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RELATIONSHIP ANALYSIS OF KNOWLEDGE OF FOOD AND NUTRITION AND THE ECONOMIC AND SOCIAL DISEASE PATIENTS CORONARY HEART (CHD) OUTPATIENT GOVERNMENT GENERAL HOSPITAL DR. WAHIDIN SUDIROHUSODO MAKASSAR

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The purpose of this research was to analyze the relationship between of knowledge of food and nutrition, and socioeconomic status of the patient of Coronary Heart Disease (CHD) in the outpatient department of Dr. Wahidin Sudirohusodo Makassar. This type of research is a survey. Population is all patients who visit at the Cardiac Center, the number of samples is a patient who has been diagnosed with CHD were 72 samples. Based on the results of research conducted knowledge of food and nutrition in middle mind the frequency of patients CHD in patients eating the recommended intake of the type obtained eat enough frequency that is 43 (59.7%), and less than 29 (40.3%), while on the type of intake recommended not eating enough frequency obtained 24 (33.4%) and less 48 (66.6%). For socioeconomic variables showed that the level of income that is enough 56 samples (77.8%), less income levels as many as 16 samples (22.2%). From these results the knowledge of patients generally have a good knowledge but expected from the hospital to promote health counseling to increase knowledge in particular coronary heart disease and required various professions who are members of the care team of nutrition to help patients improve food intake in food consumption patterns healthy, as well as socioeconomic enough food expenditure should be balanced with good also by consuming nutritional requirements needed by the body and enrich the intake of fiber is good for the prevention and accelerating recovery for the patient.

Introduction

Rapidly development in this era of globalization was not only produces a useful construction for life, but on the other hand it raises various threats to human civilization. Media information is more easily accessible to developing countries may soon lead to mimic the habits of western countries which are considered a mirror of modern lifestyles. In the field of public health the pattern of Indonesian society in terms of food consumption has changed. Generally, consumption patterns have switched to more nutritious food, so the public health. But with rising incomes, there is a tendency, especially in the upper-middle class, the excessive consumption of food or no attention to the balance between the amount of food to eat and the amount required by the body. This will result in the emergence of diseases caused by overweight, or often referred to as a "rich man's disease". A shift in lifestyle such as this that resulted in a shift in the pattern of diseases from infectious diseases

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or infectious disease becomes non-communicable diseases such as cardiovascular disease. One of the ongoing cardiovascular disease ranks first is Coronary Heart Disease (CHD) (Aryati, 2004).

Heart disease is a disease that disrupt vascular system, or more precisely attack the heart and veins, some examples of heart disease such as coronary heart disease, heart attack, high blood pressure, stroke, chest pain (commonly called "angina") and disease Rheumatic heart. Coronary Heart Disease (CHD) consisting of angina pectoris and acute myocardial infarction (AMI). The disease is part of cardiovascular disease (CVD) or heart and blood vessel disease (PJP). The World Health Organization World Health Organization (WHO: 2007: 3) recorded more than 7 million people die from CHD worldwide in 2002. This figure is expected to rise to 11 million years. According to WHO and Ministry of Health, there are now only 50 percent of Indonesia's population is still consuming a food that is called basic four food groups such as fruits, vegetables, whole grains, low-fat meat, nuts and the like. While the consumption of refined foods such as, among others, the food is more popularly called fast food is very rich in fat, it is increasing in number. The menu is presented tend to contain a lot of salt, fat and cholesterol.

Heart disease is the number one cause of death in American adults. Each year, in the United States was 478.000 people died of coronary heart disease, 1.5 million people have heart attacks, 407.000 people having surgery transition, and 300.000 people undergo angioplasty. Heart disease, stroke and peripheral arterial disease is a deadly disease. Worldwide, the number of patients with this disease continues to grow. The third category of this disease can not be separated from an unhealthy lifestyle that a lot is done in line with the changing lifestyle (Majid A: 2007: 1).

