



Analysis Of Antenatal Care (ANC) Service Quality And Service Facilities On Patient Satisfaction Through Health Workers' Competence As Mediating Variable

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ABSTRACT

This study aims to examine the influence of service quality and service facilities on patient satisfaction in antenatal care (ANC) services through the mediating role of health worker competence among third trimester pregnant women in community health centers (Puskesmas) across Jember Regency. Utilizing a quantitative approach with a cross-sectional design, data were collected from 255 respondents using Likert-scale questionnaires and analyzed through Structural Equation Modeling (SEM) with SmartPLS. The findings reveal that both service quality and service facilities significantly affect patient satisfaction directly and indirectly through health worker competence. Competence emerged as the strongest predictor, highlighting its essential role in enhancing maternal satisfaction. The model demonstrated adequate predictive power with R² values of 0.637 for patient satisfaction and 0.482 for competence. These results underscore the importance of integrated improvements in service infrastructure and human resource capacity to optimize ANC delivery and maternal health outcomes, particularly in low- and middle-income country contexts.

INTRODUCTION

Global studies reveal that the burden of maternal and neonatal mortality remains disproportionately high in developing countries, with 94% of maternal deaths occurring in lower middle income countries (LMICs) (Girotra & Malik, 2023). Indonesia has been reported as having the third highest maternal mortality rate (MMR) in Southeast Asia, following Myanmar and Laos, with an MMR of 177 deaths per 100,000 live births (Wulandari & Rohmah, 2021). Furthermore, antenatal care (ANC) coverage among pregnant women in Indonesia has shown a notable

decline, with rates of 88%, 88.5%, and 84.6% in 2018, 2019, and 2020, respectively (Alemu & Kaso, 2024). Previous research indicates that maternal satisfaction with ANC services varies widely across countries, with approximately 69% of mothers in the United States, 90% in Kazakhstan, 98.5% in Nigeria, and only 41.1% in Egypt expressing satisfaction (Emiru & Debelew, 2020). In Jember Regency, the level of maternal satisfaction with ANC services has not been specifically measured. However, preliminary data from 2024 indicate a total of 40,819 pregnant women, with an initial visit (K1) rate of 66.96%, access coverage of 82.45%, and a final visit coverage of only 59.04%.

According to assessments conducted by the Jember District Health Office, antenatal care (ANC) service coverage has declined over the past three years and remains below the expected target of 91%. Preliminary data further indicate that 30 community health centers (Puskesmas) have not met the target coverage. In 2024, the ten Puskesmas with the lowest coverage rates include Andongsari (3.87%), Semboro (8.45%), Pakusari (21.32%), Tanggul (25%), Puger (31.26%), Mangli (44.06%), Kemuningsari Kidul (44.41%), Mumbulsari (61.17%), Kasiyan (72.41%), and Nogosari (76%). Identifying factors related to healthcare providers and service delivery is essential to understanding and improving patient satisfaction. Empirical studies have examined these factors from two perspectives: patient-related characteristics such as age, educational background, and health status and provider-related determinants such as institutional and physician characteristics, consultation processes, affordability, and convenience (Gao & Llu, 2022).

Patient satisfaction reflects individuals' assessment of how well their expectations are met across various domains of healthcare, including technical, interpersonal, and organizational aspects. In low and middle income countries (LMICs), satisfaction with the quality of antenatal care (ANC) received, as well as the willingness to return to or recommend the facility to other pregnant women, remains a critical factor in addressing maternal mortality (Hibusu & Sumankuuro, 2024a). The World Health Organization (WHO) recommends respectful, woman-centered, and evidence-based maternity practices to improve maternal care outcomes and emphasizes the importance of routinely evaluating women's satisfaction with the care they receive (Alemu & Kaso, 2024). Pregnancy and childbirth are significant events for women and their families, during which both the mother and fetus are in a vulnerable state (Birhanu & Demena, 2020). ANC is defined as a health service provided by skilled health personnel to pregnant women to ensure optimal health conditions for both mother and baby during pregnancy (Belachew & Debie, 2024). Limited access to quality ANC and poor satisfaction levels significantly contribute to maternal mortality (Muarandega & Nyakura, 2021), while failure to utilize antenatal services or receive the complete components of ANC poses serious risks to both mothers and newborns (Nihal & Shekhar, 2024). In many LMICs, low levels of ANC service utilization are strongly linked to dissatisfaction with the care experience. Specifically in Indonesia, evaluations focusing on maternal satisfaction especially in the context of ANC are still lacking. Currently, patient satisfaction assessments are conducted generally through a public satisfaction index and do not yet provide a specific picture of the services received (Wulandari & Rachmawaty, 2021).

