Maternal and partner's level of satisfaction on the delivery room service in University of Gondar Referral Hospital, Northwest, Ethiopia: A comparative cross-sectional study.

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Abstract

Abstract

Background: Asking patients/clients what they perceive about the care and treatment they have received is one of the important steps towards improving the quality of health care. However, little is known about the birth experiences of partners in Ethiopia, particularly in the study area. Therefore, this study was conducted to evaluate and compare the birth satisfaction of mothers and partners and its determinant factors in the study area.

Methods: A comparative cross-sectional study was conducted from Dec 2018 to January 2019 in University of Gondar referral hospital. The birth satisfaction scale is used for the mother, and it was adapted to the partners' perspective. Paired-samples t tests were used for comparing mothers and partners for the birth satisfaction scales global and thematic scores. A binary logistic regression model was fitted to identify predicting factors for mothers' and partners satisfaction.

Results: The overall satisfaction of mothers in this study was 47.6 % whereas 41.2% of partners were satisfied by delivery room services. There were mean difference between mothers and partners' birth satisfaction scale (p=0.02). Maternal satisfaction scale was affected by age OR = 0.36, 95%CI (0.18, 0.73), perception OR =0.02, 95%CI (0.00,0.09), waiting time OR = 0.11 , 95%CI (0.00, 0.09),visiting mode OR = 0.01 , 95%CI (0.00,0.08), pregnancy status OR = 0.04, 95%CI (0.01 ,0.33) and fatal outcome OR=0.00, 95%CI (0.00,0.018) .whereas, partners satisfaction was associated with age OR=0.16,95%CI (0.05 0.49), occupational status [OR = 0.02, 95%CI (0.00, 0.24), amount of money to pay for service [OR = 2.87, 95%CI (1.07, 7.71), visiting mode of his wife OR = 0.08, 95%CI (0.01, 0.35), waiting time OR = 0.12, 95%CI (0.04, 0.33), privacy OR = 10.61, 95%CI (3.00, 37.52), mode of delivery of his wife OR = 7.69, 95%CI (3.00, 19.69).

Conclusion : This study indicated that overall level of satisfaction of mothers and their partners is very low compared to other similar hospitals in the country and mothers were more satisfied than partners' by delivery room service.

Background

Since the early 1990s ,health care executives and suppliers have started to evaluate patient satisfaction bec

1). Asking patients what they think of care and therapy is a significant step towards improvement of the quality of care and ensuring that the demands of patients are met by local health providers. It is a reality that satisfaction affects the fact that an individual is seeking medical advice and has an ongoing connection with a practitioner(

2).

In the past, the male person was associated with his work outside of the home and the mother's work in the house and caring for children, which is why fathers and mothers traditionally had distinct functions(

3).

The mother played the role of caregiver, while the father cared for the family's material needs. The father was often a distant authority figure who was very unconcerned about the care for the children and leaves the mother for children as an effective reference(

3). Childbirth is a major life event for a parent and as such an experience is multifactor. The satisfaction of the mother through the birth cycle is the measure of quality assessment of maternity services most frequently mentioned(

4,

5). A favorable birth experience is linked to the enhanced mother-to-child and maternal skills and adds to its sense of achievement and self-esteem (

6-9).In contrast, A negative experience in birth, on the contrary, can make the mother feel distressed and adverse on her mental health, increasing the risk of post-partite and post-traumatic stress disorder (

10-12). The primary reasons why the health system is being used less often are negative experiences that can lead to an enhanced birth cycle associated with complications, including death of mothers (

10-12). In the science literature, parents have their own favorable emotions of birth: fatherhood or child pride and love and thankfulness to their partner (

13). In turn, partners and/or health care professionals can feel excluded from birth (

13), and report that they are unprepared for and need more support(

14).

