Effectiveness of Health Care Services and Programs of Selected Vulnerable Communities in Zamboanga City

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ABSTRACT

The Philippines' decentralized health system, established under the Local Government Code of 1991, delegates primary care to barangay health centers. However, vulnerable communities particularly in conflict-affected areas of Mindanao continue to face significant barriers to accessing quality health services.This study assessed the availability and perceived effectiveness of health care services and programs in six vulnerable barangays in Zamboanga City, Philippines. A mixed-methods design was employed with 180 respondents (30 per barangay) from Mariki, Rio Hondo, Recodo, Arena Blanco, Lumayang, and Lumbangan. Data were collected using structured survey questionnaires and focus group discussions. Quantitative data were analyzed using frequency distribution, mean, and standard deviation. Four of six barangays reported that most health services were not available in their communities. All health service categories were rated as Moderately Effective except mental health services, which were rated Slightly Effective (mean = 2.42). Family planning received the highest rating (mean = 3.19), while maternal care (mean = 2.78) and HIV awareness (mean = 2.63) were also rated Moderately Effective, though qualitative findings revealed significant implementation gaps. Standard deviations (0.647–0.914) indicated homogeneity in respondent perceptions. Significant gaps exist in health service availability, and mental health services require urgent improvement. Multilevel interventions addressing individual, institutional, and policy barriers are needed to strengthen primary care delivery in underserved Philippine communities.

Keywords: health care services, vulnerable communities, local government units, barangay health centers, Philippines

Highlights

- Four of six vulnerable barangays in Zamboanga City lack access to basic health services.
- Mental health services are virtually absent and rated "Slightly Effective" (mean = 2.42).
- Family planning is the only service rated "Very Effective" (mean = 3.19).
- Multilevel interventions are needed to address individual, institutional, and policy barriers.

INTRODUCTION

The Philippines' public health system operates through a decentralized framework established by Republic Act No. 7160 (Local Government Code of 1991), which devolved basic service delivery including health care to Local Government Units (LGUs). Barangay Health Centers (BHCs) and Barangay Health Stations (BHSs) serve as the cornerstone of primary care, providing immunizations, health education, family planning, and treatment for minor illnesses (Reyes et al., 2023). However, research indicates that barely half of Filipinos can access a BHC within 30 minutes of travel time (Serafica et al., 2025).

Decentralization has not uniformly improved health outcomes. Previous studies demonstrate that it can worsen inequality, erode local commitment to health issues, and reduce service efficiency in underserved populations

(Reyes et al., 2023). In some of the country's poorest LGUs, health care quality has actually decreased following devolution (Serafica et al., 2025).

Zamboanga City, the sixth most populous city in the Philippines and second largest in Mindanao, exemplifies these challenges. Its population is projected to reach one million between 2020 and 2025 (Philippine Statistics Authority, 2020). The city comprises both urban and rural barangays, many of which are classified as vulnerable communities facing compounded challenges: geographic isolation, armed conflict, poverty, and inadequate health infrastructure.

The Department of Health (DOH) has established the Sentrong Sigla (Quality) Program, which sets standards for health facilities at various levels. Level I facilities (Rural Health Units, BHCs, and BHSs) are mandated to provide essential services including expanded immunization, disease surveillance, control of acute respiratory infections, diarrheal disease control, micronutrient supplementation, family planning, tuberculosis control, HIV/AIDS prevention, environmental sanitation, cancer screening, and maternal care (DOH, 2000).

Gap in the Literature

While the Philippines' BHCs and Barangay Health Workers (BHWs) have operated longer than community health worker programs in many other countries (Kawi et al., 2024), there has been limited research on the social and environmental factors affecting health care access in underserved Filipino communities (Serafica et al., 2025). Previous studies have identified barriers at multiple levels individual (lack of staff motivation, misperceptions of health needs), interpersonal (lack of training, unprofessional behaviors), institutional (lack of human resources, supplies, accountability), community (lack of support, belief in traditional healers), and policy (lack of uniformity in resources, infrastructure gaps) (Reyes et al., 2023). However, few studies have systematically assessed the visibility and effectiveness of specific health programs from the community perspective in Zamboanga City.

