



A Study to Assess the Effectiveness of a Structured Teaching Programme on Knowledge Regarding Hypertension among Nursing Students in a Selected Nursing College

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Abstract

Introduction: These days, hypertension is regarded as one of the leading causes of death and serious consequences worldwide. It typically runs in families and is characterized by a chronic process. The new scientific field of gene therapy offers a targeted method for addressing the genetic causes of hypertension. But nursing students don't fully understand or acknowledge these cutting-edge methods.

Methodology: A pre-experimental one-group pre-test and post-test research design was adopted. Eighty nursing students who were chosen using a suitable sample technique participated in the study. Prior to and during the instructional program, knowledge was evaluated using a standardized knowledge questionnaire.

Results: The majority of pupils had minimal to intermediate knowledge, according to the pre-test findings. Knowledge scores significantly improved following the organized instruction program, according to post-test results. At $p < 0.05$, the computed "t" value was statistically significant.

Conclusion: The structured teaching programme was effective in improving the knowledge regarding hypertension among nursing students.

Keywords: Hypertension, Structured Teaching Programme, Knowledge, Nursing Students, Effectiveness.

INTRODUCTION

Cardiovascular diseases (CVDs) are one of the main causes of disability and the world's leading cause of death. Since 1990, the majority of countries have seen an increase in the burden of CVD, which has been fueled by shifting exposure to dangerous risk factors, population expansion, and aging.^{1,2}

The primary risk factor for cardiovascular disease, hypertension, is caused by a confluence of social, environmental, and genetic factors. Environmental causes include being overweight or obese, eating a poor diet,

consuming too much salt or potassium, not exercising enough, and drinking alcohol. Targeted and/or population-based methods can be used to prevent and control hypertension. The focused strategy for controlling hypertension entails actions to improve individual awareness, treatment, and control. Interventions intended to lower blood pressure (BP) slightly

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across the board are part of corresponding population-based efforts. Higher rates of blood pressure control are linked to avoiding therapeutic inertia, maximizing adherence, and having a regular source of treatment.³

The significant age-specific drop in heart disease and stroke has been largely attributed to the widespread treatment of hypertension and the ensuing improvement in blood pressure. Despite these advancements, there is still a persistent discrepancy between declared public health goals and actual blood pressure management rates. Many factors may be important contributors to the gap between population hypertension control goals and currently observed control levels. The degree to which patients follow their recommended course of treatment is one of them.⁴

The discrepancy between population hypertension control objectives and present control levels may be caused by a number of significant variables. The degree to which patients follow their recommended course of treatment is one of them. According to the World Health Organization, adherence is the degree to which a person's actions—such as taking medication, adhering to a diet, or making lifestyle modifications—match recommendations made by a healthcare provider.⁵

The percentage of persons with uncontrolled hypertension who do not stick with their medication is estimated to vary widely. The reported nonpersistence rates in the first year following treatment initiation range from 30 to 80% in studies that depend on insurance claims and managed care databases.⁶

Healthcare professionals, researchers, and politicians are extremely concerned about the rising prevalence of non-communicable disorders, particularly hypertension. Due to the detrimental effects of complications resulting from hypertension illnesses, strict risk factor evaluation and preventative and control measures have been put in place.⁷

One of the main causes of death in the world and a significant risk factor for cardiovascular disease and related conditions is hypertension [Citation1]. A chronic condition that is becoming more commonplace worldwide is hypertension. Over the past three decades, high-income countries have reported advances in controlling hypertension, but in low-income countries, hypertension continues to be a significant public health concern.⁸

One of the main causes of death and disability is hypertension. In 2014, about 22% of adults worldwide had hypertension. One In every region of the World Health Organization (WHO), men are known to have a somewhat greater prevalence of hypertension (21%) than women (16%). The WHO reports that 19.6% of persons in Malaysia who are 18 years of age or older have hypertension. One of the most prevalent risk factors for heart attacks and strokes is considered to be hypertension.⁹

The American College of Cardiology (ACC) and American Heart Association (AHA) 2017 Guidelines for

the Prevention, Detection, Evaluation, and Management of High Blood Pressure state that 103.3 million people have hypertension [1]. Despite the fact that hypertension is becoming more prevalent among young individuals in the United States, the majority of programs and initiatives to control high blood pressure have targeted middle-aged and older people. The increasing prevalence of hypertension in young adults is typically attributed to lifestyle factors, such as diet and exercise.¹⁰

