



RESEARCH ARTICLE

Level of Maternal Satisfaction and its Determinants at Health Facilities in Mizan-Aman Town, Ethiopia: Cross Sectional Study

Teklemariam Ergat Yarinbab^{1*}, Wasihun Adraro Ambo², Tariku Regea² and Addisu G/Mariam²

¹Department of Public Health, College of Health Science, Mizan-Tepi University, Ethiopia

²Department of Public Health, Mizan-Aman College of Health Science, Ethiopia

*Corresponding author: Teklemariam Ergat Yarinbab, Department of Public Health, College of Health Science, Mizan-Tepi University, Ethiopia



Abstract

Background: Maternal satisfaction on institutional delivery service is the most frequently reported indicator in the evaluation of the quality of maternity services. While increasing service availability and maintaining acceptable quality standards, it is important to assess maternal satisfaction with care in order to make it more responsive and culturally acceptable, ultimately leading to enhanced utilization and improved outcomes. Maternal satisfaction determines the level of institutional delivery service utilization. Therefore, the aim of this study was to assess the determinants of maternal satisfaction on delivery service among mothers who gave birth at health facilities in Mizan-Aman Town, Ethiopia.

Methods: Cross-sectional study was conducted in Mizan-Aman Town, Ethiopia. A systematic sampling technique was used. Pre-tested structured questionnaires were used to collect the data. Both bivariate and multivariate data analysis was conducted by SPSS version 20.

Result: Level of maternal satisfaction was 30.4%. Antenatal care visit (AOR = 6.48, 95% CI = 1.01, 41.68), delivery at health center (AOR = 2.14, 95% CI = 1.15, 3.99) and stay at labor less than six-hours (AOR = 2.83, 95% CI = 1.34, 5.96) were significantly associated with maternal satisfaction.

Conclusion: Antenatal care visit, health center delivery and less prolonged labor were major determinants of maternal satisfaction.

Keywords

Maternal satisfaction, Institutional delivery service, Mizan-Aman Town, Ethiopia

List of Abbreviations

AOR: Adjusted Odds Ratio; ANC: Antenatal Care; SPSS: Statistical Package for Social Sciences

Introduction

Every day, approximately 830 women die from preventable causes related to pregnancy and childbirth. Of these, 99% of all maternal deaths occur in developing countries [1]. Owing to considerable gaps in services, developing countries emphasize on increasing service availability and maintaining acceptable quality standards [2]. Understanding maternal perception of care and satisfaction with services is important in this regard, as perceived quality is a key determinant of service utilization [3,4].

Users who perceive the quality of care in a health center to be good, are more likely to visit it again, thereby increasing demand for the service [5,6]. Service utilization and positive maternal and neonatal outcomes can be significantly enhanced by improving quality of facility deliveries and making them more acceptable to women [7].

User satisfaction is considered 'patient's judgment on the quality and goodness of care [8]. Patient satisfaction is thus indispensable to quality improvement with regard to design and management of health care systems [4].

Maternal satisfaction has often been defined using theoretical models of patient satisfaction [9]. But there is consensus that it is a multidimensional concept, influenced by a variety of factors [9,10]. It is also defined as positive evaluation of distinct dimensions of childbirth [11].

Evidence on maternal satisfaction with the quality of maternal care helps to determine other aspects of care that need strengthening in developing country contexts to support long-term demand, generate significant changes in maternal care-seeking behavior, and identify barriers that can and should be removed. Therefore, the aim of this study was to assess the determinants of maternal satisfaction on delivery service among mothers who gave birth at health facilities in Mizan-Aman Town, Ethiopia.

Methods and Materials

Study area: The study was conducted in Mizan Aman town from May 01-30/2018. The town was an administrative city of Bench Maji Zone (found in Southern Nations, Nationalities and Peoples region). It is located 583 KMs southwest of Addis Ababa. The town had an estimated total population of 48,934 among which 51% were females (2015 National Census). The town was divided in to 5 kebeles (the smallest administrative units). It had one Teaching Hospital, One Public Health Center and Four Health Posts. There were 21 private clinics in the town.

Study design: Cross sectional study was conducted.

Inclusion & exclusion criteria

Inclusion Criteria: Women who gave birth at public health institutions in the past 12 months were included in the study.

