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IMPROVING COMMUNITY HEALTH WORKERS' KNOWLEDGE IN EARLY STUNTING DETECTION THROUGH ANTHROPOMETRIC TRAINING AND THE BERAKSI APPLICATION

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ABSTRACT

Stunting remains a critical public health issue that impairs child growth and development. In Cibeber sub-district, 6.83% of the total 1,339 preschool-aged children were stunted, with the highest rates observed in RW 08 (38 children), RW 06 (32), and RW 03 (22). According to Indonesian Ministry of Health Regulation No. 2/2020, stunting is defined as a height-for-age z-score below –2 SD. This study aimed to evaluate whether anthropometry training using the mobile application BERAKSI can improve community health workers' knowledge of early stunting detection. Employing a descriptive quantitative design with a pre-test–post-test, we involved all 18 community health workers from Posyandu Rose A and B in RW 08, Cibeber. Pre-training, 56% (10) of community health workers demonstrated good knowledge, 33% (6) fair, and 11% (2) poor. Post-training, all community health workers (100%) achieved good knowledge. The findings indicate that comprehensive anthropometry training, combined with application-based guidance, significantly enhances community health workers' knowledge. For accurate growth surveillance and record keeping in maternal–child health books, community health workers must possess standardized anthropometric skills and proficiency.

Keywords: Anthropometry, Stunting, BERAKSI Application, Community health worker, Posyandu

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INTRODUCTION

UNICEF and Indonesia's National Development Planning Agency (Bappenas) evaluated the National Strategy for Accelerating Stunting Prevention, addressing three major nutritional challenges: wasting, stunting, and childhood overweight/obesity (UNICEF, 2024). In 2024, Indonesia aims to reduce child stunting to 14%. The national prevalence of stunting dropped from 30.8% in 2018 to 21.5% in 2023—a decline of 9.3 percentage points, averaging 1.86 points annually. West Java's rate stood at 21.7%, while Cimahi recorded 2,890 stunted children (9.4%) in 2023 (Bappenas, 2018; Ministry of Health, 2023).

Cibeber sub-district, one of Cimahi's 15 administrative areas, exhibits significant variability in child anthropometric measures, with several children classified as "short" or "very short." Among 1,339 children, 7.73% were normal while 6.83% were stunted (Puskesmas Cibeber data). The Indonesian Ministry of Health defines stunting as a height-for-age z-score below –2 SD per its Regulation No. 2/2020 (Abeway et al., 2018; Ministry of Health, 2020).

Stunting stems from multiple factors, including maternal education and height, economic status, low birth weight, breastfeeding, maternal nutrition, micronutrient deficiencies, infections, parental nutritional knowledge, antenatal/postnatal care quality, and inadequate sanitation. Its impacts range from impaired immunity and cognitive development to increased risk of obesity, glucose intolerance, cardiovascular problems, hypertension, and osteoporosis (Akbar & Huriah, 2022; Lalu Makripuddin et al., 2021).

Effective stunting prevention in Indonesia requires integrated multisectoral interventions (Suparyanto & Rosad, 2020). Since Presidential Regulation No. 72/2021, the Family Welfare Movement (PKK) has played a strategic role in stunting taskforces from provincial to village levels. Village community health workers—including PKK youth and family planning community health workers—assist in growth monitoring at Posyandu (Permendagri, 2024). Community health workers must ensure precise anthropometric measurements to avoid misleading growth assessments (Yusran et al., 2024).

Previous community service projects (e.g., Indriati, 2023) revealed persistent misunderstandings regarding accurate anthropometry techniques. To address this, we integrated the BERAKSI mobile application—a free Android tool available on the Play Store—that standardizes data entry and categorizes growth outcomes via WHO growth charts based on the Minister of Health's standards (Susanti et al., 2022).

METHODS

This descriptive quantitative study used a one-group pre-test–post-test design. The total sample comprised 18 Posyandu community health workers (Rose A: $n = 10$; Rose B: $n = 8$) in RW 08, Cibeber. The instrument, adapted from Indonesia's anthropometry and early childhood development screening standards (Minister of Health Decree No. HK.01.07/MENKES/51/2022), was validated ($r = 0.48$) and reliable ($\alpha = 0.88$) in Posyandu Lestari, RW 10. Following ethical approval (KEPK-STIKes 9/D/KEPK-STIKes/I/2025), community health workers completed pre-training questionnaires, participated in theoretical and practical training using the national anthropometry kit, and logged measurements via the BERAKSI app. A post-test knowledge assessment followed.

RESULT

In this study, data analysis used descriptive methods which are presented in the form of frequency distribution in the following table:

Table 1. Distribution of Community Health Workers' Knowledge on Anthropometry

Community health worker **Knowledge of Anthropometry**	***Pre-test*** **F**	**Percentage (%)**	***Post test*** **F**	**Percentage (%)**
Good	10	56	18	100
Fair	6	33	0	0
Poor	2	11	0	0
Total	18	100	18	100

Based on the table above, it is known that before the training, community health workers who had good knowledge were 10 respondents (56%), and those who had sufficient knowledge were 6 respondents (33%). Those who had insufficient knowledge were 2 respondents (11%). It can be concluded that most community health workers had good knowledge before the anthropometry training was conducted to conduct early detection of stunting. After the training, all community health workers (18 respondents) had increased their knowledge to good (100%).

DISCUSSION

Prior to training, 56% of community health workers already possessed good anthropometry knowledge, likely due to their long service (>5 years), routine practice, prior health department training, and supervision (Wijhati et al., 2018). Educational background varied: most held high-school diplomas and worked as homemakers, while two held bachelor's degrees and served as teachers—educational attainment is associated with enhanced problem-solving and adaptation (Novitasari et al., 2022).

