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Assessing Community Needs and Expectations with Healthcare Quality: A Case Study of Lawawoi Community Health Center

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ABSTRACT

Introduction: In this study, we aimed to examine the relationship between community healthcare needs, expectations, and perceived service quality within the context of rural health service delivery. With growing global emphasis on patient centered care and rising concerns about inequitable healthcare access, our objective was to assess how well community needs and expectations align with service provision at the Lawawoi Community Health Center (CHC) to address gaps identified in existing literature.

Methods: This quantitative cross sectional study involved the distribution of structured questionnaires and observational data collection conducted at the Lawawoi CHC from March to May 2024. A total of 80 respondents were enrolled through purposive sampling. Data were collected via validated surveys assessing perceptions of service quality, expectations, and healthcare needs. Ethical approval was obtained from the Institutional Review Board of the research team's affiliated institution, and participants provided informed consent.

Results: The primary outcome of the study was the perceived improvement in service quality. Findings revealed that 90.5% of participants with high healthcare needs and 94.7% of those with high expectations perceived service quality as good. Chi square tests showed statistically significant relationships between community needs and service quality ($p = 0.000$) and between expectations and service quality ($p = 0.000$). Notably, cultural values and interpersonal provider patient interactions were influential in shaping perceptions.

Conclusion: In conclusion, our study contributes to the understanding of patient centered service delivery in rural Indonesia by highlighting the importance of aligning healthcare provision with community needs and expectations. This research provides insights into participatory planning, communication strategies, and culturally responsive care as drivers of perceived service quality. Future studies should explore longitudinal impacts of community engagement and evaluate continuous quality improvement models to advance equity oriented healthcare practices in resource limited settings.

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INTRODUCTION

Community Health Centers (CHCs) constitute the backbone of primary healthcare systems, especially in rural and semi urban settings where access to comprehensive medical services remains a challenge. Their essential role in bridging healthcare gaps has become even more prominent amidst the global shift from infectious diseases to chronic, degenerative conditions that demand long term, preventive, and patient centered care. However, while CHCs aim to provide inclusive, high quality healthcare to underserved communities, they are often constrained by operational, infrastructural, and systemic limitations that hinder service alignment with local health needs and public expectations.

Globally, there is an increasing emphasis on patient centered care (PCC) as a strategic approach to improving healthcare quality. PCC underscores the necessity of tailoring services to individual preferences, cultural backgrounds, and contextual needs. Numerous studies affirm that when healthcare systems integrate patient preferences and feedback into the service design, the resulting care is not only more responsive but also generates higher patient satisfaction and treatment adherence (1,2). Despite this evidence, many CHCs continue to operate within bureaucratic frameworks that limit their adaptability to emerging patient expectations, especially in low resource settings.

A significant barrier to effective service delivery at CHCs is the misalignment between community needs and the actual structure of health service provision. For example, Ma et al. (2024) observed that cardiac rehabilitation services failed to achieve optimal outcomes due to a lack of cultural sensitivity and awareness of patient barriers, while Dannefer et al. (2019) emphasized the disconnection between community resources and localized health priorities (3,4). These gaps reflect broader challenges in service customization, which, if unaddressed, can erode trust in the public health system and discourage healthcare seeking behavior.

In many CHCs, structural inequities ranging from geographic inaccessibility to social and economic disparities amplify these service gaps. According to Haines et al. (2022), social determinants such as income, education, and location significantly shape access to care and influence health outcomes (5). Kushitor et al. (2019) further highlighted how inadequate referral systems and resource constraints in rural Ghana impede timely access to specialized services (6). These findings point to systemic failings that demand both infrastructural investment and strategic policy reform to ensure equitable healthcare delivery.

In addition to structural constraints, communication inefficiencies persist as critical barriers to quality care. Azizah et al. (2024) revealed that patients frequently express dissatisfaction due to inadequate information sharing about medications and procedures (7). Similarly, John et al. (2020) noted that the effectiveness of community health workers is often hampered by a lack of training and resources, which diminishes their ability to facilitate meaningful patient provider interactions (8). These communication gaps exacerbate patient disengagement and reduce compliance with prescribed treatment regimens.

Beyond communication, participatory service design remains underutilized in many healthcare systems. Turner et al. (2019) argued that traditional health systems often marginalize community voices, treating participation as tokenistic rather than substantive (9). Conversely, Abhishek et al. (2024) demonstrated the positive outcomes of genuine community engagement, which enhances governance accountability and aligns service delivery with public expectations. Incorporating patient perspectives not only fosters service legitimacy but also leads to innovations in care processes that reflect the lived experiences of target populations (10).

Notably, the bureaucratic culture within healthcare organizations compounds these challenges. As Mrklas et al. (2020) explain, administrative inefficiencies delay the translation of stakeholder feedback into actionable improvements, resulting in service stagnation. In this context, promoting organizational agility and decentralizing decision making can empower CHCs to be more responsive and adaptive to community specific health needs (11).

Cumulatively, these barriers underscore the need for a multidimensional strategy that addresses not just the technical aspects of service delivery, but also the relational, cultural, and communicative dynamics that define healthcare experiences. While the literature proposes various strategies including telemedicine, community advisory boards, and digital appointment systems implementation remains inconsistent. Rural and underserved areas often lag in the adoption of such innovations due to infrastructural and financial constraints (12).

