Women's satisfaction and its' associated factors on institutional delivery services provided by public health facilities of Tanahun district, Nepal

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Abstract

Background Institutional delivery is one of the important strategies to reduce the maternal related risk at the time of delivery. Satisfaction of women on labor and delivery care services has good influence on their health and results in subsequent utilization of health services. This study was focused to assess women's satisfaction and its' associated factors with institution delivery services in public health institutions.

Methods Cross- sectional study was conducted among 169 participants from June 2018 to November 2018 among women (having under one year children) residing in Tanahun district. Simple random sampling, face to face interview and semi structured interview schedule was used for the collection of data. Data were entered in Epi-Data and analyzed by SPSS. Ethical approval was obtained from Institutional Review Committee at Pokhara University and maintained during the process of research.

Results The age of the participants were between 16 to 40 years with median age 25 years (IQR = 7 Years). Most (93.5%) of the participants were Hindu. Majority of the participants (57.4%) and their husbands (60.4%) had secondary level education. Almost all pregnancies (99.4%) are planned and normal delivery was most common (77.5%). The study shows that 55% of the women performed delivery in public health facilities. The study states high satisfaction score in health status of women after delivery (4.8) and lowest in availability of visitor's bed (2.99). Women's satisfaction and religion was seen to be significantly associated.

Conclusion Majority of the participants were satisfied with the services provided by public health facilities. Although, number of birthing centers were increasing, facilities in the health institution is not sufficient as required. Different factors such as cleanliness of delivery room, availability of staffs, medicine, visitor's bed and behavior of staff are some issues to be improved.

Background

Satisfaction is stated as a pleasant feeling that you get when women receive facilities they wanted, or when they have done something they wanted to do.[1] Satisfaction of women is a subjective and dynamic perception of the extent to which health care facility you expect to receive. It is not important whether the women are right or wrong, but what is important is how the women feel.[2, 3]Satisfaction among pregnant women who were attending in health institution delivery is important measures to measure the quality of health care. The World Health Organization (WHO) emphasizes ensuring patient satisfaction as a means of secondary prevention of maternal mortality since satisfied women may be more likely to adhere to health providers' recommendations.[4]

Satisfaction on maternity care is a multidimensional construct embracing satisfaction with self and with the physical environment of delivery room and quality of care [5]. Quality of care is an important but often neglected issue in safe motherhood programs. Quality of care can be considered from the provider or

user's perspective, and is differentiated into observed and perceived quality. Lack of quality health services results in the negligence on health services. The mother's assessment of quality is central because emotional, cultural and respectful supports are needed during labor and the delivery process.[6] Women's satisfaction is one of the most frequently reported outcome measures of quality of care [3] Satisfaction of women on labor and delivery care services has good influence on her health and results in subsequent utilization of health services. Thus knowledge about women satisfaction on labor and delivery care can increase the utilization of services.[7]

Several barriers are seen for the utilizing of institutional delivery services. The major factors are socio-demographic factors, maternal health factors, household factors and service related factors.[8–11] Some studies states that strategies like user-fee exemption for delivery and associated to enhance access, barriers still exist as universal coverage remains elusive. In some studies household headship, education, maternal age, and socioeconomic status were also significantly associated with place of delivery.[12] Major three types of delay are seen for receiving institutional delivery services. They are delay in seeking care, delay in reaching care and delay in receiving care. Poor birth preparedness, knowledge on institution delivery, family influence on decision, geographical inaccessibility, and unmet needs of care in CEONC and fear of hospital setting [13] are common factors related to first delay. Late and poor-quality referral, transport not available and inadequate decisions by husband/relatives have been associated with the second type of delay. Lack of supplies and staff, poor quality of care and multiple delays due to second referrals have been reported in the literature as part of the third type of delay.[14–16]

Many of the women get suffer from the maternal related health issue during pregnancy and childbirth. In 2015, about 3, 03,000 women died due to maternal related cause. Among them 99% of the death are occurred in low and middle and low income country. More than 90% of all births benefitted from the presence of a trained midwife, doctor or nurse in middle and high income countries but, only less than half of all births in several low-income and lower-middle-income countries were assisted by such skilled health personnel.[17]The South East Asia Region alone accounts for approximately one-third of the global maternal and child deaths annually.[18]Nepal government has introduced institutional delivery services as demand sided intervention. There has been increased in number of birthing center in the different district of the country. Nepal has committed to achieve 70% of all deliveries at institution by 2020 for achieving SDG target in 2030. Institutional delivery has been increased in all region expect state number two.[19]

