Assessment of Maternal Satisfaction with the Quality of Obstetric Care Provided in the Maternity Unit of Mobini Hospital, Sabzevar, Iran

Bibi Leila Hoseini¹, Masumeh Saeidi², Zahra Beheshti Norouzi³, Mohammad Ali Kiani⁴, *Mohammad Hassan Rakhshani⁵

¹Department of Midwifery, School of Medicine, Sabzevar University of Medical Sciences, Sabzevar, Iran.
²Department of Medical Education, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.
³Midwifery BSc, Graduate of Student Research Committee of Sabzevar University of Medical Sciences, Sabzevar, Iran.
⁴Department of Pediatrics, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.
⁵Ph.D in Biostatistics, Iranian Research Center on Health Aging, School of Public Health, Sabzevar University of Medical Sciences, Sabzevar, Iran.

Abstract

Background: Mothers and infants are considered as two vulnerable groups. Most problems occur during and immediately after delivery, which, if not addressed promptly, lead to death of mother, baby, or both. Maternal emotional support and midwifery care is one of non-pharmacologic methods of pain management during labor and delivery. Since the quality of midwifery care has an effective role in mothers' satisfaction with midwife's performance, this study was conducted to assess the quality of mothers' satisfaction with midwifery care.

Materials and Methods
In this cross-sectional study, 400 mothers admitted to the postpartum ward of Shahid Mobini Brothers Hospital of Sabzevar, Iran, were evaluated by simple convenience sampling. The research instrument was a questionnaire entitled "Satisfaction with quality of midwifery care in labor and delivery room", and was confirmed by content validity method and reliability was calculated by Cronbach's alpha coefficient (α=0.92). Data were analyzed using SPSS software version 16.0.

Results: The average age of mothers was 25.88 ± 5.70 years old. The mean maternal satisfaction was 104.72 ± 0.76. In satisfaction category, 1% were dissatisfied, 17.3% had moderate satisfaction, and 81.7% had high level of satisfaction. There was a significant relationship between the variables affecting the level of satisfaction including education, age, and number of maternal deliveries with satisfaction (P<0.05).

Conclusion
The results of this study indicate that mothers have high satisfaction with the quality of midwifery care in the maternity ward. This care is mainly performed by midwives, and midwifery tutors and students. Therefore, it is recommended to apply midwives in other areas requiring specialized midwifery performance.

Key Words: Iran, Midwife, Midwifery care, Mothers, Satisfaction.

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*Corresponding Author:
Dr. Mohammad Hassan Rakhshani, School of Public Health, Sabzevar University of Medical Sciences, Sabzevar, Iran.
Email: Rakhshanimh75@gmail.com
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INTRODUCTION

Pregnancy and childbirth are high-risk periods for mothers which threaten maternal and fetal health at any moment (1). Although parturition is a natural event, it is associated with extreme pain and creates positive or negative experiences for mothers (2, 3). Excessive pain and stress during labor can increase release of catecholamines and create a defective cycle that reduces uterine activity, increases labor pain, slows down fetal heart rate, and reduces infants' Apgar score of the first and fifth minutes. This defective cycle increases the length of labor, which increases the need for vaginal examinations and other aggressive interventions (1, 4). Rajabi et al. reported pain and stress as the reason for 68% of unplanned cesarean section and mothers' fatigue during labor (3). The recently published World Health Organization (WHO) framework for improving quality of care for mothers and newborns around the time of childbirth in health facilities recognizes two important components of care: the quality of the provision of care and the quality of care as experienced by women and their families (5).

Drug and non-pharmacological methods can be used as a care to control this pain and anxiety. Maternal emotional support and midwifery care is a non-pharmacologic method of pain management during labor and delivery that is also an important goal of midwifery profession (2, 4). According to mothers' perspective, one of the most effective factors in reducing pain during delivery is the presence of a supportive person; Hodnett also showed that continuous presence of a supportive person increases the possibility of vaginal delivery. As a result, the need for anesthesia and the use of synthetic oxytocin is reduced. Most importantly, this reduces the negative emotions of mothers about childbirth (4, 6). Mothers and infants are considered as two vulnerable groups. Most problems occur during and immediately after delivery, which, if not handled promptly, lead to death of mother, baby, or both (7). So, in order to achieve a good level of their health, midwifery support and care is needed is needed to enrich women's experience during pregnancy to reduce complications of labor and delivery room, need for pain, episiotomy, and perineal rupture, use of forceps and vacuum, and cesarean section. In addition to the above mentioned, providing good midwifery care reduces maternal fear and anxiety and reminds them of a positive pregnancy experience (2). Providing proper obstetric care causes physical and mental health and failure to receive such care leads to dissatisfaction and anxiety and undesirable mental and physical effects on mother and baby (1). One of the most important indicators of quality of health services is clients' satisfaction. Satisfaction is a cognitive and emotional response that reflects the effectiveness of the services (1, 8, 9). It depends on multiple factors (10).