Studies have shown that the satisfaction of the father and the need for the future parent and not just the partners of the mother are to be considered(

13,

15). Although fathers ' birth participation in Ethiopia has been increasing lately, their emotions and experiences were not widely researched. Very few trials were performed to satisfy both parents (

16), and fewer used the same measurement tool (

17),making comparisons hard. Knowing how satisfied parents are and how determining their births can provide insight for health professionals and managers as to how parental care and services can be evaluated and adapted during the birth process. This research was therefore designed to assess and compare the satisfaction of mothers and fathers with their birth experiences. The second objective was to link their level of satisfaction with socio-demographic and reproductive factors.

Methods

Study design, area and period

The comparative cross-sectional study design was conducted from December 2018 to January 2019 in Gondar university referral hospital. The hospital has more than 500-bed capacities which are used as the referral center for more than seven million catchment populations. It provides both specialty and subspecialty services ‘including pediatrics, surgery, gynecology, internal medicine, psychiatry, ophthalmology, etc. in its inpatient and outpatient clinics. According to hospital information record data more than 8000 mothers deliver annually(

18).

Source and study population

All laboring mothers and its partners’ who visited in Gondar university referral Hospital for the

delivery service were the source population. And all mothers with its couple who gave birth and served in the referral Hospital and full fill the selection criteria were the study population. Partners' were recruited postpartum, at least 6 h after vaginal birth and 12 h after cesarean delivery.

Inclusion criteria: Mothers with its couple who were attended delivery services in the study hospital, willing to participate in the study with minor complication.

Exclusion criteria: Mothers with its couple who were mentally or critically ill and unable to communicate.

Sample size determination and Sampling technique

Simple random sampling techniques were conducted and the required sample size was determined by the comparative cross-sectional sample size formula by considering the following information.

Expected proportion (p)=0.62 for maternal satisfaction rate from the previous study (19). However, no previous study was conducted about paternal satisfaction therefor use 50% with a 95 % confidence level and 80% power.

Therefore, the required sample size (n) for this study was calculated by using comparing two Independent Proportions (p) formula as follows;

[Due to technical limitations the formula could not be included here. It can be found in the supplemental files.]

Based on the assumption, the calculated sample size (no) was

[Due to technical limitations the formula could not be included here. It can be found in the supplemental files.]

And, adding 11% for non-response rate during the actual study then the sample size is294.

Data Collection and Analysis

The self-administered questioners', which included the birth satisfaction scale (BSS) and socio-demographic issues, gathered the data and examined the birth medical report. The BSS is a validated30-point Survey designed to assess satisfaction in 15 different areas (

20,

21). To do so, satisfactions are measured using a series of simple statements with five-point Likert scales (almost half of the items are reverse-scored), which results in a maximum total score of 150. BSS measurements were adapted to fathers' circumstances and BSS questionnaires that were less than two-thirds completed was rejected and others were scaled to obtain a total score of 150.

We used Stata 14 software for all statistical analyzes. The mean and SD for continuous variables are calculated and a proportion for categorical variables is indicated. For a mean comparison, t-tests in pairs for the global and thematic BSS scores were conducted. The logistic regression analysis was adapted in order to identify important predictor and a p-value variable less than 0.05 was interpreted as significant factors.

Results

Socio-demographic characteristics

A total of 294 participants were targeted for this study. Of these, 294 participants were enrolled with a response rate of 100%. Their mean age of mothers and their partners' was 27.4 and 32.8 respectively, 83.6 % of mothers and partners have educated formal educations. The majority (55.1%) of mothers had not had work while partners were in the reverse.82.3% of mother's perceive the presence of waiting area around the delivery room and 58.1 % of mothers were waited more than 1 hour before seeing doctors(Table 1).

Table 1: Socio-demographic characteristics of study participants' at UOGRH from Dec 2018 to Jan. 2019 (N=294)

Obstetrical Characteristics of Mothers

As the delivery character of women's (Table 2), 52.7 % of women's were visited as a referral system from other health institutions. Majorities of women's (71.1%) who have delivery in the hospital were in the first time. 86.4 % of pregnancy was wanted and only 13.6 pregnancy unwanted. Among born babies, 94.9 % were live birth and cesarean delivery covered the major (53.7%) mode of delivery.

Table 2: Obstetrical characteristics of mothers at UOGRH from Dec. 2018 to Jan. 2019 (N=294).

