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Community Participation in Non-communicable Disease Integrated Counselling Unit

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Abstract

This study discusses the internal factors of non-communicable disease integrated counseling unit (NCD Posbindu) implementation with community participation in NCD Posbindu village districts Wirobrajan, Yogyakarta. The design of this study was a cross-sectional study with a population of 58 people. Sampling using purposive sampling technique obtained 46 people. Bivariate data analysis uses the Kendall Tau test. The study notes a relation of knowledge to community participation with the results of significant value P-value of 0.002 < 0.05. The Perceptions related to community participation get a significant P-value of 0.001< 0.05. The motivation was related to community participation with a significant P-value of 0.000 < 0.05. Multivariate data analysis uses simple linear regression. The study notes that from 46 samples, F value > F table (10.599> = 2.83). There is the influence of knowledge, perception, and motivation towards the NCD Posbindu implementation by community participation. The independent variables where the dominant influence is motivated by the largest value of Standardized Beta Coefficient is equal to 0.362.

Introduction

Non-communicable diseases (NCD) are the biggest killer, causing more than 60% of global deaths. A study estimates 60% of global deaths and 80% of all deaths in developing countries are due to non-communicable diseases (NCD), and cardiovascular disease (CVD) is responsible for half of. World Health Organization Global Status Report (WHO) 2010 on Non-Communicable Diseases reports a worldwide epidemic of cardiovascular disease (CVD), cancer, diabetes, and chronic respiratory disease, along with risk factors and their determinants. The report highlights the dominant global burden of this disease (Shilton et al., 2013). WHO data showed that 57 million (63%) of the world's deaths and 36 million (43%) of morbidity are caused by Non-communicable diseases (NCD). Global status report on NCD World Health Organization (WHO) in 2010 reported that 60% of death of all ages in the world was due to NCD. 4% of them died before the age of 70 years old. All deaths that caused by NCD occurred in people aged less than 60 years old 29% happened in developing countries, while 13% happened in developed countries (Remais, 2012)

The results of Basic Health Research (Riskesdas) in 2007 and Household Health Survey (SKRT) in 1995 and 2001, it appeared that for 12 years (1995-2007) there had been an epidemiological transition showing that deaths from non-communicable diseases were increasing, while deaths from infectious diseases drop. It was predicted to continue. Non-communicable diseases (NCD) are experiencing increasing morbidity and mortality worldwide. Continous advocacy, carried out by a skilled workforce, is needed (Shilton et al., 2013).

High-income countries have Initiatives to control cardiovascular disease (CVD) (Laya et al., 2019) and have had some success in reducing CVD prevalence in low and middle-

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income countries, only a few studies that have controlled for CVD and The prevalence of CVD continues to increase (Gupta et al., 2012). Compared with the CVD control program in low and middle-income countries to focus primarily on secondary prevention, programs in high-income countries are more comprehensive and focused on primary and secondary prevention. Programs in high-income countries focus on primary prevention to reduce risk factors for CVD through increasing awareness of a healthy lifestyle, and secondary prevention through early detection, and treatment improvement (Nissinen A, 2001).

One of the strategies for controlling non-communicable diseases that is efficient and effective is through empowerment and increasing community participation. Posyandu or Elderly Posbindu is for the benefit of the community. So the community should be able to play an active role in the formation, organization, utilization, and development of Posbindu as well as possible. The Posyandu formation must be maintained by carrying out good maintenance, for example by conducting regular regeneration (Shilton et al., 2013).

Community participation/community-based programs are effective in the primary risk factors control for Non-communicable diseases (NCD) and contribute significantly to global health. Posbindu is held for the benefit of the community so that the community should be able to be active in formation, organizing, utilizing, and developing the Posbindu as well as possible. Posyandu must be maintained by carrying out good maintenance, for example, by conducting regular regeneration (Shilton et al., 2013). As community participation, the Posbindu program launched by the government through the Ministry of Health to be implemented in Puskesmas. Several puskesmas have met the needs of Posbindu and several regulations, but there must be other efforts, such as regular training for those in the field, and clear guidelines for maintaining the sustainability of the program (Tetra-Dewi et al., 2013; Krishnan et al., 2011; Khan et al., 2015).

