

# Artikel 3

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## The Improvement of Cadre Competence in implementation of Non-Communicable Diseases Screening in Community Based Intervention (Posbindu PTM) at Sleman Regency in Yogyakarta

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### ABSTRACT

**Background:** The high mortality rate (out of 10 causes of death) is caused by Non-Communicable Diseases (NCDs). Moreover, NCDs is a catastrophic disease that creates a huge socioeconomic burden for sufferers, families, and countries. The lack of knowledge and the ignorance of the community towards NCDs, become a problem that may causing delay handling the diseases, so the complications and deaths occur earlier. Therefore, community participation is needed, so the model of community-based intervention towards NCDs can be developed, which known as Posbindu PTM. Posbindu PTM's activities are community participation in the early detection, monitoring and early follow-up of NCD's risk factors independently and continuously.

**Aim:** To determine the effectiveness of training in improving cadre's competence in the implementation of Screening for Non-communicable Diseases at the Community Based Intervention (Posbindu PTM) in Sleman Regency in Yogyakarta.

**Methodology and result:** This type of research was a quasi-experimental with "pre-post test with control group design". Samples were taken by non-probability sampling that involved 5 respondents in one Posbindu and analyzed with a t-test which then obtained significance of 0.001 (<0.05). The results showed that the differences in the average skills before and after the training obtained the highest results in the difference between the types of simulation, i.e. before the treatment 71.05 and after the treatment 88.07 with the difference is 7. Changes in knowledge in the Leaflet, Demonstration, and Simulation groups were almost the same. This means that there were no significant differences in the three groups in terms of cadre knowledge regarding non-communicable disease screening (NCDs). There was no significant change in knowledge in the three groups. In the treatment group, the simulation obtained a higher rate than the leaflet and demonstration group. The highest increase in respondent skills was 17.0 or the highest among the three treatment groups. So that it can be interpreted that the group treated training with simulations have an impact on improving good skills for Posbindu PTM cadres.

**Conclusion:** This study concludes that there was a difference in the average skill before and after the training which resulted from the highest difference between the types of simulation, i.e. before treatment 71.05 and after treatment 88.07 with the difference is 7.

**Keywords:** Cadre Competence; Non-Communicable Diseases; Screening.

### INTRODUCTION

The high mortality rate (out of 10 causes of death) is caused by Non-Communicable Diseases (NCDs). Moreover, NCDs is a catastrophic disease that creates a huge socioeconomic burden for sufferers, families, and countries. Diabetes is one of four priority on NCDs (Rahayu, 2020). The lack of knowledge and ignorance of the community towards NCDs became a problem that resulted delays in handling, so that complications and deaths can occur earlier. Therefore, community participation is needed, so the complications and deaths occur earlier. Therefore, community participation is needed, so the model of community-based intervention towards NCDs can be developed which known as Posbindu PTM. Posbindu PTM's activities are community participation in the early detection, monitoring and early follow-up of NCD's risk factors independently and continuously.

Cadres taking the big role in the management of NCDs in the community. In the Community Based Intervention (Posbindu PTM) activities, cadres have the task of early detection of non-communicable diseases both in healthy community groups and or in communities at risk. Until now,

Posbindu has been formed in several regions in Indonesia (Posbindu Cadre smart book, 2013). Not all cadres have been able to implement the management of the posbindu PTM, especially in the aspects of screening in non-communicable diseases (NCDs). NCDs risk factor is a condition that is potentially dangerous and can trigger the occurrence of NCDs in a particular person or group. The risk factors referred to include lack of physical activity, an unhealthy and unbalanced diet, smoking, alcohol consumption, obesity, hyperglycemia, hypertension, hypercholesterolemia, and behavior related to accidents and injuries, such as improper traffic behavior.

This can be handled by eliminating or reducing the risk factors for NCDs and paying attention to other factors that can affect health, as well as increasing health efforts through promotion and prevention. So it needs to be seen and improved the competency of cadres, especially in improving the implementation of management improvement and prevention of NCDs in Posbindu PTM through various means: both through increasing knowledge and training programs. Based on the background of the problem above, this research want to know does the training can improve the competence of Cadres, especially to screening of Non-

Communicable Diseases (NCDs) in Community Based Intervention (Posbindu PTM) at Sleman Regency in Yogyakarta.

