Maternal Satisfaction and Associated Factors on Delivery Care Service in Hawassa City Public Hospitals, South Ethiopia

Marishet Agumasie*, Zemenu Yohannes1 and Teferi Abegaz2
1School of Nursing and Midwifery, College of Medicine and Health Sciences, Hawassa University, Hawassa, Ethiopia
2School of Public Health and Environmental Health, College of Medicine and Health Sciences, Hawassa University, Hawassa, Ethiopia

Abstract

Introduction: Childbirth is one-day event but the experience lasts lifelong and is shared with others. Client dissatisfaction at public health hospitals causes parturient women to do health care shopping to private hospitals and decrease utilization of service at public health hospitals. The aim of this study was to assess client satisfaction and associated factors at public health hospitals in Hawassa city.

Method: A hospital based cross sectional study was conducted from December to January 2015. A systematic sampling technique was applied, and 398 mothers who gave live births were included in the study subjects. Data were entered into EPI Info version 7.1 statistical software and exported to SPSS version 20 for analysis. Bivariate and multivariate analysis was applied to check the association of explanatory variables with outcome variable.

Result: In public health hospitals, clients’ satisfaction at three dimensions was 87.7%. Non-formal education (AOR=6.8, 95 % CI: 1.2-38.7), had primary education (AOR=4.25, 95 % CI: 1.4-13.2) and getting prompt attention by caregivers within five minutes (AOR=5, 95 % CI: 2.08-12.03). Being a student (AOR=0.16, 95 % CI: 0.05-0.59) and instrumental delivery (AOR=0.19, 95 % CI: 0.06-0.69).

Conclusion: This study showed that client satisfaction is better than other public hospitals on delivery service. There is needed to intervene on predictors of maternal dissatisfaction like being a student, instrumental delivery and waiting time to get obstetric care providers and points to improve and strengthen for better maternal satisfaction.

Keywords: Maternal satisfaction; Delivery care service; Ethiopia

Abbreviations

AOR: Adjusted Odds Ratio, C/S: Caesarean Section, E.C: Ethiopian Calendar, ETB: Ethiopian Birr, GC: Gregorian Calendar, SNNPRS: Southern Nation, Nationalities People Regional State

Introduction

According to Ethiopian demographic and health surveys (EDHS) 2016, institutional delivery was 26%, maternal mortality ratio 412/100,000 live births, and under five mortality rate 67/1000 live births, which were among the highest in Sub-Saharan African Countries [1].

Patient satisfaction is the extent in which the health care needs, and expectations, goals, and or preferences are met by the health care providers and or service of the patients are meeting [2,3]. Patient satisfaction has benefit for both patients and health care providers [2]. Quality of health care service has a potential to strengthen self-confidence and trust to each other. Low quality of health care service, may answer low utilization of health care service [4,5].

Even though, Childbirth is a one-day event, experience lasts lifelong and is shared with others [6]. Women's memory of childbirth experiences stay with them for a lifetime and are often shared with other women, contributing to a climate of confidence or doubt around childbirth [7]. Negative experience during childbirth increase risks of postpartum depression, and may negatively affect mothers’ attitude on the future pregnancy and choice of delivery [8].

Some researcher’s measure satisfaction by quality of health care; meanwhile others measure health system in general [9]. Dimensions of satisfaction are not important whether the patient is right or wrong, but what is important is how the patient felt [10].

Patient satisfaction is a reflection of patients’ judgment on different domain of health care, including art of care (caring attitude), technical quality of care, accessibility and convenience, finance (ability to pay for service), physical environment, an availability, continuity of care, efficacy, and outcome of care [11].

High quality maternal care should continue from the pre pregnancy to the postpartum period, and in which clients and health care providers are partners in the care provision [12].

Dissatisfaction with the health system affects health-seeking behaviour and continues to make accessing health services impractical or impossible [13]. Dissatisfaction of services at public facilities lead to underutilization of service and this trend tend to continue, while at the same time patients expend unnecessary costs due to self-referral to expensive centres [14].

Despite having many studies done elsewhere, there is paucity of data concerning mother’s satisfaction with childbirth services in referral hospitals in Ethiopia. This study aimed to assess client satisfaction and associated factors at public health hospitals in Hawassa city.

Methods

Study design and setting

A hospital - based cross sectional study was done from December to

*Corresponding author: Marishet Agumasie, School of Nursing and Midwifery, College of Medicine and Health Sciences, Hawassa University, Hawassa, Ethiopia, Tel. +251913767516; E-mail: marishet.tamene@yahoo.com

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January 2015 by including mothers who gave live births at public health hospitals in Hawassa city, South Ethiopia.

