

Prevalence Rates of Hypertension Self-Care Activities Among African Americans

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BACKGROUND

Just over a quarter percent of US adults have high blood pressure (29%). African Americans experience a higher prevalence of hypertension than Whites. They also have lower rates of control of hypertension which may lead to greater health disparities and greater negative health consequences. The primary treatment for high blood pressure is anti-hypertensive drug therapy; however, drug therapy alone is not sufficient without other lifestyle changes. Self-care activities, recommended by the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7) are crucial to the management of blood pressure. The seventh report of the JNC7 recommends that individuals with hypertension practice six self-care activities in order to manage chronic hypertension.

Purpose

The purpose of this study is to report on a new self-report measure, the Hypertension Self-Care Activity Level Effects (H-SCALE). The H-SCALE assesses the 6 prescribed hypertension self-care activities for optimal control of blood pressure. We also present the prevalence rates for these self-care activities among African Americans with hypertension.

H-SCALE

The H-SCALE was designed specifically for use in primary care settings and in large epidemiological surveys. The JNC7 recommends individuals with hypertension practice the following:

1. adherence to anti-hypertensive medication regimens,
2. weight loss or maintenance of ideal body weight,
3. adoption of low-salt eating plan,
4. regular physical activity for 30 minutes most days of the week,
5. limiting alcohol intake, and
6. ceasing tobacco use.

Once a draft of the H-SCALE was completed, it was reviewed by an expert panel. Revisions were made based on the panels suggestions and a pilot study was conducted with a sample of 44 adults with hypertension. Following the results from the pilot study, a larger, community based study was conducted. Those results are presented here.

Methods: Participants

Participants were recruited as part of the Caring for Hypertension in African American Families (CHAAF) study. CHAAF was a cross sectional study, conducted from August 2008 through Spring 2010. Eligible participants were African American, at least 21 years old, diagnosed with high blood pressure for at least 6 months, and were prescribed anti-hypertensive medication.

Methods: Measures and Scoring

Outcome measures and items assessed were six self-care activities included in the H-SCALE: medication adherence (3 items), low salt diet (12 items), physical activity (2 items), smoking (1 item), weight management (10 items) and alcohol (3 items). For medication, adherence was categorized as 100% compliant on 7 out of 7 days. For smoking and alcohol, adherence was considered to be abstinence. For low salt diet, participants were adherent if they practiced low-salt techniques on 6 out of 7 days. Weight management adherence was based on agreement with all 10 statements. Physical activity adherence was based on a combination of activity and exercise on most days.

H-Scale Items

Medication: How many of the past 7 days did you:

1. Take your blood pressure pills?
2. Take your blood pressure pills at the same time every day?
3. Take the recommended number of blood pressure pills?

Low-salt Diet: How many of the past 7 days did you:

4. Follow a healthy eating plan?
5. Eat potato chips, salted nuts, or salted popcorn?
6. Eat processed meats such as ham, bacon, bologna, or sausage?
7. Eat smoked meats or smoked fish?
8. Eat pickles, olives, or other vegetables in brine?
9. Eat five or more servings of fruits and vegetables?
10. Eat frozen prepared dinners or frozen pizza?
11. Eat store bought or packaged bakery goods?
12. Salt your food at the table?
13. Add salt to food when you're cooking?
14. Eat fried foods such as chicken, French fries, or fish?
15. Avoid eating fatty foods?

H-SCALE Items (continued)

Physical Activity: How many of the past 7 days did you:

16. Do at least 30 minutes total of physical activity?
17. Do a specific exercise activity (such as swimming, walking or biking) other than what you do around the house or as part of your work?

Smoking: How many of the past 7 days did you:

18. Smoke a cigarette or cigar, even just one puff?

Weight management: In order to lose weight or maintain your weight...

19. I am careful about what I eat.
20. I read food labels when I grocery shop.
21. I exercise in order to lose or maintain weight.
22. I have cut out drinking sugary sodas and sweet tea.
23. I eat smaller portions or eat fewer portions.
24. I have stopped buying or bringing unhealthy foods into my home.
25. I have cut out or limit some foods that I like but that are not good for me.
26. I eat at restaurants or fast food places less often.
27. I substitute healthier foods for things that I used to eat.
28. I have modified my recipes when I cook.

Alcohol

29. On average, how many days per week do you drink alcohol?
30. On a typical day that you drink alcohol, how many drinks do you have?
31. What is the largest number of drinks that you've had on any given day within the last month?

Methods: Data analysis

Descriptive statistics were calculated using frequencies, means, standard deviations for demographic and health characteristics. Cronbach's alphas were calculated to assess internal consistency of each of four subscale with multiple items.

Results

Respondents were average age of 53 (range 22-88), primarily women, not currently married, over half owned their own home, middle class, had average 13 years since diagnosis of hypertension, 11% were uninsured, and 47% were obese.

Cronbach's alphas were acceptable ($\alpha \geq .70$) for all 4 subscales (range 0.74-0.88) indicating that the scale can be used in community-based population studies.

Prevalence Rates of Self-Care Activities (n=186)

Self-Care Activity	(%)
Non-Smoking	74.7
Alcohol Abstinence	65.1
Medication Adherence	58.6
Physical Activity	52.2
Weight Management	30.1
Low Salt Diet Adherence	22.0

Conclusion

The exploratory study provided evidence for a new survey instrument to assess hypertension self-care activities based on clinical recommendations for hypertension management. The measure used in this study, H-SCALE, is a valuable tool, providing useful information to health care providers about patients' self-care activities, which can create opportunities to intervene. Evidence exists in regards to self-care activities and their ability to control blood pressure; better adherence to these activities is critical to closing the gap on hypertension and stroke related health disparities among African Americans. Based upon the results in this study, an increased focus on weight management techniques and following a low salt diet is warranted among African Americans; referrals to dietician or nutritionist may improve adherence to self-care activities.

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