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**Factors Affecting Diet to Prevent Hypertension in Young Adults at Posbindu PTM  
Gedangan Village Karangrejo Tulungagung Regency**

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**ABSTRACT**

Diet is a composition of the type and amount of food consumed by a person or group of people at a certain time consisting of meal frequency, type of meal, and portion of meal. In general, factors that influence the formation of dietary patterns are economic, socio-cultural, environmental, religious, and educational factors. This study aims to identify the factors that influence dietary patterns to prevent hypertension in young adults. This research uses descriptive method. The sample in this study were 29 young adults who visited in May 2024. The variables in this study are dietary patterns to prevent hypertension, economic factors, socio-cultural factors, and environmental factors. The location and time of this research was at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency in May 2024. The method of data collection was by filling out a questionnaire. The data collection instrument used a questionnaire. Data analysis techniques consist of editing, coding, scoring, and tabulating. The results obtained diet in young adults mostly good diet, economic factors in young adults almost half have good economic factors, socio-cultural factors in young adults almost half have good socio-cultural factors, and environmental factors in young adults mostly have good environmental factors. The dominant factors as factors influencing diet to prevent hypertension in young adults are economic factors, socio-cultural factors, and environmental factors. It is expected that young adults can increase awareness of the importance of maintaining a diet and seek information about the importance of maintaining a diet to prevent hypertension through print and electronic media.

**Keywords:** Economic Factors, Environmental Factors, Socio-Cultural Factors, Dietary Patterns

**INTRODUCTION**

Indonesia is currently facing an epidemiological transition, where there is a decrease in the prevalence of infectious diseases (infectious diseases) while non-infectious diseases (non-communicable diseases) have increased (Mardiana, 2021). Hypertension is one type of non-communicable disease with an incidence rate that continues to increase every year even though promotive and preventive measures have been developed following advances in science and technology (Ekarini, 2020). Hypertension does not only occur in the elderly but also in young adults. People with hypertension tend to be

higher in young adults compared to the elderly, this can be a serious health problem because it can interfere with activities and can lead to dangerous complications if uncontrolled and early prevention is not sought (Sarumaha, 2019). Hypertension is a major risk factor for stroke. Hypertension also causes heart failure, blindness, and the most severe is the long-term effect of sudden death (Burhan, 2020).

According to the 2018 Riskesdas, the prevalence of hypertension in Indonesia was 34.1%, an increase compared to the prevalence of hypertension in the 2013 Riskesdas of 25.8% (Kemenkes RI, 2019).

Estimates of people with hypertension who get health services amounted to 49.70% or 5,806,592 residents. Compared to 2020, there was an increase of 14.10% in people with hypertension in East Java Province who received health services according to standards in 2021 (East Java Health Office, 2021). While the estimated number of people with hypertension at the age of  $\geq 15$  years in Tulungagung Regency who received health services was 61.4% or 5,806,592 people. 183,477 population. The incidence of hypertension aged  $\geq 15$  years who received health services at the Jeli Karangrejo Health Center was 4,979 people or 86.08%, this has increased when compared to 2021, which was 1,703 people or 29.61% (DHO Tulungagung Regency, 2022).

Lifestyle is an important factor that greatly affects people's lives and is closely related to the incidence of hypertension. Non-communicable diseases (NCDs) are caused by a person's lifestyle such as a diet that causes hypertension. This diet also has several influencing factors, namely economic factors, socio-cultural factors, environmental factors, religious factors, and educational factors (Amelia, 2023). If not disciplined in maintaining a healthy diet can have a serious impact on hypertension and health in general. The impact of hypertension causes the heart to work harder so that the process of destroying the blood wall takes place more quickly. Unhealthy dietary behavior such as frequent consumption of foods that contain high sodium results in the amount of sodium accumulating. Excess sodium in the body can make the body retain water, increase blood volume, and increase blood pressure. An unbalanced diet can disrupt the balance of electrolytes in the body, including potassium levels. This imbalance can affect heart function and blood pressure. Consuming high-fat foods is also one of the causes of hypertension as it leads to high cholesterol deposits in the blood, then will accumulate to form a slab and there is a blockage in the blood vessels,

triggering hypertension (Huzaifah, 2019).

