

Assessment of Quality of Antenatal Care (ANC) Service Provision Among Pregnant Women in Ambo Town Public Health Institution, Ambo, Ethiopia, 2013

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Abstract: Introduction: Antenatal care refers to care given to pregnant women so that they have safe pregnancy and healthy baby. Improving the quality of ANC and other reproductive health services has been shown to increase uptake of services and reduce the number of adverse maternal health outcomes. There is a limited attempt to measure the quality of ANC services in Ethiopia. Although, the coverage of ANC services has improved in the last few years, the quality of the services has remained comparatively low. The objective of the study is to assess quality of antenatal care services provision in governmental health institution. Methods: Institutional based descriptive cross-sectional study design was employed from October 23, 2013 to December 30, 2013. A pretested and semi structured questionnaire via interview was used to collect quantitative data from 288 pregnant women and in-depth interview of focal person at facility level to collect the qualitative data. The collected data was entered & analyzed using SPSS version 16.0. Results: Overall 256 (89%) of clients reported satisfaction with services they had received. Regarding client-provider relationship, about 206(71.5%) of women reported that the provider were attentively listening to their problems but 16% of clients believe that there was a problem of privacy. About 266 (92.3%) of clients received information on the services given, from this only 28(9.03%) had obtain information on how to recognize/danger sign of pregnancy. Conclusion and recommendation: The study revealed that majority of women was satisfied with the services they had received. however; only small number of participants had information on how to recognize serious problems occurring during pregnancy. Even if, as a principle all pregnant women should properly involved in decision making process, in this study almost half (44.5%) had not properly involved in decision making process during ANC service provision. Giving greater emphasis on the delivering information on how to recognize serious problems (danger sign) occurring during pregnancy and securing privacy of clients in order to improve quality of care was recommended. Pregnant women should be encouraged to reach at decision during client provider interaction by health care provider.

Keywords: ANC, Quality of Care, Client Satisfaction, Provider-Client Interaction

1. Introduction

Antenatal care refers to care given to pregnant women so that they have safe pregnancy and healthy baby. Pregnancy is a normal physiological process associated with certain risks to health of the woman and the infant she bears. These risks can be overcome through proper antenatal care (Fatalia M et al., 1990).

The assessment of services includes quality ANC encompasses satisfaction of clients, roles of service providers & managers and the status of services & their integration of different services (Mozlan JT and Ortayli N, 2000). Antenatal

care coverage of Ethiopia is 34% which is lower than that of worldwide coverage (72%) and percentage of deliveries at health care facilities is 16.4% (CSA and ORC Macro, 2000). As Donabedian, defined quality in terms of three major parameters: the structure (health care setting), process (how health care is provided) and outcome (effect of the health care including level of patient/client satisfaction) (Donabedian A et al., 1988). Growing demand for health care, raising costs, constrained resources, and evidence of variations in clinical practice have increased interest in

measuring and improving the quality of health care in many countries of the world (Mozlan JT and Ortayli N, 2002).

For normal pregnancies, WHO recommends only four Reproductive Health antenatal visits. The major goal of focused antenatal care is to help women maintain normal pregnancies through: identification of existing health conditions, early detection of complications arising during the pregnancy, health promotion, disease prevention and, birth preparedness and complication reduction plan (CSA and ORC Macro, 2011).

Direct obstetric causes (hemorrhage, obstructed labor, hypertensive disorders, unsafe abortion, and infection) contribute for up to 80% of maternal deaths with increased fetal loss, prenatal mortality and poor survival of small children (Fatalia M *et al.*, 1990, Campbell S.M *et al.*, 2000).

Antenatal care is placed as the basic intervention in reducing maternal and newborn mortality in “safe motherhood package” which has been developed by World Health Organization (WHO) as a guide for the interventions in maternal and child health (Fatalia M *et al.*, 1990, CSA and ORC Macro, 2000 and WHO, 1994).

Improving the quality of ANC and other reproductive health services has been shown to increase uptake of services and reduce the number of adverse maternal health outcomes (UNFPA and ICPD, 1994).

An estimated 500,000 maternal deaths occur every year and over 99% of these deaths take place in developing countries (Donabedian A, 1988). The lifetime risk for a woman in sub-Saharan Africa of dying from pregnancy related causes is about 1 in 16 which is more than 500 times higher than for a woman in northern Europe. Over 90% of low birth weight infants (infants with a birth weight less than 2,500grams) in the world are born in developing countries. These babies account for 30% to 40% of all infant deaths (CSA and ORC Macro, 2000). The capacity in terms of the human resource and facilities are limited to support these kinds of interventions (FMOH, 2005).

