Using a Culturally Sensitive Lifestyle Modification Toolkit To Manage Hypertension Among West African Immigrants

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Introduction

- Hypertension is a significant public health concern
- An estimated 1.13 billion people worldwide have hypertension (World Health Organization, 2019)
- People of African descent are disproportionally impacted by hypertension, compared with other racial and ethnic groups (Muntner, 2017)
- Lack of education- barriers that high-risk West Africans face to controlling their blood pressure
- Hypertension educational programs among high-risk population is essential to managing blood pressure.

Background and Significance

- People of African descent are at a greater risk of non-fatal stroke, fatal stroke, cardiovascular disease death and end-stage kidney disease (Lackland, 2015)
- The mortality rate is 4 to 5 times greater in people of African descent compared to their white counterparts (Lackland, 2015)
- Studies have shown that hypertension is poorly managed among blacks due to limited access to medical care, cost of treatment, and educational deficits (Still, Ferdinand, Ogedegbe & Wright, 2015)

Aims

- Improve blood pressure control in West African immigrants
- Increase hypertension knowledge
- increase adherence to lifestyle modification and anti-hypertensive medications

Methodology

- **Design:** A Quasi experimental using pre and post test
- **Setting**: West African church in central NJ
- **Participants**: Male or female West African immigrants between the ages of 21-65 who self-reported to have a preexisting diagnosis of HTN
- **Sample Size**: 14 participants met inclusion criteria and signed consent

Interventions:

Phase I:

❑ Week 1:

- Recruitment-pre-study blood pressure collected, demographic questionnaires

❑ Week 2:

- Pre-intervention blood pressure recorded twice a day
- Pre-intervention diet recorded daily
- Hypertension knowledge and lifestyle modification (HELM) pretest and Hill-Bone Medication adherence pretest.

Phase II

❑ Week 3:

- 45 minutes HTN education presentation via zoom-introduction to the toolkit
- Proper education of measuring blood pressure-one to one session- teach back

Phase III:

❑ Week 4, 5, 6:

- Post intervention blood pressure recorded twice a day
- Weekly follow up phone calls- additional support, adherence to lifestyle modification and medication adherence reinforce
- Week 6- hypertension knowledge and lifestyle modification, and medication adherence post test administered

Components of the toolkit:

- Blood pressure monitor
- 30 minutes West African gospel praise workout video
- Glancer adult portion control plate
- Blood pressure educational materials

Outcome measures

- OMRON Blood pressure monitor
- HELM scale to assess hypertension knowledge and lifestyle management
- Hill-Bone scale to assess medication adherence

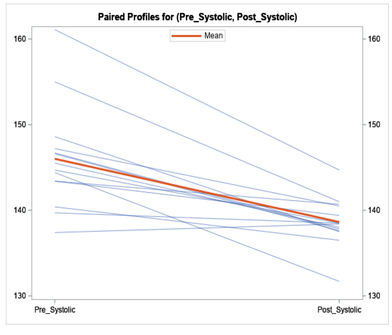
Data Analysis

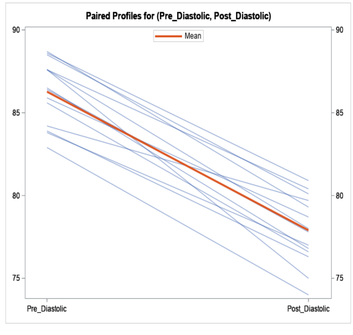
- Descriptive statistics was used to described the sample size using frequencies and percentages.
- The non-parametric Wilcoxon signed rank sum test was performed for pre- and post-intervention differences of three outcomes: hypertension knowledge-lifestyle questionnaire score, the medication adherence questionnaire score, and blood pressure measurements

Results

Increase in Hypertension Knowledge	Increase in Medication Adherence
Mean Pre intervention Score: 47 Mean Post Intervention Score: 91.0 The Difference between pre and post scores was statistically significant S=52.5 (p=0.0001)	Mean Pre intervention score: 25.0 Mean Post intervention score: 35.9 The Difference between pre and post scores was statistically significant S=7.0 (p=0.0001)

Systolic Blood Pressure	Diastolic Blood Pressure
Mean Pre intervention SBP 146 Mean Post intervention SBP 138 The Difference in DBP Pre and post measure was statistically significant S= 51.5 (p=0.0002)	Mean Pre intervention DBP 86.3 Mean Post intervention DBP 78.0 The Difference in SBP Pre and post measure was statistically significant S= 52.5 (p=0.0001).





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Discussions

Implications for clinical Practice

- Recommend home blood pressure monitoring as part of a multifaceted approach to manage hypertension in all primary care settings
- Introduce weekly follow-up calls after office visits to reinforce hypertension knowledge, medication adherence, and healthy lifestyle habits
- Individualize patient care plan to fit cultural needs

Implications for Health Care Policy

- Hypertension awareness seminar nationwide targeting high risk population

Implications for Quality and Safety

- Education lowers risk of cardiovascular mortality and morbidity
- Improve patient outcomes

Economic Implications

- Controlled blood pressure can lower the nation's financial burden

References

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