Patient centered care has emerged as a compelling framework to address these challenges. It emphasizes individualized care planning, respectful communication, and responsiveness to socio cultural contexts. As reported by Hagaman et al. (2022), maternal satisfaction in Ethiopia improved significantly when healthcare delivery aligned

with women's childbirth experiences and expectations (1). This indicates that health outcomes are closely tied to the degree of alignment between service provision and patient perspectives.

The literature also highlights the role of organizational culture in shaping the success of PCC initiatives. Crespo González et al. (2024) emphasized that team based collaboration and inclusivity among general practitioners can enhance pediatric care outcomes (13). Wartiningsih et al. (2020) pointed out that perceived value plays a critical role in fostering patient loyalty, suggesting that service satisfaction hinges on whether patients feel valued and understood(2).

Integrating patient feedback into care design is another cornerstone of quality improvement. Patel et al. (2021) demonstrated that participatory care environments significantly increase trust and improve patient experiences(14). Schaefer et al. (2024) found that involving patients in palliative care decisions not only improved satisfaction but also enhanced emotional well being (15). These findings collectively argue for a participatory approach where patients actively shape service delivery.

Frameworks established by global health authorities further reinforce the need for responsive care models. The WHO's Health Systems Framework and its "Building Blocks" model emphasize integrated service delivery, workforce training, and data driven decision making as pillars of high quality care (16). Meanwhile, the Joint Commission International (JCI) outlines standards that prioritize continuous quality improvement, patient safety, and performance measurement (17). Together, these guidelines provide a structured basis for reforming CHCs into more efficient, accountable, and community responsive institutions.

Furthermore, WHO's Integrated People Centered Health Services (IPCHS) framework promotes cross sector collaboration and community empowerment as central tenets of effective health systems. It encourages care models that recognize diversity, ensure equity, and facilitate user participation in policy and planning. These principles align closely with the goals of CHCs and suggest that adopting international standards can significantly enhance local health governance.

Despite the availability of such frameworks, gaps remain in their operationalization, particularly in resource limited settings. Studies by Kelly et al. (2019) and Khanpoor (2025) underscore the importance of understanding local socio economic realities when applying universal quality standards (18,19). Without adaptation to local contexts, even well intentioned policies risk ineffectiveness or resistance from target communities.

This study addresses a pressing gap in the literature by empirically examining how community needs and expectations relate to perceived service quality at a local CHC Puskesmas Lawawoi in South Sulawesi, Indonesia. Unlike previous research that primarily discusses frameworks or conceptual models, this study employs statistical methods to evaluate the real world alignment between patient expectations and service delivery. Its novelty lies in its localized approach, focusing on community voices and data driven service evaluation.

The study's objective is to assess the correlation between community needs, expectations, and the perceived quality of healthcare services in a rural Indonesian setting. It also aims to highlight actionable insights for improving service delivery, contributing to the broader discourse on patient centered care and participatory health planning. Ultimately, the findings provide a practical framework for CHCs to implement more responsive, adaptive, and inclusive healthcare strategies aligned with evolving community demands.

Therefore, this study explicitly seeks to examine how community health needs and expectations correlate with the perceived quality of services provided by Puskesmas Lawawoi in South Sulawesi, Indonesia. The research specifically focuses on evaluating the extent to which elements of patient centered care such as communication effectiveness, cultural sensitivity, and participatory engagement are reflected in service delivery from the perspective of the local community. Furthermore, this study aims to generate empirical insights into service components that require strategic improvements to enhance patient satisfaction, trust, and adherence, while taking into account the socio cultural and economic realities of the rural Indonesian setting. By grounding its analysis in localized data, the study seeks to contribute to the refinement of community health center governance and service delivery practices, aligning them more closely with the principles of participatory and patient centered care as advocated by global health frameworks.

METHOD

This study employed a quantitative research approach using a cross sectional design to examine the relationship between community needs, expectations, and perceived improvements in the quality of health services

at the Lawawoi Community Health Center (CHC). The cross sectional method was chosen for its efficiency in capturing data at a specific point in time, allowing for the identification of associations among variables without the need for longitudinal tracking. This methodology aligns with best practices in public health research, offering a pragmatic and timely means of analyzing service delivery patterns within defined populations (20).

Cross sectional designs are particularly well suited for exploratory analyses in public health, as they provide a snapshot of prevailing conditions, behaviors, and perceptions that can inform service improvements. According to Huang et al. (2022), such studies offer crucial insight into healthcare prevalence and community specific health needs, supporting evidence based policy decisions. In this research, the design facilitated the investigation of how community needs and expectations correlate with perceived quality improvements, enabling targeted recommendations for CHC enhancement (21). Nevertheless, it is important to acknowledge that the cross sectional approach limits the ability to infer causal relationships between variables due to its reliance on data collected at a single point in time. Despite this limitation, the design remains appropriate for the study's objective of exploring associations and generating actionable recommendations for CHC enhancement.

