PATIENT WAITING TIME AND ITS DETERMINANTS IN THE GENERAL OUTPATIENT DEPARTMENT OF DEBRE MARKOS AND FELEGEHIYWOTREFERRAL HOSPITALS INAMHARA REGIONAL STATE, NORTH WEST, ETHIOPIA.

By: Melesse Belayneh (BSc PT, BSc PH)

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April, 2015

Jimma, Ethiopia

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By: Melesse Belayneh (BSc PT, BSc PH)

Advisors: Mirkuzie Woldie (MD, MPH, Associate Professor)

Negalign Berhanu (BSc, MSc, MBA)

April, 2015

Jimma, Ethiopia

Abstract

Background: Patient waiting time is defined as the total time from registration until consultation with a doctor. Experiences of waiting in general are perceived as complex, subjective, and culturally influenced. Registration time, payment process/cash billing, recording classification/triaged time, few human resources and work process are the determinants of patient waiting time in the general outpatient departments. However, the complexity of wait time is poorly understood and has been explored only to a limited extent.

Objective: To assess patient waiting time and its determinants in Debre Markos and Felge Hiywot Referral hospitals of Amhara Regional State in North West, Ethiopia.

Methods: A hospital based comparative cross sectional study design wasemployed from October 20- November 20, 2014. The study population was patients presenting to general outpatient departments, from which464 patients was selected using systematic random sampling technique. Quantitative Data was collected using structured questionnaire and A check list adopted from studies.Quantitativedata was coded, entered, cleaned and analyzed using SPSS Software for windows version 20.0.Linear regression and bivariate logistic regression was applied to identify the determinants of each explanatory variable on outcome (patient waiting time).Finally data was interpreted by referring to the pertinent findings from the relevant literature reviewed. Ethical approval and clearance was obtained from ethical clearance committee of the Jimma University College of Public Health & Medical Sciences

Result: The measured waiting time in Felge Hiywot referral hospital mean waiting time was and its standard deviation 149.2±72.1 minutes where as 94.2±58.3 minutes in debere markos referral hospital. The major causes of the long patient waiting time was large numbers of patient with a few doctors 94(40.5%),67(28.9%) ,long searching of the cards 67(28.9%),73(31.5),and long registration time 59(25.4%),76(32.5) in Feleg hywot and debre markos referral hospitals respectively. the satisfaction status in waiting time greater than 60 minutes in Felege hiywot referral hospital were statically significance with p value 0.0001(95% CI:1.7786,1.8766) with dissatisfaction whereas p= 0.0001 (95% CI;1.7690,1.8689) in debre markos referral hospital.

Conclusion: There is the need for health care facilities and hospital administrators to address gaps in human resources, infrastructures and other internal procedures and institutional systems aimed at reducing waiting times and thus ensuring an effective health care

Key Words: patient waiting time, outpatient department, DebreMarkoshospital, FelgeHiywothospital, Ethiopia

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Acronyms and abbreviations

ANRHB Amhara National regional Health Bureau

DMRH Debre Markos Referral Hospital

EHRIG Ethiopian Hospital Reforms implementation Guideline

FGD Focus Group Discussion

FHRH FelgeHiywot Referral Hospital

GOPD General Outpatient Department

GP General Practices

HIT Health Information Technicians

HPMI Hospital performance monitoring Implementation

HRQOL Health-Related Quality Of Life

IOM Institute of Medicine

JUSH Jimma University Specialized Hospital

KPI key performance indicator

MRD Medical Record Department

NGO Non Governmental Organization

OPD Out Patient Department

SPSS Statistical Package for Social Science

TCWT Total Clinic Waiting Time

WHO World Health Organization

Chapter one

1. Introduction

1.1 Background

Waiting time defined as the total time from registration until consultation with a doctor. Patients' waiting time the length of time from when the patient entered the hospital to the time the patient contacting the doctor at OPD".A patient's experience in waiting time will radically influence his/her perceptions on quality of the service. Patients are customers, and most businesses try to focus on doing what they can to keep their customers happy(1).

Waiting time from the moment patients submit a clinic appointment card or referral letters at the counter until getting a call from the counter .During this time registration time, the payment process and record classification are made(2).

There were two waitingtimes, the first is time taken to see a doctor and the second is time to obtain medicine. Wait time for health services is commonly conceptualized as a linear construct where it is assumed that patients become more distressed the longer they wait. Waiting can be irritating, frustrating and a source of great. Uncertainty, Experiences of waiting in general may be perceived as complex, subjective, and culturally(3).

Whether it's a time used for registration of patient , routine doctor's appointment, emergency room treatment, laboratory/diagnostic test, procedures, receiving the results of various tests, patient happens to just about everyone seeking medical care. It's often one of the most frustrating parts about healthcare delivery system. Waiting times for elective care have been considered a serious problem in many health care systems since it acts as a barriers to efficient patient flows(4).

OPDs are considered as the window to hospital services and patient's impression of the hospital begins at the OPD. This impression often influences the patient's sensitivity to the hospital and therefore it is essential to ensure that OPD services provide an excellent experience for customers. It is also well-established that 8-10 per cent of OPD patients need hospitalization(5).

Waiting time is an indicator of service quality in that it examines several of six dimensions of quality, including the effectiveness and efficiency of the outpatient service to patients. Waiting times have constantly been a problem for outpatient clinics(6).

Patients spend substantial amount of time in the clinics waiting for services to be delivered by physicians and other allied health professionals. The degree to which health consumers are satisfied with the care received is strongly related to the quality of the waiting experience. Healthcare organizations that strive to deliver exceptional services must effectively manage their clinic wait. Patient clinic waiting time is an important indicator of quality of services offered by hospitals(7).

Registration time, payment process/cash billing/, recording classification/triaged time/, few human resources and work process are the determinants of patient waiting time in the general outpatient departments. Currently the patient flow in Amhara regional Health bureau according to the Ethiopian hospital reform implementation guideline (EHRIG) reception at the gate of the hospital, central triage, card room, casher/billing/ and OPD rooms until the first contact of doctors(8).

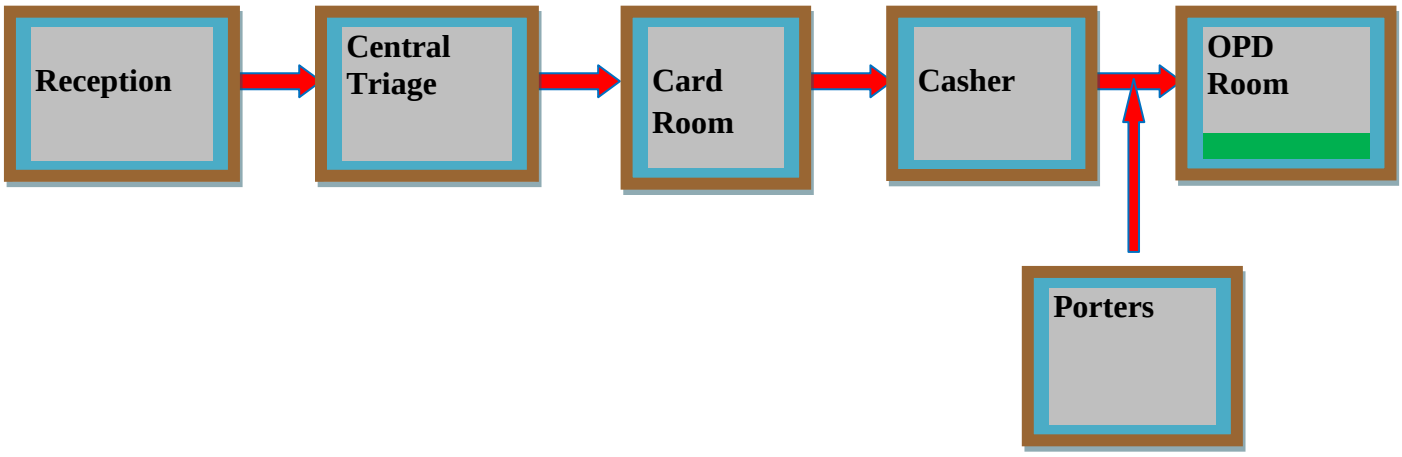

Figure 1.patient flow in general outpatient department According to Ethiopian Hospital Reform Implementation Guideline Ethiopia, 2011.

1.2 Statements of the Problem

Waiting times are a complex phenomenon and are the results of many possible determinants and variables. However, only a subset of these variables can be measured empirically at an international level. The international surveys are that they report evidence also for countries where waiting times are not a policy concern. However, they are often based on small samples of respondents. Waiting time for health services is commonly conceptualized as a linear construct where it is assumed that patients become more distressed the longer they wait. Waiting can be irritating, frustrating and a source of great uncertainty. Long waiting times have been reported in both developed and developing countries. In the USA, an average waiting time of about 60 min was found in Atlanta(9).

The duration of waiting time varies from country to country, and even within country it varies from center to center. In most developing countries, as several studies have shown that patients spend 2-4 h in the outpatient departments before Waiting times for medical services such as specialist visit and surgery continue to be an issue in most countries with publicly funded healthcare systems, where timely access to healthcare services is at the top of the health policy agenda waiting for care, however, is only problematic when patients consider their waiting times unacceptable. To address the issue of unacceptable waits for care, it is important to understand the factors contributing to patients' assessment of the acceptability of their waiting times. Much of the evidence to date focuses on the duration of the waiting time as the principal determinant of wait time acceptability, often with little to no regard for other factors that may influence patients' views on waiting times A source of dissatisfaction with health care reported by patients is having to wait a long period of time in the clinic. In Nigeria, an average waiting time of about 173 min was found in Benin(10)re seeing the doctor (6),(11) ,(12).

Time spent waiting is a resource investment by the patient for the desired goal of being seen by the physician and therefore may be moderated by the outcome. Patient waiting time in outpatient clinics is often the major reason for patients' complaints about their experiences of visiting outpatient clinics. Therefore, patient satisfaction with waiting time plays a crucial role in the process of health quality assurance or quality management(13).

In a competitively managed health care environment, patient waiting time play an increasingly important role in a clinic's ability to attract new business. It is difficult to sell services if individuals are dissatisfied with waiting time which is the length of time from when the patient entered the waiting room or the consulting room to the time the patient actually left the hospital.Additionally, waiting time becomes a factor in retaining current users of the services.

Patient satisfaction has emerged as an increasingly important parameter in the assessment of quality of health care; hence, healthcare facility performance can be best assessed by measuring the level of patient's satisfaction. A completely satisfied patient believes that the organization has potential in understanding patient needs and demands related to health care. Patient satisfaction is directly correlated with waiting times to see a doctor while another study found that, because of prolonged waiting times, a substantial number of patients left outpatient departments. Patient satisfaction is directly correlated with waiting times to see a doctor while another study found that, because of prolonged waiting times, a substantial number of patients left outpatient departments. A study of this nature is critical to public appreciation of the quality of health care operating environment; hence, this study was aimed at assessing patients' waiting time and factors affecting waiting in the outpatients' departments. Long waiting times indicate that there are insufficient staffs and/or resources to handle the patient load or that those available resources are being used inefficiently(14).

Typical questions challenging hospital managers include: How should they optimally allocate their limited resources? How much exam rooms do they need? How much physicians and supporting staff do they need? If they increase or decrease the amount of exam rooms and/or staff, how would this effect patient waiting time, the length of a medical treatment and the total time spent in clinic by patient?

Data generated from the study could be used by hospital administrators to address gaps in human resources, logistics, infrastructures and other internal procedures towards ensuring an effective health care delivery system. There is no research done as major title on patient waiting time and its determinants butthere are studies under the part of the outpatient satisfaction in the study areas. This study aimed at assessing the determinants of patients' waiting time in the general outpatient department (GOPD) of two referral hospitals of Amhara region, North West Ethiopia.

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1.2. Significance of the Study

The research will be conducted from the stand point of patients waiting time in general outpatient department. The study will investigate physical and psychological aspects of the patient experience of waiting will be reviewed.

This study will give theoretical as well as practical significance for researchers, policy makers and practitioners in order to use as base line data.OPD waiting time to contact first consultation of Doctor will provide health managers and professionals with useful information that could lead to reforms that encourage quality care in the health facilities. By measuring waiting times a hospital can assess, if there is a need for extra personnel and or other resources in the outpatient department and to review patient flow process to increases the efficiency of services provision.

