

Food Photos As A Medical Construction To Improve Knowledge Of Attitude And Behavior Diet Of Dyslipidemic Patients In Nutrition Polyclinic RSUP Prof. Dr. R.D. Kandou Manado

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ABSTRACT

Food photos used in the nutritional counseling process can function as a medium for health education in accordance with the objectives set so that the photos can fulfill its function to arouse the motivation and interest of clients to help recall food. The purpose of this study is to make and make food photos as a nutritional counseling media to improve knowledge of the attitudes and dietary habits of patients with outpatient dyslipidemia at Prof. RSUP Dr. R.D. Kandou Manado.

This research is a Quasy Experiment pre and Post Test one group Design. This research was conducted at the Nutrition Department of the Manado Health Polytechnic and the nutrition Clinic RSUP Prof. Dr. R.D. Kandou Manado from March to November 2018. The population in this study were all patients with out patient dyslipidemia at Prof. RSUP Dr. R.D. Kandou Manado. The sample in this study were dyslipidemic patients who met the criteria. The sample size in this study was determined based on the formula Hypothesis tests for two population proportion (one-side test) of 38 patients.

The results of statistical analysis using paired sample T Tests showed there were differences in respondents' knowledge before and after giving nutritional counseling using food photos ($p < 0.02$) then continued with post hoc analysis using Wilcoxon test showing differences in knowledge before and after giving counseling using food photos ($p < 0.004$) this analysis also illustrates that the majority of respondents' knowledge rose after being given counseling using food photos media as many as 35 people (92.1%) and those who remained knowledgeable were 3 people (7.9%).

The conclusion of this study is that food photos can be used as a nutritional counseling media to increase knowledge of the attitudes and dietary behavior of outpatient dyslipidemia patients at Prof. RSUP Dr. R.D. Kandou Manado

Keywords: Dyslipidemia, Food Photos, Nutrition Counseling Media

BACKGROUND

As a developing country, Indonesia still faces nutritional problems double namely lacking nutrition including short (stunting) and over nutrition included obesity. Based on the latest research, these two problems are related increased non-communicable diseases (PTM), such as heart disease and blood vessels, cancer, diabetes and diseases due to metabolic disorders. This condition is exacerbated by the general risk factors associated with behavior individuals include consumption of unhealthy foods, lack of physical activity, smoke and drink alcohol, and breathe polluted air. The World Health Organization or WHO reports that 80% of premature heart disease, stroke and diabetes, and 40% of cancers can be prevented by eating healthy, adequate and regular physical activity and not smoking. Heart and blood vessel diseases are the leading cause of death in Indonesia in the past decade. In line with the recommendations of the UN High-Level Meeting on Non-communicable Diseases, 2011,

The results of Hestuningtyas and Noer's research (2014), with an experimental method using a sample of 40 people in the district of East Semarang, got the results that nutritional counseling can improve knowledge, attitudes and practices of mothers in child feeding and nutrition intake of children significantly. Some previous studies mention that nutritional counseling affects the nutritional status and nutritional intake. Susetyowati's research (2001) found that nutritional counseling with booklets on food consumption and nutritional status of patients with Chronic Kidney Failure with Hemodialysis was very influential namely an increase in nutritional status and food consumption. Nutritional counseling for elderly nutritional intake, in the elderly coral group that is after getting nutritional counseling an increase in average nutritional intake and increased nutritional status (body mass index) (Chandra dewi, et al, 2002).

Dyslipidemia is defined as an abnormal lipid metabolism characterized by an increase or decrease in lipid fraction in plasma. The main abnormalities of lipid fraction are an increase in total cholesterol (K-total), LDL cholesterol (K-LDL), triglycerides (TG), and a decrease in HDL cholesterol (K-HDL). In the process of atherosclerosis everything has an important role, and is closely related to one another, so it may not be discussed separately. In order for lipids to dissolve in the blood, lipid molecules must be bound to a protein molecule (known as apoprotein, which is often abbreviated as Apo. Lipid compound with apoprotein is known as lipoprotein. Depending on the lipid content and the type of apoprotein contained there are five types of lipoprotein known namely chylomicrons, very low density lipo protein (VLDL), intermediate density lipo protein (IDL), low-density lipoprotein (LDL), and high density lipoprotein (HDL) (table 3.) Of the total serum cholesterol, K-LDL

contributes 60 -70%, have apolipoprotein called apo B-100 (apo B) LDL cholesterol is the main atherogenic lipoprotein, and is the main target for the management of dyslipidemia HDL cholesterol contributes to 20-30% of total serum cholesterol. -1 and APO A-II Evidence suggests that HDL inhibits the process of atherosclerosis.

