International Journal of Advanced Biotechnology and Research (IJBR)
ISSN 0976-2612, Online ISSN 2278–599X,
Vol-8, Issue-2, 2017, pp698-704
http://www.bipublication.com

Research Article

The Relationship Between Coronary Heart (Chd) With Profil Lipids the Organization of Chandra Kirana Wives in Galang

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ABSTRACT
CHD mortality largest contribution came from increasing in total cholesterol. Total cholesterol has a relationship with the incidence of CHD in both women and men, while the inverse relationship between HDL (High Desity Lipoprotein) and CHD has also been established. The incidence of CHD could be demonstrated by an increase in the ratio of total cholesterol to HDL value. Lifestyle changes, especially in large cities led to an increased prevalence of degenerative diseases such as coronary heart disease. The purpose of this study was to analyze the knowledge of CHD with high levels of lipids profile. This research used descriptive analytic cross sectional approach method by the number of respondents 52 people Soldiers' Wives Organization who have a BMI> 25 kg / m2. The data were collected by a questionnaire and a blood test. The results showed that there were significant closeness of the relationship between knowledge of CHD and LDL (Low Desisty Lipoprotein) blood cholesterol levels, where the lower the knowledge of the respondent, the higher the levels of LDL cholesterol and blood respondents. Through these results it is suggested that respondents to lose weight and improve diet.
Keywords: Knowledge, coronary heart disease, lipids profile

INTRODUCTION
World Health Organization (WHO) states that the greatest morbidity and mortality in the community more worldwide are caused by non-communicable diseases include diabetes mellitus, cardiovascular disease, stroke, cancer, and respiratory diseases. The mortality rate of the developing world, which is 28 million out of 38 million deaths worldwide (WHO, 2014).WHO (2005) reported the number one cause of death globally, namely cardiovascular disease. An estimated 17.5 million people died represented 30% of all global deaths. The death of an estimated 7.6 million were due to coronary heart disease and 5.7 million from stroke. From the above data shows the number of patients with Coronary Heart Disease (CHD) increases every year. WHO noted that over 7 million people die from coronary heart disease (CHD) worldwide in 2002. This figure is expected to rise to 11 million people by 2020.

Health problems were influenced by lifestyle, diet, environmental factors work, exercise and stress. Changes in lifestyle, especially in large cities led to an increased prevalence of degenerative diseases such as coronary heart disease, diabetes mellitus, obesity and high blood pressure (Isniati, 2007).Research in the United states that cardiovascular disease is a major cause of morbidity and mortality in the United States. An estimated 62 million people with cardiovascular disease and 50 million people with hypertension in this country (Nabel, 2003). In Indonesia, the death from CHD reach up to 26% of total mortality. The results of the National Household Health Survey (SKRTN), revealed that in the last 10 years the death rate from CHD tended to increase. In 1991, the death rate from CHD is 16%, which surged in 2001.Cardiovascular disease is the leading cause of death worldwide. Based Riskesdas (2007), cardiovascular disease is the leading cause of death in Indonesia and showed the largest proportion of causes of death in all age groups (31.9%).Health Research (Riskesdas) in 2013, coronary heart disease (CHD) is the 9th leading cause of death of 22 diseases that exist in

