



Jurnal Pengabdian Masyarakat Lentora

e-ISSN: 2809-0667

Volume 5 Issue 2, March 2026, Page 112-120

DOI: [10.33860/jpml.v5i2.4215](https://doi.org/10.33860/jpml.v5i2.4215)

Website: <https://jurnal.poltekkespalu.ac.id/index.php/jpml/>

Integrated Education and Screening Program for Adolescents at Adolescent Community Based Integrated Post for Prevention and Early Detection of Hypertension

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History Artikel

Received: : 14-09-2025

Accepted: 29-03-2026

Published: 31-03-2026

Keywords :

Hypertension-Prevention & Control;
Health Promotion;
Adolescent Health Service;

ABSTRACT

Hypertension can occur in adolescents and is often asymptomatic. However, adolescent participation in posyandu, one of whose goals is early detection of non-communicable diseases (NCDs), remains low. Purpose: This community service aims to promote health to adolescents at the adolescent posyandu in an effort to prevent and detect hypertension early. Methods: Early detection was conducted by measuring blood pressure, providing counseling, distributing leaflets, and administering pre-post tests. The activity was carried out at the adolescent posyandu in Awu Village on July 31, 2025, attended by 5 cadres and 15 adolescents. Results: All adolescent participants did not know their blood pressure. The blood pressure examination showed that one adolescent had above-normal blood pressure (140 mmHg). The pre-post test knowledge level increased by an average of 41%. Counseling proved to be an effective strategy to increase knowledge. Previously unknown information was that hypertension can occur in adolescents and is asymptomatic. The most effective way to detect it is to measure blood pressure regularly. Conclusion: The final evaluation showed that this community service activity was successful, as seen from the enthusiasm of the participants. It is hoped that adolescents will be empowered, have the knowledge, attitudes, and skills for healthy living, and help break the chain of hypertension.



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INTRODUCTION

Awu Village is one of 11 villages in North Luwuk District. It covers an area of 3 km². It consists of 4 RW and 8 RT. The population is 1,361, consisting of 681 males and 680 females. In North Luwuk, the largest age group is adolescents, namely the 10-19 age group ([Badan Pusat Statistik Banggai, 2024](#)).

Adolescent Community Based Integrated Post aims to facilitate access and efforts to meet the achievement of health services for adolescents. One of them is aimed at early detection and prevention of non-communicable diseases ([Kemenkes Poltekkes Yogyakarta, 2023](#)). In reality, adolescent participation in Adolescent

Community Based Integrated Post is still low (Ni Made Sri Gayatri, Made Agus Sugianto, 2024), partly due to a lack of knowledge about its benefits. Adolescent Community Based Integrated Post cadres have an important role in providing health information to the community, and Adolescent Community Based Integrated Post can effectively improve adolescent health and community empowerment (Eltanin Kumala Dewi, Sutopo Patria Jati, 2024). The problem of hypertension has often been socialized in the community, but cadres and adolescents in Adolescent Community Based Integrated Post need continuous mentoring in the form of refreshing knowledge and skills (Kostania et al., 2022) (Furqan Syakban Nurrahman, n.d.). By refreshing knowledge and skills, it is hoped that there will be an increase in knowledge and skills for cadres and adolescents regarding hypertension (Patria Asda, 2022) (Diwanto, 2020)(Dianti, 2017).

The main types of activities at the Adolescent Community Based Integrated Post in relation to non-communicable diseases that can be carried out are providing IEC on types of non-communicable diseases and health services in the form of early detection of risk factors for non-communicable diseases, counseling on non-communicable risk factors, referring to health facilities if one or more risk factors for non-communicable diseases are found (Kemenkes Poltekkes Yogyakarta, 2023).

Empowerment of cadres and adolescents will be maximized in adolescent health post activities as a forum for adolescent health services in Awu Village. Health promotion is carried out with the ultimate goal of improving the health of the community, especially adolescents. Adolescent Community Based Integrated Post is a forum for implementing increased knowledge and skills of adolescents in efforts to promote and prevent non-communicable diseases, especially hypertension (Sitorus et al., 2023). By having knowledge and skills, adolescents will be empowered in efforts to manage their own health and those around them (Nurlaela & Koro, 2023) (Christiani & Yuswantoro, 2023). Empowerment means that adolescents are willing and able to improve their health (Ai Nurasiah, Fera Riswidautami Herwandar, 2022).