Tabel 1. Jenis Lipoprotein, apoprotein dan kandungan lipid

Type Lipoprotein	Type Apoprotein	Content Lipid (%)		
		Trigliserida	Cholesterol	Fosfolipid
Kilomikron	Apo- B48	80-95	2-7	3-9
VLDL	Apo - B100	55-80	5-15	10-20
IDL	Apo - B 100	20-50	20-40	15-25
LDL	Apo - B 100	5-15	40-50	20-25
HDL	Apo-AI dan Apo - AII	5-10	15-25	20-30

Data from the American Heart Association in 2014 showed the prevalence of overweight and obesity in the population in America is 154.7 million people which means 68.2% of the population in the United States are over 20 years old. The population with cholesterol levels ≥ 240 mg / dl is estimated at 31.9 million people (13.8%) of the population.

Knowledge is the result of knowing and this happens after people have sensed a certain object. Sensing occurs through the five human senses namely the sense of sight, hearing, smell, taste and touch (Notoatmodjo, 2010).

Knowledge or cognitive is a very important domain for the formation of one's actions (overt behavior). While knowledge that is included in the cognitive domain has six levels, namely:

a. Know

Know is interpreted as a reminder of a material that has been studied previously. This is the lowest level of knowledge. Verbs to measure that people know about what is happening include mentioning, describing, defining, saying and so on.

b. Understanding (comprehension).

Understanding is interpreted as an ability to explain correctly about objects that are known and can interpret the material correctly. People who already understand the object or material must be able to explain, cite examples, infer, to the object being studied.

c. Application

Application is defined as the ability to use material that has been learned in real situations or conditions. This can be interpreted as the application or use of laws, formulas, methods, principles in other contexts or situations.

d. Analysis

Analysis is an ability to use material or an object into components, but it is still within the organizational structure and there are still links to each other.

e. Synthesis

Synthesis refers to the ability to place or connect parts in a new whole. In other words synthesis is an ability to compile new formulations from existing formulations.

f. Evaluation

Evaluation relates to the ability to put justification or assessment of a material or object. This assessment is based on a self-determined criteria, or using existing criteria (Notoatmodjo, 2010).

Nutrition knowledge includes knowledge about the type of food consumed, the nutritional content contained in food ingredients, the frequency of eating, the use of supplements, food sources, processing methods and also the function of food for the body. This nutritional knowledge can be obtained from information sources including friends or acquaintances, coworkers, members of the congregation / community, family, magazines and books, television / radio. Nutrition knowledge will influence the behavior carried out by someone in terms of food selection and healthy eating behavior in everyday life. According to Green et al, (1980) in Notoatmodjo (2005) a person's behavior is determined by 3 main factors namely:

1. Predisposing factors (Predisposing factors).

Predisposing factors are factors that will facilitate or complicate behavior in a person which includes one's knowledge and attitude towards the behavior to be taken. The behavior of a religious leader to choose safe and nutritious food will be facilitated if they know about the benefits of nutritious food according to their body's needs, knowing where to get correct information about adult nutrition. However, there are other factors that will complicate the behavior of religious leaders to choose healthy and nutritious foods such as the influence of the mass media about unhealthy food (junk food), the influence of friends and so on.

2. Enabling factors.

Enabling factors or supporting factors are the factors of the availability of facilities, facilities, infrastructure, which support or facilitate the behavior of a person or community. The behavior of religious leaders in this case good eating behavior will be supported by supporting infrastructure such as family attention to food consumed, healthy homes, and supportive environment to run a good diet.

3. Reinforcing factors.

Knowledge, attitudes and supporting infrastructure that are available sometimes do not guarantee good behavior in a person. Religious leaders will adopt good eating behaviors if they have good nutritional knowledge.