Indonesia. CHD prevalence nationally in Indonesia amounted to 1.5%, in North Sumatra by 1.1% (Ministry of Health, 2013).In Indonesia there has been a change in the pattern of disease due to health programs as well as changes in lifestyle and dietary changes in society. Infectious diseases and malnutrition have declined, but instead degenerative and cardiovascular disease increases. High blood lipid levels is an indicator of cardiovascular disease. Blood fat levels itself is influenced by several factors, among others, age, gender, diet, activity factors and IMT (Sunarti, 2010). CHD mortality largest contribution came from the increase in total cholesterol. Total cholesterol have a relationship with the incidence of CHD in both women and men, while the inverse relationship between HDL and CAD have also been established. The incidence of CHD can be demonstrated by an increase in the ratio of total cholesterol to HDL value (Soertidewi, 2011).Many factors influence the occurrence of CHD that prevention efforts also shape multifactoral. Prevention should be kept as far as possible by controlling the risk factors of CHD and sufficient importance in prevention of CHD, primary and secondary. Primary prevention was aimed at those who are healthy but at high risk, while the secondary was an attempt to prevent the worsening of clinical disease have suffered (Sadewantoro, 2006). Various studies showed that one of the factors that can cause the onset of cardiovascular factor was the interruption of blood fats called dyslipidemia. The disorder may be an increase in total cholesterol or hypercholesterolemia, decreased levels of HDL, increased LDL levels, or elevated levels of triglycerides in the blood or hypertriglyceride. The cause changes in blood lipid profile is a diet that can be influenced by nutrition study and attitudes (Sunarti, 2010).The risk factors for heart disease such as coronary heart disease (CHD), which include the risk factors that can not be modified such as family history, age, gender, whereas risk factors that can be modified such as, hypertension, diabetes mellitus, dyslipidemia (metabolic fat abnornal), obesity general and central obesity, lack of physical activity, diet, alcohol consumption and stress (MoH RI, 2011).One effort that can be done to push through the prevalence of primary and secondary prevention by improving the mother's knowledge to identify the risk factors and perform preventive management (Indrawati, 2014).Hyperlipidemia was a condition where there are elevated levels of lipids in the blood are cholesterol triglycerides or both, while dyslipidemia interpreted as changes in blood lipid profiles levels could increase (total cholesterol, triglycerides, LDL) or decreased HDL. Cholesterol levels and high triglyceride levels and prolonged can cause thickening of the blood vessels with the risk of narrowing of blood vessels (Azwar expertise, 2005). In obese people are metabolic disorders so that the energy body was taken to the liver to become fatty. This will improve blood lipid levels (Free Fatty Acid or FFA). Total body fat affected metablisme abnormal, judging from the degree of fat accumulation obesity is divided into two types, the abdomen (central obesity) and central obesity. Fat tissue is mainly found in the abdominal visceral. Often occurs in men, postmenopausal women, and people who are lazy move. Fatty tissue in this type are metabolic active, so the release of free fatty acids to the liver more. As a result, suffer a high risk of CHD (Coronary Heart Disease). But if the person doing the diet and activity, the lower the risk of CHD (Sargowo, 2009).

According to research conducted by Sunarti (2010) there is a relationship between obesity and coronary heart disease. The formation of atherosclerosis associated with blood lipid profile. Lipid profile is a state of blood fat in terms of the total amount of cholesterol in the blood, LDL, HDL, and triglycerides. Various studies have been conducted for over 50 years, where the incidence of CHD didapatlah different variations on the geographical and social circumstances of certain increasing and is a leading cause of death in industrialized countries. The study says that of the 500 patients with obesity, about 88% got the risk of coronary heart disease. Increased risk factors for coronary heart disease in line with the person's weight gain. Other studies also show obesity occurs at 20-40 years was influential greater occurrence of heart disease than obesity that occurs in older age (Purwati, 2010).One of the most

