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ORIGINAL RESEARCH

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EXPERIENCE OF BARRIERS TO HYPERTENSION MANAGEMENT IN MINANGKABAU ETHNIC GROUP IN PAYAKUMBUH INDONESIA: A PHENOMENOLOGICAL STUDY

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Abstract

Background: Understanding barriers to hypertension managements remains important to reduce the hypertension rate in community. Minangkabau is one of the ethnic groups in West Sumatra Indonesia that has a high proportion of people with hypertension although its management has been implemented.

Objective: This study aims to explore the experiences of barriers to hypertension management in Minangkabau ethnic group in Payakumbuh, Indonesia.

Methods: This was a phenomenological study with twelve respondents selected using purposive sampling. Data were collected using in-depth interview. Colaizzi's content analysis method was used for data analysis.

Results: Five themes were emerged from the data, namely: (i) lack of self-motivation in the management of hypertension, (ii) disobedience in the management of hypertension, (iii) culture pattern of food intake, (iv) lack of social support, and (v) excessive stress and anxiety.

Conclusions: The barriers to hypertension management in Minangkabau ethnic group are closely related to its culture both in lifestyle and in food intake of the family members and the community. Nurses are expected to always give health education about hypertension and finding the way to control it.

Keywords: barriers; management of hypertension; Minangkabau ethnic group; qualitative

INTRODUCTION

High blood pressure causes one in every eight death, making hypertension the third leading killer in the world ([Maulik, 2013](#)). Basic Health Research Indonesia in 2013 reported the prevalence of hypertension in Indonesia based on diagnosed health worker and taking hypertension medicines increased from 7.6% in 2007 to 9.5% in 2013 ([MOH, 2013](#)).

The high risk of hypertension and cardiovascular disease in Indonesia between diverse ethnic groups has a close relationship

with the pattern of food intake. The prevalence of hypertension of various ethnic groups in Indonesia is 70.7% of Jawa ethnic group, 72.7% of Sunda ethnic group, 60.9% of Betawi ethnic group, 55.6 % of Batakethnic group and 78.6 % of Minangkabau ethnic group. The results of this study indicate the Minangkabau ethnic group have a greater proportion of hypertension than other ethnic groups ([Sangadji, Wadjir, & Nurhayati, 2013](#)).

Several studies on hypertension indicate an barriers in its management especially related to diet ([Gee et al., 2012](#); [Moczygemba, Kennedy, Marks, Goode, & Matzke, 2013](#); [Randy Wexler, Pleister, & David Feldman, 2009](#)). In addition, self-efficacy and barriers to some behavioral changes in hypertensive patients are the result of barriers in quit smoking including stress, habits, addiction, long-term smoking, the fear of weight increases; and barriers in physical activity including acute medical conditions, outdoor temperature, overly busy, overly tired. Low sodium diet barriers: taste, comfort, cost, tradition, do not know how to change diet ([Gee et al., 2012](#); [Mansyur, Pavlik, Hyman, Taylor, & Goodrick, 2013](#); [Moczygemba et al., 2013](#); [Randy Wexler et al., 2009](#)).

It is indicated that hypertensive patients have barriers in the management of hypertension, especially for Minangkabau ethnic groups who are difficult in controlling blood pressure because they have a bad diet pattern, most of them cannot avoid the habit of consuming saturated fats. The aim of this study was to explore the experiences of barriers to hypertension management in Minangkabau ethnic groups in Payakumbuh, Indonesia.

METHODS

Study design

This was a phenomenological study to explore the experience of barriers to hypertension management in Minangkabau ethnic groups in Payakumbuh, Indonesia.

Setting

This study was conducted at the Community Health Center of Padang Karambia, Community Health Center of Payolansek, and Community Health Center of Tarok in Payakumbuh, Indonesia from June 2017 until the second week of July 2017.

Sample

Twelve participants were selected using purposive sampling, which were considered able to help providing information related to

the problem of the study ([Denise F. Polit & Beck, 2012](#)). The inclusion criteria in this study were: 1) participants were Minangkabau ethnic groups who lived in Payakumbuh, West Sumatra, Indonesia suffering from hypertension disease for approximately five years without complications of cardiovascular disease, neoplastic, nervous system, and diabetes mellitus, 2) participants were willing to be interviewed and recorded the conversation during the study. In-depth interviews were performed for data collection.

