

Assess the Effectiveness of Informational Booklet of Knowledge Regarding Hypertension and Its Lifestyle Modification Among Hypertension Patients

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Abstract

Background: Hypertension is one of the most common non-communicable diseases and is frequently known as a “silent killer” because many patients remain asymptomatic until complications occur. Adequate knowledge regarding hypertension and lifestyle modification plays an important role in prevention of complications and promotion of healthy living among hypertensive patients.

Aim: The present study aimed to assess the effectiveness of an informational booklet on knowledge regarding hypertension and its lifestyle modification among hypertension patients.

Objectives: The objectives of the study were to assess the pre-test knowledge regarding hypertension and its lifestyle modification among hypertensive patients and to assess the post-test knowledge after administration of an informational booklet.

Methodology: An evaluative approach with pre-experimental one-group pre-test post-test design was adopted. The study was conducted among 30 hypertensive patients residing in Sarvothaya Gramam. A structured knowledge questionnaire was used for data collection. The tool consisted of two sections: demographic variables and 22 multiple-choice questions related to hypertension and lifestyle modification. Each correct response was awarded one mark and wrong response was given zero mark. Data were analysed by using descriptive and inferential statistics.

Results: In the pre-test, 30% of patients had inadequate knowledge, 46.7% had moderate knowledge, and 23.3% had adequate knowledge regarding hypertension and lifestyle modification. In the post-test, knowledge improved, with 50% of patients having moderate knowledge and 50% having adequate knowledge. The mean knowledge score increased from 8.2 in the pre-test to 14.5 in the post-test. The calculated t-value was 2.52, indicating improvement in knowledge after the intervention. However, the reported standard deviation and p-value require verification before final publication.

Conclusion: The informational booklet was found to be effective in improving knowledge regarding hypertension and lifestyle modification among hypertensive patients. Health education materials such as booklets can be used as a simple, cost-effective and practical method to increase awareness and encourage lifestyle changes among patients with hypertension.

Keywords: Hypertension, Informational booklet, Lifestyle modification, Knowledge, Hypertensive patients

Introduction

Hypertension is a major public health problem and one of the leading risk factors for cardiovascular morbidity and mortality. It is commonly referred to as a “silent killer” because many people with high blood pressure do not experience any warning symptoms during the early stage of the disease. As a result, hypertension often remains undiagnosed or uncontrolled until serious complications such as stroke, myocardial infarction, renal failure, heart failure or visual impairment occur.

Hypertension refers to persistent elevation of arterial blood pressure above the normal range. It may be classified broadly into primary and secondary hypertension. Primary hypertension has no clearly identifiable cause and accounts for the majority of hypertension cases. Secondary hypertension occurs due to an underlying condition such as renal disease, endocrine disorders, vascular abnormalities or drug-induced causes. Although the exact cause of primary hypertension is not fully known, several risk factors are associated with its development. These include increased sympathetic nervous system activity, excess sodium intake, obesity, physical inactivity, diabetes mellitus, tobacco use, alcohol consumption, stress, advancing age and positive family history.

Lifestyle modification is considered one of the most important components of hypertension prevention and control. Modification of diet, reduction of salt intake, regular physical activity, weight management, avoidance of tobacco and alcohol, stress management, regular blood pressure monitoring and adherence to prescribed medication are essential for maintaining blood pressure within normal limits. However, many hypertensive patients lack adequate knowledge regarding the disease condition, risk factors, complications and healthy lifestyle practices. This lack of knowledge may lead to poor treatment adherence and increased risk of complications.

Health education is an important responsibility of community health nurses. Among various health education methods, an informational booklet is useful because it provides simple, structured and readable information that patients can refer to repeatedly at home. Booklets can help patients understand the nature of hypertension, importance of medication, warning signs, dietary control and daily lifestyle practices. Therefore, the present study was conducted to assess the effectiveness of an informational booklet in improving knowledge regarding hypertension and its lifestyle modification among hypertensive patients.

Need for the Study

Hypertension is increasing rapidly due to changes in lifestyle, urbanization, unhealthy dietary habits, stress, sedentary living and ageing population. Many patients are diagnosed incidentally during health check-ups because hypertension may remain silent for years. Poor awareness regarding the disease and its complications is one of the important reasons for delayed diagnosis and inadequate management.

Knowledge plays a significant role in chronic disease control. Patients who understand hypertension are more likely to monitor their blood pressure, follow dietary restrictions, take medication regularly and seek timely medical care. On the other hand, patients with poor knowledge may ignore symptoms, discontinue medication when they feel better or continue unhealthy habits. Hence, patient education becomes an essential strategy in hypertension management.