fundamental conditions tendency healthy diet lacking in the community, especially in urban communities are often associated with CHD. Errors diet because it does not unbalance the composition of the food consumed. Fast food are increasingly mushrooming in cities contains protein, fat, high carbohydrate, and preferably in fiber, vitamins, and minerals are low. This can be the originator of the development of degenerative diseases such as coronary heart disease, hypertension, diabetes, and other vascular diseases. Urban lifestyle that often hit sress also can stimulate the heart and increase blood pressure (Arief, 2008). One of the factors that influence the formation of internal human behavior is knowledge. Knowledge is basically the result of know what happens after people perform sensing against a specific object through the human senses, the senses of sight, hearing, smell, taste and touch. Most of the knowledge gained through the eyes and ears. Health behavior is influenced also by the knowledge as a predisposing factor. Based on the above theory, knowledge of coronary heart disease will affect the formation of a person's behavior (Notoatmodjo, 2007).Kartika Chandra Kirana Army Wives Organization (PERSIT) is one of the women's organization which consists of wife - the wife of the Army. Certainly the life of the wife is in contrast to non-military community. Army Wife candidates must pass a series of tests ranging from health, psychologically, to defend the state of knowledge. They must also be incorporated in PERSIT and the caretaker when her husband is an officer, and if a soldier is one or two soldiers then only have to be members. Certainly happened strata clearly among the members and the board PERSIT, because of the position of his wife in PERSIT also influenced by her husband at the office of the army. Persit mother as a wife / companion of a generation that has an important role to accompany, support and should be able to be an example and a good role model to society in terms of health as having the ideal body and free from disease. That role must be supported with good health himself. Personal hygiene including one of them is to maintain levels of blood cholesterol that is by keeping your diet and doing regular physical activity, in order to prevent dangerous diseases like degenerative diseases.This study aimed to determine the relationship of knowledge about CHD with Mother Lipids Profile Persit Kartika Chandra Kirana Galang.

RESEARCH METHOD

Place and Time

The research was conducted on Ms. Kartika Chandra Kirana PERSITt Bukit Barisan located at Jalan Bukit Barisan Galang. This study was conducted from October 2015 to July 2016, while the data collection was done from March 9 to 18 April 2016.

Type and Design Research

This study was an observational study with cross sectional design of assessing Relations CHD Awareness With Blood Lipid Profile In Army Wives Organization of Kartika Chandra Kirana Bukit Barisan Galang sub district, where data collection was done at the same time.

Populasi dan Sampel

Populasi adalah seluruh Ibu-ibu Persit yang berada dalam kompleks asrama Kartika Chandra Kirana Bukit Barisan Kecamatan Galang. Survey pendahuluan yang dilakukan pada 6 November 2015 diketahui jumlah Ibu Persit dalam kompleks asrama sebanyak 152 orang. Sampel penelitian ini adalah bagian dari populasi dan merupakan bagian dari Ibu-ibu Persit Kartika Chandra Kirana Bukit Barisan Kecamatan Galang. Penentuan sampel pada penelitian ini dilakukan secara random sampling. Untuk memperoleh sampel yang homogen maka dilakukan skrining sesuai dengan kriteria inklusi yaitu Indeks Massa Tubuh (IMT) $\geq$ 25 kg/m2, tidak dalam keadaan sakit atau hamil, tinggal di Kompleks Asrama. Berdasarkan hasil skrining maka sampel yang ada sebanyak 52 orang.

Population and Sample

The population was all Army Wives Organization who are in a dorm complex Kartika Chandra Kirana Bukit Barisan Galang sub district. Preliminary survey carried out on 6 November 2015 Army Wives Organization unknown number Persit in dormitory complex as many as 152 people. Samples were part of the population and is part of Army Wives Organization of Kartika Chandra Kirana Bukit

Barisan Galang sub district. Determination of the sample in this study conducted by random sampling. To obtain a homogeneous sample screening is carried out in accordance with the criteria for inclusion is the Body Mass Index (BMI) ≥ 25 kg / m2, not in a state of illness or pregnancy, staying in Dormitory Complex. Based on the results of screening the existing sample as many as 52 people.

Types and Data Collection Method

Types of data collected in this study, included primary data and secondary data. As for how the work done during the study that screened at Army Wives Organization of Kartika Chandra Kirana Bukit Barisan Galang sub district, determine the sample in accordance with the inclusion criteria. Data collected from a sample of identity ie name, age, address, occupation, ethnicity, and education. Identity data obtained by in-home interviews each sample. Knowledge of CAD data obtained by asking a few questions (according to the questionnaire) to the respondents who made at home each sample.

