Title Page

{See Grading Rubric for Elements to Place on Title Page}

**Abstract**

**Purpose**: The purpose of this paper is to synthesize the nursing research on the effects of dietary considerations and lifestyle regimen versus medication-based treatment in hypertensive patients in the adult population.

**Methodology**:

**Results**:

**Discussion**:

Title

**Introduction (“The introduction to a manuscript does not carry a heading that label it as the introduction” page 63).**

**USE THESE APA LEVEL HEADINGS:**

**(Resource APA: Guide 3.03: Level of Heading on page 62).**

**Method (Level 1 Heading)**

**Search Strategy (Level 2 Heading)**

**Literature Review Table**

**Results**

**Synthesis of Findings**

**Best Supporting Evidence**

**Discussion**

**Conclusion**

**References**

Fournier, J.-P., Sommet, A., Bourrel, R., Oustric, S., Pathak, A., Lapeyre-Mestre, M., & Montastruc, J.-L. (2012). Non-steroidal anti-inflammatory drugs (NSAIDs) and hypertension treatment intensification: a population-based cohort study. *European Journal of Clinical Pharmacology*, *68*(11), 1533–1540.

Hacihasanoğlu, R., & Goözuöm, S. (2011). The effect of patient education and home monitoring on medication compliance, hypertension management, healthy lifestyle behaviours and BMI in a primary health care setting. *Journal of Clinical Nursing (John Wiley & Sons, Inc.)*, *20*(5–6), 692–705.

Jarl, J., Tolentino, J. C., James, K., Clark, M. J., & Ryan, M. (2014). Supporting cardiovascular risk reduction in overweight and obese hypertensive patients through DASH diet and lifestyle education by primary care nurse practitioners. *Journal of the American Association of Nurse Practitioners*, *26*(9), 498–503.

Liu, X., Byrd, J. B., & Rodriguez, C. J. (2018). Use of physician-recommended non-pharmacological strategies for hypertension control among hypertensive patients. *Journal of Clinical Hypertension*, *20*(3), 518–527.

Shaw, R., & Bosworth, H. B. (2012). Baseline medication adherence and blood pressure in a 24-month longitudinal hypertension study. *Journal of Clinical Nursing (John Wiley & Sons, Inc.)*, *21*(9–10), 1401–1406.

