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EFFECTS OF FAMILY PSYCHOEDUCATION TO IMPROVE CAREGIVERS' KNOWLEDGE AND BEHAVIOR ON RISK CORONARY HEART DISEASE PREVENTION

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ABSTRACT

Background: Coronary Heart Disease (CHD) is a degenerative disease in developing countries that has priority in its prevention. Prevention of CHD is the only way to reduce the risk of CHD. Prevention that can be done with training approaches and family empowerment in the community. Family empowerment in the community can be done with modality therapy, one of them is family psychoeducation. **Objective:** To examine the effect of family psychoeducation on the level of knowledge and behavior of care giver in preventing the risk of CHD in family members at risk of CHD. **Methodology :** the research design used was quasi experimental pre-post control group design on caregiver which has CHD risk at family member in Talok Village. Technique sampling used was purposive sampling with amount of sampel 36 respondents (18 intervention group and 18 control group). The measuring tool used in this study was Heart Disease Fact Questionnaire (HDFQ) for CHD prevention, while for CHD risk prevention used Health Promoting Lifestyle Profile II (HPLP II) questionnaire. Data analysis used chi square test and t dependent test. **Result:** Characteristics of respondents in the psychoeducation group and control group (Age, sex, relationship and family support) had no relationship (P> 0.005). The family psychoeducation group (10.43) and the control group (9.32) had the same selective value of caregiver knowledge in CHD prevention in family members at CHD risk. The family psychoeducation group (1.49) and the control group (2.34) had the same selective value of caregiver behavior in CHD prevention in family members at CHD risk. There was an effect on the family psychoeducation group on knowledge (p = 0.000) and the behavior (p = 0.001) caregiver in CHD prevention and no effect on the control group of both controls (p = 0.805) and the precautions (p = 0.177). **Conclusion:** the groups that get family psychoeducation had knowledge and behavior in preventing CHD risk better than those given health education (control group).

KEYWORD: Knowledge, behavior, family psychoeducation, coronary heart disease.

BACKGROUND

Heart disease in developing countries is one of the non-communicable diseases that has priority in prevention.[1] World Health Organizations (WHO) said that by 2020 to 2030 heart disease continues to increase and 60% of deaths from heart disease are caused by coronary heart disease (CHD).[2] Indonesia, one of the developing countries in 2013, noted that 1.5% of heart disease was caused by CHD indication through doctor's diagnosis and there were signs of stroke.[3] Survey conducted by the researchers at Turen Malang Regency, Indonesia in 2017 stated that the biggest risk factor CHD was hypertension as much as 716 cases. The results of the survey to 30 villagers in the Talok Village of Turen Subdistrict had a lack of knowledge about CHD prevention. In addition, smoking habits can not be avoided and people also do not routinely examine their heart health to the doctor.

CHD can be prevented by reducing foods containing high cholesterol, avoiding high-sugar foods and raising sugars, avoiding smoking, stress, overweight and

intensity in activities such as exercise.[4] The Efforts can be made to prevent CHD by improving knowledge, attitude and behavior in reducing CHD.[5]

Prevention of CHD risk can be done by providing family support to family members who have risk of CHD.[6] Such family support through the care process of family members at risk of CHD performed by care giver.[7] The role of care giver in caring for family members at risk of CHD for improving family health functions, reducing the anxiety, increasing trust in CHD prevention. In addition, the role of care giver also improve the attitude of CHD prevention to the family members.[8,9] Therapeutic communication to care giver is one effort that can be performed by nurse or medical for CHD prevention.[10]

Therapeutic communication that can be done by nurses or medical by doing approach of family psychoeducation.[11] Family psychoeducation has objectives such as improving family members' ability to prevent a disease, reducing recurrence of the disease experienced by family members and improving the care giver function in providing care to family members.[12] Family psychoeducation can be implemented by recognizing illness, training care giver in caring for sick family members and strengthening family support through empowerment in the community.[13] Thus, this study identifies increased knowledge and care giver behavior in the prevention of CHD risk factors after psychoeducation kleuarga.

