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RESEARCH ARTICLE

Gap Analysis: Quality and Women's Satisfaction Regarding Postnatal Care

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Abstract:

Background:

Improving the quality of maternal health is one of the eight major developmental goals of the World Health Organization. Women's satisfaction with maternity healthcare services is a crucial indicator of quality health care.

Objective:

This study aimed to evaluate the gap between the quality of maternity care and women's satisfaction with postnatal care.

Methods:

This study used a descriptive cross-sectional study design. The sample size was 300 postpartum Saudi women. The data were collected from the postnatal care unit at the King Khalid Hospital, Jeddah, Saudi Arabia. The study used the SERVQUAL and Postnatal Satisfaction with Nursing Care Questionnaires to measure the studied variables.

Results:

The *mean* ± *SD* (3.73 ± 0.466) of women perceived that the provided care was of high quality and the *mean* ± *SD* (3.20±0.511) of women's satisfaction with postnatal care was moderate. The gap between expected and perceived quality of maternity care was reported to be -1.27. There is a significant positive relationship between the quality of maternity care and women's satisfaction.

Conclusion:

The study concluded that the participants were generally satisfied with the postnatal care and overall maternity care provided in the King Khalid Hospital. However, they showed the desire to get more empathetic care. Patients' satisfaction should be evaluated periodically to establish baseline data and provide postnatal care interventions tailored to women's expectations. There is a need to increase training for enhancing healthcare providers' empathetic and communication skills to improve the relationship between the staff and women.

Keywords: Postnatal care, Quality, Women's satisfaction, Maternity care, Childbirth, Empathy.

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1. INTRODUCTION

Quality of care refers to the scope of health care services delivered with evidence-based practices for patients and people. The care provided must be characterized by safety, effectiveness, well-timed, well-organized, reasonable, and people-centered approach [1].

Improving maternal health is one of the eight principal developmental aims of the World Health Organization (WHO).

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One of the essential criteria for achieving this goal is improving women's access to reproductive health services [2]. As per WHO statistics (2015), many women die due to childbirth complications; however, the death rate is higher in underdeveloped nations that require attention regarding service availability and quality values [3].

Quality of care is increasingly recognized internationally as a critical aspect of the ongoing maternal and newborn health agenda. It is mainly concerned with care during childbirth and in the immediate postnatal period [4]. Hence, the quality of maternity services is a particular service associated with a very significant event in the life of every future mother and the birth

of a child [5, 6].

The World Health Organization [7] recommends that pregnant women have access to different models of care, especially from those who provide continuous care. To promote maternal health, the perspectives of women and health care providers need to contribute to the quality-enhancement procedures for maternal care services [8].

A recent study conducted by Wereta (2018) [3] reported that women's opinions should be used to evaluate quality care. The experiences and perceptions of mothers, providers of postnatal care, and other stakeholders should be considered.

The measurement of maternity care is a challenge because maternity services are comprised of different services (*e.g.*, antenatal check-ups and care during the delivery) that are provided across different phases (*e.g.*, the antepartum phase, childbirth, and the postpartum phase), involving several professions and professionals (*e.g.*, obstetricians, midwives, and maternity nurses) who execute many tasks interchangeably [9].

Despite this, it is essential to ensure that the healthcare institutions do their best to create the optimal delivery conditions and ensure the mother and her child's safety. Strategies need to improve the quality of maternity services to meet patients' expectations. Regular consulting with patients in maternity wards allows health professionals to access the information regarding matters which satisfy patients, what causes their dissatisfaction, and what they expect from the institution [5].

However, quality of care needs to be assessed against pre-determined standards. Furthermore, women's satisfaction has received a great deal of attention in the medical literature and is an essential indicator of the quality of care [10]. The meaning of satisfaction has been linked with a degree of congruency between expectation and experience and patient satisfaction. So, applying quality improvement methods that focus on clinical effects is crucial to enlightening patient care [11].

