INTEGRATED SELF CARE MODEL APPLICATION TOWARD THE ABILITY OF INDEPENDENT FAMILY TO OVERCOME THE PROBLEM OF NON-COMMUNICABLE DISEASES AT PUBLIC HEALTH CENTER OF KOMBOS MANADO CITY

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ABSTRACT

The ability of independent family to overcome the problem of non-communicable diseases (degenerative disease) prevalence of hypertension 74,2% in society, prevalence of diabetes 5,7%, central obesity 28% exceeding national prevalence 18,8%. Integrated Self Care Model considers that the client has the ability and potential to take care of themselves, to achieve healthy and prosperous with emphasis on the role of the client as self-care agent for self, where self-care is a client situation that is able to do self-care and self-deficit is the client situation who cannot afford self-care (Oren, 2001). The purpose of this research is to apply the Integrated Self-Care Model to the ability of family independent with non-communicable diseases.

The type of research is quasi experiment with pretest and posttest research design with One Group Design. The respondents of this research were families with family members who suffered from non-communicable diseases which is diabetes mellitus type 2, hypertension, and obesity amounted to 94 family members. Purposive random sampling is the sampling that is used in this research. Data analysis using statistical test paired sample t test with significance level $\alpha<0,05$. Confidence level is 95%. Data analysis uses SPSS with version 21.

The result of the research shows that the most respondent characteristic of female gender is 76% and age mostly in age 45-59 years old which is 46,8%.

The results of statistical tests showed there are differences in the ability of family independence before and after the application model of Integrated Self Care to family members who suffer non-communicable diseases (Hypertension, DM, Obesity) $\alpha=0,000<0,005$.

Suggestion: to improve family self-reliance by applying Integrated Self Care model with continuous mentoring. Cross-sector and cross-program cooperation is needed.

Keywords: **Independent Family, Integrated Self-Care, Non-Communicable Diseases**

INTRODUCTION

Community Health Center is the first level of health services by implementing community empowerment in an attempt to improve promotion and prevention to increase individual's health, families and communities independently and developing

health resources community efforts (Permenkes.No.75 year 2014).

Service management Clinics comprising primer health, service pharmacy, the Ministry of public health nursing, and laboratory services. The public health nursing service quality greatly influences the quality level of health service, being extension and intensification that requires innovation efforts because its products are unique, including variable and the extent of the area of public health nursing practice. The main products of the Ministry of public health nursing are a service that can be felt directly by individuals, families and communities. Productivity in nursing clinics are correlated with different quality for any health approach related to attempt for first level service giver, qualifications of nurses and nursing care of granting method (Kelly, 2012).

The family is the smallest unit in society, occupies a position between the individual and society, then the problems that occur in the family – who's going to be a problem of society in general, the success of service at home sick cannot be meaning, if there is continued by the family at home, thus the health of family members will affect the quality of life of families, which means the quality of life of the Community (Heramis, 2000). The family approach is important in strengthening public health.

The disease is not contagious target points and health development policy directions the year 2017 i.e. Hypertension Diabetes mellitus and obesity population 18 years of age. The prevalence of hypertension in Indonesia is quite high due to the posed a problem of public health. Hypertension is a disease the risk of heart disease and blood vessels. The result from Riskesdas in 201 indicate that the prevalence of hypertension 25.8% diagnosed, and 74.2% of cases of hypertension in the society yet diagnose and general community do not know they are suffering from hypertension, estimated prevalence will decrease be a 23.4% in 2019.

Research results say uncontrolled hypertension disease can cause the chances of seven times as large as the occurrence of stroke and six times more likely exposed to Congestive Heart Failure and three times more likely had a heart attack.

Diabetics in Indonesia in the year 2000 only 8.4% people, WHO in year 2030 the prediction of the number of people with Diabetes Mellitus type II increased to 21.3 million, that indicates there is an increased 3-fold within 10 years in year 2010. Based on the results of epidemiological studies, the prevalence of DM disease in Indonesia increased from 2.3% to 5.7%. Prevalence of Diabetes Mellitus in Manado was 6%. (Sugono.S, 2006).

