



THE CORRELATION OF FAMILY KNOWLEDGE AND BEHAVIOR IN CONTROLLING HYPERTENSION IN PATIENTS AT OUTPATIENT DEPARTMENT

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ABSTRACT	Keywords
<p>There has been a significant and continuous increase in the number of people suffering from hypertension worldwide, particularly in Indonesia. Many families with hypertensive members do not recognize hypertension or control their hypertension. This study aims to determine the correlation of family knowledge and behavior in controlling hypertension in patients at the outpatient department of a private hospital in Jakarta. The method was a quantitative methodology with a cross-sectional design approach. The population was the patients' families in outpatient department. The sample was 94 respondents who were selected using the purposive sampling technique. The instrument was a previous study's questionnaire. The univariate analysis showed that 64.9% of respondents have good knowledge, and 53.3% have good behavior. The bivariate analysis, which used the Pearson Chi-Square test showed a p-value of 0.001 (CI 95%). There was a correlation between family knowledge and behavior in controlling hypertension in patients at the outpatient department. Hospitals and nurses can further optimize family education, socialization, and collaboration in controlling hypertension.</p>	<p><i>Behavior, Family, Hypertension, Knowledge, Outpatient Department</i></p>

INTRODUCTION

Hypertension is called a "silent killer". Most hypertensive people are unaware of their condition problem because there are no warning signs or symptoms. The only way to detect hypertension is to have blood pressure measured by a medical professional. According to World Health Organization (WHO) data, hypertension is a major cause of premature death worldwide, with less than 1 in every five people having it under control. The number of people with

hypertension is increasing year by year, with an estimated 1.13 billion people worldwide having hypertension in 2015, with the majority (two-thirds) living in low- and middle-income countries (WHO, 2019). WHO also explained that The WHO African Region has the highest prevalence of hypertension (27%) while the WHO Americas Region has the lowest (18%). One of the global non-communicable disease targets is to cut the prevalence by 25% by 2025.

The Minister of Health of Republic Indonesia (2018) stated that the Indonesian's prevalence of hypertension (over the age of 18) has increased from 25.8% in 2013 become 34.1% in 2018, with around 4% have controlled hypertension, due to awareness and awareness and taking medication, while 50% are unaware that they already have hypertension, so they tend to ignore it. With a prevalence of 4.67%, hypertension patients who were seeking outpatient treatment at hospitals in Indonesia rank 2nd among the ten most common diseases (Suryadi, 2014). The reasons for hypertensive patients not taking medication, among others; because hypertensive patients feel healthy (59.8%), irregular visits to health facilities (31.3%), take traditional medicine (14.5%), use other therapies (12.5%), forgot to take medicine (11.5%), could not afford to buy medicine (8.1%), there were side effects of the drug (4.5%). Hypertension medication was not available at the health facilities (2%) (Minister of Health of The Republic Indonesia, 2019).

According to Friedman, Bowden, and Jones (2010), the function of the family as health care includes: 1) Recognizing the health development disorders of each family member, 2) Making an appropriate decision in health actions, 3) Providing care to family members who are sick, 4) Maintaining a home atmosphere that is favorable for health and personality development of family members, 5) Maintaining reciprocal relationships between family members and health facilities. This shows that the family has a significant influence on family members who have health problems. Many families with hypertensive members fail to recognize and control their hypertension. The national program in Indonesia, namely the Healthy Indonesia Program (Program Indonesia Sehat), is carried out with a family approach.

According to data from a private hospital in Jakarta, there were 507 patients experiencing hypertension in the outpatient department from January to December 2018 and 377 patients from January to April 2019. Other data obtained from the Medical Records (MR) revealed an increase in visits to the outpatient department by hypertensive patients. The result of a month's worth of interviews with families accompanying hypertension patients to the outpatient department revealed that the patient's family did not have a proper understanding of hypertension and thought it was not dangerous. Concerning hypertension risk factors, some patients and family members stated that they had hypertension for a long time, have a family history of high blood pressure, smoke, and rarely exercise. Furthermore, they stated that if the patient has headaches, they should rest at home and not seek medical attention.

Laxmaiah *et al.*, (2015) conducted a previous study that revealed that awareness and knowledge about hypertension and health-seeking behavior were low. The other study showed that hypertension knowledge was significantly and suboptimally associated with medication adherence and blood pressure control (Malik *et al.*, 2014). According to Flynn *et al.* (2013), Family members established a variety of facilitators (such as their involvement in patients' doctor visits and conversations with patients' physicians outside of visits) and obstacles (such as their limited health awareness and patients' lack of motivation to maintain hypertension self-management behaviors) that influence their attempts to lower blood pressure. This study aims to determine the correlation between family knowledge and behavior in controlling hypertension in patients at the outpatient department of a private hospital in Jakarta.

METHOD

The study used a quantitative methodology with a cross-sectional design approach. This research was conducted out in the outpatient department of a private hospital in Jakarta from June to July 2019.

