

Nonpharmacological Techniques for Hypertension

Anna Grace Blackman, Marybeth Norton, Seth Perry, Aaron Vollenweider, Caroline Wisdom,

and Cora Wolfington

Auburn University School of Nursing

PICO Question and Significance

Almost every clinical situation encountered begins with a question. In order to accurately answer these questions, it is helpful to use a standardized format to outline the topic of study. A PICO question offers a method to provide a concise topic and clearly defines the following components of a research project: population, intervention, comparison, and outcome. Therefore, the PICO question for this project is as follows: Among adults with hypertension, can nonpharmacological techniques be as effective as drug therapy alone to control and lower blood pressure? Hypertension is one of the most widespread noninfectious diseases worldwide, and it can cause other deadly complications such as renal failure or strokes (Subramanian et al., 2011). It is important for patients to realize that this condition is preventable and that they have the power to eliminate risk factors (James et al., 2014). By teaching patients to modify risk factors and change their habits, nurses can help initiate positive patient outcomes.

The population for this study consists of adult patients that have been diagnosed with hypertension. Hypertension is defined as a systolic blood pressure above 140 mm Hg and a diastolic blood pressure above 90 mm Hg (Tyagi & Cohen, 2014). Specifically, this research is interested in patients who have been recently diagnosed with hypertension and are working toward modifying their lifestyle through various activities. The majority of the studies included in the Evidence Analysis Grid selected patients who were also being treated with anti-hypertensives (Ae Kyung, Fritschi, & Mi Ja, 2012; Dusek et al., 2008; Murthy, Rao, Nandkumar, & Kadam, 2011; Tyagi & Cohen, 2014). As a nurse, it is beneficial to understand alternative therapies for treatment because of the unique nurse-patient relationship. Patients look to nurses to provide guidance and education when selecting ways to cope with their diagnosis. For many

patients, side effects of anti-hypertensives can alter their quality of life. There are also patients that prefer using nonpharmacological treatments for conditions and diseases. Nurses may help patients select alternative strategies to decrease their blood pressure, which could eventually result in a reduction of medication as seen in some of the studies that we selected (Dusek et al., 2008; Murthy et al., 2011; Tyagi & Cohen, 2014).

The interventions included in our research focus on therapies that reduce stress, modify dietary choices, and improve the patient's quality of life. In addition to anti-hypertensives, the research utilized yoga-like therapies, physical exercises, breathing techniques, nurse-led interventions, and other relaxation therapies to decrease blood pressure. We want to understand how nonpharmacological techniques affect blood pressure and provide recommendations for how they should be included in the treatment of hypertension. With the growing interest in alternative and complementary therapies, nurses will be important informants when selecting appropriate interventions for each individual patient.

The comparison for this study is drug therapy alone. This includes anti-hypertensive medications such as angiotensin-converting enzyme inhibitors, angiotensin-receptor blockers, beta blockers, diuretics, and vasodilators. Finally, the expected outcome of the study is that utilizing nonpharmacological strategies will significantly decrease a patient's blood pressure. The reduction in blood pressure may also allow patients to limit their side effects by decreasing the amount of medications that they take. Patients can make changes that eliminate risks for other fatal and life-altering complications. We predict that the most effective treatment will be a multifactorial approach that utilizes stress reduction and lifestyle changes in conjunction with traditional pharmacological therapy in order to provide the highest quality of life for the patient.

Review of Evidence

When gathering research for the project, we utilized the following databases: MEDLINE, PubMed, Academic Search Premier, Cochrane Library, and CINAHL. Our group was able to find numerous articles from reliable sources, and we were planning to utilize these sources for our paper. However, we realized that three of our articles were not primary research. With the help of Dr. Sanderson, we were able to learn how to distinguish primary research articles from secondary research articles. This skill helped us to narrow our search and identify appropriate articles for our study. Taking the time to better understand primary research and levels of evidence enabled us to successfully find the best information to support our PICO question.

Our group focused our research on nonpharmacological interventions to treat hypertension. Any article that was inconclusive, included a poorly conducted trial, or was very subject to bias was eliminated. The key words used during the searches included “hypertension,” “stress management,” “nonpharmacological,” “holistic approach,” etc. We filtered our searches so that only articles published within the past 10 years were displayed to ensure that the information was current and relevant. We originally found two systematic reviews that we thought would provide very useful information; however, as the group began to further analyze one of the systematic reviews, we realized the evidence was relevant to the topic of hypertension but not to our PICO question. Therefore, we eliminated the systematic review from our study. The other systematic review included articles that were qualitative and quasi-experimental, and it is classified as level V research. This left our group eager to search for another article that fit within the level I evidence category, so we decided to include a clinical guideline in our research.

This clinical guideline, established by the Joint National Committee, discusses current treatment for hypertension and greatly increases the strength of our evidence.