Results of a survey conducted by the Ministry of Health stated the prevalence of CHD in Indonesia from year to year increase and followed by the increasing number of deaths. Previous prevalence of CHD ranks 9th threatening diseases and ranks fourth as the cause of death. But eight years later (1980) the prevalence of CHD ranks 6th, and 3rd order as the cause of death. In fact, now (2000s) can be ascertained, the tendency of the cause of death in Indonesia shifted from infectious diseases to cardiovascular disease, including coronary heart disease and degenerative (Madjid A: 2007: 1). Especially in southern Sulawesi, based on data from the 2000 health profile, the proportion of cardiovascular disease increased (1997 2.76% 1998 17.35% and 20.38% in 1999). The Hospital Dr. Wahidin Sudirohusodo Makassar recorded the incidence of coronary heart disease in 2006 that as many as 1383, then in 2007 to 2231 and in 2008 increased to 2260, and in 2009 as many as 1795 can thus be concluded that Coronary Heart Disease in Hospital Dr. Wahidin Sudirohusodo Makassar from year to year has increased. Therefore, the authors were interested to examine how the image of knowledge, patterns of

food consumption and socioeconomic status in patients who have been diagnosed with CHD at Hospital Dr. Wahidin Sudirohusodo Makassar.

The general objective of this study was to analyze the influence of knowledge, of food consumption, and socioeconomic in patients of Coronary Heart Disease (CHD) Outpatient Hospital Dr. Wahidin Sudirohusodo Makassar. Operationally, these objectives can be described as follows: (1) to analyze the influence of patients' knowledge of Coronary Heart Disease (CHD) Outpatient Hospital Dr. Wahidin Sudirohusodo Makassar, (2) to analyze the influence of food consumption patterns in the types of food recommended and are not recommended include: carbohydrates, proteins and fats by patients with Coronary Heart Disease, Coronary (CHD) Outpatient Hospital Dr. Wahidin Sudirohusodo Makassar, (3) to analyze the influence of socioeconomic status on patients with Coronary Heart Disease (CHD) Outpatient Hospital Dr. Wahidin Sudirohusodo Makassar.

Research Method

This type of research is a kind of descriptive research aimed to analyze the influence of knowledge, patterns of food consumption and socioeconomic in patients with Coronary Heart Disease (CHD) Outpatient Dr. Wahidin Sudirohusodo Makassar.

This study was conducted at Hospital Dr. Wahidin Sudirohusodo Makassar part Cardiac Center with the study population were all patients who visit at the Cardiac Center Hospital Dr. Wahidin Sudirohusodo Makassar. The large population in the department of Dr. Wahidin Sudirohusodo. The sample in this study are patients who have been diagnosed with CHD by physicians, patients and their caregivers or family willing to be interviewed. The number of samples in this study are as much as 72, using the formula (Sugiono: 2004: 67).

This research uses random sampling method ie by means of random sampling without regard to strata that exist in members of the population. How this is done when the members of the population considered to be homogeneous, for example, if the population is homogeneous and then the samples were taken were taken at random, then we will get a representative sample. Pengambilannyta to do the lottery, but extraction is given a certain serial number. (Aziz: 2007: 72).

Data processing is done electronically by using SPSS for Windows version 22.0 and presentation of data in tabular form accompanied by a narrative explanation of distribution. The indicators used in this study, as follows: (1) knowledge, (2) Type intake is recommended, (3) type is not recommended intake, and (4) Socio-Economic Status.

Result Research

Characteristics of Sample

Characteristics is the inherent characteristic of the samples obtained through a questionnaire such as age, sex, education, and employment.

Characteristics of Age

Age is a risk factor for coronary heart disease. Sample distribution by age group can be seen in Table 1:

TABLE 1: SAMPLE DISTRIBUTION BY AGE GROUP THE HOSPITAL DR. WAHIDIN SUDIROHUSODO MAKASSAR

Age Group	*Sample (n)*	*(%)*
(39-48)	8	11,1
(49-58)	25	34,7
(59-68)	27	37,5
(69-78)	12	16,7
Total	72	100,0

Source: Primary Data, 2014

Table 1 shows that of the 72 samples are most common in the 59-68 year age group is 27 people (37.5%) and the least was in the age group 39-48 years is 8 people (11.1%).

Characteristics of Gender

Gender is one risk factor for CHD. Sample distribution by sex can be seen in the figure below:

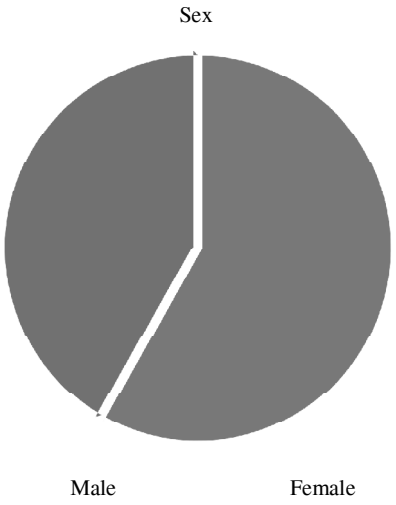

Figure 1: Pie Chart Distribution Characteristics of Sex

Figure 1 shows that of the 72 samples of the most widely-sex male is 42 people (58.3%).

