

Evidence Synthesis and Tables: Reducing Incidences of Uncontrolled Hypertension

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Chamberlain University College of Nursing

Week 4 NR 711: Evidence Synthesis and

Tables [REDACTED]

Evidence Synthesis and Tables: Reducing Incidences of Uncontrolled Hypertension

The purpose of the proposed project is to determine whether implementing a healthy eating plan comprising the Dietary Approaches to Stop Hypertension (DASH) diet will reduce incidences of uncontrolled hypertension among patients diagnosed with high Blood Pressure (BP) and under medication. The continued prevalence of uncontrolled hypertension, despite the existing practices for managing the disease, especially among patients already diagnosed and under medication, is a health care concern in the United States (US) (Flack et al., 2024). The reason is that uncontrolled hypertension increases individuals' risk of developing complications, such as diabetes, stroke, chronic kidney disease (CKD), and cardiovascular diseases (CVD) (Farhadi et al., 2023). The problem can be addressed by managing risk factors, like diabetes, a sedentary lifestyle, high body and mass index (BMI), and elevated serum cholesterol levels, which consistently raise systolic blood pressure (SBP) > 140 mmHg and/or diastolic blood pressure (DBP) to ≥ 90 mmHg, leading to uncontrolled hypertension (Kapoor et al., 2021). Therefore, the proposed evidence-based intervention involves managing disease-modifiable risk factors such as high BMI and cholesterol using the DASH diet (Alnooh et al., 2022; Guo et al., 2021). This paper provides an evidence synthesis for the selected evidence-based intervention.

The Significance of the Practice Problem

The high prevalence of uncontrolled hypertension is a significant practice problem in the US because high BP is a major contributor to conditions such as CVD, stroke, and CKD (Farhadi et al., 2023). Hypertension and its related complications affect individuals' health, well-being, and productivity, impacting the overall burden of non-communicable diseases in the US due to increased hospital admissions, high morbidity or mortality rates, and reduced productivity (World Health Organization [WHO], 2023). The WHO (2023) indicated that approximately 1.28 billion individuals had hypertension globally as of 2023. In the US, the prevalence is over 120 million adults; among those diagnosed with the disease, about 92.9 million have uncontrolled

cases (Richardson et al., 2024). In addition, the Centers for Disease Control and Prevention (CDC, 2025) showed that in 2022, high BP was the primary/contributing cause of 685,875 deaths in the US. Regarding the economic ramifications, uncontrolled hypertension costs the US about \$131 billion annually in direct and indirect expenses, including treatment and lost productivity (CDC, 2025).

Evidence Synthesis

A comprehensive literature search was done on three databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), the Public Publisher Medline (PubMed), and Google Scholar, to select relevant studies supporting the efficacy of the DASH diet intervention on managing uncontrolled hypertension. The search was facilitated through keywords such as *uncontrolled hypertension, high blood pressure, dietary approaches, hypertension management, and modifiable risk factors*. The Boolean operators “OR” and “AND” were also utilized to refine the search using appropriate phrases. In addition, inclusion criteria were developed for studies: (a) published within the last five years in peer-reviewed journals, (b) relevant to the topic, (c) available in English, and (d) accessible in full text. The search yielded five articles and two themes: (a) the use of the DASH diet in managing hypertension risk factors and (b) the impact of the DASH diet in reducing incidences of uncontrolled hypertension (Guo et al., 2021; Isnaini et al., 2025; Kenmoue et al., 2023; Said et al., 2021; Sangouni et al., 2024). Among these articles, three had Level I evidence (per the Johns Hopkins Appraisal tool) and comprised a randomized control trial (RCT) and two meta-analyses and systematic review studies of RCT (Guo et al., 2021; Isnaini et al., 2025; Sangouni et al., 2024); one article was a case-control study with Level II evidence (Kenmoue et al., 2023); and the last study was a non-randomized control trial with Level II evidence (Said et al., 2021) (see Appendix A).

The Use of the DASH Diet in Managing Hypertension Risk Factors

Evidence in the synthesized studies supported the use of the DASH diet in managing hypertension risk factors, such as BMI, cholesterol, and high lipids (Isnaini et al., 2025;