Efforts to improve patient satisfaction during antenatal care (ANC) visits are essential, as they can lead to sustained ANC utilization and higher institutional delivery rates. Satisfaction in ANC is influenced by factors such as facility infrastructure, availability of equipment and medicines, comfort, staff empathy, technical competence, service logistics, and financial accessibility (Hibusu & Sumankuuro, 2024). Unlike general outpatient care, ANC often suffers from low perceived utility, leading to underuse in many low- and middle-income countries (LMICs). Moreover, there is no universally accepted standard for measuring ANC satisfaction, which is shaped by structural (resources, supplies), process (privacy, behavior, communication, competence), and outcome (health status) factors (Heri & Malima, 2023). The Donabedian model categorizes these into input, process, and outcome widely used to assess care quality in

maternal services (*Emiru & Debelew, 2020*). Globally, organizations like WHO, OECD, and the World Bank emphasize quality as a key element of Universal Health Coverage and effective Primary Health Care (*Endalamaw & Khatri, 2023*).

Competence refers to sufficient knowledge, psychomotor and communication skills, decision-making ability, and appropriate attitudes (*Firoozehchian & Zareiyani, 2022a*). In reproductive health, core competencies also involve ethical awareness, human rights respect, teamwork, leadership, counseling, and education abilities (*Mills & Middleton, 2020*). Evaluating care quality requires considering facility readiness, service delivery, user experience, and outcomes (*Khatri & Mengistu, 2022*). While completing four ANC visits is commonly used as a quality indicator, this alone does not ensure timely and adequate interventions (*Hibusu & Sumankuuro, 2024b*). Therefore, this study aims to fill a research gap by analyzing ANC service quality and facility characteristics in relation to patient satisfaction through the competence of healthcare workers, specifically among pregnant women attending Puskesmas in Jember Regency.

LITERATURE REVIEW

Patient satisfaction in antenatal care (ANC) is a dynamic, subjective evaluation reflecting the extent to which maternal care needs are fulfilled and has become a vital metric in assessing healthcare quality (*Kebede & Belachew, 2020*). High patient satisfaction correlates with better adherence, improved provider relationships, reduced malpractice, and greater utilization of health services, particularly in primary care systems (*Gao & Peng, 2022*). In maternal care specifically, satisfaction is shaped by readiness for childbirth, interpersonal communication, facility environment, timely care, and perceived provider competence (*Creech & Addante, 2024*). Donabedian's model provides a widely accepted framework, categorizing care into structure, process, and outcomes, which underpin maternal satisfaction dimensions such as general perception, accessibility, interpersonal and technical aspects, and physical environment. Socio-demographic factors (education, income, age), previous birth experience, and expectations also shape maternal satisfaction (*Sehngelia & Pavlova, 2021*).

Healthcare provider competence is central to delivering high-quality ANC, as emphasized by the Focused Antenatal Care (FANC) model and ICM's seven-domain competency framework, which include antepartum, intrapartum, postpartum, and newborn care (*Kumbeni & Apanga, 2021*). Competency entails a mix of knowledge, psychomotor and communication skills, decision-making capacity, and ethical behavior (*Firoozehchian & Zareiyani, 2022b*). Quality ANC is also grounded in Donabedian's model through inputs (facility readiness, skilled staff), processes (timely, respectful, adequate care), and outputs (improved outcomes, patient satisfaction) (*Khatri & Mengistu, 2022*). Structural, intermediary, and contextual factors like socioeconomic status, provider-patient communication, service equity, and digital innovations affect care quality (*Bobo & Asante, 2021*). Additionally, quality ANC includes proper screening, preventive measures, and health promotion activities (*Boah & Abanga, 2024*). However, gaps in service delivery persist due to supply shortages, poor provider behavior, and socio-geographic barriers (*Gamberini & Angeli, 2022*). Facilities' readiness and responsiveness, as endorsed in the Astana Declaration, remain key to achieving universal health coverage (*Karp & Edwards, 2024*).

