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The Relationship between Self Efficacy and Dietary Approaches to Stop Hypertension (DASH) Diet and Blood Pressure of Hypertensive Patients in the Kediri City District

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ABSTRACT

Hypertension is a prevalent, non-communicable disease with elevated blood pressure. Overconsumption of salt increases blood pressure, posing a risk of stroke and heart attack. The DASH diet aims to lower blood pressure and maintain normal levels. This study aims to explore the relationship between self-efficacy, DAHS diet, and blood pressure in hypertensive patients in the Kediri City sub-district. The study used a quantitative, observational, and cross-sectional approach to analyze the relationship between self-efficacy, the DASH diet, and blood pressure in hypertensive patients. A sample of 100 respondents was surveyed using questionnaires. The results showed that over half (70.0%) had high self-efficacy and adherence to the DAHS diet, while almost half (45.0%) had normal blood pressure. The chi-square test resulted in a p value of 0.000, rejecting the hypothesis.

Keywords: Dietary Approaches to Stop Hypertension (DASH), hypertension, self eficacy blood pressure

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BACKGROUND

Hypertension or high blood pressure is an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg at two measurements with an interval of five minutes in a state of sufficient rest/calm. An increase in blood pressure that lasts for a long time (persistent) can cause damage to the kidneys (kidney failure), heart (coronary heart disease) and brain (causing stroke) if not detected early and adequately treated (Maya Cobalt Angio Septianingtyas *et al.*, 2022).

According to the results of Basic Health Research, the prevalence of hypertension in Indonesia has increased by 32.8%. In blood pressure measurements, 1,153,371 people or 12.98% were declared hypertension/high blood pressure. Based on gender, the percentage of hypertension in the female group was 13.10%, lower than in the male group which was 13.16 percent. And the results of the calculation of new cases of non-communicable diseases in the Central Java Provincial Health Center and Hospital resulted in the highest hypertension patients in Boyolali at 203,285 for essential hypertension and 2,069 for other hypertension. From the results of the percentage of hypertensive clients at the Boyolali 1 health center was 26.961% with women amounting to 27.86% (Luthfiana, Arwani and Widiyanto, 2019).

The report of the Eighth National Committee on Prevention, Detection, Evaluation and Control of Hypertension recommends lifestyle as an important therapy for hypertension. Modification of daily food intake is one part of lifestyle modification that has a big role in preventing an increase in blood pressure in individuals who do not suffer from hypertension, as well as lowering blood pressure in prehypertension and hypertensive patients. The diet that is known today in developed countries for hypertensive patients is the DASH diet (*Dietary Approaches to Stop Hypertension*), which is a diet of vegetables and fruits that contain a lot of dietary fiber (30 grams/day) and certain minerals (potassium, magnesium and calcium) while salt intake is limited (Luthfiana, Arwani and Widiyanto, 2019; Uliatiningsih and Fayasari, 2019).

The results of this study showed that the DASH diet adherence of hypertensive patients in the Cilandak Marine Detention Center was in the less compliant category with a score of 31-45 as many as 32 respondents (42.7%), the moderately compliant category with a score of 46-60 as many as 39 respondents (52.0%) and the compliance category with a score of 61-75 as many as 4 respondents (5.3%). The results of the analysis of the wilcoxon test showed that there was a significant difference between systolic and diastolic blood pressure before and after the intervention (p=0.000). There is an effect of DASH diet education on dietary adherence and blood pressure in outpatient hypertension patients at Rumkital Marine Cilandak (Uliatiningsih and Fayasari, 2019).

The number of hypertension sufferers in Kediri City in 2023 will reach 38,204 sufferers. The details are 14,420 male hypertension patients and 23,784 female hypertension patients (Surya.co.id). Meanwhile, data from BPS Kediri city found that Hypertension Disease is the 3rd out of 10 most common diseases in the city of Kediri (Central Statistics Agency of Kediri city., 2019). The number of new cases of hypertension in Kediri has increased from year to year. The prevalence rate of hypertension patients even reached 27.9%. The number of hypertension patients in Kediri reached 24,236 people in 2018 and rose to 85,513 in 2019. Meanwhile, in 2020 the incidence of hypertension has reached more than 98,613 and in 2021 until November it is known that the number of hypertension continues to increase, especially in the Sukorame Kediri Health Center area, Kediri City Health Office., 2022).

