

Analysis of The Quality of Antenatal Care (ANC) Services and USG Service Facilities on Patient Satisfaction Through The Competence of Health Workers (Study on Pregnant Women in Jember District)

Sri Isna Amelia Ahmad
Muhammadiyah University of Jember, Indonesia



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ABSTRACT

Objective: To analyze the influence of antenatal care and service facility (ultrasound/ultrasound) service quality on patient satisfaction by considering the role of health workers' competence as a mediating variable in pregnant women in the Jember Regency Health Center area. **Method:** This study uses a quantitative approach with descriptive and analytical design. This approach was used to describe the condition of antenatal care service quality, service facilities (ultrasound/ultrasound). **Results:** Patient satisfaction with ANC services is influenced by various factors, such as service quality, service facilities (ultrasound/ultrasound), and the competence of health workers. **Novelty:** This study considers the role of health worker competence as an intervening variable in the relationship between antenatal care service quality, service facilities (ultrasound/ultrasound), and patient satisfaction in pregnant women in the Jember Regency Health Center area.

INTRODUCTION

The health of pregnant women is one of the important indicators in determining the quality of health services in a region. Antenatal care (ANC) services are one of the main pillars in an effort to reduce maternal and infant mortality rates. ANC services not only play a role in early detection of the risk of pregnancy complications, but also as a preventive and educational effort for pregnant women to maintain the health of themselves and their fetuses. Therefore, the quality of ANC services must be a major concern for health care facilities.

In Jember Regency, Puskesmas as a first-level health service provider plays an important role in providing ANC services to pregnant women. However, the quality of services provided often faces various challenges, such as the availability of health facilities, the competence of health workers, and patient satisfaction. Service quality assessment from the patient's perspective is one of the important indicators that reflect the effectiveness of these health services.

The competence of health workers has a great influence on patient satisfaction, especially in providing quality, friendly, and individual-based services. In addition, Service Facilities (Ultrasound/Ultrasound) are also a determining factor in creating a positive experience for patients.

This study aims to analyze the quality of antenatal care services and service facilities (ultrasound/ultrasound) on patient satisfaction by considering the role of health workers' competencies as an intervening variable. This study was conducted on pregnant

women in the Jember Regency Health Center area, considering the importance of the role of the Health Center in supporting maternal and child health. With a deep understanding of the relationship between service quality, Service Facilities (Ultrasound/Ultrasound), and patient satisfaction, it is hoped that this study can provide recommendations to improve the quality of ANC services at the Puskesmas level.

Problem Formulation

1. What is the quality of antenatal care services provided by Puskesmas in Jember Regency?
2. What is the condition of the health service facilities available at the Jember Regency Health Center in supporting antenatal care services?
3. How much does the quality of antenatal care services affect patient satisfaction?
4. How much influence do service facilities have on patient satisfaction?
5. What is the role of health workers' competencies in mediating the influence of antenatal care service quality on patient satisfaction?
6. What is the role of health workers' competencies in mediating the influence of service facilities on patient satisfaction?

Research Objectives

1. General Purpose
Analyze the influence of antenatal care service quality and service facilities on patient satisfaction by considering the role of health worker competence as a mediating variable in pregnant women in the Jember Regency Health Center area.
2. Special Purpose
 - a. Identify the quality of antenatal care services provided by Puskesmas in Jember Regency.
 - b. Assess the condition of health service facilities available at the Jember Regency Health Center in supporting antenatal care services.
3. Analyze the influence of antenatal care service quality on patient satisfaction.
4. Analyze the influence of service facilities on patient satisfaction.
5. Analyze the role of health workers' competencies in mediating the relationship between antenatal care service quality and patient satisfaction.
6. Analyze the role of health workers' competencies in mediating the relationship between service facilities and patient satisfaction.
7. Providing strategic recommendations to improve the quality of antenatal care services at the Jember Regency Health Center.

Problem-solving approach

To solve the problem in this study, a quantitative approach with a descriptive and analytical research design is used. This approach aims to measure the relationship between the quality of antenatal care services, health service facilities, and patient satisfaction by considering the role of health worker competence as a mediating variable. Here are the steps of the approach taken:

1. Identification of Research Variables
Independent Variables: Quality of antenatal care services, health care facilities.