Obesity is a multi factorial disease, which occurs due to the accumulation of excessive fatty tissue so that it can influence the health. Obesity occurs when a large and growing number of fat cells existing in a person's body. When someone increases his weight then the size of the fat cells will grow and the amount. Fatty tissue is where the greatest energy stored in the form of triglycerides (Sugono, 2006). Central obesity is highly correlated with the incidence of diabetes, hypertension and

cardiovascular diseases (Sugonso.,2006). Excessive weight is influenced by the environment, eating habits, lack of physical activity, socio-economic status, genetic.

The prevalence of obesity is associated with urbanization and instant food as well as the abundance of food available, socioeconomic status and the changing lifestyle as well as supported by the availability of on-site restaurants serving a variety of meals that are interesting, so that there is a tendency of people consuming food overload.

The prevalence of obesity in Central Jakarta, in 2013, man was 30% and woman was 40%. Research in Minahasa reported that there were 63.4% hiperleptinemia of the population obese. (Riskesdas, 2013) Almost one third (32.9%) of adult people in North Sulawesi province are categorized more weight (overweight) and obese. This figure is three times higher than the national number, 10.3%. The prevalence of adult people with more weight and the highest obese found in urban areas — and Manado, each 40% (Riskesdas, 2010). The prevalence of adult obesity ≥ 15 years in North Sulawesi province has increasing by 28%, Manado. In other words, one of three adults aged ≥ 15 years old in North Sulawesi province has suffered obesity (Riskesdas 2010).

According to the research made by Anderson R, et al, 2003, almost 80% of those suffering type II Diabetes Mellitus have more weight or obese, with lose weight healthily to ideal body weight can decrease 60% 16 – reducing the risk of type II Diabetes Mellitus. Family self-sufficiency capabilities address the disease is not contagious (degenerative diseases) will make the quality of life of families become prosperous can contribute to the well-being of society and indirectly play a role as well as in the related government program national program efforts increased the degree of health via the efforts of individual health and public health efforts with the approach of the family.

The granting of assistance services to professional health workforce is very much needed in addressing the problems of the family disease is not contagious nursing profession, for it has the opportunities and challenges in providing health services in the form of action health education programs, and in developing an understanding of the ability of self-reliance is not an infectious disease facing families. The role of nurses as an advocate can do in Government advocate for the formation of a special government program encountering diseases incontagious in the productive age.

People thought self care model concept that clients have the ability and potential to take care of oneself, to achieve a healthy and prosperous with emphasize on the role of the client as self care agent for oneself, where self care is the situation that the client is able to do self care whereas self deficit is the situation of clients who are not able to do self-care (Orem,2001).

The general objective of this research is to apply the integrated model of self care ability of independence against families with incontagious disease. The purpose of this research is to identify the specific characteristics of the respondents on the

family with incontagious disease, knowing the mean median – median before and after the application of integrated model of self-care, analyze the influence model of self-sufficiency integrated self care family capability against such disease.

RESEARCH METHODS

This type of research is Quasi Experiment with design research Pretest-Posttest with one group design. Knowing how the application model of Integrated Self Care ability of independence against families with incontagious disease.

Research Design :

	Pretest	Treatment	Post test
Group I	: O1	X	O2
Group II	: O1	X	O2
Group II	: O1	X	O2

Respondent research is families who have family members who are suffering from incontagious disease, namely diabetes mellitus type 2, hypertension, obesity. Number of respondents is 94 families. Sampling was chosen by means of purposive non-random sampling. The criteria inclusion: respondents aged 35-90 years old, capable of taking care of one's family members, modifying home health environment, have criteria exclusion: families who have more than two family members suffer from the disease is not suffer from complications of other disease.

The workings of this research that is the family able to independently care for sick family members with obesity, hypertension and type 2 DM, housewives as respondents provided an understanding of how self-contained treatment sick family members, 1 Week 3 times for 5 weeks, then measured the level of knowledge, then given instruction about how to care for the family member. The first stage of data collection, research survey to determine the eligible respondents, one of the families who have family members suffer from the disease of hypertension, DM type 2 disease, and obesity as well as families who have inability problems to perform the independence in the integrated self-care and the implementation of this research will be coordinated with the clinics.

The second stage, perform measurements of height, weight, blood pressure, and blood sugar checks and family members who have a history of hypertension and DM. Before conducting training, pre-test is conducted to find out the respondent's knowledge and family self-sufficiency ability in taking care of family members who are dependent on others. Use the gauge indicator according to the test standard Nursing Out Come. Conduct training on the housewives who have one of the family members who suffer from hypertension, DM, and obesity. The training regarding Model of the Integrated Self-care in families depend on others. Method of training was using the training modules for groups and families.