Research Questions

This study sought to answer:

1. What health care services and programs are available in selected vulnerable communities in Zamboanga City?

2. How effective are these health care services and programs as perceived by community residents?

Objectives

This research aimed to:

1. Assess the availability and effectiveness of health care services and programs in selected vulnerable communities in Zamboanga City;

2. Develop local awareness of health care services and programs in these communities; and

3. Gather recommendations to address issues and concerns regarding health care service delivery.

Significance

The findings are expected to benefit:

- Local Government Units (LGUs): Evidence-based recommendations for program improvement and resource allocation.

- Department of Health (DOH): Policy guidance for addressing service gaps, particularly in mental health, maternal care, and HIV awareness.

- Community Residents: Increased awareness of available health services and empowerment to advocate for improved delivery.
- Future Researchers: Reference material for similar investigations and identification of priority areas for further study.

Scope and Delimitation

The study focused on six barangays in Zamboanga City identified as vulnerable by the Department of Social Welfare and Development (DSWD) Region IX: Mariki, Rio Hondo, and Recodo (District 1, urban); and Arena Blanco (urban), Lumayang, and Lumbangan (District 2, rural). A sample of 180 respondents (30 per barangay) was analyzed using survey questionnaires and focus group discussions.

METHODOLOGY

Research Design

This study employed a mixed-methods design combining quantitative (structured surveys) and qualitative (focus group discussions) approaches (Creswell & Creswell, 2018). The quantitative component assessed the visibility and effectiveness of health services; the qualitative component explored community perceptions and experiences to contextualize the quantitative findings.

Research Locale

The study was conducted in six barangays of Zamboanga City identified by DSWD Region IX as vulnerable communities based on poverty incidence, conflict exposure, and health infrastructure gaps.

Table 1. Selected Barangays by District and Area Classification

District	Barangay	Area Classification
District 1	Mariki	Urban
District 1	Rio Hondo	Urban
District 1	Recodo	Urban
District 2	Arena Blanco	Urban
District 2	Lumayang	Rural
District 2	Lumbangan	Rural

Note. Adapted from DSWD Region IX vulnerability assessment data (2022).

Population and Sampling

The target population comprised adult residents aged 18 years and older (excluding those over 70 years of age). Using simple random sampling, 30 respondents per barangay were identified, yielding a total sample of 180 respondents. One representative per household was encouraged to participate to avoid oversampling from a single household.

Research Instrument

A structured survey questionnaire was developed with three sections:

Section 1: Demographic Profile. Age, gender, and barangay of residence.

Section 2: Availability Checklist. Ten health service categories with sub-items, where respondents indicated whether each service was present ("YES") or absent ("NO") in their community.

Section 3: Effectiveness Assessment. A five-point Likert scale (1 = Not at all Effective, 2 = Slightly Effective, 3 = Moderately Effective, 4 = Very Effective, 5 = Extremely Effective) was used to rate the effectiveness of each health service category.

Table 2. Health Care Service Categories Assessed

Category	Sub-Items
Child Health Services	Health/nutrition programs, free vaccination, free circumcision
Chronic Disease Management	Free heart check-up, health/nutrition programs, prevention seminars
Disability Services	PWD discount, special education, equal opportunities
Family Planning Services	Seminars, free contraceptives
Health Promotion Services	Free Zumba, health seminars
Dental Health Services	Free dental check-up
Home and Community Care	Counseling/support, medical/nursing services, health promotion activities
Maternal Care Services	Free pre-natal check-up, free post-natal check-up, free vitamins
Mental Health Services	Guidance/counseling, psychological testing centers
HIV Awareness Services	Awareness seminars, free check-up

Data Collection Procedure

After obtaining approval from the research adviser and the Dean of the College of Public Administration and Development Studies (CPADS), letters requesting permission were forwarded to the barangay captains of the six selected barangays. Upon approval, research assistants were trained to administer the survey questionnaires. Survey questionnaires were administered to eligible residents. Focus group discussions were conducted with selected participants (four to six per barangay) to explore community experiences and perceptions.

Data Analysis

Quantitative data were analyzed using:

Frequency Distribution. To determine the availability of health care services (YES/NO responses) across barangays.

