Satisfaction and Associated Factors among Mothers Delivered at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia: A Cross Sectional Study

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Abstract

Introduction: Maternal satisfaction is a means of evaluating quality of maternal health care given in health facilities. The objective was to assess the level of maternal Satisfaction and associated factors at Asrade Zewude Memorial Primary Hospital.

Method: Cross-sectional study was conducted on 420 clients by systematic sampling method from February 8, 2017 to September 25, 2017. Structured questionnaire that was prepared by Ethiopian Federal Ministry of Health was used. Pre-testing was done prior to the actual data collection process on a sample of 20 respondents and modified accordingly. The study was approved by Asrade Zewude Memorial Primary Hospital Senior Management Committee. The collected data were checked for completeness and consistency before being coded, entered and analyzed using SPSS version 16. Logistic regression was used to assess the presence of association between dependent and independent variables using SPSS at 95% CI and 5% margin of error.

Results: The study revealed that level of satisfaction among delivering mothers was 88%. Educational level (AOR=2.15, 95% CI=1.02-3.71), access to ambulance service (AOR=3.15, 95% CI=1.02-3.78), respect full delivery service (AOR=6.85, 95% CI=4.35-6.95), welcoming hospital environment (AOR=3.09, 95% CI=2.30-2.69), proper labor pain management (AOR=4.51, 95% CI=3.12-5.01) and listening to their questions (AOR=3.95, 95% CI=2.35-4.36) were independent predictors for maternal satisfaction.

Conclusion and recommendation: Even though most of the participants were satisfied, they still had unmet needs and expectations in the delivery service. The identified main determinants were level of education, access to ambulance service, welcoming hospital environment, proper pain management and listening to their questions. Therefore, there is a need to improve the care given to maternity and appropriate strategy should be designed to address the unmet needs of mothers delivered in the hospital.

Keywords: Maternal satisfaction; Associated factors; delivery; West Gojjam zone; Ethiopia

Introduction

Globally, about 800 women die from pregnancy or labor related complications around the world every day. Two hundred eighty-seven thousand women died during pregnancy and childbirth in 2010; more than half of these deaths occur in Africa. The ratio of maternal mortality in the Sub-Saharan Africa region is one of the highest, reaching 686 per 100,000 live births [1]. In Ethiopia, according to Ethiopian demographic and health survey (EDHS) 2016, the estimated maternal mortality ratio was found to be 412 per 100,000 live births [2].

The existence of maternal health service alone does not guarantee their use by women [3]. The World Health Organization promotes skilled attendance at every birth to reduce maternal mortality and recommends that women’s satisfaction be assessed to improve the quality and effectiveness of health care [4]. Client satisfaction is a subjective and dynamic perception of the extent to which the expected health care is received [5]. It is not important whether the patient is right or wrong, but what is important is how the patient feels [6].

Studies done in Dhaka, Bangladesh and South Australia showed that the level of maternal satisfaction with delivery care was 92.3% and 86.1%, respectively [7,8]. However, the level of satisfaction among laboring mothers in African countries is not enough; only 51.9% and 56% of mothers were satisfied with delivery services in South Africa and Kenya, respectively [9,10]. Ethiopian studies done in Amhara Referral Hospitals and Assela Hospital revealed 61.9% and 80.7% satisfaction of mothers on delivery services, respectively [11,12].

Satisfaction with delivery service is a multidimensional construct embracing satisfaction with self (personal control), and with the physical environment of delivery ward and quality of care [13]. The mother’s satisfaction during the birthing process is the most frequently reported indicators in the evaluation of the quality of maternity services [14]. Dimensions of care that may influence client satisfaction include: Health care Provider client interaction, Service provision, physical environment, access, bureaucracy and attention to psychosocial problems.

Certain demographic characteristics have been predominantly studied in relation to satisfaction during delivery services. For example, a study done in Sweden (n=2762) reported that younger women had more negative expectations related to childbirth and they experienced more pain and lack of control during labour compared with older women, while another study done in Brazil (n=15,688) showed no age related difference in women’s satisfaction with childbirth services.

