

THE ROLE OF COMMUNITY-BASED HEALTH PROGRAMS IN IMPROVING MATERNAL AND CHILD HEALTH SERVICES IN INDONESIA

Saksono W. Simson

Universal Institute of Professional Management

kuliah.extensi@gmail.com

Abstract

Maternal and child health (MCH) remains a critical public health priority in Indonesia despite significant improvements over the past two decades. Geographic disparities, limited healthcare access, shortages of healthcare professionals, and socioeconomic inequalities continue to affect the quality and utilization of maternal and child health services. Community-based health programs have emerged as an effective strategy to bridge these gaps by engaging local communities in health promotion, disease prevention, and service delivery. This article examines the role of community-based health programs in improving maternal and child health services in Indonesia. Drawing upon recent literature, policy documents, and empirical studies, the article explores the contributions of community health volunteers, integrated health service posts, maternal health education initiatives, and community empowerment programs. The findings indicate that community-based interventions significantly improve antenatal care attendance, institutional childbirth, immunization coverage, nutritional outcomes, and health awareness among mothers and caregivers. However, challenges related to funding, training, program sustainability, and regional disparities remain. Strengthening community participation, enhancing health worker capacity, and integrating digital health innovations are recommended to further improve maternal and child health outcomes in Indonesia.

Keywords: community-based health programs, maternal health, child health, public health, Posyandu, Indonesia, community participation

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INTRODUCTION

Maternal and Child Health (MCH) refers to a comprehensive approach to ensuring the health and well-being of women during pregnancy, childbirth, and the postpartum period, as well as the survival, growth, and development of infants and children. In Indonesia, MCH is a national health priority because maternal mortality, neonatal mortality, child malnutrition, and unequal access to healthcare services remain significant public health challenges. The Indonesian government, together with international organizations such as the World Health Organization (WHO) and UNICEF, has implemented various programs to improve reproductive, maternal, newborn, and child health (RMNCH) services and achieve Universal Health Coverage

(UHC). Recent evidence indicates that although maternal mortality and child mortality have declined over the past two decades, disparities in healthcare access and quality continue to exist across regions and socioeconomic groups (World Health Organization, 2025).

Based on the Continuum of Care Theory, it is important provide integrated healthcare services throughout the life cycle, beginning with pre-pregnancy care, antenatal care, skilled birth attendance, postnatal care, newborn care, and child health services. According to the continuum of care approach, positive health outcomes are achieved when mothers and children receive consistent and coordinated services at every stage of life. Research in Indonesia demonstrates that continuity of maternal and child healthcare services significantly improves maternal and child survival and reduces preventable complications. Women who complete the continuum of care are more likely to experience safer pregnancies and better child health outcomes than those who receive fragmented services (Rammohan et al., 2024).

Meanwhile, the Social Determinants of Health Theory argues that health outcomes are influenced not only by medical care but also by social, economic, environmental, and cultural factors. In the Indonesian context, maternal and child health is strongly associated with household income, maternal education, nutrition, sanitation, access to clean water, and geographical location. Women living in rural and remote areas often face difficulties accessing skilled healthcare providers and emergency obstetric services. Similarly, children from low-income households are more vulnerable to malnutrition and developmental problems. UNICEF reports that poverty, inadequate nutrition, low educational attainment, and environmental inequalities continue to contribute to poor maternal and child health outcomes in Indonesia (UNICEF, 2024).

The Health Belief Model (HBM) also provides a useful framework for understanding maternal and child health behaviors. The model suggests that individuals are more likely to engage in health-promoting behaviors when they perceive a health threat, believe that preventive actions are beneficial, and perceive few barriers to taking action. In maternal and child health, mothers who understand the risks of pregnancy complications and childhood illnesses are more likely to attend antenatal care visits, seek skilled birth assistance, immunize their children, and practice exclusive breastfeeding. Government health promotion programs in Indonesia often utilize health education strategies based on these principles to encourage positive maternal and child health behaviors. WHO and UNICEF emphasize that increased awareness and support for breastfeeding practices can significantly improve newborn health and survival (World Health Organization, 2024).

