

2021

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The Effect of Lifestyle Modification Educational Intervention on Increasing Knowledge of Hypertension Management Among African Americans

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BACKGROUND AND SIGNIFICANCE

- ❑ In the United States, nearly half of adults (108 million, or 45%) have hypertension defined as a systolic blood pressure \geq 130 mm Hg or a diastolic blood pressure \geq 80 mm Hg (4). More than 54% of non-Hispanic African-American men and women have high blood pressure (4). Hypertension in the African American population is more prevalent, destructive, and directly linked to increased risk of cardiovascular disease (4,5).
- ❑ Lifestyle behavior modifications in combination with pharmacological treatment is the first line of intervention for all patients with hypertension, both of which are important for management of the disease and prevention of complications (2,3,4).
- ❑ Non-pharmacological therapies such as education on disease management, medication adherence, and lifestyle modification, which comprises of increased physical activity, DASH diet, and stress reduction have been shown to have immense benefit in the management of hypertension (1,2,5,6, 7).

PROJECT AIMS

This project aims to evaluate the effectiveness of American Heart Association (AHA) recommendation of lifestyle modification educational intervention to increase knowledge of hypertension among the African American population in a rural health clinic in Douglasville, Georgia.

Proper identification of blood pressure, weight management, physical activity, and healthy eating using AHA recommendation of DASH diet will provide the foundation for future interventions aimed at reducing the prevalence of hypertension.

CLINICAL QUESTIONS

- ❑ Will an educational intervention related to lifestyle modification increase the participants' knowledge of hypertension?
- ❑ Will an educational intervention related to lifestyle modification lead to an improvement in the participants' blood pressure?
- ❑ Will an educational intervention related to lifestyle modification lead to weight loss in the participants?
- ❑ Will an educational intervention related to self-efficacy lead to an improvement in the participants' self-efficacy?

PROJECT DESIGN

Design: An educational intervention project; using pretest and posttest design.

Setting: Outpatient family clinic in Douglasville, Georgia.

Sample: Homogenous sampling, 43 African American adult participants.

Tools: Hypertension Knowledge Level Scale (HK-LS) tool and Hypertension Management Self-Efficacy Scale.

Intervention/description: The study was implemented in three phases within ten weeks:

- ❑ **Planning Phase:** Week 1 to 2 comprised of flyer distribution, sign up sheet, and registration of the participants.
- ❑ **Implementation Phase:** Week 3 consisted of participants' identification, informed consent, blood pressure and weight measurement, pretest knowledge and self efficacy assessment, and education. The AHA lifestyle modification recommendation for hypertensive patients education was done in three days. One hour per session twice daily. Six educational sessions in total but participants were required to only attend one session. Week 4 to 9 biweekly phone calls were made to check on the participants. Documentation of participants progress/concerns.
- ❑ **Evaluation Phase:** Week 10 comprised of evaluation, posttest assessment, addressed sustainability, and future expectations.

RESULTS

A total of 43 patients consisting of 26 women and 17 men participated in the study. Paired t-test was used to analyze the pre and posttest scores.

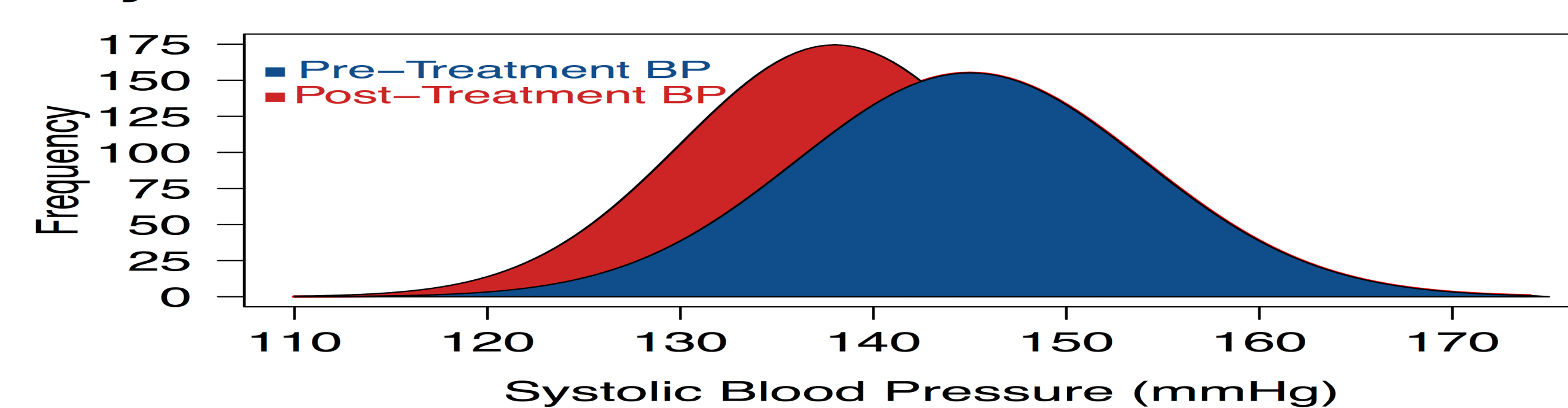
A significant increase in knowledge of hypertension was demonstrated from baseline ($M = 16.61$, $SD = 1.55$) to eight weeks ($M = 20$, $SD = 1.31$) $t(40) = -17.24$, $p < .001$. This result suggests that lifestyle modification educational intervention increased knowledge of hypertension.

A significant decrease in systolic blood pressure was demonstrated from baseline ($M = 149.80$, $SD = 14.21$) to eight weeks ($M = 143.00$, $SD = 13.54$) $t(40) = 6.25$, $p = .001$. A significant decrease in diastolic blood pressure was also demonstrated from baseline ($M = 81.54$, $SD = 8.71$) to eight weeks ($M = 77.44$, $SD = 7.60$) $t(40) = 6.25$, $p = .001$.

A significant decrease in weight was demonstrated from baseline ($M = 194.00$, $SD = 21.98$) to 8 weeks ($M = 189.67$, $SD = 18.95$) $t(39) = 2.97$, $p = .005$.

There was also a significant increase in the participants' self-efficacy from baseline ($M = 18.51$, $SD = 3.39$) to eight weeks ($M = 23.90$, $SD = 2.80$) $t(40)$

Systolic Blood Pressure Before and After Treatment



CONCLUSIONS

Implications for practice:

- ❑ The study concluded that lifestyle modification educational intervention increased the participants' knowledge of hypertension.
- ❑ The study further showed that as the knowledge level on lifestyle modification increased, the self-efficacy level also improved.
- ❑ It is important to educate health care professionals on how to communicate effectively to improve patients' knowledge of hypertension.

Limitations: Due to small sample size, cannot be generalizable to population. Also it was conducted at only one clinical setting. Considerations should be made when determining the duration and intensity of exercise to prevent undue stress on the cardiovascular system.

Recommendations for Future Research: Studies should focus on increasing awareness of the benefits of lifestyle modification education to improve community knowledge of hypertension.

ACKNOWLEDGEMENTS

Dr. Sheryl Winn, DNP – Committee Chair

Dr. Glynnis Haley, DNP – Second Committee Member

Dr. Ketevan Kobaidze, PhD – Third Committee Member

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