While the blood lipid profile data obtained by taking blood samples. Points taking blood which has been determined that in the District Health Unit Battalion 121 Galang. Blood samples determined starting at 08:00 to 10:00 hrs, performed by three personnel of the Laboratory Analyst Deli Serdang Hospital. Blood tests conducted in the laboratory of Deli Serdang Hospital using GOD - PAP.

Processing and Data Analysis

Knowledge of CAD data was processed manually by assessing the respondents' answers in the questionnaire. Blood Lipid Profile Data was taken from the results of blood tests (print out), then data entry into the computer. Univariate analysis was conducted by study the frequency distribution of the large proportion of each of the variables studied.

The bivariate analysis was conducted to see the relationship between knowledge with the blood lipids profile. Before the Test Bivariat, then each of the data test data normality.

ivariate test used is the Spearman Rank Correlation Test with α of 0.05. To determine the relationship of two variables symbolized by r, r values ranging from -1 s / d 1.

RESULTS

A. Characteristics of Sample

Age

Age is measured by the life span of years since human beings are born and is a parameter to determine the age of a person (MOH, 2009). In this study age groups were sampled according to predetermined inclusion criteria first. The frequency distribution of the sample based on age groupings can be seen in table 1.

Table 1. Sample Distribution Based on Age Group

Age	N	%
21 – 25 year	1	1,9
26 – 30 year	20	38,5
31 – 35 year	18	19,1
36 – 40 year	8	15,4
40 – 45 year	2	3,8
Total	52	100,0

Table 1 explains that of the 52 samples were obtained the largest age was the age of 31-35 years (40.4%) and the lowest age was the age of 21-25 years (1.9%). This indicates that the sample was still relatively young and productive age category. According to the MOH (2013) states that the productive age between 15-54 years, so the age of the respondents are still included in the category of childbearing age because it has a range of 31-35 years.

Education

The level of education was not the only factor that determines a person's ability to formulate and prepare a nutritious meal but educational factors can affect the ability to absorb nutrition knowledge acquired (Rahmawati, 2009). The sample distribution by level of education can be seen in Table 2.

Tabel 2. Sample Distribution based on Education Level

Education	n	%
Senior High Education	34	65,4
Labor	18	34,6
Total	52	100.0

Table 2 illustrates that more samples is high school education level that was 34 people (65.4%) and education Labor was 18 people (34.6%).

Work

Work was livelihood, what was used as a staple of life, something to do to earn a living (Hima, 2006). The frequency distribution of work Army

Wives Organization of Kartika Chandra Kirana Bukit Barisan can be seen in Table 3.

Tabel 3. Frequency Distribution Based on Career

Jenis Pekerjaan	n	%
Housewives	48	92,3
Government Civil	3	5,8
Bussinessman	1	1,9
Total	52	100,0

Table 7 explains that job most samples were as Housewife as many as 48 people (92.3%).

A. Education Pengetahuan Tentang CHD

Tabel 4. Education of CHD toward Army Wives Organization

Variabel	n	Rates	Min	Max	Std. Deviation
Education	52	61,82	35,60	95,00	15,71

From Table 4 it can be seen that the average value of knowledge Mothers Persit is 61,82 with the highest knowledge score was 95.00 and the lowest value was 35.60.

B. Lipid Profil Blood toward Army Wives Organization

Tabel 5. Rate Score Lipid Profil Blood toward Army Wives Organization

No	Variabel	n	Rates	Min	Max	SD
1.	Cholesterol	52	169,7	118	221	24,12
2.	Trigliserida	52	155,3	77	376	64,61
3.	HDL	52	43,5	20	65	12,46
4.	LDL	52	95,7	62	157	21,33

Table 5 shows that the average of cholesterol levels Army Wives Organization was 169.7 mg / dL with the lowest cholesterol level is 118 mg / dL and the highest levels of 221 mg / dL, triglycerides average of Army Wives Organization is 155, 3 mg / dL with the lowest triglyceride levels were 77 mg / dL and the highest levels of 376 mg / dL, the average levels of HDL Army Wives Organization was 43.5 mg / dL with the lowest HDL levels were 20 mg / dL and higher levels ie 65 mg / dL, the average levels of LDL mothers Persit was 95.7 mg / dL with the lowest LDL cholesterol was 62 mg / dL and the highest score is 157 mg / dL.

