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DEPARTMENT OF NURSING AND MIDWIFERY

ASSESS QUALITY OF ANTENATAL CARE SERVICES IN RURAL HEALTH CENTERS IN BURSA WOREDA, SIDAMA ZONE, SOUTHERN NATIONS NATIONALITIES PEOPLE'S REGION, ETHIOPIA, 2014

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A thesis submitted to the school of graduate studies of Addis Ababa University in partial fulfillment of the requirements for the Degree of Masters' of science in Maternity Nursing and Reproductive Health

June 2014

Addis Ababa, Ethiopia

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APPROVED BY THE BOARD OF EXAMINERS

This thesis by **Tamirat Tesfaye** is accepted in its present form by the Board of Examiners as satisfying thesis requirements for degree of masters in maternity and reproductive health nursing.

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LIST OF ABBREVIATIONS AND ACRONYM

ANC	Antenatal care
AIDS	Acquired Immunodeficiency syndrome
BP	Blood Pressure
EDHS	Ethiopia Demographic Health Survey
ETB	Ethiopia Birr
FANC	Focused Antenatal care
Hgb	Hemoglobin
HCT	Hematocrit
HIV	Human Immunodeficiency Virus
IFA	Iron Folic Acid
MCH	Maternal and child health
MDG	Millennium Development Goal
MMR	Maternal Mortality ratio
PMTCT	Prevention of Mother to Child Transmission
SNNPR	Southern Nations Nationalities People's Region
SPSS	Statistical Package for Social Science
STIs	Sexual Transmitted Infections
TTI	Tetanus Toxoid Immunization
UNFPA	United Nations population Fund Agency
VDRL	Venereal Disease Research Laboratory
VCT	Volunteer Counseling and Testing
WBC	White Blood Count
WHO	World Health Organization

ABSTRACT

BACKGROUND:-The maternal mortality ratio in Ethiopia is strikingly high. One of Key interventions to reduce maternal deaths is the promotion of ANC. ANC plays an important role in reducing maternal mortality and morbidity by detecting early risk factors in order to have an effective intervention in time and by linking the pregnant women to a planned delivery with a skilled birth attendant. However, studies have shown that there are many missed opportunities for care, both because of client and health system related factors.

OBJECTIVE:-To assess the quality of antenatal care services in rural health centers in Bursa woreda from March-April, 2014.

METHOD:-The facility based cross- sectional study was conducted in rural health centers in Bursa woreda. Antenatal follow up women's was interviewed about perception on satisfaction towards quality of antenatal services, by using structured questionnaires (n= 290). Twenty-four antenatal care provider client sessions was observed by checklist. Simple observation using checklist was made for availability of resources necessary for antenatal care. Finally data was coded, cleaned, entered using EPI-6 and was analyzed using SPSS statistical software for windows.

RESULTS: - The study showed that overall satisfaction of client was low as 33%. The likelihood of satisfaction from ANC service was lower among women secondary and above of education level [AOR = 0.14, 95% CI = (0.03-0.78)]. The study also illustrated that higher proportion of health providers did not provide danger sign counseling, advice and information related to complication of pregnancy. Although all the health centers have basic structural medical equipments, none of them has laboratory equipments and high-level disinfection process

Conclusions and Recommendation:-Overall satisfaction of ANC is low. However, for all of them ANC clients were not performed likes (hemoglobin, blood grouping and Rhesus factor, VDRL for Syphilis and urine analysis) and harmful habits likes (smoking, drug abuse &alcoholism, side effects of medicines during pregnancy, breast-feeding, and baby vaccination). Satisfaction from the ANC service in the health centers is very low, and should be stressed health providers and woreda health office to do better for client's satisfaction.

Keywords: - Quality, Antenatal care, services, Bursa

1. INTRODUCTION

Pregnancy and childbirth are natural and often eventful processes many women are at risk for developing complications during pregnancy and childbirth. Complications of pregnancy and childbirth are the leading causes of disability and death among women in the reproductive age (15-49) years in developing countries(1).

Globally, an estimated 287,000 maternal deaths occurred worldwide in 2010. Among these deaths, Sub-Saharan Africa 56 percents maternal deaths occurred(2). Ninety-nine percent of these deaths occur in developing countries(3).

The maternal mortality ratio in Ethiopia is strikingly high and has stagnated at 676 per 100,000 live births(4). About 80% of maternal deaths result from direct complications of pregnancy and childbirth. The five major direct causes are unsafe abortions, hemorrhage, sepsis, hypertensive disorders and prolonged or obstructed labour. Most of these conditions can be prevented with proper medical monitoring, information and services(5). Maternal death Complications like hemorrhage, sepsis and hypertensive disorders account for most of the maternal deaths in developing countries(6). Key interventions to reduce maternal deaths include the promotion of ANC (ANC), presence of skilled assistants during childbirth and provision of emergency obstetric care(4). The majority of maternal deaths could be avoided if women had access to quality medical care during pregnancy, childbirth, and postpartum(7).

Improving quality of care in reproductive health is one of the key issues emphasized at the time of International Conference on Population and Development (8). The assessment of services includes quality reproductive health encompasses satisfaction of clients, roles of service providers & managers and the status of services & their integration of different

services. Benefits of quality reproductive health care programs encourage health care seeking behavior of clients, motivate providers and ensure sustainability(8).

ANC is also an opportunity to promote the use of skilled attendance at birth and healthy behaviors such as breastfeeding, early postnatal care, and planning for optimal pregnancy spacing(9).

ANC refers to pregnancy related health care provided by health worker in a health facility or home(10). ANC is the key entry point of a pregnant woman to receive broad range of health promotion and preventive services that promote the health of the mother and the baby(11).

Focused antenatal care a goal-oriented approach, which was adopted by the World Health Organization (WHO) in 2002, replaced the traditional approach. Focused ANC was accepted policy in Ethiopia(12).

ANC assessment and screening enables early detection and treatment of complications and provides women at risk with an opportunity for referral. It is an entry point to skilled care at delivery, adequate postpartum care, PMTCT for HIV and AIDS prevention, nutritional counseling, and health education, thus promoting integrated service delivery for women(13-14). ANC is therefore relevant for the improvement of maternal health as it enables the monitoring of the health of the mother and anticipation of any difficulties during pregnancy, labor and birth. Some studies have estimated that ANC alone can reduce maternal mortality by 20%. Given good quality and regular attendance. Measuring the components of ANC is essential for assessing the quality of ANC services. Pregnancy complications are a primary source of maternal and child morbidity and mortality. Therefore, pregnant women should routinely receive information on the signs of complications and be tested for them at all ANC visits (4, 15-16).

In Ethiopia, according to Ethiopia demographic health survey the antenatal coverage is 34% of mothers received ANC from health professionals (Doctors, nurse and midwives) for their

most recent births. However, the coverage is still below of national coverage in southern nations nationalities peoples' region (4). The receipt of adequate ANC by the women is a challenge and only 11% of the women began attending ANC in the first trimester. ANC is more beneficial in preventing adverse pregnancy outcomes when received early in the pregnancy and continued through delivery. Early detection of problems in pregnancy leads to more timely referrals for women in high-risk categories or with complications(4).

Pregnancy is one of the most important periods in the life of a woman, a family and a society. WHO's definition of ANC includes recording medical history, assessment of individual needs, advice and guidance on pregnancy and delivery, screening tests, education on self-care and, identification of conditions harmful to health during pregnancy, first-line management and referral (17).

Every woman should have a plan for a skilled attendant at birth, the place of birth and how to get there, items needed for the birth, money saved to pay the skilled provider and for any needed medications and supplies. However, studies have shown that there are many missed opportunities for care, both because of client- and health system-related factors. Mothers and children may face risks because of limited or close to term ANC visits, low-quality care during visits due to poor provider training, infrastructure and administrative weakness at facilities, complications of existing conditions such as TB, malaria, anemia, or sexually transmitted infections (STIs), and short intervals between births. The new approach to ANC also emphasizes the quality of care rather than the quantity (18-20).

The quality of ANC can be measured by the qualifications of the provider and the number and frequency of ANC visits. ANC quality also monitored through the content of services received and the kinds of information given to women during their visits. These services raise awareness of the danger signs during pregnancy, delivery, and the postnatal period.

They also improve the health-seeking behavior of the client, orient the client to birth preparedness issues, and provide basic preventive and therapeutic care (4).

Despite the fact that quality ANC is essential for further improvement of maternal and child health, the quality of ANC service is not well studied in Ethiopia in general and the southern nations nationalities peoples' region in particular Sidama Zone. Therefore, the objective of this research is to assess the quality of ANC services in rural public health facilities in Sidama Zone Bursa woreda by using primary data that was collected from the study area and the output of this study could be used for improvement of ANC services. Improving ANC would increase the utilization of institutional delivery or delivery with a skilled birth attendant and, consequently, the MMR would be minimized and the MDG 5 goal would be achieved. In addition, Factors identified through this study could be fed into maternal health program and guide the development of policies and programs for improving quality in ANC. The information will assist policymakers, planners, and other collaborators in the health sector to formulate appropriate strategies and interventions to provide quality reproductive health services and a series of well-timed interventions to improve maternal health. Academically, findings of study will provide new knowledge in the area of quality ANC. The results will also form baseline data for improving quality of ANC in Bursa area and subsequently contributing to reduction of maternal mortality in the country and delivered by the health system of the study area in particular and other similar setting.

2. LITERATURES REVIEW

Many studies have been conducted on the quality on ANC in other countries. In Ethiopia, literature is not very clear on specific studies on quality of ANC. Therefore, studies done on quality maternal care services were reviewed.

Quality of maternity care was found to be defined and assessed in three different aspects: structure, process and outcome. Then subcomponents of these three major aspects like physical structure, facilities, equipment, organizational form, Administrative structure, staff structure/qualifications, diagnosis, treatment, surgery, consultation/referral, coordination & continuity, health outcomes, mortality, complications, satisfaction(21).

Availability of all necessary infection prevention materials, Provision of 24 hour blood supply service, Provision of drugs for obstetric emergencies, availability of nurses, availability of midwifery and emergence obstetrics care (EmOC) services, improved training approach, integration of reproductive health services, client–provider interaction, and continuous monitoring of quality improvement(21).

Research Conducted in Lao People's Democratic Republic through observation of infrastructure, basic equipment and ANC performances among the 18 health centers observed, 17 had examination beds, 15 had a waiting area, 12 had toilets, 5 had tap water, 4 had private rooms for examination. Regarding basic equipment, 15 had weighing scales, 15 had a height measure, 12 had a stethoscope, 12 had a BP apparatus, 11 had tape measures, 10 had a foetoscope and 5 had a supply of iron sulphate pills(22).

ANC offers opportunities to reduce the risk of severe postpartum hemorrhage by asking about bleeding in previous pregnancies and the current pregnancy, by providing iron/folate and counseling clients about how to use it, and by counseling clients to return if any vaginal bleeding occurs(23).

The study was undertaken for the qualitative evaluation of reproductive health care at the primary health care level of Luck now district result showed quality of physical facilities at health centers was assessed by observing physical infrastructure, equipments and drug supplies. Protected waiting area and adequate sitting space was available at 22% health centers. Visual and auditory privacy during examination was more (22.2%). It was totally absent sub centers. About 20% of the centers had a separate room for consultation and examination. Toilet facility, electricity and drinking water was found to be available at one third, half and two third of the health centers respectively. Availability of weighing scale (adult), needles and syringes was 100% while that of BP instrument, stethoscope, examination table, haemoglobinometer and fetoscope was in the range of 66 to 88%. However, the health providers were not using the available material for counseling purposes(24).