Women's satisfaction is a concept that is of particular importance in today's health care. This satisfaction is an essential aspect and depends on the care received by the mother. It has been observed that satisfied clients compared to unsatisfied clients have different responses to the care services received. Satisfied clients adapt to the recommendations and follow them, and often invite other people to use these services [2]. Therefore, understanding mothers' level of satisfaction with their childbirth experience is relevant to health care providers, administrators, and policymakers as an indicator of the quality of maternity care. Also, evaluating the nursing services is one of the most effective strategies for improving the quality of maternity care [12].

2. CONCEPTUAL FRAMEWORK

The current study was guided by two models for evaluating the quality of postnatal care and women's satisfaction. The first model is the Service Quality Model (SERVQUAL), a conceptual framework for measuring maternal care quality in the postnatal period. SERVQUAL was developed by Parasuraman *et al.* [13, 14] as an advanced technique for the

assessment of service quality that evaluates the differences in the patient's perception of various services, the quality of services currently being offered, and the quality of services that the healthcare organization is expected to deliver [13]. This study determines the discrepancy (gap) between women's expectations of the service provided and women's perceptions of the service received.

SERVQUAL examines five dimensions of service quality; Tangible, Reliability, Responsiveness, Assurance, and Empathy. Tangible/ Materiality represents the technical quality of the material elements, including the appearance and decor of the premises, equipment, staff, and ways of communication. Reliability (robustness, responsibility) embraces the ability to keep promises, provide the service as promised, and fulfill all the conditions of the agreement (*e.g.*, time) meticulously. Responsibility is the ability to respond, the will, and the willingness to help, and provide appropriate services with the service provider considering the expectations and demands of the buyer and acting quickly and professionally. The assurance dimension includes criteria, such as trust, kindness, competence, and security services resulting directly from the staff's knowledge, skills, and capacity. Empathy (care, accessibility of services) requires individual attention devoted to each client. This is a combined set of criteria of availability of customer service, communication skills, and understanding (knowledge of consumer issues) [13, 15].

The second model included specific dimensions for measuring the women's satisfaction with postnatal care. In 2013 [16], Varghese and Rajagopal developed the Jipi's Postnatal Satisfaction with Nursing Care Questionnaire (JPSNQ). It includes six areas and domains used to evaluate women's satisfaction during the postpartum time. These are "orientation, information, communication, comfort and care, specific postpartum care, and value, and preference." It was hypothesized that the use of both SERVQUAL and JPSNQ will provide a comprehensive picture of perceived, expected maternal quality care, and the actual women's satisfaction with the quality of their postnatal care.

2.1. Significance of the Study

Women's satisfaction with maternity care is essential to health care professionals, and it is related to midwifery care. High-quality midwifery care is delivered when that care is safe, effective, and results in a positive experience for women. It is a fundamental concept. As women's experiences are now regarded as an integral part of assessing the quality of maternity care, women's views of their care must be recorded and used for quality improvement [17].

The women's perception of care and satisfaction with services is essential, and apparent quality is crucial for service application. Users, who deem the quality of care in a health center to be good, are more likely to return, increasing demand for the service. Service operation and positive maternal and neonatal outcomes can be significantly enhanced by improving the quality of facility provisions and making them more acceptable to women [18].

Few studies have been conducted in Saudi Arabia (KSA) to assess the quality of generic and routine healthcare for

childbirth. In addition, few instruments are available to assess the postnatal mother's satisfaction with nursing care. It is crucial for healthcare professionals to understand women's satisfaction with their childbirth experience. Therefore, there has been a growing interest in Saudi Arabia in identifying factors associated with maternal satisfaction at the primary health care level. Maternal health care in Saudi Arabia is developing fast with multiple governmental and independent service providers. So, it is essential to look at maternal satisfaction and its determinants [19]. Evidence on women's perception and satisfaction with the quality of care received aids in identifying other aspects of care that are essential to strengthening and developing the nation's health frameworks. In addition to sustaining long-term requirements, creating healthy changes in the field of maternity care, and identifying blockages, ongoing evaluations should be performed [20].

It is hoped that the present study will provide an adequate evaluation of the quality and satisfaction of maternity care and special postnatal care in the studied hospital, which could help its administrators to identify the gaps in this service and accordingly develop appropriate improvement strategies [21].