Mean comparison of mothers and

partners level of satisfaction

When we analyzed the mean differences between the mothers' and partners' satisfaction level, we observed that the mothers considered themselves more prepared ($p<0.000$) and more supported by families ($p<0.001$).Meanwhile, there was no mean difference between mothers and partners satisfaction with distress experienced during labor/labor ($p=0.129$) and receipt of an obstetric intervention ($p=0.89$), as a whole there was the mean difference between mothers and partners' birth satisfaction scale ($p=.020$) (Table 3).

Table 3:- paired t-test mean comparison of participants' at UOGRH from Dec. 2018 to Jan. 2019 (N=294)

Only 35.4 % of mothers and 42.9 % of its partners'' were satisfied by the overall quality of care provision, satisfaction with women's personal attribute were higher in partners' (55.1%) compared with mothers (42.9%) and 34.0% mothers and 33.7 % were satisfied by stress experienced during labour/labor. Generally, 47.6% of the mothers and 41.2% of their partners were satisfied with the overall service of the delivery room in Gondar university referral hospital (Table 4).

Table 4: maternal and partners level of satisfaction at UOGRH from Dec 2018 and Jan 2019 (N=294)

Factors associated with satisfaction of mothers in delivery room services

Maternal satisfaction with delivery care was associated with age[OR = 0.361, 95%CI (0.180, 0.726)], religion [OR = 3.143, 95%CI (1.517, 6.511)], the presence of perception about waiting area[OR =0.018, 95%CI (0.003,0.091)], waiting time before seeing a doctor or a nurse[OR =0.111 ,95%CI (0.003, 0.091)],visiting mode [OR = 0.013, 95%CI (0.002,0.083)], pregnancy status [OR = 0.044, 95%CI (0.006 ,0.330)], fatal outcome[OR = 0.002, 95%CI (0.000,0.074)] were statistically significant effects.

Keeping all other variables constant; the odds of the maternal level of satisfaction were increased by 0.361 times [OR: 0.361, 95% CI (0.1804, 0.7259)]; for a unit difference of the age of mothers. Mothers who waited more than one hours before doctors seen were 0.111 times more satisfied than waited

less than one hours [OR: 0.111, 95% CI (0.003,0.091)] (Table 5).

Table 5: Factors associated with satisfaction of mothers at UOGRH from Dec 2018 and Jan 2019 (N=294)

Factors associated with satisfaction of partners in delivery room services

partners' satisfaction with delivery care was associated with age [OR = 0.161, 95%CI (0.053 0.496)],religion [OR = 3.584, 95%CI (1.783,7.205) , occupational status[OR = 0.027, 95%CI (0.003, 0.239), average monthly income [OR = 0.990, 95%CI (0.990, 0.999), amount of money to pay for service [OR = 2.87, 95%CI (1.068, 7.713),visiting mode of his wife/client [OR = 0.082, 95%CI (0.019, 0.346), waiting time of his wife/clients before seeing a doctor or a nurse[OR = 0.123, 95%CI (0.044, 0.334), care providers measure taken to assure privacy during examinations [OR = 10.611, 95%CI (3.001, 37.524), mode of delivery of his wife/client[OR =7.689, 95%CI (3.002, 19.696) were statistically significant factors.

Keeping all other variables constant; the odds of parents satisfaction were increased by 0.161 times [OR: 0.161, 95% CI (0.053, 0.496)]; for one unit increments of the age of families. Partners who follow orthodox Christian were 3.584 times more satisfied than other religion followers [OR: 3.584, 95% CI (1.783, 7.205)] (Table 6).

Table 6: Factors associated with satisfaction of partners at UOGRH from Dec 2018 and Jan 2019 (N=294)

Discussion

The study was aimed to evaluate and compare the birth experience satisfaction of mothers and partners and correlate their satisfaction level with the socio-demographic and delivery character of women's.