In 1960, for the first time, the patient was the focus of attention in medical matters, and so far we are witnessing this; and with regard to the competition that has emerged among medical services, satisfaction is of particular importance (11). Each service provider should provide feedback to their customers in order to resolve deficiencies and use it in the planning process of the organization to improve the quality of the service (12, 13). Ahmadi and Azimi (1), Naghizadeh et al. (14), Harvey et al. (15), and Mesgarzadeh et al. (16), conducted studies on the mothers' satisfaction with midwifery care. Considering that, as noted, satisfaction is a concept that is very important in medical care and is one of the main goals of the Ministry of Health and Universities, and is a measure to evaluate the quality of health care (12), and since the quality of midwifery care has an effective role in mothers' attitude towards
midwife's performance (17), and the lack of a recent study that addresses this issue, the aim of this study was to assess mothers' satisfaction with the quality of midwifery care in the Sabzevar Maternity Hospital, Iran.

2- MATERIALS AND METHODS

2-1. Study Design and Population

This cross-sectional study was performed on 400 mothers admitted in the postpartum ward of the Shahid Mobini Brothers Hospital, Sabzevar, Iran.

2-2. Method

Mothers were evaluated at least two hours after delivery by simple convenience sampling from Jan to Dec 2015. The researcher completed checklists based on the inclusion criteria mentioned by the interview method for qualified individuals. Qualified mothers completed the questionnaires. The researcher was present at the ward to answer the possible questions. At the end, the researcher collected and controlled the questionnaires, and if incomplete, returned them to the mothers. Finally, completed questionnaires were collected, coded and analyzed by the researcher for statistical analysis.

2-3. Inclusion Criteria

Inclusion criteria for the study were: consent to participate in the study, married women literate in reading and writing skill, single pregnancy, with a history of prenatal care, uncomplicated vaginal delivery and term of gestational age, having a healthy neonate with normal birth weight.

2-4. Exclusion Criteria

Exclusion criteria included: physical and mental illness, use of antidepressants, sedative and anxiety by the mother, neonatal diseases and abnormalities, pregnancy and childbirth complications such as vaginal bleeding.

2-5. Measuring tools

The data collection tool was the Units Selection Form, and the satisfaction questionnaire on the quality of midwifery care in labor and delivery room. This form was a researcher made questionnaire by Ahmadi et al. (2009) (1). The questionnaire is divided into two sections, baseline characteristics, and 25 satisfaction questions. The questionnaire was scored on the Likert scale of 5 degrees from "completely dissatisfied" to "fully satisfied" (from 1 to 5). Accordingly, total score of the questionnaire is between 25 and 125. Questions related to the satisfaction section include the following six basic factors: 1. Midwifery behavior in the labor and delivery room (6 questions), 2. Midwifery care received in the labor room (3 questions), 3. How to control vital symptoms and fetal heart rate by midwives (2 questions), 4. How to perform the examination by Midwives (3 questions), 5. Obstetric care received in the labor room (8 questions), and 6. Postpartum care (3 questions). The validity of this questionnaire was confirmed by content validity and its reliability was confirmed by Cronbach's alpha coefficient ($\alpha = 0.92$) (1).

2-6. Ethical Considerations

The research was approved by the research council of the Student Research Committee of Sabzevar University of Medical Sciences and and permission was obtained. Informed consents were obtained.

2-7. Data Analyses

Data were analyzed by SPSS software version 20.0. To analyze the data, descriptive statistics and inferential statistics including Kruskal-Wallis test,
Spearman correlation, Mann-Whitney, and generalized linear model were used.

