



Peer Support Group as a Model for Improving Behavior of Hypertension Risk and Complication Control

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Abstract

Background: Based on a preliminary study conducted by researchers in November 2017 at the Primary Healthcare Center (PHC) of Kalongan, it was found that 67% of hypertensive patients did not recognize risk factors, signs and symptoms of hypertension. Results of examinations and report at the PHC and Non-communicable Disease (NCD) Surveillance (Posbindu) in the working area of PHC of Kalongan in 2017, that Kawengen village was a village with the highest number of hypertension cases. This study aimed to developed a model for improving behavior of hypertension risk and complication control.

Methods: This study was pre-experimental with one group pretest-posttest design. The study population was all hypertensive patients in Kawengen village. Sample was determined purposively, obtained by 61 people. The research instrument was the pretest and posttest questionnaire. Data analysis was performed by McNemar test.

Results: Peer Support Group model can improve knowledge ($p = 0.031$), behavior ($p = 0.008$), risk and complication control practices ($p = 0.012$). Risk and complication control behavior is an effort that can be implemented to reduce hypertension cases in the community.

Conclusion: Peer Support Group is one of community empowerment models, especially for patients which can increase knowledge, change behavior, and improve risk and complication control practices among hypertensive patients as participant of Peer Support Group.

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BACKGROUND

Hypertension is a disease that is currently still a major public health problem in Indonesia. Hypertension is no longer a problem for urban communities, but now it has spread to all areas including rural areas. Hypertension is a disorder of the circulatory system characterized by increased blood pressure in the body and is one of the most influential risk factors for the incidence of heart and blood vessel disease.

Hypertension is often fatal and if it is not treated, it can cause damage to organs, including the heart, kidneys, eyes and blood vessels. These damage or complications depend on the measure of the blood pressure, duration of suffering, treatment and other risk factors.

Based on data from the Basic Health Research (Riset Kesehatan Dasar) 2013, the prevalence of hypertension in Indonesia was high (26.5%). It means that 1 of 4 people suffer hypertension (Kemenkes RI, 2013). The risk of hypertension in Indonesia is huge, it is caused by changes in people's lifestyle, a lifestyle that does not pay attention to dietary patterns and rarely does regular physical activity. Diet patterns and exercise habits are significantly associated with blood pressure control in hypertensive patients (Herwati and Sartika, 2013).

Changes in lifestyle have an impact on the increase in non-communicable diseases (NCD), such as hypertension, heart and blood vessels disease (Shilton, 2013). Gender, age, smoking behavior, history of diabetes mellitus (DM), physical activity, blood pressure, and body mass index (BMI) also affect the occurrence of

complications of heart disease (Subekti, Susatia, & Yusrizal, 2015).

Based on the results of the research mentioned, behavioral and lifestyle factors have become the dominant factors in the occurrence of hypertension and heart and blood vessels disease. This is consistent with the study of Mozaffarian (2008), which stated that lifestyle is the most contributing factor in cases of heart disease, blood vessels, hypertension and high sugar or blood lipids. Therefore, a healthy lifestyle is the main factor that can prevent the occurrence of heart and blood vessel disease (Forman, 2009).

The number of cases of hypertension in the last 3 years in Semarang has increased significantly. The number of cases of hypertension in 2015 was 41,134 cases, increase in 2016 to 44,173 cases, and 46,093 cases in 2017. This fact shows that the risk factors for this disease are growing (Dinkes Semarang, 2018).

Primary Healthcare Center (PHC) of Kalongan Ungaran Timur is one of the PHC in the rural areas of Semarang which has a high number of hypertension cases. Based on the results of the examination and report of NCD Surveillance (Posbindu) in the working area of the PHC of Kalongan, it was known that Kawengen village is a village with the highest number of hypertension cases from 6 villages in its working area. Most cases (79%) suffered from groups of people aged 41-70 years.

Based on the preliminary study conducted by researchers in November 2017 at the PHC of Kalongan, it was found that 67% of hypertensive patients did not recognize risk factors, signs and symptoms of hypertension. This shows that there are still many people who are not aware that they

suffer from hypertension. This fact in accordance with the Ministry of Health (2013) stated that many cases of hypertension have not been diagnosed or the public did not know that they suffer from hypertension. This disease is often found at an advanced stage. This is because the symptoms of hypertension are invisible and at the beginning of the stage there are not a serious disorder in their health.

Public's knowledge about hypertension is still low, risk factors and its dangers are often the cause of complications when the case of hypertension is diagnosed. Therefore, this disease is important to be fully known by the community from the beginning. Behavior management is also a very important part and must be implemented from the beginning in order to prevent the occurrence of hypertension, reduce the risk and prevent complications due to hypertension..