The results of another study showed a significant difference in diastolic blood pressure after patients were given the DASH diet compared to patients given the RG diet ($p<0.05$) and there was a significant delta difference in systolic and diastolic decrease in the

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DASH diet compared to the RG diet. The analysis also showed a significant decrease in systolic, diastolic blood pressure and sodium intake ($p<0.001$) in both diet groups after receiving DASH diet counseling and RG diet. It is concluded that the DASH diet can be recommended to help lower blood pressure in hypertensive patients by paying attention to nutritional status (Astuti, Damayanti, & Ngadiarti, 2021).

Dietary adherence in hypertensive patients is a factor that makes the DASH diet management successful, namely the interpretation of instructions, the quality of interaction, family social support, as well as beliefs, attitudes and personality. Confidence or self efficacy is one that can strengthen the influence of patient compliance (Astuti, Damayanti, & Ngadiarti, 2021).

Self efficacy is the belief that a person has the ability to perform certain activities. Self-efficacy encourages hypertension patients to carry out lifestyle modifications or adjustments to achieve hypertension treatment goals (Olpah, Riduansya and Manto, 2022).

The results of the research conducted by (Olpah, Riduansya and Manto, 2022) showed self-efficacy in the high category of 59.79% and dietary adherence in the compliant category of 71.74%. Data analysis using the chi-square test obtained a significance of p-value of 0.032. Strong or higher self efficacy is beneficial for the maintenance and change of positive health behaviors. The higher the self-efficacy possessed, the higher the goals and commitments set. Self efficacy is very related to successful experience, people who successfully solve a problem self efficacy will increase (Khairunichecha, Nazia & Noorani, 2023).

From the above background, the researcher is interested in conducting research with the title The Relationship *between Self Efficacy* and DASH (Dietary Approaches to Stop Hypertension*) and Blood Pressure Diet Adherence in Hypertensive Patients in the Kediri City Sub-district Area.*

METHODS

The research method used is obervasional analysis with *a cross sectional* design. The number of subjects obtained was 123 respondents who suffered from hypertension. The technique used in sampling is systematic random sampling which is randomly selected by distributing online questionnaires. Data collection was carried out from January to March 2024. The population in this study is all hypertension patients living in the Kediri City sub-district area. The number of samples was calculated based on population proportions using the Lemeshow formula with a maximum estimate of 10% and an error rate of 5%. The number of respondents was 138 people with hypertension.

Lemeshow 2 $$n = \frac{z^2_{1-a/2} \times P\,(1-P)}{d^2}$$

Data were collected using the Diet Dash questionnaire (*Dietary Approaches to Stop Hypertension*), National Institute Of Health, 2006. Meanwhile, the collection of self-efficacy data uses questionnaires that have been tested for validity by researchers (Maya Cobalt Angio Septianingtyas *et al.*, 2022).

Meanwhile, blood pressure data was obtained from the results of direct examinations at the time of the study. Blood pressure is checked using a calibrated Digital Sfigmomanometer . Furthermore, the data was analyzed using a logistic regression test. This research has received an *Ethical Clearance certificate* Number 000974/EC/KEPK/III/02/2023.

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RESULTS

Respondent's Narrative

Table 1. Baseline characteristics of the Responden

	Respond	
	n	%
Age (Years)	67.26±13,674	
Late Adulthood (36-45 years)	5	4,2%
Early Elderly (46-55 Years Old)	3	2,5%
Late Elderly (56-65 Years Old)	48	40,8%
Seniors (> 65 years old)	63	52,6%
Gender		
Male	45	37,5%
Female	75	62,5%
Height	156,05 ± 9,777	
Weight	70,5 ± 11,726	
History of Hypertension		
Exist	123	100%
No	0	0%
Riwayat Diabetes Mellitus		
Exist	72	60%
No	47	39,2%
History of heart disease		
Exist	58	48,3%
Ttd	62	51,7%
Stroke History		
Exist	58	48,3%
No	62	51,7%
Diet DASH		
Obedient	40	33,3%
Non-Compliance	80	66,7%
Self Eficacy		
Tall	34	28,3%
Low	86	71,1%
Cistole Blood Pressure	146,8 ± 20,514	
Diastole Blood Pressure	85,0 ± 10,245	
BMI (Body time index)	45.5 ± 8.027	

Based on the data on the characteristics of the respondents in Table 1, the average age of the respondents was 67.26±13,674. Meanwhile, based on gender, male respondents were 46 (34.03%), female respondents were 88 (65.07%). For the characteristics of the respondents based on the high purine diit of 91 (66.4%), and the low purine diit of 43 (31.4%). The average systole blood pressure was 147.2±100.00 mmHg and the highest systole blood pressure was 200 mmHg. The average diastole blood pressure was 85.08±40.00 mmHg, with the highest diastole blood pressure of 100 mmHg. The average uric acid level of respondents was 7.00±10.6 mg/dl and the highest value of the respondents' uric acid level was 13.9 mg/dl.