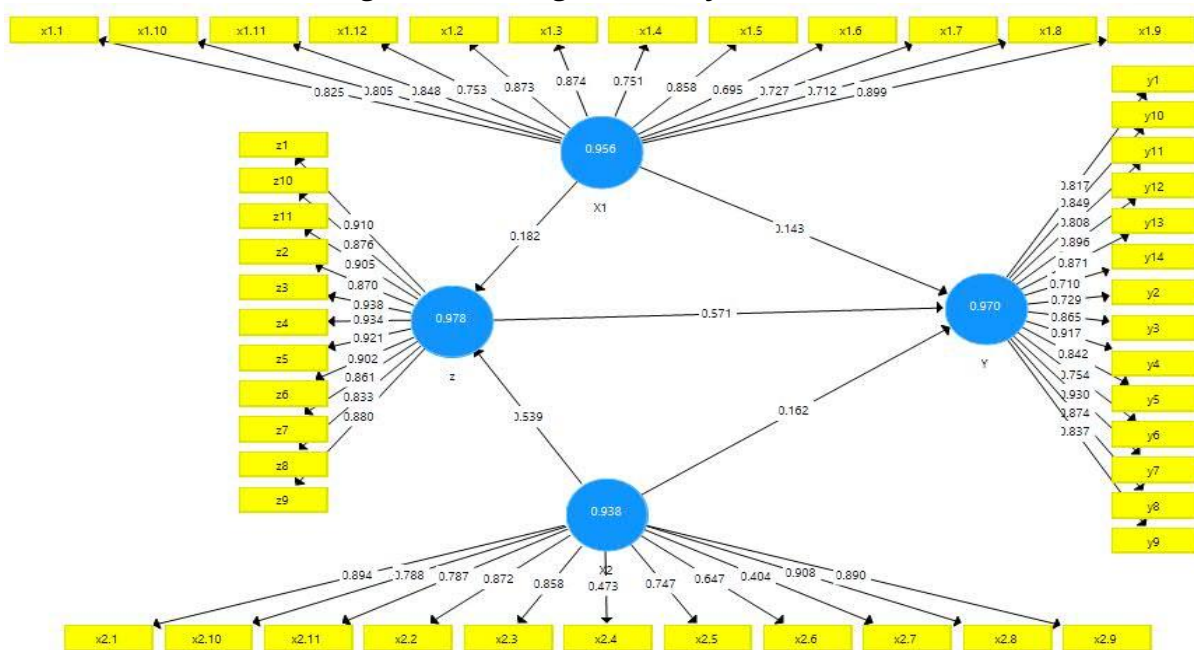
METHODS

This study employed a quantitative approach with a cross-sectional design, in which data were collected at a single point in time to examine the relationship between the study variables (*Wang & Cheng, 2020*). The research focused on assessing antenatal care (ANC) service quality, service facilities, health worker competence, and patient satisfaction among third-trimester pregnant women in community health centers (Puskesmas) throughout Jember Regency. Data

were gathered using Likert-scale questionnaires, with primary data obtained directly from respondents and secondary data sourced from the Health Office of Jember Regency. The total population comprised 3,856 third-trimester pregnant women, and a sample size of 255 participants was determined using the proportion formula by Isaac and Michael (Sugiyono, 2021). The probability proportional to size (PPS) sampling method was employed to distribute the sample across selected health centers proportionally.

Data were analyzed using Structural Equation Modeling (SEM) with the SmartPLS software. SEM was chosen due to its ability to examine complex causal relationships between latent variables simultaneously, including direct, indirect, and mediating effects. In this model, the independent variables were ANC service quality (X1) and service facilities (X2), the mediating variable was health worker competence (M), and the dependent variable was patient satisfaction (Y). Each construct was measured through standardized indicators categorized into relevant domains.