The third stage, doing the family care Model Integrated Self Care in the family and done every 3 days for 6 weeks.

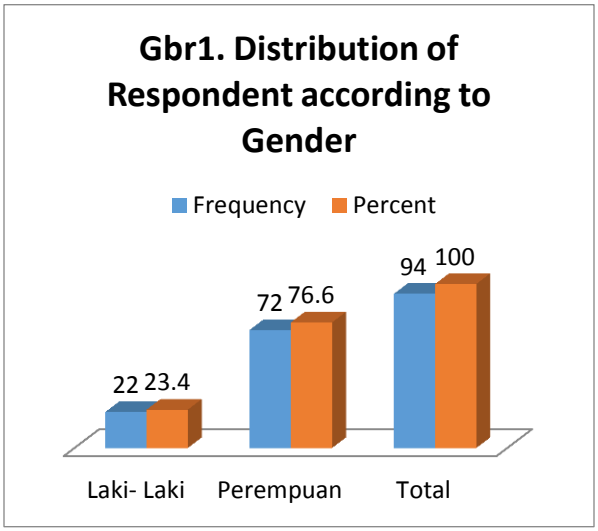
In week 6, on the fourth stage, measurement of height, weight, blood pressure, blood sugar and the ability of the family self-sufficiency to take care for the

sick family members. Distribute questionnaire to measure application model Integrated self-care ability of family independence by using a contagious measurement. Member families who instrument test standard Nursing Outcomes Classification.

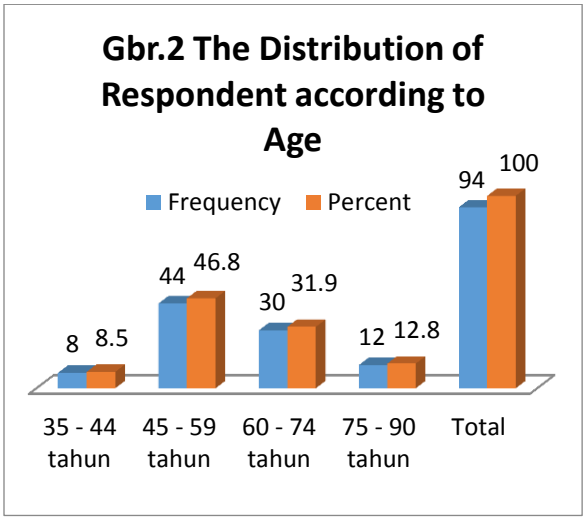
Data analysis on the research of the application of integrated model of self-care ability of independence among families with incontagious disease, used statistical tests t test, Paired samples Statistics and the level of significance of $p < 0.05$ (J. Abramson, 1997). Confidence level was 95%. Data analysis was using SPSS program version with 16.

RESULT

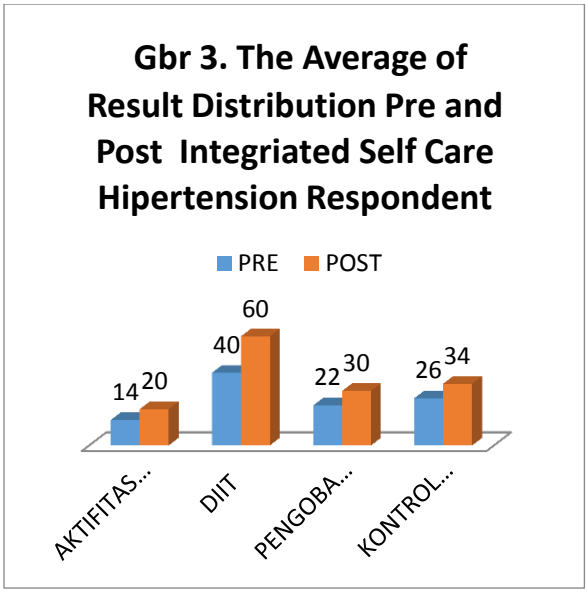
The results of the research conducted in the village of Ternate Tanung at the working area of Kombos Klini indicates that:



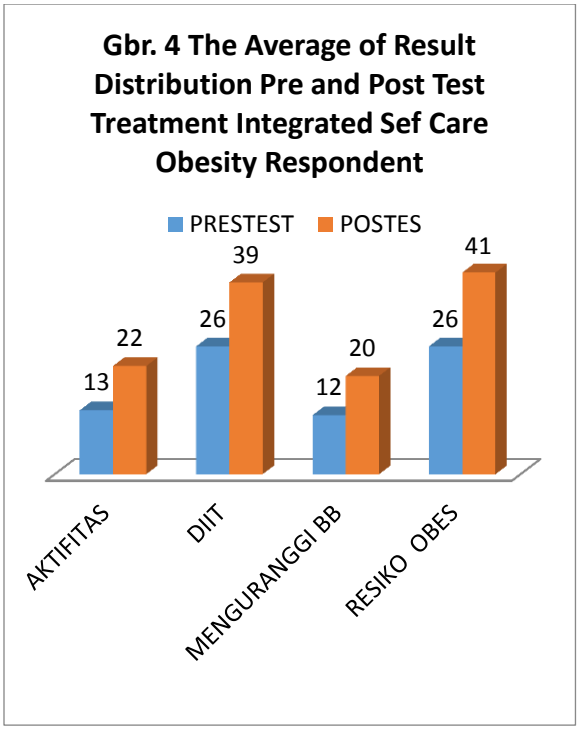
The distribution of respondents according to gender shows most women 72 (76.6%) and men (23.4%), 22 this indicates the gender of women because generally the housewives are responsible at home and are willing to do the intervention while the men low frequent due to work outside the home because they provide the family's needs.



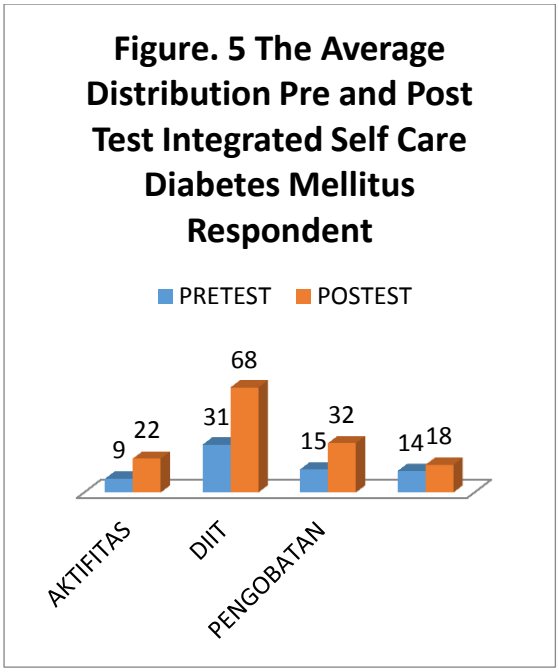
The above data turns out to be the largest age group in the category of elderly early age 45-59 years old amounted to 46.8% of respondents and 44 of the lowest in the 35-44 years old amounted to 8.5% respondents, it is associated with increasing age there is the tendency to suffer degenerative incontagious diseases or illness.



Based on the average value of the respondent's obesity before and after doing the treatment integrated self-care shows there is an increase in physical activity, consume food on hypertension diet, hypertensive drug respondents consuming appropriate dosages. It is recommended the risk of increased blood pressure and hypertension to be controlled.



Based on the average value of the respondent's obesity before and after doing the treatment integrated self-care shows there is an increase in physical activity, consume food according to diet, the respondents suffered weight loss, as well as reducing the risk of a higher degree or obesity.



Based on the average value of the respondent's obesity before and after doing the treatment integrated self-care shows there is an increase in physical activity, eating appropriate diabetes mellitus diet, respondents who consume the drugs, as well as control the risk not to an increase in blood sugar or blood pressure.

Glucose control test resulted bivariate Integrated Model Application Influence Self Care before and after the treatment against incontagious disease.

Table 1 Integrated Model Application Influence Self Care before and after the treatment against incontagious disease

Non Communicable Disease		t	df	Sig. (2-tailed)
Pair 1	PRE HYPERTENSION - POST HYPERTENSION	-10.603	50	.000
Pair 2	PRE DM - POST DM	-19.756	16	.000
Pair 3	PRE OBESITY - POST OBESITY	-9.614	25	.000

The analysis of statistical test above using a paired test sample test showed there was significant influence of intervention integrated self-care models before and after treatment on respondents with degenerative disease of hypertension.

