IMPLEMENTATION OF INTEGRATED HEALTH SERVICE CENTER (POSBINDU) PROGRAM FOR NON-CONVENIENT DISEASES IN THE ELDERLY

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Abstract - *Posbindu PTM is an integrated health service that is organized as an effort to empower public health. The Posbindu held in Singkil Padukuhan Gunungkidul is a program for the elderlyas a response of the organizers to the conditions which occur in the elderly population in Singkil to provide their needs related to health service. Posbindu implementation methods carried out by theorganizers are in-depth interviews, focus group discussions and observation methods. This method was used to obtain qualitative data. From the examinations that have been carried out by theorganizers and health cadres of Singkil, the results obtained are 52 patients who were examined with the types of examinations including height, weight, body mass index (BMI), blood pressure and ahistory of the disease that the participants had suffered. The results of BMI data showed that 18 participants were in the normal category, 26 were underweight, 5 were overweight, 3 data were unknown. As for the results of the examination of hypertension data, 25 participants were includedin the category of hypertension grade 2, 16 hypertension grade 1, 10 pre-hypertension and 1 normal participant.*

Keywords*: posbindu, non-communicable disease, singkil*

1. INTRODUCTION

PTM Integrated Health Service Center (POSBINDU) is the participation of the communityin carrying out early detection and monitoring of PTM risk factors and their follow-up carried out in an integrated manner. Follow-up implementation is in the form of counseling and referrals tobasic health care facilities. Efforts to develop the PTM POSBINDU program are being intensively carried out, and it is hoped that in the future PTM POSBINDU can be used as a "program vehicle" for controlling non-communicable diseases in the community. In order for this effort to run properly, correctly, and on target, it is necessary to develop a guideline to implement it so that the implementation of the PTM POSBINDU has leverage in controlling PTM risk factors (Kementerian Kesehatan RI, 2019).

The PTM Integrated Health Service Center (Posbindu) was formed by the Indonesian government since 2001 with the aim and purpose of empowerment and community participationin maintaining health with the concept of the community, by the community and for the community. In the implementation procedure, Posbindu is divided into 2 technical implementations, namely the first PTM Posbindu which is intended for people aged 15 years and over, and the second is the Elderly Posbindu which is intended for elderly people aged over 60 years.Non-Communicable Diseases (NCDs) are diseases that often go undetected because they are asymptomatic and have no complaints. Usually found in an advanced stage so that they are difficultto cure and end up with disability or premature death. This situation creates a large financing burden for sufferers, families and the state. PTM this can be prevented through controlling risk factors,namely smoking, lack of physical activity, an unhealthy diet and alcohol consumption. Increasing public awareness and concern for PTM risk factors is very important in controlling PTM (Kementerian Kesehatan RI, 2019).

In 2020 PTM causes 73% of deaths and 60% of all morbidity in the world. One of the PTM which is a very serious health problem nowadays is hypertension World Health Organization (WHO). Hypertension is a disease characterized by an increase in blood pressure above the normal value, with a systolic value of > 140 mmHg and a diastolic > 90 mmHg (criteria for the Join NationalCommittee) JNC VII (Zakiyyatul & Rahayu, 2018). The Covid-19 pandemic is a very painfuldisease outbreak for people around the world. Starting last year with the emergence of the Covid-19pandemic, the pattern of human life has changed very significantly, especially in the health sector. This condition is very related to the formation of the PTM Posbindu, with Posbindu it can be anearly detection of non-communicable diseases which will actually increase the risk of death when thepatient is exposed to COVID-19.

Singkil Village is geographically located on the southern outskirts of Gunungkidul Regency,Yogyakarta, which is an area that has great potential in the tourism sector. According to the demographic data of this hamlet, the average population is 30-60 years old and above who live in thishamlet. In practice, the implementation of health checks here is only intended for minors or so-called Posyandu, according to information obtained from the implementation of Posbindu which has been inactive for a long

time. Reflecting on the current state of the pandemic, actually having aPosbindu will be very beneficial, especially since most of the livelihoods of the residents of Singkil Village on Indrayanti Beach, which incidentally is a gathering place for many people, will be very atrisk of being exposed to the pandemic.