Maternal morbidity and mortality highly decreases by safe delivery and skilled birth attendant at every birth. Improving maternal health and decreasing maternal mortality is the strategies for increasing emphasis on women's satisfaction with care in order to improve women's adherence to the service.[7] Women's satisfaction is an element representative of quality of care. Therefore the most powerful prediction for measuring women's satisfaction on governmental health services was provider's behavior towards the patients, particularly respect and politeness.[20] Maternal morbidity and mortality is highly decreased by safe delivery and skilled birth attendant at every birth which indicates women satisfaction with the services was the major factor for improving maternal health. One on the three strategies for

reducing maternal mortality is taken as a maternal satisfaction.[7] A satisfied women will recommend center's services expressing their satisfaction to four or five peoples, while a dissatisfied women on the other hand will complain to twenty or more.[21]

Different factors are associated with the satisfaction of mother at institution delivery services.[22]It is also essential to identify the factors involved in dissatisfaction, if a good health care system is sought.[21] Most of the women were satisfied with receiving health care facility, providers skill, politeness of the staff waiting involvement in decision making, cleanliness and information received by them.[22] More waiting time and less consultation time are seen as the problem in the satisfaction among women.[20]Almost all the study related to maternal satisfaction were based on hospital that have create a fear to women to tell about bad side of the services.[23]

Patient satisfaction has been increasing as the important outcome for health care delivery and increasing studies in the developing countries. Most studies are focused on low and middle income countries. Among them Nepal is one of the developing countries which has low institution delivery rate. So it becomes an important issue in the public health. Mainly women are not satisfied on health related services. Since Nepal is mountainous country, topographical variation can be seen as the barriers for receiving health services. Most of the people have low income. So government has provided these services free of cost. Instead of free institution delivery services the status of the institutional delivery is very low in the district. The study also attempts to describe the socio economic condition and its impact on institutional delivery services. The study mainly aims to find out the level of satisfaction among women who have taken institutional delivery services. There may be number of researches in this issue. So, it would be relevant to explore the women's satisfaction and its' associated factors at institution delivery services provided by public health institutions of Tanahun district.

Methods

Community based cross- sectional analytical study was conducted among 169 participants from June 2018 to November 2018 among women (having under one children) residing in Tanahun district which is located in Gandaki Province of Nepal. Simple random sampling technique was used. Face to face interview was the data collection technique. Semi structured interview schedule was used as a tool for assessing satisfaction on institutional delivery services. Pre-testing was conducted and necessary modification was made in questionnaire. Data were entered in Epic-Data (Version 3.1) and analyzed by SPSS 20.The data was analyzed in terms of frequency (percentage), mean (S.D) or median(IQR) as per necessary. Info- graphics was created and interpreted as per the need. Ethical approval was obtained from Institutional Review Committee, Pokhara University. Participants who involved in this research were provided with the information in relation to the topic.

Results

Demographic Characteristics of Participants

Majority 71.6% (121) were age between 20-29 years. The median age of the participant was 25 years (IQR=7 years). Similarly majority of the participants follow Hinduism (93.5%) and lived in joint family (60.9%). Most of them 57.4% had secondary level education and only 3.6% were illiterate. Most of the women, 85.2% were housewife while remaining 14.8% (25) had some kind of work such as business job and daily wages.

Reproductive Health related Characteristics of Participants

Majority of the women, 62.1%were above 20 years. Similarly, most of the women, 62.7% were between 20-26 years during first pregnancy. Most of the participants (56.83%) were primiparous while remaining 43.16%. Among primiparous, most of them 67.1% had less than 14 hours labor time while 32.9 %. In case of multiparous 63.3% noticed less than 8 hours labor. Regarding the decision on service delivery point mostly husband 50.3% followed by wife/self (45.6%) were involved.

Table 1 Demographic characters of the participants.