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Effect of Self Eficacy on DASH Diet Adherence in Hypertensive Patients

Table 2. Results of Self-Efficacy Cross-Tabulation with DASH Diet Adherence

Self Efficacy * Diet Dash Crosstabulation					
			diet dash		
			non-compliant	obedient	Total
self-efficacy	low	Count	56	19	75
		% within self efficacy	74.7%	25.3%	100.0%
		% within diet dash	71.8%	45.2%	62.5%
	tall	Count	22	23	45
		% within self efficacy	48.9%	51.1%	100.0%
		% within diet dash	28.2%	54.8%	37.5%
Total		Count	78	42	120
		% within self efficacy	65.0%	35.0%	100.0%
		% within diet dash	100.0%	100.0%	100.0%

From Table 2, it was found that most of the respondents had low self-efficacy and the DASH diet was not compliant as many as 56 respondents (74.7%), and a small number had low self-efficacy and adherence to the DASH diet as many as 19 respondents (25.3%). From the results of the Chi-Square analysis, there was a significant influence of Sig (2-tailed) between Self-Efficacy and DASH Diet Adherence (EF-Diet DASH=0.004) with a value of $\alpha \leq 0.05$ and an Odds Ratio (OR) value of 3.081 (1,489 – 6,739) which means that the elderly who have low self-efficacy are 3 times more at risk of not complying with the DASH Diet than the elderly who have high self-efficacy.

Effect of DASH Dietary Adherence on Cystole Blood Pressure in Elderly Patients

Table 3. Results of Statistical Analysis of DASH Dietary Adherence to Cystic Blood Pressure

diet dash * sistole2 crosstabulation					
			systole2		
			Normal	Hipertensi	Total
diet dash	non-compliant	Count	14	68	82
		% within diet dash	17.1%	82.9%	100.0%
		% within sistole2	35.9%	84.0%	68.3%
	obedient	Count	25	13	38
		% within diet dash	65.8%	34.2%	100.0%
		% within sistole2	64.1%	16.0%	31.7%
Total		Count	39	81	120
		% within diet dash	32.5%	67.5%	100.0%
		% within sistole2	100.0%	100.0%	100.0%

From Table 3, it was found that most of the respondents did not comply with the DASH diet and had systole hypertension as many as 68 respondents (82.9%), and a small number of respondents adhered to the DASH diet and had systole hypertension as many as 13 respondents (34.2%). From the results of the Chi-Square analysis, there was a significant influence of Sig (2-tailed) between DASH Diet Adherence (DASH-HT Sistole Diet of 0.000) with a value of $\alpha \leq 0.05$ and an Odds Ratio (OR) value of 0.107 (0.044 – 0.259) which means

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that the elderly who do not comply with the DASH diet are 0.1 times more likely to develop Cistole Hypertension than the elderly who comply with the DASH diet.

Effect of DASH Diet Adherence on Diastole Blood Pressure in Elderly Patients

Table 4. Results of Statistical Analysis of DASH Diet Adherence to Diastole Blood Pressure

diet dash * diastole2 Crosstabulation

			diastole2		
			normal	HT	Total
diet dash	non-compliant	Count	38	44	82
		% within diet dash	46.3%	53.7%	100.0%
		% within diastole2	67.9%	68.8%	68.3%
	obedient	Count	18	20	38
		% within diet dash	47.4%	52.6%	100.0%
		% within diastole2	32.1%	31.3%	31.7%
Total		Count	56	64	120
		% within diet dash	46.7%	53.3%	100.0%
		% within diastole2	100.0%	100.0%	100.0%

From Table 4, it was found that most of the respondents did not comply with the DASH diet and had Diaseptic Hypertension as many as 44 respondents (53.7%), and a small number of respondents who complied with the DASH diet and had normal blood pressure as many as 18 respondents (47.4%). From the results of the Chi-Square analysis, there was no effect between adherence to the DASH Diet and Increased Diastole Blood Pressure with a p value of 0.536) with a value of $\alpha \leq 0.05$).

