

Utilization of Mobile Health (M-Health) Technology to Increase Coverage and Monitoring of Basic Immunization

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ABSTRAK

Rural areas in Indonesia still face significant challenges in improving maternal and child health, as reflected in high maternal and infant mortality rates (MMR) and infant mortality rates (IMR). Posyandu, as a community-based health service, is a key instrument in reaching vulnerable populations through promotive and preventive approaches. However, Posyandu's effectiveness in various rural areas is strongly influenced by structural factors such as the availability of infrastructure, cadre competence, and village government support, as well as cultural factors such as local values and health literacy. This study aims to evaluate Posyandu's effectiveness in improving maternal and child health in rural areas using a descriptive qualitative approach based on literature studies. Data were obtained from various scientific sources and analyzed using a thematic approach and the PRISMA framework. The study results indicate that Posyandu's success is highly dependent on cross-sector synergy, policy support, and digital transformation through the implementation of e-Posyandu. Geographical constraints, poor cadre training, and minimal community participation are key inhibiting factors. Therefore, a participatory approach, ongoing training, and information technology integration are strategic keys. These findings provide an important basis for evidence-based policy-making in order to strengthen the role of Posyandu as a pillar of basic health services in rural areas.

Keywords: *Effectiveness of Health Services; Maternal and Child Health; Integrated Health Posts (Posyandu)*

INTRODUCTION

Rural areas in Indonesia still face significant health challenges, particularly related to maternal and child health. Data from the Indonesian Health Profile (2022) shows that maternal mortality rates (MMR) and infant mortality rates (IMR) tend to be higher in rural areas than in urban areas. Factors such as limited access to transportation, low health literacy, and unequal distribution of health workers are key determinants of the poor health status of this vulnerable population. Furthermore, local cultural norms and traditional practices that are inconsistent with modern health principles often exacerbate morbidity and mortality among mothers and children in remote areas (Mardiah et al., 2024).

In the context of primary health care, Integrated Service Posts (Posyandu) have long been a mainstay of the Indonesian government's strategy for reaching rural communities. Posyandu is designed as a form of community-based health care that emphasizes promotive and preventive principles, particularly in monitoring toddler growth and development, immunization, supplementary feeding (PMT), and counseling for pregnant and breastfeeding mothers. According to the Ministry of Health (2023), the existence of more than 290,000 Posyandus throughout Indonesia reflects the program's significance in the primary health care system (Arsyad & Jidani, 2025). However, the program's effectiveness is highly dependent on the quality of implementation at the local level.

The effectiveness of Posyandu (Integrated Health Posts) in improving maternal and child health is determined by various structural and functional factors. Structurally, the availability of infrastructure such as scales, height measuring devices, KIA (Motherhood Card) books, and immunization logistics are essential. Functionally, the program's success depends heavily on the capacity of Posyandu cadres, the active role of village midwives, and cross-sectoral involvement, including village government and community leaders. Research by Kusuma (2022) shows that Posyandus with trained cadres and regular supervision tend to demonstrate better outcomes in terms of immunization coverage and early detection of developmental disorders.

However, not all Posyandu (Integrated Health Posts) operate optimally. Several studies report low levels of community participation in Posyandu activities, particularly in areas with difficult geographic conditions and low education levels. Furthermore, many cadres lack adequate training, resulting in routine administrative activities without a strong educational approach. This results in mothers' low understanding of the importance of regular Posyandu visits and minimal changes in healthy lifestyles. A study by Suparto et al. (2021) confirms that the success of community-based health programs is strongly influenced by the commitment and competence of cadres as agents of social change.

Evaluating the effectiveness of the Integrated Health Post (Posyandu) program requires a comprehensive approach, both quantitatively and qualitatively. Quantitatively, indicators such as complete basic immunization coverage, prevalence of malnutrition, and the percentage of pregnant women who regularly undergo prenatal checkups can be used as measurement parameters. Qualitatively, community perceptions of services, mothers' experiences during Posyandu activities, and interactions between cadres and participants provide a more in-depth picture of the program's dynamics (Sumbarwati et al., 2025; Chabibah & Agustina, 2023). According to the CIPP (Context, Input, Process, Product) evaluation approach, Posyandu analysis should not only focus on outcomes but also consider the socio-cultural context and implementation process.

