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EFFECT OF EDUCATION LEVEL AND FAMILY SUPPORT ON DIET IN ADOLESCENTS WITH HYPERTENSION RISK WITH SELF CARE THEORY APPROACH

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Abstract

Hypertension is a disease that increases every year. Diet in hypertension sufferers is still not working because many people with hypertension still have poor dietary behavior. The purpose of this study was to analyze the effect of education level and family support on diet in adolescents at risk of hypertension using the Self Care theory approach. The design of this research is Analytical Observation with Cross Sectional approach. Samples were taken using the Purposive Sampling technique with criteria according to inclusion and exclusion in Islamic Vocational Schools of Gondanglegi and NU Gondanglegi Middle Schools, Gondanglegi District, Malang Regency as many as 80 respondents. In this study, data was collected on the level of education and family support using a questionnaire sheet. The statistical test used is multiple linear regression analysis test. The results of multiple linear regression analysis revealed that the most influential variable on diet in adolescents with hypertension risk was family support with a value of (0,001) with a coefficient of -.420. Therefore, it can be seen that family support can affect diet in hypertensive adolescents, so it is necessary to have family support for hypertensive adolescents to reduce hypertension in adolescents.

Keywords: *Education Level, Family Support, Adolescents at Risk of Hypertension*

1. INTRODUCTION

Since so many hypertensive patients continue to have bad dietary habits, the diet at risk of hypertension sufferers is still characterized as not being implemented (Firmawati, 2015). It is critical for patients with hypertension to manage their diet risk in order to avoid complications (Amila et al., 2018)).

In Southeast Asia, hypertension is in the third highest position with a prevalence of 25% of the total population. Based on the prevalence of incidence in Indonesia, it is estimated at 11.4% or as many as 28.8 million people at risk of hypertension sufferers in 2020 (Ministry of Health, 2018). In East Java the total risk of hypertension sufferers is 36.22%. According to the Malang Regency Central Statistics Agency in 2017, the number of hypertensions in the Malang Regency area was 7475 cases.

Basically, a hypertension diet can be done by maintaining a lifestyle, exercising diligently, reducing salt consumption, reducing fat consumption, not smoking, reducing foods that contain high potassium, limiting caffeine and avoiding stress and controlling blood pressure regularly (Nita, 2018).

Meanwhile, low education is associated with a lack of information and awareness of hypertension diet compliance (Amelia & Kurniawati, 2020; Eshah & Al-Daken, 2016; Kirscht & Rosenstock, 1977; Osamor & Owumi, 2011). The family offered adequate

assistance in this study to ensure that respondents kept to their hypertension diet. Families provide information about foods and beverages to avoid, deliver health services, pay for treatment, and accommodate respondents' requirements.

Based on the theoretical basis above Dietary adherence has several factors that can change patient compliance, namely obedience in carrying out a diet program related to understanding of education level instructions and knowledge, pain in treatment, patient attitudes and personal beliefs and family support. This is the basis for researchers interested in analyzing and researching related to "The Effect of Education Level and Family Support on Diet in Adolescents at Risk of Hypertension with Self Care Theory Approach". This research was conducted at the Gondanglegi Islamic Vocational School and at the NU Gondanglegi Middle School in Gondanglegi Village, Gondanglegi District, Malang Regency at risk for hypertension.

2. RESEARCH METHOD

The research design used is an analytical survey research design with a Cross Sectional approach. The population in this study were adolescents who were at risk of suffering from hypertension in Islamic Vocational Schools of Gondanglegi and NU Gondanglegi Middle Schools, Malang Regency with the total of 270 students. Meanwhile, the sampling in this study using purposive sampling with a total of 80 respondents.

The independent variables in this study were the level of education and family support. The dependent variable of this study is the diet of adolescents with hypertension risk.

The method of collecting data in this study was to use a questionnaire on the level of knowledge, family support and diet in adolescents at risk of hypertension. The general data questionnaire in this study consisted of the respondent's name (initials), age, address, gender, religion, education, family history of hypertension.

Analysis of the data used is multiple linear regression analysis which will show the p-value of the family support variable has a value of 0.000 and a knowledge level of 0.115 (Nursalam, 2013).