This study therefore, aimed at assessing patient waiting time and its determinants in GOPD of DebreMarkos referral hospital and FelegeHiywot referral hospital and may generate important directions to be critically considered by health system managers and health care workers in different levels.

Chapter two

2. Literature Review

Patient waiting time in outpatient clinics is often the major reason for patients' complaints about their experiences of visiting outpatient clinics. Therefore, patient satisfaction with waiting time plays a crucial role in the process of health quality assurance or quality management. The results of a survey on patient attitude towards waiting in an outpatient surgery clinic. Generally patients appear reasonably satisfied if they wait no more than 37 minutes when arriving on time, and no more than 63 minutes when late for appointments. Patients coming up to 15 minutes early are prepared to take full responsibility for the extra waiting caused, but the patients coming even earlier intend to be seen earlier and are only prepared to wait 15 minutes longer (15).

A study in USA showed that Patients spend a substantial amount of time in clinics waiting for services to be delivered by nursing and other allied health professionals. The degree to which health consumers are satisfied with the care received is strongly related to the quality of the wait experience. Health care organizations that strive to deliver exceptional service must effectively manage their clinic wait. Failure to incorporate consumer-driven features into the design of the wait experience will lead to patient and provider dissatisfaction. Interaction times were short, with median total interaction time 13 (IQR 9-21) minutes. Waiting times were long ranging from median 6.5 (IQR 2-22) minutes for registration to 213 (IQR 154-316) minutes for lab results. Of concern was a median wait of 10 (IQR 2-46) minutes for triage and 178 (IQR 105-305) minutes to be seen by a doctor. Mean total length of stay was 377 (SD 261) minutes. All other waiting times were at least twice US benchmarks. Pediatrics' cases and children aged 0-11 years had the shortest waiting times and length of stay, whereas medicine patients and those over 49 years had the longest. Those with highest acuity had the shortest waiting times and length of stay (13, 16).

Research was done in Toronto hospital experience sample of 23,933 registered patients, 423 (1.4%) left without being seen. Follow-up was achieved on 39% of patients (165 of 423). Sixty-seven percent of those who left (284 of 423) had low acuity ratings. Of the 165 survey respondents, 107 (65%) left between 30 minutes and 2 hours after registration. The major reasons cited for leaving included prolonged waiting time (99 of 165, 60%), perceived difficulties with hospital staff (46 of 165, 28%), and pressing commitments elsewhere (45 of 165, 27%). Ninety-two percent (152 of 165) believed they should be evaluated by a physician within 1 hour of presentation. Forty-eight percent (80 of 165) sought further medical attention within 24 hours. Personal physicians (65 of 165, 39%) and other EDs (29 of 165, 18%) were the most common sources of further medical care. Their contact time and the frequency of visits needed to be identified. Long waiting time in hospitals causes discontent among patients. Such delays in industrial hospitals can lead to man-hour loss and

interfere with production. After two months of implementing these measures, the average waiting time for consultation decreased from 58.6 minutes to 7.7 minutes without any additional manpower or resources(17).

A research which was done in Spain Trinidad and Tobago, Waiting time in the GOPD of the study area. More than half of the patients waited for more than 1 h, with high patient load coupled with few doctors and nurses being the main causes of this long waiting time. If the aims of the Millennium Development Goals and recommendations of the IOM are to be realized, there is an urgent need for our health facilities to increase the number of health workers in the GOPDs which are the gate way to the hospital. This will go a long way in reducing the long waiting Time experienced by patients and thus increase the rating of satisfaction with services. Where 61.2% of the patients were seen within 61-300 min. The mean TCWT from entry to time of leaving the clinic was found to be 168 (35.7) minutes. In Trinidad and Tobago, where waiting time of 160 min was recorded (6, 17).

A Study in Norway, and socioeconomic status could not explain variations in waiting time. Being on sick leave was associated with shorter waiting time, adjusted RR of 1.7 (1.2-2.5). Referrals from within the hospital or other hospitals had also shorter waiting times than referrals from primary health care physicians, adjusted RR=1.4 (1.1-1.8)(18).

A study in Ontario London resulted, Data from a survey of 731 family physicians in south western Ontario to understand physician- and practice-level determinants of waiting time. Physician gender, usual number of patients seen per week, involvement in teaching and population served were the key determinants of physician-reported waiting time. The mean waiting time was 58.6 minutes. Only 8.7% of the patients were seen within 30 minutes of their Arrival in the hospital. In October 2011 only 49.27% of patients were seen within 60 minutes by the physician. In November 2011 this increased marginally to 51.11% and in December this was fond to be 53.31%(19).

Time from arrival at the outpatient department to treatment consultation with clinical staff member (minutes) For patients who have an appointment and who go immediately to the OPD waiting area the time of arrival begins at the time when they reach the OPD waiting area. For patients who do not have an appointment, the time of arrival means the time of arrival at the patient registration or the time of arrival at triage (whichever is first) (20).

Study in Malaysia resulted as Long waiting time can be identified through ‘cause and effect method’. There were four major elements that influence the waiting time such as availability of facilities and equipment, human resources, patients and registration process. Three main problems which accounted for 80% of long waiting time were:

a. Registration Time

b. Insufficient Doctors

c. Insufficient Counter Staff.

Patient waits from arrival to treatment is measure of access to health care services. Long waiting times indicate that there are insufficient staffs and /or resources to handle the patient load or that those available resources are being used inefficiently(7, 20).

The primary determinants of waiting time acceptability are the length of the waiting time and the effects of waiting on the patient's life. In addition, some patient characteristics, such as age and education, may play a role, pointing to the potential role of patient expectations in determining the acceptability of waits for specialized services(21).

The long waiting time observed in the study may not be unrelated to the realities in developing countries where health care providers are overwhelmed by large numbers of patients. In Nigeria, patients will have to wait longer on the queues before seeing their providers, as long as the imbalance in the doctor –patient ratio is not addressed. The commonest reason adduced by our respondents for the long waiting time was, few doctors to attend to the large number of patients on the queue. This is a common finding in most health care centers across Nigeria due to the shortage of medical doctors and other health care providers. Similar reasons were observed in the study from Jos University Teaching Hospital (JUTH), Nigeria Thatcher, 2005). A disproportionate number of doctors and patients would increase patient waiting time. Over the years, population has increased several folds without a commensurate increase in the number of health care providers(22). A study in Nigeria showed that Sixty-one percent (59/96) respondents waited between 90 and 180 min in the clinic (from entry to exit), whereas 36.5% (35/96) waited for more than 180 min with a mean total clinic waiting time (TCWT) of 168 (35) min. Seventy-four percent (71/96) of the respondents waited between 60 and 120 min to be registered, whereas 10.3% (10/96) waited for more than 120 min with a mean (SD) registration time of 78.22 (22) min. With regards the consultation time, 36.1% (35/96) respondents spent less than 5 min with the doctor, whereas only 19.6% (19/96) spent more than 10 min with the doctor. The mean consultation time with the doctor was 7 (4) min. the study would have preferred listening to health talks or watching television during the time spent waiting. Health personnel providing health education in the form of health talks could therefore be a useful way of utilizing the long waiting times in the outpatient clinics. Despite the long waiting times experienced by the majority of respondents in this study, 64.58% (62/96) of them still said they would recommend the center to others. This may not be unrelated to the fact that the study center is a tertiary health center, thus patients still prefer to utilize the services offered in the clinic despite the long waiting times associated with it, because they anticipate better services. Out of the 96 respondents, 76 (79%) of them felt they had waited for too long and reasons adduced for the long waiting period included too many patients as revealed by 44.7% (34/76) of the respondents, availability of few doctors in the clinic to attend the numerous patients (36% [27/76]), few filing and

record clerks (12% [9/76]), and jumping of queue by patients or staff members (8% [6/76]). The three most common factors leading to long waiting time observed in Nigeria study were high patient load, few doctors, and record clerks. (3, 23).

A study in Nigeria conducted at Sokoto, Of the 384 patients that were recruited into the study, 303(79%) of them visited the outpatient departments for the first time. The ages of the respondents ranged from 20 to72 years with a mean age of 38 years. A total of 171(45%) of the respondents were males while there were213 (55%) females. 162 (42%) of the respondents had no formal education while 222 (58%) had formal education with 14% of them attaining tertiary education. The occupational status of the respondents showed that, farmers were 83 (22%), civil servants 62 (16%) and 137 (36%) were unemployed (Table 1). The duration of waiting time in the clinics varied from 10 to 165 min. A total of 118 (31%) of the patients waited for less than 1 h while majority, 266 (69%) of them waited for more than 1 h, with a mean waiting time of 85 min. Time spent with the doctor in the consultation room varied from 5 to 35 min, majority, (96.6%) spending less than 30 min with the doctor, while only 3.4% spent more than 30 min, with a mean time of 14 min. It was observed that the patients who had formal education spent less time in the waiting room compared to those without formal education, and this was found to be statistically significant ($P<0.0001$) . Patients' perceived causes for long waiting time in decreasing order were large number of patients with few doctors to attend to them 108 (28%), patients jumping queue 82 (21%), doctors taking too long to attend to a patient 70 (18%), doctors arriving late to duty 62 (16%) while 14 (4%) of them attributed the long waiting time to the long search for patients' cards (Table 3). Majority, (78%) of the patients believed the ideal waiting period should not be longer than 30 min from the time of arrival in the hospital, till the time the patient is attended to by the doctor. Overall, more than half, 211 (55%) of the respondents were satisfied with the service delivery in the hospital with 138 (36%) of the respondents rating the services as satisfactory, while 73 (19%) of them rated the services as very satisfactory. More females than males expressed satisfaction with the services rendered in the outpatient departments and this was found to be statistically significant ($P=0.003$). Although more patients who expressed satisfaction with services spent less time (<30 min) for consultation compared to those who were dissatisfied, this was however found not to be statistically significant ($P=0.134$). Majority, 83 (70%) of the patients who spent less than 1 h in the waiting room expressed satisfaction with services received $P<0.0001$. Only 63 (16%) of the respondents admitted to being given health talks while waiting to be seen by the doctor while 48 (13%) said they watched television to reduce boredom or watched happenings in the OPDs (79%) of the respondents visited the OPDs for the first time. The mean waiting time observed in this study was 85 min. majority of the patients. it was therefore not surprising that, a majority, 78% of study subjects were of the opinion that, the ideal waiting time should not be longer than 30 min from the time of arrival in the

hospital to the time the patient is attended to by the doctor. Our findings showed that, only 45% of the patients were actually satisfied with the services in the OPDs. The major cause of dissatisfaction was the long waiting time. There is the need for health care facilities and hospital administrators to address gaps in human resources, logistics and other internal procedures aimed at reducing waiting times and thus ensuring an effective health care delivery system(24).

The study in Benin Nigeria A total of 250 respondents participated in the study. Two hundred and fifty-five (255) patients were initially enrolled in the study. The mean age of the respondents was 36.2±19.7 years. One hundred and one (40.4%) of the respondents were males while 149 (59.6%) were females. Forty-five (18.0%) patients completed primary education only, 85 (34.0%) secondary school, while 50 (20.0%) had university degrees or other qualifications from tertiary institutions. Those who had no formal education were 70 (28.0%). The average waiting time was 2hours 53minutes (173minutes), While the range was 2 minutes to 2 days. Eighty-five (34%) patients were seen within 1 hour of arrival in the hospital, 14.8%, 15.6%, 24.0% and 6.8% waited for 61-120 minutes, 121-180 minutes, 181-240 minutes and 241-300 minutes respectively. Four (1.6%) patients waited for 301-360 minutes, 3 (1.2%) patients waited for 361-420 minutes. While 5 (2.0%) waited for over 421 minutes before they were attended to. Two hundred and ten (84%) patients were satisfied with the amount of time spent with the doctors, while forty of them (16.0%) were not. According to the results of Patient waiting time in a tertiary health institution in Northern Nigeria study, female patients (35%) were more satisfied with health services provided in the OPDs than male patients (20%) and this difference was found to be statistically significant (P=0.003). It has been observed that patients are least satisfied while waiting times are longer than expected, relatively satisfied when waiting times are perceived as equal to expectations and highly satisfied when waiting times are shorter than expected. Findings from this study showed that, the patients who waited longer (60 min) expressed dissatisfaction with services rendered in the OPDs (P<0.089) The number of patients who expressed satisfaction (45%) with the services in the OPDs(25).

