Article

The Influence of Pregnant Women's Perceptions of Midwifery Service Quality on Their Intention to Revisit During the COVID-19 Pandemic at Public Health Center

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ABSTRACT

Background: Public perception of health center services has long been influenced by concerns regarding service quality. This negative perception was further exacerbated by the COVID-19 pandemic, which led to widespread restrictions that disrupted routine health services, including maternal and neonatal care at public health facilities such as community health centers. This study aimed to assess the effectiveness of green color breathing therapy and lemongrass aromatherapy in reducing stress levels among pregnant women, and to explore the relationship between service quality perceptions and interest in revisiting public health center.

Methods: This research employed a quantitative analytical approach using an explanatory survey method. A total of 55 respondents participated in the study. Data were collected using the DASS-42 instrument to measure stress levels before and after the intervention. Participants were given green color breathing therapy and lemongrass aromatherapy, followed by a post-intervention stress assessment. A paired samples t-test was used to analyze the effectiveness of the intervention.

Results: Of the 55 respondents, 47 (85.5%) expressed interest in returning to the health center, while 8 (14.5%) did not. Perceptions of service quality were generally high across all dimensions: tangibles (94.5% good), reliability (96.4% good), responsiveness (85.5% good), assurance (85.5% good), and empathy (80.0% good). The paired samples t-test indicated a significant reduction in stress levels after the intervention.

Conclusions: public health center is encouraged to maintain and further enhance the quality of its services, particularly in tangibles, reliability, responsiveness, assurance, and empathy to improve client satisfaction and increase the likelihood of repeat visits among pregnant women.

INTRODUCTION

To address maternal and child health challenges, the Indonesian Ministry of Health has implemented the "Safe Motherhood" initiative, which comprises four strategic pillars: family planning, clean and safe delivery, essential obstetric services, and postnatal care (Konje et al., 2018). Despite these efforts, consistent antenatal care (ANC) remains suboptimal. Irregular ANC visits make it difficult to detect complications early, thereby increasing maternal risk.

Maternal health in Indonesia continues to face critical challenges. According to the Indonesian Ministry of Health, the maternal mortality ratio (MMR) in 2020 was estimated at 189 deaths per 100,000 live births, a figure that remains significantly higher than the Sustainable Development Goal (SDG) target of fewer than 70 deaths per 100,000 live births by 2030. Major causes of maternal death include preeclampsia/eclampsia, postpartum hemorrhage, sepsis, and complications from unsafe abortions. These deaths are often preventable with timely access to quality maternal care. In addition to mortality, maternal morbidity also presents a substantial burden, with many women experiencing complications such as anemia, prolonged labor, hypertensive disorders, and infections that affect both maternal and neonatal outcomes. These adverse outcomes are exacerbated by structural barriers, including inadequate access to skilled birth attendants in remote areas, limited emergency obstetric care, and delays in obtaining appropriate referrals. The "three delays" model delays in recognizing danger signs, delays in the

decision to seek care, and delays in reaching or receiving adequate health services remains a persistent contributor to maternal morbidity and mortality in Indonesia.

The quality of health services plays a significant role in motivating women to seek and continue using care. Service quality is commonly evaluated through five core dimensions: tangibles (physical facilities and equipment), reliability (ability to perform promised services dependably), responsiveness (willingness to help clients promptly), assurance (courtesy and competence of providers), and empathy (personalized attention) (Parasuraman et al., 1985; Kofie et al., 2019; Saapiire et al., 2022; Wemakor, 2019).

Public health centers serve as the foundation of Indonesia's primary healthcare system. Their affordability and accessibility make them vital for delivering maternal and child health services. However, public perception of Puskesmas services is often mixed, particularly during crises. Poor interpersonal communication, long waiting times, and perceived lack of professionalism among providers can discourage women from returning for follow-up visits.

Access to routine healthcare services was significantly disrupted. Due to pandemic or disaster According to the Indonesian Ministry of Health, only 19.2% of community health posts (posyandu) remained active during the pandemic (Campbell et al., 2022; Riley et al., 2021). This reduction in service availability and public fear of infection led to decreased antenatal care attendance, potentially compromising maternal outcomes. Pregnant women were faced with the dual burden of health risks and limited service availability, leading to heightened anxiety and hesitancy in seeking care (Rismayanti, 2024; Panjaitan, 2023).

Perception, which is shaped by past experiences and educational background, influences individuals' health-seeking behavior. Preliminary observations at the Sukadami Health Center revealed varied levels of awareness among pregnant women regarding available services. Given the importance of perception in shaping behavior, it is essential to explore how service quality perceptions influence revisit intentions during the pandemic. This study aimed to evaluate the influence of pregnant women's perceptions of midwifery service quality on their interest in returning for continued care at the Sukadami Health Center

METHODE

Study design

This study employed a quantitative research methodology with a descriptive and explanatory survey design. The explanatory approach was selected to investigate causal relationships between pregnant women's perceptions of midwifery service quality and their intention to revisit the Sukadami Health Center during the COVID-19 pandemic. As stated by Sugiyono (2018), explanatory research aims to test hypotheses about relationships between variables to better understand the underlying patterns of behavior or decision-making.