3. RESULT AND DISCUSSION

3.1. Result Research

Table 1. Socio-Demographic Characteristics of Adolescents at risk of hypertension (n =70)

Variable	n	%
Gender		
Male	33	41.3
Female	47	58.8
Age		
12-13 years old	32	40
14-15 years old	15	18.8
16-17 years old	26	32.5
18-19 years old	7	8.8
BMI		
Underweight	32	40
Normal	27	33.8

Overweight	15	18.8
Obese	6	7.5
Education		
Uneducated	0	0
Elementary School	0	0
Junior High School	40	50
Senior High School	40	50
College	0	0
Suffering Family History		
Sufferer	80	100.0
No	0	0
Length of Suffering Family		
< 2 Years	14	17.5
2-5 Years	16	20.0
> 6 Years	50	62.5
Blood pressure		
Normal	78	97.5
Pre-Hypertension	2	2.5
Stage 1 hypertension	0	0
Stage 2 hypertension	0	0

(Data Source: Research Questionnaire, 2021)

In table 1, it shows that most of the respondents aged 12-13 years with a total of 32 respondents. Based on gender, the majority of students are female, with a total of 47 respondents. Then based on education, the majority are still in junior high school and vocational school with 40 respondents each. Based on BMI (Body Mass Index), the majority of students are in the Underweight category with a total of 32 respondents. Based on a family history of suffering from hypertension with a history of 80 respondents, while the longest suffering is in the range > 6 years with a total of 50 respondents. Meanwhile, the results of the majority of blood pressure measurements students have blood pressure in the normal category with a total of 78 respondents.

Table 2. Results of Descriptive Analysis of Categorical Data (n = 70)

Variable	**N**	**%**
Level of education		
High	40	50
Low	40	50
Family support		65.7%
Well	62	77.5
Lack	18	22.5
Diet	0	0%
Well	75	93.8
Lack	5	6.3

(Data Source: Research Questionnaire, 2021)

As shown in table 2, the education level of students is in the high and low categories with 40 respondents each. Most of the family support was in the good category with a total of 62 respondents, and the dietary data obtained were included in the good category with a total of 75 respondents.

Table 3. Results of Person Correlation Analysis of Knowledge, Attitude and Family Support Variables on Motivation for Treatment for Elderly Patients with Hypertension.

Variable	(r)	p-value
Level of education	-0.136	0.115
Family support	-0.420	0.000

(Data Source: Research Questionnaire, 2021)

Based on table 3, it can be seen that the Pearson correlation analysis test has a significant value on the education level variable of 0.115. Since the significant test value is 0.115, which is greater than the p-value of 0.05, it can be concluded that there is no relationship between education level and diet on the risk of hypertension. Meanwhile, the significant value on the family support variable is 0.001, which means that there was a relationship between family support and diet on the risk of hypertension.

Table 4. Interpretation of Regression Results from multiple regression analysis test (coefficient)

	B	**SE**	**B**	**T**	***p***
(Constant	35,828	2.223		16,119	.000
Family Support	-.385	.094	-.420	-4.092	.000

(Source: Primary Data Research Questionnaire December 2021).

Based on table 4 above, it shows that model 2 is the best model with p value < 0,05. It can be seen above that the p value of the family support variable is 0,001, so it can be concluded that family support has an influence on the dependent variable, namely the hypertension risk diet variable.

The equation of the results of the linear regression of diet (Y)= 35,828 + -.385* family support. Family support Correlation coefficient -0.420. In theory, family support affects diet because the p value of family support is 0,001 <0,05 with a correlation value of -0,420.

3.2. Discussion

3.2.1. The Effect of Education Level on Diet Risk of Hypertension

Based on the first hypothesis, it shows that the level of education has no significant effect on diet in patients with hypertension. This hypothesis can be proven from the results of multiple linear regression statistical tests through a computerized program showing the results of the p-value value of 0,115> 0,05 and the coefficient value of 0,090 where it can be concluded that H1 is rejected, which means that the level of education has no significant

effect on diet in sufferers. hypertension in Islamic Vocational Schools of Gondanglegi and NU Gondanglegi Middle Schools.