C.The Relationship Between CDH and Profil Lipids Blood of Army Wives Organization

The Relationship Between CHD and Blood Cholesterol

Cholesterol is a fatty compound complexes of which 80% is generated from inside the body (liver) and 20% were from outside the body (food) (Nurrahmani, 2014). The frequency distribution of blood cholesterol levels can be seen in the following table:

Tabel 6. The Relationship Between CHD and Blood Cholesterol

No	Variabel	n	Pvalue	R
1.	Education	52	0,021	-0,320
2.	Cholesterol	52		

Table 6 shows the results of the statistical test obtained by value p = 0.021 (p <0.05) and the value of r = -0.320 with the relationship being and a negative sign which means the better knowledge of Mothers Persit the lower the blood cholesterol levels.

The Relationship Between CHD and Blood Cholesterol

Blood Triglycerides are a form of fat that is absorbed by the intestine after hydrolysis, then into the plasma. Triglycerides are blood fats when eating carbohydrates will increase energy intake mainly sourced from pure KH. Excess carbohydrates are converted into glycogen which would then be turned into free fatty acids which then accumulates in the form of triglycerides in the liver and adipose tissue (Siahaan, 2015).

Tabel 7. Data of Relationship Between CHD and Blood Cholesterol

No	Variabel	n	Pvalue	R
1.	Education	52		
2.	Trigliserides	52	0,250	-0,162

Table 7 shows the results of the statistical test obtained by value p = 0.250 (p> 0.05) and the value of r = -0.162 with the closeness of the relationship was weak and negative sign which means the better knowledge of Mothers Persit the lower levels of triglycerides in the blood.

The Relationship Between CHD and HDL of Army Wives Organization

Tabel 8. Data The Relationship Between CHD and HDL of Army Wives Organization

No	Variabel	n	Pvalue	R
1.	Education	52	0,552	0,084
2.	HDL	52		

Table 8 shows the results of the statistical test obtained by value p = 0.552 (p> 0.05) and r = 0,084 with the closeness of the relationship is weak and is positive, that means the better knowledge of Army Wives Organization the higher levels of HDL in the blood.

The Relationship Between CDH and LDL of Army Wives Organization

Tabel 9. Data The Relationship Between CDH and LDL of Army Wives Organization

No	Variabel	n	Pvalue	R
1.	Education	52	0,003	-0,408
2.	LDL	52		

Table 9 shows the statistical test obtained by value p = 0.003 (p <0.05) and the value of r = -0.408 with the relationship being and a negative sign which means the better knowledge of Army Wives Organization the lower the levels of LDL in the blood.

DISCUSSION

Adult age have a higher risk for the occurrence of a high total cholesterol level. The increasing age of a person's body composition changes will occur due to the influence of hormonal activity which can cause increased body fat. Increased body fat can increase blood levels of total cholesterol (Badriah, 2013).The level of total serum cholesterol increase with age. In women, this increase occurred up to the age of 60 to 65 years (Suiraoka, 2012). The statement was supported by other research Madupa (2016) found no significant relationship between age and total cholesterol levels.The mother's education is the main capital in supporting the family economy also plays a role in the preparation of family meals. For mothers with high levels of education will be more receptive to health information, particularly the field of nutrition, so as to increase their knowledge and be able to apply in everyday life (MOH, 2010).