The East Java Provincial Health Office in an effort to reduce the prevalence of high blood pressure in the community encourages and strengthens Community-Based Health Efforts (UKBM) through the implementation of the Integrated Development Post for

Non-Communicable Diseases or abbreviated as Posbindu PTM (East Java Health Office, 2021). Posbindu PTM is the participation of the community in carrying out early detection activities and monitoring of risk factors for major NCDs which are carried out in an integrated, routine and periodic manner. The target of activities carried out by Posbindu PTM is all people aged more than or equal to 15 years in the Posbindu area (Kemenkes RI, 2019).

Based on the description of the background of the problem, it is considered necessary to conduct research with the title "Factors Affecting Diet to Prevent Hypertension in Young Adults at Posbindu PTM Gedangan Karangrejo Village, Tulungagung Regency".

## RESEARCH METHOD

The type of research used in this study used descriptive survey research methods. The population in this study were residents who were registered at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency in May 2024, totaling 40 people.

The sample size was calculated using the Slovin formula and obtained a sample size of 29 people. . The sampling technique used in this study was *non-probability sampling type purposive sampling*. The variables in this study are: Diet to prevent hypertension and factors that influence diet, namely economic factors, socio-cultural factors, and environmental factors. This research was conducted at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency. This research was conducted from August 2023 to June 2024.

Data collection begins with obtaining

a research permit from the Sutomo Nursing campus of Poltekkes Kemenkes Surabaya. Then take care of the license letter to Bakesbangpol Tulungagung and submit a reply letter from Bakesbangpol Tulungagung to the Head of Gedangan Village Karangrejo Tulungagung Regency. After obtaining permission, the next step is to find respondents who match the criteria. The data collection technique used in this research is filling out a questionnaire. Before filling out the questionnaire, respondents were asked to sign *informed consent* first.

The instrument in this study is a questionnaire containing dietary patterns and factors that influence dietary patterns, namely economic factors consisting of 2 question statement items, socio-cultural factors consisting of 5 question statement items, environmental factors consisting of 5 question statement items. This questionnaire uses a *Likert* scale with answer choices, namely always, often, rarely, and never. After all the data were collected, the researchers conducted a data processing process which included *editing, coding, entry, scoring* and *tabulating*.

## RESULT AND DISCUSSION

**Table 1.** Frequency distribution of characteristics of young adults in Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

No	Characteristics	Frequency	Percentage (%)
<b>Age (years)</b>			
1.	22-28	2	7
2.	29-34	6	21
3.	35-40	21	72
<b>Gender</b>			
1.	Male	10	34
2.	Female	19	66
<b>Last Education</b>			
1.	SD	1	3
2.	SMP	3	10
3.	HIGH SCHOOL	18	62

4.	Higher Education	7	24
<b>Jobs</b>			
1.	Labor	3	10
2.	Private	11	38
3.	Self-employed	5	17
4.	Housewife	10	34
<b>Total</b>		<b>29</b>	<b>100</b>

Based on Table 1, it is known that the characteristics of young adults in this study are mostly at the age of 35-40 years, totaling 21 respondents (72%), and mostly in the female gender of 19 respondents (66%). At the education level, 18 respondents mostly graduated from high school (62%). Almost half had private jobs, totaling 11 respondents (38%).

**Table 2.** Distribution of dietary patterns of young adults in Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

No.	Diet	Frequency	Percentage (%)
1.	Good	17	59
2.	Simply	7	24
3.	Less	5	17
<b>Total</b>		<b>29</b>	<b>100</b>

Based on Table 2, it was found that out of 29 respondents, most of the 17 respondents had a good diet (59%), a small proportion of 7 respondents had a sufficient diet (24%), and a small proportion of 5 respondents had a poor diet (17%).

**Table 3.** Distribution of economic factors of young adults in Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

No.	Economic Factors	Frequency	Percentage (%)
1.	Good	14	48
2.	Simply	11	38
3.	Less	4	14
<b>Total</b>		<b>29</b>	<b>100</b>

Based on Table 3, it was found that out of 29 respondents, almost half as many as 14 respondents had good economic factors (48%), almost half as many as 11 respondents had sufficient economic factors (38%), and a small proportion of 4 respondents had poor economic factors (14%).

