Original Articles

FAMILY SUPPORT AND INCREASING HYPERTENSION DIET BEHAVIOR AMONG ELDERLY

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Abstract

Background: Hypertension is one of health problems that often occurs among elderly group. Complications caused by hypertension such as heart disease, kidney failure, diabetes mellitus, stroke and even death. The hypertension diet pattern is one of interventions to keep a normal blood pressure level, which also as a strategy to prevent related complications.

Objective: The purpose of this study was to determine the correlation between family support and increasing hypertension diet behavior among the elderly in the village of Ngimbang, Tuban, East Java.

Methods: The research design used a correlational analytic design with a cross sectional approach. This study was conducted at June 2022 in Ngimbang Village, Tuban-East Java, Indonesia. The population of this study was 23 elderlies in Ngimbang village who had hypertension, the sampling technique used total sampling and obtained a sample of 23 people. Data collection of both dependent data (family support) and independent data (diet behavior) used questionnaires and it was adopted from Utari (2017). Data analysis used Chi Square statistical test with ($\rho < \alpha = 0.05$).

Result: The result of this study showed that most of the elderly aged 60-70 years and the majority were women. The degree of hypertension was majority at 1st and 2nd. Moreover, half of the respondents have good family support and 78.3% of them were in good hypertension diet behavior. The results of statistical analysis tests showed that there was a relationship between family support and dietary behavior in elderly people with hypertension with ρ-value = 0.014 ($\rho < \alpha = 0.05$).

Conclusion: Collaboration between health workers and community leaders or cadres should be needed to provide counseling to the elderly and the families about good eating habits in the elderly who suffer from hypertension, so that with good eating habits it is hoped that blood pressure can be controlled and reduce the risk of complications.

INTRODUCTION

Hypertension or commonly called high blood pressure is a degenerative disease that commonly suffered by elderly. Hypertension also referred to as a "silent killer" disease or a disease that causes sudden death because hypertension appears without symptoms and some are accompanied by mild symptoms such as dizziness, weakness, nausea, pain in the back of the head, neck stiffness, anxiety,

difficulty sleeping and vision problems. blurred (Anam, 2016; Urifah et al. 2017; Achadiyani et al., 2019).

Hypertension is an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg in two measurements with an interval of five minutes in a state of sufficient rest or calm (Kemenkes RI, 2015). Hypertension causes high morbidity (illness) and mortality (death) if not treated immediately. Hypertension can be treated in 2 ways, namely pharmacological treatment by administering anti-hypertensive drugs regularly and non-pharmacological by adjusting lifestyles such as a low-salt diet, exercise, regulating physical activity (Achadiyani et al., 2019; Harahap et al, 2019).

Some of the complications that can be caused due to hypertension are coronary heart disease, kidney failure, diabetes, impaired vision, stroke and even death (Fitria et al, 2022; Kartika et al, 2021; Rahmawati et al, 2020; Mauliya et al, 2021). The psychological impact on the elderly is related to changes in body appearance from being unable to remember clearly, loneliness, fear of losing loved ones and fear of facing death (Nurarif & Kusuma, 2016 cited Arindari, 2022).

Based on the WHO report (2021) stated that in 2019, at least 95% of the world's population aged 30-79 years are living with hypertension with an incidence rate of 59% suffered by women and 49% suffered by men. An increase in the number of people with hypertension is expected to occur in 2025, namely as many as 1.5 billion people living with hypertension and it is estimated that every year 9.4 million people die from hypertension and its complications (Jabani et al, 2021). Indonesia (34.1%) is the second highest endemic country for hypertension after Japan (50%) in 2018 (Turana et al, 2020). The 2018 Basic Health Research Results (Riskesdas) report based on individual blood pressure measurement results, the prevalence of hypertension at the age of 60 and over in Indonesia is 34.11%, the lowest hypertension prevalence is in West Papua at 22.22% and the highest is in South Kalimantan 44.13%, while for the provinces of East Java, West Sulawesi 34.77%, West Java 39.60%, Central Java 37.57%, East Kalimantan 39.30%. In 2018, there were 7,791 elderly people with hypertension aged 65-75 years in East Java and in the Tuban Regency there were around 2,108, based on data from the Tuban Regency Health Office in 2020 the number of elderly people in Tuban Regency was 11,462 elderly and of these there were 2,021 elderly people suffering from hypertension.

The elderly are a group that is vulnerable to hypertension, where 9.6% of Indonesia's population (25.6 million) are elderly. Hypertension is a major health problem for the elderly after arthritis, heart disease, diabetes and stroke (Jabani et al, 2021). The elderly often unaware of suffering hypertension and accidentally diagnosed out on other illness examination. There are at least 77.2% of hypertension sufferers who do not routinely control their blood pressure (Fitria et al, 2022). Declining physical, mental and social functions are the main factors causing uncontrolled blood pressure in the elderly (Riamah, 2019). The family is the main source of support for the elderly in maintaining their health.