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Studies from developing countries show that satisfaction with services had a negative association with the amount of time women spent at the health facility before childbirth [17]. The educational level of women in different studies and settings has demonstrated positive, negative or nil association with satisfaction during delivery services [18,19]. Other identified factors that influenced satisfaction with childbirth services are: having clean and orderly labour rooms and women-friendly delivery processes, such as having been prepared in advance for what to expect during the labour/postpartum/breast feeding period; involvement in the decision-making process; having a birth plan and being able to follow it; having pain relief during labour; having a birth companion and respectful care providers; receiving help from care providers (performing self and neonate's care); and experiencing less symptoms in the postpartum period [20-25]. A woman's obstetric history, mode of delivery, and her feelings towards recent childbirth can also affect maternal satisfaction. For example: being multiparous, preferring a spontaneous vaginal delivery and being able to have a spontaneous vaginal birth enhances the women's satisfaction with giving birth [26,27].

Qualitative studies on Indian women's experiences and opinions on giving birth at a health facility reveal that they are not fully satisfied during delivery service, primarily due to the long waiting time before they meet a healthcare provider, having few opportunities to communicate with providers, not being involved in decision-making, and having stern care providers [28-32]; however, they settle for childbirth services perceived as 'essential' for safe childbirth rather than 'desirable' for a pleasant experience [33-36]. While the community's access to institutional delivery has improved, the assumption that accessibility is synonymous with quality of care, especially among policymakers, gives concern. This study aimed to assess women's satisfaction with an institutional delivery service using a standardized scale with an intent to potentially use the findings in advocacy for service improvement.

Studying the quality of institutional delivery service from client perspective will provide systematic information for service providers, decision makers, local planners and other stakeholders help understand to what extent the service is functioning according to clients' perception and what changes might be required to meet clients' need as well as to increase utilization of the service by the target population. This study serves both knowledge generation and delivery service quality improvement purpose. The findings of this study can be used by local planners and decision makers to improve the quality of institutional delivery service.

Materials and Methods

Study design and period

Cross-sectional study was conducted at Asrade Zewude Memorial Primary hospital, from February 8, 2017 to September 25, 2017.

Study area

Asrade Zewude Memorial primary Hospital is found in Bure city administration 410 km away from Addis Ababa and 155 km away from Bahir Dar the capital city of Amhara regional state. The hospital primarily serves for four worked as: Bure, Bure city, Shindi and Sekela.

Population

Source population: All mothers delivered at Asrade Zewude Memorial Primary Hospital from February 8, 2017 to September 25, 2017.

Study population: Those systematically selected mothers who delivered at Asrade Zewude Memorial Primary Hospital from February 8, 2017 to September 25, 2017.

Inclusion and exclusion criteria

Inclusion criteria: Mothers who delivered at Asrade Zewude Memorial Primary Hospital from February 8, 2017 to September 25, 2017 before discharge.

Exclusion criteria: Mothers who delivered at Asrade Zewude Memorial Primary Hospital and came for postnatal care were excluded to avoid recall bias.

Variables

Independent variables: Socio Demographic Characteristics of the Respondents; Interaction with Healthcare Provider; Physical facilities; Service provision.

Sample size determination and sampling procedure

Targeted groups of clients in this study were delivery attendants. The sample size was determined by using a single population proportion formula, which took the proportion of overall satisfaction at 65.2%, with a margin of error of 0.05 at the 95% confidence interval (CI). Adding 10% non-response rate, the final sample size was calculated to be 420 patients [6]. From the hospital previous report about delivery, average number of clients who delivered in the hospital was 110 per month. Therefore the number of participants who visited the hospital was estimated for the study period; then sampling fraction for selecting the study participants was determined by dividing with the total estimated number of patients during the data collection period to the total sample size which was calculated to be two. The first study participant was selected by lottery method among the list from one to five; the next study participant was identified systematically in every two intervals until the required sample size was achieved.

Data collection procedure and quality assurance

A validated structured questionnaire prepared by the Ethiopian Ministry of Health to assess maternal satisfaction was used according to the objectives of the study and the local situation of the study area in Amharic language. Then the questionnaire was translated to English to assure consistency of the tool. Pre-testing was conducted on 20 respondents at Bure Health center delivery attendants.

Data management and data analysis

The collected data were checked for completeness and consistency before being coded, entered and analyzed using SPSS version 16. Summary statistics of socio demographic variables were presented using frequency tables. Bi-variable analysis was done and variables with p-value less than 0.2 were included in the multiple variable analysis of logistic regression. The odds ratio and 95% confidence intervals were also computed at p-value of 0.05.