Population and Sample

The use of purposive sampling enabled the inclusion of 80 respondents, a sample size that provided adequate statistical power for meaningful bivariate analysis. Aranda et al. (2024) noted that purposive sampling is particularly effective for capturing targeted insights in community health contexts where diverse and nuanced experiences are essential for drawing valid conclusions (16). The inclusion criteria specified adult community members aged 18 years and above who had accessed healthcare services at Puskesmas Lawawoi within the past six months, were residents of the Lawawoi service area, and were capable of providing informed consent. Individuals with cognitive impairments, severe communication difficulties, or those unwilling to participate were excluded to ensure data integrity and ethical compliance. To enhance sample heterogeneity and minimize the risk of homogeneity bias, deliberate efforts were made to ensure representation across key demographic variables. The final sample comprised 42 females and 38 males, with age distribution ranging from 18 to 65 years. Educational attainment varied from primary school (30%), secondary school (40%), to higher education (30%), while socio economic status was categorized into low (45%), middle (40%), and high (15%) income brackets. Nevertheless, the potential for selection bias was acknowledged. As the sample was not randomly selected, generalizability beyond the study population may be limited, a concern echoed by Condon et al. (22). To address this limitation, methodological triangulation was employed by integrating observational data and contextual field notes, providing complementary insights and reinforcing the robustness of the findings (23).

Research Location

The population of this study consisted of residents of the Watang Pulu Subdistrict who had accessed services at the Lawawoi CHC, particularly those involved in the Public Health Efforts (UKM) programs. To ensure representation of relevant experiences, purposive sampling was used, targeting individuals who met predefined inclusion criteria. These criteria required respondents to have accessed healthcare services at least twice, possess basic literacy, and have adequate auditory capacity. As Atukunda et al. (2020) emphasize, purposive sampling is advantageous when aiming to capture in depth perspectives from individuals with firsthand experience in the study context (24).

Instrumentation or Tools

To supplement survey responses, observation sheets were used to assess non verbal indicators of service quality, such as waiting times, staff responsiveness, and patient provider interactions. This approach enabled a comprehensive evaluation of service delivery, consistent with best practices in healthcare research that advocate for multimodal data collection (25). Questionnaires were designed to be completed within 15 20 minutes to reduce respondent fatigue and enhance data quality. Internal consistency of the final questionnaire was assessed using Cronbach's alpha, yielding a reliability coefficient of 0.87, which is considered acceptable for health service perception surveys. In addition to questionnaires, observational sheets were utilized to document interactions between patients and healthcare providers, environmental conditions of the CHC, and non verbal expressions during service

encounters. This triangulated approach enriched the data quality and provided contextual depth to complement quantitative findings.

Data Collection Procedures

Data collection took place over a two month period from March 21 to May 21, 2024. Structured questionnaires were distributed to community members during UKM activities, specifically targeting individuals with prior experience of CHC services. A total of 100 questionnaires were distributed, of which 80 were completed and returned, yielding a response rate of 80%. This response rate was considered acceptable for community based surveys, although the potential for non response bias was acknowledged and carefully considered during data interpretation. The questionnaire was designed to capture perceptions of service quality, healthcare expectations, and specific healthcare needs. A pilot test was conducted involving 20 respondents from a neighboring CHC to refine question clarity, language, and sequencing, thereby minimizing respondent misinterpretation. This process aligned with the recommendations of Vader et al. (2021) on questionnaire optimization in community health studies (26). The inclusion of both questionnaires and observational sheets facilitated data triangulation, enriching the study's robustness and enabling cross validation of findings.

Data Analysis

Data analysis was conducted using both univariate and bivariate statistical methods. Univariate analysis was employed to summarize the demographic characteristics of the study population and the distribution of responses related to healthcare needs, expectations, and service quality perceptions. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to present the data in a clear and interpretable manner.

Bivariate analysis was carried out to assess the relationships between independent variables (community needs and expectations) and the dependent variable (perceived service quality). The chi square test was selected as the appropriate statistical method due to its effectiveness in analyzing categorical data and determining significant associations between variables. The confidence level for statistical significance was set at 95% ($p < 0.05$), *data were analyzed using SPSS, to contextualize and expand upon the survey findings.*

Ethical Consideration

This study did not require formal Institutional Review Board (IRB) approval as it involved no clinical interventions, invasive procedures, or activities posing potential harm to participants. The research was conducted through non interventional survey methods, and all ethical principles of voluntary participation, informed consent, confidentiality, and respect for respondents' autonomy were rigorously upheld throughout the data collection process. Participants were informed about the study's purpose, their rights to withdraw at any time, and the exclusive academic use of the data collected. The research team also ensured that data collection did not impose any undue burden or discomfort on respondents, thereby adhering to general ethical research standards applicable to community based social research.

RESULTS

This section presents the results of the study conducted at the Lawawoi Community Health Center (CHC), focusing on the correlation between community healthcare needs, expectations, and the perceived improvement in service quality. The results are organized under three key subthemes: Community Needs, Community Expectations, and Perceived Service Quality, in line with the objectives of the study. Each subtheme is supported by relevant tables and literature to contextualize and interpret the findings.

Community Needs

The study found that community healthcare needs in Lawawoi are high, with a significant portion of respondents indicating the necessity for improved services.

