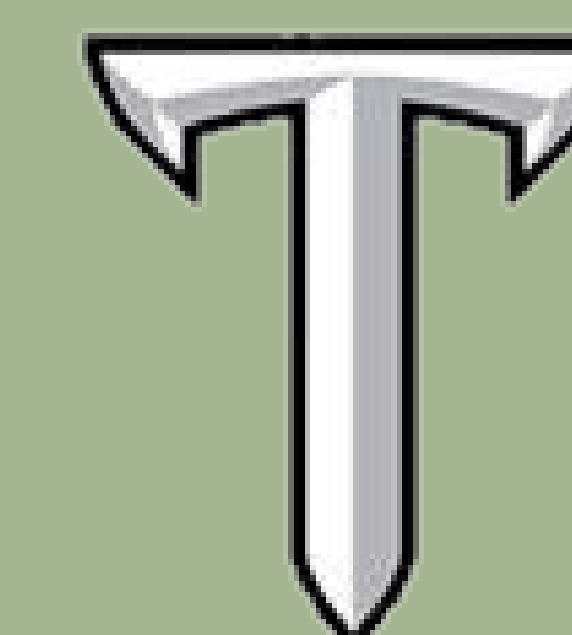


Piloting a Faith-based Self-care Hypertension Management Program



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Introduction:

Faith-based organizations are an innovative means for educating high-risk populations about chronic disease management. Incorporating faith-based settings is a great way of reaching out to individuals in the community to improve self-care activities and enhance lifestyle modifications.

Hypertension (HTN) is a public health concern as it is associated with high mortality and morbidity.

- Approximately 75 million adults, about 1 in every 3, are expected to have HTN in the US (CDC, 2019);
- 54% of people have uncontrolled HTN and more than 1,000 deaths occur daily (CDC, 2019);
- It is estimated that about 63,000 Americans will die from heart disease every year, which is 1 in every 4 deaths (CDC, 2017)

Enhancing self-care through lifestyle modifications is necessary for successful management of HTN. Research has demonstrated that health promotion strategies in a faith-based setting have been effective in influencing self-care behaviors related to HTN.

Faith-based organizations partnership with communities can advocate for a care model that focus on lifestyle modifications to improve BP control. Additionally, it offers healthcare professionals opportunities to explore different options to extend education into the community and reach vulnerable populations.



Purpose

The purpose of the pilot study was to determine if a four-week educational program would improve self-care activities related to hypertension management in a faith-based setting.

Learning Objectives:

- Identify non- traditional settings to promote health promotion activities
- Identify three subscales of Hypertension Self-Care Profile (HBP-SCP) scale
- What are the components of lifestyle modifications

Methods:

A pilot study using a quasi-experimental research design recruited 23 African Americans (N = 23) from a faith-based setting in the state of Texas. An interactive educational intervention was delivered over four-weeks that focused on lifestyle modifications to promote self-care related to HTN. Data were collected at pre- and post-intervention using the Hypertension Self-Care Profile (HBP-SCP) scale.

Procedures:

- Recruitment began following IRB approval by the educational institution and support by the identify community religious organization.
- Advertisement of the pilot study occurred by post of flyers and word of mouth through announcements at services and small group meetings.
- Additionally, a raffle of a \$50 gift card to a local whole foods store was utilized to help promote participation.
- Eligibility criteria for study participation included individuals over the age of 18, a member of the church, and a diagnosis of taking oral medications to treat HTN.
- During the first meeting, participants were provided the informed consent and initial screening (BP reading and pre-intervention questionnaire).
- Following data collection participants were involved in a 1-hr meeting that included HTN education and BP management.
- A second 1-hr meeting was used to provide interactive education on lifestyle modifications that included meal planning, reading food labels, portion control, and physical activity.
- The second meeting occurred 4-wks from the first meeting. Following the educational session, participants completed the post-intervention questionnaire and BP readings were obtained.

Survey Instrument:

The Hypertension Self-Care Profile (HBP-SCP) scale was used both pre- and post-intervention to measure THN self-care behavioral change. The HBP-SCP is a self-reported questionnaire involving three sub-scales: behavior, motivation, and self-efficacy.

Each HBP-SCP scale included 20 items written at the 6th grade reading level, with higher scores indicating higher levels of HTN self-care behavior, motivation, and self- efficacy. Each item on the scale was rate using a 4-point scale, with 1 being “not relevant” and 4 being “very relevant.”

The HBP -SCP scale was completed by participants at the beginning of the study as baseline data and at the end to identify if change had occurred after the intervention for lifestyle modification. In addition, demographic information was from the participants and included age, sex, education, diagnosis of HTN, taking oral antihypertensive medication and challenges with HTN such as diet, exercise, and stress.