Based on initial observations, hypertension remains a high problem in Awu Village, necessitating prevention and early detection efforts starting at an early age, specifically in adolescence. During this visit, the majority of hypertension sufferers at the Pobindu PTM were elderly and had long-standing hypertension (Sukmawati et al., 2023), adolescents very not enough his participation in posyandu (Ni Made Sri Gayatri, Made Agus Sugianto, 2024). Solutions that can done is develop promotion health in adolescents that is empowerment adolescent at Adolescent Community Based Integrated Post to be able to do effort preventive and detection early. Adolescents only can empowered if adolescent own knowledge and skills in recognize hypertension in himself and those around him. Therefore That need given knowledge and skills in adolescents with education about hypertension . Hypertension in adolescents often called asymptomatic (Vaduganathan et al., 2022) (Kemenkes Poltekkes Yogyakarta, 2023), Therefore, it is important to measure blood pressure to determine the health status of adolescents. This promotional activity was carried out in the form of community service by lecturers and students from the Health Polytechnic of the Ministry of Health in Palu, Indonesia, in collaboration with the Banggai Regency Health Office, namely the North Luwuk Community Health Center, which is responsible for health issues in Awu Village. This activity aims to promote health to Adolescent Community Based Integrated Post in an effort to prevent and detect hypertension early.

METHODS

This community service activity was implemented at the Adolescent Community Based Integrated Post in Awu Village, North Luwuk District, Banggai Regency, Central Sulawesi, on July 31, 2025. The main targets were adolescents and Adolescent Community Based Integrated Post cadres in Awu Village. The cadres consisted of 5 people and the adolescent participants were 15 people (aged 13–18 years). The participation of the Adolescent Community Based Integrated Post as partners is expected to ensure the sustainability of the activity outcomes. The form of target participation was active involvement in activities and providing feedback during the session.

Preparation was done through initial problem observation on-site, including discussions with cadres and health mentors regarding adolescent health problems in Awu Village.

Table 1. Activity flow:

Stage	Activity
Preparation	Observation, discussion with cadres and health mentors
Pre-test	Questionnaire to measure initial knowledge about hypertension
Blood Pressure Measurement	Screening for all adolescent participants
Counseling	Education about hypertension in adolescents
Leaflet Distribution	Promotional media on hypertension prevention
Post-test	Evaluation of knowledge improvement
Evaluation	Active participation and pre-post test score analysis

Success criteria: Participants were actively engaged in discussions and there was an improvement in the pre-post test percentage

RESULTS AND DISCUSSION

Implementation of Activities

Community service activities were carried out on Thursday, July 31, 2025. This activity collaborated with:

- a. Biak Community Health Center as the Adolescent Community Based Integrated Post Supervisor
- b. Awu Village as the owner of the Adolescent Community Based Integrated Post
- c. Service team of Lecturers and Diploma III Nursing students from Luwuk, Poltekkes Kemenkes Palu

Supporting facilities prepared:

- a. Banners
- b. Leaflets (containing definition, classification, risk factors, smart prevention, obedient control, balanced diet, and complications of hypertension)
- c. Blood pressure measuring instruments (sphygmomanometer)
- d. Questionnaires (pre-test and post-test)

- e. Stationery
- f. Presentation materials

Blood Pressure Screening Results

Each participant underwent a blood pressure check. Interviews prior to the checks revealed that all adolescent participants had never had their blood pressure checked before.

Table 2. Blood Pressure Screening Results

Category	Number of Adolescents	Percentage
Normal blood pressure (<120/80 mmHg)	14	93.3%
Above normal blood pressure (\geq 120/80 mmHg)	1	6.7%
Total	15	100%

Note: One adolescent had a systolic reading of 140 mmHg. The adolescent experienced no symptoms (asymptomatic).

The adolescent with above-normal blood pressure was educated on healthy lifestyle changes through the CERDIK program (*Cek kesehatan, Enyahkan asap rokok, Rajin aktivitas fisik, Diet sehat seimbang, Istirahat cukup, Kelola stres*) and was advised to undergo further blood pressure checks at a local health facility for confirmation.

Blood pressure checks in adolescents can potentially detect asymptomatic hypertension (Saing, 2016), so regular blood pressure checks are very important as a periodic preventive and early detection effort (Nurarifah & Sukmawati, 2024; Setiana et al., 2022).

Knowledge Improvement (Pre-Post Test)

The activity began with a pre-test, followed by counseling, leaflet distribution, and a question-and-answer session. The Q&A session went well, with adolescents enthusiastically asking questions and expressing their readiness to change unhealthy behaviors.