Ethical consideration

The research was approved by Asrade Zewude Memorial Primary Hospital Senior Management Committee. Permission to conduct the study was also obtained from Asrade Zewude Memorial hospital maternity case team. During data collection, the purpose of the study was clearly explained to the participants and informed oral consent was obtained. To ensure confidentiality and privacy no identity was linked to the questionnaire.
Results

Sociodemographic characteristics of the respondents

A total of 420 clients after delivery were involved in this study. As shown in Table 1, 60% of the respondents were between 15-24 years of age, 90% were married, 70% of the delivery was spontaneous, 70% of clients came to hospital by ambulance, 70% of delivering mothers had previous institutional delivery, 60% of delivering mothers referred from health institution.

Health care provider-client interaction

The majority of participants agree and strongly agree to provider client interaction questionnaires. For the sentence "the hospital is welcoming, starting from the gate", 90% strongly agree and 10% agree but for the sentence "the care providers listen and answer all my questions during delivery", 50% strongly agreed and 20% agreed (Table 2).

Maternal satisfaction with physical facilities

For the sentence "getting the maternity unit is easy starting from the gate", 90% strongly agreed and 10% agreed. Only 50% strongly agreed and 20% agreed that there was a functional Maternity ward toilet, hand washing and shower during their labour and delivery time (Table 3).

Maternal satisfaction with service provision

For the sentence "I was seen by the care provider immediately I have got the maternity ward", 90% strongly agreed and 10% agreed. The majority of participants (60% strongly agreed and 40% agreed) responds positively to the sentence “I have got a bed immediately” (Table 4).

Overall satisfaction

Overall satisfaction was measured on 10 scales, 1 worst and 10 the best. Those who scored 6 and above was considered 'yes' for satisfaction. Their intention to recommend others to the hospital was measured using Yes (87%) and No (13%) options (Table 5).

The regression output of factors for maternal satisfaction showed that mothers who think of the welcoming hospital environment was 3.09 (2.30-2.69) times more likely to satisfy than those who perceive the hospital environment was not welcoming (Table 6).

Discussion

In this study, the overall satisfaction of mothers on delivery service

<table>
<thead>
<tr>
<th>Variables</th>
<th>Level of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The hospital is welcoming, starting from the gate</td>
<td>5=SAG 4=AG 3=NAG 2=DAG 1=SDAG</td>
</tr>
<tr>
<td>The care providers listen and answer all my questions during delivery</td>
<td>90% 10% 0 0 0</td>
</tr>
<tr>
<td>All the care given to me was with my consent during labour</td>
<td>50% 20% 0 10% 20%</td>
</tr>
<tr>
<td>The care I received was respect full</td>
<td>90% 10% 0 0 0</td>
</tr>
<tr>
<td>I was counseled about breast feeding, vaccination and others after delivery</td>
<td>60% 20% 10% 10% 0</td>
</tr>
<tr>
<td>The health care providers introduced themselves to me</td>
<td>70% 0 20% 10% 0</td>
</tr>
<tr>
<td>During labor and delivery my pain was properly managed</td>
<td>80% 14% 0% 0 6%</td>
</tr>
</tbody>
</table>

SAG: Strongly Agree; AG: Agree; NAG: Not Agree; DAG: Disagree; SDAG: Strongly Disagree

Table 2: Maternal satisfaction with interaction of health care provider at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia, from February 8, 2017 to September 25, 2017 (N=420).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Level of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting the maternity unit is easy starting from the gate</td>
<td>5=SAG 4=AG 3=NAG 2=DAG 1=SDAG</td>
</tr>
<tr>
<td>Maternity ward toilets, hand washing and shower were functional during my labour and delivery</td>
<td>90% 10% 0 0 0</td>
</tr>
<tr>
<td>Cleanness of the ward was good during my labour and delivery</td>
<td>50% 20% 0 10% 20%</td>
</tr>
<tr>
<td>My privacy was secured during my labour and delivery</td>
<td>90% 10% 0 0 0</td>
</tr>
<tr>
<td>I used my preferred position during my labour and delivery</td>
<td>60% 20% 10% 10% 0</td>
</tr>
<tr>
<td>I was allowed to have my families on my side during my labour and delivery</td>
<td>70% 0 20% 10% 0</td>
</tr>
</tbody>
</table>