One risk factor for hypertension in children and young adults is a family history of the condition. A higher chance of acquiring hypertension, early onset hypertension, and negative consequences from hypertension are linked to a family history of high blood pressure.¹¹ The significance of the family history of high blood pressure was emphasized by the results of the Framingham Heart Study (FHS). According to the FHS data, children who had two parents with early-onset hypertension were three times as likely to have hypertension.¹²

Examining vitamin D biomarkers and cardiovascular disease risk is becoming more and more popular.^{13,14} A risk factor for cardiovascular conditions, including myocardial infarction and stroke, is low plasma vitamin D levels (<60 nmol/L).¹⁵

Objectives of The Study

- To assess the pre-test level of knowledge regarding hypertension among nursing students.
- To assess the post-test level of knowledge regarding hypertension among nursing students.
- To evaluate the effectiveness of a structured teaching programme on knowledge regarding hypertension.
- To find the association between pre-test knowledge scores and selected demographic variables.

Hypotheses

- **H₁:** The knowledge scores of nursing students on hypertension will change dramatically between the pre-test and post-test.
- **H₂:** There will be a strong correlation between pre-test knowledge scores and particular demographic traits.

METHODOLOGY

Research Design

A pre-experimental one-group pre-test and post-test research design was adopted.

Setting

The study was conducted in a selected nursing college.

Population

The population comprised nursing students studying in the selected nursing college.

Sample Size

The sample size consisted of 80 nursing students.

Sampling Technique

Convenient sampling technique was used to select the samples.

Inclusion Criteria

- Nursing students who agreed to take part in the research.
- Students who were present when the data was collected.

Exclusion Criteria

- Students who had previously undergone formal training on hypertension.

Tool for Data Collection

A structured knowledge questionnaire was used, consisting of two sections:

- Section A: Demographic variables
- Section B: Knowledge questions on hypertension

Validity and Reliability

Experts in the nursing and medical domains provided the content validity. The split-half approach was used to determine the tool’s reliability.

Data Collection Procedure

- The structured questionnaire was used to measure pre-test knowledge.
- On the same day, a systematic lesson on hypertension was given.
- Seven days later, the same questionnaire was used for a post-test.

Ethical Consideration

The relevant authority granted permission. Every participant gave their informed consent.

RESULTS

The results are arranged into Tables 1-3.

Objective 1: To Assess the Pre-test Level of Knowledge

According to the pre-test results, the majority of nursing students lacked sufficient understanding of hypertension.

Objective 2: To assess the post-test level of knowledge

Post-test findings revealed a marked improvement in the knowledge levels of nursing students.

Objective 3: To evaluate the effectiveness of structured teaching programme

Compared to the mean pre-test score, the mean post-test

Table 1: Pre-test Level of Knowledge (n = 80)

Level of Knowledge	Frequency	Percentage
Inadequate	48	60
Moderate	24	30
Adequate	8	10

Table 2: Post-test level of knowledge (n = 80)

Level of knowledge	Frequency	Percentage
Inadequate	4	5
Moderate	20	25
Adequate	56	70

Table 3: Comparison of pre-test and post-test knowledge scores

Test	Mean	SD	Mean difference	t-value
Pre-test	12.4	3.2		
Post-test	21.8	2.9	9.4	15.62*

*Significant at p < 0.05

knowledge score was substantially higher.

DISCUSSION

- The current study found that nursing students’ understanding of hypertension improved as a result of the organized training approach.
- The results are in line with other research that found that educational interventions significantly improved knowledge.
- Adequate information improves nursing students’ capacity to inform patients and avoid hypertension-related problems.

CONCLUSION

- The study found that nursing students’ understanding of hypertension was greatly enhanced by the organized training method.
- To improve students’ knowledge and proficiency, educational interventions should be used often in nursing education.

RECOMMENDATIONS

- Larger sample sizes can be used for similar investigations.
- It is possible to do comparative research between various nursing schools.
- Nursing curricula should incorporate regular health education programs on lifestyle diseases.

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CONFLICTS OF INTEREST

The author declares that they have no conflict of interest with regard to the content of the report.

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