



Faith-Based Culturally-Tailored Diabetes Prevention Program for African Americans

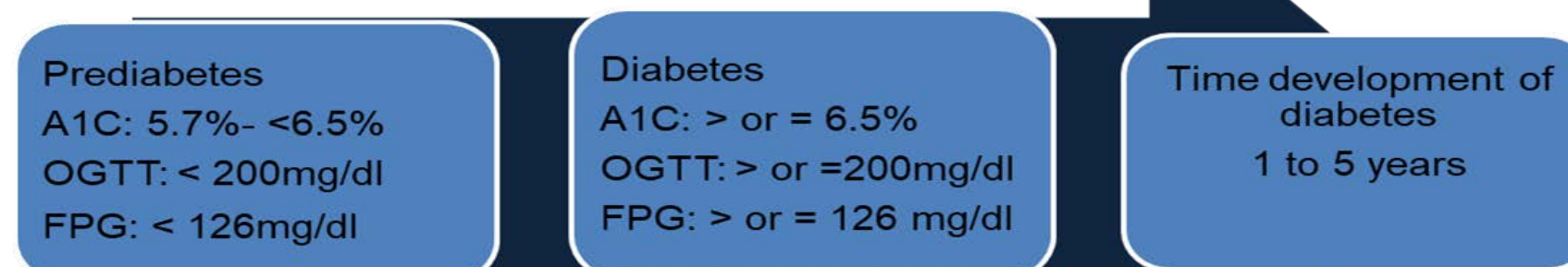
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Purpose

- Study was conducted to evaluate the effectiveness of a faith-based culturally-tailored diabetes prevention program (DPP) in mitigating the risk for the development of type 2 diabetes mellitus (T2DM) in a select group of African American (AA) church members. The principal investigator sought to mitigate the risks for acquiring T2DM through implementation of the National Diabetes Education Program (NDEP) "Power to Prevent" curriculum. 17 participants completed the study. All participants were members of the church.

Background



- Globally: > 245 million persons with T2DM in 2017
- Globally: > 371 million with prediabetes in 2013
- US: > 30 million Americans with diabetes
- US: > 84 million Americans with prediabetes
- Texas: > 2.8 million in 2012 (14.2% of pop.).
- T2DM in US 90%-95% of diabetes cases
- DM 7th leading cause of MM in US
- Ethnic minority groups disproportionately affected by T2DM
- Globally: \$827b(USD) in 2014
- US: \$327b in 2017
- Texas: \$18.5B in 2012
- Harris County: > \$58 million 2016

Research Question

- In a select group of AA church members age 18 years to 68 years, will the implementation of a faith-based culturally-tailored DPP result in a 5% to 7% reduction in weight, reduction in BMI, increased physical activity, increased nutrition knowledge, increased knowledge of diabetes prevention strategies over eight weeks.

Methodology

- Design: One group pre-test post-test design
- Protection of human subjects: Expedited Review IRB approval
- Participants: AA church members age 18 to 68 years
- 34 screened
- 27 qualified (with snowball effect)
- 30 needed for statistical power
- 17 completed the study

Aims of the Study

- Weight reduction 5% to 7% from baseline
- Increased nutrition knowledge
- Increase physical activity
- Increased knowledge of diabetes prevention strategies
- Secondary outcome: BMI reduction
- (In this group of AA church members)



1.Goodfreephotos. Retrieved from <https://www.goodfreephotos.com/food/basket-of-fruits-and-vegetables.jpg.php>
2.Emancipation Park. Retrieved from <https://commons.wikimedia.org/wiki/File:Emancipationparktown.jpg>
3.Clipart library. Retrieved from <http://clipart-library.com/clipart/weight-scale.png-picture.htm>

Theoretical Frameworks

- Stetler model of research utilization
- Evaluate the evidence for translation/implementation of the DPP for AAs
- Use the best evidence (ROL/synthesis), the PI's clinical expertise, while respecting participant's values to implement the DPP in this at-risk group
- Neuman systems model: Lines of defense
- Levels of prevention; system in balance

Intervention

- PI delivered 11 of 12 "Power to Prevent" educational sessions weekly for eight weeks. On three occasions, PI delivered two sessions.
- One session was omitted because it targeted persons with diabetes
- Educational sessions were conducted at the church.

Data Collection

Tools:

Existing tools used:

- Diabetes Risk Test
- Pre-sessions and post-sessions questionnaire
- Demographic data questionnaire (developed by PI)
- Weekly weight of each participant

**Small Steps, Big Rewards
to Prevent Type 2 Diabetes
(NDEP, n.d.)**

Data Analysis

- Descriptive statistics (SPSS 24) for: DRT
Percentage weight loss
Demographic variables
- Paired t-test for: Pre-sessions post-sessions questionnaires.
BMI
- 17 participants included in data analysis

Results /Outcomes

- Percentage weight change -1.69%
- Diabetes prevention strategies : $p = 0.040$
- Physical Activity: $p = 0.188$
- Nutrition: $p = 0.000$
- BMI: $p = 0.109$
- Limitations:** Small sample size
- High attrition (44.6%)
- Unable to generalize to population ($p < .05$)

Deliverables

- Pastor
- Congregation
- Conferences
- Publication: Peer-reviewed journal
- Ongoing DPP in places where AA work, learn, and worship.
- Sustainability (ongoing in AA churches/communities...



Nursing Implications

- Social change : Access to healthcare
- Population health: Community programs
- Policies: Healthy neighborhoods/crimes/safe parks
- Sustainability : Ongoing DPPs in at-risk populations

Reference

- National Diabetes Education Program. (n.d.). *Power to Prevent: A family lifestyle approach to diabetes prevention*. Retrieved from <https://www.yumpu.com/en/document/view/4746602/power-to-prevent-national-diabetes-education-program-national->