Mean and Standard Deviation. To assess the perceived effectiveness of each health service category. Mean scores were interpreted using the following scale:

Table 3. Scale

Mean Range	Adjectival Rating
1.00 – 1.80	Not at all Effective
1.81 – 2.60	Slightly Effective
2.61 – 3.40	Moderately Effective
3.41 – 4.20	Very Effective
4.21 – 5.00	Extremely Effective

Ethical Considerations

Participation was voluntary; informed consent was obtained from all respondents. Anonymity and confidentiality were maintained throughout the research process. Respondents were informed of their right to withdraw at any time without penalty. The study protocol was reviewed and approved by the institutional ethics review committee.

RESULTS

3.1 Availability of Health Care Services

Table 4. Availability of Health Care Services by Barangay (N = 180)

Barangay	Total YES	Total NO	Interpretation
Lumayang	344	376	**Mostly Not Available**
Mariki	242	478	**Mostly Not Available**
Lumbangan	502	218	**Mostly Available**
Rio Hondo	288	432	**Mostly Not Available**
Recodo	472	248	**Mostly Available**
Arena Blanco	205	515	**Mostly Not Available**

Four of six barangays (Lumayang, Mariki, Rio Hondo, Arena Blanco) reported that most health care services were not available in their communities. Only two barangays (Lumbangan, Recodo) reported most services were available. Mental health services (guidance/counseling, psychological testing) received the highest "NO" responses, with many communities reporting 0% availability across all six barangays. HIV awareness services also showed very low availability, particularly in rural barangays (Lumayang and Lumbangan).

Effectiveness of Health Care Services

Table 5. Community Response on Effectiveness of Health Care Services

Health Care Service Category	Not at all Effective (1)	Slightly Effective (2)	Moderately Effective (3)	Very Effective (4)	Extremely Effective (5)
Child Health Services	19	39	**73**	36	13
Chronic Disease Management	18	56	**57**	39	12
Disability Services	12	41	**53**	49	17
Family Planning Services	14	36	50	**61**	19
Health Promotion Services	16	44	**71**	40	13
Dental Health Services	20	37	**64**	38	14
Home and Community Care	24	51	**56**	36	13

Maternal Care Services	27	**51**	50	38	14
Mental Health Services	34	**76**	38	25	7
HIV Awareness Services	30	**66**	44	26	15

Key Findings:

- Child Health Services, Chronic Disease Management, Disability Services, Health Promotion, Dental Health, Home/Community Care: Majority rated Moderately Effective.
- Family Planning Services: Majority rated Very Effective the highest rating among all services.
- Maternal Care Services, Mental Health Services, HIV Awareness Services: Majority rated Slightly Effective the lowest effectiveness category.

Mean Effectiveness Ratings

Table 6. Community Attitude Towards Effectiveness of Health Care Services

Health Care Service Category	Actual Mean	Standard Deviation	Corrected Adjectival Rating
Child Health Services	2.92	0.831	Moderately Effective
Chronic Disease Management	2.87	0.872	Moderately Effective
Disability Services	2.97	0.798	Moderately Effective
Family Planning Services	3.19	0.914	Moderately Effective
Health Promotion Services	3.01	0.837	Moderately Effective
Dental Health Services	2.82	0.864	Moderately Effective
Home and Community Care	2.79	0.851	Moderately Effective
Maternal Care Services	2.78	0.647	Moderately Effective
Mental Health Services	2.42	0.681	Slightly Effective
HIV Awareness Services	2.63	0.652	Moderately Effective

Note: Higher mean scores indicate higher perceived effectiveness.

Standard deviations were small (0.647–0.914), indicating homogeneity in variance and consistent perception among respondents across barangays.

Qualitative Findings from Focus Group Discussions

To contextualize the quantitative findings, focus group discussions (FGDs) were conducted with four to six participants per barangay. Thematic analysis of the FGD transcripts revealed four major themes that explain the low visibility and moderate-to-low effectiveness ratings of health services in the study communities.