The time spent before seeing the doctor can always be made useful if patients are engaged in activities to reduce boredom. In the study, only 16% of the patients to being given health education on important health issues while majority either watched television or watched happenings in the OPDs. Where it was observed that, the three common activities patients engaged in during waiting time were watching happenings in the clinics, reading and chatting. Information provided to patients before and during the course of their visit is very important to them. Most studies suggest that there is room for improvement

in this area. in which there were generally high levels of reported patient satisfaction, 50% of long-term patients would have liked more information than those aged under 75. Patients over 75 years of

age reported less satisfaction. Allied health professionals and local and national patient groups can be useful sources of good quality patient information. Advance notification about which doctor they will be seeing is reassuring for patients. Patients should also be notified if medical students will be present and offered the opportunity to decline to take part in teaching. It should be emphasized that this will have no effect on the treatment that they will receive. Patients also expect the GP to know the physician to whom the referral is made. Further information on patients' views is awaited from the communication was poor, and training for outpatient staff haphazard(26).

A study in the Nigeria ,In terms of personnel attending to patients in the clinic, there were only 4 doctors, 2 nurses, and 2 record clerks who attended to 148 patients on day 1, while on the 2nd day, the number of patients who were seen at the clinic was even higher (162). On an average, only 4 doctors and 2 record clerks attended to about 150 patients on each day. Cross tabulation between TCWT and form of education (whether formal or non-formal) showed that there was no statistically significant association between TCWT and form of education (P = 0.94). Similarly, age and employment status of the respondents had no statistical association with TCWT (P = 0.88), whereas there was a significant association between TCWT and gender of respondents (P = 0.001) While waiting to be attended to, 65.6% (63/96) of the respondents engaged in chatting with each other, while a few others (7.3%) engaged in reading newspapers or magazines. Among the study subjects, 43.8% (42/96) would have preferred listening to health talks on important health issues, while 33.3% (32/96) would have preferred watching television if available. About 65% (62/96) of the respondents said they would recommend the center to others(3, 27).

A study in Nigeria showed that The ages of the participants ranged from 15-70 years, with mean of 33 ± 12.9 years. Sixty (62.5%) of the study participants were females whereas 36 (37.5%) were males. Twenty seven(28.4%) of the participants were students, whereas 12 (12.6%) of them were civil servants. Only one of the participants had no form of education whereas 35 (36.1%) had up to tertiary education. More than two-thirds (73%) of the participants had formal education, with majority (88.5%) residing in the urban area. The registration time ranged from 1-132 minutes, with mean of 76±22.7 minutes whereas clinic wait time ranged from 10-167minutes with a mean of 83.7±38.57minutes. The mean consultation time was 7.2±4.55 minutes and the mean total clinic wait time from entry to the time of leaving the clinic was 168±35.73 minutes. Than 60 minutes, hence no statistically significant association was observed (P= .32). Significant association was also observed between overall satisfaction and age of respondents, with 54% and 23.9% of the study participants who were 35 years or more being satisfied and dissatisfied respectively with clinic services (P= .003). Form of education

(formal or informal) and gender of the participants were found not to have any statistically significant association with the level of satisfaction with the services in the clinic (*P*= .08) (28).

The World Health Organization (WHO) target for doctor to population ratio is one per 1000. However, the doctor patient ratio is only one per 25,000 in the 25 poorest countries of the world including Ethiopia(29).

2.1 Conceptual frameworks

Patients in developing countries experience long waiting times because of the imbalance in the human resources like ;doctor – patient ratio; working process(layout,),patient load, socio demographic variables (like education, residences), registration process and facility level factors(computer simulation ..) are the main factors in different studies(3,7,21).

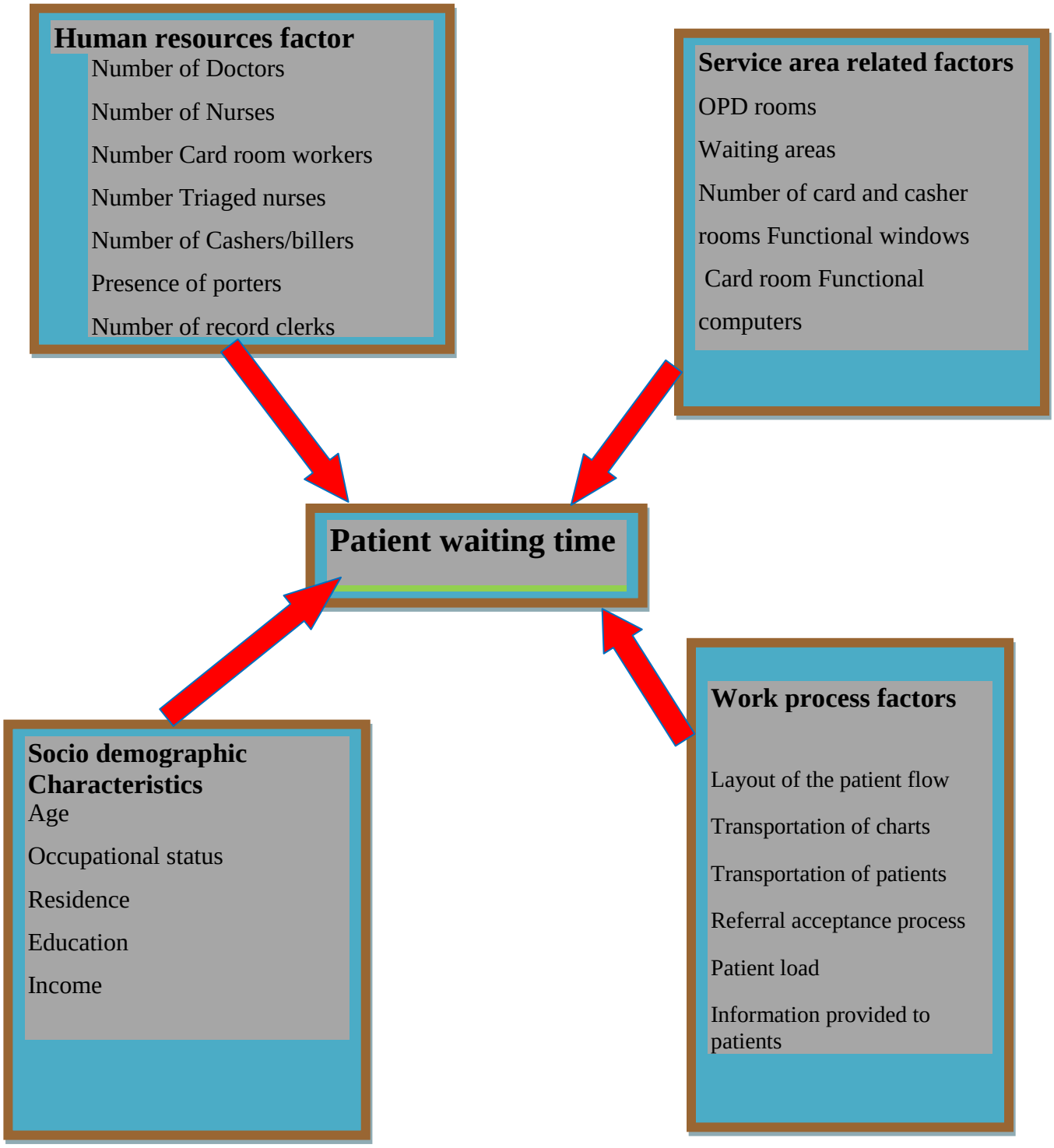


Figure 2. Conceptual frame work of the study

Chapter four

4. Objectives

4.1 General Objective

- To assess patient waiting time and its determinants in Debre Markos and Felge Hiywot Referral hospitals of Amhara Regional State in North West, Ethiopia.

4.2. Specific Objectives

- To measure the patient waiting time in Debre Markos and Felge Hiywot Referral hospitals.
- To identify the determinants of patient waiting time in Debre Markos and Felge Hiywot Referral hospitals
- To compare the magnitude and determinants of waiting time of Debre Markos and Felge Hiywot Referral hospitals.

Chapter four

4. Methods and Materials

4.1Study Area and Period

The study was conducted at Debre Markos and Felege Hiywot ReferralHospitals fromOctober 20,2014 to November 20, 2014. The two hospitals are two of the four referral hospital found in Amhara regional state and situated in Debre Markos and Bahirdar city administration with purely *wenadegga* and hot agro ecology found at a distance of 300 km and 564 km from Addis Ababa in the North West direction of the country respectively. The two Hospital services five million peoples from its catchments'. Debere Markos Referral Hospital has 143 beds and 12 OPDs, and 400beds and 22 OPDs in FelgeHiywot referral hospital. DMRH is among three government hospitals found in the East Gojjam zone. The major Health services provided in the two hospitals are outpatient, Inpatient and Emergency service. And in outpatient department services such as Surgery, Medicine, Obstetrics, Gynecology, pediatrics, Ophthalmology, Ear, Nose, Throat (ENT), Orthopedics, Skin, Radiology, Antiretroviral treatment, TB/Leprosy treatment, voluntary counseling and testing, mental health service, dental health service, physiotherapy service, laboratory service, emergency service, pharmacy service, cervical cancer screening and treatment, reproductive health services. There are Inpatient wards (Gynecological &Obstetric, Surgical, Medical, Pediatric and Eye unit, MDR ward, ICU, NICU).

The DMRH has 210 technical and 190 administrative staffs who deliver health service, And which have 5 senior physicians 21 general practitioners, 1 health officers, 121 nurses, 19 midwifes, and other different professionals and in FHRH has 553 technical and 210 administrative staffs from these, There are 20 senior physicians and 21 physicians, 207 nurses, 22 midwife and other professionals. The annual budget of the Hospital was15, 679,404 and 22,546,348.00 in DMRH and FHRH respectively. In addition to the government budget allocation, the Hospital collected its revenue from different sources.

4.2Study Design

Hospital based comparative Cross-sectional study design was employed.

4.3Population

4.3.1 Source population

All patients (clients) who visit the general outpatient department of Debre Markos referral hospital and FelgeHiywot referral hospital during the study period was the source population.

4.3.2 Study population

A sample of patients (clients) who visit the outpatient department of Debre Markos referral hospital and Felge Hiywot was the study population.

4.3.3 Inclusion and Exclusion Criteria

4.3.3.1 Inclusion Criteria

Patients presenting to the GOPD in the working hours of the week during the data collection period.

4.3.3.2 Exclusion criteria

Patients who had seen in the private wing services.

Patient or their attendance below 18 years.

Patients who was transferred in and stayed more than a day.

Patients (clients) who was judged by data collector as physically or mentally incapable of completing the survey.

Critically ill patients who had no attendance (care giver).

4.4 Sample Size and Sampling Techniques

4.4.1. Sample size determination

The quantitative samples size was determined, the minimum sample size was determined using the two population proportion formula for estimating required sample size.

N= Zα$\sqrt{2P^{-}q}$ + $Z\beta\sqrt{p1q1 + poqo}$ / p1- po

$P^{-} = \frac{p1 + \text{qo}}{2}$

q = 1-P^{-}

Taking

P1= 50% for Debre Markos Referral Hospital

P2=65% for Felge Hiywot Referral Hospital that is difference of 15% the Felge Hiywot assumption.

Zα = 1.96 CI=95%, α=0.05

For the Power =80% use Zβ= 0.84

So, from the formula calculation n equals to 211 patients/clients/ for each hospital with contingency 10% was 211 patients/clients/ to compare purpose. The total sample size was 464 patients/clients/(30).

4.4.2. Sampling Techniques

Consenting patients was recruited into the study using a systematic sampling technique after calculating the sampling interval:

$$k = \frac{\text{average number of targeted population}}{\text{Minimum required sample size}a}$$

Patients (clients) was recruited into the study using a systematic sampling technique at the OPDs.

The interval for including a patient in the study was determined by dividing the total number of patients(clients) at the hospitals in the last average one month OPDs visited by the sample size for each category of hospitals.

Where K was the sampling interval,

For Debre Markos referral hospital

K = 350/201

K = 1.7

This was, however, approximated to 2.

And for Felge Hiywot Referral Hospital

K=500/201

K=2.5

This was, however, approximate 3.

Based on the above sampling interval, we were carried out the systematic sampling technique as Simple random sampling was done for the first three patients (clients) to get the starting point. Thereafter, every other new patient (clients) that would come to the clinic would be enrolled in the study. (After obtaining informed consent) until the required sample size was obtained.

