Barrier factors of controlled blood pressure in hypertensive patients in Indonesia: a qualitative study

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Abstract

Objective : the study was to explore barrier factor of controlled blood pressure in hypertension
Method: The research used qualitative method with a descriptive phenomenological study. Participants were 12 patients with uncontrolled hypertension in Banyumas Regency, Indonesia. The sampling technique used purposive sampling. Data collection method used in-depth interviews. Data credibility used source triangulation and observation. The results of the qualitative research were analyzed using the Colaizi method.
Result: Three themes were identified including: personal barriers (inadequate knowledge and information, inappropriate belief, bad habits, physical and psychological stress, non-adherence medication), barrier to access health services (financial factor, complicated treatment procedures), environmental barriers(lack of family support, unsupportive social environment).
Conclusion: Barrier factors of controlled blood pressure in hypertensive patients include personal barriers, environmental barriers and barriers to access health services. These barriers need to be overcome so that the blood pressure of people with hypertension can be controlled
Keyword: Barrier, Uncontrolled, Hypertension, Qualitative.

Introduction

The prevalence of uncontrolled hypertension in the world is quite high, especially in developing countries. An Ethiopian study which states that the incidence of uncontrolled hypertension is more than 52.7%[1], in Zimbabwe states

that the prevalence of uncontrolled hypertension is 67.2%[2], while in Indonesia it is more than 91% of all hypertensive patients[3].

Uncontrolled hypertension can increase morbidity and mortality due to cardiovascular disease. Uncontrolled increase in blood pressure in hypertensive patients can cause organ damage due to structural or functional changes in the arteries and/or the organs they supply, including the brain, heart, kidneys, central and peripheral arteries, and eyes. This is called hypertension-mediated organ damage (HMOD)[4]. The results of the study using the cohort method showed that high blood pressure had a significant effect on the occurrence of heart failure, atrial fibrillation, chronic kidney disease, heart valve disease, aortic syndrome, coronary heart disease, stroke and dementia[5]. The study stated that the prevalence of stroke in hypertensive patients aged 50 years was 20% of the population with a risk ratio of 4 and the prevalence continued to increase with age[6], whereas according to a study in Indonesia, hypertensive patients had a 2.87 times the risk of stroke[7].

Patients with uncontrolled hypertension also have a higher risk of death from cardiovascular disease than patients whose blood pressure is controlled[8,9]. Therefore, reducing the prevalence of hypertension by 25% by 2025 is one of the global targets for non-communicable diseases[10]. However, the prevalence of hypertension in some developing countries has shown an increase without any improvement in the level of awareness or control[11]. For example, Indonesia shows an increase in the prevalence of hypertension, in 2013 the prevalence of hypertension was 25.8% and increased to 34.1% in 2018 based on basic health research[12].

Based on the results of the study, blood pressure in hypertension is influenced by non-modifiable factors including age, gender and ethnicity as well as modifiable factors, namely smoking habits, drinking alcohol habits, excessive salt consumption, hypercholesterolemia, and secondary diseases[13,14,15,16]. The prevalence of hypertension increased in people with secondary diseases such as transient ischemic attack with a prevalence of 54.7%, heart disease with a prevalence of 64.4% and diabetes with a prevalence of 64.5%[17].

Prevention of uncontrolled blood pressure and complications of hypertension can be done by understanding the factors that influence it. Therefore, it is necessary to know the factors that hinder the control of blood pressure in hypertensive patients as the basis for providing education and interventions to prevent the risk or complications of hypertension. The purpose of this study was to identify Barrier factors for controlling blood pressure in hypertension.

Method

Design of research

The research method used qualitative with a descriptive phenomenological study. A qualitative research approach to phenomenology is an exploratory study that focuses on a person's life experiences[18]. The research was conducted in July-August 2021. The research follows The Standards for Reporting Qualitative research (SRQR). SRQR aims to increase the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research[19].

Setting

Participants

Participants in this study were patients with uncontrolled hypertension in Banyumas Regency. The sampling technique used purposive sampling. Inclusion criteria were patients diagnosed with hypertension for more than 1 year and uncontrolled blood pressure, while the exclusion criteria had decreased awareness or were unable to communicate and refused to participate.

Data collection

The instruments used in this study were interview guides and recording devices. Data collection method used in-depth interviews and observation. The main questions for participants are: Why is blood pressure not controlled? What's his lifestyle like? How is the diet management? How is it treated? Explain each obstacle?

