Sigma's 30th International Nursing Research Congress
Nurse-Led Interventions to Improve Hypertension Outcomes in Uganda: A Mixed-Method Study

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Purpose:

The current global non-communicable disease (NCD) epidemic disproportionately impacts lower- and middle-income countries (Barr, et al, 2016; Guwatudde et al., 2015). In Uganda, NCDs cause an estimated 33% of deaths (WHO, 2018). Hypertension is the most prevalent NCD and the most modifiable contributor to cardiovascular disease, the leading cause of mortality globally (Ataklte et al., 2015; World Health Organization, 2015). Further accelerating the avoidable sequelae of hypertension is the fact that few people (35.9%, 28.1- 43.7) who receive treatment achieve blood pressure goals, in part due to low adherence to lifestyle modifications (Himmelfarb, Commodore-Mensah, & Hill, 2016; Musinguzi & Nuwaha, 2013; Peacock & Krousel-Wood, 2017). Nurses are ideally positioned to enhance patient adoption of lifestyle modification to improve long-term, individual patient hypertension outcomes and collectively achieve the related United Nations Sustainable Development Goals (Katende & Donnelly, 2016; Rabkin et al., 2018; Spies, Bader, Opollo, & Gray, 2018).

Bundling, or combining evidence-based interventions, creates synergy and maximizes patient outcomes. One effective primary care intervention is nurse-led adherence clubs (Beratarrechea et al., 2014; Khabala et al., 2015). Another is incorporating text-messages into care (Venables et al., 2016). The innovative intervention to be tested in this study is the combination of monthly nurse-led adherence clubs focusing on education with the addition of weekly text message reinforcement, referred to as the Bundled Education and Support with Text (BEST) intervention. These components were selected because of strong evidence in resource-constrained settings of effectiveness and efficiency. Bundled nurse-led interventions can be incorporated into diverse clinic settings to effectively, efficiently, and sustainably enhance patient outcomes.

The overarching goal is to determine roles nurses can develop to improve hypertension-related population outcomes. The purpose of the present study is to evaluate the bundled evidence-based and nurse-led interventions designed to increase lifestyle modification adoption of patients with hypertension in Uganda.

Methods:

The mixed method study is being implemented in a purposive sample of 52 adults with hypertension in an outpatient clinical setting in Kampala, Uganda. Two Ugandan nurses lead monthly hypertension groups, educate patients about lifestyle modifications, encourage patient sharing and interaction, and follow up with weekly text message reinforcement of the education. The impact of the nurse-led interventions on patients' physiological behavior are being determined by measuring change in patients' blood pressure and weight from baseline and at 3, 6, and 9 months of BEST implementation. Medication adherence was assessed at the study onset with the Self-Care Hypertension Inventory (SC-HI) The SC-HI is a 24-item instrument that measures self-care maintenance, management, and confidence.

At the completion of the study, the input of the participants and nurse leaders will be sought and used to adapt the BEST intervention for implementation in different and broader contexts. Focus groups will be conducted with patient participants to obtain their perceptions of the benefits and barriers to participation. Through interviews with the nurse group leaders their perceptions of the BEST intervention and enacting the nurse leader role will be gained. Barriers and facilitators in the role will be explored and suggestions for improvement will be requested. Content analysis of the transcripts from the focus group and interviews will be conducted and a collaborative agreement of themes and sub-themes will be reached between the Ugandan and United States researchers. The resulting themes will be shared and agreement sought from patient and nurse-leader participants.

Results:

The final results are pending. The monthly education and support meeting to date have been well attended and the patient discussion robust. The patients have expressed appreciation of the information being provided. The meeting includes the provision of a low salt healthy snack. During each meeting, patients have been observed taking notes in the BEST journal provided to monitor lifestyle modification activities. Patients report results of increased activity, decreased salt intake, and improved blood pressure. Data collection is underway.

Patient focus group and nurse leader interviews will be completed during April of 2019 and triangulation of physiologic data, self-reported medication and lifestyle adherence and participant perceptions will be undertaken. Results will be used to inform subsequent and scalable nurse-led interventions.

Conclusion:

Nurse-led hypertension interventions are key to achieve the United Nations Sustainable Development Goals of reducing by one third premature mortality from non-communicable diseases (UNSDG, 2017). In Uganda and globally, hypertension contributes to mortality and lifestyle modification is an essential component of preventing and treating hypertension. More studies are needed to determine the best way to prepare and mobilize nurses in low resource settings to reduce the negative sequelae and improve population hypertension outcomes.

Title:

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Keywords:

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Abstract Summary:

Approximately 30% of adults in Uganda have hypertension, a significant modifiable risk factor for cardiovascular disease. A mixed method study to evaluate nurse-led interventions to enhance lifestyle modifications and improve patient outcomes is currently being implemented in Kampala, Uganda. The collaborative multinational development process and preliminary results will be presented.

Content Outline:

1. Introduction
1. Ugandan and US research partners
2. Background on collaborative work in Uganda
3. Nursing mobilization to meet UNSDG, WHO and NCD goals
2. Research / Study Background
1. Global Non-communicable Diseases and Hypertension
2. Uganda Morbidity and mortality secondary to Hypertension
3. Lifestyle modification intervention evidence for practice
1. Nurse-led education
2. Support Club
3. Targeted education
4. mHealth text message follow up
4. Purpose
1. Improve hypertension population outcomes
2. Increase medication adherence
3. Enhance adoption of lifestyle modification
4. Decrease blood pressure
5. Enhance achievement of healthy weight
5. Methods
1. Design: Mixed Methods
2. Sampling: Purposive Sampling N= 52 adult clinic patients with hypertension
3. Human Participation Protection: IRB approval by US University and University Ethical Board approval and National approval in Uganda
6. Data Collection to date at 3 & 6 months Study runs August 2018 through April 2019
1. Self-Care Hypertension Inventory
2. Blood pressure and weight checks
7. Baseline and change
1. Self-care hypertension inventory
2. Blood pressure
3. Weight
8. Discussion
1. Implication for clinical nursing practice
2. Implication for nursing education
3. Implications for nursing policy to achieve UNSDG and WHO goals
9. Future research

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