4.5. Data Collection Techniques and Instrument

4.5.1Data collection instrument

Quantitative Data was collected by using structured questionnaires which elicited information's on socio demographic of patients, their experience on waiting time and check list which were adopted from studies that gather waiting time to assess, time spend before registration, time spend in the record classification (triage), time spend in payment process (billing to cash), time spend in waiting areas, staff distributions' at OPD clinics, services areas level and presence of waiting areas.

4.5.2 Data collection process

An adapted structured questionnaire and structured checklists was prepared in English and translated into Amharic. The interview was conducted among the Outpatient Department patients in the K values of patients (clients) each hospital (above 18 years and in case of pediatric patients, their attendant above 18 years working hours in the week) on their exit from the respective clinical departments. All patients who was triaged at the triaged areas allocated to different clinical departments, including, , including, Surgery, Medicine, Obstetrics, Gynecology, pediatrics, Ophthalmology, Ear, Nose, Throat (ENT), Orthopedics, Skin, Antiretroviral treatment, TB/Leprosy treatment, voluntary counseling and testing, mental health service, dental health service, physiotherapy service, cervical cancer screening and treatment, reproductive health services will be included, triaged in the triaged areas in both the hospitals. No personal identifier was collected from the patient (client) or staff. Several variables monitored in this study were data on patient's waiting time, work process, number of doctors available and number of staffs at the registration counter.

Three major collection methods was used in this study. The first method was observation. Data wascollected through direct observation on the subjects involved in the various working processes in the hospitals. Measurements of time spent from registration until consultation by a doctor was made using a stopwatch. The second method was Patients would be also interviewed to elicited the socio demographic variables and find out the problems of long waiting time by using questionnaires**.**

To determine the patient waiting time by using stop watch that is the check list which gather the time spend on each work flow which is time spend from arrival(reception) to triage, time spend from triaged to card room, time spend from card room to cash(billing) and time spend from cash to first consultation of doctors. Questionnaires On average an interview lasts 15 to 20 minutes to complete.

4.5.3. Study Variables

Dependent variable

Patient waiting time

Independent variables

Socio-demographic variables

- ✓ Age
- ✓ Educational status
- ✓ Occupation status
- ✓ Residence
- ✓ Income

Human resources variables

- ✓ Number of doctors
- ✓ Number of nurses
- ✓ Number of porters
- ✓ Number of casher(billers)
- ✓ Number of card room workers
- ✓ Number of record clerks

Work Process and facility variables

- ✓ Time spent from arrival(reception) to triaged
- ✓ Time spent from triaged to card
- ✓ Time spent from card room to cash/billings
- ✓ Time spend from cash to consultation to doctor
- ✓ Provision services in functional windows
- ✓ Transportation of patient with card
- ✓ Information provide to patients
- ✓ Patient load
- ✓ Availabilities of waiting areas
- ✓ Number of OPDs

4.6 Operational Definitions

An Outpatient Department isa hospital department, which was primarily designed to accommodate the clinical consultants and the members of their teams to provide medical consultation and primary health care services

Patient satisfaction: - concerned with patients perception on provided services. Respondents was asked for relationship with care provider, suitability of physical environment, absence of communication barriers, time management, affordability of services, patient involvement in decision making and responsiveness.

Waiting time the total time from registration/receptionist/ until consultation with a doctor. Patients. who would have got services from reception areas up to consultation of doctors at the OPD.the commutative patient waiting time wasGreater or equal to 60 minute considered as long waiting time and less than 60 minute considered as short waiting time.

Porters were persons whose roles were transportation of charts and patients by giving the information.

Referring unit - was a health service organization that initiates the referral process. A facility could be both a referring and receiving unit depending on circumstances.

Receiving unit - was a health service organization that received patients or clients from referring units and ensures that required care was given to the client and returns the patient with feedback.

Private wing services outpatient visits that were seen at the private wing service. This was out of the government working hours.

4. 7 Data Analysis procedures

4.7.1 Data Processing, Analysis and Interpretation

All responses to the survey check list and questionnaires was coded at the original English version and was entered using SPSS version 20. Data was entered, cleaned for outliers, missed values and analyzed using SPSS version 20 statistical package. To analyses the patient waiting time by using the software the time spend on each work flow process which was time spend from arrival(reception) to triage, time spend from triaged to card room, time spend from card room to cash(billing) and time spend from cash to first consultation of doctors by using Frequency tables, graphs and descriptive summaries was used to describe the study variables that is Frequencies and summary statistics (mean, standard deviation, and percentage) was used to describe the study population in relation to socio-demographic and other relevant variables. The degree of association between dependent and independent variables was assessed using adjusted odds ratio with 95%

confidence interval. Chi-square testwas performed to assess statistical association between dependent and independent variable. Then, variables, which showed statistical association with p-value of less than 0.05 on Chi-square, wasconducted for the significant association was declared at p-value less than 0.05. Quantitative statistical variables and qualitative data were cross tabulate. bivariate correlation and linear regression were applied to identify the determinants of each explanatory variables on outcome (patient waiting time); Chi-square test was used to compare proportions, whereas the Student *t*-test was used to compare means.

Finally data was interpreted with the existed data by referring to literature reviews.

4.8Data Quality Management

Quality of data to be gathered from the study subjects a range of mechanisms was employed to address major areas of bias introduction during the data collection process. Standardized and Properly designed data collection tool was modified and prepared .Then the English version questionnaire and check lists were translated in to Amharic which is the local language of the area. One days training was given to data collectors who were Health Information Technicians and supervisors who were degree nurses. The questionnaire were pre-tested on one health institute(Hospital) which was not selected for the study , that was the questionnaires would be pre-tested on 5% of study sample subjects in Fenote selam hospital.Questionnaire was checked for completeness on a daily basis by immediate supervisors.Principal investigator would do close supervision to overcome any mistakes from data collectors.After checking all questionnaires for consistency and completeness the supervisors was submit the filled questionnaire to the principal investigator. Incorrectly filled or missed records were sent back to the respective data collector for correction. To crosscheck the collected data and maintain the quality of data, the principal investigator wasrechecking all the completed questionnaires daily. Data waschecked for its completeness, coded, edited, cleaned, properly organized and analyzed. A day to day on site supervision was carried out during the entire period of data collection by principal investigator. At the end of each day, the questionnaires was checked for completeness, accuracy and consistency by investigator and corrective discussions was undertaken with all the data collectors.

4.9 Ethical Considerations

Ethical approval and clearance was obtained from ethical clearance committee of the Jimma University College of Public Health & Medical Sciences to conduct the research at DebreMarkos Referral Hospital and FelgeHiywot Referral Hospital. Study participants who was took part in interview were patients with age greater than 18 years who are capable to decide about themselves independently and less than 18 years were their responsible families. They was made free choices and decision without any interference to participate in the study. Prior to the interview Verbal consent was obtained from the study participants. Participants did not have to sign the form and no identifiers were collected from the clients to ensure their confidentiality.

4.10 *Dissemination of the study result*

The findings of the study were submitted to Jimma University, College of Public Health and Medical Sciences, Department of Health Service Management. Then findings of the study were publicly defended at Jimma University. After, Copies of the study findings was provided to relevant stakeholders like Zonal and Regional Health Bureau and to DMRH and FHRH. An effort was made to present the results at scientific conferences and to publish in a national or an international journal will also be considered.

4.11. Limitations of the Study

Strength of the study

Though there were other studies conducted on patient waiting time for the satisfaction one of the determinants this research reviewed all the current practice like resource inventory, observation of structural aspects, assessment of patients and measure waiting time appropriately on the services.

Limitation

It was difficult to generalize the result of this study for all hospitals in the study area, since the data was collected from two referral hospitals. Due to the fact that this study deals with patient waiting time at general outpatients departments social desirability bias considered.

Chapter five

5.Result

A total of 464 general outpatients (232 from each hospital) were interviewed yielding a response rate of 100%. The mean age was 41.6±13.5 years and 38.1 ± 13.9 years with the range of 20-70 years for the respondents in Felege Hiwot and Debre markos referral hospitals respectively.

Among 232 outpatients 60.8 %(N=141), 39.2 %(N=91) and 52.2%(N=121), 47.8%(N=111) were men and female in Felege Hiwot and Debre Markos referral hospitals respectively. Majority of Felege hiywot referral hospitals are males whereas almost equal in Debre markos referral hospital (table 1).

The educational status of the respondents 25.9 %(60) able to read and write from feleghiwot referral hospitals whereas 18.5%(43)are debre markos referral hospital.unable to read and write respondents of feleg hwot were 25%(58) and 44.4(103) from debere markos referral hospital25.4 %(59), 9.8 %(46) elementary school in Felegi hiwot and debre markos referral hospitals. More than half of the respondents' in Felege hiywot 118(50.8%) have no formal education while majority of the respondents' in Debre markos referral hospital have no formal education(146(63%)(table 1).

The occupational status of the respondents showed that famers were 42.2(98) in feleg hiwot and 47.4(110) in debre markos referral hospital. students 14.7%(56),24.1%(56),employed 9.5%(22), 9.1%(21) , merchants 13.4%(31), 9.1%(21) and others 20.3(47),9.9%(23) in feleg hiwot and Debre markos referral hospitals respectively.

The place of the residence more than half of 56 %(130) were from rural in Feleg hiwot referral hospital whereas majority of respondents 70.3 %(163) were Debre markos referral hospitals(table 1).

Table 1.Socio-demographic characteristics of Feleg hiywot and Debre markos referral hospitals.

Ages (years)		Feleg hiywot referral hospital		Debre Markos referral hospital	
		Frequency	Percent	Frequency	Percent
	20-29 years	119	51.3	76	32.8
	30-39 years	25	10.8	66	28.4
	40-49 years	22	9.5	38	16.4
	50-59 years	39	16.8	28	12.1
	60-69 years	27	11.6	24	10.3
	>70 years	0	0	0	0
	Total	232	100.0	232	100.0
SEX	male	141	60.8	121	52.2
	Female	91	39.2	111	47.8
	Total	232	100.0	232	100.0
Educational status	unable to read and write	58	25.0	103	44.4
	able to read and write	60	25.9	43	18.5
	elementary school	59	25.4	46	19.8
	high school	31	13.4	22	9.5
	tertiary level	24	10.3	18	7.8
	Total	232	100.0	232	100.0
occupational status	student	34	14.7	56	24.1
	farmer	98	42.2	110	47.4
	employed	22	9.5	22	9.5
	merchant	31	13.4	21	9.1
	other	47	20.3	23	9.9
	Total	232	100.0	232	100.0
Residence	urban	102	44.0	69	29.7

	rural	130	56.0	163	70.3
	Total	232	100.0	232	100.0

Interms of personnel attending to patients in the general outpatient there were 12doctors in the Felegi hiwot and 8 Debere markos referral hospitals.Distribution of personnel at the GOPD in the Felege hiywot and Debre markos referral hospitals.On average 12 doctors saw 420 patients per day in feleghiwot referral hospital whereas in debere markos referral hospital 8 doctors attended 280 patients per day. The patient flow during the data collection period was 522 in Feleg hiywot referral hospital range of 480-750 patients per day where as 396 with the range of 345-469 patients per day in debre markos referral hospital that means the time patients are treated by nurses. Majority of the respondents 147(63.3%) were new attendance in Feleghiywot referral hospital whereas 181(78%) were debere markos referral hospital new outpatient attendances (table 2).

Table 2. Personnel distributions' of Feleg hiywot and Debre markos referral hospital

		Feleghiywotreferral hospital	Debremarkos referral hospital
		Number	Number
Number of doctors		12	8
Number of nurses		20	16
Number of card room workers		12	10
Number of porters		20	20
Number of casher		8	4
Number of record clerks		6	4
Types of patients	New patients	147	181
	Repeat patients	85	51
	Mean of patient per day load	522	396

The facility level in the two hospitals

The facilities have had (20, 16)outpatient department room and (6, 4)functional computers to register the new and repeat patients in Feleghywot and Debre markos referral hospitals respectively. Therefore the patient per day load shall have additional OPD rooms,windows and functional computers in the two hospitals (table 3).

Table 3. Facility level in Felege hiywot and Debere markos referral hospitals.