The population consisted of patients' families who came to accompany hypertensive patients to the outpatient department of a private hospital in Jakarta to seek treatment. The total sample size in this study was 94 respondents obtained through the purposive sampling technique. The nuclear family, families who live with the patient and care for the patient, and families accompanying the patient to a health facility were among those who met the inclusion criteria. Someone who had no blood relationship with the patient but treated or drove the patient to a health facility met the nuclear family exclusion criteria. The variables studied in this study were family knowledge as an independent variable and family behavior in hypertension control as a dependent variable.

The instrument was a questionnaire from previous studies. The questionnaire to measure knowledge about hypertension was adopted from Kristafel (2014) with the title "The Relationship between Knowledge Levels of Hypertension and Compliance with Self-Care in Hypertensive Patients". Meanwhile, the questionnaire to measure family behavior in controlling hypertension in hypertensive patients was modified from Maulina (2013) with the title "Relationship of Family Characteristics and Functions with Hypertension Control in the Elderly in Cisalak Village, Cimanggis Market, Depok City". The questionnaire had previously been carried out by the VR test. There were 25 valid questions for knowledge variables, true or false answer choices, and 26 valid questions for behavior variables with yes or no answer choices. The Cronbach Alpha results obtained in the family knowledge

variable was 0.875, and the family behavior variables were 0.893.

After all the data has been collected, the researcher then performs the data processing stages, namely: Editing, coding, Processing, Cleaning. After processing the data, then proceed to data analysis. In this study, data were analyzed using statistical computer software. Univariate and bivariate analyses were used to examine the data. The Chi-square test was used in bivariate analysis.

This study has passed the ethical review of the Ethics Committee of the Faculty of Nursing, Pelita Harapan University, with the number 007/RCTC-EC/R/SHTBBGR/VI/2019. Information for the participants and Informed consent was given to the respondents, and the respondents provided a written consent to involve in this study. Ethical aspects used in this research, namely: 1) Rights self-determination, namely the right of the respondent to refuse or resign in this study, 2) Autonomy, the agreement described is also the respondent's volunteerism for the research to be carried out, it is not a force either not detrimental to the respondent, and 3) Confidentially, the researcher guarantees the respondent that the data is confidential and will be used only for research purposes. Researchers store research data in a computer folder and are given a password or stored in a locked cabinet when data analysis has been carried out.

RESULTS

The results of research in the univariate and bivariate analysis are summarized in table 1-4. Based on table 1, it was known that the majority of the characteristics of the respondents in this study were: 26-45 years old (58.5%), female (69.1%), bachelor (42.6%), family members accompanying the patient was the child (60.6%).

Table 1. Demographic Data Characteristics of Respondent at Outpatient Department, June-July 2019 (n = 94)

Characteristics of Respondents	Category	n	%
Age	18-25 years	3	31.9
	26-45 years	55	58.5
	>45 years	9	9.6
Gender	Man	29	30.9
	Woman	65	69.1
Education	High school	1	1.1
	Diploma	3	3.2
	Bachelor	4	4.2
	Parents	3	3.2
Family Members Accompanyin	Child	5	60.
	Husband	1	11.
	Wife	1	17.
	Sibling	7	7.5

Table 2. Family Knowledge about Hypertension at Outpatient Department, June-July 2019 (n = 94)

Family Knowledge	n	%
Good	61	64.9
Moderate	27	28.7
Poor	6	6.4

Based on table 2, it was known that the categories of family knowledge regarding hypertension in the outpatient department, namely, good at 64.9%, moderate at 28.7%, and poor at 6.4%.

Table 3. Family Behavior in Controlling Hypertension in Patients at Outpatient Department, June-July 2019 (n = 94)

Behavior	n	%
Good	50	53.2
Moderate	27	27.7
Poor	18	19.1

Based on Table 3, the distribution of family behavior in controlling hypertension in hypertensive patients in the outpatient department was known: good behavior at 53.2%, moderate behavior at 27.7%, and poor behavior at 19.1%.

Table 4. The Correlation of Family Knowledge and Behavior in Controlling Hypertension in Patients at Outpatient Department, June-July 2019 (n = 94)

Knowl edge	Behavior						To tal	p- val ue (CI 95 %)
	Good		Moder ate		Poor			
	n	%	n	%	n	%	N (%)	
Good	45	48.9	13	13.8	3	3.2	61 (64.9)	0.001
Moder ate	5	5.3	11	11.7	1	1.1	17 (18.1)	
Poor	0	0	2	2.1	4	4.2	6 (6.4)	
Total	50	53.2	27	28.7	17	18.1	94 (100)	

The bivariate analysis results using Pearson Chi-square were known based on Table 4, obtained p-value = 0.001 (95% CI). This showed a correlation of family knowledge and behavior in controlling

hypertension in patients at the outpatient department. In other words, H1 is accepted in this study.