The Ecological Systems Theory, proposed by Bronfenbrenner, is also relevant to maternal and child health. This theory explains that child development and health are influenced by multiple interconnected systems, including family, community, healthcare institutions, education systems, and government policies. In Indonesia, maternal and child health outcomes are shaped not only by individual behaviors but also by family support, community-based health services such as Posyandu, healthcare infrastructure, and national health policies. The interaction among these systems determines the accessibility and effectiveness of healthcare services for mothers and children. Therefore, improving maternal and child health requires a multisectoral approach involving healthcare providers, educators, policymakers, and communities (UNICEF, 2022).

Furthermore, the Life Course Theory highlights that health outcomes are influenced by experiences accumulated throughout life. According to this theory, maternal health before and during pregnancy directly affects fetal growth, birth outcomes, and the child's future development. Poor maternal nutrition, anemia, and inadequate prenatal care increase the risk of low birth weight, stunting, and developmental delays. UNICEF reports that maternal undernutrition remains a major concern in Indonesia and contributes to the intergenerational

cycle of malnutrition. Consequently, interventions targeting adolescent girls, pregnant women, and young children are critical for improving long-term health outcomes (UNICEF, 2022).

In recent years, nutrition has become a central component of maternal and child health theory in Indonesia through the concept of the First 1,000 Days of Life (1000 HPK). This framework emphasizes that the period from conception until a child reaches two years of age is crucial for physical growth, cognitive development, and lifelong health. Adequate maternal nutrition, exclusive breastfeeding, complementary feeding, and disease prevention during this period are essential for preventing stunting. Indonesia has made notable progress in reducing stunting prevalence, with the national rate declining to 19.8% in 2024, reflecting the effectiveness of nutrition-sensitive and nutrition-specific interventions. However, continued efforts are needed to achieve national targets and address remaining disparities. (Antara News, 2024).

Maternal and child health in Indonesia can be understood through several complementary theories, including the Continuum of Care Theory, Social Determinants of Health Theory, Health Belief Model, Ecological Systems Theory, Life Course Theory, and the First 1,000 Days of Life framework. Together, these theories explain how healthcare services, social conditions, individual behaviors, environmental factors, and early-life interventions influence maternal and child health outcomes. Understanding these theoretical perspectives is essential for developing effective policies and programs that improve the health and well-being of Indonesian mothers and children.

LITERATURE REVIEW

1. Maternal and Child Health in Indonesia

Maternal health refers to the health of women during pregnancy, childbirth, and the postpartum period. Child health encompasses physical, mental, and social well-being from infancy through adolescence. Maternal and Child Health (MCH) refers to a comprehensive approach to ensuring the health and well-being of women during pregnancy, childbirth, and the postpartum period, as well as the survival, growth, and development of infants and children. In Indonesia, MCH is a national health priority because maternal mortality, neonatal mortality, child malnutrition, and unequal access to healthcare services remain significant public health challenges. The Indonesian government, together with international organizations such as the World Health Organization (WHO) and UNICEF, has implemented various programs to improve reproductive, maternal, newborn, and child health (RMNCH) services and achieve Universal Health Coverage (UHC). Recent evidence indicates that although maternal mortality and child mortality have declined over the past two decades, disparities in healthcare access and quality continue to exist across regions and socioeconomic groups (World Health Organization, 2025). According to the World Health Organization, improving maternal and child health requires access to quality healthcare services, adequate nutrition, skilled birth attendance, immunization, and health education.

Indonesia has implemented numerous policies to improve maternal and child health, including the National Health Insurance Program (JKN), maternal health campaigns, and integrated healthcare services. Despite these efforts, maternal mortality remains higher than many neighboring countries, while child malnutrition and stunting continue to affect millions of children.

2. Community-Based Health Program

Community-based health programs are healthcare initiatives designed and implemented with active community participation. These programs focus on empowering communities to identify health needs, participate in decision-making, and contribute to health service delivery (Ayu et al, 2023).

Community participation enhances healthcare accessibility, increases health literacy, and promotes sustainable health practices. Research suggests that community-based interventions are particularly effective in low-resource settings where healthcare infrastructure is limited.