OBJECTIVE

Examining the differences in knowledge and behavior care giver in Preventing CHD risk to family members, after getting a family psychoeducation and analyze the effect care giver of knowledge and behavior in CHD prevention to family members after getting a family psychoeducation.

MATRIAL AND METHOD

Design

This study used *quasi experimental pre-post control group design* which was divided into two groups namely the intervention group and the control group. The intervention group in this study was family psychoeducation while the control group was the health education of CHD. The study was conducted from August to January 2018.

Place

The research was conducted in Talok Village, Turen District, Malang Regency, East Java Indonesia. Data collection was fed with family psychoeducation to intervention groups and providing health education on CHD to the control group.

Sampling Technique

The sampling technique used was purposive sampling on the family that has risk factor of CHD. The CHD risk factor used references from the literary framingham.[14] Inclusion criteria in this study was care giver who had family members with one of the risk factors of CHD such as history of hypertension, diabetes millitus, history of dyslipedemia, smoking, obesity, family history with heart disease, and age between 35 and 55 years. While the exclusive criteria was care giver who had family members with CHD risk. The number of research samples that entered into inclusion criteria and the exclusion of 36 respondents. The sample is divided into 2 groups namely family psychoeducation group (18 respondents) and control group (18 respondents).

Instruments

The measuring tool used in this study was *Heart Disease Fact Questionnaire* (HDFQ) for knowledge of CHD prevention[15] while for risk prevention behavior of CHD using questionnaires *Health Promoting Lifestyle Profile II (HPLP II)*.[16] The scale used on HDFQ uses the gutman scale and on the HPLP II pastry using Likert scale. HDFQ results are 0-100 while the HPLP II questionnaire has a range of 25-100 values.

Validity test was done by obtaining approval from previous researcher about HDHFQ and HPLP II, then the researcher translated the two questionnaires to the language center of Universitas Brawijaya, after getting the translation result of both questionnaires the researcher discussed the two questionnaires to cardiovasculare expert and tested Reliability in Bantur Village Kabupetan Malang. With the number of 32 Respondents who have the same criteria with families who have risk factors for CHD. Reliability test results obtained value of *crobach's alpha* for HDFQ is 0.947 and HPLP II is 0.958.

Data collection

Data collection was done in family psychological group which was given 4 sessions:

1. Session 1: Caregiver recognizes family health problems in preventing CHD;
2. Session 2: Management of caregivers' stress in caring for family members with CHD factors;
3. Session 3: Caregiver load management in caring for family members who have risk factors for CHD;
4. Session 4: Family empowerment is at risk in preventing CHD in the community.

In the control group, health education challenges CHD materials consisting of the definition of CHD, signs of CHD, CHD risk factors, first aid and care if families have heart disease.

Family psychoeducation was given by researchers who have competencies as mental health nurses, medical nurses and community nurses. Family psychoeducation was given for 4 times each time the duration was 45-60 minutes. The control group was given intervention by researchers with a one-time frequency of encounters with a duration of 45-60 minutes of health education.

The intervention media used in the family psychoeducation group was the family psychoeducation module for CHD prevention, caregiver workbook on CHD prevention, feedback sheet on CHD materials, leaflets on CHD materials, management of family burdens and family empowerment with CHD risk factors in the Community, book on management stress consisting of progressive muscle relaxation. The control group used a flipchart and a leaflet of CHD material.

Data analysis

Data analysis using software *Statistical Package for the Social Sciens* 16 (SPSS 16). The statistical test used was *t test dependent test* used to know the relationship of data with numerical variables. *Chi-square* test was used to determine the relationship of chategoric variable on karaterisitik data of respondents.

RESULTS AND DISCUSSION

Table 1: The Characteristic of caregiver for caring family member who had CHD risk.

Variable characteristics	Family Psychoeducation (Intervention Group)			Control group		P
	Category	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	
Age	21-30	2	11.2	1	5.6	0.858
	31-40	2	11.2	1	5.6	
	41-50	13	72	15	83.2	
	> 51	1	5.6	1	5.6	
Sex	Man	7	38.9	6	33.3	0.328
	Women	11	61.1	12	66.7	
Family relationship	Parents	3	16.7	2	11.1	0.656
	Husband	4	22.2	5	27.8	
	Wife	11	61.1	11	61.1	
Drug compliance support	Let	3	16.7	6	33.3	0.558
	Remind	9	50	7	38.9	
	Guide	6	33.3	5	27.8	

Table 2: Diferences care givers's knowledge in perventing risk of CHD in family psychoeducation and control group (n = 36).