## METHODS

The training methods are transferring knowledge and skills from trainers to training participants (cadres) about how to screening the non-communicable diseases, based on the established training curriculum. The training method used consists of:

- A demonstration: is a way to transfer knowledge and skills using real media or real situations.
- Simulation: is a way to transfer knowledge and skills using media that is not real or artificial. Nominal / dichotomous data scale.

Basic competence in screening non-communicable diseases referred to in this study is the result of measuring knowledge and skills in screening non-communicable diseases, at the beginning and the end of the study. This research conducted at area of Public Health Center Gamping I and Gamping II, Yogyakarta, Indonesia in 2016. Intervention for this research has been conducted for eight weeks.

The population of this study was all cadres of posbindu PTM in the working areas of the Public Health Center Gamping I and Gamping II. Random assignment was conducted for treatment group members. Sampling was based on nonprobability sampling by assigning 5 cadres to each Posbindu PTM, so the subjects observed were 60 cadres. The reason for the retrieval of research subjects was 5 cadres for each Posbindu because of the activeness of cadres in organizing activities.

Posbindu cadre training curriculum on screening non-communicable diseases using demonstration and simulation methods. Questionnaire measuring the cadre's knowledge about screening non-communicable diseases. For measuring posbindu cadre's skills in screening non-communicable disease, we use an Observation guide (checklist).

## RESULTS

Based on table 1 the results were obtained that the majority of Posbindu cadres are women aged between 55-60 years who have a high school education level, and the majority of their daily work are housewives. So the Posbindu cadres were a middle-aged woman with a secondary education level and daily business that did not take up time for activities. Based on the table 2 results, it can be noted that in all treatment groups, there were differences before and after the treatment. These differences can be seen from the value of average: all of them have increased with different standard deviation.

The level of knowledge in the treatment group with leaflets did not increase. This group tended to decrease the level of knowledge. While treatment with demonstration had a tendency to increase the amount of knowledge from fair to good. In the treatment group with simulation, there was an significant increase in knowledge.

The skills of Posbindu cadres for each group (the Leaflet group, Demonstration Group, and Simulation Group) were taken from the cadre's capable screening skills, such as

measurements of body weight, body height, body mass index, and blood sugar checks.

Based on the table 3 we can know that among the 3 groups, the one with the highest value is the simulation group.

The highest skills improvement of respondents was 17.0, which is the highest among the three treatment groups. It can be interpreted that the group that be trained with simulation will have better skills for Posbindu cadres.

Payaman Simanjuntak (2005) defines training as a part of Human Resources investment (human investment) to improve work abilities and skills, and thus improve one's performance. Training is usually done with a curriculum that is tailored to the needs of the position, given in a relatively short time, to equip someone with work skills.

The result of other studies about teacher competency shows that training experience can improve the quality of human resources; Teacher training experience contributed to the professional competence of State Junior high School teachers in Karangasem sub-district in 2012, that experience in training was the biggest factor influencing the professionalism of teachers in the field of study, so teachers in the field of study could make the most of their time to add knowledge and skills through training. Increasing the professionalism of teachers in Junior High School in Karangasem sub-district has been contributed by the experience of training.

Table 1. Frequency Distribution of Respondent Characteristics based on Gender, Age Group, Education, and Occupation both the control group and the treatment group.