The maternal mortality rate has been estimated to be 350 per 100,000 live births. This is one of the highest rates in the world. About 13% of the children are born with low birth weight and the infant mortality rate is 77 per 1000 live births, which is 10 to 20 times higher than for developed countries (UNFPA and ICPD, 1994, ROAD Map, 2012).

As emphasized in the 2011 Ethiopian Demographic and Health Survey (EDHS), one explanation for poor health outcomes among women in Ethiopia was the non-use of modern health care (UNFPA and ICPD, 1994, CSA and ORC Macro, 2011). The safe motherhood initiative strongly emphasized ensuring the accessibility and use of antenatal services as most of the deaths occurring from obstetric complications are preventable. However, in Ethiopia the proportion of mothers attending ANC was low even for women with access to the services and only 34% of mothers received antenatal care from a health professional for their most recent birth (CSA and ORC Macro, 2011, WHO, 2003).

ANC service utilization is very essential for improvement of maternal and child health, the use of the service is still

very limited in oromia Region which was only 31.1% (CSA and ORC Macro, 2011).

Based on many reports from Ethiopia and in other developing countries the health care delivery system not only falls short of reaching the majority of the people but also its quality is often compromised. (CSA and ORC Macro, 2000, WHO, 2003).

1.1. Significance of the Study

The study proposed to assess the quality of antenatal care utilization among pregnant women in governmental health institution in Ambo town. In our country, there is limited attempt to measure the quality of ANC services. Even though, few studies were conducted in the country to assess ANC services, they were not enough to show the regional coverage of the service particularly in the town. (CSA and ORC Macro, 2011) Therefore this assessment is believed to give the present image of quality in ANC In Ambo town, governmental health institution, which may help the concerned bodies to take actions based on the finding and will be used as a base line data.

1.2. Objectives

- To assess quality of ANC service in Ambo town governmental health institution in West Shoa Zone, Oromia Regional State from October 25, 2013 to January 8, 2013.

1.3. Specific Objectives

- To describe client satisfaction with ANC services in Ambo town governmental health institution
- To determine provider-client interaction in ANC services in Ambo town governmental health institution.
- To assess content's of information given to a pregnant women's regarding ANC in Ambo town governmental health institution.

2. Methods and Materials

Facility based cross-sectional study design combining both qualitative and quantitative method was used to assess quality ANC service in Ambo Town Public health facilities.

The study was conducted in Ambo town. Ambo town is located in Oromia Regional State, West Showa zone at 114km to the west of Addis Ababa. In the town different health care facilities are present ranging from private clinics to Zonal hospital.. According to the data obtained from the woreda health bureau of the town, from 61,835 total populations, the number of women in child bearing age is 13,666, of these 2290 women planned to be on ANC visit, about 83% (1907 women) found to do so.

All pregnant women who were attending their antenatal care services in Ambo town governmental health institutions and selected health professionals who were supplying information and providing antenatal services in health institutions during the study period were study population.

Single population proportion formula were used to determine required sample size via considering 31.1% proportion of antenatal care in the region, 95% confidence level and 5% margin of error assumption.

The four public health institutions in the town were included in the study and the calculated sample size was proportionally allocated to their average client size. Individual study subjects were selected simple randomly sampling methods from each health facility by using the clients ANC registration book. Eligible women were included in the study consecutively when they came for services until reaching the sample size. And non respondent rate was documented but replaced by other. And all health professionals who are directly involved with provision of antenatal services was included in the survey. For the qualitative component of the study, six antenatal care provider was selected in each health facility by purposive sampling (the provider who have more experience based on the number of years he/she work in the antenatal clinic and providing ANC services in the facility).

After reviewing of relevant literatures from previous similar studies and other materials; data collection tools questionnaire was prepared in English and translated to Afan Oromo local language then translated back to English to ensure consistency.

Quantitative data were collected by interviewing clients using a semi structured pretested questionnaire to assess their satisfaction to actual ANC service. In the case of the providers; the self-administered questionnaire was distributed to all ANC providers in facility where the study was conducted. All providers responded to the questionnaire.

Qualitative data were collected using in-depth interview with focal person at facilities level were made using Semi-structured open ended questionnaire. Facility and equipment observation for their capacity to provide ANC service was made using checklist for inventory.

Six female data collectors were recruited. Training was given to the data collectors for one day about the objective, relevance of the study, confidentiality of information, participant's right, informed consent and techniques of interview.