Figure 1. Convergent Validity Test Result



As shown in Figure 1, following the development of the path diagram, the measurement model (outer model) was evaluated based on the research data tabulation. The results indicate that indicators X1.6, X2.6, and X2.7 did not meet the minimum threshold for factor loading of 0.70 and were therefore excluded from the analysis. All remaining indicators met the required criteria, with loading factor values exceeding 0.70. Thus, it can be concluded that the data used in this study fulfilled the requirements of convergent validity, demonstrating a strong correlation between the indicators and their respective latent constructs.

Table 1. Reliability Test Result

Variable	Cronbach's Alpha	Composite Reliability
Service Quality (X1)	0.955	0.956
Service Facilities (X2)	0.942	0.938
Satisfaction (Y)	0.967	0.970
Competence (Z)	0.975	0.978

Source: Data Processed, 2025

Table 1. Reliability Test Result demonstrates that all constructs in the study exhibit excellent internal consistency. The Cronbach's Alpha values for all variables exceed the acceptable threshold of 0.70, ranging from 0.942 (Service Facilities) to 0.975 (Competence). Similarly, the Composite Reliability values also surpass the recommended minimum of 0.70, with scores between 0.938 and 0.978. These findings indicate that the measurement items used for each construct are reliable and consistently measure their respective latent variables, supporting the robustness of the measurement model in this study.

RESULTS

Table 2. Goodness of Fit Test Result

Fit Summary	Value
NFI	0,498
Blindfolding	0,398

Source: Data Processed, 2025

Table 2. Goodness of Fit Test Result presents two key indicators used to assess the overall model fit. The Normed Fit Index (NFI) value of 0.498 indicates that the model has a moderate fit, although it falls below the commonly recommended threshold of 0.90. Meanwhile, the Blindfolding Q^2 value of 0.398 suggests a satisfactory level of predictive relevance, as values above 0.35 are considered to indicate strong predictive accuracy. Despite the NFI being relatively low, the model demonstrates acceptable predictive capability, supporting its use for structural analysis.

The validity analysis presented in Table 1 demonstrates strong evidence for the measurement model's validity. All indicators across the latent variables work overload (X1), work-life balance (X2), job conflict (X3), employee performance (Y), and emotional intelligence (Z) show significant factor loadings, with T-statistics exceeding the critical threshold of 1.96, ranging from 2.531 to 17.121. These results suggest that each indicator is a reliable and valid measure of its respective latent variable. The P-values for all indicators are well below the 0.05 significance level, further corroborating the statistical significance of the relationships. Among the variables, emotional intelligence (Z) exhibits the highest T-statistics, indicating a particularly strong relationship with its respective indicators. Overall, these findings confirm that the measurement model is both reliable and valid, providing a solid foundation for subsequent analysis and interpretation of the research data

Table 3. R² Test Result

Variable	Value
Patient Satisfaction (Y)	0.637
Health Worker Competence (Z)	0.482

Source: Data Processed, 2025

Table 3. R² Test Result presents the coefficient of determination values for the endogenous variables in the model. The R² value for patient satisfaction (Y) is 0.637, indicating that 63.7% of the variance in patient satisfaction can be explained by the exogenous variables in the model. Similarly, the R² value for health worker competence (Z) is 0.482, meaning that 48.2% of the variance in competence is explained by the relevant predictors. These results suggest that the model has substantial explanatory power for patient satisfaction and moderate explanatory power for health worker competence.

Table 4. Path Coefficient and Hypothesis Test Results

Path	Path Coefficient	Standard Error (SE)	p-value	Conclusion
X1 → Y	0.143	0.062	0.022	H1 accepted
X1 → Z	0.182	0.057	0.002	H4 accepted
X2 → Y	0.162	0.073	0.028	H2 accepted
X2 → Z	0.539	0.050	0.000	H5 accepted
Z → Y	0.571	0.051	0.000	H3 accepted
X1 → Z → Y	0.104	0.104	0.001	H6 accepted
X2 → Z → Y	0.308	0.043	0.000	H7 accepted

Source: Data Processed, 2025

Table 4. Path Coefficient and Hypothesis Test Results presents the structural path analysis used to test the direct and indirect relationships among the study variables. All proposed hypotheses (H1–H7) were statistically supported, as indicated by p-values below the significance threshold of 0.05. The results show that service quality (X1) significantly affects patient satisfaction (Y) both directly ($\beta = 0.143$, $p = 0.022$) and indirectly through health worker competence (Z) ($\beta = 0.104$, $p = 0.001$). Similarly, service facilities (X2) also have a significant direct effect on patient satisfaction ($\beta = 0.162$, $p = 0.028$) and a stronger indirect effect through competence ($\beta = 0.308$, $p = 0.000$). Health worker competence itself shows a strong direct influence on patient satisfaction ($\beta = 0.571$, $p = 0.000$). These findings confirm the mediating role of health worker competence and highlight the importance of both service quality and facility readiness in improving maternal satisfaction with ANC services.

