

Improving Hypertension Management through Orem's Self-Care Deficit Nursing Theory

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Improving Hypertension Management through Orem's Self-Care Deficit Nursing Theory

Hypertension is a common health problem that is estimated to affect more than 85 million adults over the age of 20 in America and, if left untreated, may cause more severe complications like stroke, myocardial infarction, kidney failure, or even death (Ignatavicius et al., 2021). Although medications can significantly help control hypertension in adults, many evidence-based lifestyle changes can also be utilized to help control high blood pressure. These changes include reducing sodium and calorie intake, increasing physical activity and aerobic exercise, and utilizing effective methods to reduce stress (Ignatavicius et al., 2021). Because these changes should be implemented by the patient themselves throughout their own daily routine at their own home, Orem's Self-Care Deficit Nursing Theory is an effective theory for examining these goals and creating effective interventions to help the patient achieve them. The purpose of this proposal is to describe how two interventions derived from Orem's Self-Care Deficit Nursing Theory that can be completed by the patient in their own home will improve hypertension management in adults. The advanced practice nurse will submit the practice challenge to the cardiology head nurse for approval to conduct a pilot study to implement a new education and care planning program for adults diagnosed with hypertension.

Theory Description

Dorothea Orem's Self-Care Deficit Nursing Theory is a grand theory that seeks to describe the relationship between humans and the actions and choices they make within their environments that affect their own health (Orem et al., 2001). This theory also addresses the phenomena of an individual's ability to perform self-care and the nursing system that can be used when an individual is unable to perform effective self-care (Orem et al., 2001). I elected to examine this theory and its application to hypertension management in adults because I believe that the key realms of managing hypertension, including dietary changes, increased exercise, and stress reduction, are mainly driven by a patient's participation, decision-making, and their ability to make necessary changes and complete the beneficial actions that will help keep their

blood pressure at a healthy level. When a patient is unable to maintain these changes, the nurse can step in and provide aid to meet these self-care goals.

The major relative concepts of Orem's theory include self-care, self-care demands, selfcare agency, and the nursing system (Orem et al., 2001). Self-care includes any function or action that is completed with the intention of achieving growth, development, or health maintenance, and self-care demands are the requirements to meet these growth, development, and health maintenance goals—these demands are also affected by health conditions and illnesses (Orem et al., 2001). Self-care agency is a human's ability to complete self-care actions and includes environmental and personal resources, and the nursing system is comprised of the relationship between the nurse and patient to aid in self-care (Orem et al., 2001). The relationship statements between these concepts may be viewed as a spectrum; a patient's selfcare demand may increase or decrease based on their current health status, and their selfcare agency may adjust according to their health and environment as well (Orem et al., 2001). When an individual's self-care demand increases beyond their self-care agency, the nursing system becomes beneficial in helping achieve those basic self-care goals (Orem et al., 2001). Relating to adults with hypertension, the self-care demands, mainly the many different lifestyle changes that this condition requires, can be overwhelming and confusing. If these changes exceed the patient's self-care agency, the nursing system should be able to support the patient by providing effective education and helping the patient make the necessary adjustments that suits their individual goals, culture, and needs.

Literature Review

Literature Search Process

The search process included searching both the UC Libraries and Elsevier's ScienceDirect database. Search terms included self-care, hypertension, and management, and I limited my search to only include journal articles published within the last five years that were written in English, which returned over 12,000 results. I limited my focus to only reviewing

articles that involved randomized controlled trials, quasi-experimental studies, and qualitative studies, and I avoided articles that involved meta-analyses, systematic reviews, or integrative reviews. By utilizing the search function of each database effectively, and knowing how to differentiate between different levels of evidence, I was able to discover research articles that I felt best related to my theory and topic and provided interesting data and results to review.

Review of Hypertension Research Articles

One of the classifications of the nursing system described in Orem's Self-Care Deficit Nursing Theory is nursing education, or the ability of the nurse to educate the patient on how to meet their self-care demands (Orem et al., 2001). In terms of hypertension, effectively educating the patient about the condition and the different ways to control their blood pressure, including medication adherence and lifestyle changes, is a key component to managing this condition. All three research articles that I discovered in my literature search address different means and methods of patient education, and they determine success in a variety of ways, either through blood pressure readings, self-reported patient adherence, or patient satisfaction.