Ethical consideration

This study has been approved by the Research Ethics Commission of Health, Faculty of Nursing, University of Sumatra Utara, Indonesia with approval number: 1201/V/SP/2017. Informed consent was performed prior to data collection.

Data analysis

In analyzing the research data, researchers used Colaizzi methods ([Colaizzi, 1978](#)) with the following stages: 1) reading all protocols to acquire a feeling for them, 2) reviewing each protocol and extract significant statements, 3) spelling out the meaning of each significant statement (formulate meanings), 4) organizing the formulated meanings into clusters of themes, comprise: refer these clusters back to the original protocols to validate them and note discrepancies among or between the various clusters, avoiding the temptation of ignoring data or themes that do not fit, 5) integrating results into an exhaustive description of the phenomenon under study, 6) formulating an exhaustive description of the phenomenon under study in as unequivocal a statement of identification as possible, and 7) asking participants about the findings thus far as a final validating step.

Trustworthiness

To ensure the trustworthiness of the study, according to literature, member checking with participants was performed, as literature said that member checking is one of the best methods to ensure the rigor of the study ([D. F. Polit & Beck, 2008](#)), and audit trails was also

conducted with an experience researcher. Although the interview was conducted by Indonesian nurses, the researchers were ensured by discussing about personal biases.

RESULTS

Five themes were emerged from the data in Minangkabau ethnic group: 1) lack of self-motivation in the management of hypertension, 2) disobedience in the management of hypertension, 3) culture pattern of food intake of Minangkabau ethnic group, 4) lack of social support in the management of hypertension, and 5) excessive stress and anxiety.

Theme 1. Lack of self-motivation in the management of hypertension

Lack of self-motivation becomes an obstacle for participants in managing hypertension particularly in the cause of lack of willingness in doing physical activity on a regular basis, such as physical health conditions, physical fatigue and lazy exercise. This is explained in the following statements:

"...I feel tired and lethargic, quickly drowsy. My appetite and weight increased since quitting smoking. The morning walk for 2 km just feels tired, so I do not routinely exercise..." (Participant 5).

"...There is an obstacle that my body is fat, so it feels heavy when I take a move or exercise, for example, I join gymnastics sometimes but after a few minutes I stop because my body is too weight to be moved ..." (Participant 9).

The limited time to exercise also leads to a lack of self-motivation of participants in managing hypertension, such as busy with homework and not having spare time to exercise. This is explained in the following statements:

"...I am busy since in the morning with homework, from preparing breakfast for the kids, and cleaning the house to help my husband in the garden, so I do not have time to exercise..." (Participant 1).

"...The obstacle is a time, sometimes a lot of work to do, so I cannot exercise" (Participant 5).

Lack of will to quit smoking also causes lack of self-motivation of participants in managing hypertension, such as smoking addiction and

inviting friends to smoke again. This is explained in the following statements:

"... The barrier is that an addiction which is difficult to remove because it has been 18 years of smoking although I really want to stop..." (Participant 4).

"...When hanging out with friends, they sometimes offer smoke which difficult for me to refuse, so finally I smoke but for one cigarette only..." (Participant 5).

Theme 2. Disobedience in the management of hypertension

Disobedience in the management of hypertension becomes a barrier for participants in the management of hypertension caused by poor adherence in weight control, such as lack of movement due to overweight, eating frequency, and excessive sleeping after lunch. This is explained in the following statements:

"...Actually, the doctor recommended to exercise and lose weight to reduce my body fat, but to walk alone is difficult, I get tired and I never do exercise" (Participant 10).

"...My appetite is increased when the food tastes good, if there is my favorite cuisine of gold fish head curry, I can add up to eat 4-5 times a day, sometimes also dinner which finally to make my weight increased..." (Participant 8).

"...It is difficult for me to change the habit of eating, when I am full then my eyes are so sleepy and finally oversleep. My appetite is always delicious and no problem, but the only problem is my weight" (Participant 9).

Disobedience to a hypertension diet, such as excessive coffee drinking becomes a barrier for participants in managing hypertension. This is explained in the following statements:

"...The difficult barrier is to reduce the coffee, because my habit since I was a kid get used to drinking coffee as well as my family..." (Participant 6).

"...The obstacles in reducing coffee drinking. From small parents have been accustomed to drink coffee, every day our brothers always drink coffee. At most half a glass but every day in drinking. Because it has become a habit there is less if not drinking coffee..." (Participant 7).

