ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

ASSESSMENTS OF PATIENTS' SATISFACTION TOWARDS CLINICAL LABORATORY SERVICES RECEIVED AT UNIFORMED SERVICE HOSPITALS IN ADDIS ABABA, ETHIOPIA.

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TABLE OF CONTENTS

LIST OF TABLES

Title of table **Page Number**

LIST OF ABBREVIATIONS

AAU	Addis Ababa University
AFRTH	Armed Forces Referral and Teaching Hospital
AIDS	Acquired Immunodeficiency Syndrome
AOR	Adjusted Odds Ratio
ART	Antiretroviral Therapy
BPR	Business Process Reengineering
CAP	College of American Pathology
CI	Confidence Interval
COR	Crude Odds ratio
DRERC	Departmental Research and Ethics Review Committee
FPRH	Federal Police Referral Hospital
HIV	Human Immunodeficiency Virus
ISO	International Organization for Standardization
MOH	Ministry of Health
NGO	Non-Governmental Organization
OR	Odds Ratio
OPD	Out Patient Department
PCR	Polymerase Chain Reaction
SD	Standard Deviation
SPSS	Statistical Packages for Social Sciences
TAT	Turn Around Time
WHO	World Health Organization

ABSTRACT

Back ground: The patients experience the services in another way than the laboratory staff and management, and may indicate weak elements in laboratory services that the laboratory was not aware of. Therefore, the clients of the laboratory are a very good source to discover elements of laboratory service that can be improved.

Objective: To assess patients' satisfaction towards clinical laboratory services received at Uniformed Service Hospitals in Addis Ababa, April to May 2014.

Methods: A cross sectional, hospital based, descriptive study was conducted between April and May, 2014, on a sample of 422 service users of the laboratory using systematic random sampling technique. Data was collected using structured questionnaire, through face to face interview and analyzed by SPSS windows version 15.0. Satisfaction score was calculated by using Likert's five Scale giving a value of 1 for very dissatisfied up to a value of 5 for very satisfied. Median of the summary score of satisfaction was used to classify as satisfied and dissatisfied since the distribution of summary scores was skewed. Logistic regression model was also used to examine the effect of selected variables on patients' satisfaction with laboratory services. P-Value less than 0.05 were taken as statistically significant.

Results: The respondent's age range was between 18 and 66 years. 34.4% and 65.6% were from Armed Forces Referral and Teaching Hospital and Federal Police Referral Hospital, respectively. The overall satisfaction level of patients towards clinical laboratory services was 51.7% with the response rate of 422 (100%). Among the different indicators, patients were highly satisfied with courtesy/respect by laboratory workers (84.6%) while patients were highly dissatisfied with unavailability of laboratory workers on working hours (48.6%). The major determinants for dissatisfaction were long waiting time to give laboratory specimen (AOR=1.99, 95% CI 1.10 – 3.58, P=0.02), lack of place in blood drawing room to put personal thing (AOR= 6.83, 95%CI 3.07 – 15.20, P=0.00), lack of place in latrine room to put personal things (AOR=21.95, 95% CI 5.38-89.51, P=0.00), unavailability of ordered laboratory tests (AOR=2.98, 95% CI 1.68-5.34, P=0.00) and dissatisfaction of patients towards pre-laboratory services (AOR= 7.99, 95% CI 4.47- 12.28, P=0.00).

Conclusion: Of 422 respondents only 51.7 % of patient was satisfied with clinical laboratory services. Long waiting time to give laboratory specimen, availability of place in latrine and blood drawing rooms to put personal things, unavailability of ordered laboratory tests and dissatisfaction of patients towards pre-laboratory services were found to have statistically significant association with the overall satisfaction of patients towards clinical laboratory services. Therefore, these might be the possible determinants for the dissatisfaction of patients with clinical laboratory services.

Key words: Satisfaction, Patients' satisfaction, Clinical laboratory services

1.0. INTRODUCTION

1.1. BACKGROUND

The concept of patient satisfaction is widely used to assess quality [1]. It is of fundamental importance as a measure of the quality of care because it gives information on the provider's success in meeting client values and expectations, matters on which the client is the ultimate authority. Quality is one of the prime factors which affect satisfaction and there is a strong connection between health service quality perceptions and customer satisfaction. Therefore; having customer satisfaction directly contributes to them experiencing quality, and naturally experiencing quality also leads to customer satisfaction [2].

Customer satisfaction is a major component of a quality management system, and a significant focus in the ISO standards. Ultimately, the laboratory produces a product – the test result–for its customers. If the customer is not well served, the laboratory is not achieving its primary function [3]. Philip Crosby defined quality practice as meeting the requirements of the customer. He applied this practice to business and manufacturing, but it is equally important for a medical laboratory [4].

Patient satisfaction is core to quality of health care; even the most technically competent care is meaningless if it does not satisfy the users. In general satisfaction influences whether a person seeks medical advice, complies with treatment and maintains a continuing relationship with healthcare providers [5]. Moreover, measuring patient satisfaction plays an increasingly important role in the growing push toward healthcare provider accountability and is critical in the implementation of continuous improvements in medical settings [6, 7].

Patients' satisfaction often reflects their perception of the health care offered (outcome) as well as the process of giving that care, compared to their expectations. It is an expression of the gap between the expected and perceived characteristics of service. If the difference is small, the client is satisfied, while if the experience falls short of the expectation, client satisfaction is not realized [8, 9].