DISCUSSION

Health literacy is related to health-related quality of life (Johari Naimi *et al.*, 2017). Anteneh, Yalew, and Abitew (2015) found that one out of every four respondents had hypertension, and more than one out of three cases of hypertension did not know that they had hypertension. In high-income countries, understanding (58.2 % vs. 67.0 %), treatment (44.5 % vs. 55.6 %), and control (17.9 % vs. 28.4 %) all increased dramatically between 2000 and 2010, while awareness (32.3 % vs. 37.9 %), treatment (24.9 % vs. 29.0 %), and control (8.4 % vs. 7.7 %) all decreased marginally (Mills *et al.*, 2016). Unsurprisingly, the prevalence of hypertension and its complications is increasing year after year, owing to a lack of health literacy.

The study conducted by Gordon-Larsen *et al.*, 2018 found that hypertension was higher for lower education. Higher education and older age were related to improved risk perception and knowledge (Demaio *et al.*, 2013). The results showed that 42.6% of the respondents in this study were highly educated, namely bachelor's, and 64.9% had good knowledge. This shows that the level of education also affects the level of family knowledge about hypertension. The level of education affects individuals and families in accessing information, understanding hypertension, its treatment, and controlling it. Even knowledge of hypertension and regular blood pressure measurements are the strongest determinants of adherence (Jankowska-Polańska *et al.*, 2016). Hypertension knowledge also can reduce the risk of hypertension (Mohanta *et al.*, 2020). Low health literacy means a person's

hypertension knowledge is likely to be limited (Du *et al.*, 2018).

In this study, it was found that the majority of respondents had good behavior at 53.2%. Some family behaviors in the care and control of hypertension include; accompanying routine control patients to health care facilities, motivating and supervising the patient's medication, arranging a healthy hypertension diet at home, together with patients adopting a healthy lifestyle such as exercising or physical activity, not smoking, building positive coping stress and creating a conducive home atmosphere. Research conducted by Flynn *et al.*, (2013) found that Family members established a variety of facilitators (such as their involvement in patients' doctor visits and conversations with patients' physicians outside of visits) and obstacles (such as their limited health awareness and patients' lack of motivation to maintain hypertension self-management behaviors) that influence their attempts to lower blood pressure.

The family is the smallest unit in the community that has an important role in building and maintaining the health of family members. Family members impact on patients' decisions and play an important role in providing support to the patient (Manangkot, Saputra and Suindrayasa, 2020). This study's findings have revealed a correlation between knowledge and family behavior in controlling hypertension in hypertensive patients in the outpatient department (p-value 0.001, 95% CI). The majority of respondents have good knowledge (64.9%) and good behavior in controlling hypertension (53.2%). So, it can be concluded that the knowledge they have affects family behavior in caring for family members with hypertension. The knowledge of hypertensive complications influenced their treatment adherence (Ghembaza *et al.*, 2014). Research conducted by Barreto,

Reiners, and Marcon (2014) found that poor knowledge, complex drug treatment, and dissatisfaction with the healthcare service were associated with non-adherence to hypertensive patients on medication. So, the role of the family is very important in helping control hypertension in patients who have hypertension.

Respondents with health literacy were more successful in controlling and treating their diseases, and this health literacy was significantly influenced by education level, age, and monthly hypertension control (Darvishpour, Omid and Farmanbar, 2016). Age, hypertension complications, perceived susceptibility, severity, benefits, barriers, and self-efficacy were all predictors of self-care behaviors in young and middle-aged adults with hypertension (Ma, 2018). According to Ketata *et al.*, (2021), the independent factors of successful Hypertension self-care practice were over 65 years old, getting a university education, and obtaining health education from healthcare professionals and family members. In the current research, educational programs were found to increase hypertension awareness, enhance self-management, and manage unhealthy lifestyle behaviors (Beigi *et al.*, 2014).

The researcher recognizes that the research to be conducted has research limitations. The variables studied only focus on knowledge as a factor that correlates with behavioral without considering other possible factors such as attitudes, motivation, health services, social support, and others. Other factors that may affect hypertensive older adults' health-promoting behavior include self-efficacy, awareness, perceived barriers, education, situational influences, and social support (Giena, Thongpat and Nitirat, 2018).

CONCLUSIONS

This study's findings have revealed a correlation between family knowledge and behavior in controlling hypertension in patients at outpatient department. Family knowledge about hypertension can increase family behavior in controlling hypertension, lowering the risk of hypertension complications. Hospitals and nurses can further optimize family education, socialization, and collaboration in controlling hypertension. The nurse focuses not only on the patient but also on the family because they play an important role in patient care. Furthermore, additional research can investigate other factors that influence family behavior in controlling hypertension, such as attitudes, self-efficacy, situational influences, health services, social support, and others.

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CONFLICT OF INTEREST

The Authors declares that there is no conflict of interest.

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