Under normal circumstances, the World Health Organization (WHO) recommends that at least four ANC visits, the first of which should take place during the first trimester (17).

The study was conducted in rural areas of Laos People's Democratic Republic result show that Overall, the quality and performance of ANC services in rural health facilities were poor due to lack of routines, scarce or insufficient equipment and limited skills among providers. The average consultation time for each woman was five minutes. The health care providers expressed having little competence and motivation to work with ANC(22).

According to Zambia Demographic and Health Survey (ZDHS) between 2002 and 2007, the vast majority of ANC facilities provided the availability of relevant ANC functions, screening tests and related services in Zambian ANC facilities folate/iron supplementation and tetanus vaccination. Most screening tests were not commonly available: only 16% of

ANC facilities provided hemoglobin testing which is helpful in diagnosing anemia, and only half-provided syphilis testing(25).

Response rates in the LDHS, 99.6% (259) were interviewed. Non-response accounted for 0.4%. In Malawi, the observational checklist revealed that there were three health workers responsible for ANC at Lungwena Health Centre (26).

The room was not spacious, there were neither counseling chairs in the room nor waiting seats for women outside the room. Resources were shortage of gloves, lack of blood pressure (BP) apparatus, syringes, essential drugs like iron and antibiotics. In-depth interview, Health workers expressed concern over lack of laboratory reagents for investigating venereal disease research laboratory (VDRL), hemoglobin and urine on antenatal mothers(26).

An observation using the checklist, revealed lack of the following; stethoscope, gestational age calendar, tape measure, thermometer, stationary, tape measure, cotton wool, soap, folic acid and the wireless massage was out order(26).

The structured observation study took place in the Rufiji District of Tanzania in 2008 that was conducted in seven health facilities, the results from ANC observations show that health workers performed the majority of clinical examinations on the checklist including blood pressure checks (94%) and uterine height measurements (100%). However, urine tests for albumin (8%) and glucose (9%) were largely omitted. Only 61% women received information regarding danger signs(27).

Technical skills of health providers reported results in Luck now district India recording of medical history, Fetal Heart Sound and fundal height was done in less than quarter of the cases and ANC was confined to recording of obstetric details, distribution of iron folic acids (IFA) tablets and administration of tetanus toxoids(TT) vaccine. In spite of availability of equipments, weight and B.P. was recorded in 43.3% and 4.4% cases respectively. Few clients were told about danger signs, place for delivery, nutrition and rest and every third

client was referred for routine investigations. None of the client was encouraged to ask questions(24).

Study was conducted in Kenya showed that highly performed procedures with more than 90% coverage were counseling on proper diet, rest and exercise (90.7%), volunteer counseling and testing (VCT) for HIV prevention (89.9 %), PMTCT for HIV/AIDS (93.8 %), STI and HIV prevention (91.6%) and harmful habits during pregnancy (91%). Procedures that showed high level missed opportunities included: counseling on family planning (64%), danger signs at delivery (67.4%), danger signs in pregnancy (74.6%) and drug use in pregnancy (75.6%) (28).

In Kenya, the Study findings showed that over 74.1% of the respondents were referred to other facilities, mostly private, for investigations on ANC profile such as hemoglobin tests, STIs investigations, blood group test and hookworm infestation. Only two out of eight of the facilities selected could offer laboratory investigation for all ANC profile examination(28).

According to Rural Burkina Faso conducted research result showed that the physical checking of the material and equipment available in each health centre revealed problems at all the health centers but with a major variation between centers's (scores ranging from 8 to 21 out of a maximum of 24, with an average of 16.8). No health centre had equipment to measure the length of the child(29).

Eastern Uganda**,** clients whose consultation process was categorized as poor, fair or good for the different variables under observation. Client examination was generally well done for the majority (80%) of the clients, while counseling for risk factors was observed to have been poorly one for over 58% of the ANC clients. For clients counseling on birth preparedness over 50% were observed to have had poor counseling. Similarly, 53% of the clients did not have essential tests carried out on them. Nonetheless, at least 22% of the clients were observed to have undergone good counseling for birth preparedness. For the essential drugs

provided, 53% of the clients received tetanus toxoid vaccination. However, the majority of the ANC clients were not offered 72% as an iron supplement(30).

The majority of the respondents were below the age of 30 years (over 73%). Over 92% of the ANC clients were married and the majority of them were Protestants (41%). 85% of the clients had ever attended school but the majority (73%) only had primary school level of education (30).

According to study conducted in Southwest Nigeria result show with respect to available facilities at the respective centers, 63.3% respondents expressed satisfaction with waiting room/area at the antenatal clinics. 66.7% were also pleased with the examination room during the antenatal clinic visits. 42.7% respondents were unhappy about the toilet facility for antenatal women. 66% of respondents were satisfied with drugs and supply at the centers; 69.4% with the costs of services; 60.0% with the service hours; 76.7% with distance to residence; 58.7% with number of skilled providers employed at the centre. Majority of the respondents were married, within the active reproductive age groups (20-34 years)(31).

Clients satisfied with the overall ANC services in eastern Uganda. Most of the respondents (74.6%) rated the overall ANC service as satisfactory. The variables with the most satisfied percentage of ANC clients were provider's attitude (87.6%) and the examination room privacy (83.5%). However, availability of medicines (32.3%) and waiting time (25.1%) had the highest percentages of unsatisfied clients(30).

Cross-sectional descriptive study was carried out in 11 health facilities in rural Tanzania result showed that BP machines, stethoscopes, weighing scales, HIV test kits and folic acid were available in nearly all (91% – 100%) facilities. Hemoglobin estimation machines were available in (64%) of the health facilities. Glucostik and albustik kits were available only in 18% and 27% of all health facilities respectively. Generally, there was severe shortage of staff for ANC in all dispensaries and health centers. Shortage of qualified staff and irregular

supply of essential equipment, drugs and consumables were considered by 91% and 64% of the respondents respectively as the major underlying factors for substandard ANC(32).

Result reported in Nigeria women who had secondary or more education were significantly less likely to feel their care providers could effectively handle minor obstetric complications compared to those who had primary or less education(31).

According to EDHS 2012, the percentage of births that were wanted at the time of conception increased from 63 percent in the 2000 EDHS to 65 percent in 2005 and to 72 percent in 2011. The percentage of births that were wanted later stayed more or less the same, at 19-20 percent, while the percentage of unwanted births decreased from 17 percent in 2000 to 16 percent in 2005 and 9 percent in the 2011 EDHS.(4)

In Ethiopia, study conducted in Ethiopia's Hospitals result showed that ANC guidelines were observed in the ANC service area in 58% and of health facilities. 16% had emergency obstetric guidelines, and 11% had sterilization/disinfection guidelines(23).

Study conduct in Addis Ababa city in Ethiopia showed that at the time of study, health centers were staffed by average in each facility 1.5 Doctors, 2.3 midwifes, 8.0 nurses, 3.1 health assistants, 4.6 various types of technical health professionals. Basic medical examination materials were available at least in 8 to 9 of the total 10 health centers observed except for weight scale, clinical management guide and urine analysis reagent for laboratory that were observed only in one, three and four health centers, respectively. Lastly, transportation was shared with respective sub-city and generator was not available at all levels(33).

Level of education and parity were key factors influencing the timing of entry to ANC while women of higher education levels were more likely to book for ANC in the first trimester of pregnancy and make more ANC visits (28).

Study conducted in Bahir-Dar special zone, North Western Ethiopia result showed that all health facilities had functional weight scale, microscope, fetoscope and stethoscope but BP apparatus was not available in one health facility. Uristix for detection of glucose and protein in urine, Venereal Disease Research Laboratory (VDRL) and hemoglobin measurements were available only in two of the eight public health facilities included in the study. Penicillin was available in all health facilities but iron sulfate/folic acid was present only in one facility. Private ANC examination room was provided only in two health facilities. ANC guideline and water to wash hands in the examination room was available in none of the facilities. overall client satisfaction on the ANC services received was 21.92(34).

During the observation 96.3% of the clients were treated respectfully, vital signs was checked for all of the clients, although general examination was performed properly only for 29.3% of the cases. 68% of the clients were properly assessed for the pregnancy and fetal condition, advice about prescribed treatment was given for 34.8% observed mothers, and about half of the mothers received information related to their pregnancy(33).

According to assess quality of ANC services in Addis Ababa result showed 89.2% of the mothers were satisfied. Highly satisfied by general examination (95.4%) and treating respectfully (98.3 %). The longer waiting time of examination (only 27.8% were satisfied) and explanation given to describe pregnancy related complication (only a 25% of the women were satisfied). 18.8% dissatisfied with the waiting time(33).

According to report of UNFPA in-depth Analysis of the EDHS 2000-2011. Services with proven benefit had a low coverage among ANC clients, representing substantial missed opportunity. Nearly 60% of the ANC clients did not have their urine tested, 46% did not have their blood tested, 44.2% were not given two doses of TTI and 28% did not have their blood pressure measured. Pregnant women are ill equipped to make appropriate choices

especially when they are in danger - 80% of the ANC clients were not told about pregnancy complications(35).

The qualitative component of the study (by observation) demonstrated that respectful and friendly greeting was offered for (81.2%) clients. However (28.5%) of women reported that the door was not closed during consultation and (13.8%) of the study women revealed that there were people other than the provider during consultation. (32.2%) and (7.0%) of the respondents claimed that the procedures and the diagnosis were not explained for them respectively(34). During the present study only (37.9%), women started ANC visit within first trimester (4-6months). In this study (85.6%) and (82.3%) of the women were asked and tested for HIV respectively. For majority (96.5%) and (88.7%) of women gestational age and uterine height were measured, respectively(34)