Characteristics	Frequency	%age
<b>Gender</b>		
Female	58	96.7
Male	2	3.3
<b>Age</b>		
41-45	3	5.0
46-50	17	28.3
51-55	19	31.7
55-60	13	21.7
>60	8	13.3
<b>Education</b>		
Elementary School	5	8.3
Junior High School	10	16.7
Senior high School	43	71.7
Higher Education	2	3.3
<b>Occupation</b>		
Unemployed	51	85.0
Employed	9	15.0

Table 2. Distribution of Cadre Knowledge by T types of Treatment in Pre and Post Treatment in Posbindu at the Working Area of Public Health Center of Gamping I and II of Sleman Yogyakarta

Group	Min	Max	Average	SD
Before Leaflet Distribution	13.00	27.00	19.8500	3.70313
After Leaflet Distribution	20.00	27.00	24.4500	2.50210
Before Demonstration	11.00	26.00	18.8000	4.00789
After Demonstration	20.00	28.00	23.4000	2.45807
Before Simulation	11.00	26.00	19.7500	4.02460
After Simulation	19.00	30.00	24.7000	2.93975



Tabel 3. Distribution of Cadre's Skills based on the type of treatment (both pre and post) in the Posbindu PTM of the Working Area of Public Health Center of Gamping I and II Gamping Sleman Yogyakarta in 2016

Group	Min	Max	Average	SD
Before Leaflet Distribution	45.00	100.00	73.8500	16.74428
After Leaflet Distribution	40.00	100.00	73.8100	17.77627
Before Demonstration	40.00	100.00	77.3500	17.73867
After Demonstration	40.00	100.00	84.8000	19.71956
Before Simulation	33.00	100.00	71.0500	14.35811
After Simulation	40.00	100.00	88.0500	16.24745

## DISCUSSION

Based on the results of the, it can be seen that the types of treatment including leaflets, demonstrations, and simulations have a difference in increasing cadre knowledge in carrying out screening at Posbindu PTM. The highest result aimed by simulation group.

In the aspect of skills, it can be produced that there were differences in groups with maximum results in the simulation. The demonstration and practice training method has a significant effect on increasing knowledge. Training with this method gives a deep impression to the participants.

Participants are also involved in practice activities. Research conducted by Kurrachman (2003) also showed that training with the lecture method that is accompanied by discussions, simulations, and practices increases student knowledge in weighing toddlers in Posyandu. The training conducted by Sukiarko (2007) showed an increase in the pre-test and post-test scores of cadre knowledge by a difference of 16.8. Training with a problem-based learning (BBM) method emphasizes the cadre's ability to find information (student-centered learning) where participants are required to learn actively. In the theory of Benjamin Blum in Notoatmodjo (2007), it is stated that knowledge or cognitive is a very important domain for the formation of one's actions. In addition, it is also explained that behavior is the second largest factor after environmental factors that affect the health of individuals or society, so that by having good knowledge someone will affect behavior change.

Kurrachman's research (2003), showed that training with lecture methods accompanied by discussions, simulations, and practices will improve student skills in measuring the nutritional status of children under five in Posyandu. The training conducted by Sukiarko (2007) with the Problem Based Learning (BBM) method also increased the cadre skills score from 63.10 to 84.77, an increase of 21.67. The training method with demonstration and practice has been proven to increase the knowledge and skills of cadres, but this method also has a weakness that requires a relatively long time, enough teaching staff to be able to oversee the practice and adequate facilities and infrastructure both from teaching aids and teaching materials or modules and spacious rooms. In line with Islamic values, increasing knowledge and skills that are beneficial to society is our duty as human beings created by God as khalifatullah fil ard, as well as cadres as the

spearhead of community mobilization who have an obligation to always improve knowledge and skills that are useful for mutual benefit. Azwar (2008) said that one of the factors that influence a person's attitudes and actions is his knowledge. The more mature a person's age the better one's knowledge.

The cadres of the Community Based Intervention (Posbindu PTM) become the spearhead of agents of change in the fields of education, health, and welfare at the village level, because they were able to implement programs to improve the quality of services to the community.

## CONCLUSION

Referring to the purposes of this study, it can be concluded as follows:

**Respondent Characteristic:** The majority of Posbindu cadres are women aged 55-60 years who have a high school education level with the majority of their daily work as housewives.

The Effectiveness of training could increased cadre's knowledge about Screening of Non-communicable Diseases at Community Based Intervention (Posbindu PTM) in Sleman Regency in Yogyakarta.