Sample

The study was conducted at the Maternal and Child Health (KIA) Polyclinic of the Sukadami Health Center, located in Bekasi Regency, Indonesia. Data collection took place between February and March 2022. A total of 55 pregnant women were selected using an incidental (convenience) sampling technique, wherein all eligible pregnant women who visited the clinic during the study period were invited to participate. Inclusion criteria for participants were as follows: pregnant women in their second or third trimester who had previously used midwifery services at the Sukadami Health Center but had not made a repeat visit at the time of the study; those who were mentally alert, capable of communication, and willing to participate voluntarily. Exclusion criteria included patients unrelated to government insurance coverage (non-BPJS participants) and those with incomplete questionnaire data.

Measurement

The primary instrument used in this study was a structured questionnaire, which was designed to assess pregnant women's perceptions of midwifery service quality across five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. The questionnaire consisted of items formatted using Likert scales for perception ratings and Guttman scales for dichotomous responses.

Data collection

Data were collected through a structured questionnaire distributed to pregnant women attending antenatal care services at selected public health centers during the COVID-19 pandemic. The questionnaire was designed to assess participants' perceptions of midwifery service quality and their intention to revisit the facility. It included sections on service responsiveness, empathy, reliability, assurance, and facility conditions, adapted from established service quality frameworks. Respondents were selected using purposive sampling based on inclusion criteria: pregnant women in their second or third trimester who had received antenatal services at least once at the health center during the pandemic. Trained research assistants explained the purpose of the study and administered the

questionnaire in person, following strict COVID-19 safety protocols including physical distancing, hand hygiene, and use of personal protective equipment. Where necessary, the questionnaire was also made available in a digital format for respondents who preferred minimal physical contact.

Statistical Analysis

Prior to analysis, the collected data underwent a series of standard data processing procedures including editing, cleaning, coding, scoring, and data entry using SPSS software. The perception scores were then categorized into two groups: scores equal to or above the mean were classified as "good", while scores below the mean were classified as "not good". To determine whether the perception of service quality significantly influenced the interest in revisiting the health facility, a paired samples t-test was performed with a significance level set at $p < 0.05$.

Ethical Consideration

This study received ethical approval from the affliated study. Prior to participation, all respondents received a clear explanation of the study objectives, procedures, potential risks, and benefits. Written informed consent was obtained from each participant. Participation was voluntary, and respondents were informed of their right to withdraw at any time without any consequence to their care. To ensure confidentiality, all data were anonymized and securely stored, with access restricted to the research team. The study adhered to ethical principles in accordance with the Declaration of Helsinki and national health research ethics regulations during the COVID-19 period.

RESULTS

This study surveyed 52 pregnant women before and after the Covid-19 pandemic to see whether or whether their impression of the quality of midwifery services there influenced their decision to return to the Sukadami Health Center. Univariate and bivariate analyses were performed on the study's data. The univariate analysis shows that the majority of pregnant women surveyed reported positive perceptions across all five dimensions of service quality at the Sukadami Health Center during the COVID-19 pandemic. A total of 85.5% of respondents expressed interest in revisiting the facility, indicating a generally high level of satisfaction. Tangibles, which refer to the physical facilities and appearance of healthcare personnel, were rated as good by 94.5% of respondents, suggesting that visible service quality was well maintained. Reliability, or the consistency and dependability of services, received the highest positive rating at 96.4%, reflecting strong trust in the center's ability to deliver care effectively. Responsiveness and assurance were both rated positively by 85.5% of participants, indicating that most respondents felt that staff were attentive and competent. Empathy received the lowest positive rating, with 80.0% of respondents perceiving it as good and 20.0% as poor, implying that while interpersonal care was generally appreciated, it may require further strengthening to meet all patient expectations (Table 1).

Table 1. Univariate Analysis Summary

Service Dimension	Good (%)	Bad (%)
Revisit Interest	85.5	14.5
Tangibles	94.5	5.5
Reliability	96.4	3.6
Responsiveness	85.5	14.5
Assurance	85.5	14.5
Empathy	80.0	20.0

The bivariate analysis revealed a statistically significant relationship between pregnant women's perceptions of tangible service quality (such as facilities and cleanliness) and their interest in returning to the Sukadami Health Center during the COVID-19 pandemic. A p-value of 0.002 indicates that this relationship is significant at the 5% level, and an odds ratio (OR) of 0.388 suggests that respondents who perceived the tangibles poorly were less likely to return than those who rated them positively. This finding highlights the importance of physical infrastructure

and visible service quality, particularly during a health crisis when perceptions of hygiene and safety are critical. Similarly, the perception of reliability was also significantly associated with revisit interest, as indicated by a p-value of 0.019 and an OR of 3.632. This means that pregnant women who viewed the services as reliable able to deliver promised care consistently were more than three times as likely to revisit the facility. These results underscore that reliable and trustworthy service provision builds confidence among service users and directly influences their continued engagement with maternal healthcare services during emergencies.