DISCUSSION

The findings of this study provide compelling evidence on the significant role of service quality, service facilities, and health worker competence in influencing patient satisfaction in antenatal care (ANC) services at community health centers in Jember Regency. The direct and indirect effects of the variables tested through Structural Equation Modeling (SEM) affirm the conceptual framework developed from the Donabedian model and the broader literature on maternal health service delivery in low- and middle-income countries (LMICs).

Result showing a significant direct effect of service quality (X1) on patient satisfaction (Y) ($\beta = 0.143$, $p = 0.022$) aligns with previous research asserting that patient satisfaction is a reflection of how well healthcare services meet technical, interpersonal, and organizational expectations (Kebede & Belachew, 2020; Creech & Addante, 2024). This study reinforces the understanding that high-quality ANC including timely visits, competent staff, and appropriate health education leads to more positive patient experiences (Nihal & Shekhar, 2024). The three dimensions of ANC service quality measured screening, preventive actions, and counseling are integral in shaping perceptions of care adequacy and safety, consistent with Donabedian's model (Emiru & Debelew, 2020; Khatri & Mengistu, 2022).

Service facilities (X2) also significantly impacted patient satisfaction (Y) ($\beta = 0.162$, $p = 0.028$), which supports prior evidence that physical infrastructure, medical equipment availability, and resource sufficiency are vital for positive maternal experiences (Gamberini & Angeli, 2022; Esamai & Mwangi, 2023). In this study, the relatively low ANC final visit rates in several Puskesmas, such as Andongsari (3.87%) and Semboro (8.45%), indicate service access barriers likely influenced by inadequate facility readiness, which is known to hinder patient satisfaction and retention in ANC services (Wulandari & Rohmah, 2021).

Health worker competence (Z) emerged as a strong predictor of patient satisfaction ($\beta = 0.571$, $p = 0.000$), and also served as a significant mediator in the relationship between both independent variables (X1 and X2) and satisfaction. The indirect effects—X1 → Z → Y ($\beta = 0.104$,

$p = 0.001$) and $X_2 \rightarrow Z \rightarrow Y$ ($\beta = 0.308$, $p = 0.000$) demonstrate that service quality and facilities contribute to satisfaction not only directly but also by enhancing health workers' perceived competence. This reinforces the theory that skilled providers, through technical proficiency, empathy, decision-making, and effective communication, are pivotal in maternal care outcomes (Firoozehchian & Zareiyan, 2022; Mills & Middleton, 2020). These findings are consistent with the ICM core competencies, which emphasize clinical skills, patient education, and ethical professionalism as foundational to reproductive health services (Dharma & Bogren, 2024).

Furthermore, these findings are aligned with global health priorities, where the WHO and other bodies underscore the need for respectful, woman centered, and evidence based maternity care as part of universal health coverage (Alemu & Kaso, 2024; Endalamaw & Khatri, 2023). Given that Indonesia has the third highest maternal mortality rate in Southeast Asia (Wulandari & Rohmah, 2021) and that ANC coverage has seen a declining trend (Alemu & Kaso, 2024), improving satisfaction through quality care and competent providers becomes not only a clinical imperative but also a public health priority.

Additionally, this study supports the observation that maternal satisfaction is not solely dependent on the number of ANC visits, but rather on the quality of those visits, including provider interactions, clarity of information, timely interventions, and privacy (Hibusu & Sumankuuro, 2024). Even with high ANC coverage, many LMICs including Indonesia face challenges in delivering content rich, responsive services (Boah & Abanga, 2024), often due to structural inequities and limited resources (Bobo & Asante, 2021; Ladak & Grewal, 2024).