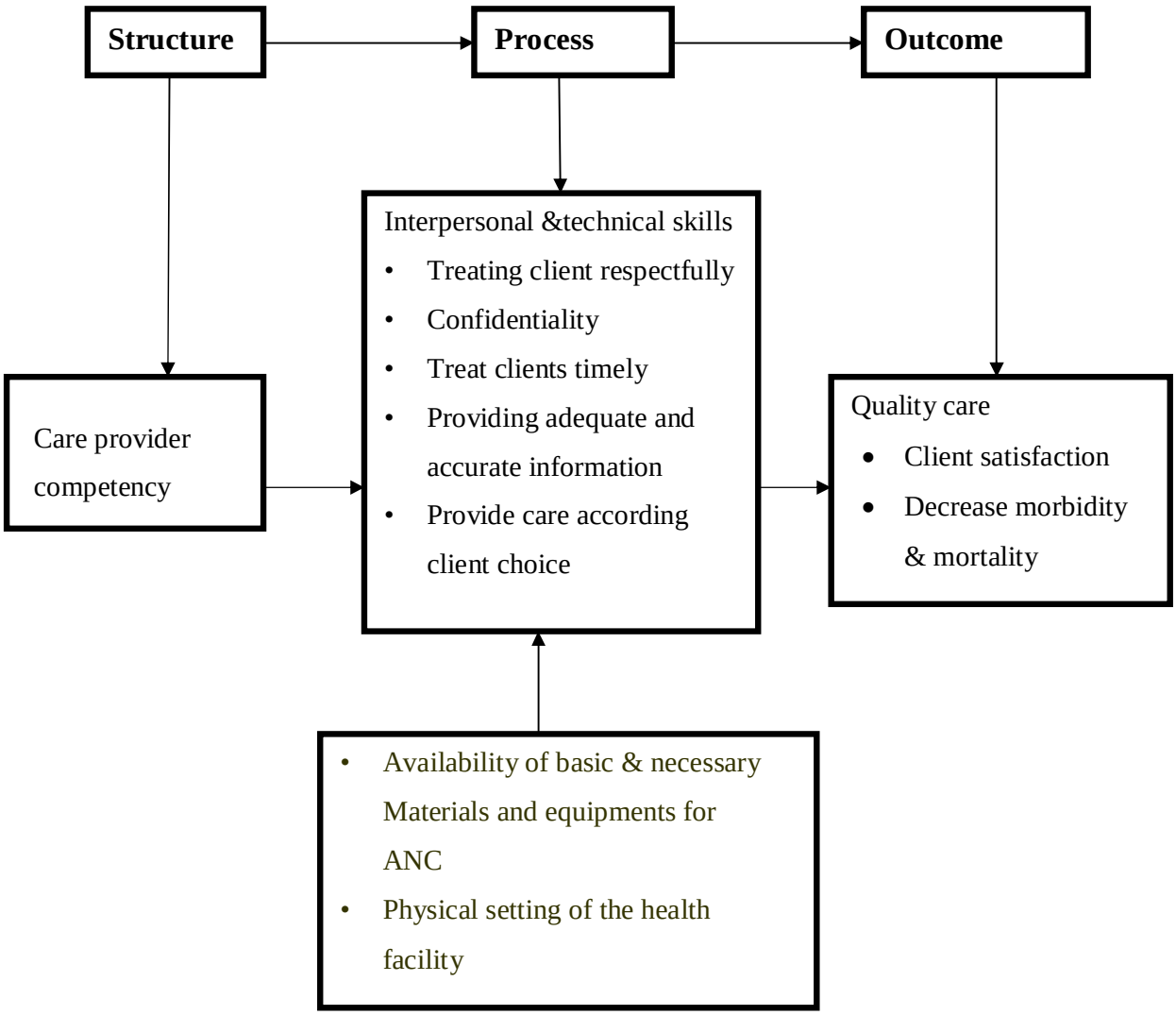

Figure 1: A Modified Conceptual Framework of Quality care and its attributes adapted from (Donabedian, 1979)

3. OBJECTIVES

3.1 GENERAL OBJECTIVE

- The general objective of the this study is assess quality of ANC services in rural health center in Bursa woreda, Sidama Zone, Southern nation's nationalities people's region Ethiopia, 2014.

3.2. SPECIFIC OBJECTIVES

The specific objectives of this study are-

- To determine women's perception on satisfaction the quality of antenatal Services received in rural health centre at Bursa Woreda.
- To identify associated factors with client's satisfactions on antenatal care services in rural health centre at Bursa woreda.
- To assess provider's practices in providing antenatal care services in rural health centre at Bursa woreda.
- To identify availability of resources for providing ANC in rural health centre at Bursa Woreda.

4. METHODS AND MATERIALS

4.1 Study areas

Bursa is one of the woreda in the Southern Nations, Nationalities Peoples' Region of Ethiopia, and part of the Sidama Zone. Bursa bordered on the south by Hula woreda, on the west by Aleta wondo woreda, on the northwest by Wensho woreda, on the northeast by Arbegona woreda, and on the southeast by Bona Zuria woreda. Bursa woreda has an area of 23,625 hectare with an estimated population of Bursa is 126,134.Out of the total population 63,151 are females; there are 5 health centers and 28 health posts. Sidama ethnicity is the dominant native of the Zone particularly in the rural area, with the Christian dominant religion followers. Bursa woreda is located at 369kms from Addis Ababa and 96 kms from the Hawassa city(37).

4.2 Study design and study period

A facility based cross-sectional study design was conducted in four rural health centers within Bursa woreda, from March – April ,2014 to assessing quality of ANC services in rural health center in bursa woreda.

4.3 Source and Study population

Public rural health centers under Bursa woreda to assess for availability of medical equipments, health care providers who are working in maternal and child health unit of rural health centers and pregnant women of reproductive age group undertaking ANC service within rural health centers in Bursa woreda were source of population. Health care providers who are working in the antenatal clinic and pregnant mothers who are attending ANC in the rural health centers at Bursa woreda the time of the study were study subjects.

4.4 Inclusion and exclusion criteria for the study population

4.4.1 Inclusion criteria

- ✓ All pregnant women who came for ANC visit
- ✓ Women who was mentally and physically capable of being interviewed
- ✓ Health workers depend on years of experience which works more than six months
- ✓ Volunteer health workers to participated in study

4.4.2 Exclusion criteria

- ✓ Women who are not confirmed by health professional for pregnancy
- ✓ Critically ill women who could not talk or listen for interviewer

4 .5 Sample Size and Sampling technique

4.5.1 Sample Size

For client satisfaction interview the sample size was determined by the formula of single population proportion. The following formula for single population proportion was used:

$$n = \frac{(Z\alpha/2)^2 \times p(1-p)}{d^2} = \frac{(1.96)^2 \times 22(0.78)}{(0.05)^2} = 263.69 + 10\% = 290$$

Whereas;

n = Sample size

Zα/2 = Confidence level at 95% = 1.96

P = Proportion of satisfaction of women which is 22% taken from previous study(34)

d = margin of error of 5%

4.5.2 Sampling procedure

In Bursa woreda, there are five governmental public health centers. In this study, four rural public health facilities providing ANC services was included and one health centers was not included in this study because it give more service for urban than rural population.

To obtain 290 study subjects, systematic sampling techniques was used until the required sample sizes was completed. The number of pregnant women allocated for each health centre was determined by a proportion population to sample size. The allocation was based on the average number of one-month ANC utilization in the last year annual report of each health facility. The sampling interval was calculated by dividing the average one-month population based on the last year report to the total sample size and this interval was used in all facilities to select study subjects(k=3). The first client was selected by randomly among the first '3' ANC service users in the sample frame. (Diagrammatic representation of procedure as following in *fig.2*)

For observational study, two ANC providers were 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). The 24 clients were selected from four-health center to assess practices of health care provider based on antenatal care services in each health facility. In addition, health center managers were interviewed regarding the availability and adequacy of resources for ANC service provision by using observational checklist.

A checklist was used to assess ANC facility infrastructure, supplies and equipment and health care practices during ANC clinic. The checklist covered areas on infrastructure (privacy, sanitation, lighting, space, coaches and chairs), universal precautions, drugs and supplies, total number of staff at the antenatal clinic, interpersonal relationship, routine practice, laboratory investigations and health promotion activities. The checklist was adopted from the previous study (33).

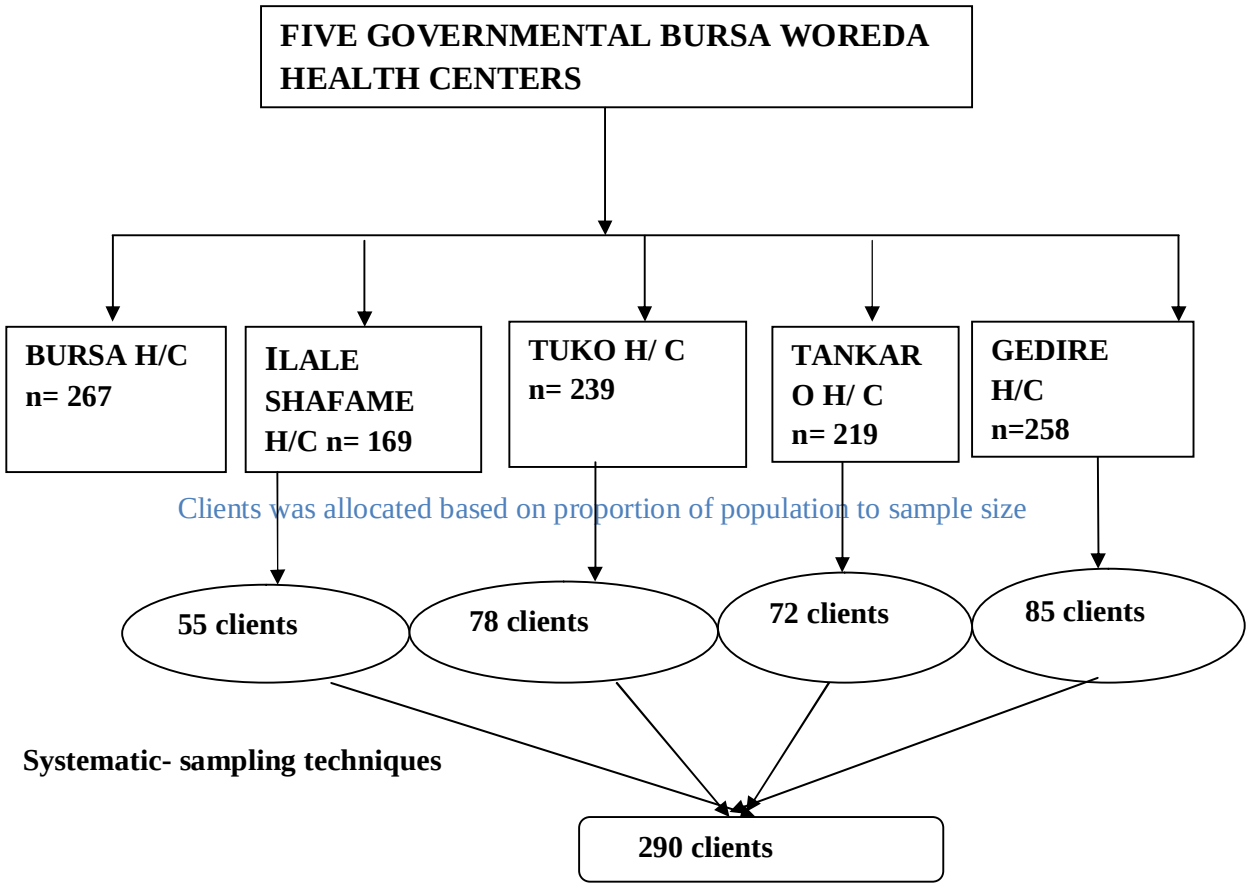

Fig:-2. Steps of Sampling Procedure

4.6. Data collection tools and Procedure

Questionnaire was adapted from the WHO safe motherhood need assessment questionnaire (Standard tools adapt from WHO safe motherhood initiative). For exit interview, structured questionnaire was translated first into local language (Sidamigna) by expertise in both languages who fluently speak and write and it was back translated to English for its consistency by other expertise in both languages who fluently speak and write to make it simple during administration. The questionnaire was pre-tested in health center out of the study site 5%. After pre-test, some modification of the questionnaire was made for unclear and difficult question.

During data collection, health care providers were observed while providing the antenatal services using the checklist at several randomly chose points of time at the antenatal clinic.

Other observation checklists were used to assess availability of equipment and materials that is required to assist ANC services.

Four diploma nurses and two (B.sc) nurses were recruited for data collection and supervision respectively. Data collectors were selected from others health centers those who do not included in the survey and they were oriented for a day on data collection process. At the time of the actual data collection, the data collectors were arrived early in the morning and were given clients small card with recorded time of arrival. Clients were interviewed when they finished the whole process of ANC. During data collection, the data was checked for completeness and consistency of information by the principal investigator. The principal investigator conducted availability of materials and equipments for ANC of the four rural health centers, including the performance of health care providers with assistance of a checklist. The data collection process totally was completed within 15 days.

