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PROPORTION OF FAMILY AND DAILY ACTIVITIES FACTORS IN HYPERTENSION PATIENT AT TEMBUKU I OF COMMUNITY HEALTH CENTER, BANGLI ON 2017

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Abstract: **Hypertension is still a public health problem in Indonesia and its prevalence increases considerably. Hypertension arises from the interaction of various risk factors. The main risk factor of hypertension on patient at Tembuku I Of Community Health Center,Bangli are by family and physical activities factor. To know the description of family and daily activities factors on hypertension patient at Tembuku I Of Community Health Center, Bangli. The type of research is a descriptive cross sectional study. The total subjects in this study is about 84 respondents. The research took place at Tembuku I Of Community Health Center,Bangli on 2017. Sample taken by convenience sampling. Data obtained through questionnaires and direct interviews and physical examination of blood pressure measurement. From the research on hypertension patient showed, family history mostly has history of hypertension in father about 69%. The proportion of activity-based hypertensive patients is almost half of respondents have moderate physical activity that is about 46.4%. Public recommended to modify lifestyle and avoid risk factors of uncontrolled hypertension. Suggested to the Tembuku I Of Community Health Center staff to increase health promotion related to the prevention and treatment of hypertension**

Keywords: **Hypertension, Family History, Activities.**

I. INTRODUCTION

Hypertension is still a serious health problem globally. Other than that high prevalence rate and the increasing occurrence of the day, hypertension is the most common cause of death in the world. Hypertension is also referred to as a silent killer or covert killers who are asymptomatic or cause no symptoms like other diseases. In general, almost all sufferers in the world do not know that they suffer from hypertension or high blood pressure because it is often accidentally known by doctors when examining other diseases in databased World Health Association (2013). Hypertension is a risk factor for cardiovascular disease and the incidence of stroke due to contributing factors[1].

Almost all countries in the world, hypertension is ranked first as a disease that is often found. Hypertension is defined as persistent blood pressure where systolic blood pressure is equal to or above 140 mmHg and diastolic blood pressure is equal to or above 90 mmHg. Systolic pressure when the heart is strongly contracting while diastolic pressure when the heart is weak to contract[1].The worldwide proportional mortality rate due to hypertension annually reaches 13% or 8 million deaths[2].

According to the World Health Association (2013), around one billion people in the world suffering hypertension and two thirds of them are found in developing countries whose income is low to moderate. The prevalence of hypertension is likely to continue to increase every year and it is estimated that in 2015 as many as 29% of adults worldwide suffer from

hypertension, whereas in Indonesia the figure reaches 31.7%. In 2012, based on world health statistics, one out of three adults in each country suffered from hypertension[3]. The incidence of hypertension tends to increase, from around 600 million people in 1980 to 1 billion people who suffer from hypertension on 2008 in databased World Health Association (2013).

In Indonesia, based on the 2013 Riskesdas there were 25.8% of Indonesia's population suffering from hypertension. If calculated if the current population of Indonesia is 252.124.458 people, there are 65,048,110 people suffering from hypertension. This means that the prevalence of hypertension in Indonesia is still quite high. The prevalence of hypertension in the population aged 18 years and over in Indonesia in 2013 was based on the diagnosis of health workers by 9.4%, and blood pressure measurements of 25.8%. Based on the diagnosis of health workers, the highest prevalence was found in Province of North Sulawesi, while based on measurements, the highest prevalence was found in the Province of Bangka Belitung by 30.9%. The lowest prevalence is based on the diagnosis of health workers and measurement in the province of Papua, which is 16.8%. The provinces of Sulawesi and Kalimantan are provinces with a high prevalence of hypertension, in addition to coronary heart disease, heart failure and stroke. In Bali, the prevalence of hypertension aged 18 years and over is 20.0% based on measurements and 9.0% based on diagnosis by medical personnel.

Tembuku I of Community health center is one of the community health center located in Bangli, with reports of a high incidence of hypertension which tends to increase in Bali. Based on data from visits in January to December 2016, hypertension is included in the 10 most diseases in the working area of Tembuku I of Community Health Center, which ranks seventh with a total number of visits of 584 cases visiting. Data obtained from patients who visit the health center because they have experienced complaints. With a total of 241 male patients and 343 female patients. This number has increased from 2015 based on data available at the Tembuku I of Community Health Center on 2015 with a total number of visits of 292 cases. As is known hypertension is a silent killer, so there are people who actually suffer from hypertension but do not visit the health center because they have not experienced complaints. This causes the health center to have difficulty in having complete data on cases of hypertension in the community.