The level of knowledge in the treatment group with leaflets did not increase. The group tended to have decreased level of knowledge. Whereas treatment with demonstrations had a tendency to increase the amount of knowledge from fair to good. In the treatment group with simulation, there was an increase in knowledge and vice versa.

The Effectiveness of training could improving cadre skills in implementing Screening of Non-communicable Diseases at Community Based Intervention (Posbindu PTM) in Sleman Regency in Yogyakarta.

The skill of respondents in the treatment group who were given leaflets had an average value of 73 and the simulation group had an average value of 88 with 16.2 standard deviations. This means that the simulation provides the better impact than the leaflet or demonstration, related to the skills aspects.

## REFERENCES

- Bennett PH., Epidemiology of type 2 diabetes mellitus, 2011
- Bjorntorp P, Metabolic implications of body fat distribution, 2010
- Bonita R., Surveillance: The stepwise approach to risk factor surveillance, 2010
- Daniel WW., Biostatistics: A foundation for analysis in the health sciences., 2007
- DeFronzo RA, Ferrannini E, Koivisto V., New concept in the pathogenesis and treatment of non-insulin-dependent diabetes mellitus, 2008
- Engelgau MM, Aubert RE, Thompson TJ, Herman WH., Screening for NIDDM in nonpregnant adults: A Review of principles, screening test, and recommendations, 2005
- Feinstein AR., Clinical epidemiology, the architecture of clinical research, 2015
- Fletcher RH, Fletcher SW, Wagner EH., Diagnosis in clinical epidemiology the essentials, 2007
- Harris MI., Definition and classification of diabetes mellitus and the new criteria for diagnosis, 2007
- Hendromartono, Obesity: Are we any closer to identifying causes and effective treatment, 2011

11. Inoue S, Zimmet P., The Asia-Pacific perspective: Redefining obesity treatment., 2010
12. Kissebach AH, Peiris AN., Biology of regional body fat distribution: Relationship to non-insulin-dependent diabetes mellitus., 2009
13. Lwanga SK, Lemeshow S., Sample size determination in health studies. A practical manual., 2011
14. Me Cane DR, Hanson RL, Charles MA, Jacobsson LTH, Pettitt DJ, Bennet PH, Knowler WC, Comparison of tests for glycated haemoglobin and fasting and two hour plasma glucose concentrations as diagnostic method of diabetes, 2004
15. Perkumpulan Endokrinologi Indonesia. Konsensus pengelolaan diabetes melitus di Indonesia, 2008
16. Puspongoro HD, Wirya IGNW, Pujjadi AH, Bisanto J, Zulkamain SZ., Uji diagnostik, 2005
17. Rahayu, Muji., Kasiyati, Menik., Martsiningsih, Atik., Setiawan, Budi., Khasanah, Furaida. Hypoglycemic And Antioxidant Activity of Yellow Pumpkin (*Curcubitaschata*) in Diabetic Rat. *Indian Journal of Public Health Research and Development.* Vol11 No1. Doi: 10.37506/v11i1/2020/ijphrd/194022
18. Rosenbaum M, Leibel RL, Hirsch J., Obesity, 2008
19. Ruige JB, de Neeling JN, Kostense PJ, Bouter LM, Heine RJ., Performance of an NIDDM screening questionnaire based on symptoms and risk factors, 2007
20. Simopoulos AP(ed, Nutritional factors and the etiology of non-insulin-dependent diabetes mellitus: An epidemiological overview in world review of nutrition and dietetics, 2009
21. Suyono S., Kecenderungan peningkatan jumlah pasien diabetes., 2009
22. Suyono S., Patofisiologi Diabetes Melitus, 2009
23. World Health Organization, Physical status: The use and interpretation of anthropometry, Technical Report Series 854., 2005
24. *Kemenkes RI (2012).* Petunjuk Teknis Pos Pembinaan Terpadu Penyakit Tidak Menular (Posbindu PTM),Kementerian Kesehatan RI, Direktorat Jenderal Pengendalian Penyakit dan Penyehatan Lingkungan, Direktorat Pengendalian Penyakit Tidak Menular.

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