Data were entered, cleaned and analyzed using SPSS version 16 statistical packages. Frequencies, proportion and summary statistics were used to describe the study population in relation to relevant variables.

2.1. Study Variables

2.1.1. Dependent Variable

- Quality of ANC services.

2.1.2. Independent Variables

- Socio-demographic: age, gender, educational level, occupation, religion, resident and socio-economic
- Client's characteristics: satisfaction with the care and information given.
- Providers characteristics: duration of stay, skill, behavior, experience

- Facility characteristics: Availability of equipment, supplies, and drugs.

2.1.3. Operational Definitions

- Satisfaction: - is defined as the pregnant women's self reported level of satisfaction stated as satisfied or dissatisfied on exist interviewed of the ANC service received from health professionals.
- Quality: "quality of care" assessed based on the points of view of providers, managers, and users.
- Client – provider relationship: "Provider who possesses good listening skills
- Understanding and cares for the woman in "respectful" way and in a private environment.
- Information received, means when a woman received information 'as much as she wanted'.

2.2. Ethical Considerations

Ethical clearance was obtained from the Ethical committee of the Department of Nursing and Midwifery, College of medicine and health sciences, Ambo University. Formal letters were written to all health institution. The right to discontinue or refuse assured and verbal informed consent was obtained from each study participant. Confidentiality of the information was assured and privacy was maintained

3. Results and Discussion

3.1. Socio-Demographic Characteristics of ANC Clients

Table 1. Socio-demographic distribution of pregnant women using ANC services, at Ambo town, in public health institutions, 2013.

Variable(n=288)	Frequency	Percent (%)
Age category		
15-19	43	14.93
20-29	157	54.51
30-39	88	30.57
Ethnicity		
Oromo	244	85
Amhara	34	12
*Others		
Marital status		
Single	2	-
Married	286	99.3
Religion		
Orthodox	146	51
Muslim	6	2
Protestants	123	43
**Others	13	-
Occupation		
House wife	151	52.4
Gove-employee	50	17.4
Merchant	608	21
Others	27	9.2
Income		
400-1000ET Birr	211	73.5
1001-2000ET Birr	64	22
2001-3000 ET Birr	13	4.5

A total of 288 pregnant women were participated in the study with a 100% response rate. The majority, 157(54.51%) of the client's were within the age of 20-29 years old and the other 88(30.57%) and 43(14.93%) were within the age of 30-39 years and 15-19 years respectively and the mean age of the respondents were 16.2 years. With respect to the educational status; majority 163(56.6%) of the study participant had secondary and above educational status, While 102(35.4%) study participant were completed primary school. With regard to occupation the majority 151(52.4%) were house wives, 60(21%) were merchants 50(17.4%) government employed, 18(6.2%) and others 27 were Farmers and Local drink seller in their occupational status (Table 1).

3.2. Perception of Pregnant Mothers with Respect to Cost, Time and Distance of ANC Service

Regarding with the waiting time for ANC service, about 202(70%) of the participant responded that waiting time spent for health care provider was 15 minutes to 30 minutes and 78(30%) of the participant said 30 minutes to hour.

With respect to the average time spent from home to facility, 235 (81.5%) of the study participant responded as it took 30 minutes to an hour, while 53(18.5%) were respond it took one hour to two hours to reach health institution. Concerning payment related issues all participants respond that the services were free paid (Table 2).

Table 2. Perception of study participants with respect to certain characteristics related to ANC services at Ambo Town in Governmental Health Institution 2013.

Variables (n=288)	frequency	Percent (%)
Time spent to reach health facility From their home		
30 min to 1hour	235	81.5
1hr to 2hrs	53	18.5
Payment for the services provided		
Yes	-	-
No	288	100
Waiting time at health institution		
15min-30min	202	70
30min-1hr	78	30
Women involved in decision making		
Full involved	160	55.5
Moderately involved	90	31.3
Not involved at all	38	13.2

3.3. Interaction at ANC Service Between Pregnant Mothers and Providers

Majority of clients were ranked the behavior of care providers from very good 157(47.5%) to good 130 (45.5%) respectively. Women also asked about the situation of privacy at ANC Care unit, majority 246(84%) of the participant respond that privacy maintained, while 42(16%) believe that there was violation of privacy.

Regarding the duration of time spent with provider; majority of the participant 212 (70%) said time was adequate, and 66(23%) the time was inadequate (Table 3).