Theme 3. Culture pattern of food intake of Minangkabau ethnic group

Culture pattern of food intake of Minangkabau ethnic group becomes obstacles of the participants in the management of

hypertension, such as the habit of eating too much salty and high fat. The participants said:

"...I cannot avoid the salty cuisine; it doesn't feel tasty if there is a less salt. If Minang people say "lai taraso garamnyo", it is about 1.5-2 tablespoons of salt per day..." (Participant 3).

"...I like tunjang curry and *cancang* (fat meat curry), it is so delicious, so I cannot avoid it, and I eat that once a week. I usually buy it and never cooked alone..." (Participant 2).

The participants in this study explained that consuming high-fat foods is the habit of Minang society in terms of food intake. This is explained in the following statements:

"...Constraints are also difficult for me to reduce cooking *kalio*, which I make with a good beef, chicken, or anchovy with sweet potatoes. Every week I tell my wife to cook *kalio* for me because I like it very much..." (Participant 6).

"...My doctor told me to reduce eating *cancang* curry dishes (beef fat curry or greasy meat curry), and I tried once, but it is difficult to do because its taste is so attempting..." (Participant 8).

The habit of serving fatty and salty dishes on traditional occasions and tradition of parents is also a part of the cultural pattern of food intake of Minangkabau ethnic group which become barriers of participants in managing hypertension. The participants said:

"...A habit in the wedding ceremony, whether in a traditional event or a party (*baralek*), is always providing fatty dishes, such as red curry, white curry, pickle and also *rendang*, which are special and mandatory menu..." (Participant 12).

"...The habit of cooking too salty is from my parents..." (Participant 2).

Theme 4. Lack of social support in the management of hypertension

Lack of social support in the management of hypertension becomes a barrier for participants in managing hypertension. It is difficult to differentiate between the patient and family members because of financial matter. This is explained in the following statements

"...When I cook and make a dish, I do not make it different between family members to save money. If I separate the dish for family member and a member with hypertension, it is difficult and involve high cost..." (Participant 1).

The habits of family members in consuming fat and too salty foods become barriers

for participants in managing hypertension. Participants said:

"...When I cook fried foods for my husband and kids with less salt, they often complain and then finally I add more salt..." (Participant 1).

Additionally, the habit of family members smoking at home also becomes a barrier for participants in managing hypertension. It is explained in the following statement:

"...Because my husband is a smoker, so every day I inhale a cigarette smoke. Sometimes I tell my husband to smoke outside, but still the smoke comes into the house..." (Participant 3).

Theme 5. Excessive stress and anxiety

The excessive stress and anxiety become obstacles for participants in managing hypertension, such as uncontrolled emotions. This is explained in the following statements:

"...I am a teacher, and my students are a lot. Sometimes their naughty behavior makes me feel emotion, and ultimately make me angry. If I am angry, my head feels dizzy too much..." (Participant 5).

Life problems also cause excessive stress for participants. It is explained in the following statements:

"...Maybe a burden of thought, I am the eldest and have two siblings. Since my parents died, I raised them both, but in recent years they do not address each other, so it becomes a burden for me..." (Participant 2).

Financial problems also cause excessive stress and anxiety, like participants said:

"...This is also a burden for me to pay educational payment. Now my mother is a single parent, sometimes her sister helps educational fees, but not every time. Sometimes I feel anxious also thinking about children who are still at school, at least they can finish high school level..." (Participant 11).

DISCUSSION

The results showed that the lack of self-motivation in the management of hypertension becomes a barrier for Minangkabau ethnic group in the management of hypertension. From the results of interviews with participants, lack of self-motivation in the management of hypertension is caused by lack of willingness

in doing physical activity on a regular basis, limited time to exercise, lack of willingness to control weight and to quit smoking. These results are in line with previous research about the lack of volition and self-discipline often reported as a barrier to engage in physical activity, weight control, and smoking cessation. Other important perceived barriers to physical activity in the limited time and condition of physical health or health problems ([Gee et al., 2012](#)).

Non-compliance in the management of hypertension is also an obstacle for Minang people in the management of hypertension, which is caused by disobedience in weight control and non-adherence to a hypertensive diet. Study describes weight loss weighing 10 pounds (0.4536 kg) has been shown to reduce blood pressure or prevent the occurrence of hypertension in obese patients ([Daniels & Nicoll, 2011](#)). Of 27% of overweight and obese respondents reported receiving lifestyle suggestions for weight-loss purposes ([Daniels & Nicoll, 2011](#)).