The main problem of NCD Posbindu is that the main target is not fully covered (healthy and at-risk community groups and people with NCD aged 15 and over). The Posbindu participants are dominated by people aged 45 and over. It indicates the lack of community participation and self-awareness, in the prevention and early discovery of NCD risk factors. The participants of NCD Posbindu are dominated by females. The program in DIY only started in January 2015, so the reporting system is still not maximal. Kelurahan Wirobrajan in Yogyakarta conducted an NCD Posbindu activity followed by 58 participants and found the attendance data was still low that was 42.67% (Note of NCD Posbindu village districts, Yogyakarta. This paper aimed to determine the relations between internal factors of NCD Posbindu implementation, community participation, and to find out the knowledge of the community about the NCD Posbindu implementation, community perceptions in following NCD Posbindu, and community motivation about the NCD Posbindu implementation.

This study was quantitative research with a descriptive survey analysis design. The data collection technique was by a cross-sectional approach. The population referred to in this research was the participants of NCD Posbindu registered in NCD Posbindu village districts Wirobrajan, Yogyakarta in 1 year (the data of 2015) that was 58 people. The sampling method used was purposive sampling technique with consideration: members of NCD Posbindu who still reside in RW 10 and want to be a respondent, so the sample was 46 people. This research took time from March 14 to April 4, 2016. It took place in village districts Wirobrajan, Yogyakarta. The data collection technique used in this study was a questionnaire that included the characteristics of respondents (name, age, gender, religion, last education, and occupation), and questions related to knowledge, perception, motivation, and community participation. The research instrument to collect the data in this research was a questionnaire. Knowledge was the

understanding of members of NCD Posbindu about NCD Posbindu. The indicators of the Knowledge in this research included the Understanding of NCD Posbindu, the Target of NCD Posbindu, the Activities and Implementation NCD Posbindu, the Implementer of NCD Posbindu.

The perception was the view of NCD Posbindu members about the real implementation of NCD Posbindu. The indicators of Perceptions in this study included Observation of NCD Posbindu, Implementation of NCD Posbindu, and Member Participation in NCD Posbindu. The motivation was the desire of NCD Posbindu members to follow the NCD Posbindu activity. The Motivation indicators in this research included Encouragement from cadres, officers, family, and other Posbindu members, and self-Encouragement. Community Participation was the active participation of NCD Posbindu members in the NCD Posbindu activity. Participation was defined as active when the attendance was ≥ 8 times in 1 year, and it was defined as inactive when the attendance was < 8 times in 1 year.

The data processing in this research was Editing, Coding, Processing, and Cleaning. The data analysis methods used univariate analysis to explain, in particular, frequency distribution and percentage of the variables of knowledge, perception, motivation, and community participation. Bivariate analysis using the Kendall tau formula. The significance test of the correlation coefficient used the formula Z because the distribution was close to normal. Multivariate analysis used the F test. All data processing uses the version "SPSS 16.0 for Windows.

Result and Discussion

NCD Posbindu was established in village districts Wirobrajan, Yogyakarta. This NCD Posbindu was formerly Elderly Posyandu (an integrated health service post), transformed into NCD Posbindu. Therefore, it was expected that not only the elderly but also pre-elderly individuals participated in the examination in NCD Posbindu because NCD Posbindu was also intended for those aged 15 years and over. The NCD Posbindu's activity was a program of Puskesmas Wirobrajan whose activities involved the participation of the elderly, families, community leaders, and social organizations. NCD Posbindu was held every month.

