ORIGINAL ARTICLE

The impact of hypertension education on self-care management in hypertensive patients in Senderak village health centre

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Abstract

Objective: To determine the effect of hypertension education on self-care management in hypertensive patients in a rural setting.

Method: The quasi-experimental study was conducted in January and February 2022 at the Senderak Village Health Centre, Bengkalis, Indonesia, and comprised hypertension patients without any complications referred to the community health centre between August 2021 and January 2022. The subjects underwent self-care education intervention. The knowledge level was assessed at baseline and post-intervention using the Hypertension Self-Management Behaviour Questionnaire. Data was analysed using IBM SPSS Statistic v23 software.

Results: All the 30(100%) patients were females, 12(40%) were aged 46-55 years, 20(66.7%) had received elementary school education and 25(83.3%) were housewives. There were 21(70%) respondents with stage II hypertension having systolic blood pressure ≥160mmHg. The mean level of knowledge about self-care management of hypertension increased significantly post-intervention (p<0.0001).

Conclusion: Health education could improve knowledge on self-care management of hypertension in hypertensive patients.

Keywords: Blood Pressure, Self Care, Hypertension, Kidney, Brain. (JPMA 74: S-27 [Suppl. 5]; 2024)

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Introduction

Hypertension (HTN), often known as high blood pressure (BP), is a chronic non-communicable disease that lasts a lifetime, and is one of the main causes of death in Indonesia. High BP is defined as an increase in BP on the walls of the arteries, with a systolic BP (SBP) reading >140mmHg and a diastolic BP (DBP) reading of >90mmHg. In Indonesia, high BP is a big problem. Because it usually shows no symptoms, high BP is called the silent killer. According to the Indonesian National Heart, Lung and Blood Institute, 50% of people with high BP are unaware of their disease.[1,2]

HTN is presently a global concern because its prevalence increases along with unhealthy lifestyle choices, including obesity, smoking, alcohol consumption, psychological stress and laziness.[3] Uncontrolled HTN can cause complications in vital organs, such as the heart, brain, eyes and kidneys. In most countries, including Indonesia, HTN is the most common disease.[3] The lack of information about HTN causes many HTN patients to continue with their unhealthy lifestyle, which leads to complications. Based on World Health Organisation (WHO) data, around 1.13 billion people worldwide are positive for HTN, which means one in every three people globally has diagnosed HTN.[2,3]

Meanwhile, stroke, which is often a consequence of HTN, remains the leading cause of death in Indonesia.[4] It is estimated that the number of HTN patients will continue to increase from year to year, and 10 million people will die due to HTN and its effects. In 2018, the prevalence of high BP in Indonesia was 3.1%.[5] Based on such factual data, HTN is still a serious problem. Lifestyle, medication, facilities and infrastructure, as well as efforts to prevent HTN all have an impact on the prevailing scenario. The plan to reduce HTN cases by carrying out self-care is one effort to prevent HTN and related problems.[2]

HTN is one of the 10 main disease patterns in Bengkalis district of Indonesia, and 6 out of 10 people (60%) do not know about the complications of HTN and self-care related to HTN, while the other 4(40%) know about HTN complications, but not about self-care measures.[6]

Health workers are required to increase HTN patients' understanding of self-care through activities, such as group education and controlling harmful behaviours.[5,7] It has been suggested that people with HTN should practise self-care to regulate their BP and reduce or limit complications. In addition, medication adherence must be considered so that BP remains normal at all times. Self-care programmes provide possibilities to reduce or avoid consequences associated with HTN. Such initiatives encourage people to

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take charge of their health by monitoring symptoms, learning about particular illnesses, and collaborating with physicians to assess disease progression.[8]

HTN, like other chronic disorders, need lifelong therapy. Treatment of the condition necessitates the cooperation of family and medical staff in addition to the patients. Self-care refers to an individual's capacity to indulge in activities to preserve, develop and maintain one's own health and wellbeing.[9,10]

The current study was planned to determine the effect of hypertension education on self-care management in hypertensive patients in a rural setting.

