

Experiences and Roles of Community Health Cadres in the Implementation of Integrated Service Posts for Non-Communicable Diseases in Indonesia: A Qualitative Study

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Abstract

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Background: Non-Communicable Diseases (NCDs) remain the leading cause of mortality globally and in Indonesia. To address this, Indonesia introduced the Posbindu PTM (Integrated Service Posts for NCDs), a community-based program that relies heavily on volunteer health cadres. This study explores the lived experiences, roles, and challenges faced by these cadres in Banda Aceh. **Methods:** A qualitative phenomenological approach was used. Twelve female health cadres from Ulee Kareng Health Center were selected using purposive sampling. Semi-structured interviews were conducted in January 2025. Thematic analysis using the Miles and Huberman model revealed two overarching themes and five subthemes, including personal empowerment, logistical constraints, low public participation, and digital limitations. **Results:** Health cadres reported increased knowledge and confidence in health promotion, but faced critical barriers such as infrastructure limitations, insufficient financial incentives, and community reluctance. Differences in perspectives emerged based on years of service. Notably, cadres with longer tenure (more than five years) expressed greater confidence and skill in engaging the community compared to newer cadres. **Conclusion:** While cadres derive personal growth and community recognition, system-level changes are essential for program sustainability. Policy recommendations include better government support, consistent training, stakeholder engagement, and adequate resources.

Keywords: Health Cadres, Non-Communicable Diseases, Community Health, Qualitative Study

Introduction

Non-Communicable Diseases (NCDs) contribute to over 75% of global mortality, presenting a substantial burden on health systems worldwide. In 2021, an estimated 18 million individuals died from non-communicable diseases (NCDs) before reaching the age of 70, with approximately 82% of these premature deaths occurring in low- and middle-income countries (World Health Organization [WHO], 2023). Cardiovascular diseases were the leading cause, responsible for at least 19 million deaths, followed by cancers (10 million), chronic respiratory diseases (4 million), and diabetes, which accounted for over 2 million deaths, including those linked to diabetic-related kidney complications (World Health Organization [WHO], 2021). In Indonesia, the prevalence of these conditions continues to rise, with the 2018 National Basic Health Research (Risdesdas) reporting that 34.1% of adults suffer from hypertension and 8.5% from diabetes mellitus (Riset Kesehatan Dasar (Risdesdas), 2018). This epidemiological trend imposes increasing demands on the healthcare infrastructure, necessitating sustainable, community-based responses (Indrawati L, Mahendra A, 2021)

In light of the shifting epidemiological landscape, recent studies underscore the urgency of adopting localized, data-driven strategies to mitigate the rising burden of NCDs in Indonesia (Prasetya et al., 2020). Urbanization, sedentary lifestyles, dietary transitions, and environmental pollution are increasingly recognized as contributory factors to the surge in NCD prevalence, particularly among working-age adults and adolescents

(Adani et al., 2022). In response, the Indonesian Ministry of Health initiated the *Pos Pembinaan Terpadu Penyakit Tidak Menular* (Posbindu PTM) program—Integrated Service Posts for Non-Communicable Diseases—as a preventative health initiative centered on community participation (Nugroho & Astuti, 2022). These posts are designed to deliver early screening, health education, and behavior change interventions, particularly for individuals aged 15 to 59 years (Nuraini & Wahyuningsih, 2023). Central to the implementation of Posbindu PTM are community health cadres, who serve multifaceted roles as educators, facilitators, and intermediaries between health institutions and the public (Oktavia & Lestari, 2023).

Moreover, the evolution of NCD risk profiles—now increasingly affecting younger populations—demands a recalibration of health promotion strategies that go beyond traditional models and leverage digital literacy, behavioral economics, and intersectoral partnerships (Dewi et al., 2024). In this regard, the empowerment and resilience of cadres become central not only to screening and prevention, but also to the sociocultural transmission of health norms (Yuliana & Handayani, 2021). The sustainability of such programs hinges on recognizing the psychosocial dynamics of volunteerism, wherein intrinsic motivation must be matched with tangible institutional support (Rosanti et al., 2022). Finally, integrated monitoring and evaluation frameworks that include qualitative perspectives of health workers can provide richer insights for adaptive policy reforms (Kok et al., 2020).

