

Empowerment of Students of Akper Justitia Palu as Agents of Change (AOC) for Non-Communicable Diseases

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ABSTRACT: Data on the top 10 diseases in outpatients at the Health Center in 2023 shows that Hypertension is in the highest position with a figure of 24.69% and Diabetes Mellitus is in the 5th position with a figure of 7.17%. To overcome this, the role of the community needs to be increased in promotive and preventive efforts for risk factors for non-communicable diseases so that the community knows, is willing and able to prevent and control risk factors for non-communicable diseases. One effort to increase community participation, especially in the institutional environment in this case Akper Justitia Palu, is through training.

The objectives of this community service activity are: 1) Formation of Agents of Change (AoC) for Non-Communicable Diseases (PTM) Akper Justitia Palu; 2) There is an evaluation of the results of the Agent of Change training; 3) There are health check-up activities for early detection of risk factors for non-communicable diseases in the Akper Justitia Palu environment.

To support the formation of Agents of Change (AoC) for Non-Communicable Diseases, several materials are needed, including: hand scoen, hand sanitizer, random blood sugar check sticks (GDS), sugar checkers (glucometers), lancets, trash boxes, and others. Meanwhile, the method of implementing community service is carried out through training and testing the results of the training.

The results of the community service show: 1) There are 10 (ten) Agents of Change (AoC) for Non-Communicable Diseases (PTM) Akper Justitia Palu, who are expected to be able to change the behavior of students on the Akper Justitia Palu campus to be healthier; 2) The skill that has not been done the most by AoC students (value 0) is "conveying the meaning of the examination results" (30%), followed by "not using gloves" (20%). The imperfect skills performed by students were mostly in "holding and fixing fingers" (40%) and "changing lancet needles" (40%); 3) All students of Akper Justitia Palu (40 students) who were checked for random blood sugar (GDS) had normal random blood sugar levels.

Conclusion: The formation of Agent of Change (AoC) for Non-Communicable Diseases can be done through training and direct trials of the training results. Support from the Akper Justitia Palu campus and the Palu City Health Office is needed for the continuity of the Agent of Change (AoC) activities of Akper Justitia Palu Students.

KEYWORDS: Agent of Change (AoC), Non-Communicable Diseases (PTM), Diabetes Mellitus (DM).

INTRODUCTION

Indonesia is currently facing a shift in disease patterns, from infectious diseases to non-communicable diseases (NCDs). The prevalence of several NCDs such as Hypertension and Diabetes Mellitus has increased, while infectious diseases are still high. A significant increase in NCD cases will increase the burden on society and the government, because it requires large costs to handle it (1)(2)(3)

In 2019, around 73% of deaths were caused by non-communicable diseases, 35% of which were due to heart and blood vessel disease, 12% by cancer, 6% by chronic respiratory disease, 6% by diabetes, and 15% were caused by other NCDs (4)(5).

The 2018 Riskesdas showed that there was an increase in the prevalence of NCDs in adolescence, such as the prevalence of high blood pressure in the population aged 18 years and over increasing from 25.8% to 34.1%; The prevalence of obesity in the population aged 18 years and over increased from 14.8% to 21.8%; The prevalence of smoking in the population aged ≤18 years increased from 7.2%. to 9.1% (3)(6).

Likewise with the city of Palu. Data on the top 10 diseases in outpatients at the Health Center in 2023 showed that Hypertension was in the highest position with a figure of 24.69% and Diabetes Mellitus in 5th position with a figure of 7.17% (7). To overcome this, the role of the community needs to be increased in promotive and preventive efforts for risk factors for non-communicable diseases so that the community knows, wants and is able to prevent and control risk factors for non-communicable diseases. One effort to increase community participation, especially in the institutional environment in this case Akper Justitia Palu, is through training (8)(9)(10).