The objective of NCD Posbindu activity was to increase community participation in the prevention and early discovery of NCD risk factors. The major groups of NCD are Diabetes Mellitus, Cancer, Heart and Blood Vessels Disease, Chronic Obstructive Pulmonary Disease (COPD), and Crash and Violence Disorders. The activity of NCD Posbindu was conducted with five stages. Each stage was tailored to five tables. Each table had its roles and functions. Table 1: Registration, the cadre gave the same code number in KMS FR-NCD and the Book of Records. Table 2: Interview (Filling KMS FR-NCD) by the cadre. Table 3: Measurement of NCD Risk Factors. Table 4: Counselling services (Personal counseling) by the cadre. Table 5: Filling KMS FR-NCD, Handing KMS back to the Participant, recording in the book of NCD Posbindu Activity Result and Follow-Up Information. The results of all these activities were still recorded in a ledger and recorded in KMS.

Table 1 shows that the most dominant respondents by age were between 60-71 years old, with 19 respondents (41.3 %). The characteristics based on the most dominant sex was female, which was 35 respondents (76%). Respondent categories provide an overview related to age, gender, education, and occupation of the respondent, all of which affect the participation of the elderly in a visit to NCD Posbindu. It follows the results of research from Wayuni et al (2016), stating the elderly participation in health coaching activities, gender, occupation, attitudes, needs, and family support. Based on education, most respondents were primary school graduates, which were 18 people (39.1%). Based on the work, most respondents were housewives, namely 22 people (47.82%). The characteristics of research respondents can be seen in the following table:

Table 1. Overview of Respondents by Individual Characteristics

The Characteristics	n= 46	%
Age (years)		
48-59	16	34.8
60-71	19	41.3
72-83	11	23.9
Gender		
Male	11	24.0
Female	35	76.0
Level of Education		
Primary school	18	39.1
Junior High school	10	21.7
Senior High School	9	19.6
College	9	19.6
Occupation Employment		
Status	3	6.5
Labor	2	4.3
Trader	13	28.4
Retirees	4	8.7
Private companies	2	4.3
Civil Servants	22	47.8
Non Employment Status/ Housewives		

Source : Primary Data, 2016

The characteristics of the respondents in Table 1 are following the research results of Sudharma et al (2016), that the majority of respondents are female, have junior high school education (from not in school to junior high school), and 55.8% of them do not work (non-employment status). However, most of the respondents are <45 years old (76.7%)

The conclusion from the research of Hoebel et al (2017), is that socio-economic inequality in the health sector occurs at older working age and early retirement but can narrow at an older age, especially in men. Seniors who are socially disadvantaged experience higher barriers to accessing health services than those who are wealthier. Socio-economic status (SES) is measured based on education, (former) employment, and income. The Socio-economic conditions and psychosocial factors that occur in middle age impact on health opportunities in old age thus contributing to health inequality in the elderly (Fors et al., 2012).

Posbindu in this study is mostly used by groups having lower education than secondary level. This fact contradicts the theory that the higher the level of local education, the higher the possibility of running a public health facility. Fors (2012), in their study showed that women with secondary or higher education were almost 1.8 times more likely to seek treatment from a doctor/nurse to treat their antepartum imorbidity. But in their prospective study did not find a significant association between education level and health service utilization after hypertension screening, although there was a slight decrease in quality with increasing their level of education (Fors et al., 2012).