**Table 4.** Distribution of dietary patterns based on economic factors of young adults at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

Economic Factors	Diet				Total			
	Good	Simply	Less		Good	Simply	Less	
	F	%	F	%	F	%	F	%
Good	10	71	4	29	0	0	14	100
Simply	7	64	2	18	2	18	11	100
Less	0	0	1	25	3	75	4	100
<b>Total</b>	<b>17</b>	<b>59</b>	<b>7</b>	<b>24</b>	<b>5</b>	<b>17</b>	<b>29</b>	<b>100</b>

Based on Table 4, the results showed that 14 respondents had good economic factors, most of them (71%) with a good diet, almost half (29%) with a moderate diet and none of the others (0%) with a poor diet. Of the 11 respondents who had sufficient economic factors, most (64%) had a good diet, a small proportion (18%) had a moderate diet, and a small proportion (18%) had a poor diet. As well as from 4 respondents who have less economic factors, none (0%) with a good diet, a small portion (25%) with a sufficient diet and most others (75%) with a poor diet. By looking at the trend of the research results, it can be concluded that young adults who have good economic factors tend to have a good diet too.

**Table 5.** Distribution of socio-cultural factors of young adults in Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

Socio- No.	cultural Factors	Frequency	Percentage (%)
1.	Good	13	45
2.	Simply	9	31

3.	Less	7	24
<b>Total</b>		<b>29</b>	<b>100</b>

Based on Table 5, it was found that out of 29 respondents, almost half as many as 13 respondents had good socio-cultural factors (45%), almost half as many as 9 respondents had sufficient socio-cultural factors (31%), and a small proportion of 7 respondents had insufficient socio-cultural factors (24%).

**Table 6.** Distribution of dietary patterns based on socio-cultural factors of young adults at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

Socio Factors	Diet						Total	
	Good	Simply	Less		Good	Simply	Less	
	F	%	F	%	F	%	F	%
Good	9	69	3	23	1	8	13	100
Simply	5	56	3	33	1	11	9	100
Less	3	43	1	14	3	43	7	100
<b>Total</b>	<b>17</b>	<b>59</b>	<b>7</b>	<b>24</b>	<b>5</b>	<b>17</b>	<b>29</b>	<b>100</b>

Based on Table 6, the results showed that 13 respondents had good socio-cultural factors, most of them (69%) with a good diet, a small proportion (23%) with a moderate diet and a small proportion (8%) with a poor diet. Of the 9 respondents who had sufficient socio-cultural factors, most (56%) had a good diet, almost half (33%) had a moderate diet, and a small proportion (11%) had a poor diet. And of the 7 respondents who had less socio-cultural factors, almost half (43%) had a good diet, a small proportion (14%) had a moderate diet and almost half (43%) had a poor diet. By looking at the trend of the research results, it can be concluded that young adults who have good socio-cultural factors tend to have a good diet too.

**Table 7.** Distribution of environmental factors of young adults in Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

No.	Environment al Factors	Frequenc y	Percentag e (%)
1.	Good	16	55
2.	Simply	8	28
3.	Less	5	17
<b>Total</b>		<b>29</b>	<b>100</b>

Based on Table 7, it was found that out of 29 respondents, most of the 16 respondents had good environmental factors (55%), almost half as many as 8 respondents had sufficient environmental factors (28%), and a small proportion of 5 respondents had insufficient environmental factors (17%).

**Table 8.** Distribution of dietary patterns based on environmental factors of young adults at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency on May 27, 2024

Environ mental Factors	Diet						Total	
	Good		Simply		Less		F	%
<b>Good</b>	11	69	4	25	1	6	16	100
<b>Simply</b>	4	50	2	25	2	25	8	100
<b>Less</b>	2	40	1	20	2	40	5	100
<b>Total</b>	<b>17</b>	<b>59</b>	<b>7</b>	<b>24</b>	<b>5</b>	<b>17</b>	<b>29</b>	<b>100</b>

Based on Table 8, the results showed 16 respondents had good environmental factors, most of them (69%) with a good diet, a small proportion (25%) with a moderate diet and a small proportion (6%) with a poor diet. Of the 8 respondents who had sufficient environmental factors, half (50%) had a good diet, a small proportion (25%) had a sufficient diet, and a small proportion (25%) had a poor diet. And of the 5 respondents who had less environmental factors, almost half (40%) had a good diet, a small proportion (20%) had a moderate diet and almost half (40%) had a poor diet. By looking at the trend of the research results, it can be concluded that young adults who have good environmental factors tend to have a good diet too.