2.2. The Objective of the Study

The main objective of this study was to evaluate the gap between the quality of maternity care and women's satisfaction with postnatal care at the King Khalid Hospital-Jeddah, Saudi Arabia

2.3. Research Questions

- How do women evaluate the quality of maternity care in KKH?
- Does a gap exist between the actual perception and expectation of maternity service quality using SERVQUAL?
- What is the degree of women's satisfaction with postnatal care in KKH?
- Does postnatal care quality relate to women's satisfaction with postnatal care?

3. MATERIALS AND METHODS

3.1. Study Design

A cross-sectional descriptive design was used to include the population at a single point in time. The study was conducted at the King Khalid Hospital (KKH), Jeddah, affiliated with the National Guard Health Care Agency (NHGA), Saudi Arabia. It is a 751-beds tertiary care hospital accredited by the Joint Commission International (JCI). Maternity services are provided in three wards. (Prenatal Ward 1, Postnatal Ward 2, and Labour & Delivery (L&D)). The study setting area was a Postnatal (Ward 2), which contained twenty beds, divided into eight rooms, each of which had four beds, and four other isolation rooms, each of which had one bed.

3.2. Participants and Data Collection

This study included a convenient sample of Saudi women who delivered in the postnatal ward (2). These women

admitted receiving either the care associated with the delivery or postnatal care. The sample size was determined using the G-POWER software application. The sample was 300 participants to achieve the power of 0.80%. The sample size was based on an accuracy level of 5%, where the confidence level was 95%, and it is considered significant if $P < 0.05$. The inclusion criteria included women, who were ≥ 18 years old and undergoing immediate care following a spontaneous vagina delivery (SVD). Mothers who had undergone cesarean section (CS) and mothers who refused to participate in this study were excluded.

3.3. Instruments of the Study

Three tools were used to measure the study variables.

3.3.1. The First Tool: Demographic Form

The researchers developed a form to collect the socio-demographic data of those who participated in the study. It consisted of 6 items, including age, education level, work, obstetric score, previous admissions to the hospital, and the reason for hospitalization.

3.3.2. The Second Tool: Service Quality Model (SERVQUAL)

This tool was developed by Parasuraman *et al.* (1988) [14] and used to measure perceived service quality. It consists of 22 items, including five care and service quality dimensions. Tangibility, Responsiveness, and Assurance have four items for each dimension, while Reliability and Empathy have five items. SERVQUAL measures the expectation and perception of the service on a five-point Likert scale ranging from (5) strongly agreed to (1) strongly disagreed. The five dimensions were assessed according to the participants' perceptions; the results were calculated and multiplied by the weighting. The gap score for every dimension was estimated by deducting the expectations score from the score of perceptions. A negative gap score specified that the basic service (the score of perception) was lesser than expected (the score of expectation).

3.3.3. The Third Tool: Jipi's Postnatal Satisfaction with Nursing Care Questionnaire (JPSNQ)

JPSNQ tool was developed by Varghese and Rajagopal (2013) [16] for evaluating postnatal women's satisfaction following nursing care. The questionnaire consists of 39 postnatal items classified under six domains to measure women's satisfaction in the postpartum period, with four items for orientation, information, communication, value, and preference and five items for comfort and care. In comparison, postnatal care has nine items. Responses measured on a five-point Likert scale ranging from (5) strongly agree to (1) strongly disagree. The author permits the unrestricted use of the skills for research purposes and is available in the public domain.

After receiving the official and IRB approvals, data were collected using the three main tools (Socio-demographic, SERVQUAL, and JPSNQ). The investigator collected data through a structured interview with participating women using the study questionnaires. It took 20 to 30 minutes to interview each participant and document the given data after fully

explaining the research aims and obtaining the woman's oral and written consent to participate. After data collection and confirmation with the participants, the researcher thanked the women for their participation. Data collection was carried out over four months, from September to December 2018.

3.4. Validity and Reliability

Tools were reviewed by a jury of Academic experts of the nursing department at the College of Nursing. Few amendments were made. The current study's reliability was tested using Cronbach's alpha correlation coefficient with a value equal to 0.876 for SERVQUAL and 0.903 for JPSNQ, indicating good reliability for both questionnaires.