Table 3. Pre-test and Post-test Results

Participant Group	Average Score (%)	Pre-test	Average Score (%)	Post-test	Improvement (%)
Cadres (n=5)	58		92		+34
Adolescents (n=15)	52		93		+41
Overall (n=20)	54		93		+41

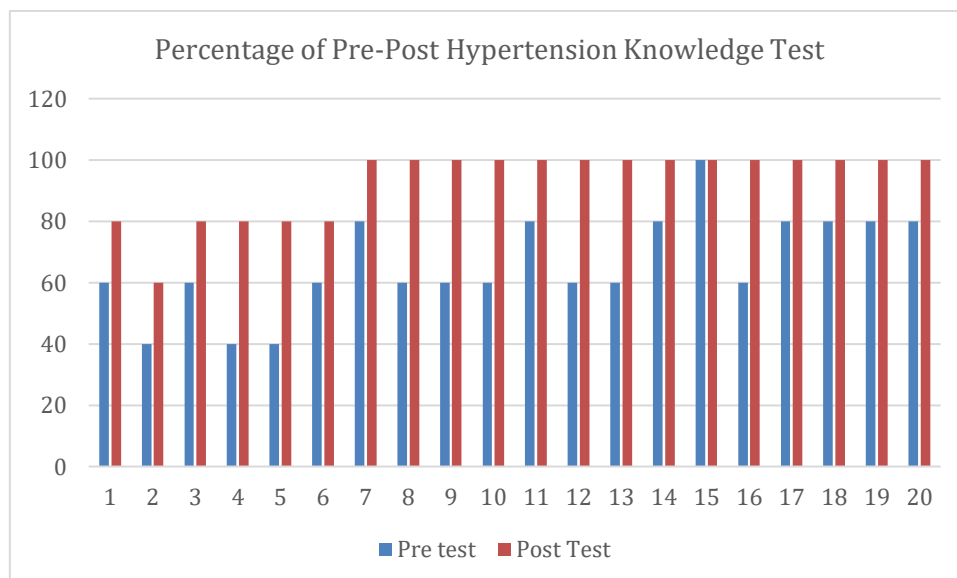


Figure 1. Graph of Knowledge Enhancement among Cadres and Adolescents about Hypertension

The results showed a 41% increase in the percentage of adolescent knowledge about hypertension. This aligns with research findings that describe knowledge improvement after health promotion activities (Fitroh et al., 2025). Increasing knowledge through counseling is in line with recent studies suggesting that health promotion in the form of counseling is an effective technique to improve public knowledge (Nurkharima, 2025).

Hypertension is problem health that has been become attention and often socialized. This is means adoelscents have also exposed and have knowledge base about hypertension. The pretest was conducted to determine knowledge and understanding beginning adolescents. Meanwhile posttest done to see to what extent has it improved knowledge after extension activities shows an increase in the percentage of adolescent knowledge at Posyandu Village Awu about hypertension. The results showed increase percentage as much as 41%. This is in accordance with findings research that describes improvement knowledge after activity Promotion health (Fitroh et al., 2025). Increase knowledge through counseling in line with invention study the latest to put forward promotion health in the form of counseling is an effective technique to improve knowledge public (Nurkharima, 2025).

Epidemiological transition due to unhealthy lifestyles of adolescents due to lack of physical activity, increasing prevalence of obesity (Byun et al., 2012) This makes adolescents a vulnerable group, but is often overlooked in hypertension management strategies. Many adolescents are unaware that elevated blood pressure above normal can also occur in adolescence (Siswanto & Afandi, 2019). This The same with results obtained from results pre-test before counseling. Other materials that are lacking understood adolescent that hypertension in adolescents nature asymptomatic and the simplest and most effective way to find out is check pressure blood in a way periodically (Vaduganathan et al., 2022). This community service activity is not only beneficial in increasing knowledge but also as an effort to break the chain of cardiovascular disease which is the number one cause of death in the world (Cesare et al., 2023).



Figures 2 and 3 Health promotion in the form of counseling and questions and answers



Figures 4 and 5 Distribution of leaflets and blood pressure measurements

CONCLUSIONS AND SUGGESTIONS

Conclusion:

The community service activities carried out included: Hypertension health promotion, Blood pressure measurement, Pre-test and post-test, Distribution of promotional media (leaflets) to prevent hypertension in adolescents

These activities were successfully implemented due to support from the Awu Village apparatus, Biak Health Center, Adolescent Community Based Integrated Post cadres, and adolescents themselves. This activity showed: An increase in the level of knowledge and skills of adolescents (41% improvement); Enthusiasm to care for their own health; Ability to perform early detection and prevention of hypertension.