One of the reasons is the lack of nutritional disorders nutritional knowledge or the ability to apply information on nutrition in everyday life (Suharjo, 2003). Education is needed to obtain information, for example the things that support health so as to improve the quality of life. Education can affect a person, including a person's behavior will be lifestyle especially in motivating to participate in the development stance.In general, the higher a person's education, the more easily receive information so that the more the knowledge possessed less education would otherwise hinder the development of a person's attitude towards the values of the newly introduced (Buanasita, 2015).The increase in total blood cholesterol levels among respondents in addition affected by the presence of obesity is also influenced by several factors such as high cholesterol intake, lack of activity and the lack of knowledge about nutrition. If blood cholesterol levels are not maintained through a healthy lifestyle and diet that either there will be an increase in blood cholesterol levels called hypercholesterolemia. Hypercholesterolemia is a condition in which high cholesterol levels in the blood. This situation is not a disease but a metabolic disorder that could contribute to the occurrence of various diseases, especially cardiovascular disease (Mardiana, 2013).Cholesterol levels in the body are the most important factors for determining a person's risk of developing cardiovascular disease. There are several factors that are proven through research can affect blood cholesterol include age, weight, diet, physical activity, stress and heredity (Miranti, 2008).

Cholesterol influenced the consumption of foods that contain cholesterol, such as eating meat, offal, and eggs can improve blood cholesterol levels, because in the diet of meat, offal, and eggs are relatively high cholesterol content.Observations on the ground that food processing is done by mothers Persit is frying using cooking oil, such as frying fish, meat, and snacks / light.Rustika research results reported in 2007 that in everyday life in general public use cooking oil for processing food, good for side dishes or for snacks, processed products referred fried food. Fried foods are fried in oil containing saturated fatty acids if ingested, metabolized which will ultimately form of cholesterol in the blood.Another study conducted by Waloya (2013) states that physical activity also significantly affect blood cholesterol levels. Regular exercise can lose weight and reduce cholesterol deposits in blood vessels. By exercising can lower total blood cholesterol levels were caused because the slowdown in activity of lipase liver function in blood cholesterol catabolism.Triglycerides are formed by the body in the liver from glycerol and fats from food from consuming excessive food. Besides being used as an energy source,

can be converted into cholesterol triglycerides, phospholipids, and other lipids forms if needed. As fat tissue, triglycerides also have physical function is to cushion the bones and vital organs, protects organs from shock or damage (Kahono, 2010).Increased plasma triglycerides in the blood will cause hypertriglyceridemia. At the time of eating food other than triglyceride fats in the eat, also contains cholesterol, HDL, LDL, and VLDL (Almatsier, 2010).High fat intake increases blood cholesterol levels. The more the consumption of fatty foods, the greater the chances to raise total cholesterol and reduce levels of High Density Lipoprotein (HDL). Low blood HDL levels will affect the ratio of total cholesterol and HDL, which can be used to predict the risk of CHD. The higher the ratio of total cholesterol and HDL the higher the risk of CHD events (Soeharto, 2002). Cholesterol HDL levels can be increased by reducing weight, increasing activity and change eating habits.Results Soyama study (2003) showed that the risk of developing CHD will decrease if these factors affect the body independently. Therefore, the interaction of risk factors in the form of the ratio of total cholesterol to HDL ratio and triglycerides to HDL levels high enough to have a role in increasing or decreasing the risk of developing CHD.Increased LDL levels are also influenced by the respondents' knowledge is not good, so the processing of more frequent meals with fried and coconut milk. Increased levels of LDL will cause thickening of the blood vessel wall, LDL cholesterol levels more appropriately as a pointer to assess the risk of CHD than total cholesterol.

CONCLUSION AND SUGGESTION

In this study, obtained a conclusion that knowledge of CHD affects levels Lipis profile Persit mothers with obesity status, especially LDL cholesterol levels and blood, where the lack of knowledge of the mother, the higher the LDL cholesterol levels and blood. Low maternal knowledge related to food processing is less well where women are more often using oil and coconut milk in the food processing, as well as lack of physical activity. It is therefore recommended that mothers attempt to lose weight by increasing physical activity, and change eating habits (food processing at home).

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