Motivational Interviewing as a Prevention Intervention for Type 2 Diabetes In African-American Men

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Introduction

Type 2 diabetes mellitus (DM2) affects 25.8 million people in the United States (4). DM2 can also contribute to many other diseases such as coronary artery disease, stroke, kidney disease, amputation, and blindness (2). In 2010, an estimated 18.7 percent of non-Hispanic blacks over 20 years of age had been diagnosed with diabetes (1). One goal of *Healthy People 2020* is to focus on at-risk populations to reduce incidence of DM2 (7). There is a need to test a culturally appropriate, theory-driven education interventions that guide behavior modification and motivation.
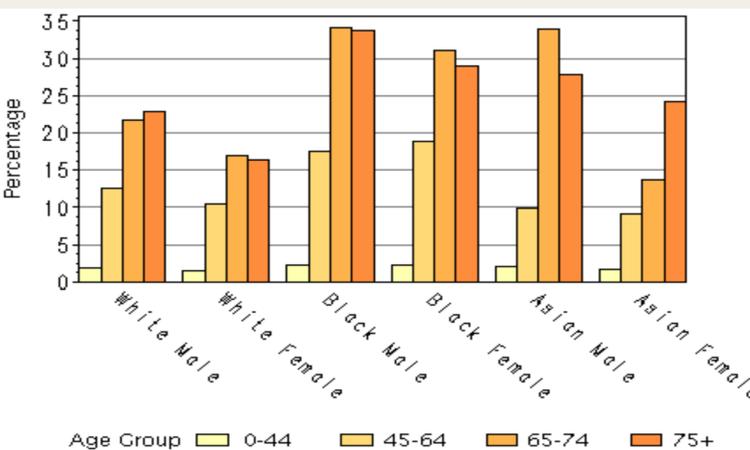
Compared to non-Hispanic whites, the risk of diagnosed diabetes is 77% higher among non-Hispanic African-Americans (CDC, 2012).

Purpose

➤The purpose of this poster is to share information with other healthcare providers regarding the need to develop and utilize novel approaches to prevent DM2 in an AA male population.

➤There were two distinct aims for this project:
(1) To utilize a culturally appropriate intervention for diabetes prevention education to be delivered to AA males in defined settings.
(2) To determine whether a diabetes education intervention targeted at AA men in any stage will lead to progression to subsequent stages on the *Motivational Interviewing(MI)* scale, according to the Transtheoretical Model of Behavioral Change (TTM) (5 & 6).

Methods

The design of the project was to obtain participants by a convenience sample, in three different rural or underserved locations, then to provide DM2 prevention education utilizing the National Diabetes Education Program(NDEP)(8). After this, pre and post intervention questionnaires with the MI stages of change were collected(3). The participants who were recruited were primarily AA males, though no one was excluded for ethical and confidentiality reasons.

Major Findings/Results

Demographics

The intervention was delivered in the planned settings of a wellness occupational Clinic, Dublin, Georgia, a Volunteer Clinic, as well as a Homeless Clinic in Macon, Georgia. The total number of participants was 52, 79.6 percent male, and 16.7 percent female. The mean age of the participants was 38.75 SD 9.998, the mean FBS was 94.49, SD 13.293. There were 28 AA males, with 11 having IFG.

Statistical Analysis

For the analysis, SPSS v. 20.0 was used (SPSS, Chicago, USA) and the significance level was set at $\leq 0.05\%$. A paired *t* test was performed to determine the statistical significance between the pre-test and post-test scores on the TTM scale.

Paired sample *t* test

In the AA male population (n=28), the items that were found to be statistically significant at the $p< 0.001$ level were: fiber and grains; at the $p< 0.01$ level: fruits and vegetables and activity; and at the < 0.05 level: exercise, lifestyle, and sweets.
  The items of weight, strategies and sports were identified as not statistically significant, but all items were shown to have a positive trend as evidenced by the decrease in means pre to post.

Limitations

Small sample size; convenience sample

Research Implications/Conclusion

As hypothesized, the statistical analysis did show a statistically significant positive trend in the AA male population pre and post intervention in most items, with the exception of weight, strategies, and sports . Utilizing the MI technique to deliver the NDEP teaching curriculum to prevent or delay DM2 to AA males has been shown in this study to have a positive impact on the behavior change as demonstrated by the decrease in means in all items analyzed, including sports weight, even though these two were not found to be statistically significant. This small study helps to verify that to the use of the NDEP in an AA population to bring about healthy behavior change for preventing or delaying DM2 is effective.

Major References

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