Exclusion Criteria: Women who were not willing to answer the questionnaires or critically ill at the time of data collection were excluded from the study.

Sample size determination

The sample size was calculated by using a single population proportion formula. The total population was 48,934 of which 49% were females. Considered assumptions were: $P = 79.1\%$ [12], margin of error to be 5% ($d = 0.05$) and $Z \alpha/2 = 1.96$. The final sample size with 10% non-response rate was 280.

Sampling technique

The card number and the respective addresses of mothers who gave birth in health institutions within the last 12 months were obtained from delivery registration books. Then health extension workers were used to get the home of study subjects. Then systematic random sampling technique was used. The total number of institutional delivery from the town was 1246 whereas the sample size considered for this study was 280. This sample size was allocated proportionally to each of the five kebeles based on their delivery record, i.e. Edget (41), Addis Ketema (63), Hibret (88), Shesheqa (46) and Kometa (42).

Data collection tool and procedure

Data was collected by face to face interview using

structured and pre-tested questionnaires. It was prepared in English and then translated in to Amharic language (official language of the region) and re-translated to English to insure correct translation prior to the start of the fieldwork. Five health workers who were fluent in the local languages were used to collect the data.

Data quality control

Pre-test was done on 5% of the questionnaires in Kite Town/Kebele (i.e. a small town in the neighboring District). Orientation was given for the data collectors. Supervisors checked the completeness of data on daily basis (Appendix).

Data processing and analysis

Data analysis was conducted by using SPSS Version 20.0. Bivariate and Multivariate logistic regression analysis was conducted. $P\text{-Value} \leq 0.05$ was considered to declare statistically significant variables.

Operational definition

Satisfied: If 75% of the study mothers/respondents/ response is above fairly satisfied.

Dissatisfied: If above 25% of the respondents reported unsatisfied.

Result

Socio-demographic profile of respondents

A total of 280 women participated in the study with a response rate of 100%. The mean age of study participants was 25.7 (± 5.4) years. One hundred forty (50.0%) attended secondary school (Table 1).

Obstetric history of respondents

About 117 (41.8%) of the study participants were primiparous. Two hundred sixty seven (95.36%) had reported at least one ANC follow up. One hundred seventy five (62.5%) of the women who participated in the study reported to gave birth in Hospital whereas 105 (37.5%) of them reported to gave birth in Health Center (Table 2).

Maternal satisfaction

The overall delivery service satisfaction of study participants was 30.4%. One hundred forty (50%) of the study participants reported that they were satisfied with the delivery services at the health facility. One hundred sixty four (58.57%) of study participants also reported that they were satisfied by intermediate and final outcomes of the delivery service.

Around 54% of satisfied study participants were those whose place of delivery was at Health centers. The age of majority satisfied study participants (65.95%) are in the range of 17-25 years old. More than half (51.8%) of satisfied participants educational status was high

Table 1: Socio-demographic profile of the study participants, Mizan Aman, Ethiopia, May 2018.

| Variables | Frequency | Percent |
|---------------------------------------|-----------|---------|
| Age | | |
| 15 - 25 | 151 | 53.9 |
| 26 - 34 | 112 | 40.0 |
| ≥ 35 | 17 | 6.1 |
| Marital status | | |
| Unmarried | 20 | 7.2 |
| Married | 260 | 92.8 |
| Religion | | |
| Orthodox | 127 | 45.4 |
| Muslim | 44 | 15.7 |
| Protestant | 109 | 38.9 |
| Ethnicity | | |
| Bench | 86 | 30.8 |
| Kaffa | 62 | 22.1 |
| Amhara | 51 | 18.2 |
| Others | 81 | 28.9 |
| Maternal educational status | | |
| Unable to write and read | 6 | 2.1 |
| Elementary | 99 | 35.3 |
| Secondary | 140 | 50.0 |
| College and Above | 35 | 12.5 |
| Paternal educational status | | |
| Elementary & below | 130 | 64.9 |
| Secondary | 76 | 27.3 |
| College and Above | 74 | 4.8 |
| Maternal occupation | | |
| Government employee | 50 | 17.8 |
| Merchant | 50 | 17.8 |
| House wife | 160 | 57.1 |
| Student | 20 | 7.1 |
| Household monthly income (USD) | | |
| < 50 USD | 133 | 47.5 |
| ≥ 50 USD | 147 | 52.5 |

school and above. Fifty five around (64.7%) of satisfied participants were either house wives or students. Forty one (46.6%) mothers who stayed 6 to 12 hours on labour in the health institutions were satisfied.