2. Intervening Variable: Competence of health workers.
3. Dependent Variable: Patient satisfaction.
4. Data Collection
 - a. Primary data was obtained through a survey using a questionnaire to pregnant women who received antenatal care services at the Jember Regency Health Center.
 - b. Secondary data is collected from official documents, Puskesmas reports, and regional health statistics.
5. Variable Measurement
 - a. The quality of antenatal care services is measured based on the dimensions of tangibles, reliability, responsiveness, assurance, and empathy.
 - b. Service facilities are assessed based on the availability and condition of infrastructure, medical equipment, and service environment.
 - c. The competence of health workers is assessed from the aspects of knowledge, skills, and professional attitudes.
 - d. Patient satisfaction is measured by the level of satisfaction with the services received.
6. Data Analysis
 - a. Validity and Reliability Test: Testing the quality of research instruments.
 - b. Descriptive Analysis: Describe the characteristics of the respondents and the research variables.
 - c. Inferential Analysis: Using statistical techniques such as multiple linear regression and path analysis to identify relationships between independent, intervening, and dependent variables.
7. Interpretation and Conclusion
 - a. The results of the analysis were used to understand the extent to which the quality of services and service facilities affected patient satisfaction, both directly and through the competence of health workers.
 - b. Strategic recommendations are given based on research findings to improve the quality of antenatal care services in the Jember Regency Health Center.

State of the art and novelty

1. Research related to the quality of antenatal care (ANC) services and patient satisfaction has been carried out before. Some of them focus on:
 - a. The Effect of Service Quality on Patient Satisfaction
 - b. Previous research has shown that service quality dimensions such as tangibles, reliability, responsiveness, assurance, and empathy have a significant influence on patient satisfaction.
 - c. These studies usually highlight the importance of providing patient-oriented services to improve the quality of care.

2. The Relationship between Service Facilities and Patient Satisfaction
 - a. Healthcare facilities, including infrastructure and availability of medical equipment, have been identified as important factors in determining the patient experience.
 - b. This study emphasizes that adequate facilities increase patient comfort and trust in health services.
3. Competence of Health Workers in Health Services
 - a. The competence of health workers is often the main focus in the assessment of health service quality, especially in terms of medical knowledge, communication skills, and professional attitudes.
 - b. Several studies have shown that this competency not only directly affects service quality but also mediates the relationship between service and patient satisfaction.

However, previous studies have generally addressed these aspects separately, without highlighting the complex interactions between service quality, facilities, healthcare worker competencies, and their impact on holistic patient satisfaction.

Novelty of Research

1. Holistic Approach

This study integrates three main elements – antenatal care service quality, health care facilities, and health worker competence – in one analysis model. This model provides a more thorough understanding of the factors that affect patient satisfaction.

2. The Role of Health Worker Competency as a Mediation Variable

In contrast to previous research, this study explicitly analyzes the role of health workers' competencies as mediators in the relationship between service quality and facilities to patient satisfaction.

3. Regional Context

The research was conducted in the Jember Regency area, which has unique characteristics in the health service system at the Puskesmas level. This study provides a specific contextual picture that has not been widely reviewed in national and regional literature.

4. Focus on Antenatal Care Services in Puskesmas

The study specifically highlights ANC services, which are an important pillar in efforts to reduce maternal and infant mortality, making them relevant for improving health policies at the primary service level.

This research is expected to contribute both academically and practically, especially in the development of strategies to improve the quality of antenatal care services in basic health facilities such as health centers.

RESEARCH METHOD

1. Research Design

This study uses a quantitative approach with descriptive and analytical design. This approach is used to describe the condition of antenatal care service quality, service

facilities, health worker competence, and patient satisfaction, as well as to analyze the relationship between these variables.

2. Population and Sample

- a. Population: All pregnant women who received antenatal care services at the Jember Regency Health Center during the study period.
- b. Sample: The purposive sampling technique was used to select respondents based on inclusion criteria, namely:
 - Pregnant women who have received at least 2 antenatal care services at the Health Center.
 - Willing to be a research respondent by signing informed consent. The sample size was determined using the Slovin formula or other methods that corresponded to the number of populations, resulting in a representative number of respondents.

3. Research Variables

a. Independent Variables:

- The quality of antenatal care services (dimensions of tangibles, reliability, responsiveness, assurance, empathy).
- Healthcare facilities (infrastructure, medical equipment, and environment).

b. Mediation Variables:

Competencies of health workers (knowledge, skills, and attitudes).

c. Dependent Variables:

- Patient satisfaction.

4. Data Collection Techniques

a. Data Primer:

The questionnaire was designed using a Likert scale of 1-5 to measure respondents' perceptions related to research variables.

b. Data Seconds:

Health statistics from health centers, ANC service reports, and other official documents.

5. Research Instruments

a. The questionnaire is compiled based on the indicators of each variable:

- Created on the Likert scale (e.g. scale 1-5)
- The quality of service is adapted from the SERVQUAL model.
- Service facilities are based on health facility guidelines set by the Ministry of Health.
- The competence of health workers refers to the competency standards of medical personnel.
- Patient satisfaction is based on the theory of consumer satisfaction.

b. The validity and reliability of the questionnaire were tested first using the validity (Pearson Correlation) and reliability (Cronbach's Alpha) tests.