3- RESULTS

400 mothers admitted in the postpartum ward of the Shahid Mobini Brothers Hospital, Sabzevar, Iran, participated in the study. The mean age of the mothers was 25.88 (±5.71) years old. The mean number of previous deliveries was 1.72 (±1.84) with a maximum number of deliveries of 5. 380 (95.2%) of the mothers were housewives, and 182 (45.6%) had an under-graduate degree. **Table.1** shows descriptive statistics of different structures of satisfaction as well as total satisfaction. The percentage of satisfaction from each structure is the average of satisfaction percentage obtained from the questions of that structure. In satisfaction category, 327 (81.7%) persons had a high level of satisfaction with care (**Figure.1**).

**Table-1**: Descriptive statistics of the mothers’ satisfaction score with the quality of midwifery care

<table>
<thead>
<tr>
<th>Dimensions of satisfaction</th>
<th>Satisfaction score</th>
<th>Percentage of satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean ± Standard deviation</td>
<td>Minimum</td>
</tr>
<tr>
<td>The first factor</td>
<td>25.30 ± 0.22</td>
<td>5</td>
</tr>
<tr>
<td>The second factor</td>
<td>12.18 ± 0.13</td>
<td>5</td>
</tr>
<tr>
<td>The third factor</td>
<td>8.92 ± 0.07</td>
<td>5</td>
</tr>
<tr>
<td>The fourth factor</td>
<td>11.92 ± 0.13</td>
<td>5</td>
</tr>
<tr>
<td>The fifth factor</td>
<td>33.77 ± 0.25</td>
<td>5</td>
</tr>
<tr>
<td>The sixth factor</td>
<td>12.63 ± 0.11</td>
<td>5</td>
</tr>
<tr>
<td>Total satisfaction</td>
<td>104.72 ± 0.76</td>
<td>25</td>
</tr>
</tbody>
</table>

**Fig.1**: Mothers’ satisfaction category.
In the statistical inference, we first consider the factors affecting satisfaction in the form of single-variable. The results of Kruskal Wallis test indicated that education effects on satisfaction with the examination (P=0.001), satisfaction with the labor room (P=0.004), satisfaction with the delivery room (P=0.007), as well as total satisfaction (P=0.013). Job occupation has no effect on satisfaction; in this regard, housewives and employees have the same satisfaction with all dimensions (P > 0.05). However, based on Spearman correlations, maternal age and the number of previous deliveries had a direct relationship with satisfaction; but maternal age had a significant relationship with the examinations, labor room care, delivery room and overall satisfaction; and the number of previous deliveries had a significant relationship with all structures except satisfaction after childbirth (Table.2). In a more comprehensive analysis, we used the generalized linear model to examine the factors affecting satisfaction constructs (Table.3). As an example, Table.3 shows that the increase in one level of maternal education has led to a decrease of 0.571 score in satisfaction with the midwives' behavior in labor and delivery room, or in the same structure, by addition of a previous delivery, satisfaction score increases 0.779.

**Table-2:** Correlation between baseline characteristics and Mothers' Satisfaction with quality of midwifery care

<table>
<thead>
<tr>
<th>Dimensions of satisfaction</th>
<th>The first factor</th>
<th>The second factor</th>
<th>The third factor</th>
<th>The fourth factor</th>
<th>The fifth factor</th>
<th>The sixth factor</th>
<th>Total satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of previous deliveries</td>
<td>P-value (r)</td>
<td>0.204 (&lt; 0.001)</td>
<td>0.233 (&lt; 0.001)</td>
<td>0.106 (0.034)</td>
<td>0.243 (&lt; 0.001)</td>
<td>0.198 (&lt; 0.001)</td>
<td>0.044 (0.383)</td>
</tr>
<tr>
<td>Age</td>
<td>P-value (r)</td>
<td>0.144 (0.004)</td>
<td>0.177 (&lt; 0.001)</td>
<td>0.05 (0.319)</td>
<td>0.182 (&lt; 0.001)</td>
<td>0.141 (0.005)</td>
<td>0.018 (0.724)</td>
</tr>
</tbody>
</table>

= Spearman correlation.