4.7. Data Quality Assurance

To assure the data quality, one day training was given for four data collectors and two supervisors. Appropriate information and instruction on the objective; relevance of the study was given for the respondents. The quality of data was assured by properly designed and pre-tested of the questionnaire , proper training of the interviewers and supervisors of the data collection procedures, proper categorization and coding of the questionnaire. Every day the computed questionnaires were reviewed and checked for completeness and relevance by the supervisors and principal investigator and the necessary feedback offered to data collectors in the next morning before the actual procedure.

4.8. Data Processing and analysis

Each completed questionnaire was assigned a unique code. The data entry was made by using Epi info. The data generated was analyzed using Statistical Package for Social Science

(SPSS) for windows (version 20). Statistical significance was evaluated at 95% levels of significance. Association of socio-demographic, past and current pregnancy outcomes and clients satisfaction were determined using cross tabulating and odds ratio (OR) with 95% confidence intervals. Multiple logistic regressions were used to control for confounding. Descriptive statistics was also applied as necessary

4.9. Variables of the study and measurement

4.9.1. Dependent Variables

- ✓ Client satisfaction
- ✓ Provider's competence skill and attitudes of ANC
- ✓ Availability of basic and absolute materials and equipment's in the al health facilities

4.9.2 Independent Variables

Socio-economic status of antenatal mothers; such as age, educational, marital status, monthly income, antenatal visit, timing of initiation, planned pregnancy and parity. Health care provider-training status, qualification, position and selected health facilities.

4.10. Operational Definitions

Poor counseling: - The counseling provided for women that below mean score.

Timing of ANC:-Time when pregnant woman starts antenatal care before four months.

Client satisfaction: with ANC -: was measured using ten items of questions related to satisfaction during examination, respectfulness, time concern, advice and information provided ,personnel .Clients were said satisfied whenever they were satisfied answered 80% or more of the item questions according to WHO standard ; otherwise they were considered as not satisfied.

Basic diagnostic facilities: - If health facilities equipped with diagnostic laboratory for ANC (pregnancy test, Hgb/HCT, HIV test, urine for; sugar and albumin and vital sig equipment's.

Medical supplies: - provision drug which given for pregnant women to preventing complications throughout a Pregnancy like; anemia, tetanus, malaria bleeding, HIV/AIDS and others

General examination: - includes examination of the skin, conjunctiva, thyroid, mouth, breast, leg for edema, redness and varicose, and examined both fetal and maternal condition

4.11. Ethical Consideration

Ethical clearance was obtained from Addis Ababa University, School of Nursing and Midwifery research committee and College of Health Sciences Institutional Review Board. Written permission was requested from Bursa woreda and the respected health centers. Consent was obtained from individual study subjects. According to the schedule, data collection day was fixed. At the time of data collection, data collectors read the written consent for each mother during exit interview, and a verbal consent was obtained both from the clients and heath care providers during performance assessment. Clients were provided with information sheet about the objective of the study, client's privacy, confidentiality. Personal privacy and cultural norms was respected properly.

4.12 Dissemination and Utilization of results

Result of the study will be disseminated to Addis Ababa University School of Nursing as partial fulfillment of master's degree in maternity nursing and reproductive health. In addition, will be communicated to the SNNPR Health Bureau, Sidama Zone health department, and all government health services in bursa woreda. The findings will be presented in different seminars, meetings and workshops and will be published in a scientific journal. Hard and soft copy will be available in the library of Addis Ababa University for graduate students as well as for other concerned readers.

5. RESULTS

5.1 Socio-demographic characteristics of study participants

Two hundred ninety (100%) of participant were responded the questionnaires. The average age of the women was 27.3 years (SD =5.4). The majority of the respondents were age of 20 to 34 years (84.1%). Two hundred sixty eight (92.4%) and 255(87.9%) were Sidama and protestant by ethnicity and religion respectively. One hundred seventy two (59.3%) of the clients had not ever attended school and 111(38.3%) respondents had attended primary school but 7(2.4%) participants had secondary and above level of education. About three-fourth of the study subjects had a monthly income below 500 birr (Table 1).

Table 1: **Socio-demographic characteristics of pregnant women attending ANC at Rural Health Centers, Bursa woreda, SNNPR, Ethiopia, 2014. (n=290)**

Variables	Number (n)	Percentage (%)
Age in years		
<20	13	4.5
20-34	244	84.1
≥35	33	11.4
Mean ± SD		27.3 ± 5.4
Ethnicity		
Sidama	268	92.4
Amhara	20	6.9
Others(wolyita,Gedo)	2	0.7
Marital status		
Married	288	99.3
Divorced	2	]0.7
Religion		
Protestant	255	87.9
Orthodox	16	5.5
Catholic	19	6.6
Education status		
Can't read and write	172	59.3
Primary	111	38.3
Secondary and above	7	2.4
Income per month		
≤ 500	221	76.2
>500	69	23.8

5.2 Maternal Statues on previous and current pregnancy

Out of total study subjects, two hundred sixteen (74.5%) of interviewed mothers had came for more than first pregnancy, while 74(25.5%) of women had came for experiencing their first pregnancy. Most of the women lived with their husbands (99.3%). At the time of the study, one hundred sixty six (57.2%) of study subjects reported that their pregnancy was planned.

In the study participants were (96.6%) of women who came for the current pregnancy of ANC visits one up to three times and only (3.4%) of women had fourth visits of ANC. One hundred eighty seven (64.5%) women were at their first and second trimester of pregnancy, 35.5% of interviewed mothers were come for the third trimester of pregnancy. Two hundred fifty three (87.2%) women were started the first visits of ANC after fourth months of pregnancy and (12.8%) were started the ANC follow up in the first four months. (Table 2)

Table:-2. Distribution of maternal statues by their current and previous pregnancy in rural health centers in Bursa Woreda, SNNPR, Ethiopia, 2014. (n=290)

Variables	Number (n)	Percentage (%)
Number of pregnancy		
Prim-gravid	74	25.5
More than -prim gravid	216	74.5
Planned pregnancy	166	
Yes	124	57.2
No		42.8
Number of visits		
1-3 times	280	96.6
4 or more	10	3.4
Gestation		
First or second trimester	187	64.5
Third trimester	103	35.5
Timing of first visits		
Less than 16 weeks	37	12.8
Greater than equal to 16 wks	253	87.2

5.3 Predictors of client satisfaction with ANC

Client satisfaction was rated by 10 satisfaction questions. Clients were categorized as not satisfied (if they score below 80%) or satisfied (if they score ≥ 80%). According to the study, 97 (33.4%) of the mothers participated in the study were satisfied. Clients highly satisfied on provider performed general physical examinations and explanation of the results of examination were (83.3%) and (74.5%) of women, respectively. However, the major reasons given by respondents for non-satisfaction with the over-all quality of care received in the rural health centers were absence of routine laboratory tests for pregnancy related cases. Also one hundred forty three (49.3%) of interviewed women have dissatisfied with the explanations of danger sign arise during pregnancy. (Table 3)

Time spent for waiting was mean 66.81± SD (68.035) minutes on day of ANC in the study. The consultations time for ANC during follow up has taken of mean± SD (7.90±4.68) minutes.

Table: - 3 Level of client's satisfaction based on following points of ANC services in rural public health centers of Bursa Woreda, SNNPR, Ethiopia 2014. (n=290)

Types of Variables	**Yes**	**Percentage (%)**
Provider performs general examination	241	83.1
Provider explain procedures before examination	155	53.4
Provider explain the results of examination	216	74.5
Confidentiality discussion providers with clients	151	52.1
Provider treats clients respectfully	212	73.1
Waiting time was fair for examination	156	53.8
Explain types of laboratory investigation satisfactory way	57	19.7
Explain dander sign complication arise during pregnancy	143	49.3
Satisfaction of all over received a health advice	210	72.4
Generally, you are happy with all the services you have got today	203	70.0
Overall satisfaction	97	33.4

5.4. Relationship between satisfaction and socio-demographic variables

Association between antenatal attendance during pregnancy of satisfaction and socio-demographic characteristics were tested by using binary logistic regression. The crude odd ratio test for association indicate that Women who attended school were 1.94 times [95% CI; 1.14-3.30] more likely satisfied when compared to those who did not go to school. The odds of catholic is OR (4.63) times higher than protestants in the study area (COR, **4.63, 05%CI, 1.05- 20.52)**. The other socio-demographics were not statistically significantly associated with satisfaction. (Table 4)

Table:-4 Relationship between satisfaction of client and socio-demographic variables during ANC attendees in rural health centers, Bursa woreda, 2014. (n=290)

Characteristics	Level of satisfaction		Crude OR (95% CI)
	Dissatisfied No.(%)	Satisfied No.(%)	
Age in year			
<20	11(3.8)	2(0.7)	1.00
20-34	155(53.4)	89(30.7)	0.32[0.07-0.15]
≥35	27(9.3)	6(2.1)	0.82[0.14-4.70]
Ethnicity			
Sidama	182(62.8)	92(31.7)	1.00
Amhara	10(3.4)	4(1.4)	1.26[0.39-4.14]
Others (Wolyita,Gedo)	1(0.3)	1(0.3)	0.51[0.03-8.17]
Religious			
Protestant	165(56.9)	90 (31.0)	1.00
Orthodox	11(3.8)	5 (1.7)	1.2[0.4-3.56]
Catholic	17(5.9)	2 (0.7)	4.63[1.05- 20.52]*
Education status			
Can't read and write	106(36.6)	66(22.8)	1.00
Primary	84(29.0)	27(9.3)	1.94[1.14-3.30] *
Secondary& above	3(1.0)	4(1.4)	0.47[0.10-2.15]
Income			
≤ 500	142(49.0)	79(27.2)	1.00
>500	51(17.6)	18(6.2)	1.58[0.86-2.88]

5.5. Relationship between satisfaction and current and previous pregnancy status

Relationship between of satisfaction and current and previous Pregnancy status at antenatal attendance was tested by using binary logistic regression. The association with [COR 0.48 and 95% CI= [0.29, 0.79] is statistically significant. Unplanned pregnancy mothers with OR 0.48 times are less likely to have a satisfaction compared with planned pregnancy.

Women who started of first visits after 4 months of pregnancy were 0.35 times [95% CI; 0.14-0.86] less likely to satisfied mothers who attend ANC compared with women who started ANC before 4 months of pregnancy.

There were no significant associations between others previous and current pregnancy condition with level of client's satisfaction as show below. (Table 5)

Table:-5 Relationship between satisfaction of client and maternal statues by their current and previous pregnancy during ANC attendees in rural health centers, Bursa woreda, SNNPR, Ethiopia, 2014 (n=290)

Characteristics	**Level of satisfaction**		**Crude OR (95% CI (%)**
	Dissatisfied No.(%)	**Satisfied No. (%)**	
Number of pregnancy			
Prim-gravid	52(17.9)	22(7.6)	1.00
More than –prim gravid	141(25.9)	75(25.9)	0.8[0.45-1.41]
Planned pregnancy			
Yes	122(42.1)	44(15.2)	1.00
No	71(24.5)	53(18.3)	**0.48[0.29-0.79]** *
Number of visits			
1-3 times	185(63.8)	95(32.8)	1.00
4 or more	8(2.8)	2(0.7)	2.05[0.43-9.86]
Gestation in trimester			
1st or 2nd trimester	118(41.0)	67(23.3)	1.00
3rd trimester	73(25.3)	30(10.4)	**1.38[1.82-2.32]***
Timing of first visits			
< 4 months	22(7.2)	15(5.2)	1.00
≥ 4 Months	171(59.0)	82(28.3)	**0.35[0.14-0.86]***

5.6. Factors associated with satisfaction

A multiple logistic regression statistical model analysis was performed in order to identify factors associated with level of satisfaction of the pregnant women. After adjusting for other factors, pregnant women whose educations level was Secondary and above were less likely to satisfied ANC services compared to those whose educations level were cannot read and write [AOR = 0.14, 95% CI = 0.03-0.78].