In addition, individuals with high blood pressure should limit caffeine to approximately 200 mg daily, which is considered as the best method. Previous study shows that respondents who consumed coffee 1 to 2 cups per day have an increase of the risk of hypertension, which is 4.11 times higher compared with respondents who do not drink coffee. So the habit of drinking coffee increases the risk of hypertension, but it depends on the frequency of daily consumption ([Daniels & Nicoll, 2011](#); [Martiani & Lelyana, 2012](#)).

While another study describes the overall adherence rate of hypertensive patients in the treatment run of 79%. Adherence rates in women were lower than those of men (74.7% and 85.7%) ([Khan, Shah, & Hameed, 2014](#)). The main reasons for non-compliance in the treatment are side effects and forget to take medication. It is in line with another study on healthy lifestyle behaviors in hypertensive patients, which explained acceptable levels of adherence to healthy lifestyle behaviors,

including diet planning and exercise (88.6% and 78.7%) ([Baynouna, Neglekerke, Ali, ZeinAlDeen, & Al Ameri, 2014](#)).

The culture of food intake of Minangkabau ethnic group is also a barrier in the management of hypertension, which is caused by the habit of consuming high-fat and too-salty foods, either at home or at the traditional occasions, and the tradition of parents using excessive salt in cooking. Meanwhile, the results of interviews with participants showed that the average of participants use salt more than a tablespoon per day because it has become a tradition and habits of parents who use a lot of salt in cooking and participants also have a habit of eating foods that are too salty because their tongue is accustomed to salty dishes. The results of this study are not in line with the recommendation of the Heart Foundation of Australia for hypertensive patients to reduce their salt intake by less than 4 grams of salt per day (about 1550 mg of salt per day), approximately one teaspoon of salt ([Heart Foundation, 2007](#)).

In addition to excessive sodium intake, study also explains that consuming excessive fat can increase the incidence of hypertension, especially in saturated fat intake and cholesterol ([Ramayulis, 2013](#)). The results of this study revealed that participants have a habit of eating high-fat foods, such as tunjang curry, red curry (beef and goat), kalio meat, fried eel and cancang curry (beef grease curry or mutton). This is in line with previous study in Padang showed 70.5% of respondents often eat fatty beef, offal, liver, brain and chicken meat; 82.1% of respondents have uncontrolled blood pressure, and 56.4% respondents have poor diet pattern ([Herwati & Sartika, 2013](#)).

Lack of family support in the management of hypertension is also a constraint for Minangkabau ethnic group in the management of hypertension due to the difficulties in differentiating the way of cooking between patient with hypertension and other family member, which is related to the high cost, habit of family members in consuming high-

fat and too-salty foods, and the habit of family members of smoking inside the house.

Previous study explains that family support is an important factor to obey the rules of life or not. Some participants described that they did not receive support from family members in actively treating their illness and sometimes they realize in treating illness better by doing it on their own by not leaning on the family (Fort et al., 2013). Similar with another study revealed that participants reported disagreement with their family members because of incorrect dietary choices (Gebrezgi, Trepka, & Kidane, 2017). This is in line with the results of this study which is related to the lack of family support, especially disagreements between family members with hypertensive patients in consuming food.

Excessive stress and anxiety are also the barrier in hypertension management due to uncontrolled emotions, life problems and financial problems. Study indicated that hypertension patients experience symptoms of anxiety (56%), stress (20%) and depression (4%) (Kretchy, Owusu-Daaku, & Danquah, 2014). Another study indicated that stress is a major factor contributing to the occurrence of high blood pressure. Work-related stress, domestic life, and finances are all the causes of stress, which is in line with the results of this study revealed that the excessive stress and anxiety are caused by emotional distress in the management of hypertension such as uncontrolled emotions, life problems and financial problems that become a barrier for Minang people in the management of hypertension.

CONCLUSION

Controlling blood pressure to remain normal is not easy. Sometimes successful of treatment of hypertension may not be achieved, which is influenced by healthy lifestyles. The Minangkabau ethnic group in this study have a barrier in controlling blood pressure due to the cultural pattern of food intake with full of

salt and high in fat. The role of nurse as educator is needed to always provide counseling to hypertension patients about how to manage hypertension by recommending a healthy lifestyle and the use of drug therapy regularly, and finding another strategy to break the habit of Minangkabau ethnic group.

Declaration of Conflicting Interest

None declared.

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Author Contribution

All authors contributed equally in this study.

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