Table 3: Maternal satisfaction with physical facilities at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia, from February 8, 2017 to September 25, 2017 (N=420).
Variables | Level of agreement | Yes | No |
--- | --- | --- | ---
I was directed to the maternity ward immediately without recording and other procedures | 5=SAG | 90% | 0 |
I was seen by the care provider immediately I have got the maternity ward | 4=AG | 90% | 10% |
I have got a bed immediately | 3=NAG | 60% | 40% |
All those diagnostic tests prescribed for me were available in the hospital | 2=DAG | 90% | 10% |
All those drugs and supplies needed were available in the hospital | 1=SDAG | 90% | 10% |

Table 4: Maternal satisfaction with service provision at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia, from February 8, 2017 to September 25, 2017 (N=420).

| Variables | Maternal satisfaction | COR (95% CI) | AOR (95% CI) |
--- | --- | --- | ---
| | Satisfied | Not satisfied | | |
Level of education | | | |
Never educated | 148 (35%) | 20 (5%) | 3.09 (1.34-7.14) | 2.15 (1.02-3.71)
First level | 148 (35%) | 20 (5%) | 2.01 (1.00-3.02) | 2.01 (0.99-3.10)
High school | 37 (9%) | 5 (1%) | 1.99 (1.00-2.03) | 1.56 (0.85-2.96)
Diploma and above | 37 (9%) | 5 (1%) | 1 | 1
Means of delivery | | | |
Natural | 259 (62%) | 36 (9%) | 2.99 (2.50-3.66) | 3.15 (1.02-3.78)
Caesarean section | 73 (17%) | 10 (2%) | 1.29 (0.53-3.10) | 1.29 (0.53-3.10)
Instrumental | 37 (9%) | 5 (1%) | 1 | 1
Means of transportation | | | |
Ambulance | 259 (62%) | 36 (9%) | 1.40 (1.01-1.95) | 2.01 (0.99-3.19)
Public transport | 74 (18%) | 10 (2%) | 0.21 (0.05-0.90) | 0.21 (0.05-0.90)
Private or Contract | 4 (1%) | 0 | 1 | 1
Previous institutional delivery | | | |
Yes | 111 (26%) | 15 (4%) | 2.05 (1.02-3.10) | 2.05 (1.02-3.10)
No | 259 (62%) | 35 (8%) | 1 | 1
The hospital is welcoming starting from the gate | | | |
Yes | 328 (78%) | 45 (11%) | 3.31 (2.32-2.66) | 3.09 (2.30-2.69)**
No | 331 (80%) | 45 (11%) | 1.99 (0.99-1.05) | 1.99 (0.99-1.05)
The care I received was respect full | | | |
Yes | 328 (78%) | 45 (11%) | 6.02 (4.01-6.65) | 6.85 (4.35-6.95)**
No | 328 (78%) | 45 (11%) | 1 | 1
I was allowed to have my families on my side during my labour and delivery | | | |
Yes | 328 (78%) | 45 (11%) | 0.95 (0.52-0.99) | 0.95 (0.52-0.99)
No | 328 (78%) | 45 (11%) | 1 | 1
I used my preferred position during my labour and delivery | | | |
Yes | 328 (78%) | 45 (11%) | 0.58 (0.15-0.60) | 0.58 (0.15-0.60)
No | 328 (78%) | 45 (11%) | 1 | 1
Cleanliness of the ward was good during my labour and delivery | | | |
Yes | 328 (78%) | 46 (11%) | 4.01 (3.02-4.99) | 4.01 (3.02-4.99)
No | 328 (78%) | 46 (11%) | 1 | 1
Maternity ward toilet, hand washing and shower was functional during my labour and delivery | | | |
Yes | 328 (78%) | 45 (11%) | 3.21 (2.20-3.52) | 3.21 (2.20-3.52)
No | 163 (39%) | 22 (5%) | 1 | 1
During labor and delivery my pain was properly managed | | | |
Yes | 328 (78%) | 45 (11%) | 5.51 (3.56-5.91) | 4.51 (3.12-5.01)**
No | 328 (78%) | 45 (11%) | 1 | 1
I was advised about breast feeding, vaccination and others after delivery | | | |
Yes | 287 (68%) | 39 (9%) | 0.30 (0.12-0.25) | 0.30 (0.12-0.25)
No | 83 (20%) | 11 (3%) | 1 | 1
The health care providers introduced themselves to me | | | |
Yes | 127 (30%) | 17 (4%) | 0.31 (0.25-0.39) | 0.31 (0.25-0.39)
No | 242 (58%) | 34 (8%) | 1 | 1
The care providers listen and answer all my questions during delivery | | | |
Yes | 328 (78%) | 45 (11%) | 3.61 (2.95-4.62) | 3.95 (3.35-4.36)
No | 328 (78%) | 45 (11%) | 1 | 1