Family support is a form of encouragement that always provides assistance as a practical and concrete source of help for family members (Fridman, 2013). The family is the main support system

for the elderly in maintaining their health. The support provided by the family is the most important element in helping individuals solve problems. Family support will also increase self-confidence and motivation to deal with problems and increase life satisfaction (Suprajitno, 2004) in (Ningrum, Okatiranti, & Wati, 2017 in Duha, 2021).

Several studies state that there is an effect of family support on low-salt diet behavior in the elderly who have hypertension and there is a relationship between family support and behavior to control high blood pressure in the elderly (Ruri et al., 2022; Tasalim et al. 2020; Perdana, 2017).

Family support includes instrumental support, emotional support, informational support, appraisal support, informative support (Friedman, 2013). One important aspect of family support is informative support, especially for the elderly, where the elderly has cognitive decline, memory loss triggers uncontrolled hypertension, failure of preventive measures or prevention of complications due to uncontrolled hypertension diet, therefore efforts Informative support from the family really helps the elderly in achieving a more optimal degree of health.

From the description of the problems above, the purpose of this study was to determine the relationship of family informative support to diet behavior in the elderly who have hypertension in Ngimbang Village, Tuban City, East Java.

METHODS

Study Design

This research was quantitative research with a correlational study design by cross sectional approach.

Settings

This study conducted at June, 2022 in Ngimbang Village, Tuban-East Java, Indonesia.

Research subject

The population of this study were all 23-elderly people with hypertension at the Posyandu in Ngimbang Tuban Village. The sampling method in this study used the total sampling method.

Instruments

The questionnaire adopted from Utari (2017), the questionnaire consisted of 20 questions relating with family support (emotional, informational, instrumental and value), and 15 questions relating with diet behavior (cognitive, affective and psychomotor).

Data collection

Data collection used a survey method by giving a questionnaire.

Data Analysis

Data analysis in this study used two methods, namely univariate and bivariate analysis methods. Univariate analysis was used to analyze demographic data such as age, gender, level of education, occupation and blood pressure, level of family informational support, level of dietary behavior. Meanwhile, bivariate analysis was used to analyze the relationship between dependent (family

informational support) and independent (elderly diet behavior) variables using the chi-square test statistic.

Ethical Consideration

This research has been approved by Faculty of Health Sciences, Universitas Pesantren Tinggi Darul Ulum, Jombang.

RESULTS

Respondent Demographic Characteristics

Based on table 1, it found that most of the elderly were aged 60-70 years, namely 65.3% and only a small proportion of those aged more than 70 years, namely 21.7%, with the majority of them being women. As for the level of education they received, the majority had elementary to high school education (78.2%) and only a small portion of them graduated from college (4.3%). On a daily basis more than half (56.3%) work as farmers and a small portion of them (30.5%) do not work. For the level of pressure, the majority have hypertension in degrees 1 and 2 (73.8%), with a range of hypertension 1st degree (systolic 140-159, diastolic 90-99 mmHg) and 2nd degree (systolic 160-179, diastolic 100-109 mmHg).

Table 1. Age, Gender, Education Level, Occupation, and degree of Blood Pressure Frequency Distribution of Respondents at Ngimbang Village, Tuban, East Java Province, Indonesia on June 2022 (n = 23).

Characteristic	Frequency (F)	Percentage (%)
Age		
≤ 59 years	3	13.0
60-65 years	8	34.8
66-70 years	7	30.5
≥ 71 years	5	21.7
Total	**23**	**100.0**
Gender		
Male	3	13.0
Female	20	87.0
Total	**23**	**100.0**
Education Level		
Elementary School	15	65.2
Junior High School	2	8.7
Senior High School	1	4.3
University	1	4.3
Other	4	17.5
Total	**23**	**100.0**
Occupation		
Civil servant	0	0.0

Farmer	13	56.5
Fisherman	0	0.0
Entrepreneur	3	13.0
Other	7	30.5
Total	**23**	**100**
Blood Pressure Degree		
1st Degree (Sistole 140-159, Diastole 90-99 mmHg)	10	43.4
2nd Degree	7	30.4
3rd Degree	6	26.2
Total	**23**	**100.0**

Sources: Primary Data, 2022.

Examination of the Relationship between Family Support and Dietary Behavior among Elderly People with Hypertensions using Chi-Square Test

Table 2. Examination of the Relationship between Family Support and Dietary Behavior among Elderly People with Hypertensions at Ngimbang Village, Tuban, East Java Province, Indonesia using Chi-Square Test.

Family support	Elderly Diet Behavior					
	Negative		**Positive**		**Total**	
	$\sum$	%	$\sum$	%	$\sum$	%
Bad	5	43.5	6	54.5	11	47.8
Good	0	0.0	12	100.0	12	52.2
Total	5	21.7	18	78.3	23	100.0
Sig. (2-tailed)	**Fisher's Exact Test P = 0.014**			**α= 0.05**		
Pearson Correlation	**.550**					

Sources: Primary Data, 2022.