Characteristic of Education

Distribution of the sample according to education can be seen in table 2:

TABLE 2: SAMPLE DISTRIBUTION ACCORDING TO EDUCATION THE HOSPITAL DR. WAHIDIN SUDIROHUSODO MAKASSAR

Education Level	*Sample (n)*	*(%)*
Primary school	9	12,5
Junior High School	7	9,7
Senior High School	22	30,6
Diploma	7	9,7
Fresh graduate	26	36,1
Other	1	1,4
Total	72	100,0

Source: Primary Data, 2014

Table 2 shows that of the 72 samples is the most educated scholar is 26 people (36.1%) and 1 (1.4%) of other categories that samples had more education. The highest sample is Fresh Graduate 26 (36.1%) and the lowest is no school at all 1 (1.4%).

Characteristics of Occupation

Sample distribution according to occupation can be seen in Table 3:

TABLE 3: SAMPLES DISTRIBUTION ACCORDING TO OCCUPATION IN HOSPITAL DR. WAHIDIN SUDIROHUSODO MAKASSAR

Type of Occupation	*Sample (n)*	*(%)*
Private Public Servants	17	23,6
Private employees	1	1,4
Trader	1	1,4
Housewife	17	23,6
Retired	36	50,0
Total	72	100,0

Source: Primary Data, 2014

Table 3 shows that of the 72 samples that most of the retirees is 36 people (50.0%) consisting of retired civil servants while the least has a occupation as a private individual clerks and trader are each 1 sample (1.4%)

Variable Description Research

TABLE 4: DISTIRUBUSI SAMPLES BASED VARIABLE EXAMINED

No	*Variable Examined*	*Enough*		*Less*		*Total*	
		n	*%*	*n*	*%*	*n*	*%*
1	Knowledge	50	69,4	22	30,6	72	100 %
2	Types of nutritional intake Recommended	43	59,7	29	40,3	72	100 %
3	Type of nutritional intake not recommended	24	33,4	48	66,6	72	100 %
4	Socio-Economic Status	56	77,8	16	22,2	72	100 %

Source: Primary Data, 2014

Table 4 shows the picture of a sample knowledge enough knowledge by the percentage of knowledge, ie 50 persons (69.4%). While the number of samples less knowledgeable as many as 22 people (30.6%). For the pattern of food consumption on the type of food intake is recommended in patients with known CHD eat enough frequency that is 43 people (59.7%) and the frequency of eating less that 29 people (40.3%). On the results of food consumption patterns on the type of food intake is not recommended to eat enough frequency obtained 24 (33.4%) and the frequency of eating less that 48 (66.6%). Socio-economic status conditions sufficient where the total expenditure not eat more than 80 percent of which 56 samples (77.8%) and socio-economic status are less as many as 16 samples (22.2%).

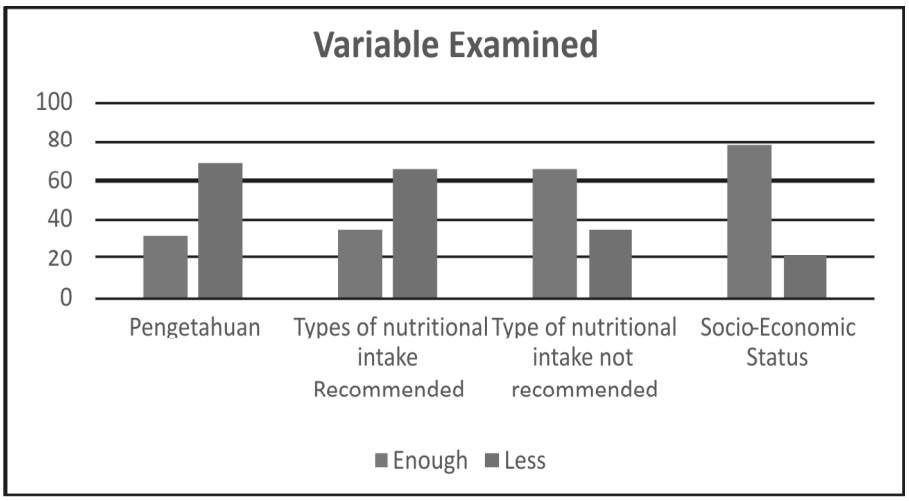

Figure 2: Histogram of Description Variable Examined

Discussion

According to (Soeharto: 2004: 144), risk factors for coronary heart disease are the things in life that are associated with early disease progression. There are various risk factors for coronary heart disease. Risk factors for coronary heart disease which can not be changed are age, gender, family history and ethnicity. Modifiable risk factors consist of smoking, hypertension, dyslipidemia, diabetes mellitus, obesity and metabolic syndrome, stress, high-calorie fat diet and physical activity.