Based on Table 2, Knowledge: 41.30% (19 respondents) of respondents had less knowledge. "Knowledge" in this study meant the members understanding about NCD Posbindu; Community perception: 41.30% (19 respondents) of respondents had less perception; Community motivation: 36.96% (17 respondents) of respondents were less motivated. On Community participation in NCD Posbindu village districts Wirobrajan, Yogyakarta, 82.61% (38 respondents) had inactive participation. The inactive participation of the elderly is following the results of observations from Laya (2019), reviewing the existing literature on perceptions, knowledge, and use of elderly services as follows: in general, the elderly are aware of the importance of health services, the level of service utilization is too low, and the use of services carried out by good. Other than that, Only as much as 25 % of the elderly use Posbindu service in Indonesia (Sudharma et al., 2016). Several obstacles encountered in the Posbindu program required all parties to pay attention to health service providers to maintain its continuity. Most of the elderly do not come to Posbindu because they feel unimportant, feel healthy, and are more concerned with their job (Yandrizal et al., 2016)

The results Umayana & Cahyati (2015) , show that family support (p-value = 0.0001) and support from community leaders (p-value = 0.001) correlated with the activeness of the community who came to NCD Posbindu in Semarang City. According to the author, role of cadres also plays a role in increasing community participation in NCD Posbindu is in line with the results (Krubiner et al., 2016), stating woman empowerment and global health promotion are the main goals of the development. Likewise, the results of Gupta et al (2012), state the program called "Public Health Workers" as community health workers in the treated village required behavioral change

to prevent disease. Several studies have shown that ability to do daily routines is a predictor of quality of life (Wongsawat, 2017). Quality of life is affected by the physical, psychological, level of independence, and individual relationships with the environment (Alexandre et al., 2009). The living environment is a vital factor affecting the quality of life of the elderly (Zubritsky et al., 2013).

Social contact plays a vital role in determining an individual's health behavior which must be considered alongside other factors. (Drageset, 2004). According to (Laya, 2019), parents of retired Chinese migrants, interacting with friends is their primary form of social bonding when community sports are the main way they feel involved with their community. The results of the study of the elderly (≥65 years) without cognitive impairment showed that successful aging was more likely to occur in those who were able to visit relatives and friends (OR: 3.86, 95% CI: 1.09-13.61) (Li et al., 2014). In Indonesia, one form of interaction with fellow elderly is regularly participating in activities at the Elderly Posyandu. Although social interactions that encourage the elderly to be active are also reduced, it can affect the quality of life of the elderly (Sovariova, 2016). Fors (2012), has suggested that direct contact between younger and older persons could cause younger to develop more positive attitudes toward the elderly. However, several studies Fors et al (2012) have found that the amount and frequency of direct contact with the elderly were not associated with the development of more positive attitudes toward the elderly.

Based on Table 2, the Kendall Tau statistical test between knowledge and participation Sig. value = 0.002. It shows statistical significance. Kendall Tau test value (r = 0.435) indicates that Ha is accepted. It means there is a relationship between Knowledge about NCD Posbindu and Community Participation. The results of this study are per the results of Sudharma et al (2016), research founding a significant relationship between the knowledge variable and the use of Posbindu (OR = 3.82; 95% confidence interval 1.60-9.09). In contrast to the results of Yandrizal (2016), on Knowledge and Desire to Come to Posbindu. The statistical analysis test showed a p-value of 0.408> 0.05, indicating no relationship between knowledge and desire to come. People may not know about NCD Posbindu, so there is no desire to come.

The Kendall-Tau statistical test between perception and participation obtained Sig. p-value = 0.001. This showed that P-value was 0.001 < 0.05 or 5%. It shows a statistically significant relationship between the Perception of NCD Posbindu and Community Participation. The test value of Kendall Tau (r = 0,450) meant that Ha was accepted (hypothesis accepted) and Ho was rejected (hypothesis rejected). This research is in line with Laya et al (2019), stated that the Interrelation Among Elderly Perception and Participation and The Utilization of Posyandu, which stated that perception was related to the use of posyandu for the elderly.

The Kendall-Tau statistical test between motivation and participation obtained Sig. p-value = 0.000. This showed that P-value was 0.000 < 0.05 or 5%. It shows a statistically significant relationship between the Motivation of NCD Posbindu and Community Participation. The test value of Kendall Tau (r = 0,520) meant that Ha was accepted (hypothesis accepted) and Ho was rejected (hypothesis rejected). It is contrary to research conducted by Novianti (2018) which states that the motivation of the elderly has no relationship with the use of posyandu for the elderly.