Factors associated with maternal satisfaction

The multivariate logistic regression analysis showed that antenatal care visit, health center delivery and less prolonged labor were major determinants of maternal satisfaction.

The study further revealed that those women who did not attend ANC service during their pregnancy were six times (AOR = 6.48, 95% CI = 1.01, 41.68) more likely to be satisfied as compared to that of mothers who reported four or more times ANC follow up. Besides, mothers who gave birth in the health center were two times (AOR = 2.14, 95% CI = 1.15, 3.99) more likely to be satisfied compared to mothers who gave birth in the hospital.

The study also showed those mothers who have stayed on labour for 6-12 hours were nearly three times (AOR = 2.83, 95% CI = 1.34, 5.96) more satisfied on

Table 2: Obstetric history of study participants, Mizan Aman, Ethiopia, May 2018.

| Variables | Frequency | Percent |
|---|-----------|---------|
| Was the pregnancy wanted? | | |
| Yes | 222 | 79.3 |
| No | 58 | 20.7 |
| Parity | | |
| One | 117 | 41.8 |
| Two - Four | 143 | 51.1 |
| Five and more | 20 | 7.1 |
| Duration of labour in the HI | | |
| 6 hours | 107 | 38.2 |
| 6 - 12 Hours | 88 | 31.4 |
| 12 - 24 Hrs | 69 | 24.6 |
| More than 24 Hrs | 16 | 5.8 |
| Facility for delivery | | |
| Health Center | 105 | 37.5 |
| Hospital | 175 | 62.5 |
| Who decided to go to HF | | |
| My self | 87 | 31.1 |
| Family or HEW | 193 | 68.9 |
| Mode of delivery | | |
| SVD | 237 | 84.6 |
| Assisted delivery | 21 | 7.5 |
| Cesarean section | 22 | 7.9 |
| Reason for choosing the facility | | |
| Planned | 255 | 91.1 |
| Referral | 25 | 8.9 |

delivery care services than those mothers who stayed on labour for less than 6 hours (Table 3).

Discussion

The overall maternal satisfaction of the study participants was 30.4%. This finding was lower than the study finding from Gamo Gofa Zone, Ethiopia, which was 79% [12]. The possible reason may be the differences in the quality of care in both settings but it needs further investigation as these issues were not addressed in the study.

The study further revealed that those women who did not attend ANC service during their pregnancy were six times more likely to be satisfied as compared to that of mothers who reported four or more times ANC follow up. The finding was similar with a study finding in Bahir-Dar City at Felege Hiwot Referral Hospital, Ethiopia [13], which showed women who did not attend ANC were 3 times more likely to be satisfied with childbirth care services compared to women those attended ANC follow up. This similarity might be due to the similarities in the socio-cultural status of the population and the similarity of the health care services in the health institutions.

Besides, mothers who gave birth in the health center were two times more likely to be satisfied compared to mothers who gave birth in the hospital. The study also showed those mothers who have stayed on labour for 6-12 hours were nearly three times more satisfied on delivery care services than those mothers who stayed on labour for less than 6 hours. It is clear that maternal

Table 3: Factors associated with maternal satisfaction, Mizan Aman, May 2018.