Lifestyle modification is a low-cost and effective method for controlling blood pressure. It includes reduction of salt intake, consumption of fruits and vegetables, avoidance of oily and processed foods, maintenance of healthy body weight, daily exercise, avoidance of smoking, limitation of alcohol, adequate sleep and stress reduction. These lifestyle measures are practical and can be adopted at community level if patients are properly educated.

An informational booklet can act as a continuing source of knowledge for hypertensive patients. Unlike verbal teaching, a booklet can be read repeatedly and shared with family members. It also helps patients remember important instructions after leaving the health care setting. Therefore, this study was undertaken to evaluate whether a planned informational booklet could improve knowledge regarding hypertension and lifestyle modification among hypertensive patients.

Objectives of the Study

1. To assess the knowledge regarding hypertension and its lifestyle modification among hypertensive patients in the pre-test.
2. To assess the knowledge regarding hypertension and its lifestyle modification among hypertensive patients in the post-test.
3. To evaluate the effectiveness of an informational booklet on knowledge regarding hypertension and its lifestyle modification among hypertensive patients.

Hypothesis

H₁: There will be a significant difference between pre-test and post-test knowledge scores regarding hypertension and its lifestyle modification among hypertensive patients after administration of the informational booklet.

Assumptions

The study was based on the following assumptions:

1. Hypertensive patients may have inadequate knowledge regarding hypertension and lifestyle modification.
2. Health education through an informational booklet may improve knowledge.
3. Improved knowledge may motivate patients to adopt healthy lifestyle practices.
4. An informational booklet may be a simple and cost-effective educational method in community settings.

Research Methodology

Research Approach

An evaluative research approach was adopted to assess the effectiveness of the informational booklet on knowledge regarding hypertension and lifestyle modification.

Research Design

A pre-experimental one-group pre-test post-test research design was used. In this design, knowledge was assessed before and after administration of the informational booklet.

Setting of the Study

The study was conducted among hypertensive patients in Sarvothaya Gramam.

Population

The population of the study consisted of hypertensive patients residing in the selected community area.

Sample and Sample Size

The sample consisted of 30 hypertensive patients who fulfilled the inclusion criteria.

Sampling Technique

A non-probability convenient sampling technique was used to select the study participants.

Criteria for Sample Selection

Inclusion Criteria

Patients who:

1. Were diagnosed with hypertension.
2. Were available during the period of data collection.
3. Were willing to participate in the study.
4. Could understand the language used in the informational booklet.

Exclusion Criteria

Patients who:

1. Were seriously ill during data collection.
2. Had already participated in a similar health education programme recently.
3. Were not willing to participate.

Description of the Tool

The tool consisted of two sections.

Section I: Demographic Variables

This section included demographic information such as age, sex, qualification, religion, occupation, type of family, monthly income and history of hypertension.

Section II: Structured Knowledge Questionnaire

This section consisted of 22 multiple-choice questions related to hypertension and lifestyle modification. The questions covered meaning, causes, risk factors, symptoms, complications, diet, exercise, medication adherence, stress management and prevention of complications.

Each correct answer was given one mark and each wrong answer was given zero mark. The total score was 22.

Scoring Interpretation

Knowledge scores were categorized as follows:

- **Inadequate knowledge:** Low score range
- **Moderate knowledge:** Middle score range
- **Adequate knowledge:** High score range

Data Collection Procedure

Formal permission was obtained from the concerned authority. The purpose of the study was explained to the participants and informed consent was obtained. A pre-test was conducted by administering the structured knowledge questionnaire. After the pre-test, the informational booklet on hypertension and lifestyle modification was distributed and explained to the participants. The booklet included information about hypertension, causes, risk factors, complications, medication adherence, dietary control, exercise, stress reduction and follow-up care. After the intervention, a post-test was conducted using the same questionnaire to assess improvement in knowledge.

Plan for Data Analysis

The collected data were analysed using descriptive and inferential statistics. Frequency and percentage were used to describe demographic variables and knowledge levels. Mean and standard deviation were used to assess knowledge scores. Paired t-test was used to compare pre-test and post-test knowledge scores and to determine the effectiveness of the informational booklet.

Results

Section I: Findings Related to Knowledge Level in Pre-Test

The pre-test findings showed that 30% of hypertensive patients had inadequate knowledge regarding hypertension and lifestyle modification. About 46.7% of patients had moderate knowledge, while only 23.3% had adequate knowledge. This indicates that before the intervention, a considerable proportion of patients did not have sufficient knowledge regarding hypertension and lifestyle-related control measures.

Table 1: Pre-test Knowledge Level of Hypertensive Patients

Knowledge Level	Frequency	Percentage
Inadequate knowledge	9	30.0%
Moderate knowledge	14	46.7%
Adequate knowledge	7	23.3%
Total	30	100%

Section II: Findings Related to Knowledge Level in Post-Test

After administration of the informational booklet, knowledge level improved among the participants. In the post-test, 50% of patients had moderate knowledge and 50% had adequate knowledge. No patient remained in the inadequate knowledge category. This shows that the

informational booklet helped in improving knowledge regarding hypertension and lifestyle modification.