Effect of DASH Diet Adherence on Body Mass Index (BMI) in Elderly Patients

Table 5. Results of Statistical Analysis of DASH Diet Adherence to BMI

diet dash * IMT2 Crosstabulation

			IMT2		
			fat	Obese	Total
diet dash	non-compliant	Count	3	79	82
		% within diet dash	3.7%	96.3%	100.0%
		% within IMT2	75.0%	68.1%	68.3%
	obedient	Count	1	37	38
		% within diet dash	2.6%	97.4%	100.0%
		% within IMT2	25.0%	31.9%	31.7%
Total		Count	4	116	120
		% within diet dash	3.3%	96.7%	100.0%
		% within IMT2	100.0%	100.0%	100.0%

From Table 5, it was found that most of the respondents did not comply with the DASH diet and had obesity (BMI >27) as many as 79 respondents (96.3%), and a small number of respondents adhered to the DASH diet and with a BMI between 25 -27 (obese) as many as 1 respondent (2.6%). From the results of the Chi-Square analysis, there was no effect between the adherence of the DASH Diet and the Body Mass Index (BMI) of the elderly with a p value of 0.623) with a value of $\alpha \leq 0.05$).

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DISCUSSION

Effect of Self Eficacy on DASH Diet Adherence in Hypertensive Patients

The results of this study were obtained that elderly respondents who had low self-efficacy and did not comply with the DASH diet (*Dietary Approaches to Stop Hypertension*) 56 respondents (74.7%), and significantly with a p value of 0.004 and an odds ratio value of 3.081. Elderly people who have low self-efficacy are 3 times more likely to not comply with the DASH Diet than older people who have high self-efficacy.

Self efficacy is the belief that a person has the ability to perform certain activities. Self-efficacy encourages hypertension patients to carry out lifestyle modifications or adjustments to achieve hypertension treatment goals (Olpah, Riduansya and Manto, 2022)

Self-efficacy makes a person have the potential to behave healthily. People who are not sure they can do something that supports their health behavior will be less likely to be reluctant to try. High self-efficacy will influence patients to behave and commit so that with self-efficacy, the goal of changing the desired behavior can be achieved. Individuals with high self-efficacy have high expectations for the success of achieving their goals while individuals with low self-efficacy have doubts in achieving their goals (Olpah, Riduansya and Manto, 2022).

Preventive management in people with Hypertension is a priority in the system health services to prevent illness and death. One of the ways to treat Hypertension is to carry out a diet program by applying DASH (*Dietary Approaches to Stop Hypertension*) that can control blood pressure. DASH is a method to control Hypertension by regulating diet including sodium intake, energy intake, amount and type of protein, as well as fat and carbohydrate components (Laili, Muchsin1 and Erlina, 2023).

The success of the implementation of the DASH diet is greatly influenced by the efficacy of a person's diet. Hypertensive patients who have high self-efficacy will be able to behave in a way that supports the DASH diet program in order to control the patient's blood pressure. Meanwhile, hypertensive patients who have low self-efficacy will not be able to behave and commit to the DASH diet so that patients are less able to control their blood pressure. (Liu *et al.*, 2023).

The implementation of the DASH diet is by increasing the consumption of vegetables and fruits that contain a lot of dietary fiber (30 grams/day) and certain minerals (potassium, magnesium and calcium) while limiting salt intake (Laili, Muchsin1 and Erlina, 2023). The food content applied in DASH includes food with 30 grams/day of dietary fiber and minerals in the form of calcium, magnesium, and potassium, as well as salt intake restrictions. The application of DASH pays attention to energy intake, the amount and type of protein, as well as the components of fats and carbohydrates. (R. Apriana, et, al, 2017; D. Rachmawati, 2021). The application of DASH follows guidelines to limit the intake of saturated fat, cholesterol, and sodium (B. Mukti, 2019; Supariasa, 2016).

Factors that can affect the application of DASH in people with hypertension include age, education, occupation, length of illness, family support, the role of health workers and internal factors (desire and motivation). The application of DASH can be fulfilled if there is a willingness to recover from hypertension patients and is willing to implement the diit program to the maximum extent (Puspita, 2016; M. Anisa, et, al, 2017).

In this study, it was found that most of the respondents were over 65 years old or included in the senior group, namely more than the elderly. In addition to the age factor, the respondents in this study also had a history of hypertension of 100%, a history of diabetes mellitus of 60%, a history of heart disease of 48.3% and a history of stroke of 48.3%. Of the 123 respondents who included the elderly and seniors, almost 71.1% had low self-efficacy and did not comply with the DASH diet by 66.7%.