The current trend in healthcare delivery is to work towards providing 'people-centered', healthcare that puts the client at the center in the health delivery system. This means that

clients' views and assessment of services provided are critical in providing feedback for improving the quality of care provided. Clients' satisfaction with clinical laboratory services, therefore, has become one of the important components of providing accepted quality of care, and obtaining their feedback provides laboratory managers with opportunities to identify areas for improvement [10].

The clients of the laboratory are a very good source to discover elements of laboratory service that can be improved and they experience the services in another way than the laboratory staff and management, and may indicate weak elements in laboratory service that the laboratory was not aware of [11]. The laboratory has different types of clients, of them patients are the external customers of laboratory services and their opinions are essential components in providing laboratory managers with opportunities to identify areas for improvement [12].

The aim of this study was to assess the level of patients' satisfaction towards clinical laboratory services received at uniformed service hospitals and identify factors influencing their satisfaction, and forward possible recommendation to improve both the services and patient satisfaction.

1.2. STATEMENTS OF THE PROBLEM

In health care, the value of patients' experiences revolves around some critical deliverables, including: showing compassion, providing a safe environment, building trust, engaging the patient in the treatment process, respecting the patient's time, and providing value-added services [13].

Studies showed that patients were highly dissatisfied with hospital services including clinical laboratory services, and dissatisfaction of patient compromised utilization of health services [14, 15], because dissatisfaction may lead to distrust towards the system. In addition, dissatisfaction with hospital services will make patients to miss more appointments, live against advice or fail to follow through on treatment plans [16]. Therefore, Poor laboratory services may have a serious implication to the patients.

Study on the perception and expectation of patients regarding hospital services by using service quality gap model in India Chennai hospital shown that there is a huge gap in the hospital services like employees' neat appearance, lack of interest in solving the problem, communication regarding services, problem in doing the right things for the first time, giving services as their promises, poor knowledge of the employees to answer the patients' questions and problems in personnel attention. These are the dimensions having huge gap among the patients who have experienced in the hospitals [17].

A number of factors have been shown to influence patients' satisfaction with health care services including long waiting time, more than one needle stick attempt, bruise resulting from phlebotomy, discomfort during phlebotomy procedures and treated non professionally [18, 19]. In addition, failure to locate different room in the hospital, refusal of laboratory staff to perform requests in the afternoon and shortage of waiting facilities were reported as factors influencing patients' satisfaction [22].

Study conducted in 2013 on 422 patients to assess clients' satisfaction with quality of clinical laboratory services at public general hospital in Addis Ababa, Ethiopia, showed that patients were dissatisfied with cleanliness of latrine (47.6%), provider's knowledge and explanation

about the procedures (22.7%), cleanliness of blood drawing area (10.4%), professional neatness and appearances (10.2%), privacy and confidentiality (9%) and friendliness and communication of healthcare providers (9%). In addition, 221 (52.4%) of clients of public hospitals revealed that the current quality of laboratory services were perceived as poor [20].

Several studies conducted in outpatient departments of different hospitals in Ethiopia revealed client satisfaction level ranging from 22.0% in Gondar to 57.1% in Jimma [21, 22]. Long waiting hours during registration, visiting of Doctors after registration, laboratory procedures and re-visiting of the Doctor for evaluation with laboratory results, failure to obtain prescribed medications from the hospitals' pharmacies and difficulty to locate different sections were the frequently faced problems affecting utilization leading to dissatisfaction [21].

Study in Jimma showed that of 344 respondents, nearly two fifth of the respondents (39%) responded they were not satisfied with the information provision about the hospital services and the flow. Out of 344 laboratory orders 178(51.74%) got all the ordered procedures in the hospital [23]. This study also showed that 37.2% of the clients were dissatisfied by the overall waiting time to get the services.

A cross sectional survey was conducted in Tigray region to assess the level of client satisfaction in outpatient departments of zonal hospitals in 2006 and the overall satisfaction level in outpatient department was 43.6%. Nearly half of the clients (46.7%) were not satisfied with the information provided about the services and above 44% of the clients were dissatisfied about the waiting time to get the services [24].

Satisfaction is, just as in other service oriented sectors, one of the outcome measures for quality of laboratory services and required by most clinical laboratories as a useful quality improvement tool [25]. Since limited studies conducted in Ethiopia, particularly in uniformed service hospitals, this study provided the current status of patients' satisfaction, and also factors associated with their dissatisfaction towards clinical laboratory services rendered at Armed Forces Referral and Teaching Hospital and Federal Police Referral Hospital.

1.3. LITERATURE REVIEW

Satisfaction is an important element of the quality of services, including health services, and a high quality organization meets customers' need. One approach assumes that, in the clinical laboratory, managers know what customers want and directly set out measures of laboratory performance in each specific area. Another approach considers that quality measurement is the assessment of customer satisfaction with the services provided by the laboratory [12].

Two forms of quality are relevant to service-providing organizations: technical quality and functional quality [26]. Technical quality in the health care environment, also referred to as quality in fact, is defined primarily on the basis of the technical accuracy of the diagnoses and procedures. Various techniques for measuring technical quality have been proposed and are currently in use in health care organizations. Because this information is not generally available to the consuming public, knowledge of the technical quality of health care services remains within the pure view of health care professionals and health care managers [27].