The purpose of PTM Integrated Assistance Post (Posbindu) work program is a form of our response to the current situation, with the real needs of the residents of the Singkil community. It ishoped that the implementation of the PTM Posbindu will give significant influence on health services in Singkil Padukuhan, then as a form of mapping non-communicable diseases for PTM, and as a form of concern for the Covid-19 pandemic situation which can actually be an early screening stage regarding the potential risk of the disease. so that the data obtained becomes a medical recordfor recommendations for handling when exposed to the Covid-19 virus and vaccination. Based on the explanation above, it is very important to understand the importance of understanding the disease and treating the disease from an early age. So it is very necessary to hold health education and community assistance about non-communicable diseases in every health service and in society at large. On the other hand, sufferers understand the importance of activities that can support health. As in Singkil Hamlet, if the PTM Posbindu program is held, the program can become a healthsupervisor and monitor in the community.

2. METHOD

Integrated Development Post (POSBINDU) PTM data collection was carried out using the following methods:

1) Interview

Data collection techniques through interviews were used to find out the informationneeded to carry out the research process for the implementation of the PTM Integrated Development Post (POSBINDU), such as the availability of health cadres in Singkil Padukuhan, demographic conditions of the elderly occupation of Singkil Padukuhan, mapping of non-communicable diseases of the Singkil elderly population and conditions health of the elderly population of Singkil Village.

2) Observation

The technique of collecting data through observation is direct observation of the desired data to support the data from real interviews such as the number of available health cadres in Singkil Padukuhan, the number of elderly residents in Singkil Padukuhan, and examination of the health condition of the elderly population in Singkil Padukuhan which includes blood pressure, weight, height, BMI and medical history.

3) Literature Study

Literature study can support data collection and discuss the implementation target object. Literature study in this case was conducted to learn about the creation of examination forms, implementation procedures, examination techniques for cadres, psychological approach techniques with elderly patients, and data processing of

examination results.

As for the process of implementing the Integrated Development Post (POSBINDU) PTMis explained in the flow of the program implementation procedure as follows:

1) Planning

The planning process is a stage in planning the implementation of the PTM Integrated Development Post (POSBINDU) in Padukuhan Singkil. At this stage studentsprepare all the needs in the POSBINDU program such as the availability of health cadres, availability of tools, examination forms and socialization of activity programs.

2) Survey

This stage is carried out to re-assure whether the planned program can be realized as itshould be. The survey will provide an overview of the field conditions that will be carried outby the POSBINDU program.

3) Data collection

At this stage, the object of the implementation of the POSBINDU program is the elderly population aged 60 years and over in Singkil Padukuhan. The data collection process for the elderly was carried out by accumulating the data provided by each RT inSingkil hamlet.

4) Implementation

The implementation of this program is carried out by health checks carried out by cadres and 2 health student volunteers. The implementation of this program is carriedout by visiting the homes of the elderly who have been registered in the data provided by the RT in the data collection process. Health data collected in this examination process includes medical history, blood pressure, height and weight to calculate BMI.

5) Approach

This approach process is a procedure that is carried out after carrying out the healthexamination process by providing a health guide brochure which will be explained at a glanceby cadres and students. This approach procedure is also a stage of health consultation experienced by patients who are then given advice and input about a healthy lifestyle.

6) Processing of Data Results:

The data that has been collected in the previous procedure will beprocessed to report the results to health cadres in Singkil Padukuhan which will be used as a reference for mapping non-communicable diseases of the elderly population in Singkil Villageand Vaccination.