Characteristics(n=169)	Frequency(f)	Percentage (%)
Age		
<20	12	7.1
20 – 29	121	71.6
≥ 30	36	21.3
Median age = 25 years (IQR= 7 years), Minimum = 16 years, Maximum = 40 years		
Religion		
Hindu	158	93.5
Buddhist	6	3.6
Christian	3	1.8
Muslim	2	1.2
Family type		
Joint	103	60.9
Nuclear	63	37.3
Extended	3	1.8
Women's education		
Graduate and above	2	1.2
Under graduate	16	9.5
Secondary	97	57.4
Basic	48	28.4
Illiterate	6	3.6
Women's occupation		
Housewife	144	85.2
Business	9	5.3
Agriculture	7	4.1
Job	6	3.6
Daily wages	2	1.2
Others	1	.6

Table 2: Reproductive health characteristics of participants

Characteristics	Frequency (n)	Percentage (%)
Age of marriage(n=169)		
< 20 years	64	37.9
≥ 20 years	105	62.1
Median age=20 years (IQR= 4 years), Minimum= 7 years, Maximum=32years		
Age of first pregnancy(n=169)		
< 20 years	45	26.6
20-26 years	106	62.7
≥ 26 years	18	10.7
Median age= 21 years (IQR=5 years), Minimum=16years, Maximum=32 years		
Duration of labor (hours) for Primiparous (n=79)		
< 14 hours (Normal)	53	67.1
≥ 14 hours (Abnormal)	26	32.9
Duration of labor (hours) for Multiparous (n=60)		
< 8 hours (Normal)	38	63.3
≥ 8 hours (Abnormal)	22	36.7
***Decision on Service Delivery Point**		
Husband	85	50.3
Self	77	45.6
Mother in law	38	22.5
Father in law	26	15.4
Sister in law	2	1.2
Brother	2	1.2
Sister	3	1.8
Friends	1	0.6

Table 3 Health service related characteristics of participants

Characteristics	Frequency (n)	Percentage (%)
Mode of delivery		
Normal vaginal delivery	131	77.5
Caesarean section	37	21.9
Normal delivery with episiotomy	1	.6
Duration of stay at health facility for Normal delivery (days) (n=169)		
Less than two days	106	62.7
Three or more days	63	37.3
Median= 2 (IQR=4), Minimum= 1 day, Maximum= 9 days		
Distance of health facility(hours) (n=169)		
<1 hours	113	66.9
2-3 hours	54	32.0
>3 hours	2	1.2
Median= 1 hour (IQR=1), Minimum= 1 hours, Maximum= 4 hours		
Available of incentives		
Yes	152	89.9
No	17	10.1

Health Services Related Characteristics of Participants

In case of delivery, more than three –fourth respondents 77.5% (131) had normal vaginal delivery. Nearly, two third of participant 62.7% (106) stayed in hospital for less than two days. The median stay in hospital was 2 days. Similarly two-third of the participant 66.9% (113) participant had to travel less than one hour to reach the hospital. Nearly, nine-tenth (89.9%) had received the incentive provided by Nepal government. The amount of incentive was found to be different among women due to budgetary policy of every fiscal year. Median cost of the health services of respondents was NRs 13000 with IQR NRs21500, minimum NRs 100 and Maximum NRs 100000.

Proportion of clients' satisfied

There were twenty four items to measure the opinion of the respondents. The lowest score (2.99) was obtained for availability of visitors bed and highest score (4.80) was obtained by condition of women

after delivery. Most of the variables value was more than four but food services (3.91) was followed by the lowest value. 4.2 to 4.8 range score was obtained to the services provided by staff in public health centers. Infrastructure of the health institution obtained the value range from 4.1 to 4.6. Similarly, accessibility of the services had the score range value from .4.0 to 4.6.

Satisfaction on institution delivery services

According to the data obtained 55% (93) respondents were satisfied with institutional delivery services while 45% (76) respondents were not satisfied. Almost all the participant 99.4% (168) wanted to visit to hospital for next delivery and suggested others for institute delivery.

Association of socio-demographic factors with clients' satisfaction during delivery period

Table 4: Association of socio-demographic factor with women's satisfaction.