**Diet to Prevent Hypertension in Young Adults at Posbindu PTM Gedangan**

**Village Karangrejo Tulungagung Regency**

Based on the results of the study, it was found that most respondents had a good diet and a small proportion had a poor diet. Diet is a factor that can increase the risk of hypertension. Therefore, one of the efforts that can be made to prevent hypertension is by regulating diet such as a low salt, low fat diet, increasing consumption of vegetables and fruits, and reducing consumption of soft drinks and caffeine. This is because hypertension is a lifelong disease where the importance of detection and management of hypertension to reduce the risk of complications such as stroke, kidney failure, retinopathy, etc. (Sistikawati, 2021). Diet is also one of the main modifiable risk factors in hypertension. Health problems can arise related to what is eaten. Diets that are high in salt and fat, and fast food lead to increased blood pressure. Factors that influence diet include economic, socio-cultural, environmental, religious, and educational factors (Suryaningrat, 2020).

This study is in line with research conducted by Kadir (2019), on diet and the incidence of hypertension in the community in the working area of Dungaliyo Kec.

Dungaliyo, Gorontalo Regency, which became the research sample, there were 24 people with poor dietary consumption patterns, and almost all of them, namely 22 people, experienced hypertension both from pre-hypertension level to grade II hypertension. This is enough to prove that the diet, especially fatty foods and high salt, can cause hypertension.

According to research by Jufri et al (2018), the more unhealthy a person's diet is, the higher the chance of hypertension. This is evidenced by the number of respondents who said that they had consumed and some said they still consumed foods that contained high levels of saturated fat, high sodium salt, canned foods and drinks, preserved foods and

foods that contained a lot of alcohol where from an unhealthy diet that can cause hypertension.

From the results of the questionnaire, it was found that respondents consumed foods that were high in salt and fat with a frequency of > 3 times a week. The results of this study are the same as Kadir (2019), which states that the preparation of an unhealthy diet reduces nutrient intake which can cause diseases including hypertension. However, there were several respondents who consumed vegetables and fruits. Researchers assume that an unbalanced diet in terms of quantity, frequency and type of food, such as foods high in sodium and fat, lack of consumption of vegetables and fruit can increase the risk of disease, one of which is hypertension. It is better to start implementing a good and healthy diet by always consuming food with a balanced menu, limiting the use of food ingredients that contain high sodium and fat, consuming vegetables and fruits that are good for body health.

#### **Economic Factors in Young Adults Affecting Diet at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency**

Based on the results of the study, it was found that respondents with good economic factors tended to have a good diet and respondents with less economic factors also had a poor diet.

The family's economic level is the amount of fixed income the family earns to fulfill their daily needs. Families whose economy is getting better will experience changes in eating habits with the inclusion of healthy food according to their purchasing power. The family's economic situation will affect the selection of the variety and quality of food ingredients, especially at this time when the economy is very difficult and food prices soar (Zulfiani, 2022). A limited economic level will affect the provision of a daily consumption menu, so that families will be principled as important as being able to eat to continue living rather than meeting nutritional needs

(Darmojo, 2019).

These results are in line with the theory put forward by Sulistyoningsih (in Prasasti, 2022), economic factors can affect diet, food types and health. Quality of food. As a family's economy improves, the diet will also improve. Groups of people with low economic status tend to consume foods that are nutritionally poor, whether it is the amount or quality. French et al 2019 (in Auliyah, 2023), found that families with less income will tend to consume less healthy food compared to families with good income. The size of household income can affect the pattern of food purchases which will determine the quality.

These results are in line with research conducted by Fadhillah (2019), which states that income affects diet. This is because most of the family's income is used to meet food needs, so that income directly has an influence on eating patterns.

According to the researcher's assumption, there is an influence of economic factors on diet, where from the results of the study it was found that the percentage of respondents who had good economic factors also had a good diet, compared to those with less economic factors, there were also more eating patterns that were lacking. This is because income is very influential with diet, type of food, and food quality.

#### **Socio-cultural factors in young adults that influence diet at Posbindu PTM in Gedangan Karangrejo Village, Tulungagung Regency**

Based on the results of the study, it was found that respondents with good socio-cultural factors tended to have a good diet and respondents with less socio-cultural factors also had a poor diet. Socio-cultural factors that influence eating habits in society, households and individuals according to Koentjaraningrat include what is thought, known and felt to be people's perceptions about food and what people do, practice about food. As a social and cultural phenomenon, food is not only an organic product with bio-chemical qualities that can

be used for humans, but food is also defined in relation to culture because as foodstuffs to be consumed, it requires cultural validation to be accepted. Many humans, despite being hungry, do not use all healthy foodstuffs as food due to religious reasons, taboos and beliefs (Mapandin, 2016s).