3. Theoretical Framework

This study is grounded in the Community Empowerment Theory and the Social Ecological Model. Community Empowerment Theory emphasizes the importance of enabling communities to take control of factors affecting their health and well-being. The Social Ecological Model highlights the interaction between individual, interpersonal, community, organizational, and policy-level factors influencing health outcomes. Together, these frameworks provide a comprehensive understanding of how community-based programs contribute to maternal and child health improvements.

RESEARCH METHODS

This study employs a **qualitative library research design**. Qualitative research is appropriate for exploring, understanding, and interpreting social phenomena through the analysis of textual and documentary evidence rather than numerical measurements. Library research enables researchers to investigate a phenomenon by systematically reviewing and synthesizing information from published documents, reports, scholarly articles, books, and other relevant sources (Creswell & Creswell, 2018). The use of library research is considered appropriate because the study aims to examine the role of community-based health programs in improving maternal and child health services in Indonesia through the analysis of existing literature, policy documents, and institutional reports. Rather than collecting primary field data, the study focuses on understanding patterns, relationships, and evidence reported in previous studies and official publications. According to qualitative research principles, library research facilitates an in-depth understanding of complex social and health issues by integrating findings from multiple sources and contexts. This approach is particularly useful for public health research because it enables the examination of national policies, international health reports, and empirical studies related to maternal and child health services (Creswell & Poth, 2018). Furthermore, qualitative library research supports the exploration of community-based health interventions such as Posyandu, community health volunteers (kader kesehatan), maternal education programs, and community nutrition initiatives that have been implemented throughout Indonesia. The design allows the researcher to critically analyze existing evidence regarding their effectiveness, challenges, and contributions to maternal and child health outcomes. The descriptive qualitative approach is used to describe: (1) Community-based health programs implemented in Indonesia; (2) Health education and community empowerment initiatives; (3) Utilization of maternal and child health services; (4) Maternal health outcomes resulting from community interventions; (5) Child health outcomes associated with community-based programs. The approach allows the researcher to present an integrated understanding of how community-based health programs contribute to maternal and child health improvements. It also enables the identification of factors influencing program effectiveness and challenges encountered during implementation. Through descriptive qualitative analysis, the study seeks to generate a rich and contextual understanding of maternal and child health services in Indonesia based on evidence from authoritative national and international sources.

Data used in this study consist of both primary and secondary sources. Primary sources are original documents produced by authoritative institutions directly involved in maternal and child health policy, implementation, and evaluation. The primary sources include: (a) World Health Organization (WHO) Reports providing global and national evidence regarding maternal health, child health, healthcare accessibility, health promotion, community participation, and

health system strengthening; (b) United Nations Children's Fund (UNICEF) Reports providing comprehensive information regarding child survival, nutrition, maternal health, stunting prevention, immunization, and community-based health programs; (c) Ministry of Health Reports published by the Indonesian Ministry of Health provide national data regarding maternal mortality, child mortality, antenatal care coverage, immunization programs, nutrition interventions, and healthcare utilization; (d) National Statistical Reports regarding demographic, socioeconomic, and health indicators related to maternal and child health conditions throughout Indonesia. Secondary sources consist of scholarly and academic materials that analyze, interpret, or discuss issues related to maternal and child health and community-based health programs. These sources include: (a) Journal Articles regarding Posyandu effectiveness, community participation, maternal health service utilization, child health outcomes, health promotion interventions, and community empowerment strategies; (b) Academic books providing theoretical foundations and methodological guidance related to: Community Empowerment Theory, Social Ecological Model, Public Health Promotion, and Qualitative Research Methods; (c) Government Documents regarding regulations, policy documents, strategic plans, and program guidelines are reviewed to understand the policy framework governing maternal and child health services in Indonesia.

Data collection is conducted through documentation and literature review techniques. Documentation refers to the systematic collection and examination of written materials relevant to the research topic. Documents reviewed in this study include: WHO reports, UNICEF reports, Ministry of Health publications, National health profiles, government regulations, policy documents, program implementation reports. Documentation enables researchers to obtain reliable information regarding program objectives, implementation processes, and outcomes. Literature review involves identifying, selecting, evaluating, and synthesizing relevant academic sources. The literature review process consists of identifying relevant publications, evaluating source credibility, organizing literature according to themes, comparing findings across studies, and synthesizing evidence into a coherent framework. The review focuses primarily on literature published during the last ten years to ensure that findings reflect contemporary developments in maternal and child health services.