Biological behavior is an activity or activity of the organism (living thing) concerned. So human behavior is essentially an activity of humans themselves. Therefore, human behavior has a very broad range, including: walking, talking, reacting, dressing, laughing, reading, crying, eating and so forth. Even internal activities (internal activity) such as: thinking, perception, and emotions are also human behavior. It can be concluded from the description that human behavior is all human activities or activities, both those that can be directly observed or those that cannot be directly observed by outsiders (Notoatmodjo, 2007).

Counseling is a form of approach used in nutritional care to help individuals and families gain a better understanding of themselves and the problems they face. It is hoped that after conducting nutritional counseling individuals and families will be able to take steps to address nutritional problems including changes in diet and solving nutrition-related problems towards healthy living habits (Cornelia, et al. 2016).

Nutrition counseling is an effort to accelerate the healing process and achieve optimal nutritional status. Nutrition counseling is given by nutritionists / nutritionists / dietitians who have been certified and are referred to as nutrition counselors. The counselor will help the client to recognize health problems related to nutrition, understand the causes of nutritional problems, and help the client solve the problem so that there is a change in behavior to be able to implement a mutually agreed diet plan (Cornelia et al, 2016).

The problem formulation in this research is how food photos can be used as a counseling media to increase knowledge of attitudes and dietary behaviors of outpatient dyslipidemia patients at Prof. RSUP Dr. R.D. Kandou Manado

The general objective in this research is to make food photos as a counseling medium to improve knowledge of the attitudes and dietary behavior of patients and families of outpatient dyslipidemia patients at Prof. RSUP Dr. R.D. Kandou Manado. Specific objectives in this study are:

1. Make food photos containing nutritional information including household size, grams and nutritional value based on size.
2. Documenting the results of making food photos in book form
3. As an evaluation material in the effort to develop counseling media based on region, ethnicity, culture specifically in North Sulawesi and in general for all provinces in Indonesia

The benefits of this research are

1. Facilitate nutritionists doctors and nurses in providing food references in making the dyslipidemia diet
2. Facilitate the patient and patient's family when returning home in preparing and making a dyslipidemia diet that is the right size and quantity of food
3. Providing knowledge to patients and families of dyslipidemic patients about the accuracy of food ingredients and the right dose to make a dyslipidemia diet
4. As a material for studying the effectiveness of counseling media which will continue to be developed in various other types of diets such as food ingredients for hypertension, kidney failure and others
5. Documented food items in the form of photos complete with nutritional information including household size, grams and nutritional value based on size.
6. Facilitate counselors and patients in providing and understanding the reference food / diet dyslipidemia
7. Facilitate the patient and patient's family when returning home in preparing and making a dyslipidemia diet that is the right size and quantity of food
8. Providing knowledge to patients and families of patients with diabetes mellitus about the accuracy of food and the right dose to make a dyslipidemia diet.

METHOD

This research is a Quasy Experiment pre and Post Test one group Design This study will describe the differences in knowledge of attitudes and dietary behavior of patients with outpatient dyslipidemia in addition to this study will describe the ease and efficiency of nutritional counseling in patients with dyslipidemia. This research was carried out in the Nutrition Department of the Poltekkes Manado and the Nutrition Clinic of Prof. Dr. Dr. R.D. Kandou Manado from March to November 2018.

The population in this study were all outpatient dyslipidemia patients in the Nutrition Clinic of Prof. Dr. Dr. R.D. Kandou Manado. The sample in this study were dyslipidemic patients who met the inclusion criteria that were able to communicate well, were willing and signed the research agreement to follow the study until completion.

The sample size in this study was determined based on the formula Hypothesis tests for two populations proportion (one-side test) of 38 patients.

The stages in this research are

1. In the first stage, the technical implementation of this research starts from making food photos. In its implementation this food photo was obtained from a food menu that was prepared on its own and processed at the Department of Nutrition Culinary Laboratory and food or other menus purchased directly at restaurants but before being purchased the researchers asked the restaurant owner about the basic ingredients of the menu compiler.
2. The second step is taking pictures using a Canon digital camera with high quality color resolution (42 megapixels) and continuing with the process of editing images and colors.
3. Trial food photo book as a counseling media for various groups of people with different levels of education
4. Evaluation and editing again after the counseling media trial
5. Print a food photo counseling book and finally use it by a nutritionist at the Nutrition Polyclinic at Prof. Dr. R.D Kandou.
6. Measurement of the level of knowledge, attitudes and behavior of patients with dyslipidemia.