Functional quality refers to the manner in which the health care service is delivered to the patient. Since patients are often unable to accurately assess the technical quality of a health care service, functional quality is usually the primary determinant of patients' quality perceptions. There is growing evidence to suggest that this perceived quality is the most important variable influencing consumers' value perceptions. These value perceptions, in turn, affect consumers' intentions to purchase services [2].

A cross-sectional study in 2012 was conducted on patients' satisfaction towards tertiary care hospital services on OPD - basis in India showed that maximum number of patients (88% among 256 patients) were satisfied with laboratory services in particular with friendliness and helpfulness of laboratory staff, but about 15% of patients were unsatisfied with turnaround time (TAT) of laboratory results. This study also showed that about 51% and 56% of patients among 450 respondents were satisfied with adequacy of sitting arrangement and cleanliness of waiting area, respectively [28].

A similar study in 2011 was conducted at Narayana on 150 patients with different educational backgrounds have been selected and studied with reference to various factors that influence the satisfaction of patients with laboratory services. Among the factors 76%, 71%, 70%, 65 % and 64% of patients were satisfied with timely issue of reports, behavior of the staff, process of issue of reports, co-operation from the staff and clarification of queries, respectively [16].

Cross-sectional study conducted in 2012 in G.B. Pant Hospital, New Delhi, India, showed that patients do not have problems getting tests done, but the laboratory's inconvenient location caused dissatisfaction. Patients do not have problems communicating with staff, but medical terms are not understood by patients. Hospital cleanliness needs improving, especially toilets, which causes the most patient dissatisfaction. Hospital staff were deemed highly competent and judged to give excellent technical help to patients [6].

Study conducted in 2007 at Medical University of South Carolina student clinic, United States, showed that the overall satisfaction with the clinic was reported in 98% of patients surveyed (of 52 respondents). Wait time and hours of operation were given the lowest rating (mean rating of 2.96±1.21 and 3.02±1.29, respectively). Friendliness of staff (4.33±0.95) was rated highly. Patients were satisfied with medications supplied, as well as laboratory services (mean rating of 4.12±1.14 and 4.41±1.00, respectively) [29].

A cross sectional study conducted in 2012 to improve quality of care at a tertiary care hospital, India, reported that the most powerful predictor for client satisfaction was the providers behavior towards patients. The behavior of the doctors and paramedical staff were found to be satisfactory but not exemplary [30]. Major client dissatisfaction was with waiting time greater than 30 minutes [30, 31].

The result of assessment of patient satisfaction with services provided in a tertiary care hospital situated in rural Haryana, India, in 2012 showed that microbiological and pathological laboratory services were somewhat satisfactory as only 5.77% were not satisfied with service level. But most of the patients were unsatisfied with biochemistry laboratory services as facilities for advanced biochemical investigations (example PCR) were not

available in the department. 46% were referred to other private facilities for investigations. 29.11% reported problem with timely delivery of investigation reports [32].

On assessing the dissatisfaction in the above study regarding missing of reports, only 4.44% had reported the problem from laboratory department. Overall dissatisfaction level in relation to record keeping was reported to a level of 5.5% [32]. Level of satisfaction was significantly associated with background, level of education and socioeconomic status of the participants. Level of satisfaction was significantly higher in respondents who were illiterate, from low socioeconomic status and rural background [32].

The findings of the study conducted in 2011 at Jimma University Specialized Hospital, Ethiopia, on clients' satisfaction with hospital services showed that the overall clients' satisfaction level with the health services rendered at the hospital was 77%. Nearly two fifth of the respondents (39%) responded they were not satisfied with the information provision about the hospital services and the flow. Out of 344 laboratory orders, 178(51.74%) got all the ordered procedures in the Hospital. Furthermore, satisfaction with care was found to have a direct relationship with an increase in age ($p=0.034$) but had an inverse relation with increase in educational level of respondents ($p=0.003$) [23].

A cross-sectional survey was conducted on patient's perspective towards the quality of hospital services in eastern Ethiopia of two zonal hospitals under Harari region in 2001. A total of 518 outpatient health service users were interviewed after completing their health care and the result shown that about 46% of the interviewees said that they were not satisfied with the health services provided. Satisfaction with health care was found to have a significant association with waiting time. The least degree of satisfaction was observed for the general cleanliness of the facility followed by provider's behavior towards the patient and waiting time between registrations and being seen by the provider. The result also shown that the satisfactions level related to laboratory service was relatively higher [33].

Study on HIV/AIDS patients' satisfaction with ART laboratory service in selected governmental hospitals, sidamma zone, southern Ethiopia, in 2013 shown that the overall satisfaction on ART laboratories by HIV/AIDS patients was 90.8% out of a total of 422

respondents. The Likert's scale results of the patient ratings for the level of satisfaction of laboratory services in this study revealed that the mean rating (M) values ranged from 3.07 (±0.96) to 4.25 (±0.56). The language that the laboratory staff used to communicate with the patients (M= 4.25 (±0.56)) was rated the highest, whereas, cleanliness of the latrines for collection of specimens (M= 3.07 (±0.96) was rated the lowest, using the Likert's scale [34].