3.5. Data Analysis

The Statistical Package for Social Sciences (SPSS) version 21 was used in the data analysis. Frequencies and percentages were used to present demographic characteristics. Mean and Standard Deviations were used to calculate average scores of care qualities and the women's satisfaction questionnaires. Pearson Correlation Coefficient (r) was used to measure the linear correlation between the quality of maternity care and women's satisfaction. Multiple Linear Regression (R^2) was used to describe the women's satisfaction concerning the quality of maternity care as a predictor variable. $P \leq 0.05$ was set as the level of statistical significance.

3.6. Ethical Considerations

The study maintained ethical considerations and obtained approval from the King Abdullah International Medical Research Centre (KAIMRC). The final approval of the institutional review board (IRB) was received: SP18/131/j. Informed consent was obtained before the patients were interviewed. The researcher clarified the purpose of the study to every woman to obtain consent for participation in the study. Approval from the hospital to progress with the data collection strategy was also obtained to meet the ethical consideration of the study. Permission was obtained from the postnatal care manager, and the information collected in this research project was kept confidential.

4. RESULTS

4.1. Socio-demographic Characteristics

Table 1 shows that the highest percentage of participants (41.7%) were aged between 23 to 26 years. More than half of women (60.3%) had a collegiate education degree. In the obstetrical data, gravidity ranged between 1 to 8, with a mean value of 2.43 ± 1.529 , and the range of parity ranged between 1 to 8, having a mean of 2.29 ± 1.365 . About two-thirds of women (61.1%) were not in the labor force, while 38.9% had work. 48.6% were admitted to the hospital in the last five years, while 12.9% were admitted in six months. The main reason behind the choice of hospital was the availability of good doctors (44.0%). However, the lowest reason for choosing this hospital was staff nurses (2.9%).

Table 1. Distribution of the participants in regarding their Socio-demographic Characteristics.

Characteristics	Number of Samples (n)	Percentage %
Age in Years		
From 18 to 22	105	35.0
From 23 to 26	125	41.7
From 27 to 30	57	19.0
Above 30	13	4.3
Educational Level		
Primary School	7	2.0
High School	36	10.3
Collegiate Education	211	60.3
Other (diploma)	96	27.4
Occupation Qualification		
Work	136	38.9
No work	214	61.1
Last Admission to Hospital		
0 months - 6 months	45	12.9
7 months – 1 year	81	23.1
2 years – 5 years	170	48.6
5 years – 8 years	54	15.4
Reason for choosing this hospital		
Modern facilities are available	71	20.3
Quality care by the staff nurses	10	2.9
Referred from other hospital	19	5.4
Convenience of the hospital	26	7.4
Availability of good doctors	154	44.0
other reasons: such as, inside the institutions	70	20.0

(Table 1) contd.....

Characteristics	Number of Samples (n)	Percentage %
Obstetrical score		
	Average	Mean± SD
Gravidity	1-8	2.43 ± 1.529
Parity	1-8	2.29 ± 1.365

SD: Standard Deviation.

Table 2. Evaluating the quality of maternity care using (SERVQUAL) tool.

The Dimension	Perceived Quality		Gap Difference between Expected and Perceived Quality*
	Mean ± SD	Degree of Quality	
Tangible quality	4.22±0.557	High	-0.78
Reliability quality	3.93±0.589	High	-1.07
Responsiveness quality	3.13±0.807	Moderate	-1.87
Assurance quality	4.39±0.571	High	-0.61
Empathy quality	3.09±0.907	Moderate	-1.91
Quality provided as a whole	3.73±0.466	High	-1.27

4.2. Evaluating the Quality of Maternity Care Using the SERVQUAL Tool

Table 2 illustrates that 68% of participants perceived maternity care as high quality, represented by mean ± SD (3.73 ± 0.466). Participants reported high-quality assurance (4.39 ± 0.571), followed by tangible and reliable quality (4.22±0.557, 3.93±0.589), respectively. However, participants rated both responsiveness and empathy as moderate (3.13±0.807, 3.09 ± 0.907, respectively).