On the other hand, increasing the effectiveness of Posyandu (Integrated Health Post) is closely related to policy and funding support. Clear regulations

regarding the role of villages in funding Posyandu operations through Village Funds are crucial for ensuring program sustainability. Furthermore, synergy between the health, education, and community empowerment sectors can strengthen cross-sectoral functions in supporting Posyandu activities. A study by Amalia et al. (2025) showed that cross-sector collaboration successfully improved the quality of Posyandu services in several rural areas in East Java, particularly in terms of strengthening nutrition education and clean and healthy living behaviors (PHBS).

Digital transformation also presents a strategic opportunity to increase the effectiveness of Integrated Health Posts (Posyandu). The implementation of digital-based information systems, such as e-Posyandu or toddler nutrition monitoring applications, allows for more accurate and faster data recording. This digitalization can also improve accountability, accelerate decision-making, and expand the reach of online health education (Ayu & Rukhmana, 2025). However, technological infrastructure challenges in rural areas, as well as low digital literacy among cadres and the community, need to be addressed through ongoing training and capacity building.

Considering the complexity of the challenges and potential, an analytical approach based on empirical data is needed to assess the effectiveness of Posyandu (Integrated Health Post) in improving maternal and child health in rural areas. Research examining the relationship between Posyandu service quality and community health status will make an important contribution to the formulation of more targeted policies. Furthermore, the results of this analysis are expected to form the basis for developing intervention strategies that are adaptive to local contexts, so that Posyandu becomes not merely a symbol of village health services but truly serves as a key pillar in efforts to reduce maternal and child mortality in Indonesia.

RESEARCH METHODS

This study uses a descriptive qualitative approach through a literature review to explore the effectiveness of the Posyandu program in improving maternal and child health in rural areas. This approach was chosen to gain a deeper understanding of the dynamics of Posyandu implementation based on previous research, policy documents, and recent scientific publications.

Data were collected from various reliable sources, such as national and international scientific journals, reports from the Ministry of Health, the WHO, and relevant academic literature from 2015–2025. Literature searches were conducted through databases such as Google Scholar, PubMed, Scopus, and Garuda, using the following keywords: Posyandu, health service effectiveness, maternal and child health, rural areas, and similar.

The obtained literature was analyzed using a thematic content analysis approach, focusing on key themes such as cadre participation, service availability, the role of village government, and the program's impact on nutritional status and maternal-child health. The PRISMA framework was used to systematically screen and select relevant literature.

According to Creswell (2014), qualitative studies aim to uncover the deeper meaning of a social phenomenon, including the evaluation of community-based health policies such as Posyandu (Integrated Health Posts). Furthermore, Notoatmodjo (2019) emphasized that the effectiveness of public health programs is greatly influenced by the capacity of cadres, active community participation, and cross-sectoral support, all of which are the primary focus of this study.

Through this approach, it is hoped that research can provide a critical synthesis of the achievements, obstacles, and potential of Posyandu development in rural areas, as well as become a basis for evidence-based policy making.

RESULTS AND DISCUSSION

1. Evaluation of Posyandu Performance in Improving Maternal and Child Health in Rural Areas

Evaluating the performance of Integrated Service Posts (Posyandu) in rural areas is a crucial step in identifying the effectiveness of community health service interventions, particularly in improving maternal and child health. As an integral part of the community-based primary health care system, Posyandu is designed to provide promotive and preventive services, as well as early detection of health problems common to vulnerable groups, including toddlers and pregnant women (Bestari et al., 2024). In the context of rural areas that tend to have limited infrastructure and access to formal health facilities, the existence of Posyandu is vital. Therefore, Posyandu performance evaluation requires a comprehensive review of achievements against basic service indicators, as stipulated in the standard operating procedures (SOPs) of the Ministry of Health of the Republic of Indonesia.