Facility related variables	Feleghiwot referral hospital	Debre markos referral hospital

	Number	Number
Number of OPDs	20	16
Number of card room functional windows	6	4
Number of casher functional windows	8	4
Number of functional computers in the card room	6	4

Presence of waiting areas in the two hospital patient's perception

Among the determinants of patient waiting time the presence of waiting areas saw by the doctors easily to accessible.in Debre markos referral hospitallthe respodnets 45.3%(107)was saying there was no waiting areas in the OPDs waiting areas whereas in Felge hiywot had OPDs waiting areas. More than half of the respondents' of Debre markos referral hospital54.7(105) said there was no waiting areas at the casher areas while 39.7(85) of the respondents said no waiting areas in Felege hiywot referral hospital(table 4).

Table 4. Presence of waiting areas in Felege hiywot and Debre markos referral hospitals

	Feleg hiwot referral hospital			Debre makos referral hospital		
	Yes (%)	No (%)	Total (%)	Yes (%)	No (%)	Total (%)
Presence of Triage waiting areas	232(100)	0	232(100)	232(100)	0	232(100)
Presence of card room waiting areas	232(100)	0	232(100)	232(100)	0	232(100)
Presence of OPD waiting areas	232(100)	0	232(100)	125(54.7)	107(45.3)	232(100)
Presence of waiting at the casher room	147(63.3)	85(39.7)	232	127(45.3)	105(54.7)	232(100)
Presence of service area arrows or banner	95(40.9)	137(59.1)	232(100)	150(64.7)	82(35.3)	232(100)
Punctual to staff	127(54.7)	105(45.3)	232(100)	154(66.4)	78(33.6)	232(100)

The patient perceived that causes of long waiting time (N=232 FHRH, N=232 DMRH)

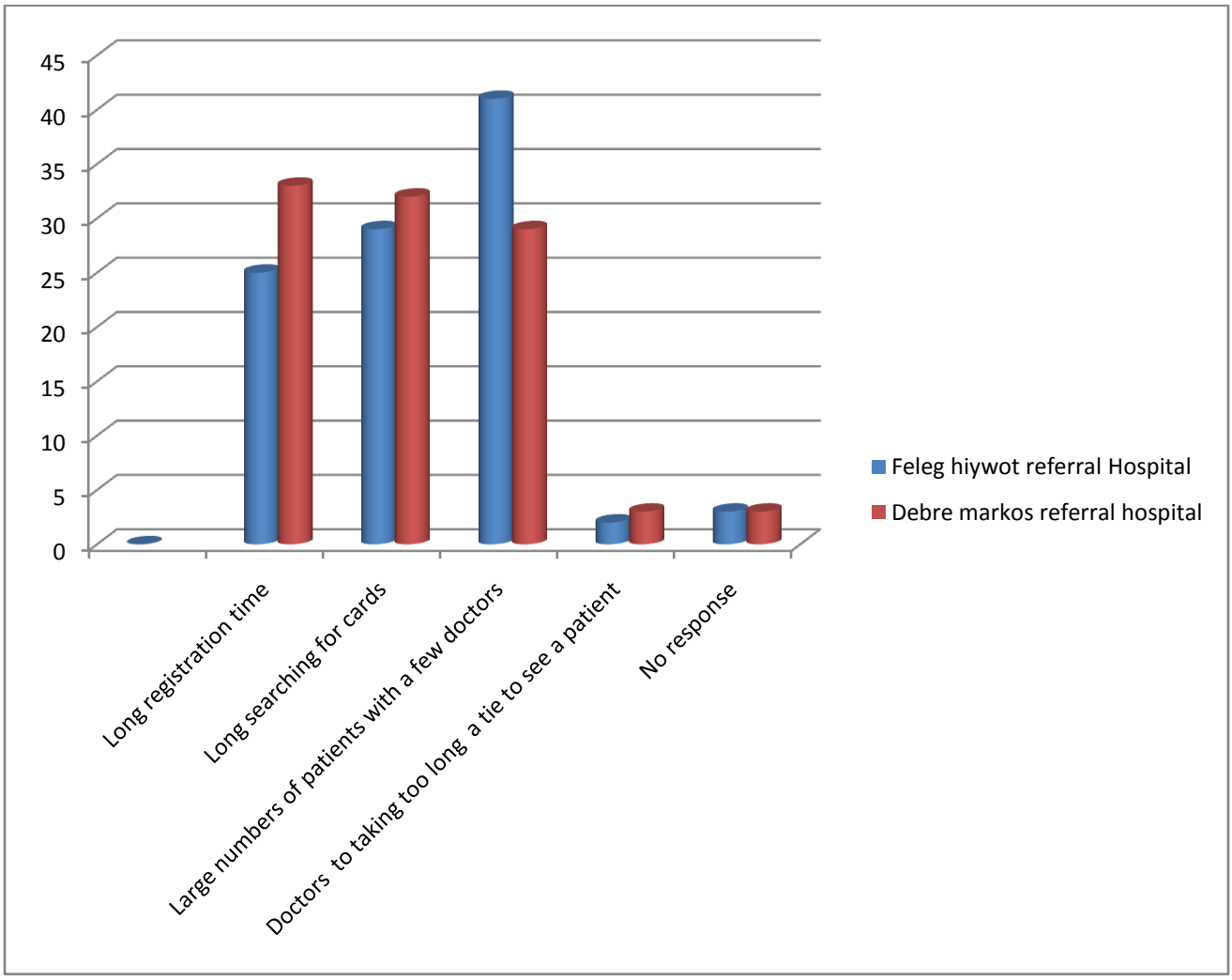
The major causes of the long patient waiting time was large numbers of patient with a few doctors 94(40.5%),67(28.9%) ,long searching of the cards 67(28.9%),73(31.5),and long registration time 59(25.4%),76(32.5) in Feleg hywot and debre markos referral hospitals respectively.

Table 5. Causes of patient waiting time in Feleg hiywot and Debre markos referral hospitals**.**

Causes of long waiting time	Feleg hiywot referral	Debre markos referral hospital

	Hospital	
	Number (%)	Number (%)
Long registration time	59(25.4)	76(32.8)
Long searching for cards	67(28.9)	73(31.5)
Large numbers of patients with a few doctors	94(40.5)	67(28.9)
Doctors to taking too long a tie to see a patient	4(1.7)	8(3.4)
No response	8(3.4)	8(3.4)
Total	232(100)	232(100)

Figure 3.The causes of long waiting time in Felge hiywot and Debre markos referral hospitals by bar graph.



Long waiting areas patient perception

Therespondents'perception on the waiting areas card room waiting 109(47%),56(24.1%) and OPD waiting areas 79(34.1),98(42.2) had responded long waiting in this areas was the common in Felge hiywot and Debre markos referral hospitals (table 6).

Table 6.**patient perceptions of long waiting areas in Felge hiywot and Debre markos referral hospital**

Areas	Feleg hiywot referral Hospital	Debre markos referral hospital
	Number (%)	Number (%)
Triage waiting areas	17(7.3)	49(21.1)
Casher waiting areas	27(11.6)	26(11.2)
Card room waiting areas	109(47)	56(24.1)
OPDs waiting areas	79(34.1)	98(42.2)
Total	232(100)	232(100)

Duration ofpatient waiting time from the measurement/recorded/

The measured waiting time in Feleghywot referral hospital mean waiting time was and its standard devation 149.2±72.1 minutes with the range of 21-449 minutes where as 94.2±58.3 minutes with the range of 25-363 minutes in debere markos referral hospital.≤60 minutes 18(7.4%),42(18.1%),60-120 minutes 101(43.2%),101(43.5),120-180 minutes 70(30.2%),60(25.9) and 180-240 minutes(17(7.3%),18(7.8) were in Felge hiywot and Debre markos referral hospitals respectively. Almost near to half 44 % (101) of the respondents' waiting time record showed that between 60 and 120 minutes in the two hospitals. While majority of the waiting time record showed that between 60to 180 minutes which was 17(74%) in Felege hiywot and 161(69.4%) of debre markos referral hospitals (table 7).

Table 7.**duration of patient waiting time actual measurement in Feleg hiywot and Debre markos referral hospitals.**

Duration of time	Feleg hiywot referral Hospital	Debre markos referral hospital
	Number (%)	Number (%)
≤60 minute	18(7.8)	42(18.1)
60-120 minute	101(43.5)	101(43.5)
120-180 minute	70(30.2)	60(25.9)
180-240 minute	17(7.3)	18(7.8)
240-300 minute	19(8.2)	8(3.4)
>300 minute	7(3)	3(1.3)
Total	232(100)	232(100)

Patients prefer to do in their waiting areas in the hospitals was watch TV 106(45.7%),Felege hiwot where as 88(37.9%) debre markosreferral hospitals and listening health talks 62(26.7%) were from feleg hiwot referral hospital respondents and 81(34.9) of respondents preferred to listen health talks and 44(18.9%) of respondents simply seating in different waiting areas at Debre markos referral hospital.responded from Debre markos referral hospital (table 8).

Table 8. Patient preference during their waiting in the waiting areas in Feleg hiywot and Debre markos referral hospitals.

during in your waiting, what do you do/prefer/					
		Felge Hiwot Referral Hospital		Debre Markos Referral Hospital	
		Frequency	Percent	Frequency	Percent
	waching TV	106	45.7	88	37.9
	listening health talks	62	26.7	81	34.9
	reading	4	1.7	13	5.6
	simply seating	48	20.7	44	18.9
	others	12	5.2	6	2.6
	Total	232	100.0	232	100.0

Satisfaction level with patient waiting time

Satisfaction of Feleg hiyot referral hospital 18(7.8%) which was less than that of Debre markos referral hospital 40(17.2%). Most of the respondents214 (92.2%) in feleg hiywot are dissatisfied by their waiting time whereas in debre markos also majority of them192 (82.8%) responded that they are dissatisfied during their waiting time to see by the doctor at the general outpatient department (table 9).

Table 9 .satisfaction descriptive in accordance with patient waiting time Feleg hiywot and Debre markos referral hospital, Amhara region, North West Ethiopia

Satisfaction level	Feleg hiywot referral hospital		Debre mrakos referral hospital	
	Frequency	Percent	Frequency	Percent
satisfied	18	7.8	40	17.2
dissatisfied	214	92.2	192	82.8

Total	232	100.0	232	100.0

Waiting time in minutes versus age in years

The waiting time greater than 60 minute with age were 104(44.8%),36(15.5%), and 26(11.2), with 20-29 years,50-59 years and 60-69 years respectively in Feleg hiywot referral hospital while 65(28%),53(22.8%) and 26(11.2%),with 20-29 years ,30-39 years, and 40-49 years respectively in Debre markos referral hospital referral hospital.(Table 10).

Table 10. Cross tabulation of patient waiting time and age in years in Felge hiywot and Debre markos referral hospitals, Amhara region, North West Ethiopia

Felege hiywot referral hospital		age in years						Total N(%)
		20-29 years N(%)	30-39 years N(%)	40-49 years N(%)	50-59years N(%)	60-69 years N(%)	>70 years N(%)	
waiting time in minute	less than or equal to 60 minute	11(4.7	2(0.8)	1(0.4)	3(1.3)	1(0.4)	0	18(7.8)
	greater than 60 minute	104(44.8)	23(9.9)	21(9.1)	36(15.5)	26(11.2)	4(1.7)	214(92.2)
Total		115(49.6)	25(10.8)	22(9.5)	39(16.8)	27(11.6)	4(1.7)	232(100)

Debre markos referral hospital		20-29 years	30-39 years	40-49 years	50-59 years	60-69 years	>70 years	Total
waiting time in minutes	less than or equal to 60 minute	11(4.7)	8(3.4)	12(5.2)	3(1.3)	7(3)	1(0.4).	42(8.1)
	greater than 60 minutes	65(28)	53(22.8)	26(11.2)	25(10.8)	17(7.3)	4(1.7)	190(81.9)
Total		76(32.8)	61(26.3)	38(16.4)	28(12.1)	24	5(2.2)	232(100)

Among the waiting areas in debre markos referral hospital waiting areas which was greater than 60 minutes 38,23,49,77 of triage waiting areas, casher waiting areas, card room waiting areas, OPDs waiting areas and others while 14,27,103,70 feleg hiywot referral hospital respectively (table 11).

Table 11.waiting areas with less than or equals to 60 minutes in Feleg hiywot and Debre markos referral hospitals, Amhara region, North west Ethiopia.