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| **Author and Publication Date** | **Purpose of Study** | **Sampling Method, Size & Description** | **Study Variables****(Label IV & DV if applicable)** | **Research Design, Data Collection Methods, & Analysis Used**  | **Results** |
| 1) Shaw and Bosworth (2011) | “To identify the feasibility and predictive validity of an easy and quick self-reported measure of medication adherence and to identify characteristics of people with hypertension that may warrant increase attentiveness by nurses to address hypertensive self-management needs” (Shaw and Bosworth, 2011, p.1401). | The longitudinal study was conducted with a randomized sample size of 159 hypertensive patients in two separate primary clinics. The study was carried out from May 2004 to December 2005, continuing with a follow-up study which occurred from November 2004 to January 2008. The baseline blood pressure was measured at 6-month intervals for a total of 24 months; these patients received standard pharmacological treatment from their primary physicians. The patients then received an outcome assessment measurement at the end of each 6-month interval.  | ­-Patient medication adherence/compliance-Patient non-adherence-Socioeconomic status  -Health literacy -Race -BMI -Gender | **Design**: Longitudinal, correlational, quantitative design  **Data Collection Methods:** Data was collected from three different demographics: financial status, health literacy, and body mass index (BMI) of the patients. Blood pressure was measured at 6-month intervals over a 24-month period. The blood pressure was obtained through the use of a digital sphygmomanometer with two measurements being done; the first measurement was obtained with the patients seated and relaxed for five minutes and the second measurement was obtained 30 seconds following the first. The mean of the two measurements was calculated and utilized as the outcome for that 6-month interval. They chose to observe changes in systolic blood pressure (SBP) because a systolic blood pressure (SBP) of greater than 140 mmHg is a significant risk factor compared to diastolic blood pressure (DBP). **Analysis Used:** A correlational analysis method was used to identify the relationship between various demographic variables and blood pressure outcomes. The study used a simple linear regression analysis to estimate the validity of baseline medication adherence over a 24-month period. General regression analysis was utilized to estimate the difference in blood pressure between non-adherent and adherent patients over 24 months.  | Non-compliance of hypertensive medications resulted in a 6.3 mmHg increase in SBP at baseline, an 8.4 mmHg increase in SBP at 12 months, and a 7.5 mmHg increase in BP at 24 months in comparison to adherent patients. There was also a significant increase in SBP in minority patients and patients with low income.  |
| 2) Jean-Pascal Fournier et al. (2012) | NSAIDS are known to antagonize the effects of antihypertensive drugs which leads to an increase in arterial blood pressure. In this article, they examined whether the introduction of NSAIDS would induce an intensification of hypertension treatment.  | They conducted a pharmacoepidemiological retrospective cohort study involving 5,710 hypertensive subjects included in the Frensh health insurance database who has been treated and stabilized with their antihypertensive therapy and not exposed to any NSAID between April of 2005 and April 2006. The maximum follow-up duration was 4 years.For each patient, exposure to each antihypertensive drug was defined as the period between the first and the last month of reimbursement for this drug. For NSAIDS, exposure started on the first reimbursement date. The duration of the NSAID treatment was estimated from the number of daily doses, corresponding by definition to the number of days under treatment. Only exposure of oral and injectable NSAIDS during the period of study were taken into account, topical NSAIDS were excluded from the analysis. Cardiovascular morbidity was defined by the number of cardiology consultations and hospitalizations during the 6 months before inclusion.  | Independent: NSAIDSDependent: Health status of the Hypertensive patients included in the study  | **Design**: pharmacoepidemiological retrospective cohort study**Data Collection Methods:** The French health insurance system database collects information on the French population and categorizes this information into four categories: demographic characteristics of users, characteristics of health professionals, data concerning health facilities and reimbursement data. For the category of drug dispensing, the database contains information on the date of dispensing, quality of dispensed drug expressed in defined daily doses and the prescriber. Drugs are classified according to the Anatomical Therapeutic Chemical system.**Analysis Used:** Kaplan-Meier curves were used to illustrate the time to an event according to exposure. They used the Cox proportional hazard regression model, including exposure to drugs of interest as time-dependent covaries. The model was then adjusted for potential confounding factors associated with the outcome in univariate analysis (log rank test, p<0.2). The potential confounding factors were age, gender, antihypertensive classes and comorbidities. For the analysis, p<0.5 was considered to be significantly significant.  | There were statistically significant interactions between NSAIDS and ACEIs or ARBs, but not with other antihypertensive drugs. HR associated with NSAID exposure decreased when these two interactions were taken into account. Similar interactions were found for diclofenac and piroxicam. Overall exposure to NSAIDS leads to an intensification of hypertension treatment, especially in patients treated with SCEIs or ARBS. Renin-angiotensin system blockers should be avoided whenever NSAIDs are prescribed.  |