Group	Variables	Mean	t	*p*
Family psychoeducation	HDFQ			
	pretest	54.44	10.43	0,000
	posttest	72.78		
Control group	HDFQ			
	pretest	53.33	9,32	0.8 05
	posttest	53.39		

Table 3: Diferences care givers's behavior in preveting risk of CHD in family psychoeducation and control group (n = 36).

Group	Variables	Mean	t	*p*
Family psychoeducation	HPLP II			
	pretest	58.89	1.49	0.001
	posttest	80.22		
Control group	HPLP II			
	pretest	65.11	2.34	0, 177
	posttest	65.17		

Stages of previous data used homogeneity test and normality test data. The result of homogeneity test used levine test with the result of probability value was P> 0.05. levien test values on the knowledge variables on CHD in the family psychoeducation group was 0.028 and in the 0.022 control group. The variables of risk prevention of CHD in the psychoeducation group were 0.604 and control group 0.712. so it could be concluded that both groups have the same variant value (homogeneous).

The data normality test used the Shaporo-Wilk test because the respondents were less than 50 in each group. Normality test results if the probability is P> 0.05. normality test data obtained from pretest and postet value. The variables of knowledge in the family psychoeducation intervention group were *pretest* (0.028) *postets* (0.023) whereas in the family psychoeducation intervention group with *pretest* value (0.604) and *posttest* value (0.481). So it can be concluded that the two variables were normally distributed.

Characteristic dataof respondents consist of Age, sex, family relations and family support. Characteristic of respondent in psychoeducation group and control group did not have relationship (P> 0,005) and seen in table 1 (*chi-square* test result*).*

The family psychoeducation group (10.43) and the control group (9.32) have the same selective value of caregiver knowledge in the prevention of CHD in family members at risk of CHD. The family psychoeducation group (1.49) and the control group (2.34) had the same selective value of caregiver in the prevention of CHD in family members at risk of CHD). There was an influence on the family psychoeducation group on knowledge (p = 0.000) and the (p = 0.001) caregiver in Mecegah family members at risk of CHD and no influence on the control group of both controls (p = 0.805) and the precautions (p = 0.177) (tables 2 and 3) (test result t *dependent*).

DISCUSSION

Knowledge is the interpertation of knowing, knowing and going after the sensations made by a person against the object, while the behavior is formed from knowledge and awareness of the importance of health. Someone who is often exposed to health-related information then lifestyle patterns of a person will also increase in the prevention of a disease.[17]

Differences with previous research, psychoeducation is given to patients with CHD mainly viewed from the psychosocial aspects. Previous research also used 8 sessions in each intervention but the development of psychoeducation interventions could use sessions of problem recognition, stress management, load management as well as empowerment in the community.[18,19]

Prevention of CHD in the family one of them can be through health education. Health education is able to change knowledge until the in preventing a disease. In line with previous studies on CHD prevention with self-management education methods in patients with coronary arteries, it was able to improve the behavior of preventing coronary artery disease well.[20] In harmony with research-related education behavioral changes to lifestyle patterns of patients with CHD. The result is a change in lifestyle after getting the intervention one of them reduces smoking habit.[21]

Increased knowledge and care giver behavior in the prevention of CHD risk in family members with CHD risk may be provided with family psychoeducation methide. Because in this study is different from previous research. The focus of family psycho-education is one of empowerment dikomunits. Empowerment in the community can be interpreted as a model of educational intervention in individuals or families so as to improve the ability to think and act independently in increasing the knowledge of self efficacy in taking the of prevention of a disease.[22,23]

CONCLUSION

There is a difference in caregiver's knowledge and behavior in preventing the risk of CHD in family members at risk of CHD, after obtaining family psychoeducation. And there is the influence of family psychoeducation on knowledge and caregiver behavior in preventing the risk of CHD in family members at risk of CHD with group control.

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