From the characteristics of the sample by age group, most samples are in the age group 59-68 years is 27 people (37.5%) and 49-58 year age group is 25 people (34.7%), ie the age group 69-78 years 12 people (16.7%) and the lowest is the age group 39-48 years as many as eight people (11.1%).

Then 60% of all samples male sex. It is based on the conditions of service at the time of the research conducted, the majority are male visitors. Results of this study also supported by the theory that suggests that CHD is most prevalent in men with incidence rates 3-4 times higher than women in middle age and 2 times higher in elderly age. In the United States of CHD symptoms before the age of 60 years was found in 1 out of 5 men and 1 out of 17 women. This means that men are at risk of CHD is 2-3 times greater than women. (Anwar: 2004: 5)

Research carried out on the installation Cardiac Center Hospital Dr. Wahidin Sudirohusodo is dominated by the sample to work as a retiree is 36 people (50.0%) and the sample with the level of undergraduate education that is 17 people (23.6%). For variable knowledge, patterns of food consumption and socioeconomic can be described as follows:

Knowledge

In the context of this study, knowledge is something that is known, understood by the sample having seen and witnessed, experienced or diujar associated with CHD risk factors include mainly to do with nutrition. While the nutrient in question is concerning about the use of food consumed that includes several aspects, namely: knowledge foodstuffs both the type and dose as well as their respective roles in the body; methods of application of the diet in organizing and implementing measures for the control of heart patients diet is based on the General Guidelines for Balanced Nutrition, about the causes of CHD diseases and their impact on health.

Based on the results of a study conducted in patients with CHD outpatients when viewed in general, shows that the majority have sufficient knowledge of 50 people (69.4%) and less than 22 (30.6%). Moreover, the high level of understanding of the sample at the level of this knowledge comes from the extension of diet therapy provided by doctors and patients know the type of food intake are recommended and what kind of food should be restricted, to know that eating fat can increase cholesterol increases and leads to accumulation of substances fat in the body that result in obesity that can stimulate coronary heart disease (CHD).

The results of the research (Pasorong: 2007: 65) suggests that as many as 85 people or (73.5%) samples of patients with coronary heart disease (CHD) eat regularly, eat a varied, according to the needs/taste and restrictions on certain foods. In addition, good food processing known right the knowledge that as many as 56 samples (61.1%) and one of 16 (22.3%) showed that the sample had good knowledge on food processing as well as the results of research (Pasorong: 2007: 61) also known general sample of patients with coronary heart disease (CHD) who had a habit of how to cultivate vegetables by boiling the 72 people (62.6%) of the total sample.

As well as that proposed by (Notoatmodjo: 2003: 97) that the knowledge of a person can be affected by several factors, namely: experience, education, beliefs, facilities resources, income and social culture. Education can bring insight or knowledge of a person. In general, the higher educated person will have greater knowledge than someone who is a lower level of education. The level of education contribute greatly to knowledge, education and knowledge is one good step to reduce the rate of increase in the incidence of CHD, as is expected to drive awareness to maintain a healthy physical condition, mental and social. Seen in Table 4 are generally the sample consisted of civil servants or retired civil servants and supported with facilities and resources or external media has also been quite a lot that can be absorbed as easily as with a form of socialization of health care workers to obtain sufficient knowledge of the sample.

Consumption Pattern of Food and Nutrition

Patterns of food consumption and nutrition is one of the risk factors for CHD indirectly in this case relating to changes in dietary fat diet that is high in calories and low in fiber. Therefore, the role of a healthy diet and balanced nutrition is very important in order to reduce risk and support the healing process of degenerative diseases including heart disease and blood vessels. Nutritional intake is also one risk factor for CHD in this case concerning the food consumption patterns of high calorie fat diet and low in fiber. Therefore, the pattern of consumption of healthy food and balanced nutrition is very important in order to reduce risk and support the healing process of degenerative diseases including heart disease and blood vessels.