Banda Aceh was selected as the study location owing to its high incidence of *non communicable disease*, active Posbindu PTM programs, documented urban health challenges, and the municipality's policy focus on community-based healthcare strategies (Rahmadana et al., 2023). recent data highlights persistent challenges in program engagement and outreach, particularly in sub-districts like Ulee Kareng where community participation rates remain suboptimal. (Profil Kesehatan Kota Banda Aceh, 2024)

In the context of Banda Aceh, where urbanization and shifting health behaviors converge, the role of Posbindu PTM has become increasingly significant (Putri & Ardi, 2022). These discrepancies indicate a critical need to explore not only institutional and community-level constraints but also the intrinsic dynamics shaping cadre engagement (Fahlevi et al., 2023). Despite the established structure of Posbindu PTM, its overall effectiveness remains constrained by several systemic issues, including limited infrastructure, low public participation, insufficient cadre training, and weak cross-sector collaboration (Arifin et al., 2022).

While the role of health cadres is pivotal in the success of these programs, there is a notable lack of empirical research examining their day-to-day experiences and operational challenges. (Widya & Sari, 2023). Capturing these lived experiences is vital to identifying programmatic bottlenecks and informing targeted strategies for improvement (Lestari et al., 2023). Additionally, many cadres operate under constrained resources, limited digital literacy, and modest financial incentives—factors that may affect both service delivery and personal well-being (Suryani & Lestari, 2023) (Chanda et al., 2021). Recognizing these contextual elements is essential to crafting responsive policy interventions that elevate both the sustainability and impact of community health initiatives (Nasution & Siregar, 2021).

Methods

The research employed a qualitative phenomenological design, which is well-suited to capturing and interpreting individual experiences within a particular context. This method allows for an in-depth examination of the subjective realities and nuanced challenges encountered by health cadres as they perform their roles.

Participants

The study was conducted in Ulee Kareng, a sub-district in Banda Aceh known for its large population and high prevalence of non-communicable diseases, which then correspond to its active Posbindu PTM programs. According to data from the Aceh Provincial Health Office in 2020, the prevalence of hypertension in the province reached 32%, while diabetes mellitus was reported at approximately 10%. In Banda Aceh City specifically, the prevalence of hypertension among individuals aged over 40 was even higher, reaching around 30%. Twelve female health cadres were selected using purposive sampling to ensure varied representation in terms of age, experience, and educational background. All participants had at least one year of continuous involvement in Posbindu PTM operations and had completed formal training modules provided by the local health office.

Data Collection

Data collection took place in January 2025 through face-to-face, Semi-structured interviews were conducted in Bahasa Indonesia using open-ended prompts such as: "Can you describe a typical day at Posbindu PTM?" and "What challenges do you encounter when engaging the community?". Each interview lasted 30–45 minutes and was audio-recorded with consent.

Trustworthiness of Data

To ensure trustworthiness, researchers used triangulation, member-checking, and prolonged engagement with participants. Verbatim transcription and peer debriefing strengthened data reliability. The cadres were approached at the Posbindu PTM-Community-Based NCD Posts event location while the activity was taking place. This was done at the same time to conduct field observations.

Ethical Considerations

The study received ethical approval from the Ethics Committee of the Faculty of Medicine at Universitas Syiah Kuala. All participants provided informed consent and were assured of their anonymity and the confidentiality of their responses. The ethical framework emphasized voluntary participation, non-maleficence, and transparency.

Data Analysis

Data analysis was conducted using the Miles and Huberman framework. The first stage involved data reduction through the identification and extraction of significant statements. These data were then categorized and displayed to reveal patterns, relationships, and emerging themes. The final step involved interpreting the data to draw meaningful conclusions. Triangulation and member checking were employed to ensure data credibility and reliability.

Results

A total of 12 informants participated in this study, all of whom were female Posbindu cadres with varying ages and years of experience. The majority of the informants were between 22 and 53 years old, with their length of service ranging from 3 to 35 years. Notably, all respondents had received some form of training related to their roles, such as non-communicable disease (NCD) prevention, child health, maternal health, and the use of health-related applications like ASIK. This indicates that the cadres not only possess diverse experience levels but also demonstrate a consistent engagement in capacity-building efforts, which is crucial in supporting the implementation of community-based health programs. Detail of characteristics of study respondents is presented in Table 1.