About 206(71.5%) of the participants reported that health care provider were attentively listening to their problem, but

82(28.5%) of the women reported that the provider didn't asked them their feeling. Concerning on the number of ANC visit; about 76(26.4%) and 72(25%) had first and second visit, while 58(20.1%) and 20 had fourth and more visit respectively (figure 1). Based on their preference; majority 190(66%) were preferred female provider, while only 39(13.5%) were preferred male provider (figure 2).

Table 3. Perceived interaction between ANC services provider and pregnant mothers related to different characteristics at Ambo Town governmental health institution 2013.

Variables(n=288)	Frequency	Percent(%)
Lack of privacy at ANC units		
Yes	42	16
No	246	84
Provider listen the client's feeling		
Yes	206	71.5
No	82	28.5
Rank behaviour of health worker		
Very good	173	47.5
Good	130	45.5
Fair	12	7
Time spent with provider		
Adequate time	212	70
Inadequate time	66	23
Don't know	20	7

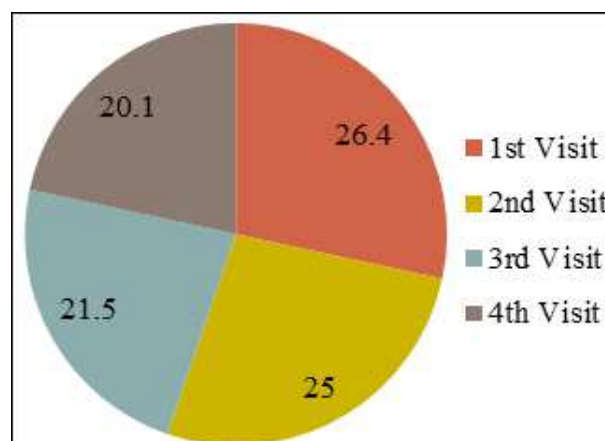


Figure 1. shows the distribution of the number of ANC visiting of pregnant women at Ambo town in governmental health institution, 2013.

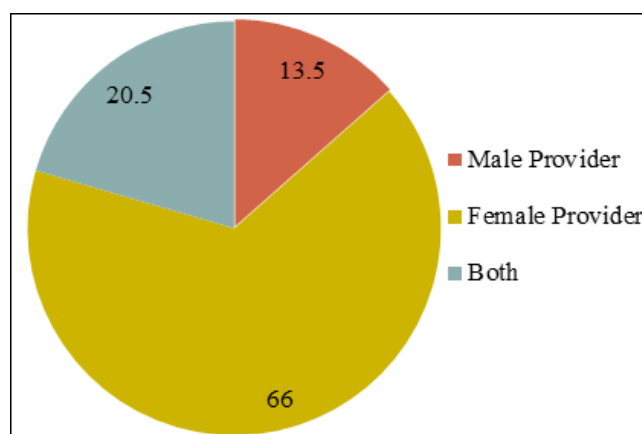


Figure 2. shows the distribution of participants' preference of sex of ANC care provider during ANC service utilization at Ambo town in governmental health institution, 2013.

3.4. Pregnant Mother Satisfaction with Information Received

Pregnant Mother also asked about general satisfaction with information received on F.P, labor and delivery, breast feeding and danger signs occurred during pregnancy.

Out of those who obtain information; 135 (51%) were said information related to labor and delivery, 127(48%) were said about postnatal and breast feeding and only 28(9.03%) had obtain information on how to recognize danger sign of pregnancy.

3.5. Perception of Pregnant Mothers with Technical & Services Management of Facilities

Regarding to the indicators of technical competence of service providers, 256 (89%) of the women reported as received a comprehensive physical examination, while 32 (11%) of women said that they received less. Out of 288 women asked about the working hours, majority 231(80.2%) of participant reported that the working hours were convenient and 57(19.8%) were said the working hours was not convenient and 207(71.8%) have shown an interest to come again for services in the next pregnancy and also recommend & encourage other to use services at a given health institute. 256(92.3%) of participants were appointed for next follow up. Ninety seven (33.6%) women were very satisfied, 159(55.3%) women were satisfied with ANC services, while only 32(11%) women were not satisfied.