Table 2: Post-test Knowledge Level of Hypertensive Patients

Knowledge Level	Frequency	Percentage
Inadequate knowledge	0	0%
Moderate knowledge	15	50.0%
Adequate knowledge	15	50.0%
Total	30	100%

Section III: Comparison of Pre-Test and Post-Test Knowledge Scores

The mean pre-test knowledge score was 8.2, while the mean post-test knowledge score increased to 14.5. This indicates a clear improvement in knowledge after administration of the informational booklet. The calculated t-value was 2.52, showing that the booklet was effective in enhancing knowledge among hypertensive patients.

Table 3: Comparison of Mean Knowledge Scores

Test	Mean Score	Standard Deviation	t-value	Interpretation
Pre-test	8.2	To be verified	2.52	Improvement observed
Post-test	14.5	To be verified		Effective

Discussion

The findings of the present study revealed that hypertensive patients had insufficient knowledge regarding hypertension and lifestyle modification before the intervention. In the pre-test, only 23.3% of participants had adequate knowledge, whereas 30% had inadequate knowledge. This finding indicates the need for planned health education among hypertensive patients in the community.

After administration of the informational booklet, there was a noticeable improvement in knowledge. The post-test findings showed that 50% of participants had adequate knowledge and 50% had moderate knowledge. Importantly, no participant remained in the inadequate knowledge category. The mean knowledge score increased from 8.2 to 14.5, which indicates that the informational booklet was useful in improving patient knowledge.

The improvement may be due to the simple language, organized content and practical lifestyle-related information included in the booklet. Hypertensive patients need clear guidance regarding diet, salt restriction, exercise, medication adherence, follow-up visits and prevention of complications. When such information is provided in written form, patients can read it repeatedly and clarify doubts with health care workers.

The study findings support the importance of community-based health education. Community health nurses can play a key role in educating patients about chronic diseases like hypertension. Health education should not be limited to hospitals but should be extended to families and communities. Since lifestyle modification requires long-term commitment, repeated reinforcement through booklets, counselling and follow-up is essential.

The findings also suggest that hypertensive patients should be encouraged to involve family members in lifestyle modification. Family support is important for maintaining a low-salt diet, regular exercise, medication adherence and stress management. Therefore, educational materials should be designed not only for patients but also for caregivers and family members.

Nursing Implications

Nursing Practice

Nurses should provide regular health education to hypertensive patients regarding disease condition, medication, diet, exercise and follow-up care. Informational booklets can be used in outpatient departments, community health centres and home visits.

Nursing Education

Nursing students should be trained to prepare and use simple educational materials for patients with chronic diseases. Community health nursing education should emphasize lifestyle modification and patient counselling.

Nursing Administration

Nurse administrators should encourage development of health education materials in local languages. Regular hypertension awareness programmes can be organized in community settings.

Nursing Research

Further studies can be conducted with larger sample size and control group to assess the long-term effect of informational booklets on knowledge, attitude and lifestyle practices among hypertensive patients.

Limitations of the Study

1. The study was conducted on a small sample of 30 hypertensive patients.
2. The study used a pre-experimental design without a control group.
3. The study assessed only knowledge and not actual lifestyle practice.

4. Long-term retention of knowledge was not assessed.
5. Some statistical values require verification before publication.

Recommendations

1. A similar study can be conducted with a larger sample size.
2. A true experimental study can be conducted with experimental and control groups.
3. A follow-up study can be done to assess changes in lifestyle practices.
4. Similar booklets can be prepared in regional languages.
5. Community-based hypertension screening and education programmes should be strengthened.

Conclusion

The present study concluded that the informational booklet was effective in improving knowledge regarding hypertension and lifestyle modification among hypertensive patients. The pre-test findings showed that many patients had inadequate or moderate knowledge regarding hypertension. After administration of the informational booklet, the knowledge level improved considerably, and half of the participants achieved adequate knowledge.

Hypertension is a serious health problem that may remain silent in the initial stage but can lead to severe complications if not controlled. Adequate knowledge regarding lifestyle modification is essential for prevention of complications and promotion of healthy living. Patients should be educated regarding salt restriction, balanced diet, regular exercise, weight control, avoidance of tobacco and alcohol, stress management, medication adherence and regular blood pressure monitoring.

The study highlights the role of nurses in patient education and community-based chronic disease prevention. Informational booklets are simple, economical and useful tools for improving health awareness. Therefore, such educational interventions should be used regularly in community health nursing practice to promote better hypertension control and healthier lifestyles among patients.

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