**Table-3:** The relationship between baseline characteristics and mothers' satisfaction with quality of midwifery care

<table>
<thead>
<tr>
<th>Dimensions of satisfaction</th>
<th>The first factor</th>
<th>The second factor</th>
<th>The third factor</th>
<th>The fourth factor</th>
<th>The fifth factor</th>
<th>The sixth factor</th>
<th>Total satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic variables</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-0.571 ± 0.24 (0.020)</td>
<td>-0.45 ± 0.13 (0.002)</td>
<td>-0.371 ± 0.15 (0.011)</td>
<td>-0.88 ± 0.28 (0.002)</td>
<td>-</td>
<td>-2.29 ± 0.84 (0.006)</td>
<td></td>
</tr>
<tr>
<td>Number of deliveries</td>
<td>0.779 ± 0.28 (0.005)</td>
<td>-</td>
<td>-</td>
<td>0.57 ± 0.16 (0.001)</td>
<td>0.73 ± 0.32 (0.025)</td>
<td>-</td>
<td>2.68 ± 0.94 (0.005)</td>
</tr>
<tr>
<td>Age</td>
<td>-</td>
<td>0.068 ± 0.022 (0.002)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Occupation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.10 ± 0.52 (0.034)</td>
<td>-</td>
</tr>
</tbody>
</table>

SE: Standard error.

**4- DISCUSSION**

The aim of this study was to assess mothers' satisfaction with the quality of midwifery care in the Sabzevar Maternity Hospital, Iran. The results of our study showed that mothers' satisfaction with quality of obstetric care is high in the maternity hospital. So that, only 1% of mothers were dissatisfied, 17.3% had moderate satisfaction and 81.7% had a high level of satisfaction with care. In the study of Ahmadi et al., the overall satisfaction of mothers with midwifery
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care was 3.73 (from a scale of 1-5) that was moderate and 35% had a high satisfaction rate, 53% had average satisfaction with midwifery care, and 12% reported low satisfaction (1). Therefore, the satisfaction rate in the present study is higher than Ahmadi’s study. Since the sample size used in our study is 400 people, hence 4 times that of Ahmadi’s study; the results are more reliable. Ahmadi’s study was in 2009, but our study was conducted in 2014, that is the beginning of the implementation of the health system reform. Therefore, the reasons for higher satisfaction of mothers can be the application of new rules in care. Three approaches were defined for development of health system, including financial protection of the people, establishing equity in access to health services and improving service quality; one of its ultimate goals is to increase the accountability of the health system through the provision of several service packages, including improving the quality of hotel services in hospitals and the program for the promotion of normal delivery and monitoring good implementation of these programs (18).

In this regard, equipping of hospitals and nursing units for patients and personnel, and naturally, afterwards, more effort to satisfy patients by assessing the behavior of the staff and examining patient complaints is one of the factors that can be used to improve the satisfaction of mothers. However, at the time of our study, the maternity unit was not subject to hoteling changes, so the mothers' satisfaction could be more relevant to actual impact of Midwives' performance. Although the application of some regulatory rules may have been affected on the performance of personnel following the implementation of health system reform and hoteling in another ward of the hospital. Harvey et al. (2002) reported a high degree of satisfaction with midwifery care that is consistent with the present study (15). Mesgarzadeh et al. (2014) reported the percentage of satisfaction with midwifery care as follows: prenatal care, 77.17%, during delivery, 77.96%, and postpartum, 77.49% (16), although this result is lower than the current study, it is somewhat consistent with it. Naghizadeh et al. also reported the average of mothers' satisfaction percentage in all dimensions during labor, delivery and postpartum in educational hospitals, respectively: 49.13%, 65.9%, and 74.75% of mothers were completely satisfied and satisfied. These results are only nearly consistent with mothers' satisfaction with postpartum room in the present study (85.6%). Although mentioned rates of satisfaction were a little higher in the present study, satisfaction rate in labor and delivery room of Naghizadeh’s study was meaningfully less than our study (with a satisfaction rate of 83.13% and 88.51%, respectively) (14).

In this study, sample size at the educational hospital was 200, which is half of the sample size in the educational hospital of the present study. One of the six factors studied in terms of mother's satisfaction was "Midwives' behavior in the labor and delivery room", which according to our results, 87.18% of the mothers were satisfied with the behavior of midwives, which was somewhat higher than Ahmadi’s study (1). Midwives can help mothers more than any other person with more experience in communication skills, awareness and knowledge about the needs of mothers. Midwives increase mothers' self-esteem, and strengthen their emotions and emotional satisfaction, with behaviors such as mothers' guidance and encouragement, a clear and blended response with respect, friendly behavior, and effective presence, good and complete care (1). Another factor was "Mothers' satisfaction with midwifery care received in labor room". The results showed that 83.13% of the mothers were
satisfied with the care received in labor room, which was still somewhat higher than Ahmadi's study, in which the satisfaction rate was 73.8%. Proper behavior and treatment, providing information to mothers, and creating a relaxed and comfortable environment in labor room by the midwife, will improve the satisfaction of mothers with the care provided. Other factors were "How to control the vital signs of the mother and the fetal heart rate by the midwives". The satisfaction rate of mothers in this study is 94.15%, which is consistent with Ahmadi's study, which showed a satisfaction rate of 90.8%. In both studies, this factor has the most satisfactory level of satisfaction. Fortunately, this level of satisfaction indicates high level of attention and responsibility of midwives to protect maternal and fetal health. The fourth factor was "How to do examinations by midwives", which according to our study (79.13%), and Ahmadi's study (54.8%), the lowest rate of satisfaction belongs to this factor.