The overall maternal and partner's level of satisfaction with the overall service of the delivery room of Gondar university referral hospital was 47.6% and 41.2%, respectively. In this study, mothers were

more satisfied than partners in the overall service of the hospital. The result was supported by other studies (

22-24), the reason might be during childbirth, mothers may directly experience the pain of lengthy labor and tearing or mothers are a direct actor in the childbirth. By contrast, partners are the direct, and maybe more fully conscious, witness of childbirth, and hence they are more likely to be unsatisfied with what they observe, and most of the time partners were not entered into the delivery room, they follow his/her clients outside the room, they did not see inside service and mother to caregiver/doctor interaction.

The level of maternal satisfaction in this study was lower than studies conducted in Assela teaching and referral hospital (80.7%) (

25), Jimma, Ethiopia (77.0%)(

26), Irbid, North Jordan (64%) (

27), Côte d'Ivoire (92.5%)(

28),Nairobi, Kenya (56%)(

29), Sri Lanka (48%)(

30),Mekelle, Ethiopia(79.7%)(

31), Black Lion Referral Hospital Addis Ababa, Ethiopia (90.1%) (

32). However, higher than studies conducted in Asmara Public Hospitals, Eritrea 20.8% (

33). This variation may be because of a real difference in the quality of services provided, the expectation of mothers or the type of health facilities, difference in socio-cultural and sample size(

34,

35). The lowest proportion in the study area may due to in the current situation the hospital have had greater patient flow beyond capacity (more than seven million people catchment population as compared to 3.5 million people according to Health Sector Development Plan -IV plan), which could impede the general qualities of the health care deliveries, and mothers admitted to obstetrics and gynecology wards.

The age of mothers (p=0.004) were significant predictors of satisfaction, in a unit change of age, level

of satisfaction was also increased. This is supported by other studies (

25). It might be related to the age of mother increase, the stability of life situation increase and more prepared for medical and psychological risk. In addition, more aged mothers have many exposures for childbirth and comparing the current delivery from the past they are satisfied because maternal and child health status was modified from the past.

In this research both mothers and associates who adopt the Islamic and Protestant religions were more satisfied than orthodox Christians. The reason could be more co-ordinate and endorsed by their families within traditional or spiritual views of Protestant and Muslim adherents and motivated to give birth. Influx on self-efficacy and childbirth fear as a consequence of the higher religious / spiritual assistance (

36).

Mothers who have had work were 47.14 times more satisfied than unemployed mothers. The findings of this study suggested that the direct association between occupation and maternal satisfaction was primarily explained by the relationship between occupation with income and occupational prestige.

It has been noted that mothers who wished pregnancy were more likely to be satisfied than those mothers w

A similar finding was reported in Arsi, Ethiopia and Nairobi, Kenya (

25,

29)

Mothers who reported privacy during the physical examination were more satisfied than those who perceived the absence of privacy. Other studies (

26,

31,

37,

38) also suggested that mothers who were admitted for reproductive organ related issue which is a sensitive organ that a sense of shame is also attached to the process of physical examination, thereby, increasing women’s discomfort and diminishing their satisfaction levels if privacy is not kept.

The partner level of satisfaction was affected by the amount of money paid for service, fathers who paid less than or equal to157 ETB were more satisfied than those who paid greater than157 ETB. The result was supported by studies conducted in Amhara regional state (

37). This might be due to the low socioeconomic status of families or/and mothers may have paid unexpected costs such as cost for travel and charge for supplies. However, mothers' level of satisfaction was not affected by the amount of money paid for service, it might be related with the majority of mothers (55.10%) haven’t had an occupation, as a result, she does not worry about money and doesn’t take the responsibility.

Mothers who have had one childbirth (71.1%) were more satisfied than those who had more than two (28.9%) childbirths. This finding is in line with other studies studied in a different area (

25,

31,

39-41). The reason may be due to the effect of the previous delivery, boringness of quality of care during the previous time or/and previously admitted mothers might be expected more service than this. But in the reverse study conducted in Iraq stated that mothers who had more than two births were more satisfied than those who had one childbirth(

42). Variation may due to the difference in the country’s economic status and hospitals quality.