Significant test results in this study are in accordance with research conducted by Supriyono & Andriyanto (2020) which highlight that level of education has no effect on diet Hypertension, other factors that may occur from health workers are constrained by socio-cultural background and barriers to communication. Moreover, Ahmad et al. (2020) found that many educated respondents knew about the risk factors for hypertension, especially in terms of lifestyle such as consuming foods that contain high sodium for example salted fish and eating foods that contain high cholesterol such as fried foods but still consume them.

In this study, the level of education did not affect the diet of adolescents, another factor that might occur is the distribution of information from health workers and from the School Health Clinic (also referred to UKS) who are rarely active in providing information about preventing hypertension to their students and in conveying information the quality of information sources must be taken into account. For example, counseling about hypertension and the dangers of hypertension and its prevention provided by officers so that it has an impact on healthy behavior/lifestyle.

3.2.2. The Effect of Family Support on Adolescent Diet Risk of Hypertension

Based on the results of multiple linear tests to determine the independent variables (level of education and family support) affect the dependent variable (adolescent diet at risk of hypertension). The value obtained is family support (0.001) and education level (0.115). Therefore, it can be concluded that statistically the most influential factor between family support and education level is family support.

The significant test results in this study are in accordance with research conducted by Anisa & Bahri (2017) which underlines that there is an effect of family support on diet in hypertensive patients. Family support, according to Friedman & Bowden (2010) the attitude, action and acceptance of the family towards sick patients. Family support is needed by a patient, because someone who is sick certainly needs attention and affection from the family. Family support is an important thing that must exist in every individual, both sick and healthy, with family support, sick patients feel cared for, peaceful and loved so as to reduce the burden and psychological stress of the individual (Tumenggung, 2013).

Family support is an important thing that must exist in every individual, both sick and healthy, with family support, sick patients feel cared for, peaceful and loved so as to reduce the burden and psychological stress of the individual (Sholikhah et al., 2021). Family members who get this will all be encouraged to follow and adhere to the diet that is being followed because there are those who support healing and many want the individual to be in good health.

According to Rahmatika (2019) emotional support was obtained by most families providing encouragement to people with hypertension to always carry out therapy such as diet, exercise while support for appreciation was obtained by families giving praise for the efforts made by hypertension sufferers to carry out diet, treatment, and exercise in accordance with the recommendations as well as information support found that the family provides information about the risk of hypertension as well as instrumental support where the family does not mind paying for hypertension treatment. In research at Islamic Vocational Schools of Gondanglegi and NU Gondanglegi Middle Schools, family support

in the Good category, totaling 62 respondents, received information support in the form of the correct diet for adolescents at risk of hypertension, the family also provides emotional support by reminding not to eat foods high in sodium as well as encouraging diligent exercise. With this support, the BMI of respondents is in the overweight category of 18.8% and also in the obese category of 7.5%. Furthermore, BMI is the most influential indicator of blood pressure in both male and female adolescents (Bao et al., 1995; Forman et al., 2009; Nishina et al., 2003). Adolescents with more nutritional status have a 3,51 times risk of developing hypertension compared to adolescents with normal nutritional status. In the theory of self-care, it is defined as a form of a person's behavior in maintaining life, health, development and life around him (Baker & Denyes, 2008) so that with self-care, humans can decide what is best for themselves.

Based on the facts and theories above, it can be shown that family support affects diet in adolescents at risk of hypertension. With good family support, the risk of hypertension will decrease.

4. CONCLUSION

From the results of research conducted in December 2021 on the effect of education level and family support on diet in adolescents at risk of hypertension with a self-care theory approach that was carried out at Gondanglegi Islamic Vocational School and NU Gondanglegi Middle School, in Gondanglegi District, Malang Regency, the following conclusions can be drawn:

1. Education level has no significant effect on diet in hypertensive patients. This hypothesis can be proven from the results of multiple linear regression statistical tests through a computerized program showing the results of the p-value value of 0,115> 0,05 as well as the coefficient value of 0,090;
2. Family support has a significant effect on diet in adolescents at risk of hypertension. This hypothesis can be proven from the results of multiple linear regression statistical tests through a computerized program showing the results of the p-value of 0,001< 0,05 and the coefficient value of -,420

According to the conclusion, the researcher suggests that the findings of this study can support the data source and be used as a reference in interventions for adolescents in diet to reduce their risk of hypertension by educating nurses about the critical role of family support and encouraging families to support the diet of adolescents at risk of hypertension.

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