Table 2 shows a gap between the expectations and the perception of the participant's quality of care. This gap was found to be lower than expected quality of maternity care by -1.27. The same trend of the result was reflected in all the dimensions of quality, where there was a gap between the expected and perceived quality of Tangible (-0.78), Reliability (-1.07), Responsiveness (-1.87), Assurance (-0.61), and Empathy (-1.91). The highest gap value was related to Empathy (-1.91), while the lowest gap was related to Assurance (0.61).

4.3. The Degree of Women's Satisfaction with Postnatal Care Using the JPSNQ Tool

The overall women's satisfaction with postnatal care was above average, with a mean ±SD of 3.20±0.511. The participated women were highly satisfied with the value and

preference dimension (4.76 ± 0.775) and comfort and care (3.77 ± 0.854). While they were moderately satisfied with communication skills, orientation, and information dimension (3.34±0.743, 3.07±0.813, 3.02±0.767), respectively, they were less satisfied with the dimension of postnatal care (2.73±0.775) (Table 3).

4.4. Relationship and Regression Analysis of the Quality of Maternity Care and Women's Satisfaction with Postnatalcare

Table 4 shows a significant strong positive linear correlation between the overall quality of maternity care and women's satisfaction with postnatal care at r = 0.622, p=0.000. The regression analysis showed a statistically significant effect of quality of care in achieving women's satisfaction, where R² = 0.387, indicating that the quality of maternity care could be explained for about 38.7% of the variation in women's satisfaction. Where the value of F=219.483 and the p=0.000 were statistically significant.

The individual effect of different dimensions of quality of maternity care on women's satisfaction revealed that Responsiveness, Assurance, and Empathy dimensions had a significant impact on women's satisfaction with postnatal care (t=4.404,5.712,6.955 and P=0.00). On the other hand, both the Tangible and Reliability dimensions had no significant impact or effect on the women's satisfaction, where P = (0.515, .057).

Table 3. The degree of women satisfaction with postnatal care using (JPSNQ) tool.

Dimension	Mean± SD.	Degree of Satisfactions
Orientation	3.07±0.813	Moderate
Information	3.02±0.767	Moderate
Communication	3.34±0.743	Moderate
Comfort and Care	3.77±0.854	High
Postnatal Care	2.73±0.648	Moderate
Value & Preference	4.76±0.775	High
Satisfaction as whole	3.20±	Moderate

SD = Standard Deviation Average score of Mean: (poor from 1.00 to 1.79, moderate from 1.80 to 3.39, high from 3.40 to 5).

Table 4. Multiple regression analysis of the impact of quality dimensions on women satisfaction with postnatal care.

Quality of Care	Women Satisfaction with Postnatal Care			
	B	β	t	p-value
Tangible quality	.030	.033	.651	.515
Reliability quality	.091	.105	1.909	.057
Responsiveness quality	.162	.257	4.404	.000*
Assurance quality	.218	.244	5.712	.000*
Empathy quality	.180	.320	6.955	.000*
$r=0.622, R^2=0.387, F=219.483, p<0.000^*$				

r: correlation coefficient, significant, R^2 : The regression coefficient **B**: non-standard regression coefficient, β : standard regression coefficient (**F.test**) ANOVA**P* significant at the 0.05.

5. DISCUSSION

The present study aimed to evaluate the quality of maternity care and the woman's satisfaction with postnatal care at the King Khalid Hospital, Jeddah. The result showed that the highest percentage of participants perceived the care to be high quality, although a gap between the mean of both expected and perceived quality of maternity care was reported. Participants perceived assurance quality as the highest dimension. In contrast, they would like to see more empathic behaviors. Although numerous factors were found to influence patients' views, their perceptions of health care providers' empathy and caring attitude were of crucial importance in contributing to patient outcomes in clinical practice.

The study conducted by Rezaei *et al.* [22] supported these findings that revealed service quality gaps in the provision of care in all dimension's services. However, the women's perceptions were lower than expected. The most significant gap was reported in the dimensions of assurance and responsibility, and the lowest gap was reported in the domains of reliability and empathy. Similarly, it was reported [23, 24] that most participants perceived good quality assurance, and the women's expectations were higher than their perceptions. Empathy is just one element that facilitates treatment effectiveness, but a powerful one. Healthcare professionals' empathic behavior is an essential component of quality health care implicated in patients' trust, satisfaction, and compliance [25].