Table 7. Thematic Analysis Summary Table

Theme	Key Finding	Supporting Quantitative Data
"Walang Nararamdaman"	Health workers and services are largely absent	4 of 6 barangays reported services as "not available"

"Hindi Namin Alam"	Low awareness of specific programs	Mental health and HIV services showed near-zero visibility
"Kulang ang Suporta"	Shortages in supplies, staff, and facilities	Low effectiveness ratings across most service categories
"Mas Pinipili Namin ang Ibang Options"	Preference for traditional healers and private clinics	Community-level barrier consistent with Reyes et al. (2023)

Illustrative quotes from participants

"*Ang health center namin, bukas lang daw pag may schedule. Pero pag pumunta ka, walang tao. Parang hindi naman talaga sila nagseserbisyo." (Our health center is only open when there's a schedule. But when you go there, no one is around. It's like they don't really provide service.)* — Female participant, Lumayang

"*Mental health? Ano yun? Wala naman nagtuturo sa amin tungkol diyan. Baka sa city lang yun." (Mental health? What's that? No one teaches us about that. Maybe that's only in the city.)* — Female participant, Arena Blanco

"Isang midwife lang ang naka-assign sa amin para sa 500 na pamilya. Paano niya kakayanin yun?" (Only one midwife is assigned to us for 500 families. How can she handle that?) — Female participant, Rio Hondo

"Mas pinipili namin ang albularyo kasi malapit lang at kilala namin." (We prefer the traditional healer because it's nearby and we know them.) — Male participant, Arena Blanco

DISCUSSION

This study assessed the availability and effectiveness of health care services in six vulnerable barangays in Zamboanga City. Three key findings emerged:

First, four of six barangays reported that most health care services were not available a finding consistent with broader Philippine data showing that barely half the population can access a BHC within 30 minutes of travel time (Serafica et al., 2025). Mental health services showed near-zero availability across all barangays, reflecting the national shortage of mental health resources (approximately 0.5 psychiatrists per 100,000 population) despite the passage of the Mental Health Act (RA 11036) in 2018. This suggests that legislative action alone is insufficient; implementation and resource allocation must follow.

Second, family planning services were rated Very Effective, while most other services were Moderately Effective. This aligns with the success of the Responsible Parenthood and Reproductive Health Act (RA 10354) and suggests that family planning programs have received prioritization in resource-limited settings. However, the Very Effective rating may also indicate high demand rather than exceptional service quality, as family planning services are often prioritized due to international donor funding (Kawi et al., 2024).

Third, despite being rated Moderately Effective overall (mean = 2.78), maternal care services were identified by FGD participants as requiring significant improvement, particularly in rural areas where only one midwife may serve hundreds of families. The qualitative theme *"Kulang ang Suporta"* (Lack of Support) highlighted that supply shortages and understaffing undermine the effectiveness of even moderately-rated services. Similarly, HIV awareness services received a mean rating of 2.63 (Moderately Effective), yet FGD participants in several barangays expressed complete unawareness of such programs (*"Hindi namin alam"*), suggesting that low visibility masks potentially lower actual effectiveness. Most critically, mental health services (mean = 2.42, Slightly Effective) showed near-zero visibility across all barangays, with FGD participants unable to define or identify any mental health resources in their communities. This reflects the national shortage of mental health resources (approximately 0.5 psychiatrists per 100,000 population).

Comparison With Previous Research

Recent studies using the socioecological model have identified barriers to health care provision in underserved Philippine communities at five levels (Reyes et al., 2023):

Individual-level: Lack of staff motivation and misperceptions of health needs. One BHW participant noted, "People in our community don't go to the center because they don't think it's necessary to be seen for their high blood pressure" (Reyes et al., 2023, p. 7).

Interpersonal-level: Lack of training, unprofessional behaviors, and communication gaps. "We never see the nurses, so if we aren't sure what to do, we have to send them a text message, which they may not answer for several days" (Reyes et al., 2023, p. 8).

Institutional-level: Lack of human resources, accountability, physical space, and supplies. "There are just days when it is busy, and I can't take care of all the people coming in. We just need more manpower" (Reyes et al., 2023, p. 9).

Community-level: Lack of community support and lack of available resources. "Our wealthier members will go to hospitals in the city, while those with less money will go to an herbalist" (Reyes et al., 2023, p. 10).

Policy-level: Lack of uniformity in policies and functional infrastructure.

These multilevel barriers directly explain the low effectiveness ratings observed in the present study. The absence of psychological testing centers (mental health), inconsistent maternal care availability, and low HIV awareness all reflect systemic gaps identified in the socioecological model.

Serafica et al. (2025) further emphasized that Filipinos living in rural areas have less access to preventive health care services despite having higher rates of chronic disease. Their study found that community engagement strategies such as using local leaders as health advocates—significantly improved health-seeking behaviors. This suggests that visibility and effectiveness are not solely about service availability but also about community awareness and trust.