**p-value less than 0.001

Table 6: Maternal satisfaction and associated factors at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia, from February 8, 2017 to September 25, 2017 (N=420).

was found to be 88%, which was comparable to the study conducted in Wolayita Zone (82.9%), Debremarks town (81.7%) and Assela Hospital (80.7%) [9,11,17]. However, it was higher than the study, which was conducted in Jimma (77%) [19] and Amhara Referral Hospitals (61.9%) in Ethiopia and South Africa (51.9%) and Kenya (56%) in Africa [9,10,12]. The difference with the above finding may be because of a real difference in the quality of services provided, expectation of mothers or the type of health facilities.
Maternal educational status was significantly and inversely associated with their level of satisfaction with delivery services. Those respondents who were never educated were 2.15 more likely to satisfy with delivery service than whose educational level is diploma and above. This finding supports the study conducted in Assela Hospital and other foreign literatures. The literatures showed that clients had various expectations about hospital delivery that influenced their perception of care [11,18].

This study revealed that those who came to the hospital by ambulance were 3.15 times more likely to satisfy than those who came on foot. This finding was related to accessibility as explained by other similar studies [12,24].

Maternal level of satisfaction was also related to creating welcoming environment to laboring mothers. Those clients who consider the hospital as welcoming environment were 3.09 times more likely to satisfy with maternal service.

There was a strong association between maternal levels of satisfaction and respectful delivery care providers. Those participants who thought that care providers were respectful were 6.85 times more likely to satisfy with the delivery service. Perception of respondents of labor pain management was associated with level of maternal satisfaction. Those who answered yes were 4.51 times more likely to satisfy than who answered no to proper labor pain management, according to their perception. Attention to laboring mother's concern was also related to the maternal level of satisfaction. Those who thought their questions and concerns were answered during labor were 3.61 times more likely to satisfy than who thought not.

Conclusion

The aim of this study was to assess levels of maternal satisfaction and associated factors with delivery service at the Asrade Zewude Memorial primary hospital. The overall maternal satisfaction with the delivery service was found to be 88%. Even though the result was slightly higher than the previous studies conducted in Ethiopia, there are still unmet needs and expectations of mothers during labor and delivery that the hospital should focus as delivery service quality improvement area. The identified associated factors were access to ambulance service, welcoming hospital environment, proper labor pain management, respectful care and listening to their questions.

Recommendations

Recommendation to Asrade Zewude Memorial Primary Hospital

The hospital shall better consider physical barriers to create a welcoming hospital environment for maternal service.

The hospital should facilitate ambulance access for delivering mothers.

Recommendation to health care providers

- The care providers should manage labour pain properly.
- When providing service, it should be with compassionate and respectful.
- The care provider should meet the social and psychological concerns of the delivering mothers.

Recommendations to future researchers

Future researchers need large scale and prospective study to generalize the level and factors for maternal satisfaction nationally as well as globally.

Limitations

The feelings associated with childbirth itself, due to limited opportunities of exploration in quantitative studies, pose some confounders like the ‘halo effect’ a positive attitude towards successfully give birth makes it difficult to separate childbirth satisfaction from satisfaction with childbirth services. Participants’ tendencies to rate services more positive in general is another known confounder. Participants’ subjectivity being pleased with services that are not necessarily evidence based poses another confounder for quantitative studies measuring satisfaction. Large scale study is needed to generalize the result to nationally as well as globally. Large scale study is needed to generalize nationally as well as globally.

Acknowledgement

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