The main indicators focused on in the evaluation include complete basic immunization coverage, maternal attendance at prenatal checkups (K1 and K4), monitoring of toddler growth and development, and implementation of screening and early intervention for malnutrition. Performance on these indicators reflects the effectiveness of services and the extent to which community-based health interventions successfully reach priority population targets. Based on the results of the Basic Health Research (Riskesdas, 2018) and the Ministry of Health's report (2022), it was found that achievement of these indicators in several rural areas still falls short of the national target. This indicates gaps in program implementation, both in terms of human resources, logistics, and the operational sustainability of Posyandu (Integrated Health Posts) (Anasril et al., 2025).

The effectiveness of Posyandu services is greatly influenced by the availability of competent cadres, consistent implementation of monthly activities, and the availability of supporting facilities and infrastructure. In reality, many Posyandus in rural areas cannot optimally operate all five service desks, which include registration, weighing, recording, counseling, and health services. Failure to operationalize all these components directly impacts the quality of data collected and the effectiveness of counseling provided. A study by Misnaniarti et

al. (2020) noted that the low quality of cadre training and the lack of supervision from community health center (Puskesmas) health workers led to substandard service practices. This contributed to low program reach and delays in detecting maternal and child health problems.

The alignment of Posyandu service implementation with established operational standards is an important evaluative aspect. Ideally, Posyandu functions as a community health service center that meets the principles of lifecycle-based basic services, integrated with an accurate recording and reporting system. However, according to Maulani & Yulianingsih (2025), most Posyandu in rural areas are not yet integrated with digital reporting systems such as e-PPGBM. The absence of valid and real-time data limits the health system's ability to conduct evidence-based monitoring and formulate intervention policies that adapt to local dynamics.

Performance disparities across rural areas indicate that geographic and socioeconomic contexts play a significant role in determining the operational success of Posyandu (Integrated Health Post) programs. In areas with difficult geographic access, community participation in Posyandu activities is relatively low due to mobility barriers and a lack of motivation among cadres due to a lack of incentives. This situation is exacerbated by weak support from village governments and a lack of cross-sector integration to promote program sustainability. UNICEF Indonesia's analysis (2020) shows that areas with an integrated intervention approach and mentoring from community health centers (Puskesmas) significantly increased Posyandu service coverage compared to areas that relied on independent cadre mobilization.

In a policy context, revitalizing Posyandu (Integrated Health Posts) through institutional strengthening and increasing the capacity of cadres is a crucial strategy for improving service quality in rural areas. This approach involves increasing village budgets to support Posyandu operations, providing ongoing cadre training, and strengthening the supervision system by health workers. A study by Ruwayda et al. (2024) underscores the crucial role of local governments in ensuring that Posyandus function not merely as complementary health services but as a key pillar of a community-based health system that is resilient and adaptive to local needs.

Beyond institutional aspects, the integration of information technology in recording and reporting is an urgent need to improve the accountability and effectiveness of interventions (Helmyati et al., 2021). The implementation of digital information systems such as e-PPGBM and e-Posyandu can accelerate the identification of nutritional issues, delayed immunizations, and high-risk pregnancies. Strengthening the capacity of cadres in using digital technology is also expected to support the transformation of Posyandu services toward a data-driven service model relevant to the demands of a modern health system.

Thus, evaluating the performance of Posyandu (Integrated Health Post) in rural areas requires a multidimensional approach that focuses not only on quantitative figures but also on the quality of service processes, the functioning of support systems, and the social resilience of institutions at the community

level. Within the framework of sustainable health development, strengthening Posyandu as the epicenter of basic services is a strategic investment in efforts to reduce maternal and infant mortality, combat stunting, and achieve the Sustainable Development Goals (SDGs), particularly Goal 3 on good health and well-being.

2. Supporting and Inhibiting Factors of Posyandu Effectiveness in Rural Areas

The effectiveness of Posyandu (Integrated Health Post) implementation in rural areas is a product of the multidimensional interaction between structural, cultural, and geographic determinants that influence each other within the context of a community-based health care system. One of the most fundamental structural aspects is the quality of human resources, particularly Posyandu cadres, who directly implement service activities. In numerous studies, such as those by Setiawan et al. (2025), cadre competence has been shown to have a positive correlation with the quality of health services provided. However, in rural areas, cadres often work voluntarily without ongoing training or adequate incentives, creating an imbalance between their workload and their actual capacity to carry out their functions. This is exacerbated by the disproportionate ratio of cadres to the target population, which directly impacts the effectiveness of service coverage (Amelia et al., 2024).