Pregnant women who had current pregnancy unplanned were 0.57 times less likely satisfied than those who had current pregnancy planned [AOR=0.56, (95% CI) = (0.33-0.97)].

Level of satisfaction of the study participants had also a significant association with their timing of first visits for present pregnancy. Those women who had started first visits of ANC after 4 months of pregnancy were less likely satisfied than who had started before 4 months of pregnancy [AOR= 0.29, 95% CI, 0.11-0.79]. Other variables that included under women socio-demography and pregnancy related factors were not found to be significantly associated with level of client's satisfaction. (Table 6)

Table: -6 Associations between socio-demographic and pregnancy related factors with satisfaction of mothers on ANC, Bursa woreda, SNNPR, Ethiopia, 2014. (n=290)

Variables	Dissatisfied N=193 (66.4%)	Satisfied N=97(33 %)	Crude OR (95% CI)	Adjusted* OR (95% CI)
Age in years				
<20	11(3.8)	2(0.7)	1.00	1.00
20-34	155(53.4)	89(30.7)	0.32[0.07-0.15]	2.74[0.94-7.97]
≥35	27(9.3)	6(2.1)	0.82[0.14-4.70]	2.64[0.98-7.12]
Religious				
Protestant	165(56.9)	90(31.0)	1.00	1.00
Orthodox	11(3.8)	5(1.7)	1.2[0.4-3.56]	3.37[0.73-15.54]
Catholic	17(5.9)	2(0.7)	4.63[1.05-20.52]	3.46[0.53-22.57]
Education status				
Can't read &write	106(36.6)	66(22.8)	1.00	1.00
Primary	84(29.0)	27(9.3)	1.94[1.14-3.30]	0.27[0.05-1.44]
Secondary &above	3(1.0)	4(1.4)	0.47[0.10-2.15]	**0.14[0.03-0.78]***
Gestation				
1st or 2nd trimester	118(41.0)	67(23.3)	1.00	1.00
3rd trimester	73(25.3)	30(10.4)	1.38[1.82-2.32]	1.37[0.79-2.38]
Planned pregnancy				
Yes	122(42.1)	44(15.2)	1.00	1.00
No	71(24.5)	53(18.3)	0.48[0.29-0.79]	**0.57[0.33-0.97]***
Timing of 1st visits				
<16 weeks	22(7.2)	15(5.2)	1.00	1.00
≥16weeks	171(59.0)	82(28.3)	0.35[0.14-0.86]	**0.29[0.11-0.79]***

Note: * *= Statistically significant at P<0.05*

5.7 Observational assessment of providers

Performance observation of ANC service session was done when eight selected health care providers based on 33 observation points examined 24 clients. These points were categorized to six groups.

5.7.1 History taking

In this structural observational finding, the general history of the pregnant women had taken in 70.8% of all consultations in the health facilities (Table 7). However, the majority of the ANC clients were not greeted and called by her name.

5.7.2 Physical examinations

The frequency of carrying out specific physical examinations revealed a heterogeneous picture. Some of the examinations were done very regularly (weighing, palpation of the fundus, and auscultation of the fetal heart). Others examinations were done less regularly, for example breast examinations and general examination for medical assessments (examine skin, conjunctivae, legs for edema, redness, and varicose veins, thyroid, mouth and lungs). (Table 7)

5.7.3 Screening and tests

On laboratory investigations, Observations findings revealed that (66.7%) did give only their blood sample for HIV/AIDS testing and counseling. However, the majority of the ANC clients were not performed likes (hemoglobin, blood grouping and Rhesus factor, VDRL for Syphilis and urine analysis). (Table 7)

5.7.4 Preventive measures and Health education

Table 7 shows the percentages of clients whose observations for the essential drugs provided, (91.7%) of the clients received tetanus toxoid vaccination and Prescribes iron and folic acid were (37.5%). For clients counseling about mothers and fetus's health condition after physical examinations were 21(87.5%) and Orients women about alarm signs were

16(66.7%). Counseling was provided for (the place of delivery, personal hygiene, STI and HIV/AIDS prevention and Counsels about nutritional need) below the mean scored were observed to have had poor counseling. Never have had counseling risk factors about harmful habits likes:- smocking, drug abuse &alcoholism, side effects of medicines during pregnancy and breast-feeding and baby vaccination. (See in table 7)

5.7.5 Inter-communications b/n provider & clients

Communication between provider with client throughout the procedure have had communicated were 17(70.8%) and Schedules the next appointment according to health needs have given to all clients. No one health provider has said thanks clients for her times. (Table 7)

5.8. Antenatal Resources (human and Material)

Antenatal Resources were checked in four rural health centers in Bursa woreda. At the time of this study, health centers were staffed by 2-health officer, 61 nurses, 6 midwifes one health assistants and 1-laboratory technicians within four studied health centers. All health centers had protected waiting area and adequate sitting space. On infrastructure for providing ANC, findings from the checklist indicated that examination table, Foetoscope, Stethoscope & Blood Pressure instruments, Maternal & child health cards (FANC), and weighing machine was available in all health facilities. There were in all health centers no separated room, auditory privacy and visual privacy in consultations room. In all health facilities, Toilet was available. However, bathroom, hand washroom with soap and drinking water facility in all health centers were not available. Electricity was available in one health center and no in other three health centers. The health institutions have not transportation facility and generator access.

Resources for providing ANC were also investigated. An observation using the checklist, revealed lack of the following; Syphilis test, Urine Analysis tests, Haemoglobinometer and Albuminstix were unavailable in all health facilities. The TT Vaccines available during the study period in all health centers. Health workers during observations revealed, shortage of gloves, syringes, essential drugs like, iron and folic acids tablets and high-level disinfection.

Table:-7 Provider Performance observations on ANC services, Bursa woreda, SNNPR, Ethiopia, 2014 (n =24)

ANC Services	Performed No _ (%)	Not performed No_ (%)
History taking (Ask, check, Records)		
Greets and calls client by her name	8(33.3)	16(66.7)
Reviews clinic record before starting the session	17(70.8)	7(29.2)
Comprehensive history taking	17(7 0.8)	7(29.2)
Examination (Look, listen, feel)		
Vital sign	21(87.5)	3(12.5)
Breast Examinations	8(33.3)	16(66.7)
General examination for medical assessment	3(12.5)	21(87.5)
Palpates uterus and perform maneuvers	24(100)	-----
Determines weeks of gestation fundable palpations	24(100)	-----
Records all findings	20(83.3)	4(16.7)
Screening and tests		
Hemoglobin/Hematocrit	--------	24(100)
Blood grouping and Rhesus factor	--------	24(100)
VDRL for Syphilis	--------	24(100)
Urine analysis	--------	24(100)
HIV testing and counseling	16(66.7)	8(33.3)
Preventive measures		
Prescribes iron and folic acid	9(37.5)	15(62.5)
Administered TT injection	22(91.7	2(8.3)
Health education, advice and counseling		
Informs mothers about her and fetus's health condition	21(87.5)	3(12.5)
Orients women for the place of delivery	11(45.8)	13(54.2)
Orients women about personal hygiene, rest, and exercise	1(4.2	23(95.8)
Orients women about STI and HIV/AIDS prevention	11(45.8)	13(54.2)
Counseling about harmful habits smocking &alcoholism	----	24(100)
Orients women about alarm signs	16(66.7)	8(33.3)
Counsels about nutritional need	11(45.8)	13(54.2)
Informs mothers about side effects of medicines during pregnancy	-------	24(100)
Orients women breast feeding, baby vaccination	-------	24(100)
Inter-communications b/n provider & clients		
Communication with client throughout the procedure	17(70.8)	7(29.2)
Insist her to ask ensure client has understood	12(50.0)	12(50.0)
Schedules the next appointment according to health needs	24(100)	---------
Thanks clients for her times	---------	24(100)

(…) =*Dots in table indicated empty*

6. Discussion

The study examined the quality of ANC services in the primary health care centers as perceived by women, among a rural antenatal population in Bursa woreda. The study showed that women attending antenatal clinics at these centers, in general, were less satisfied with the quality of services received of some inconsistencies between the received care and their expectations of the facilities. Besides the overall assessment of their perspectives on care received from the above average level of happiness with many elements of quality of ANC that were explored in the study.

In a study findings, three out ten women participated in the study was satisfied. Other similar study was reported in Eastern Uganda on satisfaction was better compared with the present study findings (30). This might be due to the socio-demographic variation of the study populations. In other hand, the study finding was higher compare with the similar quality study results reported that satisfaction on the ANC services received in North Western Ethiopia in the Amhara region (34). This might be due to the time variation of the study period. Clients highly satisfied on provider performed general physical examinations and explanation of the results of examination. In other finding, the variables with the most satisfied percentage of ANC clients were provider's attitude and the examination room privacy. The findings in previous studies revealed that Addis Ababa health Centre were experiencing variables with the most satisfied on general examination and treating respectfully (30, 33**).** However, the major reasons given for dissatisfaction with the over-all quality of care received in the Bursa rural health centers were absence of laboratory tests for pregnancy related cases and the explanations of danger sign arise during pregnancy. This finding was found to be consistent with studies conducted in Luck now district India (24).

The consultations time for ANC during follow up has taken of mean± SD (7.90±4.68) minutes. The finding was found to be higher than studies conducted in Lao People's

Democratic Republic, where the average consultation time for each woman was five minutes (22).

The study further revealed that after adjusting for other factors, pregnant women whose educations level was Secondary and above were less likely to satisfied compared to those whose educations level were can't read and write. Level of education was key factors influencing the timing of entry to ANC and making four or more visits and corresponds to findings from previous studies (28,31 and 34), where the possible reason for these women with higher level of schooling more needs quality care for satisfactions. The finding showed that pregnant women who had current pregnancy unplanned less likely satisfied than those who had current pregnancy planned [AOR=0.56, (95% CI, 0.33-0.97)]. The finding is consistent with the EDHS 2012, which reported increasing wanted pregnancy in Ethiopia since the year 2005 to 2012(4). This implied that the women might be getting wanted pregnancy more satisfied than unwanted pregnancy. The finding in this study indicated that women who had started first visits of ANC after 4 months were less satisfied than who had started before 4 months. The World Health Organization (WHO) recommends that at least four ANC visits, the first should take place before of 4 months. Therefore, there was significant association between ANC attendance during first trimester and satisfaction. The finding was concur with the previous studies which reported in Malawi and North Western Ethiopia (17, 26, 34).

