

## Mentoring the Integrated Non-Communicable Diseases Development Post (Posbindu PTM) "Boulevard" Cadres Together with the Pimpinan Cabang Aisyiyah, Mangkubumi District, Tasikmalaya City in Reducing the Incidence Rate of Obesity and Hypertension

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### ABSTRACT

Non-Communicable Diseases are still a concern because they cause premature death (before 70 years) in middle and low income countries. The risk factors for this disease include hypertension and obesity. This mentoring program aims to increase the capacity of cadres to help control hypertension and obesity not only in the context of checking blood pressure and body weight and height but also in providing education about the importance of reducing hypertension and obesity rates as risk factors for NCDs. The method used in this Community Service program is Community-Based Research (CBR), namely providing health education accompanied by a pre-test and post-test before and after the health education activity. This program was attended by 10 cadres as part of the Pimpinan Cabang Aisyiyah, Mangkubumi District, Tasikmalaya City and 40 Posbindu PTM "Boulevard" participants. Based on the results of the analysis of pre-test and post-test answers which assess knowledge about Obesity and Hypertension, it can be concluded that the health education "Knowing Obesity and Hypertension" is effective in increasing knowledge about the importance of preventing and controlling Obesity and Hypertension.

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## INTRODUCTION

Non-Communicable Diseases (NCDs) are diseases that kill 41 million people every year. According to (World Health Organization, 2023b) the death rate due to NCDs reaches 74% of the total global death rate. This NCDs needs to be a concern because it is the cause of premature death (before 70 years) in middle and low income countries. In fact, the figure reaches 77% of the total death rate due to NCDs in the world (World Health Organization, 2023b).

There are several diseases that include NCDs, namely: cardiovascular disease, cancer, chronic respiratory disease, and Diabetes Mellitus (World Health Organization, 2023b). Of the many types of NCDs, the type of PTM that causes the most deaths is cardiovascular disease, namely 17.9 million each year (World Health Organization, 2023b).

The metabolic risk factors for cardiovascular disease include hypertension, obesity, hyperglycemia and hyperlipidemia. However, among these four metabolic risk factors, those that most increase the risk of death from NCDs are hypertension and obesity (World Health Organization, 2023b).

Hypertension is a condition where blood pressure is more than 140/90mmHg. It is estimated that 1.28 billion people aged 30 – 79 years in the world suffer from hypertension. And two-thirds live in low- and middle-income countries. 46% of adults with hypertension don't even know it (World Health Organization, 2023a). In Indonesia, the incidence of hypertension increases every year. Based on data from (Badan Pusat Statistik, 2018b) that in 2013 the prevalence was 25.8%, while in 2016 it was 30.9% and in 2018 it increased again to 34.1%.

In West Java Province itself, the prevalence of hypertension in 2018 was second after South Kalimantan Province (44.1%), namely 39.6% (Badan Pusat Statistik, 2018b). Based on data (Dinas Kesehatan Provinsi Jawa Barat, 2022) in 2022, the total number of hypertension sufferers is 1,956,417 cases. Meanwhile, the average number of hypertension sufferers in the last 4 years is 3,627,479.75. In Tasikmalaya itself, in 2019 the incidence of hypertension was 70,587 cases (Dinas Kesehatan Provinsi Jawa Barat, 2022).

Another risk factor for NCDs is obesity. Obesity is an abnormal or excessive accumulation of fat that can harm health. According to (World Health Organization, 2021) it is considered obese if the Body Mass Index (BMI) is equal to or more than 30. In 2016 more than 1.9 billion adults aged 18 years or over were overweight. Of this figure, 650 million adults are obese. From 1975 to 2016 the number of obese sufferers increased threefold (World Health Organization, 2021).

In Indonesia itself, the number of obese sufferers has increased from year to year. In 2013, the prevalence of obesity in men was 19.6%, in women 32.9%. In 2016, the prevalence of obesity in men was 24%, in women 41.6%. In 2018, the prevalence of obesity in men was 26.6%, in women 44.4% (Badan Pusat Statistik, 2018a). In Tasikmalaya in 2018 the number of obese men was 4971 people, 6300 people were women (Badan Pusat Statistik, 2018a).

Considering the very detrimental impact of NCDs on increasing morbidity and mortality, the government launched the PTM Integrated Development Post (Posbindu PTM) program since 2012. Posbindu PTM is a community-based NCD control model with the aim of controlling NCDs risk factors independently and sustainably. With the existence of Posbindu PTM, it is hoped that the number of NCDs incidents can be minimized (Kemenkes RI, 2012). The management of NCDs includes early detection, screening, treatment and palliative care for those who need it (World Health Organization, 2023b). Early detection is a very useful effort to prevent the occurrence of disease so as to minimize the costs incurred due to disease (World Health Organization, 2023b).