The study adopts the qualitative data analysis model developed by Miles, Huberman, and Saldaña (2019). According to Miles, Huberman, and Saldaña, qualitative data analysis is an interactive and continuous process involving data condensation, data display, and conclusion drawing. Data reduction refers to the process of selecting, focusing, simplifying, organizing, and transforming data into meaningful information. In this study, data reduction includes selecting relevant documents, identifying major themes, categorizing information, removing irrelevant data, and summarizing key findings. Themes identified include community-based health programs, health education, community empowerment, healthcare utilization, maternal health outcomes, and child health outcomes. Data reduction helps researchers focus on information directly related to the research objectives. Data display refers to the systematic organization and presentation of information to facilitate interpretation and understanding. Data are displayed through narrative descriptions, thematic matrices, conceptual diagrams, and comparative tables. Thematic displays allow the researcher to identify patterns, similarities, differences, and relationships among findings from various sources. Conclusion drawing involves interpreting findings and developing explanations regarding the phenomenon under investigation. The researcher continuously verifies conclusions by comparing findings across sources, reviewing contradictory evidence, examining consistency among studies, returning to original documents when necessary.

The verification process ensures that conclusions are supported by sufficient evidence and accurately reflect the available data. The analytical framework developed by Miles, Huberman, and Saldaña remains one of the most widely used qualitative analysis models and continues to be recommended in contemporary qualitative research methodology (Miles et al., 2019). Trustworthiness is employed to ensure the quality and rigor of qualitative research. This study follows the criteria proposed by Lincoln and Guba, which remain widely applied in contemporary qualitative studies. Credibility refers to the accuracy and believability of research findings. To enhance credibility, the researcher uses authoritative sources, reviews multiple data sources, compares findings across documents, utilizes peer-reviewed literature. Triangulation of information from WHO, UNICEF, Ministry of Health, and scholarly publications strengthen the credibility of findings. Transferability. Transferability refers to the extent to which findings may be applicable in other contexts. The researcher provides detailed descriptions of community-based health programs, maternal and child health services, Indonesian healthcare settings, research procedures. These descriptions enable readers to determine the relevance of findings to other settings. Dependability refers to the consistency and stability of the research process. To ensure dependability, the researcher documents research procedures systematically, maintains records of data sources, follows established qualitative research guidelines, and applies consistent analytical procedures. Confirmability refers to the extent to which findings are based on evidence rather than researcher bias. To achieve confirmability, the researcher uses documented evidence, maintains transparency in data analysis, reports findings objectively, supports interpretations with authoritative sources. Through these strategies, the study ensures that findings are grounded in documented evidence and can be verified by other researchers.

RESEARCH RESULTS AND DISCUSSION

1. Posyandu (Integrated Health Service Posts)

Posyandu is one of Indonesia's most successful community-based health initiatives. Established in villages and neighborhoods, Posyandu provides essential maternal and child health services, including:

- Antenatal care monitoring
- Growth and development assessment
- Child immunization
- Nutrition counseling
- Family planning education
- Health promotion activities

Posyandu is operated by trained community volunteers known as kader kesehatan, who work closely with healthcare professionals from local health centers. Studies have shown that Posyandu participation increases immunization rates, improves maternal health knowledge, and facilitates early detection of health risks among mothers and children.

2. Community Health Volunteers (Kader Kesehatan)

Community health volunteers play a crucial role in connecting communities with formal healthcare services. Their responsibilities include:

- Conducting health education sessions
- Monitoring pregnant women and children
- Encouraging healthcare utilization
- Facilitating referrals
- Supporting nutrition programs

The presence of trusted local volunteers often increases community acceptance of health interventions and improves communication between healthcare providers and residents.

3. Maternal Health Education Programs

Maternal health education initiatives focus on increasing awareness of pregnancy-related risks, proper nutrition, breastfeeding practices, and newborn care. Educational programs are delivered through community meetings, health classes, and home visits.