Nutrition is a specialized branch of knowledge that studies the relationship between food and health. Nutritional science is not limited to the issue of how the influence of food in the body, but many other things are learned in the science of nutrition, namely circumstances-circumstances brought about by the entry of food into the body (Moehji, S: 2002: 2).

Nutrients (nutrients) in food divided by six major groups namely: carbohydrates, proteins, fats, vitamins, water and minerals. Three of them, including energy producers, namely carbohydrates, proteins and fats. In patients with CHD

recommended carbohydrate, ie 50-60% of the total energy requirement, enough protein is 0.8 g/kg body weight, and fat were that 25-30% of the total energy needs.

Humans essentially need a balanced diet throughout his life for the survival and maintenance of health. Food consumption is a source of energy that is needed by the body not only in the implementation of various metabolism in the body. Source energy obtained from food can be a carbohydrate protein and fat.

In the application of the pattern of consumption patterns of different individual should eat better in terms of gender, age and physical activity until acted. Special needs in order to meet nutritional meal will certainly differ significantly with fulfillment in CHD patients.

Based on the results of data collection in patients with CHD in the department. Dr.Wahidin Sudirohusodo known frequency patterns of food consumption by eating enough on the type recommended intake by 47 (65.3%) and less than 25 (34.7%) with an average score of 591 out of a total score of the whole sample. Meanwhile the results of the frequency of eating enough on the type of which is not recommended to eat enough frequency obtained by 24 (33.4%) and less than 48 (66.6%) with an average score of 107 out of a total score of the whole sample.

Carbohydrate Intake

In patients with CHD, carbohydrate needs are also supporting elements of the fulfillment of energy needs for the implementation of the body's metabolism. Although the fulfillment of carbohydrates should be limited by reducing the size of the meal, but must be able to meet the needs of every day so that it can supply the energy needs required by the body, and recommended more than 50% to meet the needs of energy sufficient to achieve and maintain a normal weight.

Carbohydrate intake to CHD itself is not only derived from the type of rice that is eaten every day but must also be supported from the other types but should be a given carbohydrate complex carbohydrates and lower intake of simple carbohydrates with a setting where food consumption patterns in simple carbohydrates that trigger increased caloric needs total energy becomes high, resulting in triglyceride metabolism which results came from fat food or from the change in the elements of excessive energy in the body.

Based on the results of the frequency of carbohydrate intake on the type recommended obtained namely rice at every meal the amount of 72 (100%), beans with number 24 (33.3%) at a frequency of 3-6 times a week and bread 23 (31.9%) in the frequency of 1-2 times a week. Based on the results mentioned above can be known for several types of the intake into the intake of the type that is often consumed.

Protein Intake

In patients with CHD who average generally excessive body mass index is commonly called overweight or obese, resulting accumulation of fatty substances.

The accumulation of fatty substances that increase the levels of cholesterol, especially LDL or triglyceride blood. Triglycerides this is the beginning of atherosclerosis ie blockage or narrowing of the arteries to the heart. For the types of protein intake is good for CHD are the types of animal and vegetable protein that contains a lot of unsaturated fat and little saturated fat. Of its total needs sufficient potein should also be considered in order to be adjusted according to body weight and physical activity. In addition to the stress (distress), infectious diseases, and other diseases, will increase the energy requirements for CHD patients. For protein requirements should be increased by the main sources of protein include animal food beef / chicken with low-fat, fish, eggs, low-fat milk in a predetermined amount and soybean and processed products such as tofu and tempeh.

Based on a study tracking animal protein derived the most widely consumed fish that 54 (75.0%), vegetable oils such as soybean For 62 (86.1%), know 63 (87.5%) declared at a frequency of every meal. The number of samples to consume the right foods that fish than chicken, previously known mainly fish that contains omega-3 is good for the heart than a chicken which contain a lot of saturated fat.

Fat Intake

Fat is a source of energy other than carbohydrate, excess fat can be stored in the body as an energy reserve, and if so the excess will be stored as body fat. Consumption of excess fat on CHD avoided because it may increase the levels of body fat, particularly cholesterol levels in blood. Recommended reduced consumption of animal fat and vegetable fat lot of use. The amount of animal fat is recommended not melewari 25% of total daily energy adequacy.

From the research results can be seen in Table 9 is obtained on the type of fat intake recommended intake of corn oil at a frequency that is never consumed a number of 47 (65.3%), while the coconut / coconut dilute number of 36 (50.0%) stated consumed each meals. Lack of intake on the type of corn oil caused because the sample is not accustomed to using corn oil for cooking meals served and the average wear cooking oil or edible oil known high saturated fatty acid content than corn oil.