A similar study was conducted on 406 patients to assess their satisfaction with ART laboratory services received at ART Clinics in nine public hospitals, Addis Ababa, Ethiopia in 2012. The overall patients' satisfaction with ART monitoring laboratory services was (85.5%). Patients were satisfied with measures taken by health care providers to keep confidentiality and ability of the person drawing blood to answer question (98.3% and 96.3%, respectively). Moreover, the finding of this study revealed statistical significant associations between the overall patients' satisfaction with waiting time to get blood drawing service, availability of ordered laboratory tests and waiting time to get laboratory result with ($p<0.05$). Patients receiving blood drawing service less than 30 minute were 7.59 times (95% CI AOR: 3.92–14.70) to be more satisfied with ART monitoring laboratory services compared to those who underwent for more than 30 minutes [31].

A cross sectional study was conducted in 2013 at Dil Chora, Jugal, Hiwot Fana and Bisidimo hospitals, eastern Ethiopia, with focus on patients' and clinicians' satisfaction towards laboratory services shown that most of the patients, 87.6% out of 422 respondents, were satisfied with the laboratory services. The lowest, in Likert's scale, [2.48 ± 1.39] and highest [4.27 ± 0.83] rate satisfaction were on cleanness of latrine to collect specimens and availability of laboratory staff on working hours, respectively [35].

1.4. RATIONALE OF THE STUDY

Nowadays, assessing customer satisfaction with laboratory services is considered as an important component of a laboratory quality assurance programme, and is one of the requirements for accreditation by the WHO-Afro accreditation program [36] and the Ethiopian National Accreditation Office; the office uses ISO 15189:2012 standards [37]. Ethiopian National Accreditation Office has power for accrediting laboratories in Ethiopia**.** Therefore this study provided feedback from patients to meet one of the national accreditation requirements for uniformed service hospitals laboratories in Addis Ababa.

In Ethiopia, studies have been conducted on patients' satisfaction with hospital services in general [21-23] and some has conducted on specific to patients' satisfaction with ART monitoring laboratories (ART monitoring laboratories has relatively good supply chain management and many donors involved in improving the services) [31, 34]. But studies on patients' satisfaction with clinical laboratories are very limited; therefore, this study gives the current status of patients' satisfaction with clinical laboratory services.

In many studies, there has no a clear information about the association between patients' satisfaction towards pre-laboratory services and overall satisfaction towards clinical laboratory services. In addition, different studies in Ethiopia have revealed different level of patients' satisfaction [20, 35]. Therefore, the present study has provided clear information on both the association and the current status of patients' satisfaction level towards clinical laboratory services.

Although Business Process Re-engineering (BPR) reform has been implemented in Ethiopia since 2004 [41], there is no adequate information on patients' satisfaction towards services rendered by services delivery organization. Therefore, this study assessed and creates a benchmark for current patients' satisfaction levels with clinical laboratory services rendered at uniformed service hospitals laboratories in Addis Ababa as a means of comparison for the future.

2.0. OBJECTIVES

2.1. GENERAL OBJECTIVE

2.1.1. To assess patients' satisfaction and its associated factors with patients' dissatisfaction towards clinical laboratory services received at uniformed service hospitals in Addis Ababa, Ethiopia.

2.2. SPECIFIC OBJECTIVES

2.2.1. To determine the overall patients' satisfaction level towards clinical laboratory services received at uniformed service hospitals in Addis Ababa, Ethiopia.

2.2.2. To identify factors associated with patient' dissatisfaction towards clinical laboratory services received at uniformed service hospitals in Addis Ababa, Ethiopia.

3.0. METHODS

3.1. STUDY DESIGN, STUDY PERIOD AND STUDY AREA

3.1.1. STUDY DESIGN AND STUDY PERIOD

A cross sectional, hospital based, descriptive study was conducted to assess the level of patients' satisfaction towards clinical laboratory services among patients received clinical laboratory services at Armed Forces Referral & Teaching Hospital and Federal Police Referral Hospital in Addis Ababa.

The study was conducted between April, 2014 and May, 2014. Data was collected using structured questionnaire through face to face interview.

3.1.2. STUDY AREA

The study has been conducted in Addis Ababa which is the capital city of Ethiopia. 45 hospitals have been found in Addis Ababa, of which 28 are privates, 10 are publics, 4 are non-governmental organizations and 3 are uniformed services [39].

This study has been conducted in Armed Forces Referral & Teaching Hospital and Federal Police Referral Hospital among the uniformed service hospitals in Ethiopia. Both hospitals are found in Addis Ababa. Armed Forces Referral and Teaching Hospital is a tertiary level hospital located in lideta sub city at south west Addis Ababa, and it serve as a referral hospital for all other military health facilities in the country and give services to military and military families. The average number of patients per month who received laboratory services in the year 2013 was 1250.

Federal Police Referral Hospital serve as a referral hospital for all members of regional and zonal police clinic, and federal police health centers. It is found south western of Addis Ababa in the Lideta sub city. The average number of patients per month who received laboratory services in the year 2013 was 2400.

3.2. POPULATION

3.2.1. SOURCE POPULATION

All patients who visit the outpatient departments of Armed Forces Referral &Teaching Hospital and Federal Police Referral Hospital in Addis Ababa were considered as source population

3.2.2. STUDY POPULATION

All patients received laboratory services at Armed Forces Referral & Teaching Hospital and Federal Police Referral Hospital during the study period, and who fulfill the inclusion criteria of the study was taken as study population.