One of the possible corrective causes that leads to less satisfaction with this factor in the current study is lack of adequate information on need for an examination, lack of attention to the mother's readiness for examination, not observing maternal coverage and privacy when performing examinations, the accumulation of individuals during examinations, especially in educational hospitals, shame and embarrassment or fear of mothers due to the examination that results in muscle contraction and pain. Occasionally, early admission of mothers, which causes fatigue and boredom in the mother, on the other hand increases the frequency of examinations. Clement (1994) writes that most women find vaginal examinations unpleasant and painful. Other studies also highlighted the causes of women's dissatisfaction with vaginal examinations, such as the lack of knowledge about the need for examinations, the history of fetal death and sexual abuse (1). The fifth factor was "Care received in delivery room", which indicated mothers' satisfaction 88.51%, which was higher than Ahmadi's study. The presence of the midwife in labor room, calming down the mother, how she treats, pays attention and supports the mother, providing explanations before doing the work, providing information on the progress of delivery, guidance on how to push and breathe during childbirth, and showing the baby to mother immediately after birth are some factors that can enhance the mother's spirits, increase her cooperation during delivery and improve her mother's satisfaction. The last studied factor was "Postpartum care", which resulted in 85.6% satisfaction of mothers, which is consistent with Ahmadi's study which had a satisfaction rate of 86.4%. Postpartum care included control of vital signs, adequate anesthetic injection prior to suturing, and a convenient position.

Observing these, especially precise control of vital signs, not only ensures the survival and health of mothers in the postpartum period, but also it will result in tranquility of mother and help the mother and baby to communicate emotionally, and accelerate and strengthen breastfeeding and ensure the baby's health. Although in single-variable mode the age and number of mothers' previous births are related to most satisfaction factors, in the regression model due to the presence of other effective variables, this relationship has decreased; so that age is only related to the second factor and the number of previous births with the first, fourth, fifth factor, and overall satisfaction of mothers. As age increased, maternal satisfaction increased. This contradicts with Ahmadi and Azimi (1), and Naghizadeh (14), which did not show any correlation between age and satisfaction; and also Masgarzadeh's study (16) that reported as age increased, satisfaction decreased. In our study, with
increasing the number of maternal delivery, satisfaction increased, which contradicted Ahmadi’s study (1) and was inconsistent with the study of Naghizadeh et al. (14). It seems that previous experience and knowledge of labor and delivery can lead to increase in mothers’ satisfaction. However, as the level of education increased, satisfaction from most factors decreased. This finding coincides with the study of Mesgarzade et al. (16), and does not conform to Ahmadi’s study (1) in which there was no relation between the two variables. Typically, the level of expectations of people with lower education levels is reduced because of less awareness of how their care should be and what their rights are in comparison with those with higher education. There was no relationship between job and satisfaction in this study which was in agreement with Ahmadi’s study (1), and contradicted the study of Mesgarzade et al. (16).

5. CONCLUSION

The results of this study indicate that mothers have high satisfaction with the quality of midwifery care in the maternity ward. Maternity unit care is beyond the care that is strictly related to the delivery process and includes pre and postpartum care. Since these care services are mainly performed by midwives, midwifery tutors and students, this level of satisfaction indicates the high quality of midwifery performance in different parts. As in Germany midwives have the prerogative of providing birth support, meaning that a midwife can assist a woman to birth without a doctor present, but a doctor must call for a midwife when encountering a woman in labour. Only in case of complications (and most hospital births) is the midwife required to call a doctor (obstetrician/pediatrician), and to follow her/his instructions (19). Therefore, it is recommended to apply midwives in other wards requiring specialized midwifery performance including postpartum and normal neonatal wards.

6. CONFLICT OF INTEREST: None.

7. ACKNOWLEDGEMENT

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