Debre markos referral hospital		which waiting areas do you think waiting a long time?					Total
		triage waiting areas N(%)	casher waiting areas N(%)	card room waiting areas N(%)	OPD waiting areas N(%)	Others N(%)	
waiting time in minutes	less than or equal to	11(4.7)	3(1.3)	7(3)	21(9.1)	0	42(8.1)

		60 minute greater than 60 minutes	38(16.4)	23(9.9)	49(21.2)	77(33.2)	3(1.3)	190(81.9)
Total			49(21.1)	26(11.2)	56(24)	98(42.2)	3(1.3)	232(100)
Felege hiywot referral hospital								
waiting time in minute		less than or equal to 60 minute	9(3.9)	3(1.3)	0	6(2.6)	0	18(7.9)
		greater than 60 minute	68(29.3)	14(6)	27(11.6)	103(44.4)	2(0.8)	214(92.2)
Total			77(33.2)	17(7.3)	27(11.6)	109(47)	2(0.8)	232(100)

Satisfaction level of the respondents was dissatisfied with when they waited for greater than 60 minutes.Majority of the respondents in feleghiywot referral hospital were dissatisfied 159(68.5) when the waited greater 60 minutes while most of the respondents in debre markos referral hospital 196(84.5%) were dissatisfaction during their waiting time to reach the GOPDs which was greater than 60 minute. But 33(14.2%) and 18(7.8%) were satisfied with their waiting time in Felege hiywot and Debre markos referral hospital respectively. The comparison of Felehiywot referral hospital was more dissatisfied than debere markos dissatisfaction (table 12).

Table 12. **waiting areas with satisfaction in Feleg hiywot and Debre markos referral hospitals, Amhara region, North west Ethiopia**

Debre markos referral hospital		satisfaction status		Total N(%)
		Satisfied N (%)	Dissatisfied N (%)	
waiting time in minutes	less than or equal to 60 minute	9(3.9)	33(14.2)	42(18)
	greater than 60 minutes	31(13.4)	159(68.5)	190(82)
Total		40(17.2)	192(82.8)	232(100)
Feleg hiywot referral hospital				
waiting time in minute	less than or equal to 60 minute	0	18(7.8)	18(7.8)
	greater than 60 minute	18(7.8)	196(84.5)	214(92.2)
Total		18(7.8)	214(92.2)	232(100)

in the above table the satisfaction status in waiting time greater than 60 minutes in Felege hiywot referral hospital were statically significance with p value 0.0001(95% CI:1.7786,1.8766) with dissatisfaction whereas p= 0.0001 (95% CI;1.7690,1.8689) in debre markos referral hospital.

The correlation of waiting time and other variables in Feleg hiywot referral hospital.

Pearson correlation between waiting time less than or equal to and greater than 180 minutes and satisfaction was -0.230 thus implying anegative correlation between the two variables, (P =.007).

Longer duration of TCWT wasassociated with lower satisfaction (r = -0.20, *P*=.001). The patient waiting time less than or equal to and greater than 180 minutes and staff punctuality showed a weak negative correlation (r = -0.177), however it was statisticallysignificant (*P*= .007). The less than or equal to and greater than 180 minutes and occupational status ofrespondents however, showed a positive correlation (r = -0.188), which was also statistically significant (*P*= .004), thus the higher the occupational status the low waiting time can reach the doctor and the medical care visit have a showed positive correlation(r=0.264)which was statistically significant (p=0.001) (table13).

Table 13. The correlation of waiting time and other variables in Feleg hiywot referral hospital, Amhara rehion North west Ethiopia.

		waiting time less than or greater than 180 minute	sex	education status	occupational status	residence	medical care /visits /	Satisfaction status	staff punctuality
180 minute waiting time adjusted in minutes	Pearson Correlation	1	.076	.094	.188**	-.128	-.264**	-.230**	-.177**
	Sig. (2-tailed)		.247	.153	.004	.052	.000	.000	.007
	N	232	232	232	232	232	232	232	232
sex	Pearson Correlation	.076	1	.048	.020	-.018	.085	.035	.139*
	Sig. (2-tailed)	.247		.467	.766	.789	.196	.596	.035
	N	232	232	232	232	232	232	232	232
Education status	Pearson Correlation	.094	.048	1	.267**	-.002	-.144*	-.092	-.128
	Sig. (2-tailed)	.153	.467		.000	.975	.028	.164	.051
	N	232	232	232	232	232	232	232	232
occupational status	Pearson Correlation	.188**	.020	.267**	1	-.489**	.195**	-.095	-.115
	Sig. (2-tailed)	.004	.766	.000		.000	.003	.149	.080
	N	232	232	232	232	232	232	232	232
residence	Pearson Correlation	-.128	-.018	-.002	.489**	1	-.096	.035	.090
	Sig. (2-tailed)	.052	.789	.975	.000		.145	.593	.171
	N	232	232	232	232	232	232	232	232
medical care/visits/	Pearson Correlation	.264**	.085	-.144*	.195**	-.096	1	-.235**	-.190**
	Sig. (2-tailed)	.000	.196	.028	.003	.145		.000	.004

	N	232	232	232	232	232	232	232	232
Satisfaction status	Pearson Correlation	-.230**	.035	-.092	-.095	.035	-.235**	1	.102
	Sig. (2-tailed)	.000	.596	.164	.149	.593	.000		.122
	N	232	232	232	232	232	232	232	232
staff punctuality	Pearson Correlation	-.177**	.139*	-.128	-.115	.090	-.190**	.102	1
	Sig. (2-tailed)	.007	.035	.051	.080	.171	.004	.122	
	N	232	232	232	232	232	232	232	232

Correlation of patient waiting time and other variables in Debere markos referral hospital

Pearson correlation between waiting time less than or equal to and greater than 180 minutes and satisfaction was -0.104 thus implying a negative correlation between the two variables, (*P* =.008). Longer duration of TCWT wasassociated with lower satisfaction (r = -0.10, *P*=.008). The patient waiting time less than or equal to and greater than 180 minutes and staff punctuality showed a weak negative correlation (r = -.062), however it was statistically significant (*P*= .003). The less than or equal to and greater than 180 minutes and occupational status of respondents however, showed a positive correlation (r = 0.015), which was not statistically significant (*P*= .0.412), and the medical care visit have a showed positive correlation(r=0.371) which was not statisticallysignificant (p=0.001).the same to Felege hiywot referral hospital that were satisfaction status, occupational status medical care/visits/ and staff punctuality are statically significance but the sex and age are not statistically significance (table 14).

Table 14.The correlation of patient waiting time and other variables in Debre markos referral hospital in Amhara region, North West Ethiopia.

		waiting time less than or equal to and greater than 180 minutes	sex	Education status	Occupational status	residence	staff punctuality	satisfaction statuss	medical care/visits/
waiting time less than or equal to and greater than 180 minutes	Pearson Correlation	1	.003	.024	0.015	.046	-.062**	.104**	.371**
	Sig. (1-tailed)		.480	.361	0.412	.241	.003	.008	.000
	N	232	232	232	232	232	232	232	232
sex	Pearson Correlation	.003	1	.118*	-.091	.019	-.079	-.088	.221**
	Sig. (1-tailed)	.480		.036	.083	.386	.116	.090	.000
	N	232	232	232	232	232	232	232	232
Education status	Pearson Correlation	.024	.118*	1	.277**	.567**	.099	.000	-.279**
	Sig. (1-tailed)	.361	.036		.000	.000	.066	.500	.000
	N	232	232	232	232	232	232	232	232
occupational status	Pearson Correlation	.015	-.091	.277**	1	.015	.211**	.059	-.112*
	Sig. (1-tailed)	.412	.083	.000		.412	.001	.186	.045
	N	232	232	232	232	232	232	232	232
residence	Pearson Correlation	.046	.019	.567**	.015	1	-.156**	.003	-.190**
	Sig. (1-tailed)	.241	.386	.000	.412		.009	.484	.002
	N	232	232	232	232	232	232	232	232
staff punctuality	Pearson Correlation	.062	-.079	.099	.211**	.156**	1	.035	-.143*
	Sig. (1-tailed)	.173	.116	.066	.001	.009		.298	.014
	N	232	232	232	232	232	232	232	232
satisfaction status	Pearson Correlation	-.104	-.088	.000	.059	.003	.035	1	-.056
	Sig. (1-tailed)	.058	.090	.500	.186	.484	.298		.200

	N	.232	232	232	232	232	232	232	232
	Pearson Correlation	.037	221**	-.279**	-.112	-.190**	-.143*	-.056	1
medical care/visits/	Sig. (1-tailed)	.286	.000	.000	.045	.002	.014	.200	
	N	232	232	232	232	232	232	232	232

Linear regression relationship of patient waiting time with other variables in Feleg hiywot referral hospital.

outpatients of the Felege hiywot referral hospital, andoccupational showed statistically significant association with patient waiting time. For instance, respondents from occupational had 0.0.006 (95% CI, -0.029- 0.041) higher patient waiting score as compared to respondents of Feleghiywot referral hospital with Debre markos referral hospital which means thatwho have high level of occupational status had got his service with the low waiting time. Similarly, forpatient waiting time statistically significant association wasnot found with p=0.722(95 % CI:-0.029 to 0.041)occupation status. Medical care/visit/ of the patients 95%CI (-0.378,-0.029)which is significance with the patient waiting time (p=0.02)and direction arrows and banners have 95%CI(0.027,0.392) significance(p=0.03) to the patent waiting time in Debere markos referral hospital compared to Felege hiywot referral hospital.(Table 15).

Table 15 .linear regression relationship of patient waiting time with other variables in Felege hiywot referral hospital Amhara Region, North west Ethiopia.

Variable	Unstandardized Coefficients		Standardized Coefficients	P-value.	95.0% Confidence Interval for B	
	B	Std. Error	Beta		Lower Bound	Upper Bound
(Constant)	2.580	.716		.000	1.168	3.992
age in years	.009	.013	.055	.470	-.016	.035
sex	-.026	.038	-.048	.484	-.101	.048
educational status	.061	.036	.289	.094	-.010	.132
occupational status	.006	.018	.033	.722	-.029	.041
residence	.001	.043	.002	.982	-.084	.086
medical care/visits	-.002	.054	-.003	.968	-.109	.105

information how to go charts with patients	-.074	.108	-.133	.493	-.286	.138
categorized satisfaction	.107	.120	.107	.372	-.129	.343
During waiting, what do you do	-.021	.024	-.087	.383	-.067	.026
staff punctual	-.039	.046	-.073	.392	-.129	.051
presence of direction arrows or banner	-.054	.056	-.100	.334	-.165	.056

Chapter six

6. Discussion

In this study showed that, the mean age of the respondents was 41.6 years of Felge hiywot referral hospital and 38 years of debre markos referral hospital which is high and equals compared to 38 years respectively (24).which is low compared to the mean age of 45 years obtained in a similar study in Karachi, Pakistan(31). The lower mean age observed in our study may not be unrelated to the fact that, more than half of our study subjects were less than forty years of age 144(62%) and 142(61.2) Felege hiywot and debre markos referral hospitals respectively . Findings from our study also showed that majority, the long waiting time observed unrelated to the realities in developing countries where health care providers are overwhelmed by large numbers of patients with few doctors. This was supported by InNigeria; patients will have to wait longer on the queues before seeing their providers, as long as the imbalance in the doctor –patient ratio is not addressed. The commonest reason adduced by our respondents for the long waiting time was, few doctors to attend to the large number of patients on the queue, long searching of cards and long registration time. This is a common finding in most health care centers across Ethiopia .and supported by the Nigerian research that was due to the shortage of medical doctors and other health care providers. And also similar reasons were observed in the study from Jos University Teaching Hospital (JUTH), Nigeria (7,31 &32).A disproportionate number of doctors and patients would increase patient waiting time. Over the years, population has increased several folds without a commensurate increase in the number of health care providers. The World Health Organization (WHO) target for doctor to population ratio is one per 1000. However, the doctor patient ratio is only one per 25,000 in the 25 poorest countries of the world including Ethiopia (33). With this trend, patient waiting times in our GOPDs will be a recurring decimal. Patients experienced long wait times in our institution possibly because of the dearth of qualified manpower especially in the card room and casher room workers. Findings from our study revealed that longer duration of total clinic

wait time was associated with lower satisfaction. This long wait time observed in our study may be because the GOPD rooms are not enough to service the patients besides the number of doctors.