Table 1. Data Distribution Based on Community Needs Variable in the Working Area of Lawawoi Community Health Center, Watang Pulu Sub district

Community Needs	Number (n)	Percent (%)
Yes	63	**79**
No	17	**21**
Total	**80**	**100**

Source: Primary Data, 2024

Table 1 illustrates that 63 out of 80 respondents (79%) reported a strong need for healthcare services, while 17 (21%) indicated no particular need. This finding underscores the prevalence of unmet or under met healthcare demands within the semi urban context of Lawawoi. These findings align with previous literature that highlights the distinct healthcare needs in rural and semi urban populations. Byhoff et al. (2019) assert that social determinants such as income, education, and location significantly shape healthcare access, often resulting in unmet healthcare needs that hinder health equity(27).

Logistical challenges, including transportation barriers and service availability, further exacerbate these needs. Hagaman et al. (2022) emphasize that community based support systems, especially for maternal health, are critical in resource limited settings (1). The need for psychological and social support alongside clinical services suggests that a holistic approach is necessary to meet the multifaceted health demands of the population.

Furthermore, preventive health education emerged as a critical community need. Panagiotopoulos et al. (2019) indicate that limited health literacy, especially among immigrant and marginalized populations, leads to reduced engagement with healthcare systems (28). The Lawawoi context mirrors this issue, as many community members lack sufficient health education and awareness. Finally, the demand for outreach services, such as mobile health clinics, reflects the importance of adaptable service models. Dannefer et al. (2019) argue that collaborative strategies between health systems and communities can bridge accessibility gaps, a need clearly demonstrated by the findings in Lawawoi (4).

Community Expectations

Community expectations regarding healthcare services in Lawawoi were notably high.

Table 2. Data Distribution Based on Community Expectations Variable in the Working Area of Lawawoi Community Health Center, Watang Pulu Sub district

Community Expectations	Number (n)	Percent (%)
High	57	71
Low	23	29
Total	80	100

Source: Primary Data, 2024

Table 2 shows that 57 respondents (71%) had high expectations for healthcare service provision, while only 23 (29%) reported low expectations. These expectations were largely shaped by prior experiences, accessibility of services, and cultural values, in line with findings by Wartiningsih et al. (2020), who identified strong correlations between patient loyalty and treatment satisfaction (2).

Cultural beliefs also influenced expectations. Atukunda et al. (2020) reported that in Uganda, traditional health beliefs significantly shaped women's expectations during childbirth (24). Similarly, in Lawawoi, traditional and familial norms play a pivotal role in framing expectations, particularly around maternal and child health services. Kelly et al. (2019) further support this by demonstrating that underserved populations often judge healthcare systems based on perceived responsiveness and reliability, two components that strongly affect community trust (18).

Effective communication and public health messaging were found to be insufficient in aligning expectations with actual service capabilities. Although not directly supported by Schaefer et al., broader literature suggests that appropriate dissemination of information can help calibrate public expectations (16). When such communication is lacking, as appears to be the case in Lawawoi, unrealistic expectations may arise, leading to dissatisfaction even when services are objectively adequate.

Moreover, media portrayals and societal narratives surrounding healthcare further influence public perceptions. Aranda et al. (2024) argue that public representations of healthcare experiences significantly shape expectations, especially in maternity services (16). Therefore, managing community expectations requires both transparent communication and contextually appropriate education campaigns.

Perceived Service Quality

The perception of service quality at Lawawoi CHC was generally positive but not without critique.

Table 3. Data Distribution Based on Quality Improvement Variable in the Working Area of Lawawoi Community Health Center, Watang Pulu Sub district

Community Expectation	Number (n)	Percent (%)
Good Quality	66	83
Not of Good Quality	14	18
Total	80	100

Source: Primary Data, 2024

Table 3 shows that 66 respondents (83%) perceived the quality of healthcare as good, while 14 (18%) believed it was poor. These perceptions were driven by multiple indicators, including accessibility, responsiveness, and the professionalism of healthcare staff.

Ma et al. (2024) identify accessibility as a cornerstone of perceived service quality, noting that ease of access significantly influences patient decisions to seek care(3). In Lawawoi, despite logistical challenges, the community perceived services to be accessible, likely due to outreach efforts and public health programs such as UKM (Public Health Efforts). Reliability and consistency in care delivery also shaped positive perceptions. Dannefer et al. (2019) reported that dependable care fosters patient trust and loyalty, sentiments echoed by respondents who appreciated the predictable availability of services (4).

Responsiveness, defined by Haines et al. (2022) as the promptness and appropriateness of service delivery, was another key factor influencing perceptions (5). While most respondents acknowledged timely responses, a minority expressed concerns about long wait times and delayed follow ups. Empathy and assurance, particularly regarding healthcare workers' interpersonal skills and professional competence, also influenced perceptions. Kushitor et al. (2019) and Azizah et al. (2024) highlight that culturally competent and empathetic care increases satisfaction, a dynamic observed among Lawawoi patients who praised attentive and courteous staff (6,7).