On the other hand, support from the village government and the health sector plays a central role in creating an enabling environment that allows Posyandu activities to run optimally. Structural interventions such as village fund allocation, cross-sector coordination, and routine guidance from community health centers have been shown to improve Posyandu performance, as reported by the Indonesian Ministry of Health (2020). However, in practice, there are disparities in implementation between villages, reflecting the unequal understanding that Posyandu is an integral part of human development, not merely a technical domain of the health sector. The absence of strong political and administrative support will weaken Posyandu's social legitimacy and reduce the cross-sectoral participation essential to a community-based primary care approach.

Furthermore, infrastructure and logistics are also significant determinants. The availability of facilities and infrastructure, such as weighing machines, service desks, KIA books, and adequate physical facilities, significantly impacts the sustainability and comfort of Posyandu (Integrated Health Post) activities (Suparto et al., 2021). Many Posyandus in rural areas still rely on rudimentary facilities, even using residents' homes or multipurpose rooms that do not meet basic health service standards. These inadequate facilities not only impact operational efficiency but also lower the public's perception of service quality, ultimately affecting visitation rates and coverage of basic health services such as immunizations or child growth monitoring.

The level of community participation, particularly among mothers and families with toddlers, is key to determining the effectiveness of Integrated

Health Posts (Posyandu). Based on the Health Belief Model (Rosenstock, 1974), community visiting behavior is strongly influenced by perceptions of child vulnerability, perceived benefits, and perceived barriers. In many rural communities, the perception that Posyandu is only necessary when a child is sick creates a psychosocial barrier that reduces regular participation. In this context, health promotion interventions that strengthen understanding of the importance of promotive and preventive efforts are urgent, including through improving the communication capacity of cadres and disseminating local literacy-based health information.

The geographical dimension also poses a structural challenge that cannot be ignored. Difficult-to-access topography, limited transportation, and extreme weather conditions such as long rainy seasons often disrupt the routine implementation schedule of Integrated Health Posts (Posyandu) (Pandiangan et al., 2025). Difficult geography not only impacts community accessibility to service locations but also hinders logistical mobilization, technical supervision by community health center staff, and the distribution of medical equipment and supplies. This phenomenon underscores the importance of operational decentralization and adapting Posyandu service models to be more flexible to local conditions, including the use of outreach and more intensive home visits in remote areas.

Limited health literacy also plays a significant role as an internal barrier within the community's social system. In many villages, communities still have limited understanding of the concept of preventive health, so Posyandu activities are not considered a priority. Low health literacy results in communities not understanding the significance of height measurements, weight checks, or nutrition education. Islamiati & Kurniasih (2025) state that health literacy is not merely the ability to read medical information but also includes the capacity to make informed decisions regarding daily health behaviors. Therefore, community-based health literacy improvement strategies need to be integrated into the Posyandu agenda, particularly through participatory and culture-based approaches.

Local cultural values cannot be ignored as a cultural determinant influencing the effectiveness of Posyandu (Integrated Health Posts). In some rural communities, patriarchal social norms limit women's autonomy in accessing health services without permission from their husbands or families, thus hindering their participation. However, on the other hand, local wisdom can be optimized to strengthen program effectiveness. The use of local languages, approaches through traditional leaders, and aligning health messages with local values have been shown to increase program acceptance at the grassroots level. As Qorib (2024) noted, culturally responsive community-based programs have a greater chance of success and sustainability.

Finally, cross-sector integration and program sustainability are often overlooked strategic issues. Integrated health posts (Posyandu) cannot be viewed as a separate entity but must be integrated with other development programs such as early childhood education, family food security, and environmental

sanitation. This lack of integration leads to fragmented interventions, weakening their cumulative impact on public health. Furthermore, budget sustainability, regular training for cadres, and a monitoring and evaluation system that adapts to local dynamics are prerequisites for ensuring that Posyandu remains relevant and effective in the long term. A 2021 WHO study emphasized that the success of community-based health programs is crucially determined by the continuity of resource support, both from the government and the community itself.