Variables	Client satisfaction		Total	Chi-square	p-value
	Satisfaction 93(55%)	Dissatisfaction 76(45%)			
Age					
<25	42(63.6%)	24(36.4%)	66	χ^2=3.432	0.082
25+	51(49.5%)	52(50.5%)	103		
Religion					
Hindu	83(52.5%)	75(47.5%)	158	χ^2=6.084*	0.024**
Non-Hindu	10(90.9%)	1(9.1%)	11		
Caste/Ethnicity					
Upper Caste	38(59.4%)	26(40.6%)	64	χ^2=1.180	0.554
Janajati	40(50.6%)	39(49.4%)	79		
Dalit and others	15(57.7%)	11(42.3%)	26		
Family type					
Single	39(61.9%)	24(38.1%)	63	χ^2= 0.166	0.201
Non-single	54(50.9%)	52(49.1%)	106		
Women's education					
Below basic	33(61.1%)	21(38.9%)	54	χ^2= 1.186	0.321
Secondary and above	60(52.2%)	55(47.8%)	115		
Husbands Education					
Below basic	34{63%)	20(37%)	54	χ^2=0.155	0.104
Secondary and above	59(51.3%)	56(48.7%)	115		
Women's Occupation					
Unemployed	81(56.2%)	63(43.8%)	144	χ^2= 0.586	0.516
Employed	12(48%)	13(52%)	25		
Husband's Occupation					
Unemployed	9(64.3%)	5(37.5%)	14	χ^2= 0.528	0.580
Employed	84(54.2%)	71(45.8%)	155		

***Fisher Exact test, **p value significant at <0.05,**

Table 4 represents the association between the socio-demographic variable and women's satisfaction in institution delivery services. Religion (χ^2=6.084, df=1, p= 0.0024) was significantly associated with women's satisfaction.

Association of Reproductive Health related Characteristics with Client satisfaction during delivery period

Table 5: Association of reproductive health related characteristics with women's satisfaction

Variables	Women's satisfaction		Total	Chi-square	p-value
	Satisfaction 93(55%)	Dissatisfaction 76(45%)			
Age of Marriage					
<20 years	48(62.3%)	29(37.7%)	77	χ^2=3.052	0.09
≥20 years	45(48.9%)	47(51.1%)	92		
Complete age during first pregnancy					
<20	30(66.66%)	15(33.33%)	45	χ^2=3.548	0.170
20-26	53(50%)	53(50%)	106		
≥26	10(55.6%)	8(44.4%)	18		
Total Live birth					
Primiparous	54(55.1%)	44(44.9%)	98	χ^2=0.00	1
Multiparous	39(54.9%)	32(45.1%)	71		
Labor time(Primiparous)					
<14 hours	28(52.8%)	25(47.2%)	53	χ^2= 0.007	1
≥14 hours	14(53.8%)	12(46.2%)	26		
Labor time(Multiparous)					
< 8 hours	20(52.6%)	18(47.4%)	38	χ^2= 0.021	1
≥ 8 hours	12(54.5%)	10(45.5%)	22		

Table 5 shows the association between reproductive health related characteristics with women's satisfaction. None of the variables were found statistically significant.

Association of Health Service related Characteristics with Women's Satisfaction during delivery period

Table 6: Association of health services related characteristics with women's satisfaction.

Variables	Women's satisfaction		Total	Chi-square	p-value
	Satisfaction 93(55%)	Dissatisfaction 76(45%)			
Type of delivery					
Normal	71(54.2%)	60(45.8%)	131	χ^2=0.163	0.715
Abnormal	22(57.9%)	16(42.1%)	38		
Health status of mother					
Normal	92(54.8%)	76(45.2%)	168	χ^2= 0.817*	1
Abnormal	1(100%)	0(0%)	1		
Health status of child					
Normal	89(55.3%)	72(44.7%)	161	χ^2= 0.085*	1
Abnormal	4(50%)	4(50%)	8		
Duration of stay in hospital(Days)					
<2 days	60(56.6%)	46(42.4%)	106	χ^2= 0.285	0.633
≥ 2 days	33(52.4%)	30(47.6%)	63		
Cost of health services					
<13000	48(62.3%)	29(37.7%)	77	χ^2= 2.888	0.105
≥ 13000	37(48.7%)	39(51.3%)	76		
Distance of health facilities					
< 1 hour	63(55.8%)	50(44.2%)	113	χ^2= 0.072	0.87
≥ 1 hour	30(53.6%)	26(46.4%)	56		
Receive incentive					
Yes	86(56.6%)	66(43.4%)	152	χ^2= 1.466	0.305
No	7(41.2%)	10(58.8%)	17		

***Fisher exact test**

Table 6 expresses association between health service related characteristics with women's satisfaction. None of the variables were found statistically significant.