This research was conducted using a qualitative method which was then

presented in theform of a chart. Qualitative data collection was carried out by in-depth interviews and direct observation methods. The qualitative data processing was analyzed descriptively by calculating theBody Mass Index (BMI) and also the condition of the patient's blood pressure examination, which was then grouped according to the provisions in the PTM POSBINDU guidelines.

3. RESULTS AND DICUSSION

Our PTM Integrated Assistance Post (POSBINDU) activity program will be carried out in Singkil Village, Tepus Village, Tepus District, Gunungkidul, Yogyakarta Special Region in 2021. The selection of this location is based on where the KKN 105 INTEGRATION- INTERCONNECTION is carried out from the Mandiri 38 group. The object of the program is these are elderly residents aged 60 years and over in Singkil Padukuhan. The sample selection wascarried out purposively that met the inclusion criteria, namely residents aged 60 years and over as participants of PTM POSBINDU services in the KKN area, so that in its implementation, 52 elderly people could be checked for health. To get an idea of the demographics of the elderly population ofSingkil Padukuhan to carry out the PTM POSBINDU program, a Focus Group Discussion (FGD) was carried out, then in its implementation we carried out an examination by visiting the homes of the elderly accompanied by health cadres and 2 Nursing students at Aisyah University Yogyakarta.

Data was collected by interviewing medical history, measuring blood pressure, measuring height and weight to calculate BMI. In-depth interviews were conducted to obtain data regarding the patient's identity and history of illness. Then after the examination, we gave an approach procedure to the elderly who were examined in the form of advice on health and gave health brochures, so at the end of the examination we provided hand sanitizer and also masks and healthy food for the elderly.

A. Body Mass Index (BMI)

Body Mass Index or BMI is a standard comparison of weight to height that is often used asan indicator of general health. A BMI between 18.5 and 24.9 is considered normal, whereas a higherBMI may indicate overweight or obesity (Supriati, 2017). Based on data on the prevalence of overweight in Indonesia as a developing country, it shows a fairly high number. Data Riskesdas in 2007 recorded 200 million Indonesian population had Overweight at 17.5% and 4.7% obese (Supriati, 2017).

Obesity itself can be caused by various factors, the most common of which can cause obesityis excessive intake of energy (calorie intake) without being accompanied by burning energy (caloryoutput) is sufficient, so that the energy that enters the excess will be stored in the body as fat resultingin obesity. increase in accumulated body weight (Wijaya, Muliarta, & Permana, 2020). As forcalculating BMI used the following formula:

$$BMI = \frac{Weight}{Heightx\ Heoght} \quad (1)$$

B. Blood Pressure

Hypertension or "high blood pressure" is a condition when a person experiences an increasein blood pressure either slowly or suddenly (Chowdhury, Iinatti, & Pirinen, 2008). Hypertension isa major cardiovascular risk factor which is the leading cause of death worldwide. Increased lifeexpectancy and lifestyle changes will increase the risk factors for hypertension in various countries(Supriati, 2017). Hypertension is common in the elderly. This is related to the sleep quality of the elderly which tends to be poor due to the psychological problems of the elderly. Mental healthproblems commonly experienced by the elderly include anxiety, loneliness, feelings of sadness andirritability (Supriati, 2017).

The references in classifying the blood pressure data obtained are as follows:

Tabel 1. Classifying The Blood Pressure

No.	Blood Pressure	Classification
1.	≤120/≤80 mm/Hg	Normal
2.	120-139/80-90 mm/Hg	Prehypertension
3.	140-150/90-99 mm/Hg	Hypertension grade 1
4.	≤160/≤100 mm/Hg	Hypertension grade 2

Several studies state that BMI is closely related to the occurrence of hypertension, mosthypertensive patients have excess weight. This is because the larger the body size, the more blood isneeded to supply oxygen and food to the body's tissues. It can be ascertained that the volume ofblood circulating through the blood vessels increases, causing arterial blood pressure to increase. Thisis the reason why obesity is one of the risk factors for hypertension (Somantri, 2015). Then Supriati(2017), in his journal states that Body Mass Index (BMI) helps determine whether a person is at riskof developing hypertension, because BMI is correlated with blood pressure, especially systolic bloodpressure. The lowest risk for cardiovascular disease is those who have a BMI of 21-25, the risk willincrease if the BMI is 25-27, the real risk is if the BMI is 27-30, the risk is very prominent if the BMI>30. However, the results obtained in this study showed contradictory results, because the majority of the elderly population in Singkil hamlet had high blood pressure even though they were underweight.