As for satisfaction, the present findings revealed a moderate degree of women's satisfaction with postnatal care. The majority of participants were satisfied with the dimension of value and preference, comfort, and care, while they were less satisfied with the dimension of postnatal care. The probable reason for this result was reported by participants that they were not adequately assisted after delivery, and they needed more information regarding hygienic care of the perineum, baby care, and assisted diaper changes. This poor communication between caregivers and women resulted in patients having little information regarding their postnatal care, in addition to other factors, like shortage of nurses and language barriers as most of the staff nurses were not Arabian or Saudi nurses. Also, differences in religion might affect women's perceptions because the nursing system in KSA relies a great deal on expatriate nurses recruited from over 52 countries, including Arabic and non-Arabic speakers. Differences in religion, culture, social values, and language can

create barriers between expatriate nurses and local patients [26]. Therefore, the language is considered an obstacle to care; mainly, it is too general and not customized to nursing care. Therefore, nurses are forced to depend on interpreters from Saudi colleagues and patients' family members, which negatively impacts care.

These findings are supported by a study conducted in Ghana [27], which found that respondents were generally satisfied with the quality of maternal healthcare services. However, respondents reported poor attitudes toward healthcare providers at the health facility. Likewise, another study [23] indicated that most participants reported the least satisfaction with postnatal care. Furthermore, results from a study [24] revealed that some postnatal mothers were not satisfied with nursing care related to their values and preferences. On the other hand, a Nigerian study [28] found that women had many areas of dissatisfaction or were not satisfied with the quality of maternal care provided. Reasons for dissatisfaction included poor staff attitude and little attention to women's needs.

Explicitly, the findings of the Egyptian study [24] explained the causes of why postnatal mothers were minimally satisfied with provided nursing care specific to a postnatal period, such as that related to advice about postnatal exercise, the importance of family planning and postnatal follow-up visits, teaching regarding neonatal condition, immunization, and weaning. These results could be related to the mothers' brief postpartum hospital stay, leaving insufficient time for nurses to address their learning needs. Also, a study [28] indicated that the staff's poor attitude might be due to heavy workload and limited incentives. Consequently, to overcome this problem, it is essential to emphasize staff training and re-training on childbirth, including techniques. However, developing the staff's capability to follow standard operational, clinical strategies and rules will be supportive.

Moreover, the establishment of support care practices, including effective communication of care providers, enhances a positive childbirth experience and prevents potentially harmful care practices that weaken women's satisfaction with maternal care [29]. Therapeutic communication, caring behavior, and the interpersonal skills of staff are essential themes that are recognized as persuading satisfaction with maternal care [20]. Hence, there is a need to increase training to improve healthcare providers' empathetic and communication skills and upgrade their counseling skills and

improve the relationship between the staff and women.

Considering this, Zulu and Chanda [6] declared that providing competent and positive experience mentoring relationships between maternity nurses and mothers is essential to postnatal care. They contribute to both maternal and neonatal health outcomes and satisfaction.

5.1. Relationship between the Quality of Maternity Care and Women's Satisfaction with Postnatal Care

The findings of the current study revealed a significant moderate positive correlation between the quality of maternity care and women's satisfaction with postnatal care. The quality of maternity care predicted 38% of the variation in women's satisfaction, indicating that the quality of maternity care for postnatal women in KKH affected women's satisfaction, and the higher the quality of maternal care, the higher the women's satisfaction. These findings were in agreement with the results of a study reported by Atiya [23], demonstrating a statistically significant relationship between women's satisfaction and the quality of maternity care.

Furthermore, thirty-eight postgraduate nursing programs were implemented in the 2017-2018 academic year; one of these was the midwifery program [30]. However, there is a lack of national nursing scope of practice, which the Saudi Commission mandates for Health Specialties (SCFHS) [31]. Therefore, the lack of a national scope of nursing practice may lead to alterations in learning outcomes of adopting different international scopes; there is no assurance that nursing graduates of midwifery programs will practice midwifery, including the childbirth process. These issues also work against Saudi nurses, who graduate from international nursing schools, including advanced nursing practitioners, who are not guided by clear nursing practice regulations [32].