3.6. In Depth Interview for Clients

Among a total of respondents participated in the in-depth interview; A 26 years old, with secondary education stated that, *"If you go to health institution you will find low quality of services and lack of respect and mistreatment from some of the health care providers"*. The 2nd client with 30 years old age having primary education came to Ambo health center *"reported that the service given was good, and improved when compared with previously"*. The 3rd client with 23years old age merchant said that *"the services given to the client's was good, and the care provider has good approaches with their client, in general there is improvement based on the services given"*

3.7. Providers' Perception (Key Informants)

A total of four key informants participated in the in-depth interviewed. The majority of informants had similar understanding about quality of health services and explained quality of health services as follows: A male health professional with 48years old, and having work experience of 8years, from Ambo hospital said that, quality of ANC service means *"when the service has given to the client's on time with skill full and adequate man power, with safe and respectfully ways ,using appropriate resources and satisfying the clients"*.

A female head nurse, from Ambo health center, having a 6years working experiences reported that *"the ANC services*

provided to the client with appropriate ways, with skilled full health profession and satisfying the client's". The male head nurse from Awaro health center with 32 years old, having 5years work experience reported that *"he understood quality of ANC service when the services should be delivered as required, satisfying the client's and has sustainability but because of resource constraint our health facility has not provided service as it required"*. A female nurse from Ambo town governmental MCH Clinic with 36 years old age reported that *"quality of ANC service has acquired when the service has been given for the client's on time, with skill full and adequate man power, with safe and respectful way"*.

When asked about measures to be taken to improve quality of ANC services majority of informants mentioned a need to continuous discussion with administrative office, Ambo town health office West Shoa Zone Health Office and others concerning parts to improving quality of ANC services.

4. Discussion

This study showed that clients have less positive view than providers about issues such as waiting time, time spent in discussion with ANC service provider, information given and ranking about the behaviors of the care giver.

In this study we found that 202 (70%) of the participants had a waiting time ranging from 15min-30min with a mean waiting time of 29.3(+ 9.2SD) minutes for getting the required services. This is similar with the study done in Northern Ethiopia (Girmatsion Fesseha, 2014) and different from reported waiting in Mushin, Lagos, which are about 69.03 + 2.64 minutes (Sholeye OO, 2013)

This difference may be due to less prevision of technical service by health professional in our setup. In addition, there is lower ANC attendance in our facilities taken from the national survey.

More than half of the respondents 160(55.5%) felt they were properly involved in decision process during ANC services utilization. This finding is much lower than the study conducted in northern of Ethiopia (66%) and Lagos Nigaria where most respondents were properly involved in the decision making process(Girmatsion Fesseha, 2014, Sholeye OO, 2013).

In our study, majority of the study participants 212(70%) reported that they had enough time with care provider and 66(23%) reported that time was inadequate for proper interaction with provider of service. This is lower than the study finding in northern Ethiopia 89.8 % in which participant felt time was adequate and study finding in Lagos where most clients 94.6% felt they had enough time to discuss ANC service with service provider.

According to this study most of the women who use ANC service were having Secondary school and above. Thus more or less it was similar with the study conducted in Addis Ababa, Women with at least secondary education more likely to receive ANC (81%) than women with primary education (39 %) and those with no education (22 %) for that reason the educational status of the clients might be has an impact on

quality ANC utilization(CSA and ORC Macro, 2011).

Also this study shows that the number of pregnant women who were made four or more ANC visits was very less (20.1%). Thus it was less than survey done in the EDHS 2005 Urban women are more than rural women to have made four or more visits (46 percent versus 14 percent)(CSA and ORC Macro, 2011).

The qualitative component of the study demonstrated that respectful and friendly greeting was offered for (25%) clients and two (50%) of women reported that the door was not closed and there were people other than the provider during the service given.

This was again supplemented by the qualitative component as some health facilities had private ANC rooms while the remaining facilities had multi- purpose rooms during observation.

5. Conclusion and Recommendation

Generally, the study showed that majority of clients was satisfied with the service provided. However, their satisfaction with specific elements (indicators) of quality was varied. Almost one-third of pregnant women reported that the provider didn't asked them their feeling during interaction and even if as a principle all pregnant women should properly involved in decision making, in this study almost half (44.5%)of pregnant women had not properly involved in decision making process during ANC service provision.

From this finding those pregnant women who reached four or more of ANC visit was less than the national coverage. In addition, during observation of health facilities, some health institution had multipurpose room, this affects the privacy of pregnant women. Less than 10% of the pregnant women had received information on how to recognize danger sign of pregnancy.

Giving greater emphasis on the delivering information on how to recognize serious problems(danger sign) occurring during pregnancy and securing privacy of clients in order to improve quality of care was recommended. Besides, Pregnant women should be encouraged to reach at decision during client provider interaction by health care provider. and in order to encourage more ANC visit health providers and head of the health institution should give due attention.

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