Discussion

Satisfaction on Institution Delivery Services

According to survey (55%) of the participant were satisfied with institutional delivery services provided by public health centers. The level of satisfaction was 56% in Sri-Lanka, 51.9% in South Africa and 54.5% Kenya which were said to be similar studies of this research. In the similar case, the studies conducted in South Australia and Bangladesh, 86.1% and 92.3% women were satisfied respectively.[24]A study in Ethiopia states that 90.26% women were satisfied with institution delivery services. Similarly some other studies on Ethiopia state that 82.9% and 61.9% women were satisfied.[7]A study conducted in Nepal states that the overall satisfaction on institution delivery services was 45.1% while it was 58.1% in Kaski District.[25] According to STS Survey in 2012 the level of satisfaction among Nepalese women was 90%. But STS survey stated 86% satisfaction on their survey in 2013.[5] The difference in level of satisfaction in other studies and ours could be because of study setting difference, more availability of health service facilities in different countries and could also because of methodological difference in which researcher used factor analysis to set the cutoff point for satisfaction.

Satisfaction was seen to be strongly correlated with the politeness and experience of staff as well as the health facilities that they received. A study in Nepal showed that clients were satisfied with care received at the facility (86%), provider's skills (85%), politeness of staff (83%), waiting time (80%), involvement in decision making (77%), cleanliness (70%), information received (69%), and assured confidentiality (67%). [22] The proportion of mothers who were satisfied with delivery care was nearly four-fifth (79,1 %). satisfaction levels for cleanliness was (35%), presence of relatives or family to support women during child birth was (65.3%) the client and emotional support during child birth.[26] A study revealed that support for institutional delivery by mother-in-law and husband is associated with institutional delivery. [27]Another study states that that two-third of the clients were satisfied or very satisfied with privacy in the facilities.[22] Women who were treated with respect, courtesy and dignity and had trusting relationship with their care providers were more likely to be satisfied.[5]

Socio-demographic variables with Satisfaction

In this study, religion is considered as one of the variables associated with satisfaction in delivery services. But in other studies there was association between age group and education with overall satisfaction which was statistically significant.[28]This study states that women who were 25 years and above, were more satisfied but the case was not found same to women whose age ranging from 20 to 34 years . This is to say, they were less satisfied with the care they received compared to women whose age from 35 to 49 years.[29] A study in Chitwan shows Age[30], parity and education were associated with the institution delivery services while this study didn't show any association.[31] The difference in socio-demographic characters of the participants in other studies and our studies could be due to the variation in geographical status, standard of living, level of education, religion and status of family.

Reproductive health variables with satisfaction.

A study in Nepal states that one-third of Nepali women get married before 16 while 57% become pregnant at their adolescent but this study expresses that around two-third women get married after age twenty and more than seventh-tenth planned first baby after 20 years.[32] With changing time period, increase in health education, restriction by government law and provision of education to girls could be reason for delay marriage which can further increases in decision making ability of female which ultimately reduces the pregnancy before the age of 20 years. A study conducted in public health facilities of Kenya states that more than half (51.7%) were multiparous where as in this study 35% were multiparous. A tri-nation study states that decision regarding utilization of birthing facilities is often made by the husband or his family members rather than by the parturient woman[13] where as another study of eastern Nepal showed that slightly more than half of the of decision for delivery point were made by mother and her spouse which is also considered as supporting details to this study.[33] The reason behind this could be because of the patriarchal nature of society, where the final decision are mostly made by the husbands or elder persons of the household regarding delivery point. A study conducted in eastern Nepal showed that almost all (92.5%) pregnancies were planned which supports our study.[33] Increase level of education of our participants (female) and theirs husbands might be one of the reason for high planned pregnancy.