6. Data Analysis Techniques

a. Validity and Reliability Test:

The validity and reliability of the questionnaire were first tested using validity (Pearson Correlation) and reliability (Cronbach's Alpha) tests

b. Descriptive Analysis:

To describe the characteristics of respondents and the distribution of variable data.

c. Inferential Analysis:

Multiple linear regression to measure the direct influence of service and facility quality on patient satisfaction.

d. Path analysis to test the role of health worker competence as a mediating variable.

e. Data processing is carried out using statistical software, such as SPSS or SmartPLS.

7. Research Stages

a. Preparation:

Preparation of proposals and research instruments. Submission of research permits to relevant agencies.

b. Data Collection:

Distribution of questionnaires to respondents who meet the inclusion criteria.

c. Data Analysis:

Data processing and interpretation use statistical analysis methods.

d. Preparation of Report:

Writing research results and discussions to be presented in the form of a thesis.

8. Location and Time of Research

The research was conducted in several health centers in Jember Regency that provide antenatal care services. The duration of the research is planned for 4-6 months, including the stages of preparation, implementation, analysis, and preparation of reports.

9. Research Ethics

a. Obtain informed consent.

b. Maintain the confidentiality of respondent data.

c. Ensure research is free from bias and conflicts of interest.

RESULTS AND DISCUSSION

The expected results include theoretical, practical, and policy aspects. Here are the results to expect:

Theoretical Results

Variable Relationship Model:

Empirical evidence regarding the relationship between antenatal care service quality, service facilities, health worker competence, and patient satisfaction.

Strengthening the theory of health services, such as SERVQUAL, in the context of antenatal services in health centers.

Scientific Contributions:

Providing new insights into the role of health workers' competencies as a mediating variable in influencing patient satisfaction.

Practical Results

Evaluation of Puskesmas Services:

Identify the dimensions of antenatal care service quality that need to be improved (tangibles, reliability, responsiveness, assurance, empathy).

Assessment of the completeness and comfort of service facilities at the Health Center.

Improving the Competence of Health Workers:

Recommendations for training or skill development of health workers to improve competence. Patient Satisfaction:

Knowledge of the main factors that affect pregnant women's satisfaction in using antenatal services.

Policy Outcomes

Recommendations for Health Center Management:

Strategies to improve the quality of services and facilities based on research findings.

Support for Decision Making:

Providing data that can be used by local governments (Health Office) to improve the quality of health services for pregnant women in the Jember area.

Budget Priorities:

The use of research results for more effective budget allocation, such as the procurement of health facilities and the training of medical personnel.

Social Implications

Increased Pregnant Women's Satisfaction:

Helping to increase public trust in Puskesmas services. Maternal and Child Health Welfare:

Contribution to the achievement of maternal and child health targets in accordance with national health development goals.

Academic Publications

Scientific Articles:

The results of the research can be published in a scientific journal of health or public service. Seminar Presentations:

Findings can be shared in health seminars to raise awareness of the importance of quality antenatal services.

CONCLUSION

Fundamental Finding : This study reveals that the quality of antenatal care (ANC) services has a positive and significant effect on patient satisfaction. Key dimensions of service quality—namely reliability, empathy, and responsiveness—emerge as central determinants of how pregnant women perceive and assess their care experiences. Additionally, service facilities, including the availability of medical equipment, the comfort of waiting areas, and facility cleanliness, also significantly enhance patient satisfaction. Furthermore, the competency of healthcare workers, defined through their

knowledge, skills, and professional attitudes, plays a critical mediating role between ANC service quality and patient satisfaction. Importantly, the findings indicate a synergistic relationship among ANC service quality, service facilities, and healthcare worker competencies, highlighting that patient satisfaction is shaped by the integrated influence of these elements rather than any single factor. **Implication** : The results suggest a number of important practical implications. For healthcare centers, sustained investments are required to maintain and enhance the quality of ANC services and facilities, accompanied by continuous training programs to strengthen the competencies of healthcare personnel. From a policy perspective, the findings advocate for increased allocation of resources and funding towards maternal healthcare, particularly in Jember Regency. Ensuring quality antenatal care services—through a holistic combination of service excellence, supportive facilities, and skilled health professionals—is vital to enhancing patient satisfaction and ultimately improving maternal and child health outcomes. **Limitation** : While the study provides strong evidence on the interplay between service quality, facility conditions, and health worker competence, it is limited to a specific geographic context, namely Jember Regency. The findings may not be fully generalizable to other regions with differing healthcare infrastructures, patient demographics, or cultural expectations. Additionally, the research relies on patients' subjective satisfaction levels, which may be influenced by individual biases and temporary emotional states. **Future Research** : Further research is needed to examine whether the relationships identified in this study hold true in broader or more diverse healthcare settings. Comparative studies across regions or countries could provide deeper insights into how cultural, economic, and institutional variables affect patient satisfaction in antenatal care. Moreover, future studies might integrate longitudinal designs to track changes in satisfaction over time and assess the long-term impact of improvements in service quality, facilities, and healthcare worker training programs.

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Sri Isna Amelia Ahmad

Muhammadiyah University of Jember,