Data credibility data

Data credibility used source triangulation dan methods. In addition to interviewing patients, researchers also interviewed families and health workers and made observations. Researchers also conducted a checklist using the Standards for Reporting Qualitative research (SRQR) which consisted of 21 items. To increase credibility, this is done by selecting participants according to variations in age, gender, education level, occupation, and duration of diagnosis of hypertension. In addition, the data collection used is semi-structured interviews, observations, photos and field notes. The interview protocol was tested in a pilot study before being used in a study to improve transferability. To increase the validity, we also

confirmed to the family, health workers, linguists and the team about the results of the interviews. The coding and theme development process also involved a team of qualitative researchers and experts.

Data analysis

Data analysis used a phenomenology approach (18). The analysis steps carried out were:1) making transcripts from interview results; 2) after reading the transcript by reading it over and over again; 3) create keywords; 4) create categories from keywords; 5) make a theme from the categories: 6) write a complete description of the theme; and 7) reconfirming the themes formed by the participants.

Ethical approval

The research has obtained ethical approval from the ethics committee of the Faculty of Health Sciences, Jenderal Soedirman University with Number: 419/EC/KEPK/V/2021. Before taking the data, the researcher gave informed consent first.

Result

Characteristics of Participants

Participants totaling 12 people with hypertension in Banyumas Regency participated in the interview. The characteristics of the participants are described in table 1. Based on table 1, it is known that majority the participants is more than 60 years old, have low education, unemployed and duration of being diagnosed with hypertension is more than 10 years

There are 3 main themes and 9 sub themes (table 2). The three main themes include personal barriers, barriers to access health services and environmental barriers

Personal barriers

The most common personal barriers found in participants included inadequate knowledge and information, inappropriate beliefs, bad habits, physical and psychological stress, medication non-adherence. Insufficient knowledge and information were found, as stated by the following participants:

"I don't know, cause I don't know, if I know I left it" (P1)
"Must avoid what foods are not explained, the information is not clear" (P2)
"The doctor said nothing, if he was told to avoid it, I would have avoided it, but he said nothing". (P5).

The participants' false beliefs that hindered blood pressure control were expressed as follows:

"Just eat normally, don't feel anything, for example eating satay, don't feel anything. Not dizzy either, can work as usual ". (P5)
"Yes it feels healthy so no need to check". (P6)

Bad habits that are difficult to get rid of by participants that are a risk for uncontrolled blood pressure are expressed by participants as follows:

"I usually smoke, if I don't smoke, how does it feel". (P1)
"I want side dishes to have taste, side dishes have no taste, yes, there is no appetite". (P2)

Physical and psychological stress was felt by several participants, which was thought to be related to uncontrolled blood pressure, the following are the participants' expressions:

"I don't know what I was thinking, I just had such thoughts. Actually, because of work, my legs are tired to go up and down, maybe that's all". (P2)
"I have a lot on my mind, I work here and there to pay off debts ". (P10)

The majority of respondents also stated that they were not compliant with treatment because they already felt healthy and only took medicine if there were symptoms, the following statements from participants:

"I take medicine and go to the doctor just if I feel dizzy". (P1)
"If I take medication my blood pressure decreased. Stopped a month, didn't take medication 2 or 3 days my blood pressure increased". (P3)
"Yes.. it feels healthy so I don't go to the doctor". (P6)

Barrier to access health services

Participants also stated that there were obstacles to obtaining health services. The inhibiting factors include financial factors and complicated treatment procedures. Financial factor was disclosed by one of the participants as follows:

'Yes, if you have money, buy it, (if not) I stop buy drug". (P2)

Complicated treatment procedures can also be one of the obstacles, following the participants' comments:

"Currently the process is difficult, I want to go to the doctor, I was asked for a referral… I have arrived at the place, I was told to go home to take a referral, even though my body had been not comfortable". (P1)

Environmental Barriers

Environmental factors that become obstacles include the lack of family support and an unsupportive social environment. The following are participant statements regarding this matter:

"Since the wife died no one has taken the check up…now the child has separated from the parents". (P7)
"My wife recommends taking herbs only, no need to check" (P9)

The unsupportive social environment is also an inhibiting factor, the following is the participant's expression:

"Yes, I was afraid of being considered disrespectful, I was served coffee, so I drank". (P4)
"If a friend invites me to eat satay, I want too". (P5)

Discussion

The most common personal barriers found in participants were inadequate knowledge and information, inappropriate beliefs, bad habits, physical and psychological stress, non-adherent medication. Knowledge and information are the basis for behavior change, inadequate information inhibits behavior. Beliefs also influence behavior. False beliefs can also hinder disease prevention behavior. Habit is a behavior that is difficult to change so that bad habits can be an obstacle to prevent blood pressure control behavior in hypertension. Physical and psychological stress conditions can increase the risk of uncontrolled blood pressure. Non-compliance is also a major factor that hinders blood pressure control. The results of a systematic review show that non-adherence to treatment has a significant effect on the incidence of uncontrolled blood pressure[20].