Post-training results were unanimously positive: all community health workers achieved good knowledge scores. Practical simulations revealed common issues: failure to remove children's accessories during measurement and difficulties handling non-cooperative children—factors that can bias measurement outcomes and affect growth records. Ongoing refreshers are essential (Hal et al., 2024).

The BERAKSI app facilitated accurate data recording and provided real-time growth and development categorizations based on Indonesian anthropometric standards. It also includes the KPSP digital screening tool aligned with the national SDIDTK guidelines (Ministry of Health, 2016), enabling community health workers to consult results with health professionals, reinforcing its utility for early detection (Susanti et al., 2022).

CONCLUSION

Before training, 56% of community health workers demonstrated good knowledge; 33% were fair and 11% poor. Following anthropometry training and digital application support, 100% reached a good knowledge level. Knowledge gains were influenced by training, educational background, community health worker experience, and supportive interventions by health authorities.

RECOMMENDATION

Posyandu community health workers should receive regular academic and practical training, digital tools like BERAKSI, and ongoing supervision to standardize anthropometric skills, facilitating accurate growth monitoring and contributing strategically to community-level stunting prevention programs.

REFERENCES

Abeway, S. *et al.* (2018) 'Stunting and its determinants among children aged 6-59 Months in Northern Ethiopia: A cross-sectional study', *Journal of Nutrition and Metabolism*, 2018. Available at: https://doi.org/10.1155/2018/1078480.

Akbar, I. and Huriah, T. (2022) 'Modul Pencegahan Stunting', p. 22. Available at: http://repository.umy.ac.id/bitstream/handle/123456789/36596/Modul Pencegahan Stunting - EBOOK.pdf?sequence=1&isAllowed=y.

Dyeri Susanti, Fatonah Sofa, Ryka Juaeriah, S.W. (2022) *Manual E-Book Aplikasi BERAKSI*. Cimahi.

Hal, A. *et al.* (2024) 'Aksiologiya : Jurnal Pengabdian Kepada Masyarakat Pelatihan Penyegaran Pengukuran Antropometri pada Kader Posyandu di Wilayah Kerja Puskesmas Poka-Rumah Tiga , Ambon , 2021 Refresher Training on Anthropometric Measurement of Integrated Service Post ' s Community health workers in The Catchment Area of Poka-Rumah Tiga Health Center , Ambon , 2021 Berdasarkan hasil Pemantauan Status Gizi (PSG) tahun 2016 , prevalensi balita dengan angka sanitasi , minimnya akses air bersih , serta', 8(3).

Indriati, M. (2023) 'Peningkatan Kapasitas Kader Posyandu Dalam Mendeteksi Dan Mencegah Stunting', *Jurnal Abdi Masada*, 4(1), pp. 1–4. Available at: https://doi.org/10.38037/am.v4i1.66.

Kemenkes (2020) 'Peraturan Menteri Kesehatan Republik Indonesia Nomor 2 Tahun 2020 Tentang Standar Antropometri Anak', 2507(February), pp. 1–9.

Kementerian Kesehatan (2019) 'Modul Pelatihan Bagi Pelatih Kader Kesehatan', *Pusat Pelatihan SDM Kesehatan Badan Pengembangan dan Pemberdayaan Sumber Daya Manusia Kesehatan*, pp. 1–497. Available at: https://jurnal.unpad.ac.id/mkk/article/view/36654/18625.

Kementerian PPN/ Bappenas (2018) 'Strategi Nasional Percepatan Pencegahan Stunting', *Strategi Nasional Percepatan Pencegahan Stunting*, (November), p. 96.

Kesehatan, K. (2016) 'Pedoman Pelaksanaan Stimulasi, Deteksi dan Intervensi Dini Tumbuh Kembang Anak', *Direktorat Kesehatan Departmen Kesehatan Keluarga*, p. 59.

Lalu Makripuddin, Dadi Ahmad Roswandi, F.T.T. (2021) *Kebijakan dan Strategi Percepatan Penurunan Stunting Di Indonesia*.

Novitasari, Usman and Ayu Dwi Putri Rusman (2022) 'Analisis Kinerja Kader Posyandu Dalam Pengukuran Antropometri Di Wilayah Kota Parepare', *Jurnal Ilmiah Manusia Dan Kesehatan*, 5(1), pp. 487–493. Available at: https://doi.org/10.31850/makes.v5i1.725.

Permendagri (2024) 'Pos Pelayanan Terpadu'.

Perpres (2021) 'Peraturan Presiden No. 72'.

Suparyanto dan Rosad (2020) 'Pendampingan Keluarga BAGI KELUARGA BADUTA DAN BALITA', *Suparyanto dan Rosad*, 5(3), pp. 248–253.

UNICEF (2024) 'Formative Evaluation of the National Strategy to Accelerate Stunting Prevention'.

Wijhati, E.R., Suharni and Susilawati, B. (2018) 'The Growth Development Child Training of Posyandu Community health workers At Ponowaren Gamping Sleman', *Jurnal Pengabdian dan Pemberdayaan Masyarakat*, 2(2), pp. 343–347.

Yusran, P.S. *et al.* (2024) 'Pelatihan Pengukuran Antropometri Balita Pada Kader Posyandu di Desa Lombuea Kecamatan Moramo Utara Kabupaten Konawe Selatan DOI : https://doi.org//10.54832/judimas.v3i1.411, pp. 162–173.