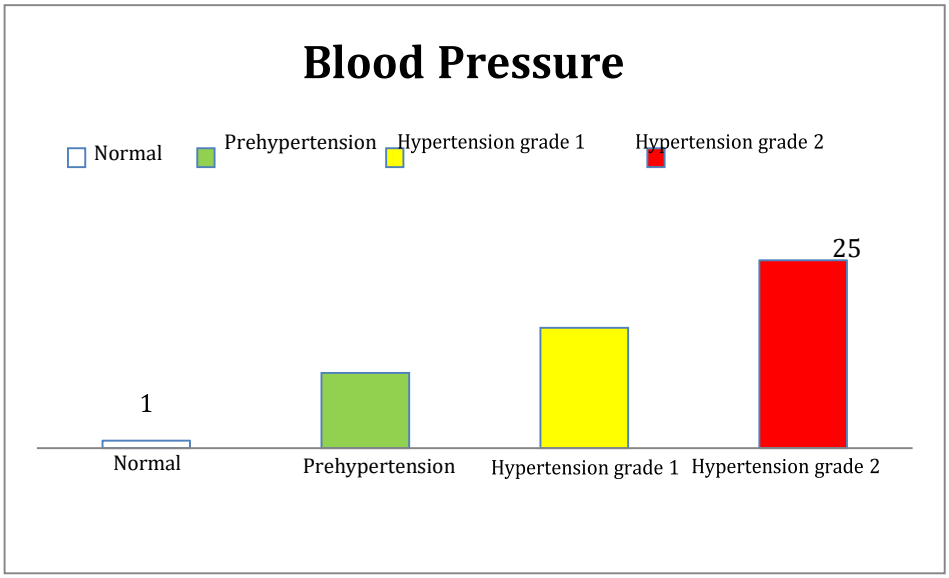

Figure 1. Blood Pressure Measurement

Based on the results of blood pressure checks carried out on 52 elderly people in Singkilhamlet, it can be seen that as many as 25 elderly people have grade 2 hypertension, 16 elderly peoplehave grade 1 hypertension and 10 elderly people have prehypertension while 1 person has normal blood pressure.

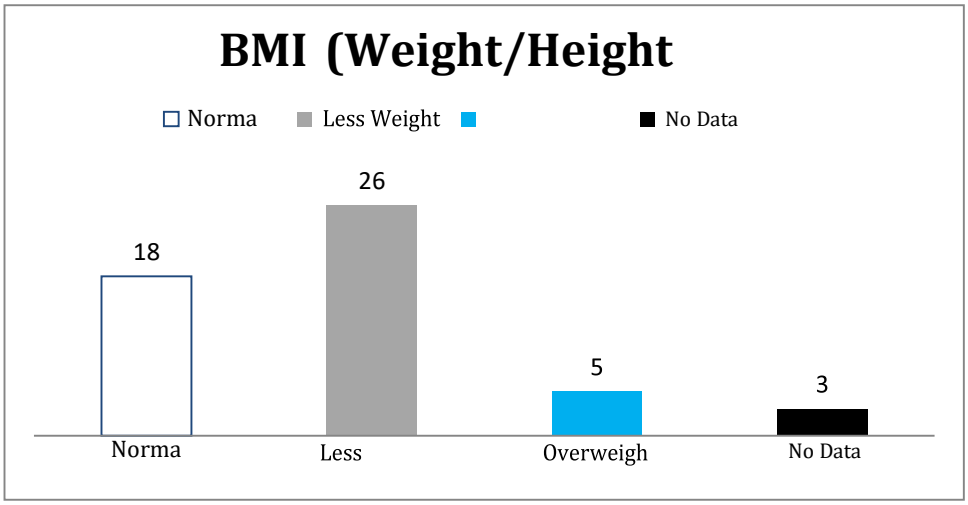

Figure 2. Body Mass Index (BMI)