The first article, by Andrew et al. (2022), detailed a quasi-experimental study that looked to determine the effects of different education methods and frequency on patients' management of hypertension through education on medication adherence, diet, exercise, and self-monitoring. Using purposive sampling, 256 participants in Hyderabad, India with a prior diagnosis of primary hypertension were randomly split into five different groups that would receive different types of education intervention: one session of direct interaction education, two sessions of direct interaction education fifteen days apart, one session of an educational video presentation, two sessions of an educational video presentation fifteen days apart, and a control group which received no education. Blood pressures were recorded pre-intervention and six weeks postintervention, and the mean arterial pressure was recorded for all groups.

To determine success, the researchers used the Hypertension Compliance Scale

(HYCOMPS), which has a Cronbach's alpha of 0.67, and blood pressure readings that were measured within the same window of time across all applicants (Andrew et al., 2022). The study found a statistically significant difference between the HYCOMPS scores and blood pressure readings of individuals who received direct interaction education sessions and those who received video education sessions or no education sessions. The individuals who received direct interaction education sessions scored higher on the Hypertension Compliance Scale and had lower blood pressure readings, indicating that this was a more effective method of helping individuals manage hypertension.

This study and its design were approved by the ethics committee of the University of Hyderabad, and the participants signed informed consent disclosures (Andrew et al., 2022). Rigor was addressed in this study by using comparison groups and a control group to help avoid any confounding variables and to establish the effects of the education intervention. Additionally, the study addressed rigor by using multiple measures to determine outcomes, mainly the objective data from blood pressure readings and the subjective data of compliance with the hypertension management questionnaire.

A second article, published by M. Yatim et al. (2019), aimed to explore the different factors that affect patients' ability to self-manage hypertension through a qualitative study involving 19 participants in Malaysia that were selected through purposive sampling seeking patients diagnosed with hypertension who participated in a prior hypertension self-management education program. Participants were placed into focus groups, and their conversations and responses were recorded, transcribed, analyzed, and coded to determine core themes. The researchers discovered common themes emerged from the group discussion, and through those themes they were able to identify that the participants enjoyed learning and discussing their experiences and challenges in a group setting, and some of the challenges they face in managing their hypertension included their own culture, influence from family and friends, and lack of self-discipline (M. Yatim et al., 2019). The article concludes by indicating that healthcare

professionals should focus on psychosocial factors that include boosting patient confidence and patient motivation to improve self-care activities for managing hypertension.

Ethical approvals for this study were obtained from the MARA Technological University Research Ethics Committees and the Joint Ethics Committee of Malaysia-Lam Wah Ee Hospital. Participants consented to the study and were assigned pseudonyms to maintain confidentiality (M. Yatim et al., 2019). The reliability and validity of the tools used for the study were not directly addressed in this article, but rigor was addressed through the verification of the moderator and focus group discussion translations, and through the thematic analysis of the focus group discussion data. The moderator's guide for group discussions was written in English and translated into Malay by both a researcher and an independent translator, and quotes from the resulting discussions were independently translated into English. The group discussion transcription analysis was coded by two researchers independently and the data was managed by the qualitative data analysis program NVivo, version 10.

Research Article Testing Orem's Theory

Another quasi-experimental study, published by Khademian et al. (2020), focused on determining how quality of life and self-efficacy are affected by self-care education based specifically on Orem's nursing theory. Convenience sampling was used to select adult patients admitted to a specific hypertension outpatient clinic in Iran during a one month period, and 80 participants completed the study. Participants were split into two groups: one group received an educational intervention based on Orem's nursing theory over the course of several weeks, and the control group received a routine intervention with no education. The study found that the effect of the educational intervention had a statistically significant improvement in the quality of life for patients, and the mean self-efficacy scores were higher in the educational group immediately after and eight weeks after the intervention.

This study utilized two questionnaires to measure quality of life and self-efficacy of its participants. The Quality of Life Cardiac questionnaire had a Cronbach's Alpha score of 0.95,

and the Strategies Used by People to Promote Health questionnaire had a Cronbach's Alpha score of 0.91 (Khademian et al., 2020). This study was approved by the ethics committee at Shiraz University of Medical Sciences and obtained consent from the participants after explaining the study's objectives. The study addressed rigor by explaining that blinding was not possible since the control group was aware that they were not receiving the educational intervention, and by explaining the methodology and rationale behind the statistical tests and software they utilized to analyze the collected data.

Evidence Summary

The literature included in this review includes two quasi-experimental studies and one qualitative study. The Johns Hopkins Nursing Evidence-Based Practice model indicates that quasi-experimental studies are considered Level II and qualitative studies are considered Level III (Dang et al., 2022). Although all three studies were conducted outside of the United States, the results are transferable because education and management of hypertension are generally universal, in that they include similar changes to diet and exercise. I would consider the quality of all three studies to be considered good because each study provided detailed outlines, objectives, methodologies, and ethical considerations. Although there were limitations to the studies and threats to rigor, the authors were transparent about them and discussed how the outcomes should be interpreted within the context of each study's parameters.