Based on the interview findings with informants in this study, a range of perceptions emerged regarding the challenges they faced in fulfilling their roles as health cadres in the Ulee Kareng District, Banda Aceh Regency. The analysis produced two main themes and five subthemes, which will be further explored and discussed as follows:

Theme 1: Cadre Experiences and Perceived Benefits

The experiences of Posbindu PTM cadres highlight a delicate balance between dedication and adversity. While the role provides personal fulfillment, learning opportunities, and social recognition, it also demands resilience in the face of logistical, motivational, and community-related challenges. Health cadres involved in the Posbindu PTM program reported profound satisfaction in their roles, particularly in contributing to the well-being of their communities. They expressed joy in the opportunity to interact with fellow residents, participate in social activities, and gain new health knowledge.

Participants consistently reported that their involvement in Posbindu PTM fostered both personal and professional growth. Many shared that they had developed greater confidence in public speaking, facilitating discussions, and managing health screening procedures. This empowerment extended to an increased sense of self-efficacy in addressing health issues, both within their families and the broader community. One participant stated, "I feel more confident speaking in public after being involved in Posbindu activities." This

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Table 1. Characteristics of Informants

Respondent No.	Age (years)	Gender	Years of Service as Posbindu Cadre
1	53	Female	12 years
2	30	Female	3 years
3	35	Female	8 years
4	27	Female	3 years
5	49	Female	3 years
6	48	Female	5 years
7	40	Female	7 years
8	28	Female	2 years
9	29	Female	6 years
10	48	Female	3 years
11	30	Female	4 years
12	22	Female	2 years

Knowledge acquisition was another prominent benefit. Cadres indicated that their understanding of NCDs, risk factors, dietary habits, and physical activity recommendations had significantly improved. Several mentioned applying this knowledge in their daily lives and encouraging neighbors and relatives to adopt healthier lifestyles. This accumulation of expertise not only elevated their self-esteem but also positioned them as trusted figures within their communities. *“At first I didn’t know the normal range for each disease or any detail things about it, but as I became part of the health cadres, I slowly grew my knowledge, and my neighbor now often comes to me for health advice.”* This quote illustrates how cadres gain personal and social value from their roles.

Despite these positive experiences, cadres also faced significant challenges. A frequently cited concern was the limited community engagement. Many residents were hesitant to participate in Posbindu activities, often due to low health literacy or fear of receiving a medical diagnosis. As a result, cadres had to repeatedly motivate community members to attend sessions and emphasize the importance of early detection and adopting healthy lifestyles. This effort proved both time- consuming and emotionally demanding.

Theme 2: Challenges in Program Implementation

Despite these positive outcomes, cadres encountered numerous challenges. A recurring issue was the place where the event was held tended to be small and the limit of essential resources. The findings from this study reveal that health cadres operating within the Posbindu PTM program encounter multifaceted challenges that significantly affect their performance and overall program implementation. These challenges include systemic barriers such as the inadequacy of medical equipment and facilities which limit the effectiveness of service delivery and compromise community trust in the program. Cadres also report insufficient financial incentives that do not reflect the breadth of their responsibilities, leading to a sense of undervaluation.

Currently, Posbindu activities are conducted under the ILP (Primary Service Integration) system, which has generated both support and criticism. One of the main advantages is the increased number of participants, as

health screenings for both toddlers and the elderly can be carried out simultaneously. However, this system also presents challenges, including extended working hours and a less conducive environment due to limited space in the facility where the activities are held.

Collectively, these obstacles highlight structural deficiencies in program design and implementation. While the implementation of the ILP system in Posbindu PTM activities has led to a higher turnout of participants by enabling simultaneous health screenings for various age groups, it also introduces significant operational challenges. These include extended working hours, inadequate facilities, and insufficient resources, which collectively hinder the efficiency and effectiveness of health service delivery. Furthermore, the lack of appropriate financial incentives contributes to the demotivation of cadres, despite their critical role in the program. To enhance the sustainability and impact of the Posbindu PTM program, it is recommended that relevant stakeholders improve infrastructural support, ensure the availability of essential medical equipment, and provide fair and structured financial compensation for health cadres. Strengthening these aspects is crucial to maintaining the trust of the community and optimizing the quality of integrated primary health services. Inadequate financial incentives were also cited as a major concern. Most cadres received minimal stipends, which did not reflect the time, energy, and emotional labor invested in their roles. This lack of compensation contributed to feelings of undervaluation and, in some cases, demotivation.