3.2.3. STUDY UNIT

Patients who were selected from the study population with sampling procedure (Systematic Random Sampling) during the study period were study units for this study.

3.3. SAMPLE SIZE AND SAMPLING PROCEDURE

3.3.1. SAMPLE SIZE

The required sample size for patients was determined by using a single population formula considering the following assumptions:

- Proportion of satisfied patients is equal to 50% (considering rate of patients' satisfaction with laboratory service is equal to 50 % will be taken due to the absence of reliable previous study).
- Level of significance ($_{a/2}$) = 0.05
- Marginal error (d) = 5%
- 10% of the calculated sample size was added to compensate non-responses
- The formula for calculating the sample size (n) was:

$$n = \frac{(Z_{a/2})^2 P x (1-P)}{d^2}$$

Where:

- n= sample size
- $Z_{a/2}$= Z-score at 95% confidence interval = 1.96
- P= 0.50
- 1-P= 0.50
- d= marginal error=0.05 (5%)
- Therefore n becomes:

  n= $(1.96)^2$ x 0.50x 0.50/ $(0.05)^2$

  n=384

With the above assumptions, the sample size was calculated and the overall sample size was= 384 + 38 (10 % non-responses) = **422**

3.3.2. SAMPLING PROCEDURES

Sample size was allocated proportionately for each hospital according to patient load of hospital's laboratories (average patients load per month in the year 2013 was 1250 at AFRTH and 2400 at FPRH). Respondents in each hospital were selected by using systematic Random sampling method and 145 and 277 respondents from AFRTH and FPRH were taken for interview, respectively [see annex-I on page]. The interval of the respondents for the interview was determined by dividing the average total number of patients per month received laboratory services at two hospitals during the year 2013 by the required sample size for the study. Therefore, every 9^{th} patients were selected for the interview at each hospital from laboratory record books and simple random sampling technique was employed to select the first patient.

3.4. INCLUSION AND EXCLUSION

3.4.1. INCLUSION CRITERIA

All patients attending the laboratory and willing to participate in this study was included in the study after taking written consent.

3.4.2. EXCLUSION CRITERIA

Patient working in the hospital (study hospital) and patients with serious physical or mental pathologies, and psychosis were excluded from the study. Therefore, patients from psychiatry clinic and emergency department did not participate in this study.

3.5. DATA COLLECTION TOOL AND COLLECTION METHODS

Data was collected by face-to-face interview using structured questionnaire. The questionnaire was developed in English after reviewing relevant literatures and translated into Amharic (the local language) and retranslated back into English to ensure its consistency. This also helped data collectors to communicate easily with respondents. The questionnaire has been pre-tested to ensure that it was clear for respondents then correction was done accordingly.

The questionnaire contained the socio-demographic characteristics and patients' satisfaction indicators towards clinical laboratory services including physical facility factors, employees' competency factors, communication factors, service availability factors, and waiting time factors.

Besides the above factors, the questionnaire also contained patients' satisfaction indicators towards pre-laboratory services (services before arriving to the laboratory) including information center services (information desk), hospital registration services, and outpatient department services in order to assessed its association with overall patients' satisfaction towards clinical laboratory services.

Patients who finished their laboratory examinations and returned to outpatient department and willing to participate in this study has been interviewed by trained data collectors in the hospitals.

As part of qualitative assessment, all interviewed patients were also asked if they had specific complaints or recommendations regarding their encounter in the laboratory at the end of their interview and recorded it on the comments section of the questionnaire.

3.6. STUDY VARIABLES

3.6.1. DEPENDENT VARIABLE

Patients' satisfaction with clinical laboratory services

3.6.2. IDEPENDENT VARIABLES

Socio-demographic characteristics of the patient (age, gender, marital status and educational status), availability of place in blood collection room to put personal things, availability of place in latrine to put personal things, number of needle sticks, bruise development, information provision on how to lessen the possible bruise, patient waiting time to giving laboratory specimens, patient waiting time to get laboratory result and availability of ordered laboratory tests in the hospital.

3.7. DATA MANAGEMENT AND ANALYSIS

The completed questionnaire was checked for completeness, consistency and coded by the principal investigator. For qualitative data (from "comments" section of the questionnaire), patient's comment and complaints was translated to English language, transcribed, coded and categorized manually by the principal investigator.

Data entry and analysis was made using SPSS for windows version 15 software. A 5 point Likert's scale rating of very dissatisfied (1-point), dissatisfied (2-points), neutral (3-points), satisfied (4-points) and very satisfied (5points) was employed. Seventeen satisfaction indicators of the service were selected and patients were interviewed for their satisfactions on each indicator using a 5-point Likert's scale.

Internal consistency was checked using cronbach's alpha coefficient and it has found to be 0.894 (cronbach's alpha coefficient >0.7 is acceptable) [43]. This result confirms that the items (seventeen items) identified as indicators for patients' satisfaction towards clinical laboratory services were cohesive enough to adequately represent a single concept (which is patients' satisfaction).