DISCUSSION

From the results of the study found cases of incontagious disease (hypertension, Diabetes mellitus) among women at Kombos clinics. It is understandable because most of them are housewives, who are highly susceptible to an increase in blood pressure due to increasing age (Susilo& Wulandari;,2011).

The distribution of respondents according to age groups found to be most at age 45-59 years old. The age factor is very influential to suffer non-infectious diseases because as the increasing of age, there is high risk of occurrence of increased blood pressure, increased blood sugar and increase in weight, it often due to changes in the physiology of the body affecting the heart, blood vessels, and setting the body's metabolism (Triyanto,2014). According to the WHO classification of age 45-59 years old, including pre-elderly there is a tendency to have a decrease in physical, psychological and social, has the risk of suffering from diabetes mellitus, hypertension and obesity.

Analysis on the research of the bivariate results of research on families with incontagious disease (hypertension, diabetes mellitus and obesity) shows that there is a difference before and after the intervention model of integrated self-care to increase family independence in controlling the increase in blood pressure, blood sugar, and increase in weight gain, obtained a value of significance 0.000 ($p < 0.05$). This is supported by research results. Schiling, at al (2009) stated that a decision against the condition of health and welfare is through improved knowledge, attitudes and skills that are owned. Similar things expressed by Newman, s., at al, (2005) that is stated that health education on individuals help improve knowledge significantly.

The results of this research also proves that interventions of the integrated self care can help identify problems experienced by families in the form of physical activity, diet settings, treatment and risk factors setting, herding ability of the independent family in an attempt to control the increase in blood pressure, increase blood sugar and weight, so it requires an increase in skills of self-management and self-care of families (Orem, 2001). With reference to the theory Bloom (2013), the results of this research show that the intervention of integrated self care in families with incontagious disease can increase knowledge and understanding as well as changing attitudes and self-awareness of the family so it is able to perform the skills of self-monitoring and self-controlling, self-reward to enhance capabilities in addressing the problem of increasing in blood pressure, blood sugar and weight.

Researchers believe that learning is a long-term process, throughout the life of a human being, will increase the success of the application of integrated self care model in families with incontagious disease in the increasing ability of self-reliance family. For the success of program, the family needs to pay attention to the perception and management of family health in the improvement of the learning process, where the families presume that they are learning is a learning experience and will continue in an attempt to meet his needs, for it is necessary on the motivation in acquiring deep knowledge and shaping attitudes and skills so that families have the ability independently to tackle hypertension, diabetes mellitus and obesity.

According to Notoatmojo (2010), knowledge is a domain that is very important to the formation of one's actions (over-use of behavior) and someone said to

be skilled, can be done through the process of training and study diligently in order to master these skills and can understand and apply them. Skills will be better when constantly honed and trained to raise the ability so that it will become an expert and master as well as produce a special skills and skilled.

The application of integrated model of self-care given to families with hypertension, diabetes mellitus and obesity, can be proven by the existence of a difference before and after the intervention against the ability of families in controlling blood pressure, blood sugar and obesity after a given intervention. The difference is amplified with questions expressed by families, which stated that the integrated self care interventions beneficial to them and they will therefore continue to do in everyday life – day.

The application of integrated model of self-care proved successful in helping families control the increase of blood pressure, blood sugar and weight. This success gave a positive impact for families to continuously perform control measures by doing self-care skills, self-management in daily activities. The success of applying the self-care and self-management will enhance the ability of the self (Self Care Agency) on families so that it does not affect the occurrence of risk of hypertension, diabetes mellitus or obesity.

Increase in the ability of the family independence in controlling the increase in blood pressure, increased blood sugar and increased weight, evidenced from the monitoring sheet form family content, based on self-monitoring skills, self-controlling and self-reward through activity – activity screening of family members, coaching, mentoring, demonstration, re-demonstration, control measures which include: in families with hypertension i.e. physical activities (gymnastics and hypertension healthy heart), setting low salt an diet cholesterol management, hypertension drugs and control the risk of hypertension (blood pressure control, handling of hyper/hypotension) are in families with diabetes mellitus: a physical activity (gymnastics diabetes), diet settings, management of medications – drugs (insulin and OAD), and control of the risks of diabetes mellitus (blood sugar control, handling against hyper/hypoglycaemic) and on families with obesity: physical activities (*nusantara* exercise) management of low calories diet, the strategy of reducing weight and obesity risk control (monitoring of weight and weight loss). This is done by giving the sign check list (V) column. The results of the achievement of self-evaluation sheet monitoring done during 35 days or 5 weeks showed an increase in the independence of the family in applying self-care and self-management in controlling the increase in blood pressure, sugar blood and obesity.