Motivation plays a vital part in an elderly individual's ability to recover from a disabling event. On the other hand, apathy is a lack of motivation (Resnick, 2012). Apathy, or loss of motivation, is the most common behavior change but is not realized by the elderly (Laya, 2019). To increase motivation in the elderly, health workers need to develop interventions and help them reach and maintain the highest functional level (Resnick, 2012). The results of the study Sovariova (2016), show that motivation enhancement programs are effective for reducing cardiovascular risk and improving the institutionalized functional status of the elderly by motivating them to perform better health behaviors. Table of variable bivariate analysis is as follows:

Table 2. Bivariate Analysis of Community Participation In *Posbindu* Non-Communicable Diseases

Variable	Community Participation		n= 46	KoefisienKendall's tau_b (r)	P-value
	Inactive	Active			
Knowledge					
Good	4(8.7%)	6(13.0%)	10 (21.7%)		
Enough	16(34.8%)	1(2.2%)	17 (37.0%)	.435	.002
Less	18(39.1%)	1(2.2%)	19 (41.3%)		
Perception					
Good	10(21.7%)	7(15.2%)	17 (37.0%)	.	.
Enough	9(19.6%)	1(2.2 %)	10 (21.7%)	.450	.001
Less	19 (41.3%)	0(0 %)	19 (41.3%)		
Motivation					
Good	8(17.4%)	8(17.4%)	16 (34.8%)		
Enough	13(28.3%)	0(0 %)	13 (28.3 %)	.520	.000
Less	17(37.0%)	0(0 %)	17 (36.9 %)		

Source : Primary Data, 2016

A multivariate test was conducted to determine the influence of knowledge, perception, and motivation factors on the implementation of NCD Posbindu and community participation in NCD Posbindu village district Wirobrajan, Yogyakarta Year 2016. Based on the multiple linear regression analysis in table 3.

Table 3. Multiple Linier Regression of Community Participation In *Posbindu* Non-Communicable Diseases

Variable	Regression Coefficient	t-value	Standardized Coefficient Beta	Sig.	F-value	R^2	sign
Knowledge	0,138	2,148	0,280	0,038	10.599	.431	.00
Perseption	0,084	1,433	0,196	0,159			
Motivation	0,162	2,690	0,362	0,010			

Source: Primary Data, 2016

The result of the F-test obtained the F-value of 10,599 with a significance of 0,000. The value of F table with dk1 = 3, dk2 = 42 at significance level α = 0.05 was 2.83. Therefore, the value of F-value > F-table meant that Ha was accepted. It meant that the variables of knowledge, perception, and motivation, altogether, affect the variables of community participation. The coefficient of determinant R square showed number 0,431. It meant that the independent variables (knowledge, perception, and motivation) contribute 43.10 % to community participation. 56.90 % were affected by other factors not examined. To find out which independent variable had the most dominant effect on the dependent variable is by Standardized Coefficient Beta Test. The independent variable dominantly affects the dependent variable was tested by the highest Standardized Coefficient Beta. By looking at the result of the Standardized Coefficient Beta from each independent variable (knowledge, perception, and motivation) in the table, it could be seen that the independent variable that had a dominant influence on the dependent variable of public participation was motivation. The value of Standardized Coefficient Beta for motivation was higher than the other independent variables, which was 0.362.

Conclusion

The conclusions obtained from this research are as follows: First, there is a relationship between knowledge and community participation in Posbindu village districts Wirobrajan, Yogyakarta. Second, there is a relationship between perception and community participation. Third, there is a relationship between motivation and community participation. Fourth, knowledge, perception, and motivation altogether affect the community participation variable. The

independent variable that has the most dominant influence on the dependent variable of community participation is the independent variable of motivation.

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