Hawassa is the main city of Southern Nation, Nationality and people’s regional state (SNNPRS), located 275 km from Addis Ababa. The city has two public hospitals namely: Hawassa referral teaching hospital and Adare general hospital. Hawassa referral hospital serves 18 million people in the region and surrounding Oromia region. In both hospitals, mothers who have ANC follow up and self-referral came to get delivery care service.

Study Population and Sampling Procedure

Women who gave live births at public hospitals in Hawassa city were included in the study. This study excluded women who could not hear or speak, had severe psychiatric problems, and those referred to other hospitals for dialysis during data collection period. Sample size was calculated using single population proportion formula taking p value from another similar study conducted at public hospital in Amhara region (61.9%) [15]. Level of significance 5% (α=0.05), margin of error 5% (d=0.05) and non-responsive rate of 10%, the total sample is 398.

Sample was proportionally allocated based on the number of births in the past six months. Based on this, 219 study subjects from Adare hospital and 179 study subjects from Hawassa referral Hospital were taken. Using the expected 380 deliveries at Referral and 464 deliveries at Adare hospital in two months K value was two. Systematic sampling technique was used to interview study participants at postnatal ward.

Data collection

The data were collected using structured and pretested interview questionnaires and parturient were interviewed at postnatal ward. The questionnaires were prepared for reviewing different literatures and standard demographic and health survey (DHS) questionnaires. First, the questionnaires were written in English and then translated to local language Amharic and back to English to check consistency. The questionnaires were consists of fifty-three items. From these, socio demographic items (8 questionnaires), obstetrical items were (13 questionnaires) and three dimension items were included environmental dimensions (12 questionnaires), technical and professional aspects (6 questionnaires), communication aspects, and interpersonal aspects (14 questionnaires). Five point likert scale (1-very dissatisfied, 2-dissatisfied, 3-neutral, 4-satisfied, and 5-very satisfied) were used to compute maternal satisfaction. The five point liker scale was then collapsed into two outcome variable for analysis purpose. These are dissatisfied and satisfied. Very dissatisfied, dissatisfied, neutral responses were considered as dissatisfied whereas satisfied, and very satisfied were considered as satisfied. Neutral consider as dissatisfied because the women were interviewed at the hospital, they feared and reluctant when they are dissatisfied. The overall satisfied and dissatisfied by taking 75% as cut point based on previous similar studies [16-18]. The score >75% were satisfied on delivery service and the score <75% was classified as dissatisfied on delivery service. The questionnaires were pretested 5% (20 women who gave live births) at Bushule hospital having similar socio cultural characteristics with study subject. The tool checked reliability during pertest and Alpha coefficient was 0.93. The data were collected four BSc nurses and the entirely supervised one MSc nurse. Data were collected while parturient are in postnatal ward of respective hospital, and ready to exit after delivery service. To minimize bias, interview was conducted in convenient area, and without any involvement of health care providers.

Data management

Data were entered into EPI info version 7.1 and exported to SPSS version 20 for analysis. Bivariate and multivariate analysis applied to check the association of explanatory variables with outcome variable. To increase the power of study all variables with p value less than 0.25 in bivariate analysis were candidate for multivariate analysis. P value is <0.05 is statically significant. To see the strength of association of three dimension of satisfaction with the outcome variable correlation of Pearson was done. Data presented by text and tables.

Results

Socio demographic characteristics

Three hundred ninety respondents participated in the study, making the response rate of 97.9%. Of this 213 (54.6%) were at Adare general hospital and 177 (45.4%) were at Hawassa university referral and teaching hospital. The mean age was 26.5 SD ± 4.96 with the range 15 to 41 years old. Regarding educational status, (18.2%) had secondary level, 33.8% had primary level of education, and 31% had above secondary level (Table 1).