These results are in line with the theory put forward by Sulistyoningsih (in Prasasti, 2022), food taboos are often based on cultural and customary beliefs. For example, in some cultures, there may be taboos against the consumption of certain meats because they are considered to have certain symbolic or religious meanings. Culture has considerable power in influencing a person in choosing and processing the food to be consumed. This can be reflected in food preferences, cooking methods, and food rituals practiced in that society. Every culture has its own traditions and customs unique eating habits. For example, some cultures may tend to eat foods rich in carbohydrates, such as rice, while other cultures prefer a high-protein diet. Customs such as family meals, ritual meals or festivals, also influence eating patterns.

These results are also in line with research conducted by Jamilatussa'diyah (2018), which states that respondents whose socio-cultural factors are lacking most of their diets are not good, as many as 58.8%, and good socio-cultural factors most of their diets are good, as many as 85.7%. Mapandin's research (2016) which examines the relationship between socio-cultural factors and household staple food consumption in communities in Wamena District, Jayawijaya Regency, found that there is a significant influence between socio-cultural factors and community diet.

From the results of the questionnaire there were respondents who had taboos in consuming types of food, abstinence culture is a culture that develops in society and is related to the prohibition of consuming certain types of food, because there is a threat of harm to people who violate it. Food taboos are something that is

passed down from ancestors through parents, continuing to the generations below, this causes people to no longer know when a food taboo or taboo starts and what causes the taboo. Researchers assume that socio-cultural factors influence diet, the existence of taboos based on beliefs and become habits or customs in choosing and processing food to be consumed.

#### **Environmental Factors in Young Adults Affecting Diet at Posbindu PTM Gedangan Village Karangrejo Tulungagung Regency**

Based on the results of the study, it was found that respondents with good environmental factors tended to have a good diet and respondents with less environmental factors also had a poor diet. These results are in line with the theory put forward by Sulistyoningsih (in Prasasti, 2022), environmental factors in diet can influence the formation of eating behavior, a supportive environment such as family, promotion, electronic media and print media. Environmental factors have a significant influence on the formation of eating behavior, eating habits in the family have a big influence on a person's eating patterns on these foods from eating habits found in the family. The physical environment, such as shops and supermarkets, can influence food accessibility. The availability and accessibility of fruits, vegetables and fresh foods can influence diet.

These results are in line with research conducted by Diasmianti (2019) on the description of eating patterns in MI Khadijah Malang students, which states that almost half, namely 98 respondents with good environmental factors (49%) are included in the category that affects eating patterns.

From the results of the questionnaire, there are respondents who are motivated to buy food after seeing food advertisements on electronic media, someone who spends a lot of time using electronic media tends to consume unhealthy food because the majority of advertisements displayed are

about inappropriate food. Electronic media also has an influence on developing motivation and desire to consume a product and brand preference. According to research by Aulia and Yulianti (2018), individuals who spend time watching TV tend to show high motivation for the food consumed.

Physical environments such as shops and supermarkets can affect the accessibility of food to be consumed, if it can be accessed easily, it will be chosen by the individual. If healthy foods are available, individuals will tend to choose healthy foods over unhealthy foods. Family and friends also have a big influence on a person's diet, for example, being interested in trying new foods recommended by friends even though these foods are unhealthy which can trigger disease. In addition, there are also respondents who are more interested in eating out with friends than eating at home with family, this also affects food selection, where home cooking tends to be healthier than outside cooking such as in restaurants, cafes, and other eating places.

According to the researcher's perspective, environmental factors in eating patterns are influential in shaping eating behavior in the form of a family & friend environment through promotions, electronic media, and food availability & accessibility.

## CONCLUSION AND RECOMMENDATION

Based on the results of research obtained from 85 respondents about the relationship between *self-efficacy* and *self-care management* of Diabetes Mellitus patients at the Taman Sidoarjo Health Center in May - June 2024, conclusions that can be drawn include Diet in young adults at Posbindu PTM Gedangan Karangrejo Village, Tulungagung Regency mostly have a good diet. Economic factors in young adults at Posbindu PTM Gedangan Karangrejo Village, Tulungagung Regency who have good

economic factors tend to have a good diet. And less economic factors tend to have a poor diet. Socio-cultural factors in young adults at Posbindu PTM Gedangan Karangrejo Village, Tulungagung Regency who have good socio-cultural factors tend to have a good diet. And less socio-cultural factors tend to have a poor diet. Environmental factors in young adults at Posbindu PTM Gedangan Karangrejo Village, Tulungagung Regency who have good environmental factors tend to have a good diet. And less environmental factors tend to have a poor diet.

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