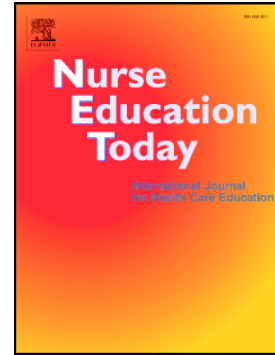


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Transformational leadership as a framework for nurse education about hypertension in Uganda

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Transformational Leadership as a Framework for Nurse Education about Hypertension in  
Uganda

**Abstract**

**Aims**

The aim of the study was to describe nurses' knowledge, skills, and confidence related to hypertension and to assess the impact of a hypertension education initiative based in transformational leadership.

**Methods**

The exploratory study was conducted using a pre and posttest model of 18 Ugandan nurses during June of 2016 to assess knowledge and attitude about hypertension. Biometric screening of study participants was completed. Follow up information was collected from participants via email.

**Results**

Paired sample *t*-test revealed the nurses had increased knowledge after completion of workshop. Follow up e-mail query revealed the participants had acted on content of workshop and implemented programs in their communities to screen for and provide education related to hypertension. Biometric screening of participants found significant risk factors for hypertension but less than expected prevalence of hypertension.

**Conclusion**

Despite having more formal education related to hypertension and healthy behaviors, nurses are at risk for obesity and hypertension. Their knowledge and commitment can be improved by an educational workshop. Linking educational workshops to a transformational leadership model that incorporates leadership of self, others, and systems has the potential to enhance nurses' health and leadership skills and to encourage dissemination of critical information.

## 1. Introduction

Proactively preparing nurses and students to meet population needs in a shifting global environment is challenging. Nurses must be agile; able to identify and respond expertly and efficiently to personal, patient, institutional, and system needs (Alleyne, Hancock & Hughes, 2011). The ability to meet the changing demands in complex health care systems mandates that nurses be leaders, in addition to care providers. Nurse educators adopt and adapt a wide variety of modalities to prepare graduates to best meet current and emerging population health needs. As leaders and role models for their students, colleagues, and communities, nurse educators often seek innovative ways to engage learners and prepare nurses. Transformational leadership theory has been successfully employed in many arenas to improve patient outcomes and nurse satisfaction (Fisher, 2016). Nurse education and continuing professional development may also benefit from Drenkard's adaptation of transformational leadership theory (2012) as a framework for enhancing engaged learning and thereby preparing population health focused nurses with leadership acumen.

Globally, cardiovascular disease accounts for nearly 17 million deaths every year, and is increasing rapidly (Schwartz et al., 2015; World Health Organization, 2015). Non-communicable diseases (NCD), and especially cardiovascular diseases, are increasing at an alarming rate. If the current trend continues, the highest mortality rate will be from NCDs in low to middle income (WHO, 2013). Hypertension is a significant component of, and an increasing contribution to, the burden of disease in sub-Saharan East Africa (Ataklte et al., 2015).

In 2008, the researchers who conducted this study began working together. The capacity building efforts of Uganda nurse leaders and educators have focused on education, leadership, and research methods. Over the years, studies have been collaboratively planned and

implemented on nursing research priorities, work-related quality of life, and task shifting in Uganda. The Ugandan team members identified the growing problem of NCDs and recommended focusing the team's work in 2016 on hypertension prevention and treatment due to the high prevalence and harmful sequelae.

## 2. Literature Review

Uganda, with 38 million people, has a health worker shortage, a significant prevalence of communicable diseases, and a growing problem with NCDs, placing an additional burden on its healthcare system (Schwartz et al., 2015). The HIV/AIDS epidemic overwhelmed available human resources and required innovative solutions such as preparing nurses as prescribers. An expanded nursing role may also be an appropriate response to the NCD epidemic. How can nurses' best be prepared to provide NCD education, screening, and treatment? To address this question, a feasibility study was conducted with Ugandan nurses using an approach to teaching content about one particular NCD, hypertension, within a framework of transformational leadership.

In sub-Saharan East Africa, hypertension affects an estimated 31% of the population. A systematic review of hypertension studies in sub-Saharan Africa that included 33 studies and 110000 total participants found that the prevalence of hypertension ranged from 14.7 to 69.9% with a median of 29% (Ataklte et al., 2015). Significantly, only 27% of the study's participants were aware that they had hypertension prior to participating in the respective studies (Ataklte et al., 2015).

Nurses in Uganda diagnose and treat malaria, HIV, and a myriad of neglected tropical diseases. The nurses implement programs and run clinics that are the backbone of care in communities that would not otherwise have access to health care. Nurses' expertise in leading

programs and managing clinics is evidence that nurses are the logical group to lead hypertension screening and treatment. However, nurses in Uganda are themselves at high risk for hypertension. By educating nurse leaders to be role models and decreasing their own risks of hypertension, their credibility to educate other healthcare providers and patients regarding hypertension is supported and increased. Transformational leadership provided a logical framework within which to enable and empower nurse educators to implement and lead change.

Transformational leadership is directed toward inspiring others, encouraging change, cultivating innovation, and instilling a desire to work beyond expectations (Fischer, 2016; Waite & McKinney, 2015). Such skills provide nurse educators with the ability to guide students and patients to better self-care. Drenkard (2012) outlines a conceptual framework that includes leadership of self, leadership in relation to others, and leadership in relation to systems. This multifaceted framework is ideal as a platform for engaging and developing leadership in nursing students. The 4I's of transformational leadership, Idealized Influence, Inspirational Motivation, Individualized Consideration, and Intellectual Stimulation are easily applied in the education of nurses. For this project, leadership of self was reflected in the nurses taking responsibility for their own health by adopting healthy behaviors to prevent hypertension. Leadership of others focused on the nurses' sphere of influence and included educating other nurses and healthcare professionals as well as families and communities about hypertension prevention and treatment. By educating nurse leaders about hypertension using a transformational leadership framework, nurses will be able to implement change in their own health habits while providing education and being role models in their communities for peers and patients. Perceptions of leadership of self, others, and systems data were gathered via a follow-up query about the application of knowledge since the transformational leadership hypertension workshop.