The Institute of Medicine (IOM) has since recognized the problems of prolonged waiting time resulting in dissatisfaction among patients and had therefore recommended that at least 90% of patients should be attended to within 30 min of their scheduled appointment time (2). It was therefore not surprising that, a majority, 92.2% of our study subjects were of the measured in Feleg hiywot and 78.1% were debere markos referral hospitals that, the ideal waiting time should not be longer than 30 min from the time of arrival in the hospital to the time the patient is attended to by the doctor. Our findings showed that, only 7.8 % % of the patients were actually satisfied with the services in the OPDs in Felege hiyote referral hospital where as 17.2%. The mean waiting time observed in this study was 149 minutes in Feleg hiywot referral hospital and 94minutes in debre markos referral hospitals which was high compared to that which was done in Nigeria 85 min. This is high when compared to the findings from similar studies in other centers with lower figures for waiting time (5,9,36 and 37). However, dos Santos and his colleagues observed that, 62% of their respondents had a mean waiting time of 188 minute(10). Other studies also observed waiting times of 148 and 152 min respectively (14, 32) which were higher than94 min Debre markos referral hospitals and also 149 min in felege hiywot referral hospital recorded in our study. the major cause of long waiting time was large numbers of patient with a few doctors, long searching of the cards ,and long registration time in Feleg hywot and debre markos referral hospitals respectively.and this was supported by in Nigeria which was studied on patient waiting time in tertiary institutions and in on outpatient waiting tine in hospital university kebangsan Malaysia (7,24)

According to the results of this study, female patients (57.5%) were more satisfied with health services provided in the OPDs than male patients (42.5%) and this difference was found to be statistically significant (P=0.001) in debere markos referral hospital. This finding was found to be consistent with the results from other studies (38,39) where as in Felege hiywot referral hospital was inverse. One important component of measured health care is quality of patient satisfaction (36). It has been observed that patients are least satisfied while waiting times are longer than expected, relatively satisfied when waiting times are perceived as equal to expectations and highly satisfied when waiting times are shorter than expected (40). Findings from this study showed that, the patients who waited longer (> 60 min) expressed dissatisfaction with services rendered in the OPDs in the two hospitals (P<0.000) The number of patients who expressed satisfaction (20.8 Debre markos and 8.4% Felege hiywotreferral hospitals) with the services in the OPDs is low when compared with 95% obtained in the study by Maitra and his colleagues (41). The high level of satisfaction recorded in their study could be

attributed to differences in settings, as their study was carried out in a more developed country with enormous human and material resources.

The same study by Maitra and his colleague showed a significant correlation between satisfaction and waiting time, to see the doctor as those that waited for shorter periods, to see the doctor expressed satisfaction with services they assessed. Patients with who have high occupational status were found to have spent less time (<60 min) in the waiting room in both hospitals(P=0.0001). This could be due to the fact that, they are more likely to be gainfully employed and therefore are in a haste to get back to their places of work early. Researchers have found that, as waiting time increases, patients are more likely to leave emergency departments without being seen by a doctor or are dissatisfied with services (10,42 & 43). The time spent before seeing the doctor can always be made useful if patients are engaged in activities to reduce boredom. In this study, in Felege hiywot referral hospital only 26.7% of the patients admitted to being given health education on important health issues and in debre markos referral hospital was 34.9% while majority either watched television or watched happenings in the OPDs(37%,36.2) respectively. Here favorable research's which done in Nigeria patient waiting time in a tertiary health institution (10) . This finding is also in consonance with those of Ajayi in Ibadan, where it was observed that, the three common activities patients engaged in during waiting time were watching happenings in the clinics, reading and chatting (35). The study showed similar activities by their respondents; however, the respondents in their study showed a preference for health education programmes for specific diseases. Thus, the constructive use of patient waiting time can be made to provide greater patient satisfaction through effective health education activities in the OPDs (14).

Chapter seven

7. Conclusion and Recommendations

7.1 conclusions

Over all patient waiting time at the general outpatient departmentshowed that has demonstrated that, the record of mean waiting time in Felege hiywot were 149±72.1 minutes with the range of 21 to 449 minutes whereas 94.2±58.3 minutes with the range of 25 to 363 minutes in debre markos referral hospitals. Nearly half of patients in Felege hiywot referral hospital preferred to watching TV the same is true for Debre markos referral hospital. In the two hospital majority causes of long patient waiting time were large number of patients with a few doctors, long searching of cards and long registration time. The facility has limited number of infrastructures and physician. During their waiting more than half of the respondents' said there were no waiting rooms at the casher areas the same true for OPDs in Debre marrkos referral hospital. Patient waiting time and other variables like with education, occupation, and medical visit and staff punctuality and satisfaction status are statically significance. Patients waiting a long period of time their satisfaction level becoming decreased.Of the patients were long patient waiting time with services offered and the major cause of dissatisfaction. The major causes of the long patient waiting time was large numbers of patient with a few doctors, long searching of the cards ,and long registration time in Feleg hywot and debre markos referral hospitals respectively.

There is the need for health care facilities and hospital administrators to address gaps in human resources, logistics and other internal procedures and institution systems aimed at reducing waiting times and thus ensuring an effective health care.

7.2 Recommendations

Federal Ministry of Health

- FMOH must the standards of patient waiting time in the general outpatient waiting time for hospital based on their patient load per day.

- FMOH need to change the educational level and service (requirement) of card room and casher workers in the referral hospitals because high patient flow.
- FMOH must again increase the number of doctors in high patient loaded hospitals for this allocation also will have prepare standards.

Amhara Regional Health Office

- The Amhara regional health office should plan to build the additional new or renovation of the hospitals in collaboration with FMOH.
- Amhara regional health office together with other partners need to arrange training for health workers and administrative staff on patient waiting time.
- Amhara Regional Health office must improve the educational level and job requirements of card room workers and casher workers.
- And set standards in the region to manage the waiting time and to increase the satisfaction.
- When allocation of doctors the region should see the patient load in the outpatient and inpatient level.
- Must supervise the hospitals services delivery and other civil service implementation like punctuality, direction arrows or banners etc.

Feleg hywot Referral Hospital

- Feleg hywot referral hospital should deploy competent and adequate number of workers at MRD to reduce increased waiting time at GOPD.
- Feleg hywot referral hospitals in collaboration with other partners need to give traings especially on smart care computer application.
- Feleg hywotreferral hospitals should renovate outpatient department and waiting areas with adequate seating chairs in line with other services like one stop shopping.
- Feleg hywot referral hospital must control the punctuality of staff and prepared the direction arrows or banners to indicate service areas for the patient.
- Give to health talks (education) about the hospital service and other health issues in the outpatient waiting areas in either mass media or medical professionals.

Debre markos referral hospital

- Debre markosreferral hospital should deploy competent and adequate number of workers at MRD to reduce increased waiting time at GOPD.
- Debre markosreferral hospitals in collaboration with other partners need to give trainings especially on smart care computer application.

- Debre markosreferral hospitals should renovate outpatient department and waiting areas with adequate seating chairs in line with other services like one stop shopping.
- Debre markosreferral hospital must control the punctuality of staff and prepared the direction arrows or banners to indicate service areas for the patient.
- Give to health talks (education) about the hospital service and other health issues in the outpatient waiting areas in either mass media or medical professionals.
- The hospital managers should see the determinants of patient waiting time each services.

Health Service Providers

- Health workers and other administrative workers are required to work strongly on tracing lost patients when they call by the porters to go in the appointed OPD room.
- Health care's providers should conscious on waiting time of the patient and give appropriate time without complain.
- Health workers must be punctual in their work.

And Other Partners

- Taking their partnership working to reduce patient waiting time and to come up the satisfaction supports the regional health office by seating standards or giving training.
- Partners working on health service system should seriously take consideration of patient waiting time in prepare standards collaboration with FMOH.

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9. Annexes

9.1 Verbal Consent Form

Hello. My name is _____ and I am here to collect health related data for the purpose of research.

I would like to ask you questions related to patient waiting time while you are presenting at general outpatient department at DebreMarkos Referral Hospital/FelegeHiywot referral hospital/. The information you provide will help us to decrease the waiting time and improve the patient satisfaction. We assure you that whatever information you provide will only be used for the purpose of this research and will not be made available to anyone. I appreciate you too much for your willingness and support to respond the interview. We also assure that the interview process will not bring any harm to you and your family. The interview process will require approximately 15 to 20 minutes of your time. Your participation is voluntary. If you choose not to answer a particular question, that is your right. You are also permitted to withdraw any time from the study when you feel uncomfortable with it.

The purpose of the study and confidentiality procedures has been explained to me and I on my own consent:

a) Agree----------

b) Disagree----------

If the subject does NOT agree to voluntarily participate in the study, document the reason for their abstention in the space provided below.

_____

_____

_____

Date of Interview ---------- Time Started----------Time Finished----------

Interviewer's Name ----------

Interviewer's Signature ----------

Thank you very much!

9.2 Data collection Tools (questionnaire)

English version interviewed type of questionnaire

III.CHECK LIST FOR MEDICAL RECORDS REVIEW

Part I:socio demographic characteristics			
S.No.	Variable	Response	Skip to
101	Age	_____	
102	Sex	Male-------1 Female-----2	
103	Educational status	Unable to read and write----------1 Able to read and write----2 High school----------3 Tertiary level----------4	
104	Ethnicity	Amhara----------1 Oromo ----------2 Tigre----------3 Others(specify)----------4	
105	Occupational status	Student----------1 Farmer----------2 Employed----------3 Merchant ----------4 Others(specify)----------5	
106	Residence	Urban--------1 Rural---------2	
107	Religion	Orthodox ----------1 Islam ----------2 Catholic----------3	

		Protestant----------4 Others(specify)--------5	
108	Marital status	Single----------1 Married----------2 Divorced----------3 Separated----------4 Widow/widower------5	

109. Income per month ----------

110. Do you think you have waited for a long time in the course of receiving services at theclinic?
a. Yes
b. No

111. How long have you been waiting since your arrival?
a. <30 mins
b. <1hr
c. 1-2hrs
d. >2hrs

112 . Do you think you have stayed too long since your arrival?
a. yes
b. No

113. If yes why?
a. No /few record clerk(s) on desk
b. No /few doctor (s) to attend to me on time
c. Patients were too many
d. Shunting by other patients/staff
e. Others……..(specify)

114. Do you have medical care/visits here for….?

1. The first time
2. two times
3. three times
4. four times
5. Five and more times

115. Do you have gotten information charts with patient go to OPD waiting area?

1. Yes 2. No

116. If the question number 115 is yes, Transportation of patient with charts isdone?

1. by porters
2. by patient
3. by health professional
4. by card workers
5. Others

117. Which areas do you think waiting a long time?

1. Triage waiting areas
2. Casher waiting areas
3. Card room areas
4. OPD waiting areas

118. From question number 117 you waited long time, what is the reason? ----------

119. Are you satisfied with the registration process?

a. Very satisfied
b. Satisfied
c. Fairly satisfied
d. Dissatisfied
e. Very dissatisfied

120. If no, with what are you dissatisfied?

a. Long registration time
b. Record clerk was not on the desk on time
c. The record clerk was too harsh
d. Disruption of queue by staff and other patients
e. Registration materials were not available/inadequate
f. Other reasons, (specify)……..

121 . If no, what makes it uncomfortable? (you can select more than one option)

a. Lack of adequate/comfortable seats
b. Lack of fans/air conditioners
c. Waiting area is untidy
d. Waiting area is smelling
e. Poor /lack of toilet facilities

123. What are you doing, during in your waiting areas? What activity were you engaged in, while waiting to see the doctor?

1. Watching television

2. Setting simply

3. Reading newspaper or magazine

4. Go to café

5. Others

124. What activity do you prefer most?
a. Reading,
b. Chatting
c. Watching TV
d. H/E talks
e. Others (specify

125. Do you think the hospital staffs are punctual?

1. Yes 2. No

126. Are you coming by----------?

1. Referral sheet coming

2. Self or family coming

3. Others

127. Is any staff briefs you regarding the workflowin OPD?

1.yes 2. No

128. if question number 127 is yes, who give you berfing rearding work flow to reach OPD

1. by record clerks

2.by porters

3. by card room workers

4. by health professionals

5. by seeing the artifacts of banners

6. others

129. Was there any health talks given while you were in the waiting area?
a. Yes

b. No

130. What would you suggest to reduce waiting time to reach OPD?----------

---

---

131. Any other suggestions?----------

Thank you very much!!!

Waiting Time Assessment Card

· Serial number……

· Time of clinic arrival……..…

· Time of registration…….….

· Time of entry into consulting room…….