The mean, median and mode score for the overall satisfaction of patients towards clinical laboratory services were calculated. Median (67) of the summary score of satisfaction was used to classify as satisfied and dissatisfied since the distribution of summary score was skewed. Similarly, level of patients' satisfaction with each indicator was classified as satisfied and dissatisfied by using the median score of that specific indicator.

The percentage of very satisfied, satisfied, neutral, dissatisfied or very dissatisfied rating was calculated by dividing the number of very satisfied, satisfied, neutral, dissatisfied or very dissatisfied rating by the total number of ratings (1–5) for specific laboratory service, respectively [35].

Patients' satisfaction with pre-laboratory services was not included in the overall patients' satisfaction towards clinical laboratory services, rather it was analyzed in a separately manner. The mean, median and mode score for the overall satisfaction of patients towards pre-laboratory services were calculated. Median, it was 25, of the summary score of satisfaction was used to classify as satisfied and dissatisfied since the distribution of summary score was skewed. Moreover, its association with the overall patients' satisfaction towards clinical laboratory services was statistically analyzed. .

Hierarchical binary logistic regression analysis was conducted to predict the factors which influence the level of satisfaction with clinical laboratory services using Odds Ratio (OR) with a 95% Confidence Interval (CI). P-Value less than 0.05 were taken as statistically significant.

3.8. DATA QUALITY ASSURANCES

The questionnaire was pre-tested by 22 patients (accounts 5% of the total sample size), 7 patients at AFRTH and 15 patients at FPRH before conducting the actual data collection. Pre-tested results were not included in the study.

Training was given for data collectors and supervisors by the principal investigator to clarify how to interview the patients using a structured questionnaire.

Questionnaire for patients was translated to local language (Amharic). Data collectors were instructed to check the completeness of each questionnaire at the end of each interview. The

completeness of the questionnaire at the end of the day was rechecked by supervisors. This was also double checked by the principal investigator.

3.9. ETHICAL CONSIDERATION

Before the research work, ethical clearance was obtained from the Departmental Research and Ethics Review committee (DRERC) of School of clinical laboratory sciences, Addis Ababa University.

In addition to DRERC, written consent was obtained from Defense Health Main Directorate and Federal Police Referral Hospital before start to collect the data.

Response of respondents is anonymous and data collectors inform respondents that they have full right to discontinue or refuse to participate in the study. Informed consent was also obtained from respondents.

3.10. DISSEMINATION OF RESULTS

The final result of the study will be submitted to School of Clinical Laboratory sciences, AAU, which could serve as a reference material to researchers, experts or policy makers for intervention.

In addition, a copy of this material will be given to Defense Health Main Directorate, Federal Police Referral Hospital and Armed Forces Referral & Teaching Hospital.

The result will also be disseminated through publication in peer reviewed local and international journals and through presenting it in relevant workshops and seminars.

3.11. OPERATIONAL DEFINITION

Accreditation: Procedure by which an authoritative body gives formal recognition that an organization is competent to care out specific tasks.

Confidentiality: Pertains to the disclosure of personal (patient's) information in a relationship of trust and with the expectation that it will not be divulged to others in ways that are inconsistent with the original disclosure.

Continuous Quality Improvement (CQI): A philosophy and attitude for analyzing capabilities and processes and improving them repeatedly to achieve the objective of patients' satisfaction.

Patients' Satisfaction: patients' perception of the degree to which the patient's requirements have been fulfilled.

Satisfaction: the degree to which patients perceive or accept the services as appropriate to them.

Provider - Patient interaction: personal dimensions for service, principally the received emotional (affection) contents of exchanges between providers and patients. These may include treating patients with dignity or respect and greeting.

Quality Laboratory Service: a service which provided accurate, reliable, and timely services leading to satisfaction of patients.

Turnaround Time: a time from receipt of specimen in laboratory until result reported.

Communication: any interaction between services provider and patient

Perception: The evaluation of patient regarding to the specific services relative to his/her expectation.

Pre-laboratory services: Any services rendered by the hospital to the patients before arriving to the laboratory, this includes mainly information center services (Information desk), hospital registration services and hospital outpatient department services**.**

Loyalty: a positive propensity for service provider organization.

4.0. RESULTS

4.1. GENERAL INFORMATION

A total of 422 patients were involved in this study with the response rate of 100 %. Of 422 respondents, one hundred and forty five (34.4%) were from Armed Forces Referral & Teaching Hospital while two hundred and seventy seven (65.6%) were from Federal Police Referral Hospital.

4.2. SOCIO-DEMOGRAPHIC CHARACTERSTICS OF RESPONDENTS

The mean (±SD) age of the respondents was 35 ± 9 years ranging from 18 - 66 years. The highest proportion (37.4%) was in the age group of 28 - 37 years.

Of 422 respondents, 238 (56.4%) were male. Majority of the respondents (60.7%) were married. Majority (75.8%) of respondents was Orthodox Christian and (38.6%) belongs to Amhara ethnic-group. During the present survey, one hundred and ninety one (45.3%) of respondents had attained at Grade 6^{th} – 12^{th} and one hundred and seventy one (40.3%) had attended at college. Just above three-forth (76.1%) of the respondents lived in Addis Ababa and the rest (23.9%) were out of Addis Ababa (Table -1).