Research indicates that women who participate in maternal education programs are more likely to attend antenatal care appointments, deliver in healthcare facilities, and adopt healthy childcare practices.

4. Community Nutrition Programs

Malnutrition and stunting remain major concerns in Indonesia. Community nutrition programs aim to improve dietary practices among pregnant women, breastfeeding mothers, and young children. **Activities include:**

- Nutrition counseling
- Growth monitoring
- Supplementary feeding
- Micronutrient distribution
- Breastfeeding support

These interventions contribute to improved nutritional status and reduced rates of childhood stunting.

a. Impact on Maternal Health Services

(1) Increased Antenatal Care Utilization

Community-based programs encourage pregnant women to seek regular antenatal care through awareness campaigns and personalized support. Increased antenatal care attendance enables early detection of pregnancy complications and improves maternal outcomes.

(2) Improved Skilled Birth Attendance

Health volunteers often educate families about the importance of delivering in healthcare facilities under the supervision of skilled healthcare professionals. Consequently, institutional delivery rates have increased in many regions.

(3) Enhanced Maternal Health Literacy

Health education activities improve women's understanding of reproductive health, nutrition, danger signs during pregnancy, and postpartum care. Better-informed mothers are more likely to make appropriate healthcare decisions.

(4) Reduced Maternal Mortality Risks

By promoting timely healthcare utilization and facilitating referrals, community-based programs contribute to reducing preventable maternal deaths.

b. Impact on Child Health Services

(1) Higher Immunization Coverage

Community outreach activities increase awareness regarding childhood vaccination schedules and encourage parents to utilize immunization services.

(2) Improved Nutritional Outcomes

Regular growth monitoring and nutrition counseling help identify children at risk of malnutrition and facilitate early intervention.

(3) Better Child Development Monitoring

Posyandu activities support the early detection of developmental delays and health conditions requiring medical attention.

(4) Increased Health-Seeking Behavior

Community-based programs foster positive attitudes toward healthcare utilization, resulting in earlier treatment and prevention of childhood illnesses.

c. Challenges Facing Community-Based Health Programs

Despite their achievements, several challenges continue to affect the effectiveness of community-based health programs in Indonesia.

(1) Limited Funding

Many programs rely on inconsistent funding sources, which may affect service quality and program continuity.

(2) Volunteer Retention and Motivation

Community health volunteers often work with limited incentives, creating challenges in maintaining long-term commitment and performance.

(3) Training and Capacity Building

Continuous training is necessary to ensure volunteers possess updated knowledge and skills.

(4) Geographic Disparities

Remote and underserved areas continue to face difficulties in accessing healthcare services and resources.

(5) Data Management and Monitoring

Inadequate health information systems may hinder effective monitoring and evaluation of program outcomes.

d. Future Directions

To strengthen the impact of community-based health programs, several strategies should be considered:

1. Increasing government investment in community health initiatives.
2. Enhancing volunteer training and support systems.
3. Expanding digital health technologies for health education and monitoring.
4. Strengthening partnerships between communities, healthcare facilities, and local governments.
5. Improving data collection and evaluation mechanisms.
6. Integrating community-based programs into broader national health policies.

These measures can improve program sustainability and contribute to better maternal and child health outcomes across Indonesia.

CONCLUSION

Community-based health programs have become a cornerstone of maternal and child health services in Indonesia. Through initiatives such as Posyandu, community health volunteers, maternal education programs, and nutrition interventions, these programs enhance healthcare accessibility, promote preventive practices, and empower communities to participate actively in health improvement efforts.

Evidence suggests that community-based programs contribute significantly to increased antenatal care utilization, improved institutional delivery rates, higher immunization coverage, better nutritional outcomes, and enhanced health literacy among mothers and caregivers. However, challenges related to funding, volunteer support, training, and geographic inequalities continue to affect program effectiveness.

Strengthening community participation, investing in capacity building, and leveraging digital innovations can further enhance the effectiveness of community-based health programs. As Indonesia continues its efforts to achieve universal health coverage and sustainable

development goals, community-based approaches will remain essential for ensuring equitable and high-quality maternal and child health services.

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