Various government efforts to reduce the incidence of hypertension, one of which is to improve early detection and effective health management. The identification of risk factors is one of the ways that is expected to be able to detect cases of hypertension effectively. There are many risk factors for hypertension. Heredity or family history is a factor that plays a major role as a cause of hypertension. Saxena and Prakash's research (2011) reports that in India there is a close relationship between family history and the incidence of hypertension. If in one family suffering from hypertension, a person will have 4 times the potential to suffer from hypertension. Apart from family history factors, other factors that influence the incidence of hypertension are physical activity. WHO states that a continuous lifestyle at work is one of ten causes of death and illness, and more than two million deaths each year are caused by lack of movement / physical activity. Based on the results of brief observations from researchers through direct interviews with hypertension sufferers, some said that they had a diverse family history and physical activity in the working area of Tembuku I of Community Health Center On 2017.

II. METHODOLOGY

The sampling technique used was convenience sampling, because researchers found respondents in a place where hypertension sufferers treated at the mobile health center. Subjects who met the inclusion criteria without exclusion criteria were given an explanation of the aims and objectives of this study and sought approval by signing an informed consent sheet. Research data were collected through questionnaires and blood pressure measurements. The collected data was then analyzed descriptively, then displayed in tabular form to provide a description of family facts and hypertension prevention activities in the working area of the Tembuku I of Community Health Center on 2017.

Statistical tests were carried out in a comparative analysis that was processed with SPSS (Statistic Program for Social Science) computer peripheral tools.

III. RESULT AND DISCUSSION

3.1 Characteristics of Hypertension patients

A description of the frequency characteristics of hypertension patients visiting four the working area of the Tembuku I of community health center on 2017 can be seen in the following table :

Tabel 3.1: Characteristics of hypertension patients in Tembuku I of Community Health Center on 2017

Variable	Amount (n=84)	Percentage (%)
Sex		
Male	27	32,1
Female	57	67,9
Age		
<45 years old	14	16,7
45-59 years old	26	31,0
>59 years old	44	52,4
Level of Education		
Low	70	83,3
High	14	16,7

Based on the table above, the majority of respondents were female namely 67.9%, aged over 59 years (52.4%), and had a low level of education (83.3%).

3.2 Family Factors

Table 5.2 shows that hypertension patients based on family history mostly have a history of fathers who have hypertension, 58 people (69%), with the percentage of children suffering from hypertension of 40.7%. Followed by a history of hypertension in siblings of respondents by 53.6% and history of mothers with hypertension by 41.7%. While the proportion of respondents who did not have a family history of hypertension was 10.7%, with the percentage of children experiencing hypertension of 20.7%.

Tabel 3.2: Family factors of Hypertension patients in Tembuku I of Community Health Center on 2017

Hypertension History	Hypertension		Proportion of Hypertension (%)
	Amount (n=84)	Percentage (%)	
Father	58	69,0	40,7
Mother	35	41,7	35,5
Brother	45	53,6	48,4
Father and Mother	24	28,6	35,6
Father, Mother and Brother	14	16,7	43,8
Not all three	9	10,7	20,7

Figures for the proportion of hypertension tendencies obtained through the calculation of a person's tendency to suffer from hypertension based on history in family members. Calculation of proportion is obtained by calculating the percentage of hypertension in the number of siblings of respondents based on the similarity in the history of hypertension in the family. The calculation that the researcher did was preceded by asking the number of respondent's siblings and asking whether there were respondent siblings suffering from hypertension. Based on the similarity in the history of family members who suffer from hypertension in this case the most is the history of fathers with hypertension, then grouped respondents who have a history of fathers with hypertension then calculated the percentage of hypertension in all siblings. The results of these calculations are then added to all respondents with the same history and the means sought to obtain the tendency of individuals to suffer from hypertension based on the history of family members with hypertension. Based on research that has been done, it was found that the proportion of the tendency of individuals to suffer from hypertension was found highest in individuals who have a sibling history with hypertension, which is equal to 48.4%.