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Self-efficacy in elderly hypertensive patients can be improved using coping strategies that focus on problems to overcome blood pressure experienced by elderly hypertensive patients. Coping is a condition in which elderly hypertensive patients manage to overcome discomfort and difficulties due to stress. The condition of uncontrolled blood pressure is something oppressive and painful that can cause stress, but if elderly hypertensive patients are able to cope with stress due to high blood pressure and eliminate discomfort, stress can be avoided, thereby increasing the self-efficacy of elderly hypertension sufferers (Ramadhani, 2020).

Effect of DASH Dietary Adherence on Cystole Blood Pressure in Elderly Patients

The results in this study were obtained that most of the respondents did not comply with the DASH diet and developed symoral hypertension as many as 68 respondents (82.9%), and a small number of respondents adhered to the DASH diet and developed systole hypertension as many as 13 respondents (34.2%). From the results of the Chi-Square analysis, there was a significant influence of Sig (2-tailed) between DASH Diet Adherence (DASH-HT Sistole Diet of 0.000) with a value of $\alpha \leq 0.05$ and an Odds Ratio (OR) value of 0.107 (0.044 – 0.259) which means that the elderly who do not comply with the DASH diet are 0.1 times more likely to develop Cistole Hypertension than the elderly who comply with the DASH diet.

Diet DASH (*Dietary Approaches to stop Hypertension*) is a diet that stops high blood pressure. The principle of the DASH diet is to be high in food ingredients derived from fruits and vegetables, by using low-fat dairy products, as well as consuming enough fish, nuts and poultry sourced *Saturated Fatty Acid* (SAFA). This diet is recommended as part of the treatment of hypertension (Dewi, Sugiyanto and Yetti, 2007). Approach the diet with *Dietary Approaches to Stop Hypertension* (DASH) is highly recommended. The DASH diet can lower and control blood pressure, the DASH diet emphasizes fruits and vegetables that are rich in fiber and low in salt. Clinical trials in the United States and Northern Europe have shown that reducing sodium chloride can lower blood pressure (Sacks FM, et al, 2001).

The results of this study were obtained that only a small part of the elderly have complied with this DASH diet, which is 33.7%, the rest around 67.3% do not comply with this DASH diet. The existence of non-compliance in implementing the DASH diet has an impact on the increase in systole blood pressure in elderly respondents on average 146.8 ± 20,514, Most of them have hypertension due to non-compliance with the DASH diet as much as 82.9%.

Increased systolic blood is very dangerous for the elderly, isolated systolic hypertension (HST), increased systolic pressure causes a high probability of stroke and myocard infarction even if the diastolic pressure is within normal limits (*isolated systolic hypertension*) (A et al., 2022). *Isolated systolic hypertension* is the most common form of hypertension in the elderly. The presence of hypertension, both HST or even a combination of systolic and diastolic is a risk factor for morbidity and mortality for the elderly. So that the elderly are expected to routinely check blood pressure, because with this they can find out what steps can be taken if blood pressure is high (Listyanto, 2020).

Effect of DASH Diet Adherence on Diastole Blood Pressure in Elderly Patients

The results of this study showed that most of the respondents did not comply with the DASH diet and had Diastotic Hypertension as many as 44 respondents (53.7%), and a small number of respondents who adhered to the DASH diet and had normal blood pressure as many as 18 respondents (47.4%). From the results of the Chi-Square analysis, there was no effect between adherence to the DASH Diet and Increased Diastole Blood Pressure with a p value of 0.536) with a value of $\alpha \leq 0.05$).

Diastolic hypertension (*Diastolic Hypertension*) is defined as diastolic blood pressure with a value of 90 mmHg or more. Elevated diastolic blood pressure if followed by an

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increase in systolic blood pressure, which is ≥140 mmHg is said to be systolic-diastolic hypertension (*Systolic-Diastolic Hypertension*). Diastolic hypertension usually occurs at a young or middle age, which is around 30–50 years. Diastolic hypertension (*Diastolic Hypertension*) is more common in middle-aged men who are overweight. If left untreated, diastolic hypertension (*Diastolic Hypertension*) can lead to systolic-diastolic hypertension (*Systolic Diastolic Hypertension*). The results of Framingham's research found a relationship between Coronary Heart Disease (CHD) and diastolic blood pressure. The incidence of CHD was 2 times greater in the diastolic blood pressure group of 90–104 mmHg compared to diastolic blood pressure of 85 mmHg (Nursakinah and Handayani, 2021).