Health services related variable with satisfaction

Generally, more than eight-tenth (82.9%) participants travelled for an hour according to the study conducted in Ethiopia while in this study around seventh-tenth (66.9%) had travelled less than an hour to reach to health institution.[26] This could be because of the topographical variation, transportation facilities, social beliefs and practices on delivering on urban health facilities rather than rural health facilities. A study in Pakistan states that public sector hospitals were more efficient in providing assurance to women which was consistent to our study.[34] This could be because the Nepal government is increasing number of birthing center and provide free delivery service with travelling cost. So, believe towards the government health centers is increasing day by day. Discipline of staff, cleanliness and regular visits of doctors is found in public sector hospital which increased the satisfaction of women which is similar to our study[34] The reason behind this could be due to the commitment of health staffs during the recruitment to provide quality services and also could be due to the individual nature of health service providers. A study in Northern Ethiopia states that having plan to deliver at health institution and laboring time of less than six hours were significantly and positively associated with maternal satisfaction on delivery service but there was no any association seen in our study among characteristics[23].Only 40% of mothers were satisfied with the quality of the services as a study conducted in Nairobi[4]. A study states that women who received advice from health workers on danger signs for mothers had higher satisfaction which was similar to our study. This can be supported by practice in Nepal that, Female Community Health Volunteer (FCHV) are regularly involved in ground level to ensure the safety for the pregnant women. They promote safe motherhood, child health and other community based health issues and service delivery and also refer serious cases to health institution and motivate local people on healthy behavior. Women who had an opportunity to ask questions related to reproductive health to the health providers had higher satisfaction which shows consistency in our study.

[5] This could be because of the provision of four ANC checkup for pregnant women in which they can ask maternal health related issues in four visit in health institution. Female staff like ANM and SBA are recruited in health institution so that every female can share their problem without hesitation. Another study states that incentives is not only for the utilization of institutional delivery services. It also states that incentives scheme increased the awareness in the community.[35]

Conclusion

According to the overall study majority of delivery service users were satisfied with institutional delivery services provided by public health facilities (centers). The level of satisfaction was seen higher in services for mother delivering in health centers and lower in availability of well managed visitor's bed in health facilities. Women using delivery services were more satisfied with infrastructure and health services. Majority of the participant were satisfied with time provided by health worker, their response towards the participant, co-operation during delivery period along with politeness of health staff. Respondents were dissatisfied with cleanliness of toilets, labor room, and availability of well managed visitor bed as well as with food services at hospitals. The study shows that religion was significantly associated with women's satisfaction where as other socio-demographic factors were not associated with women's satisfaction towards delivery services at public health facilities. Similarly, reproductive health characteristics and health services characteristics were not associated with women's satisfaction.

Quality of service is directly associated with environment around the health institution so hygienic environment should be maintained to ensure clean and safe delivery services that will ultimately increase the satisfaction of clients. Satisfaction with services is also associated with how visitors are managed in health institution so based on the findings of this study it is recommended that adequate number of visitor's bed along with their maintenance should be considered as an important factor in every health institution. Promoting free and quality delivery services through public health facilities is today's concern. So concerned authorities are recommended for considering need of people in community and are requested to address those with new service delivery equipment's and infrastructure which may further increase their satisfaction towards services and institution.

Abbreviations

ANC
Antenatal Care
ANM
Auxiliary Nurse Midwifery
CEONC
Comprehensive Emergency Obstructive and Neonatal Care
FCHV
Female Community Health Volunteer
IQR

Inter-quartile Range
SBA
Skilled Birth Attendance
SDG
Sustainable Development Goal
STS
Service Tracking Survey

Declarations

Ethical Approval and Consent to Participant

Ethical approval was provided by Institute Review Committee of Pokhara University Research Centre. All the participant are informed about study. Participant were asked for the willingness to participate in the study. Participates signature was taken after the completion of data. Information were provided to participant who were willingness to know more about topic.

Consent for publication:

Non Applicable

Availability Of data and materials:

Data are analyzed in SPSS version 20 and can be provided by corresponding author after adhering to CISM policy on data sharing

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