In the same line [33], a study reported that maternal satisfaction is one of the most frequently reported outcome measures for quality of care, the quality improvement and efficiency of health care to provide quality maternal-friendly services. Also, another study [27] found that maternal satisfaction with healthcare services is increasingly recognized as an essential outcome for the healthcare system. Moreover, another study [34] reported that the quality of the service facility is enhanced by assessing patients' satisfaction with provided care, consequently leading to progress and perfection of nursing care based on patients' outlooks.

Our findings reported that women became more satisfied with maternal health care services when they perceived good technical quality of care and competency of providers. However, good care is perceived through receiving complete procedures, proper medication, and information [20]. In the same line, a study conducted in Iraq [35] reported that discrepancy between the predictable and delivered care affected women's satisfaction and reflected that the empathy, responsiveness, assurance, reliability, and tangibles were explained by one-quarter only of the total variance of customer satisfaction. Among five factors, responsiveness, reliability, and tangibles significantly impacted customers' satisfaction, and the remaining two factors (empathy and assurance) did not significantly affect customers' satisfaction. While a study [36]

indicated that empathy, reliability, responsiveness, assurance, and tangibles are the significant determinants of service quality that positively affect customers' satisfaction.

CONCLUSION

The present study concluded that women who participated in this study perceived high-quality care at the postnatal care units but strived for more empathetic care. They were moderately satisfied with the maternity care provided at the King Khalid Hospital and needed more emphasis on specific postnatal care. A low gap existed between the expected quality of maternity care and the perceived quality. A positive relationship was found between the quality of maternity care and women's satisfaction.

Although most mothers were satisfied by the delivery services, nurses and other health care providers need to fully understand the mothers' expectations and provide care that is consistent with those expectations. The health system should be devised to increase maternal satisfaction in the health institution and provide maternal-friendly services.

IMPLICATIONS

Application of the "women-friendly" tactic established on suitable reaction to women's care requirements and during the postnatal care is essential to decline women's dissatisfaction. Similarly, a strategic approach for designating applicable quantity and quality of staff to suit the number of women looking for maternal care would be beneficial. There is also a need to apply individualized postnatal care based on age, rarity, condition, and culture to meet the various health needs and achieve satisfaction for mothers. The current study recommends providing educational programs for postnatal care skills. Besides, continuous training of the health care providers at maternal and child health units is recommended to improve their performance and raise the quality level. So, regular and continuous monitoring of women's satisfaction could improve the hospitalization services by using a program to evaluate the quality and satisfaction. Enhancing strategies to increase the health care worker's knowledge and providing training courses for providers to upgrade their communication and counseling skills are inevitable.

LIMITATIONS OF THE STUDY AND FUTURE STUDIES

The current study is the first study conducted in the western region of Saudi Arabia to study the relationship between women's satisfaction and the quality of services provided at the postnatal care units. However, the results are limited only to the population of the King Khalid Hospital in Jeddah. The study cannot be generalized to other settings, so replicating the study with other settings and populations is recommended. Additionally, women's satisfaction could include more indicators for more holistic measurement.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study followed ethical considerations approved by the King Abdullah International Medical Research Centre

(KAIMRC). The final approval of the institutional review board (IRB) was also obtained: SP18/131/j.

HUMAN AND ANIMAL RIGHTS

No animals were used in the studies that are the basis of this research. The procedures in this study were conducted as per the ethical standards of the committee responsible for human experimentation by the Helsinki Declaration.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants for the publication of this report.

STANDARDS OF REPORTING

This study has been written using STROBE guidelines.

AUTHORS' CONTRIBUTIONS

HF, EA, and RA contributed to the study concept, design, data analysis, and interpretation. RA contributed to the data collection and drafting of the article. HF and EA critically revised the article.

AVAILABILITY OF DATA AND MATERIAL

Not applicable.

FUNDING

None.

CONFLICTS OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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