In carrying out this research involving humans as objects of research, therefore, before this research is carried out, the researcher will submit a request for ethical ethical research (ethical clearance) to the Polytechnic Ethics Commission of the Ministry of Health Manado through the Secretariat of the Ethics Commission and the Ethics Commission of the Prof. Dr. R.D. Kandou Manado. The cost of conducting this research came from the DIPA Poltekkes Manado Health Ministry fund in 2018.

RESULTS

The implementation of this research took place in two places, namely the Department of Nutrition Culinary Laboratory related to menu processing followed by picture taking and editing while the second location was in the Nutrition Clinic of Prof. RSUP. Dr. R.D. Kandou Manado is related to the measurement of the variable knowledge of Dyslipidemic patients who are outpatient and consulted at the Nutritionist Poly.

Food photo counseling media produced in this study in book form (attached) which in the next stage will be patented in the form of intellectual property rights (IPR) and then will be published in the form of popular books. Further development of this food photo will be developed into a leaflet.

a) Characteristics of Respondents

Respondents in this study showed that the respondents in this study were mostly women, there were more in the age group 48-54 years and more work as housewives with nutritional status overweight and obesity and most of them had the results of both LDL and triglyceride cholesterol tests tall one.

b) Bivariate Analysis

The results of statistical analysis using paired sample T Tests showed there were differences in respondents' knowledge before and after giving nutritional counseling using food photos ($p < 0.02$) then continued with post hoc analysis using Wilcoxon test showing differences in knowledge before and after giving counseling using food photos ($p < 0.004$) this analysis also illustrates that the majority of respondents' knowledge increased by 35 people (92.1%) and those who remained knowledgeable were 3 people (7.9%)

The attitude and behavior in this study is the dyslipidemia patient's adherence to the diet recommended by nutritionists through counseling using food photographs. The results of statistical analysis using the Wilcoxon test in this study showed that there were significant differences in the attitudes and behavior of respondents before and after counseling using food photographs ($p = 0.021$). The results of this study indicate that the majority of respondents followed or complied with dietary recommendations given by nutritionists after being given nutritional counseling while the respondent's dietary behavior in this study obtained from the analysis of semi-food frequency questionnaires (FFQ) showed that most respondents began to limit the amount and types of food that are considered at risk of dyslipidemia, namely foods that can increase cholesterol low density lipoprotein (LDL), very low density lipoprotein (VLDL) and triglycerides

Behavior of respondents in this study is to look at the respondent's eating patterns, namely the selection of healthy and unhealthy foods where food can increase blood cholesterol levels that is what is meant by unhealthy eating behavior before and after giving nutritional counseling using food photos

DISCUSSION

a. Characteristics of Respondents

Respondents in this study were mostly women. Cholesterol is generally in women, tends to be higher, so that women are more at risk of experiencing increased cholesterol. In addition, hereditary factors also influence the increase in cholesterol, an increase in cholesterol due to family history of having experienced cardiovascular disease. The results of this study indicate that respondents in this study were more prevalent in the age group 48-54 years and more worked as housewives. According to Arisman (2004), in Indonesia, the

age above 40 years can be said to be of productive age affected by dyslipidemia. Risk factors for dyslipidemia increase with age.

Respondents in this study mostly have overweight and obesity nutritional status and have high LDL cholesterol and triglyceride examination results. People who are overweight (obese) and high-fat diets (especially animal fat) causing the synthesis of cholesterol in the liver increases LDL concentrations (which are rich in cholesterol). blood causes cholesterol to accumulate in macrophage cells, skin and blood vessels. Triggers atherosclerosis and coronary heart disease. handling obesity is not simple. Especially when weight gain is triggered by dyslipidemia. This is a disorder of lipoprotein metabolism that involves an increase in total cholesterol, triglycerides, low-density lipoprotein (LDL) cholesterol, or decreased levels of high-density lipoprotein (HDL) cholesterol in the blood. Dyslipidemia is associated with the presence of an apolipoprotein (apo) E genotype inherited from both parents. Dyslipidemia results in an increased risk of early cardiovascular disease. "Dyslipidemia causes the tunica intima media layer in the blood vessels to thicken, including in the carotid arteries leading to the neck. As a result, blood flow carrying nutrients and oxygen to the brain is disrupted, and can cause strokes. Cholesterol in the body is closely related to the high prevalence of obesity in the group society and will have an impact on cardiovascular disease due to the wrong lifestyle. Many factors that cause an increase in cholesterol that causes obesity are lifestyle, diet, age, etc. The dominant factor is the pattern of consumption of foods that contain high fat, especially foods originating from animals and lack of physical activity. Abdominal Obesity has an effect on increasing cholesterol