Relationship Between Community Needs and Healthcare Quality Improvement

Table 4. Relationship between Community Needs and Quality Improvement in the Working Area of Lawawoi Community Health Center, Watang Pulu Sub district

Quality Improvement	Community Needs				Total	Percentage (%)	p
	Yes	%	No	%			
High Quality	57	90.5	9	52.9	66	100	
Poor Quality	6	9.5	8	47.1	14	100	0,000

Source: Primary Data, 2024

Table 4 explores the relationship between healthcare needs and perceived service quality. The chi square analysis revealed a significant association ($p = 0.000$), showing that 90.5% of respondents who reported a high need for healthcare also perceived service quality to be high. Conversely, only 9.5% of those with high needs reported poor service quality. This supports the argument that addressing specific community health needs enhances the perceived quality of services, as also noted by Ceccarelli et al. (2023) (29). To provide a more nuanced interpretation of the strength of association, Cramer's V was calculated, yielding a value of 0.612. Based on conventional interpretation guidelines, this indicates a strong association between community health needs and perceptions of service quality, suggesting that the alignment of services with local expectations plays a critical role in shaping user satisfaction and perceptions of healthcare effectiveness.

Relationship Between Community Expectations and Healthcare Quality Improvement

Table 5. Relationship between Community Expectations and Quality Improvement in the Working Area of Lawawoi Community Health Center, Watang Pulu Sub district

Quality Improvement	Community Needs				Total	Percentage (%)	p
	Yes	%	No	%			
High Quality	54	94.7	12	52.2	66	100	
Poor Quality	3	5.3	11	47.8	14	100	0,000

Source: Primary Data, 2024

Similarly, Table 5 presents the relationship between community expectations and perceived service quality. Among respondents with high expectations, 94.7% rated service quality as good, compared to only 52.2% of those with low expectations. The chi square test confirmed a significant relationship ($p = 0.000$). This finding reinforces prior evidence by Yang et al. (2021), who emphasize the critical role expectations play in shaping satisfaction and perceived care quality. When healthcare services align with community expectations, patient trust, loyalty, and engagement increase (30). Beyond statistical significance, the practical significance of these findings is also notable. The marked difference in perceived service quality between groups with differing expectations illustrates how unmet expectations can substantially diminish patient satisfaction, potentially undermining trust and discouraging future healthcare utilization. This underscores the necessity for CHCs to proactively manage and align their service delivery with evolving community expectations, as doing so not only improves perceived quality but also fosters greater patient engagement, loyalty, and long term adherence to healthcare interventions.

In sum, the findings highlight that perceived quality of care is closely linked with both the fulfillment of healthcare needs and alignment with community expectations. Addressing these factors through targeted service delivery can improve satisfaction and promote greater engagement with healthcare systems. The positive perceptions recorded among Lawawoi residents provide a foundation for future quality improvement strategies that center community voices in the planning and execution of health services.

DISCUSSION

This study sought to evaluate the relationship between community needs, expectations, and the perceived quality of health services at the Lawawoi Community Health Center (CHC). The findings revealed statistically significant correlations between these variables, affirming the hypothesis that aligning healthcare provision with the expressed needs and expectations of the community enhances perceived service quality. This section discusses these findings in light of existing literature and identifies implications for public health practice, healthcare delivery, and policy.

Community Needs and Healthcare Service Quality

The study results emphasize the importance of understanding and addressing community specific healthcare needs. The significant association identified in Table 1.4 between high healthcare needs and perceptions of improved service quality indicates that service alignment with identified needs directly influences how healthcare is experienced by users. As Byhoff et al. (2019) note, social determinants, including geography and income, heavily influence access to care, and therefore shape perceptions of its adequacy (27). In Lawawoi, the high proportion of respondents expressing clear healthcare needs suggests an underlying service gap, especially in preventive services, maternal care, and chronic illness management.

This is consistent with Hagaman et al. (2022), who found that community support structures significantly influence health decisions, particularly in maternal care. When such structures are integrated into service delivery, they can improve patient experiences (1). The Lawawoi study suggests similar opportunities exist for integrating emotional, social, and logistical support into CHC programming. Furthermore, the recognition of the need for preventive education mirrors findings from Panagiotopoulos et al. (2019), who argue that health literacy deficits hinder the effective use of services, particularly among marginalized groups (28). Bridging this gap through tailored educational interventions could be a strategic lever for improving perceptions of care quality.

Unmet needs, as the literature consistently indicates, have detrimental effects on satisfaction and perceived quality. Kelly et al. (2019) found that underserved populations with unmet care needs report lower satisfaction and reduced engagement with services (18). Condon et al. (2021) further suggest that unmet needs can lead to feelings of neglect, eroding trust in health institutions (23). These findings resonate with the Lawawoi context, where even amidst positive perceptions of care quality, a minority of respondents reported dissatisfaction stemming from unaddressed needs.

Nonetheless, it is important to critically acknowledge that the study's reliance on self reported data may introduce certain limitations. Respondents' perceptions and reported needs are inherently subjective and may be influenced by recall bias, social desirability bias, or variations in individual health literacy. These factors can potentially skew responses toward either over reporting or under reporting of satisfaction and needs, as highlighted by Bowling (2020). While efforts were made to mitigate such biases through questionnaire piloting and triangulation with observational data, the potential for response distortion remains an inherent constraint of the study design. Future research incorporating objective service utilization data or mixed method approaches could enhance the robustness and validity of these findings.