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The objectives of this community service activity are: 1) Formation of Agents of Change (AoC) for Non-Communicable Diseases (PTM) Akper Justitia Palu; 2) Evaluation of the results of the Agent of Change training; 3) Health check-up activities for early detection of NCD risk factors in the Justitia Palu Nursing Academy.

MATERIALS AND METHODS

To support the formation of Agents of Change (AoC) for Non-Communicable Diseases, several materials are needed, including: hand scoen, hand sanitizer, random blood sugar check sticks (GDS), sugar check tools (glucometers), lancets, trash boxes, and others.

To maximize the empowerment of Justitia Palu Nursing Academy students as Agents of Change (AoC) for Non-Communicable Diseases, several stages of activities are carried out, including :

- Communicating and coordinating with the Leadership of Justitia Palu Nursing Academy;
- Selecting Justitia Palu Nursing Academy students as Agents of Change (AoC) for Non-Communicable Diseases;
- Implementing training for Agents of Change (AoC) for Non-Communicable Diseases;
- Conducting pre-tests and post-tests to determine the progress of knowledge and understanding as Agents of Change (AoC) for Non-Communicable Diseases;
- Conduct analysis of the results of the Agent of Change (AoC) Non-Communicable Diseases training.

RESULTS

The training was conducted on 10 Akper Justitia students from level 1 (5 people) and level 2 (5 people), with the following characteristics :

Table 1. Characteristics of Akper Justitia Students who became Agents of Change (AoC) PTM

Characteristics		n	%
Age	19	7	70,0
	20	2	20,0
	21	1	10,0
Gender	Man	2	20,0
	Women	8	80,0

Source : primary data, 2024

Akper Justitia students who were selected to become AoC for Non-Communicable Diseases (PTM) were mostly female (80%) and aged 19 years (70%).

After the evaluation, the results were as follows:

Table 2. Results of Training for Akper Justitia Students who became AoC PTM

No	Assesment Aspect	Score					
		0		1		2	
		n	%	n	%	n	%
COMMUNICATION SKILLS							
1	Introduce yourself and say hello	0	0,0	0	0,0	10	100,0
2	Explain the indications, procedures and purpose of the examination	0	0,0	0	0,0	10	100,0
PREPARATION							
3	Preparing the examination tool	0	0,0	0	0,0	10	100,0
4	Changing the lancet needle	0	0,0	4	40,0	7	70,0
5	Washing hands using the 6-step method	0	0,0	2	0,0	8	80,0
6	Using gloves	2	20,0	0	20,0	10	100,0
7	Installing the examination stick	0	0,0	2	20,0	8	80,0

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CONDUCTING THE EXAMINATION							
8	Holding and fixing the finger	0	0,0	4	40,0	6	60,0
9	Disinfecting with an alcohol swab	1	10,0	0	0,0	9	90,0
10	Placing the lancet on the tip of the finger	0	0,0	0	0,0	10	100,0
11	Inserting the lancet needle	0	0,0	3	3,0	7	70,0
12	Drawing blood	0	0,0	0	0,0	10	100,0
13	Putting blood on the examination stick	0	0,0	0	0,0	10	100,0
CLOSING							
14	Reading and delivering the results	0	0,0	0	0,0	10	100,0
15	Delivering the meaning of the results	3	30,0	0	0,0	7	70,0
16	Discarding the lancet and stick in the safety box	1	10,0	0	0,0	9	90,0
17	Removing gloves	2	20,0	0	0,0	8	80,0
18	Washing hands	0	0,0	0	0,0	10	100,0
19	Reorganizing the equipment as before	0	0,0	0	0,0	10	100,0
20	Delivering closing remarks	0	0,0	0	0,0	10	100,0

Table 2 above shows that the most AoC students have not done (value 0) is "conveying the meaning of the examination results" (30%), followed by "not wearing gloves" (20%). The skills that have not been perfected by students are mostly "holding and fixing fingers" (40%) and "changing lancet needles" (40%).