Obstetric characteristics of participants

More than half of the participants had given births previously.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence</td>
<td>rural</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>268</td>
</tr>
<tr>
<td></td>
<td>Less 20</td>
<td>21</td>
</tr>
<tr>
<td></td>
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<td>252</td>
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<td></td>
<td>35-49</td>
<td>13</td>
</tr>
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<td>Marital status</td>
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<tr>
<td></td>
<td>single</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>374</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Tigray</td>
<td>8</td>
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<tr>
<td></td>
<td>Wolayita</td>
<td>38</td>
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<tr>
<td></td>
<td>Amhara</td>
<td>49</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>Oromo</td>
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</tr>
<tr>
<td></td>
<td>Sidama</td>
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</tr>
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<td></td>
<td>Protestants</td>
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<tr>
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<tr>
<td></td>
<td>orthodox</td>
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<tr>
<td>Educational status</td>
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<tr>
<td></td>
<td>Primary level</td>
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</tr>
<tr>
<td></td>
<td>Secondary level</td>
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</tr>
<tr>
<td></td>
<td>Above secondary level</td>
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</tr>
<tr>
<td>Occupation</td>
<td>Farmer</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Othersb</td>
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<tr>
<td></td>
<td>Student</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>merchant</td>
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<td></td>
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<td>72</td>
</tr>
<tr>
<td></td>
<td>House wife</td>
<td>185</td>
</tr>
<tr>
<td>income</td>
<td>1260 - 8190 ETB (&lt; 60USD )</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>1260 - 8190 ETB (60-390 USD )</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>&gt;8190 ETB (&gt; 390 USD)</td>
<td>14</td>
</tr>
</tbody>
</table>

1 USD is 21 ETB, others@=Adventist,bawella, Othersb=private employee, daily labor, house maid.

Table 1: Socio demographic characteristics of mothers who deliver at Hawassa city public hospitals from December to January 2016 (N=390).
91.3% pregnancy was wanted, 92.3% had ANC follow up, 91.8% birth alive neonate, and 88.7% mothers were in good condition after delivery. Normal vaginal delivery was commonest mode of delivery 56.5% followed by cesarean section (30.4%) and assisted vaginal delivery was 13%. Forty-nine point two (49.2%) were referred from other institutions, 31.8% were self-referred, 13.8% came with emergency and 5.1% came with appointment. Regarding to service provision about 93.3% feel that their privacy were maintained. Eighty-five percent of the participants got prompt attention immediately within five minutes. The mode was five minutes with 80% frequency. The range was from immediately within five min to 1 hr (Table 2).

### Client satisfaction on three dimensions

The Satisfaction with environmental aspects in hospitals received the lowest median scores followed by communication and interpersonal aspects. Whereas there is relatively better median scores for professional and technical aspects (Table 3). Eighty-seven point two percent (87.2%) of the mothers were satisfied with the service given during delivery. More than 95% of clients recommended to others to deliver at the public hospitals and come again next time for delivery service.

### Factors associated with clients’ satisfaction

Non formal education (AOR=6.8, 95% CI: 1.2-38.7), primary level of education (AOR=4.25, 95% CI: 1.4-13.2) and getting prompt attention by caregivers within five minutes (AOR=5, 95% CI: 2.08-12.03), being student (AOR=0.16, 95% CI: 0.05-0.59) and with instrumental delivery (AOR=0.19, 95% CI: 0.06-0.69) (Table 4).

### Correlations major dimensions of delivery care service satisfaction

To see the strength of association of the three dimensions of satisfaction with the outcome variable correlation was done. Among the three major dimensions of maternal satisfaction was highest Pearson correlation with environmental and communication aspects (0.959) and lower for technical aspects (0.905) with overall satisfaction. Highest Pearson correlation was between the environmental and communication aspects (0.959) (Table 5).
Discussion

In public health hospitals, clients' satisfaction at three dimensions were 87.7%. Non-formal education, primary level of education, and being student, instrumental delivery, and waiting time to get health professionals are significantly associated with maternal satisfaction. This finding is in line with the study conducted in Oromia region, Wolayita, and Debre Markos client satisfaction was above 80% [16-18]. However, this finding is higher than study conducted at three referral hospitals.
hospitals in Amhara region 61.9 [15]. This finding is higher than the study conducted different parts of the world [19-24]. This difference compared to other referral hospitals in the country could be due to during the study period study hospitals start to implement charge free delivery service.

The variable non-formal education of mothers is found to be 6.8 times associated with satisfaction on delivery service care \( AOR=6.8(1.2-38.7) \). This finding is in line with study conducted in Arbaminch town [25]. Primary level of education have mothers 4.25 times satisfaction about delivery service care \( AOR=4.25(1.4-13.2) \). This finding is inconsistent to other studies [21,24]. There might be more expectation, as parturient get more educated. This is consistent with the study conducted in Oromia region and Wolayita zone [16,17] and different parts of the globe [26-28].

Being a student is negatively associated with maternal satisfaction compared to being a housewife \( AOR=0.16(0.05-0.59) \). The students were 84% less satisfied than the house wife. This could be housewives are more ready for childbirths, but students might be less tolerant. Those who had delivery by instrument is negatively associated with maternal satisfaction \( AOR= 0.19(0.06-0.69) \). Instrumental delivery is 81% less satisfied than women who deliver by caesarean section. This could be those who deliver by instrument might have damage and suffering with instrument or even after instrument is tried, it may fail and undergo caesarean section that caused dissatisfaction. However, those who gave birth by caesarean section get relief by operation from their labour pain. This finding is similar to other studies \[18,29\]. However, this finding is inconsistent to study conducted at Serbian public hospital \[25,30\] this could be due to caesarean section in Ethiopia is done for emergency conditions to save the life of baby and mother hence this may affect their perception.