In observation study revealed that, the general history of the pregnant women had taken correctly in (70.8%). In other study, ANC was confined to recording of obstetric details better than present findings [24, 26]. However, the majority of the ANC clients not greeted and called by her name were (33.3%). This finding was inconsistent with previous studies (34), which reported that demonstrated that respectful and friendly greeting was offered for [81.2%] clients. The structural observation study revealed that the staff providing ANC

concentrated on examinations done very regularly (weighing, auscultation of the fetal heart, and palpation of the fundus). The finding is similar to findings in a study done by (Addis Ababa and other country) (27, 32-33). In the finding others medical and gynecology, examinations had done less regularly. This finding was inconsistent with previous studies done in country (33). The Structural observations findings revealed that during study period volunteer HIV/AIDS testing and counseling had done (66.7%). The study finding showed low result compare with the similar study done in rural Kenya (28). However, the majority of the ANC clients were not performed likes (hemoglobin, blood grouping and Rhesus factor, VDRL for Syphilis and urine analysis). Similar structural observational study revealed that there were different level done routine laboratory tests in previous studies (25, 27-28, 35). The findings in this structural observation study indicated that clients received tetanus toxoid vaccination (91.7%) and Prescribes iron and folic acid were (37.5%). These finding were better than compared with previous studies done in Eastern Uganda (30). The finding showed provider orients women about alarm signs were (66.7%). In other finding reported that danger signs counseling in pregnancy women were higher than present finding (25, 28). Overall communication between provider with client throughout the procedure have had communicated were (70.8%). No one-health provider has said thanks clients for her times. The finding was inconsistent with previous studies (21- 22, 24). In previous finding client provider, interaction was very important for quality improvement. Such missed opportunities should be regarded as indicators of poor quality.

However, there were in all health centers no separated room, auditory privacy and visual privacy in consultations room. The findings in this study consultations room and place were not convenient compare with other studies (24).

On infrastructure for providing ANC, the findings from the checklist indicated that examination table, Foetoscope, Stethoscope & B.P. instruments, Maternal & child health

cards (FANC), and weighing machine was available in all health facilities. A present finding was consistent with previous study (22, 24-26, 34). However, structural observation study revealed lack of the following resources; Syphilis test, Urine Analysis tests, Haemoglobinometer and Albuminstix were unavailable in all health facilities. In present study, there were no laboratory tests in all rural health centers. The probable reasons for this discrepancy could be a lack of laboratory supplies such as reagents or the mere lack of initiative to carry out these tests by the health workers. The related studies results showed that have variations from Amhara region and Addis Ababa (33- 34). This implied identification of pre-existing health conditions that may affect outcome of pregnancies such as anemia, bacteria (urine tract infection), albumins, and other sexually transmitted infections were not offered. Such missed opportunities were, as indicators for affected quality of care for pregnancy outcome.

7. STRENGTHS AND LIMITATIONS OF THE STUDY

7.1 Limitations

- Subjective measurement of satisfaction may make the study difficult to assess and compare Satisfaction. However, satisfaction from the service was measured through satisfaction at all provision of the service and this makes the measurement to have slight objectivity.
- Moreover, study subjects may be affected by social desirability to answer dissatisfaction to a person whom they consider as employee of the health center. Similarly, assessment of health providers through observation while they do ANC may change their behavior, and usually it may be reflected on matters related to what they know including resection to their clients. This observed reality that is reflected in this study.
- The study was lack of enough literature on quality ANC relevant to Ethiopia and study area in particular.
- Finally, the other limitation was that the study was conducted in a rural area and findings cannot be generalized to urban setting.

7.2 Strength

- The questioner was pretested on similar setting and a necessary modification had made to minimize the difficulty during the data collection.
- The study has included all the legible subjects in the selected health centers and has got 100% response rate.
- The study has assessed client satisfaction on ANC through client interview and observed health providers performance. It has also assessed basic equipments and materials in health centers, and use of these different assessments tools to verify quality of ANC service in health centers through triangulation of the methods is the major strength this study conceives.

8. CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

The study findings revealed that the ANC provided at Bursa woreda rural health Centre client's satisfaction was low. About three in ten women were satisfied with ANC provided in rural health centers. The chance of satisfaction from ANC service was lower among women education level was secondary and above. In this study, higher proportion of health providers did provide physical examinations very regularly (weighing, auscultation of the fetal heart, and palpation of the fundus). However, for all of them ANC clients were not performed likes (hemoglobin, blood grouping and Rhesus factor, VDRL for Syphilis and urine analysis) and counseling risk factors about harmful habits likes (smocking, drug abuse &alcoholism, side effects of medicines during pregnancy, breast-feeding, and baby vaccination). Although health centers have basic structural medical equipments, all of the health institutions have no laboratory equipments and high-level disinfection process**.**

8.2. Recommendation

- Satisfaction from the ANC service in the health centers is very low. So should be stressed out on health providers and woreda health office to do better for client's satisfaction.
- Regular in-service training on management of women coming to health institution and on the use of guidelines for examination and management of health professionals working in ANC is essential.
- Stakeholders' (governmental and non-governmental organization) should be providing on service training for health workers how to provide health counseling and education for all antenatal clients in health facilities.
- To improving quality of ANC, services woreda health offices should be fill full essential basic equipments and materials for each health facilities as needed.
- The study has certain limitation and quality improvement is never ending journey therefore further studies are valuable for the improvement of findings and maternal health services.

9. REFERENCE

1.Dana A. NG, and German R. Utilization of care during pregnancy in rural Guatemala: does obstetrical need matter? . Soc Sci and Med. 2003;57:2447-63.

2.WHO U, UNFPA, the World Bank. Trends in Maternal Mortality: 1990-2010. and The World Bank estimates. Maternal Mortality Estimation Inter-agency Group (MMEIG). 2012.

3.estimates developed by WHO U, UNFPA, and the World Bank. World Health Organization. Maternal mortality in 2005:. Geneva: World Health Organization, . 48 p. 2008.

4.ICF International Calverton M, USA. Ethiopian Demographic and Health Survey Report. In: Ethiopia CSAo, editor. Addis Ababa, Ethiopia 2011.

5.Organization WWH. Working with individuals, families and communities to improve maternal and newborn health. . In: Safer DoMP, editor. Geneva, Switzerland: WHO press; 2010b.

6.Campbell OM GW. :Strategies for reducing maternal mortality: getting on with what works. Lancet 2006:368:1284-99.

7.Khan KS WD, Say L, Gulmezoglu AM, Van Look PF. WHO analysis of causes of maternal death: a systematic review. Lancet. 2006:367:1066-74.

8.Nuriye MJTaO. An evaluation of quality of Maternity care in three Istanbul Updated Social since Research initiative on quality of Care.

9.Ornella Lincetto SM-A, Patricia Gomez, Stephen Munjanja. Opportunities for Africa's Newborns. ANC

10.Srilatha D RS, Amma LI, Vijayakumar. Assessing the quality of ANC Thiruvananthapuran district: Available from: http://www.who.int.Accessed 28 June 2006.

11.AbouZahr CW, T Maternal Mortality In: Organization DoRhRWH, editor. Geneva: Estimates by WHO, UNICEF & UNFPA; 2004.

12.Ministry FDRoE, editor. Health ANC 2003.

13.(ROK) RoK. National guidelines for quality obstetrics and perinatal care. Division of Reproductive Health, Ministry of Health. 2004

14.M SSaK. Factors influencing women receiving safe delivery care In: Population WHa, editor. Bangladesh: Dhaka; 2006.

15.Wirth MeaDotM. Equity and Maternal Health in Ghana, Ethiopia and Kenya. East African Journal of Public Health. [This article on PubMed]. 2008;5(3):133-41.

16.al. NLe. Quality of ANC and Obstetrical Coverage in Rural Burkina Faso 2010;28.

17.Organization WH. Health services coverage statistics: ANC coverage (percentage) Genevaaccessed 22 August 2012.

18.WHO. ANC in developing countries: promises, achievements and missed opportunities; an analysis of trends, levels and differentials 1990–2001. Geneva2003.

19.Chege J ea. Feasibility of introducing a comprehensive integrated package of ANC services in rural public clinics in South Africa, frontiers final report. In: Council P, editor. Washington, DC 2008.

20.USAID. Focused ANC: A Better, Cheaper, Faster, Evidence-Based Approach). http://wwwk4healthorg/sites/default/files/focused%20antenatal %20care_engpdf.

21.Choudhry mtm. maternal mortality and quality of maternity care. Pakistan.: Karolinska Institutet; 2005.

22.Darj APE. Quality and utilisation of ANC services. Stockholm, Sweden: Karolinska Institutet; 2012.

23.Ashebir Getachew JR, David C. Quality of Care for Prevention and Management of Common Maternal and Newborn Complications: A Study of Ethiopia's Hospitals. In: program Machi, editor. Maryland 21231-3492,USA: Jhpiego; 2011.

24.Monika A. MZI, U.Mohan. Quality of Reproductive Health Care at Primary Level. Indian Journal of Community Medicine. 2005;Vol. 26(3 (2001-07 - 2001-09)).

25.Nicholas N A Kyei1, Collins Chansa2 and Sabine Gabrysch1. Quality of ANC in Zambia: a national assessment. BMC Pregnancy and Childbirth. 2012;12(151):3-4.

26.Mgawadere FM. Assessing the Quality of ANC. MALAŴI: UNIVERSITY of MALAŴI; 2009.

27.Malabika Sarker GS, Elin Larsson. Quality of ANC in rural southern Tanzania. BMC Research Notes 2010;3:209(1756-0500/3/209):3-4.

28.Kipronoh KM. factors influencing the quality of anc. kenya: Kenyatta University; 2009.

29.L. Nikiema1 YK, G. Capon3, B. Quality of ANC and Obstetrical Coverage. J HEALTH POPUL NUTR. 2010;28(1):67-75.

30.Moses Tetui, Elizabeth Kiracho Ekirapa. Quality of ANC services in eastern Uganda. Pan African Medical Journal 2012;13(27):1-6.

31.Olufemi T. Oladapo CAI. Quality of Antenatal Services at the Primary Care Level. African Journal of Reproductive Health. 2008;12(3):71-92.

32.Angelo S Nyamtema* AB-dJ, David P Urassa. The quality of ANC in rural Tanzania. Nyamtema et al BMC Pregnancy and Childbirth. 2012;12(70):3-4.

33.Sinishaw W. assessment of quality of anc in addis ababa health centers. ethiopia: addis ababa university; 2009.

34.Tadese Ejigu MWaYK. Quality of ANC services. Ejigu et al BMC Health Services Research. 2013;13(443):3-6.

35.Mekonnen DY. Trends in Maternal Health in Ethiopia. Addis Ababa ,Ethiopia: UNFPA2012.

36.AM M-P. Factors that influence Early Prenatal Care Enrollment and Compliance Behavior among Rural Malawian Women. . Malawian 1993.

37.office Bwhs. Annual estimeted populations data in woreda: health sector 2013.

ANNEX

Annex 1: Consent Form

Questionnaire on evaluate quality of ANC services in rural health centers in Bursa woreda.

Code of the health institution_____

Hello! My name is_____. I am from Addis Ababa University, college of health science, school of Nursing and midwifery. This is a study to be conducted health research on evaluate quality of ANC services in rural health centers among antenatal follow up mothers. This is beneficial to identify areas of improvement in the quality of ANC services and highlighting the need for corrective actions. By doing this we will provide sufficient information for policy makers, clinicians so that they could make informed decision. In order to attain this goal, you are kindly requested to provide you are genuine response on the questions given below. I would like to confirm you that you have the right to stop the interview at any time or skip any question that you do not wish to answer. Because taking part in this survey is voluntary and your responses will be held in strict confidence. Your privacy will also be protected and no one will know your answer. If you do not wish to participate, it will not affect the services you receive at the clinic now or in the future.

I also request you to answer it candidly because your answers are like one important piece of brick in the whole research and determine the outcome of this study. Thank you very much for your willingness to listen to me. In case, if you have any question you can ask:

Contact address:-Tamirat Tesfaye, cell phone: *+251-913-861908*

Are you voluntary to respond to the questions? Yes; ----proceed with the interview

No; ---- thank her and End.