| Variable | | Satisfied on delivery service | | COR (95% CI) | AOR (95% CI) |
|------------------------------|------------------------|-------------------------------|-----------|-------------------|---------------------------|
| | | No (%) | Yes (%) | | |
| Age | 17-25 | 95 (62.9) | 56 (37.1) | 1 | 1 |
| | 26-34 | 84 (75) | 28 (25) | 0.56 (0.32, 0.97) | 0.71 (0.37, 1.37) |
| | > 35 | 16 (94.1) | 1 (5.9) | 0.10 (0.01, 0.82) | 0.16 (0.01, 1.34) |
| Marital Status | Unmarried | 11 (55) | 9 (45) | 1 | 1 |
| | Married | 184 (70.8) | 76 (29.2) | 0.5 (0.20, 1.26) | 1.98 (0.47, 8.26) |
| Educational status | Unable to Read & Write | 29 (80.6) | 7 (19.4) | 0.45 (0.15, 1.27) | 1.1 (0.21, 5.19) |
| | Primary | 89 (72.4) | 34 (17.6) | 0.71 (0.33, 1.49) | 1.85 (0.46, 7.33) |
| | Secondary | 49 (62.8) | 29 (37.2) | 1.1 (0.5, 2.4) | 1.86 (0.46, 6.52) |
| | Tertiary | 28 (65.1) | 15 (34.9) | 1 | 1 |
| Occupation | House Wife | 171 (79.9) | 43 (20.1) | 0.59 (0.30, 1.17) | 0.67 (0.20, 2.16) |
| | Gov employee | 31 (62) | 19 (38) | 1 | 1 |
| | Merchant | 39 (78) | 11 (22) | 0.46 (0.19, 1.10) | 0.31 (0.09, 1.17) |
| | Student | 8 (40) | 12 (60) | 2.44 (0.84, 7.1) | 2.2 (0.52, 9.31) |
| ANC visit, | None | 5 (38.5) | 8 (61.5) | 3.8 (1.2, 12.1) | 6.5 (1.01, 41.68)* |
| | Once | 9 (81.8) | 2 (18.2) | 0.53 (0.11, 2.51) | 0.25 (0.04, 1.48) |
| | Twice | 26 (76.5) | 8 (23.5) | 0.73 (0.31, 1.71) | 0.71 (0.25, 2.03) |
| | Three times | 20 (66.7) | 10 (33.3) | 1.2 (0.52, 2.69) | 1.4 (0.55, 3.38) |
| | Four times | 135 (18.6) | 57 (81.4) | 1 | 1 |
| Decision maker | My self | 53 (60.9) | 34 (39.1) | 1 | 1 |
| | Family | 142 (73.6) | 51 (26.4) | 0.56 (0.32, 0.96) | 0.47 (0.22, 0.99)* |
| Type of HI | Hospital | 136 (77.7) | 39 (22.3) | 1 | 1 |
| | Health center | 59 (56.1) | 46 (43.9) | 2.72 (1.61, 4.59) | 2.14 (1.15, 3.99)* |
| Duration of labour in the HI | 6 hrs and less | 81 (75.7) | 26 (24.3) | 1 | 1 |
| | 6 - 12 hrs | 47 (53.4) | 41 (46.6) | 2.72 (1.48, 4.99) | 2.83 (1.34, 5.96)* |
| | 12 - 24 hrs | 54 (78.3) | 15 (21.7) | 0.87 (0.42, 1.78) | 0.98 (0.43, 2.21) |
| | > 24 hrs | 13 (81.3) | 3 (18.7) | 0.71 (0.19, 2.72) | 0.51 (0.10, 2.60) |

Key: * = Significant at p-value < 0.05 on multivariate logistic analysis, HI: Health Institutions; COR: Crude Odds Ratio; AOR: Adjusted Odds Ratio.

satisfaction depends on the care given by the health workers. Hence we can deduce that mothers who stayed in labor for a longer time might have a better exposure to the care given by the health professionals. Therefore, they will be in a better position to judge the services delivered by the health workers. This study finding contradicts with a study finding in Debre-Markos, Ethiopia [14]. The differences in the quality of care given might have contributed to the difference but it needs further investigation.

Conclusion

The overall level of maternal satisfaction was 30.4%. The mean age of study participants was 25.7 (\pm 5.4) years. Antenatal care visit, delivery at health center and stay at labor less than six-hours were significantly associated with maternal satisfaction.

Recommendation

Ethiopian Federal Ministry of Health and Regional Health Bureaus should work hard on the maternal care to improve the maternal satisfaction during delivery. Mizan-Tepi University Teaching Hospital should also work on the delivery services as maternal satisfaction in the was low. Bench Maji Zone health department should work on improvement of the delivery services in the health centers.

Declarations

Ethical approval

Ethical clearance was received from Mizan-Tepi University. Participants were made aware about the purpose of study, and oral consents were obtained accordingly. The participants' confidentiality issues were considered.

Consent to publish

Not applicable.

Availability of data and materials

All data included in the Article.

Competing interests

Authors' declare that they have no competing interests.

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Authors' contribution

WA, TR and AG developed the proposal, supervised the data collection and conducted the final analysis and report writing. TE drafted and critically reviewed the manuscript. All the authors approved the final manuscript.

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