Community Expectations and Their Influence on Satisfaction

The results in Table 1.5 reveal a strong association between high community expectations and perceptions of service quality, underscoring the centrality of expectations in shaping patient satisfaction. In the Lawawoi context, these expectations are not solely individual but are deeply rooted in cultural norms, previous healthcare experiences, and patterns of information dissemination. This finding is consistent with the observations of Wartiningsih et al. (2020), who assert that alignment between expectations and service delivery fosters loyalty and sustained utilization of healthcare services (2).

More specifically, the Lawawoi findings highlight how culturally embedded beliefs, particularly regarding maternal and chronic care services, influence expectations. As Atukunda et al. (2020) identified, cultural norms often dictate not only what is expected from healthcare services but also how those services should be delivered (24). n Lawawoi, several respondents expressed preferences for care that integrates traditional support structures and local practices, which are perceived as integral to the healing process. When these culturally informed expectations are not acknowledged, it may erode trust and discourage engagement, regardless of technical service quality.

Kelly et al. (2019) further explain that in underserved areas, such as Lawawoi, expectations are also shaped by structural realities, including perceived availability and accessibility of services (18). This dynamic was evident in the present study, where some respondents reported moderating their expectations based on prior experiences of service shortages or limited provider responsiveness. These patterns reinforce the need for culturally sensitive and contextually adapted service models that actively incorporate community voices into planning processes.

Additionally, the role of information dissemination emerged as a salient factor in expectation formation. As Aranda et al. (2024) suggest, public communication about healthcare services influences community sentiment and shapes expectations (16). In Lawawoi, weak health communication strategies appear to have created gaps in public understanding, leading to mismatches between what communities expect and what the CHC can realistically provide. Addressing this gap through transparent, culturally tailored health promotion and education could recalibrate expectations and foster a more constructive alignment between service capabilities and community demands.

Perceived Service Quality and the Role of Alignment

The concept of perceived service quality is multifaceted, shaped by dimensions such as accessibility, responsiveness, empathy, and assurance. Findings from Ma et al. (2024) support this, suggesting that accessibility is foundational to perceived quality (3). In the Lawawoi context, respondents expressed satisfaction when physical and procedural access was streamlined, such as ease of registration and proximity of services. This suggests that maintaining logistical simplicity can substantially enhance user perceptions and reduce perceived barriers to care.

Dannefer et al. (2019) further highlight reliability as central to building trust in healthcare services (4). n Lawawoi, consistency in service delivery, particularly in routine care and immunization services, contributed positively to evaluations, reinforcing the critical role of dependability in sustaining user satisfaction. However, it is important to note that this consistency was not uniformly experienced across all service areas.

Responsiveness, another key determinant of perceived quality, was variably rated by respondents. While some respondents acknowledged prompt and empathetic responses from healthcare workers during acute illness episodes, others reported dissatisfaction, particularly in cases involving chronic disease management and follow up care. Haines et al. (2022) emphasize that delays in service provision and inadequate follow up mechanisms can undermine patient experience, even when initial care encounters are positive (5). This discrepancy was evident in Lawawoi, where respondents with complex or ongoing care needs felt overlooked, citing prolonged waiting times, unclear referral processes, and insufficient communication about treatment plans. These frustrations highlight the unevenness in service quality, where basic services are perceived as adequate, but more nuanced, patient centered care processes remain insufficiently developed. Such divergent experiences underscore the need for CHCs to critically assess not only the availability of services but also the consistency and responsiveness across different service domains. Addressing these gaps requires strengthening care continuity mechanisms, ensuring that patients with chronic and preventive care needs receive the same level of attentiveness and follow up as those accessing episodic services.

Empathy and assurance, particularly the interpersonal dynamics between providers and patients, were also emphasized. As noted by Kushitor et al. (2019), culturally sensitive, empathetic care improves perceptions and strengthens relationships (6). Lawawoi respondents positively rated staff courtesy and professionalism, affirming the importance of soft skills in shaping quality perceptions.

The critical point emerging from the analysis is the alignment between service delivery and community expectations and needs. Ceccarelli et al. (2023) and Yang et al. (2021) both argue that alignment is essential for enhancing satisfaction and increasing trust in healthcare systems (29). This study provides empirical support for this proposition. Where community needs and expectations were met, service quality was perceived as higher. Conversely, misalignment resulted in dissatisfaction, even where services were objectively adequate.

Enhancing Community Participation for Quality Improvement

To address the gaps identified in the study, enhancing community participation in service planning and evaluation becomes essential. Dannefer et al. (2019) argue that co design processes, involving communities in developing health services, result in more tailored, acceptable interventions (4). Implementing community based participatory research methods could establish continuous dialogue and integration of user perspectives into service adaptation processes. In this regard, structured platforms such as community advisory boards (CABs) and patient forums could provide practical avenues for institutionalizing community participation. These bodies would act as formal channels where community representatives, patients, and CHC staff regularly deliberate on service performance, challenges, and areas for improvement. Such models have been successfully implemented in other low resource settings, fostering trust and enhancing service responsiveness through routine engagement and shared decision making.