Participants also stated that there were obstacles in obtaining health services. The inhibiting factors include financial factors and complicated medical service procedures. Financial conditions are a common problem in developing countries. With poor financial conditions without health insurance, it will be difficult to get access to good health services. Complicated treatment procedures can also hinder blood pressure control because this condition will reduce the patient's interest in accessing health services. Improved adherence can be improved through better education, availability of health insurance, judicious use of patient incentives,

collaboration between patients, payers, policy makers and health providers, and redesign of systems to use more team-based care, and use of affordable medications[21]. Another study showed that affordability of therapy significantly affected adherence and outcome[22].

Environmental factors that become obstacles include Lack of family support and Unsupportive social environment. The family is the closest environment for the patient and is the main support for the patient. Families who are less supportive will hinder the care of hypertensive patients at home, especially for elderly patients who are more dependent on their families. The social environment also influences behavior. Social environment that does not understand the condition of hypertensive patients can inhibit behavior to prevent blood pressure from being controlled. Research shows that family support is the main source of the support system available for most patients with hypertension and type 2 diabetes although formal support from government and non-governmental organizations is most desirable[22].

Conclusion

Barrier factors of controlled blood pressure in hypertensive patients include personal barriers, environmental barriers and barriers to access health services. These barriers need to be overcome so that the blood pressure of people with hypertension can be controlled.

Conflict of interest

The authors declare no conflict of interest related to this study

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Table 1. Participant characteristic

Participant characteristic	f	%
Gender		
Male	7	58,33
Female	5	41,67
Age (years old)		
40-50	3	25
51-60	2	16,67
61-70	4	33,33
>70	3	25
Education level		
Illiterate	2	16,67
Primary high school	6	50
Junior high school	3	25
Senior high school	0	0
College	1	8,33
Occupational status		
Unemployed	4	33,33
Farmer	3	25
Driver	1	8,33
Security	1	8,33
Baby dukuns	2	16,67
Government worker	1	8,33
Marital status		
Married	9	75
Widower/widow	3	25
Duration of being diagnosed with hypertension		
1-5 years	2	16,67
6-10 years	2	16,67
>10 years	10	83,33

Table 2. Description of quotes, subthemes and themes

Quotes	Subthemes	Themes
"I don't know, cause I don't know, if I know I left it" (P1) *"Must avoid what foods are not explained, the information is not clear" (P2)* *"The doctor said nothing, if he was told to avoid it, I would have avoided it, but he said nothing". (P5).*	Inadequate knowledge and information	Personal barriers
"Just eat normally, don't feel anything, for example eating satay, don't feel anything. Not dizzy either, can work as usual ". (P5) *"Yes it feels healthy so no need to check". (P6)*	inappropriate belief	
"I usually smoke, if I don't smoke, how does it feel". (P1) *"I want side dishes to have taste, side dishes have no taste, yes, there is no appetite". (P2)*	Bad Habits	
"I don't know what I was thinking, I just had such thoughts. Actually, because of work, my legs are tired to go up and down, maybe that's all". (P2) *"I have a lot on my mind, I work here and there to pay off debts ". (P10)*	Physical and psychological stress	
"I take medicine and go to the doctor just if I feel dizzy". (P1) *"If I take medication my blood pressure decreased. Stopped a month, didn't take medication 2 or 3 days my blood pressure increased". (P3)* *"Yes.. it feels healthy so I don't go to the doctor". (P6)*	non-adherence medication	

Quotes	Subthemes	Themes
'Yes, if you have money, buy it, (if not) I stop buy drug". (P2)	Financial factor	Barrier to access health services
"Currently the process is difficult, I want to go to the doctor, I was asked for a referral… I have arrived at the place, I was told to go home to take a referral, even though my body had been not comfortable". (P1)	Complicated treatment procedures	
"Since the wife died no one has taken the check up…now the child has separated from the parents". (P7)	Lack of family support	Environmental Barriers
"My wife recommends taking herbs only, no need to check" (P9)		
"Yes, I was afraid of being considered disrespectful, I was served coffee, so I drank". (P4)	Unsupportive social environment	
"If a friend invites me to eat satay, I want too". (P5)		