After the team was trained, they conducted examinations on other Justitia Nursing Academy students. There were 40 Justitia Nursing Academy students who were examined, with the following characteristics :

Table 3. Characteristics of Justitia Nursing Academy Students

Characteristics		n	%
Age	18	4	10,0
	19	23	57,5
	20	5	12,5
	21	4	10,0
	22	4	10,0
Gender	Laki	10	25,0
	Wanita	30	75,0
Area of origin	Palu	1	2,5
	Donggala	2	5,0
	Parimo	2	5,0
	Sigi	5	12,5
	Poso	4	10,0
	Touna	18	45,0
	Banggai	2	5,0
	Bangkep	1	2,5
	Balut	1	2,5
	Morut	2	5,0
	Morowali	1	2,5
	Lain2	1	2,5

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From table 3 it can be seen that most of the students are 19 years old (57.5%), female (75.0%) and come from Tojo Una-Una district (45.0%). Of the 40 students whose random blood sugar (GDS) was checked, the results were that all students (100%) had normal random blood sugar (GDS) levels, as shown in the table below :

Table 4. Results of Random Blood Sugar (GDS) Examination of Justitia Palu Akper Students, Class of 2023

Class	Normal (<200 mg/dL)		Abnormal (< 70 mg/dL atau >200 mg/dL)	
	n	%	n	%
A	20	50,0	0	0,0
B	20	50,0	0	0,0
Total	40	100,0	0	0,0

Source : Primary Data, 2024



Photo. Agent of Change Training for Students of Akper Justitia Palu

DISCUSSION

1. Agent of Change (AoC) for Non-Communicable Diseases (NCDs) of Akper Justitia Palu

A team of Agents of Change (AoC) of Akper Justitia Palu students has been formed consisting of 10 students. These 10 students are tasked with conducting NCD screening for students and academics in the Akper Justitia Palu environment. There are several factors that are considered in the AoC PTM training process for Akper Justitia Palu students, including: training objectives, participants (number and characteristics), time available, suggestions and infrastructure available.

The learning process is carried out by providing initial information about the tools used, how to use the tools, examination techniques and information about the benefits of NCD screening. This training is facilitated by 3 facilitators from the Faculty of Medicine, Tadulako University. In addition to these stages, the training process also goes through standard learning stages, as follows (11)(12) :

- 1) Forming: At this stage, each participant observes each other and provides ideas to the group regarding the implementation of NCD screening and the technical use of the tools. The trainer plays a role in providing stimulation so that each participant participates and provides various ideas;
- 2) Storming: At this stage, debates begin to occur between students regarding future plans if they become AoC on their campus. The trainer plays a role in providing stimulation to participants who are less involved to actively respond;
- 3) Norming: At this stage, the "dynamic" atmosphere has begun to subside because several students have agreed with the clarification made and there is a common perception. Each participant/student begins to realize and feels willing to accept the ideas of other participants. At this stage, new norms agreed upon by the group have been formed. The trainer plays a role in making the ideas that have been agreed upon into group ideas;
- 4) Performing : At this stage, students who become AoC are united, enveloped in a harmonious atmosphere of cooperation in accordance with the new norms that have been agreed upon together. The trainer plays a role in encouraging students so that each participant actively participates in every group activity and continues to carry out the norms that have been agreed upon.

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The results obtained in the learning process are the hope to do something for the beloved campus and their friends, and the commitment to become an Agent of Change at the Akper Justitia Palu campus. Agent of Change (AoC) is a driver who influences the environment/target to change according to expectations. People are needed who can be inspirations, motivators or motors to stimulate/encourage behavioral changes in order to create a healthier communal environment and behavior so that Non-Communicable Diseases (NCDs) can be prevented (13).

2. Agent of Change (AoC) Skills of Justitia Palu Nursing Academy Students

Skills are the ability to complete tasks. Skills can also be interpreted as the ability to do a job quickly and correctly, in this case the scope of skills is very broad, covering various activities including actions, thinking, speaking, seeing, hearing, and so on. Skills are a measure of a person's abilities. Included in the skills here are the skills to play a role or create and create works that can be accepted by others. Skills in making or realizing something, both material and non-material, can be capital in achieving goals.