Getting attention within five minutes by health care providers after arrival at delivery ward is also associated with satisfaction \( AOR = 5 (2.08-12.03) \). This means those women who get prompt attention within five minutes are five times more satisfied than those women who wait more than five minutes. This is consistent with other similar studies in Oromia, Amhara region and Arbaminch town \[15,16,25\]. Therefore, it is advisable to have reception area which is clearly labelled so that immediate attention is given on arrival for better satisfaction.

From the three dimensions of maternal satisfaction, environmental dimensions received the lowest median scores and there is better satisfaction score in technical aspects and communication aspects of satisfaction. This tells us much of dissatisfaction comes from environmental aspect followed by communication aspect.

Satisfaction to environmental aspects such as overall cleanliness of facility, bed cleanliness, coach cleanliness, toilet cleanliness, accessibility of toilet, infrastructures range from 80 to 90%. This is higher than the study conducted in other parts of country \[15,16\]. This difference could be different expectation of clients. The areas of dissatisfaction regarding interpersonal interaction include explanation before the procedure (8.5%), assuring privacy (10.5%), information during discharge (8.2%), the way socials are treated (9.5%), allowing to be in different position (9.6%), allowing socials to be together (7.9%) .

There are relatively better median satisfaction scores in professional and technical aspects. This implies that clients are satisfied to what they expect from providers regarding the technical aspects. Areas of dissatisfaction in this dimension include pain management (6.7%), newborn care given (4.6%) are dissatisfied to technical aspects.

There is highest Pearson correlation with environmental and communication aspects (0.959) and lower for technical aspects (0.905) with satisfaction. Highest Pearson correlation was between the environmental and communication aspects than the technical aspect. This means imperfect positive correlation between maternal satisfaction with technical aspects and almost better perfect correlation between satisfaction with environmental and communication aspects. This implies that the environment where care is given and communication with mother affect satisfaction more than technical aspects. Therefore, more than technical aspects of care given for the mother, what affects mothers satisfaction more is interpersonal interaction and environmental dimensions. This is similar to study conducted in Serbia and other studies \[30,31\].

This finding showed that above 95% of mothers recommend this hospitals to use for their friends and families, and will come back again for delivery care next time. This suggests that the hospitals are providing an acceptable delivery service for mothers. The findings of this study had limitations. First, data are restricted to delivery experience to referral hospital thereby limiting generalization to the overall health facility experience of childbirth by women. Second, potential response biases often present in patient satisfaction studies related to social desirability. We tried to minimize this bias by interviewing mothers in a separate room by trained nurses who are not affiliated with the facilities studied.

### Conclusion

The study showed that compared to other referral hospitals level of satisfaction at Hawassa city public hospitals is higher on delivery care service. Mothers have better satisfaction to professional technical aspect of care; however, improvement is needed on environmental aspects and interpersonal aspect of care. Education, being a student, mode of delivery and waiting time are predictors of maternal satisfaction. The hospital manager and stakeholders introduce friendly maternity care in public hospitals and improve the environmental aspect of the hospitals.

### Ethical Considerations

Ethical clearance letter was first obtained from Institutional Review Board (IRB) of the College of medicine and Health Sciences, Hawassa University Rf.No:IRB029/08. Ethical clearance paper was then be presented for chief executive academic & research director of college of medicine and health sciences to get letter of cooperation to be given to the selected hospitals to undertake research activities. Then the permission was first obtained from Hawassa University Referral Hospital and Adare hospital medical director before data collection was started. Participation was based on willingness after information sheet was explained and consent was obtained. There was no harm with participation in this interview. All mothers who were voluntary and fulfill inclusion criteria participate in the study. Participants were told as they have full right to stop interview any time if they do not want to participate. Confidentiality was assured by making the questionnaire anonymous.

### Consent for Publication

This manuscript is not containing data from any other person’s so not applicable.

### Availability of Data and Materials

We send All data which is available us, there is not remaining data and materials.

### Competing Interests

The authors declare no conflicts of interest.
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There was no any funding or sponsoring organization in this paper.

**Authors' Contributions**

MA: designed research, conducted research, wrote paper, analyzed data and edited paper and TA advised the research. ZY edited paper and manuscript submission. All authors read and approved the final manuscript.

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**References**

1. Ageny CS (2016) EDHS.