b. Photo of Food as Counseling Media

Food photos used as counseling media on the results of this study were obtained from making a food menu that refers to the guide to the dyslipidemia diet. The results of the evaluation conducted by nutritionists in the Nutrition Installation of Prof. Dr. R.D. Kandou Manado starting from the type of foodstuff, household size and nutritional value as well as the quality of the images and colors become a reference in every improvement and finally become a book in the form of food photo media used in the nutritional counseling process.

As a medium for health education, photographs must be selected and used in accordance with established learning objectives. Thus the photo can fulfill its function to arouse the motivation and interest of the target and help the target interpret and remember the material that is pleased with the photos (Suiraka and Supriasa, 2012).

According to research conducted by Zahra et al (2015) regarding the description of nutritional counseling services at the Jatinangor Public Health Center in 2015 obtained the result that the problem that often arises when counseling is the lack of assistive devices or support facilities for counseling and the selection of conventional methods. Various media can be used to help nutrition counseling services. According to research conducted by Siswanto et al (2016), regarding differences in knowledge and attitudes of patients with diabetes mellitus hospitalization in Samarinda Islamic Hospital before and after nutritional counseling using audiovisual media on 54 respondents with one group pre-post test method showed the results that there was an increase knowledge of diabetes mellitus patients or respondents about diabetes mellitus after intervention with nutritional counseling methods with audio visual media.

According to Prasetiawan (2017), regarding media in guidance and counseling services concludes that the use of media in counseling helps the effectiveness of service delivery. In addition there are media objects or 3-dimensional media that convey information through physical characteristics such as size, shape, weight, arrangement, color, function and so on. Food photos can be used as an effective media to increase the knowledge of patients with dyslipidemia in determining food ingredients, measuring the amount of food and take into account the nutrients in the food. According to Apriadi (2017) The use of good photos as a design in a menu book is also an important instrument for consumers to get information about the food to be ordered. Good photos will be easily accepted and influence consumer decisions such as photos that show a tantalizing part of the food or show the details of the food.

a. Knowledge of respondents' attitudes and behavior

The results of statistical analysis using the Wilcoxon test in this study indicate that there are significant differences after being counseled using food photographs ($p < 0.05$). This proves that there are differences in knowledge after counseling using food photographs where the average knowledge of respondents increased after getting counseling using food photos compared to before getting counseling using food photos. Nutrition counseling is a process that guides clients towards solving problems for normal nutritional needs to achieve a healthy lifestyle with a scientific, practical and systematic approach. Nutrition counseling can also be used for individuals and groups to regulate eating habits and healthy lifestyles for health or for the treatment of disease. In conducting health communication there needs to be a communicator, messages, channels, communicants and feedback. So that the health counseling process is effective and directed, it can be done with interpersonal communication that can be directly face to face, the best media is the language both oral and written and needs to be assisted by print media namely booklets and leaflets. Nutrition counseling is one effective way of providing communication information or advice that is closely related to public health conditions that need to

foster an attitude of openness, can recognize problems, the environment, confidence, motivate in improving health (Green & Kreuter, 2006).

CONCLUSION

Conclusions from this study Food photos can be used as counseling media to improve knowledge of the attitudes and dietary habits of patients and families of outpatient dyslipidemia patients at Prof. RSUP Dr. R.D. Kandou Manado

SUGGESTION

Food photos that are used as counseling media can then be used as material for making counseling media in the form of software that can be accessed via Android so that it makes it easier for users to access and utilize it more effectively.

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