Based on survey results in 2022, in the PKM Sambongpari area, Mangkubumi District, Tasikmalaya City, the coverage of early detection of PTM is still low. Therefore, in 2022 Fakultas Ilmu Kesehatan Universitas Muhammadiyah Tasikmalaya (FIKes UMTAS) as a form of Muhammadiyah Charity Business will collaborate

with Pimpinan Cabang Muhammadiyah (PCM), Mangkubumi District, Tasikmalaya City to initiate the establishment of Posbindu PTM. Considering that the establishment of Posbindu PTM is in line with the fields and programs of the Pimpinan Cabang Aisyiyah (PCA) Mangkubumi District, the PCM recommends cadre members who mostly come from Mangkubumi District PCA members (Miftahulhaq, 2017).

Therefore, FIKes UMTAS collaborated with the PCM and PCA Mangkubumi District, PKM Sambongpari, and Sambongtengah Subdistrict to establish Posbindu PTM in the PKM Sambongpari area with funding from the Majelis Pendidikan Tinggi, Penelitian dan Pengembangan (Majelis Dikti Litbang) Pimpinan Pusat (PP) Muhammadiyah. On 2<sup>nd</sup> March 2023, Posbindu PTM "Boulevard" was formed in Sambong Tengah Village, RW 01 Sambongpari, Mangkubumi District, Tasikmalaya City.

Posbindu PTM "Boulevard" consists of 10 cadres and has implemented activities every month until October 2023 (Ariyani et al., 2023). From the results of the first implementation in April 2023, it shows that the majority of Posbindu PTM participants' BMI was in the obesity category, 17 people (45.9%) and 14 people (37.8%) in hypertension, while most blood sugar was in the normal category. as many as 32 people (86.5%) (Ariyani et al., 2023). Likewise, the results of implementation activities in the following months showed that the majority of participants experienced hypertension and obesity.

Considering that the screening results show how high the rates of hypertension and obesity are at Posbindu PTM "Boulevard", it is very important to immediately provide assistance to Posbindu PTM "Boulevard" cadres together with PCA, Mangkubumi District, Tasikmalaya City in reducing the incidence of obesity and hypertension. This mentoring activity aims to increase the capacity of cadres to help control hypertension and obesity not only in the context of checking blood pressure and body weight and height but also in providing education on the importance of reducing hypertension and obesity rates as risk factors for NCDs. Because based on research results (Fuadah & Rahayu, 2018) and (Hastuti et al., 2019) it is clear that cadres play a very important role as risk monitors and PTM counselors. By holding this cadre mentoring activity, it is hoped that it can further increase awareness of Posbindu PTM Boulevard participants regarding the importance of controlling blood pressure and body weight to prevent obesity.

## METHOD

The method used in this Community Service activity is Community-Based Research (CBR), namely providing health education accompanied by a pre-test and post-test before and after the health education program. The activity began with local cadres assisted by students distributing pre-test questions about obesity and hypertension 30 minutes before the health education program began. Then continued with health education "Knowing Obesity and Hypertension" for 60 minutes using leaflets and animated videos via their respective gadgets. After that, a question and answer session continued for 30 minutes and ended with the distribution of post test questions. The stages of this community service program are as follows:

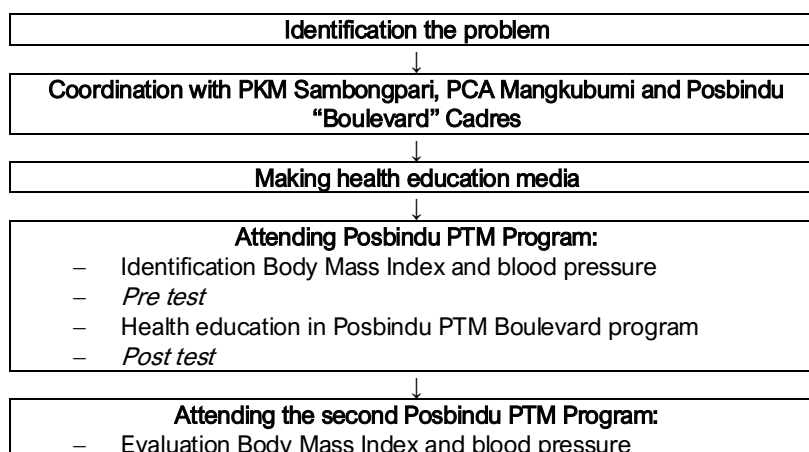


FIGURE1. The Implementation Stage of The Program

## RESULT AND DISCUSSION

### *Health Education about "knowing Obesity and Hypertension"*



**FIGURE 2.** Health Education about "knowing Obesity and Hypertension"

In the first Posbindu PTM activity, an outreach activity was carried out on "Knowing Obesity and Hypertension". 30 minutes before the counseling, a pre-test was carried out on Obesity consisting of 5 numbers and on Hypertension consisting of 5 numbers. Then after the counseling is finished, posbindu participants are given post test questions. The analysis results show the following results:

**TABEL 1.** Pre-test and post-test evaluation results about obesity and hypertension

Number	Mean	
	<i>Pre Test</i>	<i>Post Test</i>
1	3,2	8,8
2	4,7	9,1
3	5,0	9,0
4	3,2	9,4
5	1,2	7,3
6	5,4	9,2
7	5,4	9,7
8	3,2	8,6
9	2,1	7,4
10	2,2	8,5

Source: Primary Data

From table 1 above, it appears that the knowledge of Posbindu PTM participants increased after being given training material on "Knowing Obesity and Hypertension". The average value of increasing knowledge is 5.14. This shows that there is an increase in knowledge about obesity and hypertension after being given health education. This is in accordance with (Fitri & Fitriani, 2019) that health education using leaflets and audio-visual media is declared effective in increasing knowledge about obesity and hypertension (Field theory, Lewin, 2015; Priyanto et al., 2021; Sari & Priyantari, 2019; Ulya & Iskandar, 2017).

### *Evaluation of Body Mass Index and Blood Pressure*

Based on the evaluation results regarding the Body Mass Index (BMI) of Posbindu PTM Boulevard participants in the first implementation on May 25 2024, it shows that of the 40 participants, there were 18 people who were obese and 15 people who had hypertension. Then it was re-evaluated at the next Posbindu

PTM activity, namely on June 29 2024, it appeared that of the 18 people who were obese, there were 4 people (22.2%) who experienced weight loss. Based on the results of interviews, Posbindu participants said that after receiving health education about obesity, participants were motivated to reduce their weight with efforts as stated during the health education, namely: increasing physical activity and reducing processed, fried and high-sugar foods (P2PTM Kemenkes RI, 2018). This is in accordance with (Asnidar et al., 2022) that there is an influence of health education on the self-efficacy and BMI of obese sufferers.

Then, of the 15 people who suffered from hypertension, there were 8 people (53.3%) who experienced a decrease in blood pressure. Based on the results of interviews, Posbindu participants said that after receiving counseling through leaflets and videos, participants became motivated to adopt a lifestyle that could maintain blood pressure within a normal range in accordance with recommendations during the health education, including: doing sports or regular physical activity. regularly and avoid foods: salty foods, pickles, fried foods, chicken skin, processed meat, soup and canned tomatoes, sweet foods and drinks, margarine and alcohol (Editor Medis Siloam Hospital, 2023). This is in accordance with (Utari et al., 2021) that there are differences in motivation to undertake a hypertension diet after being given health education using leaflet media.



**FIGURE 3.** Research Mu Batch 5 Grant Recipient Team at Posindu PTM Boulevard Program in June 2024

## CONCLUSION AND RECOMMENDATION

Based on the "Boulevard" PTM Posbindu Cadre mentoring activities in reducing the incidence of obesity and hypertension that have been carried out, it can be concluded that health education about "Knowing Obesity and Hypertension" using leaflets and videos is effective in increasing knowledge about the importance of preventing and controlling obesity and hypertension. So that in the next Posbindu PTM activity there were 2.2% of Obesity sufferers who experienced weight loss and 53.3% of Hypertension sufferers who experienced a decrease in blood pressure.

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## REFERENCE

- Ariyani, H., Rosidawati, I., Ramadanty, N., Amelisqi, L. B., & Tri, Y. (2023). *Establishment of Integrated Non-Communicable Disease Development Post ( Posbindu PTM ) in Muhammadiyah Branch Leadership ( PCM ) Area , Mangkubumi District , Tasikmalaya City.*
- Asnidar, Andi Suswani, Asdinar, & Muriyati. (2022). Efektifitas Media Pendidikan Kesehatan Terhadap