The R^2 values from the model further strengthen the argument. Patient satisfaction (Y) had an R^2 of 0.637, indicating that over 63% of its variance could be explained by service quality, service facilities, and competence. Similarly, the competence variable (Z) had an R^2 of 0.482, showing a moderate explanatory power from its predictors. This confirms the relevance of the proposed model and highlights the importance of integrated ANC delivery systems that combine structural readiness with skilled human resources to optimize care (Karp & Edwards, 2024; Mekie & Belachew, 2024a).

This study provides empirical support that enhancing both the infrastructure (service facilities) and the human capital (health worker competence) of ANC services significantly contributes to increasing maternal satisfaction. Addressing gaps in these areas is critical to improving the quality of ANC, which ultimately contributes to reducing maternal mortality in regions like Jember and beyond. Future interventions should emphasize the holistic development of service environments and the continual training of healthcare providers to ensure that care is not only available but also acceptable and responsive to women's needs.

CONCLUSION

This study concludes that service quality, service facilities, and health worker competence play a significant role in shaping patient satisfaction in antenatal care (ANC) services. The findings demonstrate that both service quality and facilities not only have a direct effect on patient satisfaction but also influence it indirectly through the mediating role of health worker competence. Among these variables, competence emerged as the strongest predictor, highlighting the importance of well trained, communicative, and responsive healthcare providers in delivering high quality maternal care.

The model used in this study, grounded in the Donabedian framework, provides a robust explanation of the relationships between structural, process, and outcome factors in ANC. The results also confirm the predictive relevance and reliability of the measurement and structural models. Given the declining ANC coverage and maternal satisfaction levels in Jember Regency, strategic efforts must prioritize strengthening facility readiness, ensuring the availability of essential medical supplies, and enhancing the skills and professionalism of frontline health

workers. Ultimately, improving patient satisfaction in ANC services requires a comprehensive approach that integrates service infrastructure, provider competence, and woman centered care principles. These efforts are vital not only for enhancing the patient experience but also for contributing to broader public health goals, including the reduction of maternal mortality and the achievement of universal health coverage.

LIMITATION

Despite yielding valuable insights, this study has several limitations that should be acknowledged. First, the cross-sectional design restricts the ability to establish causal relationships among the variables. While associations were identified, the temporal sequence between service quality, competence, and patient satisfaction cannot be confirmed. Second, the data were collected using self-reported questionnaires, which are subject to response bias, including social desirability and recall bias, particularly when assessing perceptions of service quality and competence. Third, the study was conducted exclusively in public health centers (Puskemas) within Jember Regency, which may limit the generalizability of the findings to other regions or to private healthcare settings with different standards and service conditions. In addition, the use of ordinal Likert-scale data to measure complex constructs may not fully capture the nuances of patient experiences or provider performance. Lastly, while the study employed a strong analytical approach using SEM, other potential influencing variables, such as cultural beliefs, patient health literacy, or provider workload, were not included and may also affect satisfaction levels. Future research should consider longitudinal designs, mixed-methods approaches, and broader geographic scopes to enhance the depth and applicability of findings.

REFERENCES

- Alemu, & Kaso. (2024). Maternal satisfaction with delivery service and associated factors among women who gave birth at public hospitals in Guji Zone, Southern Ethiopia. *BMC Women's Health, 24*(227).
- Belachew, & Debie. (2024). Antenatal care service satisfaction and associated factors among pregnant women at public health facilities of Wogera district, Northwest Ethiopia: A cross-sectional study. *Front. Glob. Womens Health, 5*(2024).
- Birhanu, & Demena. (2020). Pregnant women's satisfaction with antenatal care services and its associated factors at public health facilities in the Harari region, Eastern Ethiopia. *SAGE Open Med, 20*(8;2050312120973480).
- Boah, & Abanga. (2024). Quality of antenatal care services received by women of reproductive age prior to delivery in selected public health facilities in the northern zone of Ghana. *BMC Health Serv Res, 24*(1063).
- Bobo, & Asante. (2021). Poor coverage and quality for poor women: Inequalities in quality antenatal care in nine East African countries. *Health Policy and Planning, 36*(5), Pages 662-672.
- Creech, & Addante. (2024). Satisfaction with perinatal care providers and the childbirth experience: The moderating role of body mass index. *BMC Pregnancy Childbirth, 24*(656).
- Emiru, & Debelew. (2020). Women's satisfaction with the quality of antenatal care services rendered at public health facilities in Northwest Ethiopia: The application of partial proportional odds model. *BMJ Open, 10*(9). <https://doi.org/0.1136/bmjopen-2020-037085>.