· Time of exit from consulting room……...

· Total clinic waiting time……

OBSERVATION CHECKLIST

1. Date/day of the week…….

2. Time of arrival of 1st patient……

3. Time of arrival of first record clerk……..

4. Time of arrival of first nurse……..

5. Time of arrival of first doctor……

6. Time of commencement of registration……

7. Time of commencing consultation……..

8. Number of patients on seat at the start of consultation……..

9. Number of doctors attending to patients at the start of consultation ……

10. Number of nurses attending to patients at the start of consultation ……

11. Number of record clerks present at the start of registration…….

12. Number of patients registered for the day…….

13. Number of patients seen by the doctors……..

14. Conduct of health education while patients are waiting [yes] [No]

15. Presence of posters on H/E and other health issues [Yes] [No]

16. Presence of TV in the waiting room [Yes] [No]

17. Availability of functional toilets within the clinic premises [Yes] [No]

18. Other irregular activities taking place in the clinic,

Shunting [Yes] [No]

Sales of commodities [Yes] [No]

Denying patients access to service(s) [Yes] [No]

Poor attitude of staff towards patients[Yes] [No]

II. <u>OBSERVATION CHECK LIST</u> will be collected by data collectors

132. Patient load during data collection day----------

A	Staff distribution in the OPD clinic			
	Types of workers	Numbers		Remark
133	Doctors			
134	OPD nurses			
135	Casher			
136	Porters			
137	Card workers			
138	Triaged nurses			
139	Record clerks			
B	Facility level check lists			
140	Number of OPD rooms			
141	Number of Card room Functional windows			
142	Number of casher Functional windows			
143	Number of card room functional computers			
C	Presence of waiting areas	Yes	No	Remark
144	Reception			
145	Central triage			

146	Card room			
147	Casher			
148	OPD areas			

D. Duration of time spend at each waiting areas in (minute)

S.No.	Service areas	Time of arrival	Time of finished	Remark
149	Reception			
150	Central triage			
151	Card room			
152	Casher			
153	OPD areas			
154	Total waiting services areas in minute			

*9.3.**የአማርኛጥያቄዎች (Amharic Questionnaires)***

የጥናቱተሳታፊዎችስምምነትማረጋገጫቅጽእናጥያቄ

አባሪ 1.የቃለመጠይቅቅጽ

የደንበኛዉመለያቁጥር……

ጥያቄየተጀመረበትሰዓት……..

በጂማዩኒቨርሲቲህክምናእናህበረተሰብጤናሳይንስኮሌጅበፈቃደኝነትላይተመሰረተየህክምናአገልገሎትከመጡጀምሮእሰከሀኪሙአ
ስኪደርሱያለውንጊዜእናችግሮችንበደብረማርቆስእናፈለገህወትሪፈራልሆስፒታልያለውንለማጥናትነው፡፡

እነደምንአደሩ/ዋሉ ;እንደምንነዎት; ስሜ_____ ይባላል
::እኔእዚህየምገኘውተማሪመለሰበለይነህንበመወከልበደብረማርቆስሪፈራልሆስፒታልእናበፈለገህወትሪፈራልሆስፒታልየህክምናአገ
ልግሎትከመጡጀምሮእሰከሀኪሙአስኪደርሱያለውንጊዜእናችግሮችንጋርተያያዥነትያላቸውምክንያቶችንለማጥናትየቀረበሲሆንይ
ህምበጂማየኒቨርሲቲህክምናእናህብረተሰብጤናሳይንስሳይንስኮሌጅበሚሰጥየጤናአመራርእናበሆስፒታልአስተዳደርማስተርስዲግሪ
ፕሮግራምክፍልውስጥየሚደገፍየድህረምረቃትምህርትላይየእርስዎንየቆይታጊዜ፣የመዘግየትምክንያቶች(ችግሮችን)በተመለከተጥና
ትበማድረግምንያህልሃኪሙለመድረስየሚፈጀውንጊዜእናየመዘግየትምክንያቶችለማወቅተፈልጎነው፡፡
ከእርስዎየሚገኘውመረጃበጣምአስፈላጊእናየእርስዎስምምሆነመለያመረጃዎችአይመዘገብም፡፡ምስጢሩየተጠበቀመሆኑንላረጋግጥለ
ዎትእወዳለሁ፡፡ጥያቄንለመመለስ 20-25
ደቂቃከእኔጋርሊያጠፉይችላሉ፡፡እርስዎበጥናቱእነድሳተፉየተመረጡትበዕጣ፡፡እርስዎበጥናቱየመሳተፍምሆነያለመሳተፍመብትያለ
ዎትሲሆንጥያቄዎችንያለመመለስወይምየማቋረጥመብትዎየተጠበቀነው፡፡ነገርግንእርስዎየሚሰጡንመረጃበማዕከላቱየሚሰጠውንአ
ገልግሎትለማሻሻልናፖሊሲዎችንለማውጣትበጣምጠቃሚነው፡፡
እባክዎንጥናቱንበተመለከተየሚጠይቁኝነገርአለዎት ;
እንጀምር ? አመሰግናለሁ፡

ለመሳተፍፈቃደኛነዎት?

1. አዎ
2. አይደለሁም

አይደለሁምካሉ፡አመስግነውደንበኛዋንአሰናብተውወደሌላተጠያቂይለፉ

ፈቃደኛስለመሆናቸውየጠያቂውፊርማ ----------

ጂማዩኒቨርሲቲ
ህክምናእናህበረተሰብጤናሳይንስኮሌጅ

Annex – II መጠይቅ

ለእይንዳንዱጥያቄውመልስይሆናልያሉትንአንዱንበመምረጥቁጥሩንበቻያክብቡ

ክፍል 1.ማህበራዊእና ሥነ-ህዝባዊገጽታዎች

ተ.ቁ	ጥያቄዎች	ምድብ	ዝለል
101	ፆታ	ወንድ 2. ሴት	
102	ዕድሜዎስንትነው?	[_ _] ዓመት	
103	የሚከተሉትየትኛውንሀይማኖትነው;	ኦርቶዶክስ -1 እስልምና -2 ካቶሊክ-3 ፕሮቴስታንት -3 ሌላ---4	
104	ያጠናቀቁትየትምህርትደረጃስንትነው;	ማንበብናመጻፍየማይችል/ትችል-----1 ማንበብናመጻፍየሚችል/ትችል--2 አንደኛደረጃትምህርት -3 ሁለተኛደረጃትምህርት -4 ከፍተኛተቃምትምህርትእናበላይ -5	
105	ብሄርዎምንድንነው;	አማራ -1 ኦሮሞ -2 ትግሬ-3 ሌላ---4	
106	የጋብቻሁኔታ	ያገባ/ች / አብራየምትኖር -1 ያላገባ/ች -2 የሞተባት/በት -3 የፈታ/ች -4 መግለጽያልፈለገች/ገ -5	

107	ጠቅላላወርሃዊገቢዎስንትነው;	--------	
108	የሥራሁኔታ	ተማሪ -1 ግብርና-2 የመንግስትሰራተኛ-3 ነጋዴ-4 ሌላ -5	
109	የመኖሪያአካባቢ፡	1)ከተማ 2)ገጠር	

110.ረጂምሰዓትየቆየሁኝብለውያስባሉ;

1.አዎ 2.የለም

111. በጥያቄ 110 አዎከሆነመልስዎምክንያቱምንድንነው;

1.የዶክተሮችቁጥርአናሳመሆን

2. ባለሙያዎችበሰዓቱአለመገኘት

3.ካርድክፍልሰራተኞችአናሳመሆን

4. ነርሶችቁጥርአናሳመሆን

5. ሌላካለይጠቀስ

112.ለስንተኛጊዜነውወደሆስፒታልመጡ..;

1. ለመጀመሪያጊዜ

2.ለሁለተኛጊዜ

3. ለሶስተኛጊዜ

4.ለአረተኛጊዜ

5.ለአምስተኛጊዜናበላይ

113. ካርድእናበሽተኛአንድላይወደምርመራክፍልአብረውእንደሚሄዱመረጃተሰጥቶታል;

1. አዎ 2. የለም

114. በጥያቄ 113 አዎከሆነመልስዎወደምርመራክፍልየሚወስደውማንነው;

1.በፖርተር

2. በበሽተኛ

3. በጤናባለሙያ

4. በካርድክፍልሰራተኛ

5. ሌላካለ

115. ለረጅምጊዜየቆዩበትክፍልየቱነው;

1.ማዕከላዊትሪያጅቦተ/መቆያ

2. ገንዘብመክፈያቦታ

3.ካርድክፍልመቆያቦታ

4.ምርመራመቆያቦታ

5.ሌላካለ..

116. በተራቁጥር 115 አዎከሆነምክንቱምንድንነውብለውያስባሉ?----------

117. በመቆያቦታዎችምንእየሰሮሩቆዩ;

1. ቴሌቪዥንእየተመለከትኩ

2. ቁጭብዬ

3.ጋዜጣእያነበብኩ

4. ካፌሻይቡናእያልኩ

5.ሌላካለ

118.የሆስፒታሉሰራተኞችበመንግስትየስራሰዓትይጋበሉ;

1. አዎ 2. አይገቡም

119.እርስዎየመጡበትሂደትበምንአግባብነው;

1. በሪፈራልወረቀት

2. በራሴ /በቤተሰብ

3. ሌላካለ

120. ስለበሽተኛፍሰቱበተመለከተመረጃማንሰጠዎት;

1. አዎ 2. የለም

121.በጥያቄ 120 አዎከሆነመልስዎ፣በማንተሰጠዎት;

1.በመረጃባለሙያዎች

2.በፖርተር

3.በጥበቃ

4.በጤናባለሙያ

5.ሆሲፒታልላይያሉየተለጠፉትንበማየት

6.ሌላካለ

122. ሃኪሙጋርለመድረስያለውንጊዜለማሳተርምንመደረግአለበትብለውየስባሉ;----------

123.ሌላማንኛውምአስተያየትካለዎት ----------

በድጋሜበጣምአመሰግናለሁኝ !!!

II. በመረጃስብሳቢውየሚሞላቼክሊስት፤

ሀ	የባለሙያስርጭትበተመለከተ…			
ተ.ቁ	የሙያውአይነት	በቁጥር		ምርመራ
124	ዶክተሮች			
125	ነርሶች(ምርመራክፍል)			
126	ገናዘብተቀባይ			
127	ፖርተር			
128	ካርድክፍልሰራተኛ			
129	ትሪያጅነርስ			
130	መረጃባለሙያ			
ለ	ተቃሙንየሚመለከትቼክሊስት			
131	ምርመራክፍልብዛት			
132	ካርድክፍልየሚስተናገዱባቸውመስኮቶች			
133	ገንዘብየሚስተናገዱባቸውመስኮቶች			
134	የሚሰሩኮምፒውተሮች			
ሐ	የመቆያቦታበተመለከተ			
135	የመቆያቦታያለው	አለው	የለውም	
136	መረጃክፍል			
137	ማዕከላዊትሪያጅ			
138	ካርድክፍል			
139	ገንዘብተቀባይ			
140	ምርመራክፍልአካባቢ			
መ	አ ገ ል ግ ሎቱ የ ሚፈ ጀ ውጊ ዜ በ ተ መለ ከ ተ ቼ ክ ሊስ ት (ደ ቂ ቃ)			
141	የ አ ገ ል ግ ሎት ቦ ታ	የ ደ ረ ሰ በ ት /የ ገ መረ በ ት /ጊ ዜ	የ ጨረ ሰ በ ት ጊ ዜ	
142	መረ ጃ ክ ፍ ል			

143	ማዕከላዊትሪያጅ			
144	ካርድክፍል			
145	ገንዘብተቀባይ			
146	ምርመራክፍል			
147	ጠቅላላየፈጀውአገልግሎትጊዜ			

አመሰግናለሁ!!!

10.ASSURANCE OF PRINCIPAL INVESTIGATOR

I, the undersigned, senior Health care and Hospital Administration student declare that this thesis is my original work, has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

Name: **Melesse Belayneh (BSc PT, BSc PH)**

Signature: _____

Place of submission:, College of Public Health and Medicine Sciences, Jimma University.

Date of Submission: _____

This proposal work has been submitted for examination with my/our approval as university advisor(s).

Advisors:

Name **Mirkuzie Woldie (MD, MPH, Associate professor)** Signature

1. Dr. Merkuzie Woldie _____