Local leadership is pivotal in this process. As seen in the East Harlem Health Action Center (Dannefer et al., 2019), local organizations act as intermediaries, translating community concerns into actionable service improvements (4). In Lawawoi, empowering local leaders, including village health committees or women's groups, to act as facilitators between the CHC and the community could strengthen these feedback loops and ensure that community voices are systematically heard and acted upon.

Digital platforms also present new opportunities. Farr et al. (2021) show that technology enables inclusive engagement, especially where physical interaction is limited (31). Tools such as mobile surveys or digital suggestion boxes could complement traditional forums, capturing feedback efficiently and inclusively. Mobile surveys, digital suggestion boxes, or WhatsApp groups could serve as low cost, scalable tools to capture community feedback efficiently, broadening participation beyond traditional face to face forums.

Patient feedback mechanisms, as highlighted by Wartiningsih et al. (2020), are key to building responsive services (2). In Lawawoi, the current absence of structured feedback mechanisms signals an area for immediate improvement. Establishing systematic, recurring community dialogues whether in the form of town hall meetings, CAB sessions, or digital platforms could significantly enhance the CHC's capacity to adapt services in line with evolving community needs and expectations.

Cultural Competence and Health Equity

Cultural competence emerged as a cross cutting theme in this study. Schaefer et al. (2024) argue that when care is delivered in culturally resonant ways, community engagement increases (15). Turner et al. (2019) similarly demonstrate that culturally competent frameworks improve service experiences for Indigenous communities (9).

In Lawawoi, the diverse cultural makeup and local norms necessitate the inclusion of cultural training for CHC staff. Aligning services with these norms can bridge gaps in understanding, reduce friction in care encounters, and enhance patient satisfaction. Such efforts also contribute to health equity by making services more accessible and acceptable to diverse populations.

Operationalizing Continuous Quality Improvement

The evidence from this study supports the implementation of continuous quality improvement (CQI) frameworks as a strategic pathway to enhance service responsiveness and alignment with community needs. Establishing Community Advisory Boards (CABs), as recommended by Wong et al. (2022), could create a structured and institutionalized mechanism for feedback and co planning. Incorporating community voices through such participatory platforms ensures that interventions remain relevant, adaptive, and culturally sensitive (32).

John et al. (2020) further illustrate that involving community health workers in quality assessments strengthens community engagement and accountability structures (8). Applying similar approaches in Lawawoi by engaging cadres and local health volunteers in quality audits and participatory monitoring could foster greater ownership of health outcomes and enhance responsiveness to local concerns. Moreover, Schleiff et al. (2021) emphasize that capacity building and staff development, particularly in communication, cultural competence, and responsiveness, are critical to the success of CQI initiatives (33). Prioritizing these areas would not only improve the clinical quality of care but also strengthen interpersonal interactions that shape patient experiences.

Technology can serve as an enabler of these processes. Shuldiner et al. (2023) note that mobile health platforms can support real time feedback collection, enabling rapid analysis and iterative improvements (34). Given Lawawoi's infrastructural and resource constraints, a phased, low cost approach to digital feedback systems could be piloted. For instance, integrating simple mobile SMS surveys, leveraging WhatsApp groups, or using QR code based digital suggestion boxes during routine service encounters could provide accessible and context appropriate channels for community feedback. These tools can be linked to existing community health activities, allowing for timely data collection that feeds directly into CHC performance review meetings, thus fulfilling the quality loop essential to CQI.

Ultimately, the findings reinforce the notion that aligning services with community needs and expectations facilitated by participatory frameworks, strengthened by capacity building, and supported by accessible technology is pivotal for improving service quality. Lawawoi's experience illustrates that meaningful engagement, responsiveness, and continuous improvement are not just aspirational goals but achievable practices grounded in empirical evidence and guided by inclusive, context adapted policy design.

Interpretation of Key Findings

The findings of this study reveal a strong correlation between community needs and expectations and their perception of healthcare service quality at the Lawawoi Community Health Center. Most respondents expressed a high level of healthcare needs, accompanied by elevated expectations regarding service quality. These findings demonstrate that when health services effectively address the real needs of the community and align with their expectations, the perceived quality of care improves significantly. Service quality is not solely assessed based on technical aspects such as accessibility and waiting time but also on interpersonal dimensions such as empathy, effective communication, and the cultural competence of healthcare providers (6,7). Discrepancies between expectations and service realities are often caused by inadequate public communication and health education, emphasizing the need for context specific communication strategies (16). Moreover, active community participation in service planning and evaluation is deemed essential for sustaining quality improvement, as advocated by Turner et al. (2019) and Wartiningsih et al. (2020) (2,9). This study affirms that the success of healthcare delivery at the community level is largely determined by the extent to which available services are aligned with the aspirations and needs of the local population (29,30).