Table -1: Socio-Demographic Characteristics of Respondents on Patients' Satisfaction with Clinical Laboratory Services Received at Uniformed Services Hospitals in Addis Ababa, April to May, 2014 (n=422)

Variables	Frequency	Percentage
Age Group in Year		
18 – 27	100	23.7
28 – 37	158	37.4
38 – 47	124	29.4
48 – 57	27	6.4
>=58	13	3.1
Total	422	100.0
Sex		
Female	184	43.6
Male	238	56.4
Total	422	100
Marital Status		
Divorced	15	3.6
Widowed	20	4.7
Unmarried	131	31.0
Married	256	60.7
Total	422	100

Table-1: continues

Educational Status		
Uneducated	10	2.4
Read and write	21	5.0
Grade 1- Grade 6	29	6.9
Grade 7- Grade 12	191	45.3
Collage	171	40.5
Total	422	100
Current Living Place		
Out of Addis Ababa	101	23.9
Addis Ababa	321	76.1
Total	422	100.0
Religion		
Orthodox	320	75.8
Muslim	36	8.5
Protestant	58	13.7
Others ‡	8	1.9
Total	422	100.0
Ethnicity		
Oromo	122	28.9
Amhara	163	38.6
Tigray	105	24.9
Gurague	29	6.9
Othrers ‡‡	3	0.7
Total	422	100.0
Study Hospital		
Armed Forces Referral & Teaching Hospital	145	34.4
Federal Police Referral Hospital	277	65.6
Total	422	100

‡ = Includes Yehiwaw Miskir & Catholic Christian ǂ =Includes Welayita, Hadiya and Gumz,

4.3. PATIENTS' SATISFACTION WITH PRE-LABORATORY SERVICES

Since the cumulative score for overall satisfaction of patients with pre-laboratory services was skewed, the cumulative median score has been used as a demarcation threshold and it was found to be 25. Of 422 patients, 215 (50.9%) were scored at higher through the median value and considered as satisfied towards pre-laboratory services.

Among the seven indicators patients were relatively highly satisfied with the courtesy/respect of the Doctor at outpatient department (82.7%) and information provision on where to go after being registered (79.9%), while (30.8%) and (30.3%) patients were dissatisfied with courtesy/respect of staff in registration services and sign found in the hospital, respectively (Table- 2).

Table-2: Level of Satisfaction of Patients towards Pre-laboratory Services Received at Uniformed Service Hospitals in Addis Ababa, April to May, 2014 (n=422)

variables	V. Sat.* No. (%)	Sat.* No. (%)	Neu.* No. (%)	Dissat.* No. (%)	V. dissat.* No. (%)	Satisfaction ǂ No. (%)
Availability of staff in Information Desk	160 (37.9)	137 (32.5)	74 (17.5)	42 (10.0)	9 (2.1)	297 (70.4)
Friendless & helpfulness of Staff in the Information Service	130 (30.8)	170 (40.3)	74 (17.5)	33 (7.8)	15 (3.6)	300 (71.1)
Info. Provided about the hospital services & flow	157 (37.2)	147 (34.8)	81 (19.2)	21 (5.0)	16 (3.8)	304 (72.0)
Sign Found in the hospital	151 (35.8)	143 (33.9)	88 (20.9)	25 (5.9)	15 (3.6)	294(69.7)
Courtesy/respect of the staff in registration services	145 (34.4)	147 (34.8)	83 (19.7)	37 (8.8)	10 (2.4)	292(69.2)
Info. Provided where to go after being registered	181 (42.9)	156 (37.0)	65(15.4)	14 (3.3)	6 (1.4)	337 (79.9)
Courtesy/respect of the Doctor in the OPD β.	206 (48.8)	143 (33.9)	55 (13.0)	16 (3.8)	2 (0.5)	349 (82.7)
Overall satisfaction with Pre-laboratory services ǂǂ						215(50.9%)

*V. Sat=Very satisfied, *Sat.=Satisfied, *Neu=Neutral, *Dissat=Dissatisfied, *V. Dissat=*Very Dissatisfied , β =Out patient Department

ǂ =Classified by using a median score of that specific indicator as a demarcation threshold

ǂǂ =classified by using overall summary median score as a demarcation threshold.

4.4. FACTORS AFFECTING THE LEVEL OF PATIENTS' SATISFACTION WITH PRE-LABORATORY SERVICES

Two hundred and eighty eight (54%) patients had got registration services below thirty minutes; whereas 38 (9%) patients were waited more than two hours. Similarly, hundred and ninety five (46.5%) of patients waited less than thirty minutes to get their Doctor at outpatient departments while 33(7.8%) of the patients had spent more than two hours. Regarding loss of patient's primary medical records, only 2.6% of the patients did not get their primary medical records at the registration service while 97.4 % had got their primary medical records (Table-3).

Table -3 Factors Affecting the Level of Satisfaction of Patients towards Pre-laboratory Services at Uniformed Service Hospitals in Addis Ababa, April to May, 2014 (n=422)

Variables	Frequency	Percentage
Waiting Time to get registration services		
< 30 minutes	228	54.0
30 minutes - 1 hour	116	27.5
1 hour - 2 hours	40	9.5
>2 hours	38	9.0
Total	422	100.0
Waiting time to get the Doctor		
<30 minutes	195	46.2
30 minutes - 1 hour	111	26.3
1 hour - 2 hours	83	19.7
>2 hours	33	7.8
Total	422	100.0
Loss of Patient's Card		
Lost	11	2.6
Not lost	411	97.4
Total	422	100.0

In binary logistic regression analysis, overall satisfaction of patients towards pre-laboratory services showed statistically high significant association with waiting time to get registration services and waiting time to get Doctor at outpatient departments with ($p<0.005$) (Table 4). However, our data did not show a statistical significant association between overall satisfaction towards pre-laboratory services and loss of patients' primary medical records.