The final evaluation results indicated that this community service activity was successful.

Suggestions:

1. For adolescents: Regularly check blood pressure at least once every 6 months, even without symptoms.
2. For cadres: Continue to provide regular health education and blood pressure screening at every posyandu session.
3. For health centers: Support adolescent posyandu with equipment, training, and regular supervision.
4. For future community service: Conduct follow-up activities to evaluate behavioral changes after health promotion.

It is hoped that adolescents will be empowered, have the knowledge, attitudes, and skills for healthy living, and help break the chain of hypertension

ACKNOWLEDGEMENT

We would like to express our gratitude to:

1. The Director of the Palu Ministry of Health Polytechnic for providing financial support for this community service activity (PKM).
2. The Head of Awu Village, North Luwuk District, Banggai Regency, for facilitating the PKM activities so they could be carried out well.
3. The cadres and adolescents of Awu Village who participated in this activity.
4. The Biak Health Center as the mentor for Adolescent Community Based Integrated Post in North Luwuk District for facilitating the PKM activities.

REFERENCES

- Ai Nurasih, Fera Riswidautami Herwandari, S. (2022). Problem Based Learning Untuk Peningkatan Pengetahuan Kader Posyandu Remaja di Kabuapten Kuningan. *Jurnal Ilmu Kesehatan Bhakti Husada: Health Sciences Journal*, 13(2), 126–134. <https://doi.org/10.34305/jikbh.v13i02.560>
- Badan Pusat Statistik Banggai. (2024). *Kecamatan Luwuk Utara Dalam Angka 2024*. 9, 99. <https://banggaikab.bps.go.id/publication.html?page=2>
- Byun, W., Dowda, M., & Pate, R. R. (2012). Associations between screen-based sedentary behavior and cardiovascular disease risk factors in Korean youth. *Journal of Korean Medical Science*, 27(4), 388–394. <https://doi.org/10.3346/jkms.2012.27.4.388>
- Cesare, M. D., Bixby, H., Gaziano, T., Hadeed, L., Kabudula, C., McGhie, D. V., Mwangi, J., Pervan, B., Perel, P., Piñeiro, D., Taylor, S., & Pinto, F. (2023). World Heart Report 2023: Confronting the World's Number One Killer. *World Heart Federation*, 1–52. <https://world-heart-federation.org/wp-content/uploads/World-Heart-Report-2023.pdf>
- Christiani, M., & Yuswantoro, E. (2023). *Pemberdayaan Kader Posyandu Remaja*. 3 (September).
- Dianti, Y. (2017). Pembinaan Kader Remaja Dalam Mencegah Penyakit Tidak Menular di Wilayah Kerjauskesmas Warung Jambu. *Angewandte Chemie International Edition*, 6(11), 951–952., 6, 5–24. <http://repo.iain-tulungagung.ac.id/5510/5/BAB2.pdf>
- Diwanto, Y. P. (2020). *Peningkatan Pengetahuan dan Keterampilan Kader dan Karang Taruna tentang Hipertensi*.
- Eltanin Kumala Dewi, Sutopo Patria Jati, A. S. (2024). Optimalisasi Peran Lintas Sektor Dalam Pelaksanaan Posyandu Remaja. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, 14, 1011–1026. <https://journal2.stikeskendal.ac.id/index.php/PSKM/article/download/1935/1215>
- Fitroh, S. N., Siwi, A. S., & Khasanah, S. (2025). Strategi Pencegahan Hipertensi Pada Remaja : Edukasi Kesehatan. *BERNAS: Jurnal Pengabdian Kepada Masyarakat*, 6(2), 1555–1563. <https://www.ejournal.unma.ac.id/index.php/bernas/article/view/13198>
- Furqan Syakban Nurrahman, Y. A. (n.d.). *Optimalisasi Status Kesehatan Remaja*