Conclusion

The finding of the research indicated that mothers were more satisfied than partners’ by delivery room service and still in the hospital clients were more dissatisfied. Age, religion, perception, waiting time, visiting mode, parity, pregnancy status, and fatal outcome were important predictors of maternal and partners satisfaction in delivery room services. So, the findings of our study would alert the health care system to design a client-friendly approach to enhance communication and provide insights to hospital administrators in formulating a policy that would enhance the support first-time father give to their partner/wife during labor and delivery.

Nowadays most patients in our country complain about hospital services and evaluate health care

services from the patient's point of view, facilitate the identification of problem areas, and help generate ideas towards resolving these problems. Therefore researchers should invest their time in these areas of the country by conducting research for the future.

Abbreviations

BSS, Birth Satisfaction Scale; CI, Confidence Interval; OR, Odds Ratio; SD, Standard Deviation;

UOGRH, University of Gondar Referral Hospital

Declarations

Ethics approval and consent to participate

The study was approved by the Institutional Review Board of the University of Gondar. Informed consent was gotten from study participants. Support letters were obtained from university of Gondar referral hospital clinical director office. All the information was kept confidential and no individual identifiers were collected.

Availability of data and materials

The data upon which the result based could be accessed a reasonable request to the corresponding author

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Consent for publication

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Competing interests

The authors declare that they have no any conflict of interest

Authors’ contribution

All the authors have actively participated during Conception and design, acquisition of data, or analysis and interpretation of data. All authors read and approved the final version of the manuscript.

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Tables

Table 1: Socio-demographic characteristics of study participants' at UOGRH from Dec 2018 to Jan. 2019 (N=294)

Characteristics		Mothers N=294 Prevalence of characteristics	
Age	Less than 20	13 (4.42)	Less than 20
	20-24	103 (35.03)	20-30
	25-29	75 (25.51)	30-40
	30-35	51 (17.35)	Greater than 40
	Greater than 35	52 (17.69)	
Educational status	Educated	246 (83.67)	246 (83.67)
	Uneducated	48 (16.33)	48 (16.33)
Occupational status	Employed	132 (44.90)	263 (89.46)
	Unemployed	162 (55.10)	31 (10.54)
Religion	Orthodox	239 (81.29)	231 (78.57)
	Muslim	21 (7.14)	29 (9.86)
	Protestant	34 (11.56)	34 (11.56)
Marital status	Married	277 (94.22)	266 (90.48)
	single	9 (3.06)	20 (6.80)
	Divorced	8 (2.72)	8 (2.72)
Average Amount of Money Paid for service	less than 157	224 (76.19)	
	greater than 157	70 (23.81)	
Mother's Perception due to the presence Of Waiting Area	Yes	242 (82.31)	
	No	52 (17.69)	
Waiting time before seeing doctors	>1hr	171 (58.16)	
	<1hr	123 (41.84)	
Privacy during the medical examination	Yes	264 (89.80)	
	No	30 (10.20)	

Table 2: Obstetrical characteristics of mothers at UOGRH from Dec. 2018 to Jan. 2019 (N=294).

Delivery character		Frequency (%)
Mode of visiting	Referral	155 (52.7)
	Not referral	139 (47.3)
Numbers of parity	Primipara	209 (71.1)
	Multipara	85 (28.9)
Wanted status of pregnancy	Wanted pregnancy	254 (86.4)
	Unwanted pregnancy	40 (13.6)
Mode of delivery	Spontaneous vaginal delivery	49 (16.7)
	Assisted delivery	87 (29.6)
	Cesarean section	158 (53.7)
Fatal outcome	Live birth	279 (94.9)
	Stillbirth	15 (5.1)

Table 3:- paired t-test mean comparison of participants' at UOGRH from Dec. 2018 to Jan. 2019 (N=294)