Reliability statistics were computed for HBP-SCP subscales. Cronbach’s alpha for pre- behavior (.789), pre- motivation (.952), pre-self-efficacy (.958) and post-behavior (.676), post-motivation (.955) and post-self-efficacy (.963). Alpha coefficients above 0.70 were considered acceptable.



Results:

The majority of participants were males 52.2% (n = 12), 52.2 0% (n= 12) were between the age of 35 to 44 years old, and 69.6 % (n=16) had associates or bachelor’s degrees, and all the participants were African Americans 100% (n= 23).

Most of the participants reported a diagnosis of HTN of less than one year (73.9%, n=11) and (52.2%, n=12) had a family history of HTN. The major challenges of HTN were diet (43.5%, n=10) and exercise (39.1%, n=9).

Frequencies of Demographic Characteristics of the Sample (N = 23)

Characteristics	n	%
Age		
25-34 years	2	8.7
35-44 years	12	52.2
45-54 years	8	34.8
over 55 years	1	4.3
Gender		
Female	11	47.8
Male	12	52.2
Education		
Some college	3	13.0
Associates or Bachelor’s degree	16	69.6
Graduate degree	4	17.4
Under the care of a provider		
Yes	14	60.9
No	9	39.1
Health Insurance		
Yes	21	91.3
No	2	8.7
Frequency of provider visit		
0-3 months	1	4.3
3-6 months	4	17.4
Once a year	15	65.2
Never	3	13.0

Pre- and Post-Mean and Standard Deviation for Behavior, Motivation, and Self-Efficacy (N = 23)

Subscales	Pre Intervention		Post Intervention	
	M	SD	M	SD
Behavior	53.13	7.86	62.08	6.69
Motivation	65.17	12.02	74.00	8.25
Self-Efficacy	65.73	12.76	73.48	9.57

Mean, Standard Deviation, and Range for Blood Pressure Pre- and Post-Intervention (N = 23)

	Pre-Intervention			Post Intervention		
	M	SD	Range	M	SD	Range
Blood Pressure						
Systolic	128.78	13.86	99-147	125.30	15.34	99-157
Diastolic	78.87	10.60	62-96	79.00	12.84	58-118

Significant differences were found in the self-care subscale scores after the intervention. Improvement was seen from the pre-intervention behavior (M = 53.13, SD = 7.86) to post-intervention behavior (M = 62.08, SD = 6.96) (t₍₂₂₎ = -7.08, p < .01, 95% C. I. = -11.58 - -6.33). Additionally, significance was noted in pre-intervention motivation (M = 65.17, SD = 12.02) and pre-intervention self-efficacy (M = 65.73, SD = 12.76) with post-intervention motivation (M = 74.00, SD = 8.25) (t₍₂₀₎ = -4.77, p < .01, 95% C. I. = -12.66 - -4.99) and post- intervention self-efficacy (M = 73.48, SD = 9.57) (t₍₂₀₎ = -4.24, p < .01, 95% C. I. = -11.52 - -3.96).

There was no significant difference in the pre-intervention systolic BP (M = 128.78, SD = 13.86) and post-intervention systolic BP (M = 125.30, SD = 15.34) (t₍₂₂₎ = 1.081, p > .05) and between the pre-intervention diastolic BP (M = 78.87, SD = 10.60) and post-intervention diastolic BP (M = 79, SD = 12.84) (t₍₂₂₎ = -.046, p > .05). While there was not a significant statistical difference in the systolic BP and diastolic BP after the intervention, there was clinical significance with a decrease in the number of participants whose systolic BP and diastolic BP were at Stage 1 and Stage 2 HTN.

The primary objective of the pilot study was to determine the effectiveness of a four-week educational intervention to improve self-care activities. A majority of the participants indicated that diet and exercise were the most common challenges related HTN management. The post-intervention assessment showed an improvement in systolic BP, which decreased by 3.46 mmHg, and an improvement was noted in the category of normal BP and reduction in Stage 1 and 2 BPs. Self-care activities related to behavior, motivation, and self-efficacy showed significant improvement post-intervention; with greater improvement in behavior. These findings indicated that improvement in self-care activities can help to improve BP control.

Recommendations:

Nurses have a vital role in educating the patients with HTN and those who are at risk for developing HTN to decrease mortality and morbidity. Nurses can assist patients to reach their BP goal by educating about self-care activities. Seeking patients in places where they feel comfortable to promote teaching is important rather than relying on patients to seek care.

Engaging discussions in a faith-based setting about HTN education can promote more patient involvement as many times patients does not get the needed time or attention in clinics. Nurse need to reach out to high-risk populations outside of the traditional healthcare settings.

This study supports that faith-based settings can open doors to reaching high-risk, vulnerable population in underserved area and successfully implement behavioral modifications to improve self-care activities.