Based on the results of the BMI calculation obtained from the weight/height m2 formula, itcan be seen that of the 52 elderly the majority have low body weight, namely as many as 26 elderly,then the second majority, namely 18 people have normal weight and 5 elderly people have normal body weight. excess weight. Meanwhile, 3 elderly people cannot calculate their BMI because theirweight or height cannot be measured due to the inability to stand.

Fig 1. Health Checkup for the Elderly

The majority of the elderly in Singkil sub-village are underweight and have high bloodpressure, namely grade 2 hypertension. This can be due to several factors, both socio-cultural and geographical factors. Based on research that has been done in the elderly in Kabregan Hamlet,Srimulyo, Piyungan, Bantul, Yogyakarta in 2008 the factors that influence the occurrence of hypertension include age, obesity, exercise habits, stress and personality type (Wahyuningsih & Astuti, 2016) .

In addition to the factors mentioned above, another thing that may affect the health condition of the elderly in Singkil hamlet is geographical conditions. Singkil Hamlet located inGunungkidul Regency is a land with a karst mountain ecosystem, so that it is possible to lack the required water intake due to the lack of water availability. Water contains many minerals that the body needs such as calcium, potassium and magnesium which are known to lower blood pressure, these minerals inhibit the occurrence of blood vessel constriction which causes a decrease in peripheral resistance resulting in a decrease in blood pressure (Lestari, 2010). The majority of which is obtained from drinking water is not met, it can increase blood pressure.

As for the socio-cultural conditions of the elderly in Singkil Hamlet, in general they still liketo farm from morning to evening. Activities that use a lot of physical activity and lack of intake can be the reason the majority of the elderly in Singkil hamlet are underweight and have high bloodpressure. Based on previous research, it is stated that unbalanced food intake causes excessive consumption associated with lifestyle changes. Lifestyle changes will affect the emergence of various non-communicable diseases in the elderly. In addition to providing good nutrition, physical activityis also something that needs to be considered in the elderly (Between et al., 2017).

In addition, the cause of hypertension in the elderly is also caused by lifestyle changes and more importantly the possibility of an increase in high blood pressure due to increasing age is greaterin people who consume a lot of foods that contain lots of salt (Kenia, 2013 in Seke, et al., 2016).

4. CONCLUSION

POSBINDU PTM is a very important activity for early detection of non-communicablediseases in the elderly in Singkil Hamlet, so that in the future we hope

this program can continue even not only for the elderly but also for adolescents. The health checks carried out to 52 elderly included blood pressure checks and BMI measurements. Based on the results of the blood pressure examination, it can be seen that as many as 25 elderly in Singkil have hypertension grade 2, 16 elderly have hypertension grade 1, 10 elderly have prehypertension, and 1 elderly have normal blood pressure. Then based on the results of the calculation of BMI (weight/height m2) it can be seen thatas many as 26 elderly are underweight, 5 elderly have excess body weight, and 18 elderly have normal weight. Meanwhile, as many as 3 elderly people cannot calculate their BMI because their height andweight cannot be measured because of the inability to stand. Factors that can affect the health condition of the elderly in Singkil hamlet include geographical conditions, socio-cultural and lifestyle of the elderly.