3. Posyandu Strengthening and Innovation Strategy Based on Empirical Findings

Empirical findings-based efforts to strengthen and innovate Posyandu (Integrated Health Post) are a strategic step in addressing the challenges of sustainable primary health care services in rural areas. This strategy not only emphasizes optimizing Posyandu institutional functions but also encompasses systemic transformation through an evidence-based approach that adapts to local contexts. One key aspect of this strengthening is enhancing the capacity of Posyandu cadres through competency-based training. Empirical studies have shown that ongoing training using an andragogical approach and the use of interactive modules can improve cadre competency, both in technical aspects such as weighing and recording nutritional status, and in public health communication skills (Arieffiani & Ekowanti, 2024). This is crucial given that cadres are the spearheads in implementing promotive and preventive services at the community level.

In addition to strengthening human resources, integrating information technology into the Integrated Health Post (Posyandu) service system is a strategic component in improving the efficiency and accuracy of data recording. The implementation of the e-Posyandu system, which adopts the principles of digitalizing health services, has been proven to accelerate information flow, facilitate reporting, and support more systematic monitoring by health workers. However, the success of this digitalization depends on the digital literacy of cadres and the readiness of technology infrastructure at the local level. Research shows that challenges in implementing e-Posyandu include limited internet access, a lack of hardware, and low user technological capacity. Therefore, a digital training strategy for cadres and strengthened logistical support from local governments are needed to ensure the sustainability of this system.

Strengthening cross-sector synergy is also a crucial foundation for Posyandu innovation. Collaboration between the health, education, village government, civil society organizations, and the private sector through Corporate Social Responsibility (CSR) schemes can expand resources and strengthen Posyandu institutional capacity. This multisectoral approach aligns with World Health Organization (WHO) recommendations for strengthening community-based primary healthcare systems. This collaboration can be realized through the provision of anthropometric measurement tools, cadre development by higher education institutions, and integration of Posyandu activities with

other community empowerment programs. Such synergy can also create a more inclusive healthcare ecosystem that is highly resilient to social change.

Furthermore, the strategy for strengthening Posyandu (Integrated Health Post) needs to be based on an evidence-based policy approach. In this context, empirical data from program monitoring and evaluation should serve as the primary basis for formulating adaptive and contextual policies. For example, data showing low cadre retention due to a lack of incentives could encourage the formulation of non-financial incentive policies such as providing advanced training, social recognition, or certification. Such policies not only increase cadre motivation but also strengthen professionalism and the sustainability of services at the village level. Therefore, a regular evaluation system with measurable indicators is crucial to ensure that interventions remain relevant to community needs.

Adapting programs to local social and cultural contexts is a crucial dimension in ensuring the effectiveness and acceptance of Posyandu (Integrated Health Post) in the community. Empirical findings from health ethnography studies indicate that the success of an intervention is determined not only by its content but also by the alignment of the approach with local values. Therefore, innovative strategies need to accommodate the participation of community leaders, religious leaders, and traditional institutions in implementing Posyandu activities. Aligning implementation times with community economic activities, using local languages in health education, and approaches based on local wisdom have been shown to increase participation and the effectiveness of promotional messages.

Within the framework of strengthening institutional models, an integrative approach through the development of family Posyandu (Integrated Health Post) is a promising solution. This model encompasses services not only for mothers and children but also targets other groups such as adolescents, the elderly, and those with non-communicable diseases (NCDs). Family Posyandu aims to create a life-course approach to health services, which has proven effective in improving service continuity and expanding the scope of public health interventions. Studies on the implementation of this model have shown significant increases in community participation across age groups and improved family health knowledge.

Participatory strategies in the planning and evaluation of Posyandu activities also need to be prioritized. Approaches such as Participatory Rural Appraisal (PRA) enable communities to identify their own health problems, prioritize interventions, and collectively evaluate the program's impact. This active participation creates a sense of ownership of the Posyandu program, which in turn encourages sustainable and consistent community participation. It also provides space for local innovation to develop organically, while adhering to basic public health principles.

Finally, a Posyandu strengthening strategy based on empirical findings must be accompanied by a robust monitoring and evaluation system that integrates input, process, output, and outcome indicators (Latifah & Puspitawati,

2025). With a comprehensive monitoring system, best practices proven effective in one region can be documented and replicated in other areas with similar characteristics. Developing a national repository of Posyandu innovations and a knowledge-sharing system among Posyandus across regions is a strategic step in encouraging sustainable innovation and equitable distribution of community-based health services in Indonesia.