- Melalui Pelatihan Kader Remaja Peduli Kesehatan.* 20–24. <https://jurnal.unimus.ac.id/index.php/psn12012010/article/viewFile/3108/3012>
- Kemenkes Poltekkes Yogyakarta. (2023). *Panduan Posyandu Remaja*.
- Kostania, G., Yulifah, R., & Suprpti, S. (2022). Pemberdayaan Kader Kesehatan Remaja Melalui Program Pelatihan dan Pendampingan Posyandu Remaja. *Jurnal Pengabdian Masyarakat Kesehatan Stikes Pemkab Jombang*, 8(1), 64–69. <https://journal.stikespemkabjombang.ac.id/index.php/jpm/article/view/1023>
- Ni Made Sri Gayatri, Made Agus Sugianto, K. F. A. P. (2024). Evaluasi Program Posyandu Remaja di Wilayah Kerja UPTD Puskesmas Abiansemal I. *Jurnal Kesehatan Sains, Dan Teknologi (JAKASAKTI)*, 3. <https://jurnal.undhirabali.ac.id/index.php/jakasakti/article/view/2948>
- Nurarifah, N., & Sukmawati, S. (2024). Optimalisasi Edukasi Metode Brainstorming untuk Meningkatkan Self Care Management pada Pasien Hipertensi. *Jurnal Pengabdian Kepada Masyarakat Citra Delima*, 1(2), 64–72. <https://doi.org/10.33862/jp.v1i2.451>
- Nurkharima, A. (2025). *Efektivitas Promosi Kesehatan Dalam Meningkatkan Pengetahuan Terkait Hipertensi: Literature Review.* 6, 7719–7729. <https://journal.universitaspahlawan.ac.id/index.php/jkt/article/view/44957>
- Nurlaela, E., & Koro, S. (2023). *Pelatihan kader posyandu remaja dalam upaya peningkatan keterampilan kader remaja.* 7(3), 1–6. https://www.researchgate.net/publication/371813340_Pelatihan_Kader_Posyandu_Remaja_Dalam_Upaya_Peningkatan_Keterampilan_Kader_Remaja
- Patria Asda. (2022). Peningkatan Pengetahuan dan Keterampilan Kader Remaja Karang Taruna Tentang Hipertensi. *Jurnal Abdimas Saintika Jurnal.* <https://jurnal.syedzasaintika.ac.id/index.php/abdimas/article/view/1817/0>
- Saing, J. H. (2016). Proceedings of the 4th International Conference on Management, Leadership and Governance, ICMLG 2016. *Proceedings of the 4th International Conference on Management, Leadership and Governance, ICMLG 2016*, 6(4), 159–165.
- Setiana, N. R., Istiana, N., Saputri, R. K., Kiswati, T., Anam, R. S., Rohmatullah, M. S., Sholeh, M., & Septiana, Y. (2022). Upaya Pencegahan Hipertensi Remaja melalui Pendidikan Kesehatan dan Pemeriksaan Faktor Risiko Hipertensi di Universitas Nahdlatul Ulama Sunan Giri. *Prosiding Seminar Nasional Pemberdayaan Masyarakat (SENDAMAS)*, 2(1), 71. <https://doi.org/10.36722/psn.v2i1.1571>
- Siswanto, Y., & Afandi, A. (2019). Peningkatan Pengetahuan Tentang Hipertensi Pada Remaja. *Jurnal Pemberdayaan Masyarakat Mandiri Indonesia (Indonesian Journal of Independent Community Empowerment)*, 2(3), 1–7. <https://doi.org/10.35473/jpmmi.v2i3.32>
- Sitorus, M. E. J., Nababan, D., Bangun, H. A., Sari, U., Indonesia, M., Muslim, J. K., Helvetia, K., Medan, K., & Utara, S. (2023). *Sosialisasi Tentang Hipertensi Pada Kader Posyandu Remaja Kelurahan Pintusona Kecamatan Pangururan.* 2(1), 63–69. <https://tourjournal.akupuntour.com/index.php/tourabdimasjournal/article/view/48>
- Sukmawati, S., Nurarifah, N., & Nitro, G. (2023). Edukasi tentang Hipertensi bagi Kader dan Lansia Hipertensi di Posbindu Penyakit Tidak Menular. *Jurnal Pengabdian*

Masyarakat Lentora, 3(1), 16–22. <https://doi.org/10.33860/jpml.v3i1.3318>

Vaduganathan, M., Mensah, G. A., Turco, J. V., Fuster, V., & Roth, G. A. (2022). The Global Burden of Cardiovascular Diseases and Risk: A Compass for Future Health. *Journal of the American College of Cardiology*, 80(25), 2361–2371. <https://doi.org/10.1016/j.jacc.2022.11.005>