Providing intensive information will be able to increase public's knowledge and can raise public awareness in managing preventive behavior and risk control of disease. This is in accordance with Atak (2007), patients who get information about disease, prevention and treatment of the disease, tend to be more successful in controlling the disease. Based on these facts, it is necessary to control the risk of hypertension, especially in rural areas far from health care centers. Peer Support Group is needed to improve the risk and complications control of hypertensive patients in the community.

METHODS

This study was pre-experimental with one group pretest-posttest design. This study began

with a pretest to determine the levels of knowledge, behavior and practices of risk and complications control by patients over the years. Furthermore, the Peer Support Group model was carried out intensively, which was once every 2 weeks for 3 months in the form of training and simulation. After the Peer Support Group model was implemented, participants were taken posttest.

The study population was all hypertensive patients in Kawengen village, 61 people (Posbindu NCD Data, 2017). Sample was determined purposively with following conditions: 1) lived in Kawengen village, 2) able to read and write, 3) willing to take part in Peer Support Group activities until the end of the program. From these criteria, samples of 34 people were obtained..

The research instrument was the pretest and posttest questionnaire. Data analysis was performed by McNemar test to compare the knowledge, behavior and practices of risk and complications control by participation between before and after the implementation of the Peer Support Group program. This study aimed to developed a model for improving behavior of hypertension risk and complication control.

RESULTS AND DISCUSSION

Based on the results of the study, of 34 patients who participated in the Peer Support Group program, it was found that their average age was 54 years. The youngest Peer Support Group participant was 46 years old and the oldest was 65 years old.

Peer Support Group hypertension program is an effort to control risk and complications of hypertension developed by organizing and

empowering methods, especially in groups of patients and at risk of hypertension. This model was carried out once every 2 weeks for 3 months. The method used was training and formation of peer support groups among patients.

Peer Support Group training includes: 1) training for early detection of hypertension risk factors, 2) training in family history of

hypertension and risky complications identification, 3) training in blood pressure measurement, 3) training in weighing, height measurement, abdominal circumference, body mass index (BMI), body fat analysis, as well as 4) peer supports training changes in risky behavior for hypertension.

Table 1. Differences in knowledge, behavior, and practices of risk and complications control by participants between before and after the implementation of the peer support group hypertension program

Knowledge		After			<i>p value</i>
		Poor	Good	Total	
Before	Poor	8 (23.6%)	9 (26.4%)	17 (50.0%)	0.004
	Good	0 (0.0%)	17 (50.0%)	17 (50.0%)	
	Total	8 (23.5%)	26 (76.5%)	34 (100.0%)	
Behavior		Poor	Good	Total	<i>p value</i>
Before	Poor	9 (26.4%)	8 (23.6%)	17 (50.0%)	0.008
	Good	0 (0.0%)	17 (50.0%)	17 (50.0%)	
	Total	9 (26.5%)	25 (73.5%)	34 (100.0%)	
Practices of Risk and Complications Control		Poor	Good	Total	<i>p value</i>
Before	Poor	11 (32.4%)	8 (23.6%)	19 (55.9%)	0.109
	Good	2 (5.8%)	13 (38.2%)	15 (44.1%)	
	Total	13 (38.2%)	21 (61.8%)	34 (100.0%)	

Table 1 showed an overview of the differences in the levels of knowledge, behavior and practices of risk and complications control by participants between before and after the implementation of the Peer Support Group hypertension program.

Before the Peer Support Group hypertension program was implemented, there were 50.0% hypertensive patients who had low knowledge related to hypertension, the causes and the possible impact of complications due to hypertension. After participating in the Peer Support Group program

for 3 months, the number of participants with good knowledge increased to 76.5%. This showed that there was increase in the knowledge of Peer Support Group participants (*p value*=0.004).

Likewise, with behavior, before the Peer Support Group hypertension was implemented, there were 50.0% patients who lacked awareness to control risk through behavioral changes. After participating in the Peer Support Group program intensively, participants' awareness became better. The number of participants with a better behavior increased to 73.5%. This showed that there was a

better behavioral change after the Peer Support Group program was implemented (p value=0.008).

Risk and complications control practices done by hypertensive patients of Peer Support Group participant were still low. Evidently before the Peer Support Group program, 55.9% of participants had not carried out risk and complications control practices properly. After the Peer Support Group program, participants who practiced risk and complications control improved slightly to 61.8%. However, this increase was not significant (p value 0.109). This number showed that there were no significant changes in risk and complications control practices by the Peer Support Group program participants.

CONCLUSION

The results of this study conclude that the Peer Support Group model is one of the community empowerments models, especially for patients which can increase knowledge, change behavior, and improve risk and complication control practices among hypertensive patients as participants of Peer Support Group.

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