Kawi et al. (2024) investigated health information sources and health-seeking behaviors in medically underserved Philippine communities and found that Filipino adults rely on multiple information sources, including healthcare providers, family members, and social media. This underscores the importance of multi-channel health communication strategies to improve service availability and utilization.

Implications For Policy and Practice

For Local Government Units (LGUs): Findings underscore the need for enhanced resource allocation, improved supervision of BHWs, and stronger community engagement. Decentralization has not automatically improved equity; intentional interventions are required (Serafica et al., 2025). LGUs should conduct regular community health assessments and involve residents in health program planning and evaluation.

For the Department of Health (DOH): The Mental Health Act implementation must accelerate, with community-based services prioritized. HIV prevention programs must reach vulnerable populations beyond urban centers. DOH should consider integrating mental health services into existing BHCs rather than establishing standalone facilities, which may be resource-prohibitive.

For Communities: Health literacy campaigns should address misperceptions about when to seek care. Community leaders should support BHCs consistently. The barangay health committee should be activated and empowered to monitor service delivery and advocate for improvements.

For Future Research: Longitudinal studies are needed to assess program impact over time. Comparative studies between urban and rural barangays would help identify context-specific barriers. Intervention studies testing community engagement strategies would provide evidence for effective implementation.

Limitations

This study has several limitations:

1. Sample Size: While 180 respondents provide meaningful data, a larger sample would enhance generalizability.

2. Self-Reported Data: Responses may be subject to recall bias or social desirability bias.

3. Geographic Scope: The study was limited to six barangays in Zamboanga City; findings may not be generalizable to other vulnerable communities in the Philippines.

4. Cross-Sectional Design: The study captures perceptions at a single point in time; longitudinal research would better assess program impact.

5. Limited Qualitative Data: While focus group discussions were conducted, deeper ethnographic research would provide richer contextual understanding.

RECOMMENDATIONS

Based on the findings, the following recommendations are proposed:

1. Strengthen Service Delivery: Establish or upgrade Barangay Health Stations in underserved areas; ensure consistent availability of essential medicines and supplies; increase the number of health workers in vulnerable communities.

2. Improve Program Availability: Conduct community-wide information campaigns on available health services; utilize multiple communication channels (radio, social media, community meetings); integrate health education into barangay assemblies.

3. Address Critical Service Gaps:

    - Mental Health: Train barangay health workers in mental health first aid; establish community-based counseling services.

    - Maternal Care: Enhance prenatal and postnatal care services, particularly in rural areas.

    - HIV Awareness: Implement targeted HIV prevention programs for vulnerable populations.

4. Enhance Governance: Strengthen the barangay health committee's role in monitoring service delivery; increase transparency and accountability in health program implementation; foster multi-stakeholder partnerships (LGUs, DOH, NGOs, community organizations).

5. Conduct Further Research: Investigate specific barriers to health service utilization; evaluate the impact of health programs using longitudinal designs; explore the experiences of vulnerable populations through qualitative research.

CONCLUSION

This study assessed health care service availability and effectiveness in six vulnerable Zamboanga City barangays. Most services were not available in four of six communities. Family planning was rated Very Effective (mean = 3.19), most services were Moderately Effective (means ranging from 2.63 to 3.01), and mental health services were rated Slightly Effective (mean = 2.42). Maternal care (mean = 2.78) and HIV awareness (mean = 2.63) were rated Moderately Effective but, based on qualitative findings, face significant implementation challenges related to staffing shortages, supply inadequacies, and low community awareness.

These findings align with recent research identifying multilevel barriers individual, interpersonal, institutional, community, and policy to primary care in underserved Philippine communities (Reyes et al., 2023).

The study demonstrates that while the Philippines has a comprehensive legal and policy framework for healthcare delivery, implementation gaps persist at the local level, particularly in vulnerable communities. Achieving universal health coverage requires intentional, multi-level interventions targeting the specific barriers faced by vulnerable populations.

As the Philippine government pursues its goal of "Health for All Filipinos," it must ensure that no community is left behind. The health of vulnerable populations is not only a matter of social justice but also a prerequisite for national development. "The health of vulnerable populations is a matter of social justice and a prerequisite for national development; achieving universal health coverage requires that no community is left behind."

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