Date & Signature: _____

Name of supervisor: _____

ANNEX 2; - ENGLISH VERSION QUESTIONNAIRES' FOR EXIT INTERVIEW

Write Tick or number, or statements or word of the interviewed mother in front of the question of space provided ___ of this space

Question part one:-Back ground information of the client

Health facility Code number_____

1001. Date of visit within weeks _____

10002. Addresses Keble_____

1003. Age of Client _____ yrs

1004. Marital Status 1. Married 2. Unmarried 3. Divorced 4. Widowed 5.others

1005. Educational Statues 1. Illiterate 2. Read and writes 3. Primary 4. Secondary 5. Tertiary

1006. Income level per month: _____birr

1007. Number of Pregnancy: _____

1008. Number of children 1. Alive_____ 2. Dead__

1009. Religious statuses 1. Protestant 2. Orthodox 3. Muslim 4. Catholic 5. Others

1010. Ethnicity 1. Sidama 2. Amhara 3. Others

1011. Is the pregnancy planned? 1. Yes 2. No

1012 How many visits do you have in this pregnancy _____ times

Questions part two

1013. Duration of pregnancy _____month _____weeks

1014. When was your first visit? Date/ Months /_____

1015. Why did you start at this time?

1. TT immunizations 2. Antenatal check up 3. Pregnancy test 4. Other medical cases

1016. Does the health care provider performs general examination in this visit

1. Yes 2. No

1017. If yes, dose the health care provider explain about the examination before

1. Yes 2. No

1018. Did the health care provider explain about the result of examination?

1. Yes 2. NO 3. I cannot remember

1019. Was the discussion b/n the health care provider and you was confidential.

1. Yes 2. No 3. I am not sure

1020. Did the health care provider treat you respectfully? 1. Yes 2. NO

1021. After you arrived in the health facility how much time did you spent to get the health care provider.

1. Waiting time hours ____min_____ 2. Consultation _____Minutes

1022. What did you say about the time that you spent?

1-Very long 2-Short 3-Appropriate

1023. Is there any time that you return to your home without having check up?

1. Yes 2.No

1024. If, yes explain the reason 1. Lack of health care provider 2. Lack of laboratory equipments 3. Due to taking long time 4. others_____

1025. During your follow up most of your visits were done by how many health professionals 1-one health professional 2-Two-professional 3-More than two

1026. How much you are satisfied with the above care.

1- Very satisfied 2- Partially Satisfied 3. Neutral

3- Partially Dissatisfied 4- Very dissatisfied

1027. Which group of health professional is mostly give you ANC

1-Mid wife 2-Nurse 3-Doctor 4-Both Nurse &mid wife

1028. From the below-mentioned health care professional whom groups did you preferred

1-Midwifery 2-Nurse 3- Doctor 4-Both Nurse &mid wife

1029. During your follow up do the health professional explain about the following points in Satisfactory way

1.-Type of laboratory investigation	1. Yes	2. No
2 -Complication that occurs during pregnancy	1. Yes	2. No
3-Bleeding	1. Yes	2. No
4-Head ach & blurred vision	1. Yes	2. No
5 -True sign of labour	1. Yes	2. No
6-When to go to health facilities for delivery	1. Yes	2. No
7. pre-preparation before delivery	1. Yes	2. No

1030. About your antenatal follows up on which points do you agree.

1-You are strongly agree 2- agree 3. Neutral 4- disagree 5. Strongly disagree.

Put number only in front of each question.

1. We were waiting for Long time to get health workers.

2. The follow up would be good if conducted by one health professional

3. Health care providers were usually initiates to ask question

4. They give as enough time to ask question

1031. At the time of follow up does the health care provider tells you about possible complication arise during pregnancy.

1. Yes 2. NO 3. I cannot remember

1032. If yes, mention the topic's _____

1033. If yes how much did you satisfied with advise you had

1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. V. dissatisfied

1034. How much did you pay for the care that you receive _____Birr?

1035. How much expensive the money that you pay

1-Very expensive 2-Appropriate 3-Minimume

1036. Where did you want to give birth 1-In this health center 2-Other health center 3-Home 4-Hospital

1037. If your choice is number one (1) what are the reason among the following?

1- It is near to my house

2-I like the health care provider

3-Health care providers provides good care

4-Better medical equipments are available

5-I usually give birth in this specific place

6. The waiting time was very short

7. Others_____

1038. Is the health care provider gives you appointment. 1. Yes 2. No

1039. To have a good ANC which of the followings needs to be improved

1- Increase health care provider 2- Drug supply 3-Laboratory

4-Cleanness of the room 5-Short waiting time 6-Extra rooms

1040. Today or previously, did you receive a health advice? 1-Yes 2- No

1041. If, yes tell the topic that you receive

1-HIVS/AIDS	1. Yes	2. NO
2-STDS	1. Yes	2. No
3-nutrition	1.yes	2. No
4-ANC	1. Yes	2. No
5-Family planning	1. Yes	2.No
6-Vaccination	1. Yes	2. No

7-Others_____

1042. How much did you get satisfied with the advice given?

1-Very Satisfied 2- Satisfied 3. Neutral 4- Dissatisfied 5-V. Dissatisfied

1043. Among the care that you receive which one is very good

1. Counseling service
2. TT Vaccinations
3. HIV testing and counseling
4. Laboratory activities

1044. During your follow up is there any obstacle? 1. Yes 2. No

1045. How much did you satisfy about the follow up you had up to this time.

1-Very Satisfied 2- Satisfied 3. Neutral 4- Dissatisfied 5-Very dissatisfied

1046. Did you receive the care that you want and need? 1. Yes 2. No

- Time of data collection completed_____ Signature of data collector_____

ANNE 3 SIDAMIGNA VERSION

Bursi woradi giddo noo fayimmate agarooshi xaabbarra godowi noo amuwi ilate balanxe assinanni kaa'looshi isilanchimma aana assinanni xinxallote xa'mo.

Ane sumi_____yinanni. Ani daawommohu Addis Ababu yuniversite fayyimate sayinse kollejenni nursenna amuwu illishiishaano rosu kifilenniiti. Tenne xiinxalo assinanihu gaxarete fayyimmate uurrinsha giddo goddowi noo amuwira uyinanni owante xinxalloteeti (buuxateeti). Horose bande anfe woyyaawino coye dancha owaantenninna qarru no yine hendanni qooxeessira hasissanno irko assateeti. Tenne xiinxalo assatenni noo qarra haja la''annonsa bissara sayisatenna owaante uyitanno uurrinshubbara horosiraano noo qarra xawo assite kulateenni uminsa kaonni hedonsa wortannote buuxate kaa'litanno.

Tenne hedo gumulo iillishate konni woroonni noo xa'mora hassisanno tumo aatenni kaa'l'atae gede shooshanqeetenni xamireemohe. Atera e''eemohe qaali hasiritta yannara xa'mo xa'mantanni hedhe hasirita yannara uurrisa dandaata, woyi hassissanohekki xa'mo kubba dandaatta ati qolate hasirattakkita. Korkaatuno tenne xiinxaalora ummiki fajjonni aatta hedo baalate fajo ayeeranno kullannikita ikkitinota buuxiseemohe qoleno tenne xa'mote giddo su'makki diborreessinanni. Umikki ayimma agaratinote ate dawaro ayino afara didandaano.tenne xiinxaalo hedora umokki fajja hoggatara dandaata. Ikkolanna kayinni ummokki fajja hoogakkira albillichote uyinnanihe owaanteera ate aana xaano ikko konni albira ate aana qarra abbinannihekkita xawiseemmohe.

Ledeno shooshanqetenni xa'moreemmoheri tenne xiinxallo giddo karsammatenni aatae dawaro woyyaabbino waante aate kaa'litanohura onoohe yanna anera beekke kaa'latae gedenna tenne xiinxaalonni daanno gummira atino horonsiraancho ikkatahura qaaru noowa xawo assite kulateenni umikki qeecha fulatta gede lowo ayirrinyinni xa'mireemmohe. Umokki fajjite macciishootae daafira lowo geeshsha asse galaxxeemmohe. Miteekite xa'mo heedhuheha ikkiro xa'ma dandaata.

❖ Xiinxalote anni suma: - **Taammiraati Tesfaye, silkete kiiro**. ***0913861908***

Tenne xa'mora tumo dawarate umokki fajjotae? Ee____xamoya xa'ma hanafeemo xaa.

Deeni_____lowo geeshsha galaxxeemmo hasaawa konne gundeemmo.

Barrana malaate_____ Taje gamba assanorreharunsano ogeessi su'ma _____

<u>Gafa I</u> sidaamu afiinni xa'mate qixxaabbino xa'mubba

Tike ( ) woyi kiiro woyi handaarunninna qaallunni amuwa xa'mite xa'muwate albaanni qixxaanbbo fanu bayichira borressite dawari.

Xamote gafa mite:-xa'manchoote xaphoomu taje

fayyimate uurrishi xaawi koodde kiiro_____

1.1 umo la'noonnihe barrimammooteeti_____

1.2 Base (Qawale) mamaati_____

1.3 Dirikki me"eho _____

1.4 Gaabichu ikkito 1. Adhatino 2. Diadhatino 3. Babbaxitinori
4. Gashshanni reyinoti 5. Wole korkaata

1.5 Rosu deerra lainohunnin 1. Rossinokkite 2. Umi dirimi roso rossino
3. Layinki dirimi roso rossinotenna alenni

1.6 Aganu giddo afidhanno eo_____?

1.7 Godowate ikkito_____

1.8 Ilantino ooso kiiro, lubbote noori kiiro_____reeyitinori_____

1.9 Ammannote ikkito 1. Protestaante 2. Ortodokiseete 3. Isilaamaho 4. Kaatoolikete
5. Wole ammanno_____

1.10 Gosate gaamooshshe 1.Sidaama 2. Amaara Wolootu gosa_____

1.11 Godowootahu mixotenniiti? 1. Ee 2. Deeni

1.12 Tenne godowara fayyimmate uurrinshira dagee me"e higge layirootta? _____

2. XA'MOTE GAFA LAME (2)

2.1 Godowu gatihenku mageeyi yannaati _____aganunni_____lamalatenni

2. 2 umo layyiroottahu mamarooti? Barranna agana layidhinoha_____

2.3 Tenne yanna layira mayira hanafitta_____

2.4 Tenne daara fayyimmate ogeeyye xaphooma bisu mirmara assitinohe? 1. Ee 2. Deeni

2.5 Ee yituro, assinihe bisikki aani mirmarira ogeeyye balaxxe xawisha uyite hanafinohe

2.6 Deeni yituro, korkaata xawisinke _____

2.7 Fayyimmate ogeeyye assituhe mirmari guma xawisse kultinohe?

1. Ee 2. Deeni 3. diqaadeemma

2.8 Atenna fayyimmate ogeeyye mereero assitininoonni hasaawi ki'ne lamunku mereero calla gatannota hasaawinsoonnihe? 1. Ee 2. Deeni 3. Diqaageemma

2.9 Fayyimmate ogeessi ate danchu garinni koyisinoke? 1. Ee 2. Deeni

2.10 Fayyimmate uurrinsha dayitta kawa fayyimmate ogeeyye afirita geeshsha mageeshshi yanna keeshshita

1. keeshshoota yanna saatetenninna daqiiqunni _____

2. amaalete mageeyi yanna adhihe daqiqunni

2.11 Tenne keeshshita yannare mayyata 1. seeda yannaati

2. harancho yannaati 3. Ikkado yannaati

2.12 Fayyimmate uurrinsha dagge hasiratta horo afirittakkinni higootta yanna no?

1. Ee 2. Dee'ni

2.13. Ee yituro, korkaatu maati? _____

2.14 Dagge layiritta yannara harunso assate me"e ogeeyye lainohe ?

1. Mittu ogeessi 2. Lamu ogeessi 3. Lamu aleenni

2. 15 Ogeeyye uyitino kaa'loonni mageeshsha hagiidhootta?