- Endalamaw, & Khatri. (2023). Successes and challenges towards improving quality of primary health care services: A scoping review. *BMC Health Serv Res, 23*(893).
- Firoozehchian, & Zareiyan. (2022a). Domains of competence in midwifery students: A basis for developing a competence assessment tool for Iranian undergraduate midwifery students. *BMC Med Educ, 22*(704).
- Firoozehchian, & Zareiyan. (2022b). Domains of competence in midwifery students: A basis for developing a competence assessment tool for Iranian undergraduate midwifery students. *BMC Med Educ, 22*(704).
- Gamberini, & Angeli. (2022). Exploring solutions to improve antenatal care in resource-limited settings: An expert consultation. *BMC Pregnancy Childbirth, 22*(449).
- Gao, & Llu. (2022). Patient satisfaction and its health provider-related determinants in primary health facilities in rural China. *BMC Health Serv Res, 22*(946).
- Gao, & Peng. (2022). Patient satisfaction and its health provider-related determinants in primary health facilities in rural China. *BMC Health Serv Res, 22*(946).
- Girotra, & Malik. (2023). Utilization and determinants of adequate quality antenatal care services in India: Evidence from the National Family Health Survey (NFHS-5) (2019-21). *BMC Pregnancy and Childbirth, 23*(800).
- Heri, & Malima. (2023). Women's Expectations of and Satisfaction with Antenatal Care Services in a Semi-Urban Setting in Tanzania and Associated Factors: A Cross-Sectional Survey. *Healthcare, 11*(16).
- Hibusu, & Sumankuuro. (2024a). Pregnant women's satisfaction with the quality of antenatal care and the continued willingness to use health facility care in Lusaka district, Zambia. *BMC Pregnancy Childbirth, 24*(20).
- Hibusu, & Sumankuuro. (2024b). Pregnant women's satisfaction with the quality of antenatal care and the continued willingness to use health facility care in Lusaka district, Zambia. *BMC Pregnancy Childbirth, 24*(20).
- Karp, & Edwards. (2024). Quality improvement in maternal and reproductive health services. *BMC Pregnancy Childbirth, 24*(21).
- Kebede, & Belachew. (2020). Maternal Satisfaction with Antenatal Care and Associated Factors among Pregnant Women in Hossana Town. *Int J Reprod Med, 2020*:21563.
- Khatri, & Mengistu. (2022). Input, process, and output factors contributing to quality of antenatal care services: A scoping review of evidence. *BMC Pregnancy Childbirth, 22*(977).
- Kumbeni, & Apanga. (2021). The relationship between time spent during the first ANC contact, home visits and adherence to ANC contacts in Ghana. *Global Health Action, 14*(1).
- Mills, & Middleton. (2020). Proposing a re-conceptualisation of competency framework terminology for health: A scoping review. *Hum Resour Health, 18*(15).
- Muarandega, & Nyakura. (2021). Causes of maternal mortality in Sub-Saharan Africa: A systematic review of studies published from 2015 to 2020. *Glob Health, 11*(04048).
- Nihal, & Shekhar. (2024). An assessment of adequate quality antenatal care and its determinants in India. *BMC Pregnancy Childbirth, 24*(698).

- Sehngelia, & Pavlova. (2021). Women's satisfaction with maternal care services in Georgia. *Health Policy OPEN, December 2*.
- Sugiyono. (2021). *Statistika Untuk Penelitian*. Penerbit Alfabeta.
- Wang, & Cheng. (2020). Cross-Sectional Studies Strengths, Weaknesses, and Recommendations. *Chest Journal, 158*(1).
- Wulandari, & Rachmawaty. (2021). Patient satisfaction towards healthcare quality in Indonesian Public Hospital. *Enfermería Clínica, 31*(5), S745-S750.
- Wulandari, & Rohmah. (2021). Urban-rural disparities of antenatal care in South East Asia: A case study in the Philippines and Indonesia. *BMC Public Health, 21*(1221).