Based on table 2, it is known that family support in providing support to the elderly most of the respondents had good family support or a number of 12 respondents (52.2%). Based on the data above, it is known that almost all respondents had positive eating habits or good eating habits with a total of 18 respondents (78.3%). The results of data analysis using the Chi Square test found that it did not meet the requirements, so the data analysis test in this study used the Fisher's Exact Test, this was because there was a frequency value of less than 5 in cross tabulation and using a 2x2 table and obtained a *p*-value the value on the Fisher's Exact Test is 0.014, which means that the value of p < α (0.014 <0.05), so that H1 is accepted, which means that there is a relationship between family support and the dietary behavior of elderly people who suffer from hypertension in Ngimbang Village, Palang District, Tuban Regency. The results of the data test for other comparisons are the Pearson correlation test, which obtains *p*-value = 0.006 (*p*-value 0.006 <α 0.05), which can also be concluded so that H1 is accepted and a correlation value of 0.550 (0.40 – 0.599 is the category of moderate relationship level) which

means that there was a relationship between family support and eating behavior in elderly people who suffer from hypertension in the elderly Posyandu, Ngimbang Village, Palang District, Tuban Regency, which had a moderate relationship.

DISCUSSION

In this study, it found that most of the elderly were aged 60-70 years, namely 65.3% and only a small number of those aged over 70 years, namely 21.7%. Hypertension is very closely related to the elderly, several studies have stated that hypertension mostly occurs in the elderly with an average age of 68 years (Rury et al, 202; Tasalim et al, 2020; Perdana, 2017; Novianingtyas, 2017; Yunus et al, 2021). The elderly experienced many setbacks both physically and psychologically, degenerative diseases such as hypertension are very prone to occur in accordance with increasing age in the elderly, complications caused by hypertension also worsen the physical condition of the elderly, a study states that the older a person is, the more susceptible they are to diseases such as hypertension (Yunus et al, 2021).

Other results from this study found that half of the respondents received good support from their families (50.2%). The intended family support is in the form of emotional, informational, instrumental and appraisal.

According to Friedman's theory that the family is a source of practical and concrete help in the form of material, labor and means (Perdana, 2017). One of the benefits of family support is to support the elderly in hypertension diet programs. Elderly who behaves healthily can be caused because families are able and willing to provide the facilities needed by the elderly.

According to Fridman (2014) said that the most instrumental support given is the family providing all the needs of clothing and food, financial assistance, and providing transportation. While emotional support can provide a sense of comfort, security, love, attention and encouragement to the elderly. Informational support can be in the form of communication support, providing problem solutions, advice, suggestions and feedback. Assessment support can be in the form of helping individuals to better understand the incidence of hypertension as well as sources of hypertension and strategies that can be used in dealing with hypertension.

For the level of behavior on the hypertension diet, in this study was found that almost all respondents behaved well in implementing the hypertension diet (78.3%) and only a small proportion had bad behavior (21.7%). A person's behavior based on knowledge will last longer when compared to not based on knowledge (Notoatmodjo, 2012). More specifically, health behavior is a person's response to stimuli related to illness, disease, the health care system, food and the environment. Health Behavior includes the following (Notoatmodjo, 2014). A person's behavior is also influenced by several factors such as 1) physical support (health infrastructure, health programs). 2) driving factors (attitudes and actions of health workers as role models. 3) predisposing factors (knowledge, attitudes, beliefs, norms, age, education and family economic status.

From the results of statistical tests using the Fisher's Exact Test, a p-value of 0.014 is obtained, meaning that the p-value is $<\alpha$ (0.014 <0.05), so that H_1 is accepted, which means that there is a relationship between family support and the dietary behavior of elderly people who suffer from hypertension in Ngimbang Village, District Tuban. The results of the data test for other comparisons are the Pearson correlation test, which obtains p value = 0.006 (p value 0.006 $<\alpha$ 0.05), which can also be concluded so that H1 is accepted and a correlation value of 0.550 (0.40 – 0.599 is the category of moderate relationship level)) which means that there is a relationship between family support and eating behavior in elderly people who suffer from hypertension in the elderly Posyandu, Ngimbang Village, Palang District, Tuban Regency, which has a moderate relationship. The results of this study are in accordance with previous studies which stated that there was a statistically significant relationship between family support and diet adherence in the elderly with hypertension in Depok Ambarketawang Hamlet, Gamping Sleman, Yogyakarta (Perdana, 2017). Another research also mentioned that family support was corelated with diet hypertension among elder people in Lombok (Sapwal et al, 2021; Nurhikmah, 2021; Sawitri, 2016; Claudia, 2017;). Family support is very important in supporting the behavior of the elderly in adherence to the hypertension diet, especially for the elderly.

LIMITATION

There is no limitation on this study.

CONCLUSION

The dietary behavior of the elderly at the Elderly Posyandu in Ngimbang Village, Palang District, Tuban Regency, which suffers from hypertension, mostly has positive behavior.

AUTHOR CONTRIBUTION

Siti Urifah: Conceptualization, methodology, writing-original draft validation, and formal analysis.

Nasrudin Nasrudin: Writing-review and editing, supervision, and visualization.

Devin Prihar Ninuk: Investigation, resources, and data duration.

Heri Widodo: Project administration, software, and funding acquisition.

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Siti Urifah   : None.

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CONFLICT OF INTEREST

The author declares that the data published in the above manuscript have no conflict of interest with any part.

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