The results of the interviews also confirmed the existence of family support is high on all the respondents. Christine (2010) stated that family support gave an emotional advantage and give rise to feelings of relief because of the note. In addition, the existence of some of the participants moved to provide guidance and information on

integrated model of self-care to families. Such statements are relevant to the research results with Howyidaet all (2012), that significant health education to improve the ability of self-care agency, up grading knowledge, understanding, awareness and attitude skills self-management at home.

According to Kapantouw (2008), the disease of hypertension, diabetes mellitus, and obesity, related to the lifestyle. Lifestyle changes (modifications) against physical activity factors, diet settings, management of risk factors, as well as setting the medication, it is essential in the prevention and treatment of incontagious disease.

Lifestyle factors influenced the success of the application of integrated self-care model in an attempt to achieve independence of the ability of the family to live a healthy life. The efforts of attaining ability of independent families controlling the increase in blood pressure, increase blood sugar and weight reduction are: (1) enhancing the capabilities of doing sports individually or collectively at home or in group; (2) increasing the ability to choose balance diet is related to a decrease in blood pressure, decreased blood sugar and weight loss; 3) efforts to address risk factors of incontagious disease and (4) controlling efforts, assessing, imitating the signs and symptoms of increased blood pressure, increased blood sugar or weight loss (Orem,2001).

The integration of the concept of self care theory and self-management fosters a new perception on families with hypertension, diabetes mellitus and obesity due to the stimulus from the outside through the experience of respondents self-mental proceeded by sensing, so that the respondent can acknowledge and understand the progression of the ailment itself. Generated perception through the process of education and learning raises awareness and changes behaviour to do self-management skills to enhance self-agency, so families are integrated on the conditions of self care (Orem,2001).

The results of this study have implications against nursing research, nursing education and nursing services, namely:

1. Self-Care Intervention Model implicates to family self-sufficiency in controlling the incontagious disease transmitted via the process of lifelong learning to continually improve the knowledge, attitudes and skills of self-respondents. Lifelong learning implications on models of integrated care is self-control measures undertaken respondents by doing self-management skills i.e. self-controlling, self-monitoring and self-reward so that respondents have self-care is integrated to optimal health conditions and quality of life and prosperous.
2. Integrated model of self care related research against which have implications for the process of the preparation of the integrated model of self-care, can be used as a model to develop a model of family independence in applying the behavior of a healthy life different approach through education, training, where respondents can identify and perform healthy living skills, as well as

changes in family that can control risk factors.

3. Integrated model of self-care, implicates on nursing education through partnership, collaboration on educational institutions in the achievement of the human resources of high quality healthcare through integration of community nursing courses curriculum and family nursing and gerontical via an integrated program of street vendors. This can improve the competence of learners, in contributing to the development of health through the development of home care/home visit and self-care.
4. Integrated model of self care also implies the nursing services i.e. through the development partnership, intra and interstate collaboration with the government of the profession through the determination of the policy on the importance of public awareness by independently control the rise in blood pressure, increase blood sugar and weight gain, so that families have the independence to practice a healthy life, lower numbers of pain complaints. The nursing workforce can be do collaboration with the health services, health centers, clinics program through which involves the participation of the community such as the family welfare movement, cadres of health, community leaders, religious figures and leaders of the region.

CONCLUSION

Research results application integrated of self-care model in families for measuring family in the self-sufficiency did self-management on family members showed

1. The characteristics of the respondents were women 76.6%, whereas the highest age group on elderly category outset a number of 46.8%.
2. Mean average before and after treatment show improvement ranging from activity, diet settings, management of the treatment and control of the risks of incontagious disease.
3. There is a significant influence of the application of integrated self care model against the not infectious disease or degenerative on one of the family members.

SUGGESTION

1. To maintain the integrated self care model in the family applied independently and need continuous accompaniment.
2. Cooperation needs to be cross-cutting and cross-program in doing collaboration with the health services, health centers, clinics program through which involves the participation of the community such the family welfare movement, cadres of health, community leaders, religious figures and the leaders of the region.

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