### 3. Methodology

#### 4.1 Ethical approval

The study received Institutional Review Board approval from Baylor University and Oklahoma Christian University. Ethics board approval was obtained from Makerere University School of Health Sciences' Research and Ethics Committee and the Ugandan National Council for Science and Technology (SS 4096). All study participants were provided verbal and written study information and written consent was obtained.

#### 4.2 Research Design

A cross-sectional study was conducted in two locations within Uganda during June of 2016.

In each location, prior to hypertension education, data were collected from the nurses attending a professional development workshop ( $N = 16$ ). In addition to demographic information, two tools were used to assess baseline nurse knowledge and attitudes about hypertension.

#### 4.4 Data Collection and Analysis

Knowledge was measured using a revision of Katende et al.'s Case Study Knowledge Assessment. The Health Care Providers' Knowledge and Attitude Toward Hypertension Prevention and Treatment was also administered. In the present study, the pre-test initial Cronbach's alpha as an estimate of internal consistency was 0.312. The post-test Cronbach's alpha was 0.720, a finding consistent with increased knowledge and improved internal consistency after education.

### 5. Findings

A paired sample t-test was conducted to compare the pre-workshop and post-workshop scores on the Health Care Providers' Knowledge and Attitude Toward Hypertension scale. The analysis revealed a significant difference ( $t(12) = 12.76, p = 0.00$ ) in the pre-test ( $M = 43.23, SD = 3.68$ ) and the post-test ( $M = 56.00, SD = 3.05$ ). A paired-samples t-test was also conducted to compare the nurses' percentage of correct answers on the Case Study Knowledge Assessment before and after the workshop. The mean of the pre-workshop percentage of correct answers was 58.70% ( $SD = 7.95$ ) compared to the mean of 70.50% ( $SD = 9.05$ ) for the post-test workshop percent correct. The mean difference of the pairs was 11.80% ( $SD = 11.24$ ), which was a statistically significant difference ( $t(13) = 3.93, p = 0.002$ ).

Two weeks after the workshop, nine study participants responded to the email questions:

- 1) How have you used the information from the hypertension and leadership workshop with your patients?
- 2) What changes in your health behaviors have you made related to your blood pressure and BMI?
- 3) If you have not made any changes in your health behaviors, which changes do you plan to make in the next two weeks?

The written responses were consistent with leadership of self and leadership of others. One nurse captured the goal of leadership of self, stating: "I gained a lot to support me in my work but it also gave an opportunity to begin appreciating looking at my own health other than others only." All of the nurse participants who responded noted that they were implementing healthy changes "I have had a personal adjustment in my lifestyle. I have increased on fruit intakes, timed and regulated my physical exercises." The hypertension prevention education was reflected as some of the nurse participants spoke specifically of decreasing salt intake: "I was one of the people who used to take a lot of salt and I have now tried my level best to reduce it." increasing fruit and vegetable consumption, "I have tried so much to apply this knowledge. I



have reduced on the amount of calories of food but increased fruits and vegetables and I have so reduced in weight.” and engaging in exercise. “I have added on my walking distance per day to exercise.”

Participants demonstrated the transformational leadership of others in statements such as: “I have passed on the health education everywhere I go including [to] my church members”; “I have been able to health educate patients about the risk factors, symptoms of high blood pressure, general management....”. The researchers were gratified to see ambitious plans in the transformational leadership of others in statements such as: “I have held two continuous professional education seminars at my place of work. I was also able to share the same at my church with a congregation of 150 people. I am planning to share the same message with student nurses at one of the nursing school who are in their final semester of their training.”

The study participants in the transformational nurse leadership and hypertension management workshop provided positive feedback at the close of the workshop. The expressed eagerness of the participants to engage in education was significant. The follow up details of how the information had been applied and shared reflect the potential of NCD education workshops that fall within the realm of the nurses’ sphere of influence. The demonstration of leadership of others, coupled with the increased knowledge about hypertension and the enhanced understanding of the importance of implementing hypertension education and screening programs, appears to have resonated with the study participants.

## 6. Implications for Nurse Educators

Transformational leadership theory, and specifically leadership of self and others, was successfully integrated into the education workshop about hypertension. The nurses involved reported an increased commitment to healthy behaviors and resulted in reported behavior

changes and significant dissemination of the knowledge to others. The inclusion of transformational leadership in the educational workshop encouraged the nurses to seek opportunities to implement and demonstrate a leadership role in the management of both self and others. Embedding education about hypertension in a transformational leadership framework encouraged action and provided a platform for engaged learning.

## 7. Conclusions

Transformational leadership is relevant to the bedside nurse and to the nurse in the boardroom. It provides an approach to evoke change through education. This project lends support to incorporating transformational leadership in educational endeavors and there appears to be support for transformational leadership as the link between knowledge and action. The action-oriented leadership of self as a part of self-care and of leading others, which incorporates being a role model and knowledge sharing, moves hypertension education beyond esoteric or theoretical knowledge.

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## Research Highlights

- Educating nurses with the ability to lead and provide care in a complex health system is challenging
- Nurse educators may find transformational leadership to be useful framework for CPD.
- In low and middle income countries there is a rapidly increasing need to educate nurses to provide quality care for non-communicable diseases
- Educating nurses in hypertension can have a significant and positive impact on the health of nurses and those in their care.
- Incorporating transformational leadership development into hypertension education workshop may reinforce action on information learned