People with Hypertension must maintain their food patterns and intake. If people with Hypertension do not follow the recommended diet such as DASH, it will worsen the situation, aggravate complications and blood pressure will become uncontrollable. An unhealthy diet such as foods with a high intake of sodium (high in salt) causes an increase in blood pressure and foods high in saturated fat and cholesterol cause narrowing and hardening of blood vessels or arteriosclerosis which can increase the risk of complications of hypertension (A. S. Marbun, et, al, 2020).

This study showed that there was no effect of DASH dietary adherence with diatole hypertension. The DASH diet is not specific only to lower diastole blood pressure, but both systole and diastole blood pressure can be controlled by running the DASH diet because a healthy diet in the DASH diet that consumes more fruits and vegetables and limits high intake of sodium will be able to control the increase in blood pressure by lowering the level of saturated fat and cholesterol in the body which can cause atherosclerosis. So if the DASH diet has no effect on systole blood pressure, it is not a problem, but it is still useful in maintaining the normality of blood pressure in the elderly.

Effect of DASH Diet Adherence on Body Mass Index (BMI) in Elderly Patients

In this study, most of the respondents did not comply with the DASH diet and had obesity (BMI >27) as many as 79 respondents (96.3%), and a small number of respondents adhered to the DASH diet and with a BMI between 25 -27 (obese) as many as 1 respondent (2.6%). From the results of the Chi-Square analysis, there was no effect between the adherence of the DASH Diet and the Body Mass Index (BMI) of the elderly with a p value of 0.623) with a value of $\alpha \leq 0.05$).

Body mass index is a measure used to find out a person's nutritional status obtained from the ratio of weight and height. Therefore, everyone must calculate what their BMI value is in order to know whether their body's nutritional status is normal or not. IBody mass index is the easiest way to find out if a person is at risk for a chronic disease or not. Although this BMI value cannot be used to measure body fat levels, it is also important to know. Body mass index is one of the assessment tools that can be done to help diagnose one of the diseases (Gusti *et al.*, 2022).

In addition to food intake patterns, another factor that causes hypertension is a person's nutritional status. Excessive nutritional status (obesity) causes the kidneys to work harder to maintain a balance between sodium intake and excretion in the kidneys. This condition requires higher blood pressure. According to WHO, there are 2.3 billion adults who are overweight, with 700 million of them classified as obese. The prevalence of obesity in Indonesia is reported to be 21.8%.2 Bali Province also has a fairly high obesity rate with a prevalence rate of 23.3%.2 Asari and Helda research in 2021 stated that obesity is related to the occurrence of hypertension (Niga, Dwi Soelistyoningsih and Lisan Sediawan, 2021).

In a study conducted by Dien et al., it was found that there was a significant difference between body mass index and systolic blood pressure and diastolic blood pressure ($p<0.05$). A person with BMI Obesity needs more blood to supply oxygen and food to the body's tissues, causing the volume of blood circulating through the veins to increase as well

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as increased cardiac output which eventually leads to blood pressure (Mu *et al.*, 2022).

In this study, most of the respondents had a BMI of .27 which was classified as obesity with an average BMI of 45.5 ± 8.027. This BMI data strongly supports the occurrence of hypertension conditions in elderly respondents, and a history of diseases suffered by the elderly such as diabetes mellitus, heart disease and stroke. Elderly people who do not comply with the DASH diet have the potential to increase the Body Mass Index (BMI) in the classification of obesity and obesity. Although the results of the study did not show a significant relationship between DASH diet adherence and respondents' BMI, indirectly by not adhering to the DASH diet, carbohydrate intake, and sodium (high in salt) were not controlled, so that it would trigger an increase in blood pressure and complications of other diseases.

Asari and Helda research in 2021 stated that obesity is related to the occurrence of hypertension in the elderly. The same thing was also proven in Amanda and Martini's research in 2018, which proved that there was a relationship between an increase in the incidence of hypertension and a person's obese status (Filippou *et al.*, 2020).

CONCLUSION

The conclusion obtained from the results of the study is that the elderly who have low self-efficacy may not comply with the DASH (*Dietary Approaches to stop Hypertension)* diet so that the DASH diet inconsistency will cause an increase in systole and diastole blood pressure. An increase in blood pressure in the elderly or Hypertension in the elderly can be caused by an increase in BMI that is more than normal, tends to be obese and obese. So it is hoped that from the results of this study, all elderly respondents can increase their compliance in carrying out the DASH diet to prevent hypertension and its complications.

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