Patients and Methods

The quasi-experimental study was conducted in January and February 2022 at the Senderak Village Health Centre, Bengkalis, Indonesia, and comprised patients referred to the health centre between August 2021 and January 2022. After approval from the ethical review committee of Pekanbaru Medical Center Hospital, the sample size was calculated using Cochran's standard formula for finite population with confidence interval 5%, confidence level 95%, standard deviation 50%, and a z score of 1.96.[11] The sample was raised using purposive sampling technique. There was no control group, and assessments were done at the baseline and post-intervention.[12,13]

Those included were HTN patients without any complications, and had the ability to read. Patients with complications, like strokes, severe nervous disorders, decreased consciousness and cognitive impairment, were excluded.

After taking informed consent from the participants, they were subjected to a self-care education intervention that was carried out once for 90 minutes, and a post-test was given 3 days later. The knowledge level was assessed at baseline and post-intervention using the Hypertension Self-Management Behaviour Questionnaire (HSMBQ) modified from WHOQOL: Measuring Quality of Life.[14]

Data was analysed using IBM SPSS Statistic v23 software. Bivariate analysis was done with Wilcoxon Sign Rank Test. P<0.05 was considered significant.

Results

All the 30(100%) patients were females, 12(40%) were aged 46-55 years, 20(66.7%) had received elementary school education, 25(83.3%) were housewives, and 21(70%) had stage II HTN with SBP ≥160mmHg (Table 1).

The level of knowledge improved form poor to good in all 30(100%) subjects (Table 2). The mean level of knowledge about self-care management of HTN increased significantly post-intervention (Table 3).

Table-1: Characteristics of the respondents.

Characteristics	n (%)
Age (Ministry of Health of the Republic of Indonesia, 2009)	
Early Adulthood (26-35)	3 (10)
Late Adulthood (36-45)	10 (33.3)
Early Elderly (46-55)	12 (40)
Late Elderly (56-65)	4 (13.3)
Seniors (65- upper)	1 (3.3)
Total	30 (100)
Level of Education	
No School	1 (3.33)
Elementary	20 (66.7)
Junior High School	3 (10)
Senior High School	6 (20)
Total	30 (100)
Gender	
Male	0 (0)
Female	30 (100)
Total	30 (100)
Marital Status	
Married	30 (100)
Single	0 (0)
Total	30 (100)
Profession	
Housewife	25 (83.3)
Weaver	3 (10)
Hodge	1 (3.3)
Farmer	1 (3.3)
Total	30 (100)
Smoking History	
Smoke	0 (0)
Not Smoke	30 (100)
Total	30 (100)
Alcohol Consumption	
Consumption	0 (0)
No Consumption	30 (100)
Total	30 (100)
Disease Complications	
Have	0 (0)
Haven't	30 (100)
Total	30 (100)
Classification of Hypertension	
Hypertension Stage 1 (140-159 mmHg)	9 (30)
Hypertension Stage II (≥160 mmHg)	21 (70)
Total	30 (100)

Table-2: Knowledge level at baseline and post-intervention.

Knowledge about self care	Levels	n (%)
Pre Test	Poor	30 (100)
Post Test	Good	30 (100)

Table-3: The effect of self-care education on the knowledge of hypertension patients.

Treatment	n	Mean±SD	Min	Max	*z*-score	*p*-value
Pre	30	48.3667±4.46815	40	59	-4.785	0.000
Post	30	147.1667±5.88442	137	156		

SD: Standard deviation.

Discussion

With increasing age, the risk of developing HTN is greater.[15] Age is one of the variables in the demographic model that is used as an absolute measure of various psychological indicators.[16]

However, as people age, visual and hearing impairments can affect the thinking processes[17] and add to the illness profile[18]

Education and knowledge are inextricably linked. Education is a process that results in a collection of behaviour patterns, activities or functions that might increase intellectual maturity and knowledge.[19] The association of education status with disease profile has been frequently reported.[20,21]

In the current study, 83.3% subjects were housewives, which was consistent with a study[22] that found that the majority patients were either housewives or retirees.

Smoking[23,24] and alcohol consumption[25] are also risk factors that might cause high BP.

In the current study, the level of knowledge improved form poor to good in all subjects, and the mean level of knowledge about self-care management of HTN increased significantly post-intervention, indicating that self-care education had a significant positive impact on HTN patients' knowledge.

The findings are consistent with those of an earlier study.[26] Health education is an attempt to persuade or encourage individuals to take action to preserve and enhance their own health. Several factors impact a person's knowledge, including education level, media exposure and information exposure.[27]

Conclusion

Health awareness education could improve knowledge on self-care management of HTN in hypertensive patients.

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