Discussion

Cadre Experiences and Perceived Benefits

The findings of this study affirm that health cadres involved in the Posbindu PTM program derive significant personal and professional benefits from their roles. The sense of empowerment reported by the participants aligns with existing literature that highlights the transformative potential of community health work in fostering self-efficacy and identity development among volunteers. Cadres in this study gained increased confidence in communication, public speaking, and technical competencies such as health screening and counseling. These developments contribute not only to the success of the Posbindu program but also to the enhancement of individual cadre capacity for broader health advocacy roles.

The acquisition of knowledge related to non-communicable diseases, including their risk factors and preventive strategies, further enhanced the cadres' credibility and functionality within their communities. By serving as sources of health information and behavioral models, cadres positioned themselves as trusted intermediaries between formal health systems and local populations. The recognition and appreciation they received from community members and local authorities reinforced their motivation and sustained their commitment to voluntary health promotion work.

These results mirror global findings from similar community-based interventions. Studies from South Asia and Sub-Saharan Africa also reflect similar outcomes, where community health volunteers experience both empowerment and institutional neglect (e.g., Akintola & Chikoko, 2016; Smith & Hall, 2021), where health volunteers reported psychosocial benefits, social capital, and enhanced status as key motivators. However, it is important to note that such intrinsic benefits, while impactful, may not be sufficient to sustain long-term participation in the absence of structural support.

Challenges in Program Implementation

In contrast to the positive personal outcomes, the study also reveals persistent systemic and contextual challenges that hinder the optimal implementation of the Posbindu PTM program. The most pressing issues identified include lack of public interest in undergoing health checks and the facilities that support the running of the event which restrict cadres from conducting proper screenings and reduce the community's trust in the quality of the services provided. The physical space for Posbindu activities was often limited, compromising privacy and accessibility for participants.

Another central concern is the insufficient financial remuneration provided to cadres. The minimal or inconsistent stipends do not adequately reflect the scope of responsibilities, or the time invested by cadres. These findings are consistent with broader literature on community health workers, which emphasizes the need for fair compensation to maintain workforce stability and prevent attrition.

Cadres are required to input all data online within the specified time which leads to fatigue and time constraints. While some cadres reported receiving digital literacy training, others noted inconsistent access to such support,

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suggesting variability in administrative assistance or digital literacy training. Moreover, community engagement remains a persistent and complex challenge. Despite the cadres' active efforts, attendance at Posbindu sessions was generally low. An unexpected finding was the high intrinsic motivation of some cadres, who continued volunteering without expecting financial compensation. This was attributed to poor health literacy, irregular scheduling, insufficient awareness campaigns, and socio-economic factors that caused health promotion to be deprioritized in daily life. This challenge underscores the importance of a coordinated approach involving local leadership, culturally sensitive messaging, and sustained outreach strategies.

Collectively, these barriers reflect critical weaknesses in the institutional and operational frameworks that underpin the Posbindu PTM program. Addressing them will require a multifaceted response that includes resource allocation, technical training, financial investment, and cross-sector collaboration.

Conclusion

Health cadres represent a vital link between formal health systems and community members, especially in the context of NCD prevention. Their lived experiences illustrate both the potential and the limitations of community-based health initiatives. While personal growth and communal respect are notable outcomes, systemic challenges such as inadequate facilities, limited incentives, and insufficient public engagement hinder the full realization of Posbindu PTM's objectives.

Therefore, policymakers and health authorities must recognize the critical importance of cadres. Specifically, the Ministry of Health should institutionalize periodic cadre training, while local governments are advised to allocate dedicated resources for infrastructure and remuneration, and commit to strengthening the institutional frameworks that support them. By addressing these challenges, Indonesia can better leverage the Posbindu PTM program to combat the growing threat of NCDs and promote a healthier, more resilient population.

Conflicts of interest

The authors declare that they have no competing interests.

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