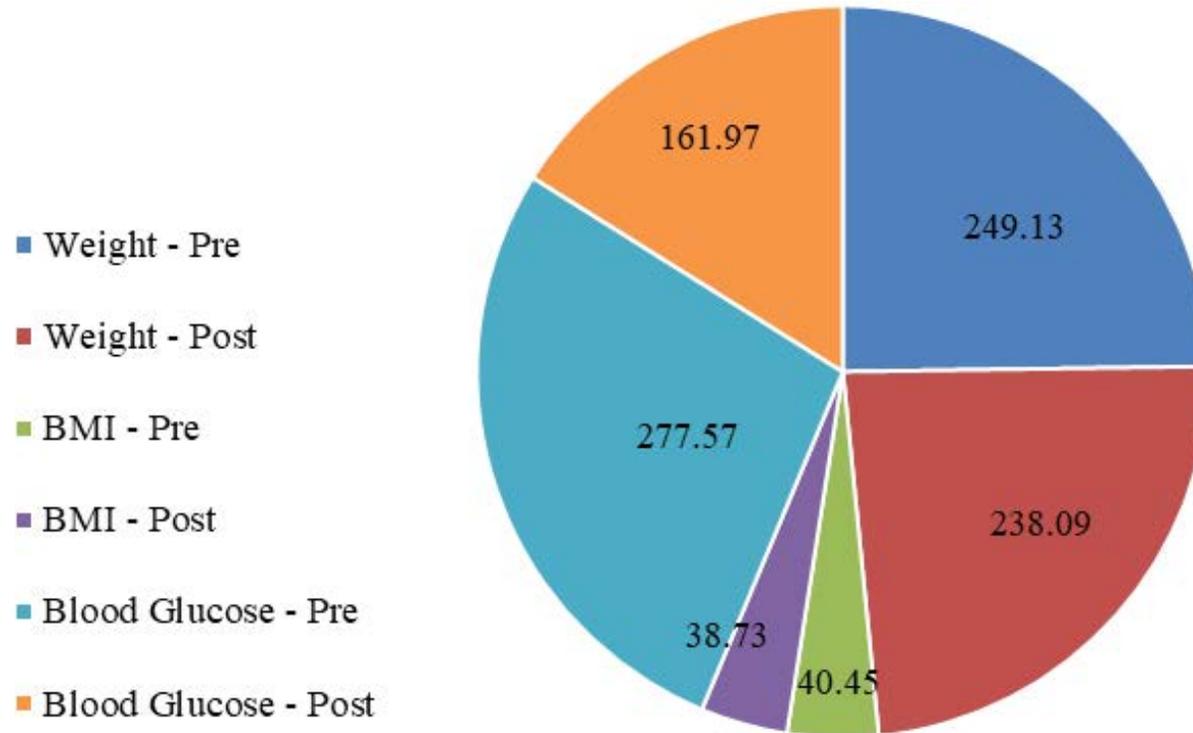
Data Analysis

- Data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 21.0
- Using Munro's statistical methods for health care research, frequencies and percentages were calculated for the demographic variables.
- Paired samples T Tests were conducted to determine whether statistically significant differences exist between pre and post groups.

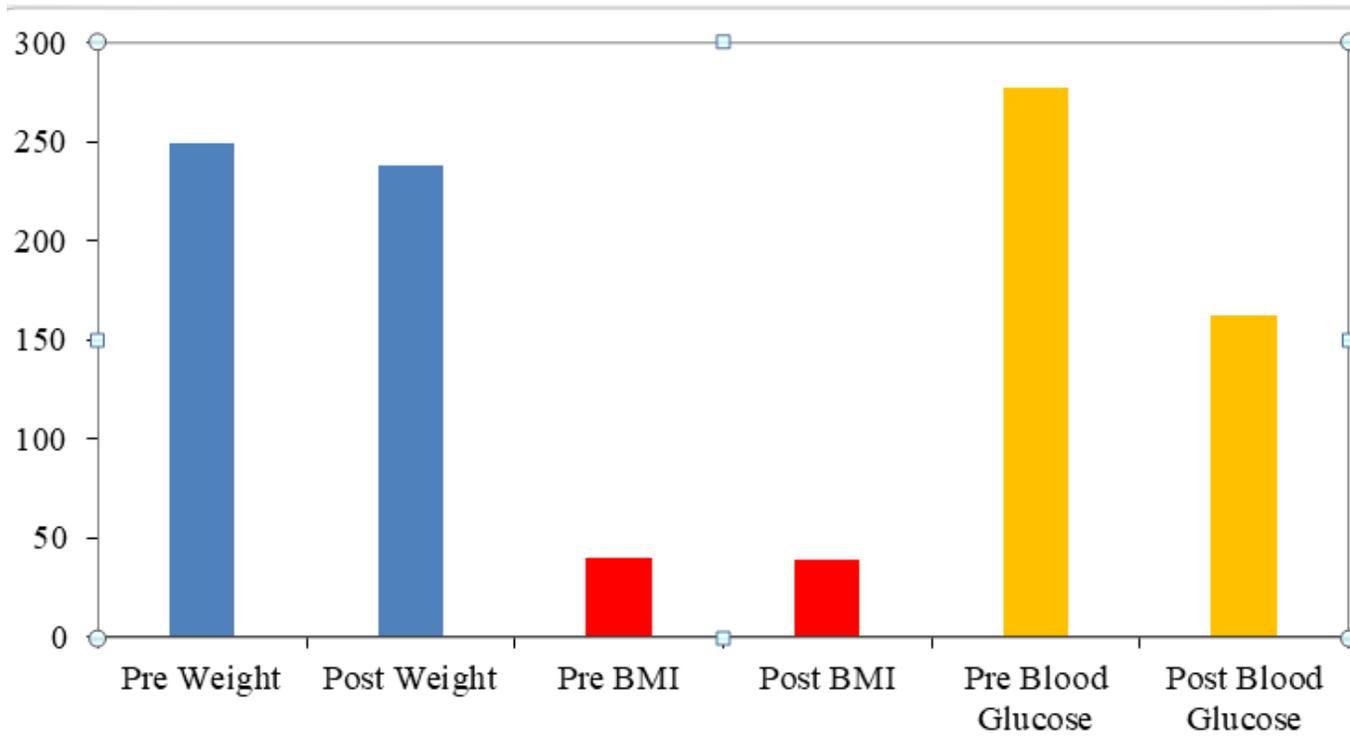
Results

Findings indicated that there were clinically significant differences, at the .05 significance level, in pretest to posttest scores for weight, BMI, and blood glucose.

Results: Pre/Post Mean Scores for Weight/BMI/Blood Glucose



Results



Implications for Practice

- Empowering diabetic patients will improve their self-awareness, self-esteem and involvement in their care
- DNP must continue to strategize and provide venues to ensure the development of patient confidence to continue to promote control over their everyday living and control of diabetes

Doctoral Essentials

- Scientific Underpinnings for Practice
- Clinical Scholarship and Analytical Methods for Evidence-Based Practice
- Clinical Prevention and Population Health for Improving the Nation's Health
- Advanced Nursing Practice



References

- Wattanakul (2012): Diabetes self-efficacy and risk perceptions were among the strongest explanatory variables for self-care behaviors within the participants.
- Ozgul (2015): empowerment is an efficient strategy in diabetes patient education
- Wu et al., (2014): There is great importance on patient education focusing on total lifestyle activities for self-management of type 2 diabetes