- Perubahan Pengetahuan, Self Efficacy, Indeks Massa Tubuh Remaja Overweight dan Obesitas. *Jurnal Kesehatan Panrita Husada*, 7(1), 53–66. <https://doi.org/10.37362/jkph.v7i1.727>
- Badan Pusat Statistik. (2018a). *Prevalensi Obesitas Pada Penduduk Umur > 18 Tahun Menurut Jenis Kelamin 2013-2018*. <https://www.bps.go.id/indicator/30/1781/1/prevalensi-obesitas-pada-penduduk-umur-18-tahun-menurut-jenis-kelamin.html>
- Badan Pusat Statistik. (2018b). *Prevalensi Tekanan Darah Tinggi Menurut Provinsi 2013-2018*. <https://www.bps.go.id/indicator/30/1480/1/prevalensi-tekanan-darah-tinggi-menurut-provinsi.html>
- Dinas Kesehatan Provinsi Jawa Barat. (2022). *Jumlah penderita hipertensi yang mendapat pelayanan kesehatan berdasarkan kabupaten/kota di Provinsi Jawa Barat dari tahun 2019 s.d. 2022*. <https://opendata.jabarprov.go.id/id/dataset/jumlah-penderita-hipertensi-yang-mendapat-pelayanan-kesehatan-berdasarkan-kabupatenkota-di-jawa-barat>
- Editor Medis Siloam Hospital. (2023). *Mengenal Penyebab, Gejala, dan Cara Mengatasi Hipertensi*. <https://www.siloamhospitals.com/informasi-siloam/artikel/apa-itu-hipertensi>
- Field theory, Lewin, 1954. (2015). Pendidikan Kesehatan Dalam Peningkatan Pengetahuan, Sikap Dan Keterampilan Keluarga Dengan Hipertensi - Pilot Study. *Jurnal Ilmu Keperawatan*, 3(2), 111–121. <http://jurnal.unsyiah.ac.id/JIK/article/view/5310>
- Fitri, R. P. S., & Fitriani, I. M. (2019). Efektifitas Pendidikan Kesehatan Dengan Penggunaan Media Audio Visual Terhadap Perubahan Pengetahuan Remaja Tentang Obesitas Di Smpn 1 Pekanbaru. *Prepotif Jurnal Kesehatan Masyarakat*, 53(9), 1689–1699.
- Fuadah, D. Z., & Rahayu, N. F. (2018). Pemanfaatan POS Pembinaan Terpadu (POSBINDU) Penyakit tidak Menular (PTM) pada Penderita Hipertensi. *Jurnal Ners Dan Kebidanan (Journal of Ners and Midwifery)*, 5(1), 020–028. <https://doi.org/10.26699/jnk.v5i1.art.p020-028>
- Hastuti, N. M., Pupitasari, R., Sugiarsi, S., & Karanganyar, M. H. (2019). PERAN KADER KESEHATAN DALAM PROGRAM POSBINDU PENYAKIT TIDAK MENULAR DI PUSKESMAS JATEN Prodi D3 RMIK STIKes Mitra Husada Karanganyar Email : Nunikmaya21@mail.com 2 Prodi D3 Kebidanan STIKes Prodi D4 MIK STIKes. *Maternal*, 11(P-ISSN: 2541-3120 E-ISSN: 2541-5085), 57–61.
- Kemendes RI. (2012). *Petunjuk Teknis Pos Pembinaan Terpadu Penyakit Tidak Menular (Posbindu PTM)*. Dirjen penyakit dan Penyehatan Lingkungan Dirjen Pengendalian PTM.
- Miftahulhaq, M. (2017). Strategi Pelaksanaan Dakwah 'Aisyiyah Melalui Pendekatan Pembangunan Masyarakat Lokal. *Jurnal Al-Hikmah*, 3(1), 5–18.
- P2PTM Kemendes RI. (2018). *Apa itu Obesitas ?* <https://p2ptm.kemdes.go.id/infographic-p2ptm/obesitas/apa-itu-obesitas>
- Priyanto, Alvin Abdillah, & Titin Zaitun. (2021). Jurnal Priyanto. *Jurnal Ilmiah Ilmu Kesehatan*, X, 1–11.
- Sari, Y. R., & Priyantari, W. (2019). Pengaruh Pendidikan Kesehatan Tentang Hipertensi Terhadap Pengetahuan Lansia Dalam Mencegah Hipertensi Di Panti Werdha Budhi Dharma Yogyakarta. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Ulya, Z., & Iskandar, A. (2017). Pengaruh Pendidikan Kesehatan Dengan Media Poster Terhadap Pengetahuan Manajemen Hipertensi Pada Penderita Hipertensi. *Jurnal Keperawatan Soedirman*, 12(1), 38. <https://doi.org/10.20884/1.jks.2017.12.1.715>
- Utari, R., Sari, N., & Sari, F. E. (2021). Efektivitas Pendidikan Kesehatan perhadap Motivasi Diit Hipertensi Pada Lansia Hipertensi di Posyandu Lansia Desa Makarti Tulang Bawang Barat Tahun 2020. *Jurnal Dunia Kesmas*, 10(1), 136–144. <https://doi.org/10.33024/jdk.v10i1.3550>
- World Health Organization. (2021). *Obesity and overweight*. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
- World Health Organization. (2023a). *Hypertension*. <https://www.who.int/news-room/fact-sheets/detail/hypertension>
- World Health Organization. (2023b). *Noncommunicable diseases*. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>