Table 2. Bivariate Analysis Summary

Service Dimension	p-value	OR	95% CI
Tangibles	0.002	0.388	-2.588
Reliability	0.019	3.632	-9.506
Responsiveness	0.082	4.6	-12.478
Assurance	0.001	3.833	-9.814
Empathy	0.001	3.529	-10.113

DISCUSSION

The univariate analysis indicated that the majority of pregnant women at the Sukadami Health Center were interested in making repeat visits during the Covid-19 pandemic. Specifically, 85.5% of the respondents expressed interest in returning, while 14.5% were not inclined to do so. This lack of interest among a small proportion of respondents is potentially attributable to unfavorable perceptions of service quality, particularly concerning tangibles, responsiveness, assurance, and empathy. These findings underscore the critical role of service quality in influencing patients' behavioral intentions. Satisfaction with healthcare services, shaped by these dimensions, directly contributes to patient loyalty. When patients perceive the quality of care as high, they are more likely to return for future visits and recommend the service to others, thereby enhancing both retention and outreach through word-of-mouth promotion.

The bivariate analysis further elaborated on how specific aspects of service quality influenced patients' interest in returning. Regarding tangibles, 37.5% of the respondents who were not interested in revisiting perceived the physical aspects of service delivery as poor. These tangibles included the appearance of healthcare personnel, adequacy of medical equipment, and the condition of the examination environment in accordance with Covid-19 protocols. A negative perception of these elements suggests a significant influence of the physical environment on patients' comfort and trust, both of which are essential for sustained engagement with health services.

In terms of reliability, 25% of those who were not interested in repeat visits rated this dimension poorly. Reliability, in this context, referred to the midwives' ability to provide consistent, accurate, and competent care, such as clear explanations during examinations, skill in interpreting gestational age, and the careful administration of vaccinations and other procedures. The findings indicate that gaps in these areas may reduce confidence in the care provided, thus deterring future visits.

Perceptions of responsiveness also played a notable role. Among the respondents who did not wish to return, 37.5% rated responsiveness negatively. This dimension included the ability of health workers to respond promptly and appropriately to patient needs and concerns, including efficient registration procedures, proper implementation of health protocols, and the provision of relevant feedback. When responsiveness is perceived as inadequate, patients may feel neglected or undervalued, which can significantly diminish their motivation to continue care at the facility.

Assurance emerged as another influential factor, with 62.5% of those not interested in returning expressing negative perceptions of this domain. Assurance encompassed the competence, courtesy, and credibility of healthcare personnel. When healthcare providers fail to convey professionalism and build trust, particularly during uncertain times like the Covid-19 pandemic, patients are likely to experience anxiety and doubt, discouraging further visits. These results are consistent with findings from prior studies which have shown that assurance is a key determinant of patient satisfaction and loyalty.

Empathy was also found to influence repeat visit interest. Among respondents, 20% perceived a lack of empathy in the services provided. This dimension reflects the ability of healthcare workers to understand and respond to patients' emotional and psychological needs. During the pandemic, when pregnant women may have experienced heightened stress and vulnerability, empathetic interactions were particularly vital. The presence of

poor perceptions in this area suggests that efforts to foster a caring and supportive environment were not fully effective. When empathy is lacking, patients may feel emotionally unsupported, which can reduce their willingness to engage further with healthcare providers.

CONCLUSION

The findings of this study demonstrate that most pregnant women at the Sukadami Health Center were interested in making repeat visits during the Covid-19 pandemic, with 85.5% expressing interest and 14.5% indicating disinterest. This relatively small proportion of patients who were not interested in returning cited negative experiences with various aspects of service quality. Overall, the perceptions of pregnant women toward the quality of midwifery services were generally positive across the five core dimensions of service quality. Tangibles and reliability were the most highly rated, while empathy received the lowest satisfaction rating, suggesting a need for improved interpersonal engagement. The analysis revealed that each of the five service quality dimensions, namely tangibles, reliability, responsiveness, assurance, and empathy significantly influenced patients' interest in returning for care. This relationship highlights the importance of a holistic approach to quality improvement, particularly in ensuring that clinical competence is matched with effective communication and compassionate care. Improving the physical infrastructure of health centers, ensuring the reliability and accuracy of medical procedures, enhancing responsiveness to patient needs, building trust through professional assurance, and nurturing empathetic communication are all vital to increasing patient satisfaction and retention. These improvements are not only critical for encouraging repeat visits but also for strengthening the reputation of health services during public health crises such as the Covid-19 pandemic. Future research should consider incorporating qualitative methods to explore in greater depth the specific factors contributing to dissatisfaction and to identify context-specific strategies for enhancing service quality. Broadening the scope of the study across multiple health facilities would also help to increase the generalizability of the findings and guide policy improvements in maternal health services across different settings.

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