CONCLUSION

The study's findings on the performance, supporting factors, barriers, and strategies for strengthening Posyandu (Integrated Health Post) in rural areas indicate that Posyandu plays a vital role as the frontline of community-based health services, particularly for mothers and children. The performance evaluation confirmed a significant gap between national targets and actual outcomes on the ground, influenced by limitations in human resources, logistics, and infrastructure. Key factors supporting Posyandu effectiveness include cadre competence, village government support, and adequate infrastructure. However, there are also inhibiting factors such as low cadre incentives, limited public health literacy, challenging geographic conditions, and minimal cross-sectoral integration. Low community participation due to narrow perceptions of Posyandu's function further weakens the effectiveness of preventive and promotive services. Therefore, a strengthening strategy based on empirical findings is needed through cadre capacity building, service digitization, and multisectoral synergy that adapts to the local context. Integration of cultural wisdom, involvement of community leaders, and development of a family Posyandu model are strategic steps to increase program acceptance. Furthermore, an evidence-based monitoring and evaluation system must be optimized to ensure program sustainability and replication of best practices across regions. Support for incentive policies, ongoing training, and consistent village budget allocation are key factors in the revitalization of Posyandu institutions. With a participatory and data-driven approach, Posyandu is expected to transform into a resilient community health service center. Ultimately, strengthening Posyandu is a strategic investment in reducing maternal and infant mortality, combating stunting, and supporting the achievement of sustainable development goals in the health sector.

BIBLIOGRAPHY

- Amalia, D. R., Hidayat, R., Yunita, A., & Fuzail, M. (2025). THE IMPLEMENTATION OF THE POSYANDU (ELDERLY) PROGRAM AT TOARI COMMUNITY HEALTH CENTER: A REVIEW FROM DUNCAN'S PROGRAM EFFECTIVENESS PERSPECTIVE. *Jurnal Administrasi Negara*, 31(1), 88-106.
- Amelia, R., Budiman, A., & Baihaqi, A. (2024). Efektivitas Program Posyandu Lansia Pada Puskesmas Kecamatan Amuntai Tengah Kabupaten Hulu Sungai Utara (Studi