The results of this study are similar to the statement mentioned by Mannan (2013) that if one of the parents has a history of hypertension then the offspring is likely to have a 25% risk of suffering from hypertension[4]. Meanwhile, if both parents have a history of hypertension then the possibility of offspring has a risk of 60%. Not much different from the research conducted by Victoria et al. (2011) in the Regencies of Sleman and Wonosari who classify in pedigries (genealogical maps), that gene inheritors from parents, fathers or mothers, can be passed on to their offspring. However, there are no data on the number of respondents in the study and data on the number of sufferers in the family[5]. Research conducted by Azren in 2014 in the area of Abang I of community Health Center, Karangasem Regency reported that of the 60 hypertension sufferers who were the study respondents, more than half of the respondents (63.3%) had a family history (father and / or biological mother) with hypertension. The study only looked at family history based on the family tree between father and mother only, while for the history of relatives and uncles / aunts were not examined.

Another study conducted in the Dawan I of Community Health Center, Klungkung District reported that there were more cases of hypertension among respondents who had a family history of hypertension, which was about 69.2% compared to respondents who did not have a family history of hypertension (24.5%). This finding is consistent with the theory that individuals with a family history of hypertension have twice the risk of suffering from hypertension[6]. Another study conducted by Aris in 2007 stated that individuals who have parents with hypertension will have a risk of suffering from hypertension 4.04 times greater than individuals who do not have a history of hypertension in the elderly. The results of the study are in line with the theory that genetic factors in certain families will influence these families to have a risk of suffering from hypertension. This is related to the increase in intracellular sodium levels and the low ratio between potassium to sodium[7]. Research conducted by Androgue and Madias on the pathogenesis of potassium and sodium in hypertension, states that heredity affects primary hypertension through several genes involved in vascular regulation and sodium reabsorption by the kidneys[8].

The results obtained by researchers in the Tembuku I area of Tembuku prove that heredity has an important role and determines how much a person's tendency to suffer from hypertension.

3.3 Factors of Physical Activity

Physical activity is grouped according to the amount of Metabolic Energy Turnover (MET). The total amount of MET consists of several components, namely walking activity, moderate physical activity such as cycling, and exercising, as well as strenuous physical activities such as digging, and gymnastics. Categories of physical activity in hypertensive patients in the working area of Tembuku I of Community Health Center on 2017 can be seen in the following table :

Tabel 3.3: Physical activity factors of Hypertension patients in Tembuku I of Community Health Center on 2017

Physical activity	Amount (n=84)	Percentage (%)
Low	10	11,9
Mild	39	46,4
Moderete	35	41,7

Based on Table 5.3 it can be seen that the number of hypertensive sufferers who have moderate physical activity is the highest with 39 people (46.4%). This is similar to a study conducted by Mahmudah et al (2016) in Depok that groups hypertension sufferers into mild and moderate physical activity categories, with the highest number being moderate physical activity ie 63 people (72.4%), while mild physical activity 24 people (27.6%)[9].

Not much different from the research conducted by Sihombing (2017) in Jakarta. In his study hypertension patients were classified into working and not working, with a total of 1371 people (50.4%) and 1350 (49.6%) [10]. But it differs from research conducted by Sawitri and Wahyuningsih (2017) in Yogyakarta. In this study, it was found that most respondents had a low level of physical activity at 62.8%, and the rest were moderate physical activity[11].

In this study most of the respondents still actively doing physical activity every day. The number of respondents who have physical activity that is likely because they are elderly but still actively working, but are not able to do heavy physical activity. Even a small proportion of respondents who are over or equal to 70 years old are only able to do light physical activity. This can be caused by people with hypertension in the working area of Tembuku I of community Health Center who do not have physical activity factors as risk factors for hypertension, so other factors such as age, sex and education level need to be considered.

IV. CONCLUSION

Based on research that has been done, it can be concluded several things as follows:

1. The proportion of hypertensive patients based on family history, namely father 69.0%, mother 41.7%, respondent sibling 53.6%, father and mother 28.6%, father, mother, and respondent relatives 16.7%, and do not have a history of all of them 10.7%.

2. The proportion of hypertensive patients based on activity that is having mild physical activity 11.9%, moderate physical activity 46.4%, and heavy physical activity 41.7%.

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