| 3) Hacihasanoglu and Gozum (2010) | “To determine the effect of anti-hypertensive patient-oriented education and in-home monitoring for medication adherence and management of hypertension in a primary care setting, by providing education on healthy lifestyle behaviors and medication adherence” (Hacihasanoglu and Gozum, 2010, p. 692).  | This experiment consisted of a randomized controlled study.  There was a total of one hundred and twenty subjects diagnosed with hypertension who started medication therapy a year prior to conducting this experiment. Group A consisted of forty subjects who received education about medication adherence. Group B consisted of forty subjects who received education about medication compliance and healthy lifestyles. Both A and B groups received six monthly education sessions, four at the clinical and two at home. The control group consisted of forty subjects who received no intervention and recorded weight and blood pressure measurements six times.  | -Independent: education about medication adherence and lifestyle behaviors -Dependent: health status and blood pressure readings | **Design**: The design of this experiment was performed a pretest-post-test study over six months. The pretests consisted of blood pressure reading and questionnaires regarding medication adherence and lifestyle behaviors. **Data Collection Methods**: The medication adherence self-efficacy scale asked the participants to rate their confidence in taking their medications. The health promoting lifestyle profile was composed of six categories; self-realization, responsibility, exercise, nutrition, support and stress management, in which they rated themselves how often they performed those behaviors. Upon each arrival the to the health care facility, Groups A and B received their education in a face to face interview lasting approximately thirty to forty-five minutes, and obtained two blood pressure readings. The control group received no intervention and had two blood pressure readings obtained. **Analysis Used:** Analysis showed great variance between the average pretest and post test scores of medication adherence self-efficiency scale, health promotion lifestyle profile scale, body mass index, and systolic and diastolic blood pressure.  | Education in medication adherence and lifestyle behaviors successfully improved blood pressure in comparison to the control group. However, between Groups A and B, Group B showed a greater decrease in blood pressure after receiving an education in both medication compliance and lifestyle behaviors as evidenced by post-test systolic 133.50 ± 12.25 diastolic measurements 83.50 ± 4.83 as opposed to Group A’s post-test systolic 139.75 ± 11.31 and diastolic measurements 86.00 ± 4.69.  |
| 4) Jarl, Tolentino, James, Clark, and Ryan (2014) | “To describe an intervention among overweight and obese hypertensive patients, encouraging Dietary Approaches to Stop Hypertension (DASH) diet and lifestyle changes, designed and led by a primary care nurse practioner (NP).” (Jarl et al., 2010).  | Forty-five chronic hypertensive patients enrolled, with a mean starting BMI of 32, and mean age of 55. The sample was taken from a single family medicine clinic. They were questioned using two standard instruments (Rapid Eating Assessment for Patients [REAP] and Partners in Health [PIH] to evaluate their diet and lifestyle habits before and after the counseling sessions.  | Independent-Patient education program, Dependent-PIH score, Dependent-REAP score, Dependent-BMI | **Design**: A quasi-experimental time-series design was implemented over a two month period. **Data Collection Methods:** Two standard instruments were used for data collection to evaluate nutrition and lifestyle habits before and after completion of a NP- led intervention and counseling program. (Rapid Eating Assessment for Patients [REAP] and Partners in Health [PIH] questionnaires) The REAP questionnaire contained questions that assessed intake frequency of each food group on a scale of one to three. Additionally, it contained several “yes/no” questions in order to address concerns of preparation, shopping, and diets. The PIH scale was also used in order to determine the participants knowledge and behaviors in relation to self-management of their hypertension. This twelve-item questionnaire was scored on a nine-point scale for each question, for a possible total of 96 points. BMI was also calculated using height and weight measurements at the beginning and end of the program. **Analysis Used:** Statistical analysis of the data was performed | Of the forty-five patients who enrolled and consented to the study, twenty-six completed the educational program. Majority of the participants who completed the program were female, white (non-Hispanic), and had less than a college degree. The REAP score after completing the program was significantly higher in comparison to the average REAP score prior to the educational sessions. They not only reported a significant reduction in sodium intake, but also an increase in physical activity after completion of the counseling. There was also an increase in PIH scores, meaning a higher cognizance of knowledge and efficacy in managing their own health. |
| 5) Byrd, Rodriguez, and Xuefeng (2017) | “This study aims to evaluate the four non-pharmacological strategies adopted by patients for hypertension control and patient characteristics that affect the choice of strategies”  (Byrd, Rodriguez, and Xuefeng, 2017). |  Sampling method: randomly selected from 30 countries across the country using a complex-stratified multi-stage clustered sampling designo   Face-to-face interviews conducted in the participant’s home to collect info for socio-demographic factors and hx of diseaseo   Examinations were performed in mobile examination centers to obtain measurements of examination and clinical/laboratory factors·      Size: 31,070 individuals interviewed or examinedo   4,008 pt with dx of HTNo   8 pt diagnosed <18 y/oo   Total of 4,000 HTN pt > 18 y/o·      Description: questionnaire components in the NHANES surveyo   Weight losso   Reduced sodium intakeo   Reduced alcohol useo   Moderate or vigorous physical activity | ·      Independent variable: HTN pts·      Dependent variable: lifestyle regimen change·      Variables:o   Age – young adults (18-39), middle-aged (40-59), old adults (60+)o   Family history | ·      **Research design**: survey sample with a stratified multi-stage sampling design 7·      **Data collection methods:**·      **Analysis**:o   Nonresponse adjustment taken into accounto   Sampling weights – combined for multi-year samples by dividing two-year weights by the number of survey cycleso   Sampling error estimates calculated by Taylor Series Linearization methodso   Means calculated with CI for categorical datao   Survey F Tests used to compare the means btw groups and Rao-Scott chi-square testo   Wald chi-square test run to evaluate significance of factors influencing choice of strategies | ·      HTN was uncontrolled in 46.8% of ptso   Told by physicians to get under control§  Weight – 55.6%§  Reduce sodium – 68.4%§  Exercise more – 66.6%§  Reduce alcohol – 25.5%o   Self-reported adoption rates§  Weight – 76.8%§  Reduce sodium – 86.7%§  Exercise more – 58.8%§  Reduce alcohol – 76.8%·      Most frequently reported was reduce sodium – 86.7%·      Least frequently reported was exercise more – 58.8%o   More likely to report using sodium reduction§  Middle age pt – 2.08 fold§  Old adults pt – 3 fold·      Sodium intake reduction was the most reported adopted strategy and “more exercise” was the least-adopted strategy by self-reports |