Specifically the thin coconut milk with coconut percentage (50.0%) have a high distribution coverage that is at a frequency that every meal as much as 36 samples of the frequency of the total sample, the sample can be seen selecting choices of good food intake that is kind of coconut milk / dilute at a frequency every meal.

Furthermore, the results of the frequency of the type of food intake is not recommended in coconut oil derived fat intake 58 (80.6%) for the type often consumed at every meal, and thick coconut milk 27 (37.5%) at a frequency that is rarely consumed.

The high intake of the type of oil that is 58 samples (80.6%) is due because in general, patients are accustomed to using oil material that is kind of coconut oil at

each meal, although it has been suggested in certain dietary pattern to reduce the use of oil at every meal but no manifestation. Being the kind of thick coconut note 27 (37.5%) it can be concluded that the obtained 27 samples have high levels of high frequency in a frequency rarely consumed.

Things that need to be understood in the presentation of food would we have to pay attention to the type of consumption of dietary fat intake was good as with choosing the type of oil that saturated fatty acid content of less, or more preferably contains unsaturated fatty acids as well as limited frekuensinnya. Due to the excessive consumption of fat intake may increase cholesterol in the blood. Total fat intake associated with obesity, which is a major risk factor for developing atherosclerosis. Effect of dietary fat on coronary heart disease associated with the effect of fatty acid and cholesterol component of the blood cholesterol, especially LDL cholesterol.

From the results of the pattern of consumption of vegetables and fruit on the type recommended by table 10 is known in general all kinds of vegetables are often consumed each week. At the recommended intake diproleh kinds of vegetables, often consumed namely carrots 42 (58.3%), kale and who never consumed beans 46 (63.9%). For frequency pattern that is most frequently consumed fruits namely banana 53 (73.6%) and the type who never consumed the sapodilla 67 (93.1%).

As for the types of non-recommended intake of all kinds of vegetables are rarely consumed each day, including the types of vegetables such as radish most rarely consumed by the number of 47 (65.3%). The fruit of nearly all samples is also rare for either consume durian 51 (70.8%) and jackfruit 55 (76.4%).

This is because the sample knowing good intake to maintain a daily intake. Neither the sample claimed to have consultation with the doctor or dietician with the limitation bersantan and greasy food and fruit consumption mmperbanyak example with a vegetarian diet, because by eating fruits and vegetables can absorb fat and lowers cholesterol in the blood.

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Social Economy

The results show sufficient socio-economic status where the total expenditure not eat more than 80 percent of which 56 samples (77.8%), and less than 16 (22.2%).

With a total food expenditure of not more than 80% categorized enough socioeconomic status. Family income is enough to affect the expenditure to buy food.

The level of income as one of the main factors that influence food consumption, and describes the ability of a person's purchasing power. The higher the purchasing power of someone then food consumed tends to vary and vice versa nutritious low income purchasing power to buy the food and the kind of good food nutritional quality and diversity.

As proposed (Vanda.K: 2004: 28) The greater the person's income, the greater the consumption expenditure. Comparison of the magnitude of the additional consumption expenditure against revenue are marginal desire to consume (the marginal propensity to Consume, MPC).

Judging by the characteristics of the sample are generally highly educated majority, and the average work as civil servants so that it can be concluded that these factors also influence the socio-economic status enough. In accordance with the results of the study (Kasmawati: 2004: 53) explains in terms of the work that the father had a job as a self-employed 46 samples (56.09%) can meet the nutritional status of the mother.

Conclusion

From the results of the research data refineries that have been conducted on 72 samples in the department. Dr. Wahidin Sudirohusodo namely in the clinic (Cardiac Center) we concluded that: (1) To analyze the effect of the knowledge acquired sufficient knowledge of> 50%, ie 50 persons (69.4%). While the number of samples less knowledgeable <50% as many as 22 people (30.6%), (2) the pattern of food consumption known CHD patients eating frequency on the type recommended intake obtained eat enough frequency that is 43 (59.7%), and less than 29 (40.3), while on the type of intake is not recommended to eat enough frequency obtained 24 (33.4%) and less than 48 (66.6%). (3) For the socioeconomic variables obtained sufficient socioeconomic status ie 56 samples (77.8%), and less as many as 16 samples (22.2%).

Acknowledgmenst

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