Skills can also involve intellectual skills. One of the goals expected in learning is intellectual skills. Namely the type of student's ability to interact with their environment through symbols or concepts that are owned after the learning process, as an application or reflection of learning outcomes. Intellectual skills can be honed by providing knowledge. So one of the AoC training materials is to provide material on Non-Communicable Diseases (NCDs) in general, NCD risk factors, and other knowledge about NCDs.

The data in table 3 shows that the most AoC students have not done (value 0) is "conveying the meaning of the examination results" (30%), followed by "not wearing gloves" (20%). The skills that have not been perfected by students are mostly in "holding and fixing fingers" (40%) and "changing lancet needles" (40%). Based on these results, communication skills (the ability to convey examination results) to the participants being examined are still low. Communication is a process where the goal is to achieve a better mutual understanding of problems that are important to all parties concerned. There are three types of communication skills, namely oral communication skills, written communication skills, and visual communication skills. Oral communication skills are a person's ability to communicate through speaking and feedback can be given directly. This is what is taught during training. An AoC must be able to communicate verbally to other participants. The following are ways to hone and develop skills: continue to develop ideas, learn from various sources, maintain and strengthen the existing AoC community, and continue to learn and hone skills (14).

3. Results of PTM Examination of Justitia Nursing Academy Students by AoC

From 40 students whose random blood sugar (GDS) was checked, the results showed that all students (100%) had normal random blood sugar (GDS) levels. Diabetes mellitus (DM) and other diseases known as non-communicable diseases are starting to stand out as one of the causes of morbidity and mortality in developing countries. These diseases will cause a burden on health services and the country's economy now and in the future, both directly and indirectly .

Non-communicable but chronic diseases, such as DM, hypertension, obesity and heart disease in developing countries including Indonesia which are the main causes of morbidity and mortality in western society, are now starting to be a problem in developing countries too. In terms of age, it has attacked productive-age teenagers.

Diabetes Mellitus is a group of metabolic diseases characterized by high blood sugar (glucose) levels due to disorders in insulin production by the pancreas or insulin use by the body. Diabetes Mellitus (DM) is a major metabolic disease in children that is chronic in nature and has the potential to disrupt children's growth and development. In children, there are 2 types of diabetes that are most commonly found, namely type-1 DM with low insulin levels due to damage to pancreatic beta cells, and type-2 DM caused by insulin resistance, even though blood insulin levels are normal. The main causes of type-1 DM are genetic and autoimmune factors, while type-2 DM is usually caused by an unhealthy lifestyle and obesity. One effort to reduce the high mortality and morbidity rates of diabetes in children and adolescents is through a strategy to educate parents to understand the nutritional value label information on packaged and ready-to-eat food and beverages. and with massive promotion and education, it is hoped that it can increase public understanding in addition to reducing consumption (15)(16)(17).

CONCLUSION

1. There are 10 (ten) Agents of Change (AoC) of Non-Communicable Diseases (PTM) of Akper Justitia Palu, expected to be able to change the behavior of students on the Akper Justitia Palu campus to be healthier;
2. The results of the training showed that the most AoC students had not done (value 0) was "conveying the meaning of the examination results" (30%), followed by "not wearing gloves" (20%). The skills that were not perfected by students were mostly in "holding and fixing fingers" (40%) and "changing lancet needles" (40%).
3. All students of Akper Justitia Palu (40 students) who had their random blood sugar (GDS) checked had normal random blood sugar levels (GDS).

SUGGESTIONS

1. So that the Palu City Health Office can support the GDS examination stick, so that the AoC team can continue to carry out their duties in early detection of PTM, especially Diabetes Mellitus (DM);

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2. So that the campus (Akper Justitia Palu) empowers the existing AoC team to educate about clean and healthy living behavior, as well as education on risk factors for NCDs.

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