- Kasus Desa Kota Raden Hulu, Desa Kota Raden Hilir dan Desa Kandang Halang). *Al Iidara Balad*, 6(1), 173-181.
- Anasril, A., Bustami, B., & Maryono, M. (2025). HUBUNGAN KINERJA KADER KESEHATAN DENGAN KEPUASAN IBU BAYI DAN BALITA DI DESA PURWODADI WILAYAH KERJA PUSKESMAS PADANG PANYANG KABUPATEN NAGAN RAYA. *SINERGI: Jurnal Riset Ilmiah*, 2(5), 2104-2113.
- Arieffiani, D., & Ekowanti, M. R. L. (2024). Evaluating local government policy innovations: A case study of Surabaya's efforts in combating stunting and enhancing public health services quality. *Jurnal Bina Praja*, 16(1), 1-20.
- Arsyad, M., & Jidani, M. A. (2025). EFEKTIVITAS PROGRAM POSYANDU DALAM MENINGKATKAN KESEHATAN IBU DAN ANAK DI DESA PAKACANGAN KECAMATAN AMUNTAI UTARA KABUPATEN HULU SUNGAI UTARA. *Al Iidara Balad*, 6(2), 426-437.
- Ayu, J. D., & Rukhmana, T. F. I. (2025). TRANSFORMASI KESEHATAN MASYARAKAT PEDESAAN MELALUI AKSI SOSIAL INTERDISIPLINER: STUDI KASUS SOCIAL WARRIOR 1.0 DI NTB. *Jurnal Pengabdian Kepada Masyarakat Ungu (ABDI KE UNGU)*, 7(2), 113-125.
- Bestari, A. D., Didah, A. M., & Martini, N. (2024). Pemetaan Kesehatan Ibu dan Anak melalui Pendekatan Participatory Rural Appraisal (PRA). *Jurnal Kreativitas Pengabdian Kepada Masyarakat (PKM)*, 7(3), 943-952.
- Chabibah, I. F. A., & Agustina, R. (2023). Exploration of the Role of Posyandu Cadres in the Achievements of the Community Health Center Program in Reducing Stunting Incidence. *Amerta Nutrition*, 7.
- Helmyati, S., Dipo, D. P., Adiwibowo, I. R., Wigati, M., Safika, E. L., Hariawan, M. H., ... & Trisnantoro, L. (2021). Monitoring continuity of maternal and child health services, Indonesia. *Bulletin of the World Health Organization*, 100(2), 144.
- Islamiati, D., & Kurniasih, S. (2025). The role of Posyandu in the Prevention of Early Childhood Stunting. *Jurnal Pena Paud*, 6(1).
- Khamid, A., & Zagita, P. A. V. (2024). Hidup Bersih dan Sehat (Phbs) Santriwati. *Kesehatan Masyarakat dalam Konteks Budaya, Ilmiah, dan Spiritualitas*, 77.
- Kusuma, A. N. (2022). The presence of Posyandu as an approach in improving health development in the community. *Jurnal EduHealth*, 13(01), 137-146.
- Latifah, K. A., & Puspitawati, H. (2025). Determinants of The Quality of Care For Stunted Children: The Role Of Gender Roles, Posyandu Check-Ups, and Household Characteristics. *Journal of Child, Family, and Consumer Studies*, 4(1), 24-39.
- Mardiah, M., Munawarah, M., & Setiawan, I. (2024). Efektivitas Program Posyandu Balita Dalam Meningkatkan Kesehatan Ibu dan Anak di Desa Baruh Jaya Kecamatan Daha Selatan Kabupaten Hulu Sungai Selatan. *Jurnal Kebijakan Publik*, 1(2), 343-350.
- Maulani, M. N., & Yulianingsih, W. (2025). Peran Edukasi Posyandu dalam Meningkatkan Kesadaran Masyarakat Bagi Kesehatan Ibu dan Anak di Desa Sumedangan Kabupaten Pamekasan. *J+ PLUS UNESA*, 14(1), 216-225.
- Pandiangan, M., Asriwati, A., & Nasution, R. S. (2025). Factors Affecting the Utilization of Posyandu for the Elderly in the Working Area of the Glugur Darat Health Center, East Medan District, Medan City. *PROMOTOR*, 8(1), 138-143.

- Qorib, F. (2024). Tantangan dan peluang kolaborasi antara perguruan tinggi dan masyarakat dalam program pengabdian di Indonesia. *Journal of Indonesian Society Empowerment*, 2(2), 46-57.
- Ruwayda, R., Hastono, S. P., Siregar, K. N., Martha, E., & Nurdini, L. (2024). Village Midwife Performance in Maternal and Child Health Services in Jambi Province, Indonesia. *Health Education and Health Promotion*, 12(4), 617-622.
- Setiawan, Y., Suhardi, M., Murtikusuma, R. P., & Yatni, S. H. (2025). PERSEPSI MASYARAKAT DESA TERHADAP PROGRAM POSYANDU SEBAGAI UPAYA PENCEGAHAN PENYAKIT PADA BALITA. *DIAGNOSA: Jurnal Hasil Riset dan Pengembangan ilmu Kesehatan*, 1(1), 39-46.
- Sumbarwati, N., Sastrawan, S., & Sismulyanto, S. (2025). Analysis of the Family Posyandu Program Implementation in East Lombok, Indonesia. *Journal of Health Science and Prevention*, 9(1), 54-62.
- Suparto, T. A., Azizah, N. N., Andriyani, S., Puspita, A. P. W., & Hermayanti, Y. (2021). The problems affecting the implementation of Posyandu program: A literature review. *JIKO (Jurnal Ilmiah Keperawatan Orthopedi)*, 5(2), 55-61.
- Susanto, T., Yunanto, R. A., Rasny, H., Susumaningrum, L. A., & Nur, K. R. M. (2019). Promoting Children Growth and Development: A community-based cluster randomized controlled trial in rural areas of Indonesia. *Public Health Nursing*, 36(4), 514-524.