1. lowo geeshsha hagiidhoomma 2. boode geeshsha hagiidhoomma

3. mereerima heedo noe 4. bikkanokolla 5. hadiiraame di'ikkoomma

2.16 Godowi nootta yannara roore kaa'lo uyinohehu hiikkoneeti?

1. Midiwayiferete 2. Dokiterah 3. Nersete 4. Nersetenna midiwayiferete

2.17Aleenni xawinsi fayyimmate ogeeyye gaamo giddonni hiikkonne roore doodhatta?____

2.18 Harunso assiritta yannara fayyimmate ogeessi konni woroonni noo bixillera hagiirrame ikkatta garinni xawisinohe. A. Ee ikkiro 1, B. dee'ni ikkiro 2 kiiro

1. Labiraatoorete assinanni mirmara garunni xawisinohe/xawisohe
2. Babbaxino qarri ilate yannara iillanota dancha gede asse xawisinohe

3. Mundee batidhannotanna sae sae qarru heeranota xawisinohe/xawisohe
4. Umu damuumenna illete xoe gananota xawisinohe
5. Halaalancho ilate malaatta xawisinohe
6. Ilate yannara fayyimmate uurrinshira mamoote harattaro bande ku'loonnihe?
7. Ilate albaanni marcho qixxaanbanniro xawise kulinohe

2.19ssinihe harunsora konni woroonni noo hedora hiitteera sumuu yaatta?

1. Lowonta sumuu yeemma 2. Bocunni sumuu diyeemma 3. mereerima heedo noee 4. Bocunni sumuu yeemma 5. Horontenni sumuu diyoomma

Mitte mittente xa'mora kiiro xa'mote albaanni dawari

A. Fayyimmate ogeeyye afirate keeshshoota yannara noohe hedo
B. Mittu fayyimmate ogeessini calla assi'nanni harunso danchate
C. Ogeeyye xa'mo xa'matansa gede ate kakaayisinohe tennera mageeya sumuu yaatta
D. Xa'mo xa'mate ikkado yanna uyinohe? tennera mageeya sumuu yaatta

a. Harunso assiritta yannara fayyimmate ogeeyye godonbanni yannara xaaddanno qarruba xawisse kultinohe? 1. Ee 2. Dee'ni 3. Diqaageemma

2.20Ee yituro, ku'loonnise qarruba birxicha xawisso_____

2.21 Ee yituro, aleenni uyinihe amaaleenni mageeya hisataame ikkootta

1. Lowo geeshsha hisatooma 2. Boode geeshsha hisatooma 3. mereerima heedo
4. Bikkunni dihisatooma 5. Horontanni dihisachishinoe

2.22 Assinihe kaa'lora mageeshshi birra baaxxita? _____

2.23 Baatisiinsihe birrira noohe hedo hiittoote?

1. Lowo geeshsha muggi yiinoho 2. Bikkankolla 3. Shiimaho

2.24 Mama ila hasiratta? 1. Konne fayyimmate uurrinshara
2. Wole fayyimmate uurrinshara 3. Mine 4. Hospitaalete

2.25 Aleenni noori giddo doorshise kiro "1" ikkituro. konni woroonni noori giddo korkkatikki maati?

1. Ane mini mule ikkinohura
2. Owaante uyitannore ogeeyyete kaa'lo baxeeti
3. Fayyimmate ogeeyye dancha kaa'lo uyitannohuraati
4. Woyyawino fayyimmate kaa'lo uduunne afidhinohuraati
5. Ani wo'ma woyite konne bayicho daye ila hasireemmahuraati
6. Agadhinani yanna harancho ikkitinohuraati

2.26 Fayyimmate ogeeyye aantanno yannara daate qaxaro dinye uuyinohe (kulinohe)

1. Ee 2. Dee’ni

2.27 Dancha harunso assate konni woroonni noori giddo hiikkuri woyyeessa hasiissanno

1. Ogeeyyete kiiro leda 2. Xagga shiqisha 3. Labiratoorete horo kaajjissha

4. Layi’nanni kifile feeyanna coite assa 5.Agadhinanni yanna haransa

6. Lende kifilla mina 7. Wolere xawisuro_____

2.28 Tewono ikko konni albaanni fayyimmate amaale adhoota? 1. Ee 2. Dee’ni

2.29 Ee yituro, adhitino amaale birxe xawissona

1. HIV/AIDS 2.Simu xaadooshini daano dhibbire 3.Sagallate amanyootire

4. Ilate albaani assi’nanni harunso daafira 5.Ila bikkuni ilate horo daafira

6. Kitibaatete horo daafira 7.Wole horo xawisuro_____

2.30 Aleenni uyyinoonni rosi amaalera mageeshsha hagiiraammete?

1. Lowo geeshsha hagiirraamete 2. Bikkunni hagiidhoomma 3. Mereereho

4. Boodere dihagiidhoomma 5.Horontanni dihagiidhoomma

2.31 Hasaabbinni hasawira fayyimmate ogeessi misiletenni leellishshanni xawisha uyinohe? 1. Ee 2. Dee’ni

2.32 Uyiinihe horo (owaante) giddo hiitteneeti lowo geeshsha dancha?

1. Amaale uyinoonoeti 2. kitibaate 3. eedis mirmari 4. labiroteeri mirimari

2.33. Harunso assiritta yannara xaadinohe qarri no? 1. Ee, maati _____

2. 35 Tewo uyinihe owaantera baalunkurinni xaphi assite mageeshsha hagiidhootta

1. Lowo geeshsha hagiidhoomma 2. Boode geeshsha hagiidhoomma 3. merreroho heedooti 4. Boode geeyaano dihagiidhoomma 5. Horontanni dihagiidhoomma

2.36 Hasirootta kaa’looshshe afirootta ? 1. ee 2. Dee’ni

Taje gamba assino ogeessi malaate_____

ANNEX 4: - CHECKLIST FOR RESOURCES

Assessment of structural aspect of rural health center about antenatal services availability of physical infrastructure

3.1 Health unit_____

3.2 Health professional Interviewed _____

3.3-Head of the institution (profession) _____

3.4-Head of the ANC unit (specify) _____

3.5. Staff Profile of the health institution

	Category	Female	Male	Total
3.5.1.	Technical			
	Health officer			
	Midwife			
	Nurses			
	Health Assistant			
	Sanitarian			
	Lab. Technician			
3.5.2	Administrative Staff			
	Clerk			
	Cleaner			
	Guard			
	Total			
3.6	Does the health institution have specific plan document	Yes__ No __		
	What is the total population that the health center look			
3.6.1	Does the health institution have prepared action plan for the current budget for F/p, ANC, Delivery and STI	1=Yes 2=no 3=yes, but for some of them		
2.6.2	Is there clear job description for all staff in this health institution	1=yes 2=no 3=yes for some		

3.7. Logistics

3.7.1	Does this health institution have transportation facility	1= Car 2=Motorcycle 3=Bicycle 4=none	
3.7.2	If they available, are they functional?	Yes____ No____	
3.7.3	Does the health institution have stand by generator? If no What alternative means do you use _____	Yes____ No_____	
3.7.4	What water source is using Pip water Well Water	 Yes___No___ Yes___ No____	
3.7.5	Does the health institution has enough budget for vehicle maintenance and fuel	Yes____ No___	
3.7.6	Does the health institution has Generator	Yes____ No_____	
3.8	**Waiting space**		
3.8.1	Protected waiting area		
3.8.2	Adequate sitting space		
3.9	**Consultation room**		
3.9.1	Separate room		
3.9.2	Auditory privacy		
3.9.3	Visual privacy		
3.9.4	Examination Table		
3.9.5	Foetoscope		
3.9.6	Weighing machine		
3.9.7	Stethoscope & B.P. instruments		
3.9.8	Maternal & child health cards(FANC)		
3.10	**Facilities sanitation**		
3.10.1	Bathroom		
3.10.2	Toilet		
3.10.3	Hand wash room with Soap		

3.10.4	Electricity		
3.10.5	Drinking water facility		
3.11	**Laboratory Facilities and medical supplies**	1=available 2=not available	
3.11.1	Syphilis test		
3.11.2	Urine Analysis test		
3.11.3	HIV test		
3.11.4	Pregnancy test		
3.11.5	Haemoglobinometer		
3.11.6	Albuminstix		
3.11.7	IFA tablets		
3.11.8	TT Vaccines		

3.12. Sterilization

Sterilizer	**1=Dry oven**	**2=autoclave**	**3=Boiling pan**
3.13	**Infection prevention measures taken**	**1=Yes 2= No**	
3.13.1	If no state the reason	----------	
3.13.2	Hand washing with soap		
3.13.3	Decontamination		
3.13.4	Surgical Gloving		
3.13.5	Cleaning gloving		
3.13.6	Heavy duty gloving		
3.13.7	High level disinfection		
3.13.8	Alcohol spirit swabs present		

ANNEX 5 CHECKLIST QUALITY OF ANC SERVICES

Performance Observational checklist for ANC& maternity Care

1=performed, 2=not performed, 3=unsatisfactory,4=not applicable

	ANC Observation checklist	1	2	3	4
1	Check for the availability of washing facilities (water, soap, towel)				
2	Greets and calls client by her name and introduce her /himself/				
3	Reviews clinic record before starting the session and check about previous pregnancy, number, and outcome				
4.	Comprehensive history taking				
5.	Take pulse rate, blood pressure ,temperature and Measured weight				
6	Breast Examination :- inspection, Palpation & Preparation for breast feeding				
7	Examine skin, conjunctivae, legs for edema, redness, and varicose veins, thyroid, mouth, breast and lungs.				
8	Palpates uterus and perform maneuvers to detect fetal position and situation and measure uterine height and listens to the fetal heart rate(>18 wks)				
9	Determines weeks of gestation, EED & progress of pregnancy				
10	Informs mothers about her and fetus's health condition				
11	Informs mothers about any complication and management				
12	Orients women for the place of delivery (health centers, hospital & others)				
13	Orients women about personal hygiene, rest, exercise and general care				
14	Orients women about STI and HIV/AIDS prevention				
15	Counseling about harmful habits likes; smocking, drug abuse , alcoholism and traditional herbs to induce labour				
16	Orients women about alarm signs: pain, fever, Vaginal bleeding,				

	loss of amniotic fluid and reduction of fetal movement.				
17	Counsels about nutritional need				
18	Prescribes iron and folic acid				
19	Administered TT injection				
16	Informs mothers about side effects of medicines during pregnancy				
17	Orients women breast feeding, baby vaccination and use of Contraception				
18	**Laboratory investigation Blood for**				
1	Hemoglobin				
2	Grouping and cross matching				
3	Rhesus factor				
4	VDRL				
5	Syphilis				
6	HIV testing and counseling				
19	Communication with client throughout the procedure and gives her feedback On findings of physical, obstetric and any other procedures done				
20	Insist her to ask ensure client has understood				
21	Schedules the next appointment according to health needs and women's convenience				
22	Records all findings, assessments, diagnosis ,and care with client				
23	Thanks clients for her times				

Annex 6 DECLARATIONS

I TAMIRAT TESFAYE, the undersigned declare that this is my original work and has not been presented in this or any other University for a similar or any other degree award, and any partial or full sources of materials used should be fully acknowledged.

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