Practice Interventions

The relationship statement from Orem's Self-Care Deficit Nursing Theory that most influences the nursing interventions designed for this project is that self-care demands can outweigh a patient's self-care agency, which then requires assistance from the nursing system (Orem et al., 2001). By working to increase a patient's self-care agency, they can eventually resume meeting their own self-care demands to increase the quality and development of their own lives (Orem et al., 2001).

Orem et al. (2001) indicate that one of the ways to increase self-care agency is by improving a patient's knowledge and skills through education. The first intervention will involve setting up monthly educational sessions for adult patients diagnosed with hypertension to attend over a period of six months. The literature indicates that direct interaction is more effective (Andrew et al., 2022) and that patients enjoy group sessions so that they can share their experiences and learn from others (M. Yatim et al., 2019). Patients will be placed into groups of six and presented with a brief 20-minute presentation on different topics concerning hypertension management followed by a 20-minute group discussion about the same topic. Topics will include self-monitoring, diet, exercise, stress, medication adherence, and weight loss. An advanced practice nurse certified in cardiology will lead the presentation and moderate the group discussion. These sessions will also be held through telehealth video conferencing and the patients should join the sessions from their own homes, allowing the sessions to be more comfortable and convenient for the patient and allowing the advanced practice nurse to observe the patient in their environment, which is another important aspect of Orem's nursing theory.

Outcomes will be measured by patients taking the Hypertension Knowledge Test (Andrew & Hariharan, 2017) online before the series of sessions begins and again at the end of the final session. Blood pressure readings will also be taken by the patient using their own inhome monitoring devices and be privately reported to the advanced practice nurse at the beginning of each monthly session. Success will be considered if patients score higher on the test and report lower blood pressure readings at the end of the six-month period, as this will indicate that a patient has learned how to complete and execute the self-care activities required to meet the self-care demands of hypertension.

The second intervention will involve an advanced practice nurse certified in cardiology helping the patient create an individualized plan for ways to manage their hypertension through lifestyle changes like diet, exercise, and stress reduction. The results of the study conducted by

M. Yatim et al. (2019) indicated that many patients have unique and cultural considerations that serve as barriers to managing hypertension, so creating an individualized plan will provide more support by specifically addressing any unique or personal challenges. This will also allow the advanced practice nurse to incorporate the facets of Orem's nursing theory by supporting and increasing the patient's self-care agency, and by helping the patient identify their own self-care deficits and ways to overcome them (Orem et al., 2001). The intervention will begin with an initial direct interaction session through telehealth video conferencing with the advanced practice nurse to create a long-term outline for the plan, followed-up by shorter bi-weekly checkins with the same advanced practice nurse that can be completed through video conferencing or telephone conversations and will last for six months. Blood pressure readings will be taken and reported at the initial session and each follow-up session, and the patient will take the Strategies Used by People to Promote Health questionnaire (Lev & Owen, 1996) at the initial session and after the final follow-up session. The patient and advanced practice nurse will work together to outline goals and different methods to achieve them, as well as outlining challenges and ways to overcome them. The follow-up sessions will help the advanced practice nurse ensure that the patient is making progress, and will allow the patient to relay any new challenges or adjustments that need to be made to the plan.

Success will again be measured by comparing blood pressure readings at the beginning and end of the six-month course, and by comparing the Strategies Used by People to Promote Health scores from the initial session to the scores after the final session. The literature indicates that the Strategies Used by People to Promote Health questionnaire is an effective tool for measuring self-efficacy in self-care (Khademian et al., 2020) with a higher score indicating that the patient is more self-sufficient, and lower blood pressure readings will serve as a concrete representation that the patient is managing their hypertension well.

Conclusion

Hypertension management can include many different lifestyle changes that can become overwhelming for many patients, and the basis for helping patients manage or improve their health in Orem's Self-Care Deficit Nursing Theory includes increasing the patient's selfcare agency with the nursing system through education and support (Orem et al., 2001). The literature presented supports that patient knowledge about hypertension and self-care efficacy can be improved through educational intervention as well as both group and individualized methods (Andrew et al., 2022; Khademian 2020; M. Yatim et al, 2019). Continued research should be conducted on the many different educational techniques and technologies and the different levels of individualized care needed to manage hypertension so that the available time and resources can be maximized. As we continue to see a rise in both medical misinformation and patients advocating for their own health, the nursing system should be utilized to help guide and direct patients to more effective methods of hypertension management.

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