Themes of birth satisfaction score	Subthemes of birth satisfaction score	Mean satisfaction scores(SD)	
		Mothers	Partners
Quality of Care provision (QC)	Home assessment	0.517(0.500)	0.629(0.483)
	Birth environment	0.146(0.353)	0.251(0.434)
	Sufficient support	0.108(0.311)	0.251(0.434)
	Relationships with health care professionals	0.278(0.449)	0.166(0.373)
Women's Attributes (WA)	Ability to cope during labour/labor	0.782 (0.413)	0.234 (0.424)
	Feeling in control	0.323(0.468)	0.829 (0.376)
	Preparation for childbirth	0.755(0.430)	0.663 (0.473)
	Relationship with baby	0.081 (0.274)	0.261(0.440)
Stress experienced	Distress experienced during labour/labor	0.378 (0.485)	0.320 (0.467)
	Obstetric injuries	0.537(0.499)	0.731(0.444)
	Perception of having received sufficient medical care	0.530 (0.499)	0.799(0.401)
	Receipt of an obstetric intervention	0.833 (0.373)	0.836(0.370)
	Pain experienced	0.972(0.162)	0.748(0.434)
	Long labour/labor	0.758(0.428)	0.894(0.571)
	Health of baby	0.537 (0.499)	0.3571(0.479)
Total satisfaction		0.524 (0.500)	0.588(0.492)

Table 4: maternal and partners level of satisfaction at UOGRH from Dec 2018 and Jan 2019 (N=294)

Birth satisfaction scale themes	Maternal Level of satisfaction, Frequency (%)		Partners Lev Frequency (
	Satisfied	dissatisfied	Satisfied
Quality of Care provision (QC)	104 (35.4)	190 (64.6)	126 (42.9)
Women's Attributes (WA)	126 (42.9)	168 (57.1)	162 (55.1)
Stress experienced during Labour (SL)	100 (34.0)	194 (66.0)	99 (33.7)
Overall satisfaction	140 (47.6)	154 (52.4)	121 (41.2)

Table 5: Factors associated with satisfaction of mothers at UOGRH from Dec 2018 and Jan 2019 (N=294)

Variable's	OR	SE.	Z	P>z	[9 L
Age of Mothers'	0.361	0.128	-2.86	0.004	0
Educational status of Mothers	11.75	15.79	1.83	0.067	0
Occupation status of Mothers	47.14	31.43	5.78	0.000	1
Religion of Mother	3.143	1.168	3.08	0.002	1
Average monthly income	0.369	.3913	-0.94	0.347	0
Amount paid to the service	2.756	1.731	1.61	0.106	0
Perceived presence of waiting area	0.017	.0147	-4.82	0.000	0
Visiting mode	0.012	.0122	-4.57	0.000	0
Waiting time before seeing a doctor or a nurse	0.110	.0707	-3.45	0.001	0
Privacy during examinations	67.49	120.0	2.37	0.018	2
Number of parity	162.2	165.0	5.00	0.000	2
Pregnancy status	0.044	0.045	-3.04	0.002	0
Mode of delivery	2.458	1.228	1.80	0.072	0
Immediate maternal condition after delivery	0.579	0.439	-0.72	0.472	0
Fatal outcome	0.001	0.003	-3.31	0.001	0

Table 6: Factors associated with satisfaction of partners at UOGRH from Dec 2018 and Jan 2019 (N=294)

Variables	Odds Ratio	Std. Err.	Z	P>z	[95% CI]
					Lower
Age of parents	0.161	0.092	-3.19	0.001	.053
Marital status of parents	0.540	0.321	-1.04	0.300	0.168
Religion of parents	3.584	1.277	3.58	0.000	1.783
Occupational status of parents’	0.027	0.030	-3.25	0.001	0.003
Average monthly income	0.995	0.000	-2.56	0.010	0.994
Service paid	2.87	1.447	2.09	0.037	1.068
Visiting mode of his wife/attendant	0.082	0.060	-3.41	0.001	0.019
Waiting time before seeing a doctor or a nurse his wife/attendant	0.121	0.062	-4.09	0.000	0.044
privacy during examinations	10.611	6.838	3.67	0.000	3.001
Number of parity	83.745	84.306	4.40	0.000	11.642
Mode of delivery of his wife	7.6895	3.690	4.25	0.000	3.001
maternal condition after delivery	.97789	.5232	-0.04	0.967	.34262
Fatal outcome	.00324	.01213	-1.53	0.125	2.13e-06

Supplementary Files

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