BIBLIOGRAPHY

Kementerian Kesehatan RI. (2019). *Petunjuk Teknis Pos Pembinaan Terpadu Posbindu bagi Kader*. 1–60. Supriati, L. (2017). Stress, Indeks Massa Tubuh (Imt) Dengan Kejadian Hipertensi Pada Lansia Di

Kabupaten Malang. *Jurnal Kesehatan Mesencephalon*, *3*(1), 44–50.https://doi.org/10.36053/mesencephalon.v3i1.36

Wijaya, G. B. R., Muliarta, I. M., & Permana, P. (2020). Faktor-faktor yang berpengaruh pada Indeks MassaTubuh (IMT) pada anak Sekolah Menengah Atas (SMA) di Kecamatan Buleleng, Bali, Indonesia tahun2016. *Intisari Sains Medis*, *11*(1), 223. https://doi.org/10.15562/ism.v11i1.528

Zakiyyatul, D., & Rahayu, N. F. (2018). Pemanfaatan Posbindu Penyakit Tidak Menular Penderita HipBetween, R., Patterns, C., Activities, P., Nutrition, O. N., On, S., Elderly, T. H. E., … Pati, M. (2017).Terhadap Status Gizi Pada Lansia Di Panti Sosial Tresna. 5(2), 124–132.

Chowdhury, H., Iinatti, J., & Pirinen, P. (2008). Broadband services on move in the coverage of relay-basednetwork. IEEE International Symposium on Spread Spectrum Techniques and Applications, 227– 231. https://doi.org/10.1109/ISSSTA.2008.47

Seke, P., Bidjuni, H., & Lolong, J. (2016). Hubungan Kejadian Stres Dengan Penyakit Hipertensi Pada Lansia Di Balai Penyantunan Lanjut Usia Senjah Cerah Kecamatan Mapanget Kota Manado. Jurnal keperawatan 4 (2).

Kementerian Kesehatan RI. (2019). Petunjuk Teknis Pos Pembinaan Terpadu Posbindu bagi Kader. 1–60.

Lestari, D. (2010). Hubungan Asupan Kalium, Kalsium, Magnesium, dan Natrium, Indeks Massa Tubuh, serta Aktifitas Fisik dengan Kejadian Hipertensi pada Wanita Usia 30 - 40 Tahun. Program Studi Ilmu Gizi Fakultas Kedokteran Universitas Diponegoro Semarang, (Badan Penerbit Fakultas Kedokteran Universitas Diponegooro), 235–248.

Somantri, B. (2015). Hubungan Indeks Massa Tubuh (Imt) Dengan Tekanan Darah Pada Lansia Di Puskesmas Melong Asih Cimahi. Jurnal Pendidikan Keperawatan Indonesia, 1(1), 44. https://doi.org/10.17509/jpki.v1i1.1186

Supriati, L. (2017). Stress, Indeks Massa Tubuh (Imt) Dengan Kejadian Hipertensi Pada Lansia Di Kabupaten Malang. Jurnal Kesehatan Mesencephalon, 3(1), 44–50. https://doi.org/10.36053/mesencephalon.v3i1.36

Wahyuningsih, W., & Astuti, E. (2016). Faktor Yang Mempengaruhi Hipertensi pada Usia Lanjut. Jurnal Ners Dan Kebidanan Indonesia, 1(3), 71. https://doi.org/10.21927/jnki.2013.1(3).71-75

Wijaya, G. B. R., Muliarta, I. M., & Permana, P. (2020). Faktor-faktor yang berpengaruh pada Indeks MassaTubuh (IMT) pada anak Sekolah Menengah Atas (SMA) di Kecamatan Buleleng, Bali, Indonesia tahun2016. Intisari Sains Medis, 11(1), 223. https://doi.org/10.15562/ism.v11i1.528

Zakiyyatul, D., & Rahayu, N. F. (2018). Pemanfaatan Posbindu Penyakit Tidak Menular Penderita Hipertensi. Nasional, 5(1), 20–28. https://doi.org/10.26699/jnk.v5i1.ART.p020.