Comparison with Previous Studies

The findings of this study reinforce several previous works that emphasize the importance of aligning healthcare services with community needs and expectations to enhance service quality perception. The significant relationship found between high healthcare needs and positive assessments of service quality supports the findings of Byhoff et al. (2019) and Ceccarelli et al. (2023), who concluded that services responsive to the socio economic and geographical realities of communities tend to be more highly valued (27,29). Similarly, the link between high expectations and favorable perceptions of quality is consistent with the work of Wartiningsih et al. (2020) and Yang et al. (2021), which underscore the role of patient expectations in shaping satisfaction and loyalty to health providers (2,30). The influence of cultural norms on service expectations, as evidenced in the Lawawoi context, echoes Atukunda et al. (2020), who emphasized that traditional and local values significantly shape healthcare expectations, particularly in maternal and child health services (24). Interpersonal aspects such as empathy, communication skills, and cultural sensitivity found in this study to be key determinants of perceived quality are in line with the conclusions of Azizah et al. (2024) and Kushitor et al. (2019), who emphasized the centrality of provider patient relationships (6,7). Furthermore, the critique of bureaucratic rigidity and the slow response to community feedback aligns with Mrklas et al. (2020), who argued that non adaptive organizational cultures hinder quality improvement (11). Thus, this study not only affirms the relevance of previous research but also contributes localized empirical evidence from Indonesia, highlighting the importance of synchronizing healthcare delivery with community needs, patient expectations, and systemic responsiveness to achieve people centered quality care.

Limitations and Cautions

The limitations of cross sectional studies were also considered. One inherent drawback is the inability to establish causality, as the data reflects a single time point rather than longitudinal trends (35). In this study, while significant relationships were identified, these cannot be interpreted as causal links. Moreover, the reliance on self-reported data introduces potential recall and social desirability biases, where participants may underreport or overstate their responses due to memory lapses or perceived normative pressures (22).

While purposive sampling provided valuable insights into the target population, its limitations in representativeness were acknowledged. However, these limitations were mitigated through respondent diversity and the use of observational triangulation. The entire sampling and analytical process was transparently documented to enable replication and ensure methodological rigor. As Schaad et al. (2025) suggest, maintaining transparency in sampling and analysis is crucial for enhancing the reliability of public health research (36).

Recommendations for Future Research

This research contributes to the broader body of knowledge on patient centered care by offering empirical evidence from a localized Indonesian context. It illustrates how systematic alignment between healthcare delivery and community voices can drive meaningful improvements in service perception and engagement. Future studies could expand on these findings by exploring longitudinal impacts of community engagement on health outcomes or assessing the effectiveness of CQI models in other CHC settings.

CONCLUSION

This study investigated the relationship between community needs, community expectations, and the perceived quality This study investigated the relationship between community needs, community expectations, and the perceived quality of healthcare services at the Lawawoi Community Health Center (CHC) in South Sulawesi, Indonesia, and assessed how alignment between service provision and community perspectives influences perceived service quality. The findings demonstrated that both healthcare needs and service expectations significantly correlated with positive perceptions of service quality, underscoring the crucial role of community centered approaches in strengthening primary healthcare delivery. Moreover, the study offers context specific insights into how cultural values, interpersonal communication, and service accessibility shape user satisfaction in a semi urban Indonesian setting.

These results reinforce the theoretical relevance of patient centered care while highlighting the practical imperative for CHC management to institutionalize participatory service planning mechanisms, such as community advisory boards, systematic feedback platforms, and regular patient forums. Investing in staff capacity building

particularly in cultural competence, responsive communication, and service continuity should be prioritized to enhance both clinical effectiveness and patient experiences. Additionally, the findings suggest that integrating low cost digital tools for community feedback can complement existing structures, enabling more agile and responsive service adaptation.

For future policy directions, this study recommends that health authorities at local and district levels develop frameworks that formalize community participation in health governance, promote culturally sensitive care models, and embed continuous quality improvement processes into routine CHC operations. Doing so would ensure that CHCs, particularly in rural and underserved areas, evolve into more inclusive, trusted, and accountable institutions capable of meeting the dynamic health needs and expectations of the populations they serve.

While this study provides valuable insights into community perceptions of healthcare quality, certain limitations should be noted, such as the cross sectional design that limits causal inference and the use of purposive sampling, which may affect generalizability. Future research should focus on longitudinal studies to assess changes over time and explore the long term effects of community engagement on health outcomes, potentially enhancing our understanding of participatory health governance and informing both national policies and global practices in community based primary healthcare systems.

AUTHOR'S CONTRIBUTION STATEMENT

Muhammad Tahir served as the principal investigator, responsible for designing the study, coordinating data collection, and leading the analysis and writing of the manuscript. Hasrul and Nur Annisa Parno contributed to survey administration, field observations, and validation of research instruments. Asnuddin was in charge of statistical data processing and interpretation of the analysis results. All authors collaborated in drafting and revising the manuscript and approved the final version for publication.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest that could have influenced the conduct of this research or the preparation of this manuscript. This study was conducted independently without any commercial or third-party affiliations that may affect the objectivity of the findings.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors acknowledge the use of generative AI technology (ChatGPT by OpenAI) in a limited and ethical manner during the preparation of this manuscript. This assistance was restricted to non-substantive support, such as grammar refinement, paraphrasing suggestions, or summarizing publicly available information.

All AI-generated content was critically reviewed, verified, and edited by the authors to ensure accuracy, relevance, and compliance with academic standards. The authors accept full responsibility for the content and interpretation presented in this manuscript.

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