As shown in Table-4, when adjusted odds ratios were calculated among these variables, significant associations were found between the overall satisfaction of the patients towards

pre-laboratory services and waiting time to get the Doctor at outpatient department with (p-value<0.005) (Table 4).

Those patients who waited less than thirty minutes to get Doctor at outpatient department were about four times more likely to be satisfied than those who waited more than thirty minutes (AOR= 3.82 ; 95% CI:2.48- 5.91). However; patients' satisfaction towards pre-laboratory services with waiting time to be registered and loss of primary medical records were not found to be statistically significant.

Table -4 Determinants of Satisfaction of Patients towards Pre-laboratory Services Receive at Uniformed Service Hospitals in Addis Ababa, April to May, 2014 (n=422)

Variables	Sat. with Pre Lab. services		Odds Ratio (95 % CI)			
	ǂ Sat.(no.)	ǂǂ Dissat.(no.)	Crude	P-value	Adjusted	P-Value
Waiting Time to be registered						
>30 Minutes	84	110	**1**		**1**	
≤30 Minutes	131	97	**1.77(1.20-2.60)**	**0.00****	**1.10 (0.71-1.70)**	**0.66**
Waiting time to get the Doctor						
>30 Minutes	81	146	**1**		**1**	
≤30 Minutes	134	61	**3.96 (2.64-5.95)**	**0.00****	**3.82 (2.48- 5.91)**	**0.00****
Loss of Patient Card						
Lost	5	6	**1**		**1**	
Not lost	210	201	**1.25 (0.38-4.17)**	**0.71**	**1.25 (0.35-4.49)**	**0.73**

**Statistically high significant P<0.005.

no. = Number

ǂ = Satisfied

ǂǂ =Dissatisfied

4.5. PATIENTS' SATISFACTION TOWARDS CLINICAL LABORATORY SERVICES

Since the cumulative score for overall satisfaction of patients towards clinical laboratory services was skewed, the median of the cumulative score for overall satisfaction of patients towards clinical laboratory services has been taken as a demarcation threshold to classify as satisfied and dissatisfied, and it was found to be 67. Of 422 patients, 218 (51.7%) were scored at higher through 67 and considered as they were satisfied with clinical laboratory services.

Among the seventeen indicators, when median has been used as a demarcation threshold for each indicator, patients were relatively highly satisfied with Courtesy/respect of the laboratory workers (84.6%), ability of the laboratory personnel to answer question (80.8%), laboratory personnel's body signaling (80.6%), measures taken by laboratory worker to keep confidentiality (80.1%) and location of laboratory in the hospital (79.1%).

However, many patients were found to be dissatisfied with unavailability of laboratory workers on working hours (48.6%), difficulty in access of latrine (44.4%), lack of privacy during blood specimen collection (43.8%), poor laboratory worker's professional dressing (42.7%), lack of information provision on how and when to collect specimen outside the laboratory (41.2%), inadequacy of sitting arrangements in waiting area (38.9%) and lack of cleanliness of latrine (37.8%) (Table-5).

Table- 5: Level of Satisfaction of Patients' towards Clinical Laboratory Services Received at Uniformed Service Hospitals in Addis Ababa, April to May, 2014 (n=422)

Variables	V. Sat*. No. (%)	Sat*. No. (%)	Neu.* No. (%)	Dissat.* No. (%)	V. dissat.* No. (%)	Satisfaction ǂ No. (%)
Location of Laboratory in the hospital	194 (46.0)	140 (33.2)	59 (14.0)	20 (4.7)	9 (2.1)	334(79.1)
Cleanliness of waiting area	180 (42.7)	119 (28.2)	83 (19.6)	21 (5.0)	19 (4.5)	299(70.9)
Adequacy of sitting arrangements	159 (37.7)	99 (23.5)	87 (20.6)	59 (14.0)	18 (4.3)	258(61.1)
Availability of Lab. Staff on working hours	217 (51.4)	124 (29.4)	53 (12.6)	16 (3.8)	12 (2.8)	217(51.4)
Laboratory personnel's welcoming approaches	154(37.7)	167(39.6)	63(14.9)	30(7.1)	8(1.9)	321(76.1)
Laboratory personnel's body signaling	189(44.8)	151(35.8)	63(14.9)	15(3.6)	4(0.9)	340(80.6)
Lab. Personnel's professional appearances (Neatness, Professional dressing)	242(57.3)	125(29.6)	30(7.1)	9(2.1)	16(3.8)	242(57.3)
Courtesy/respect of the Laboratory Personnel	185(43.8)	172(40.8)	43(10.2)	10(2.4)	11(2.6)	357(84.6)
Measures taken to assures privacy during specimen collection	115(27.3)	122(28.9)	100(23.7)	68(16.1)	17(4.0)	237(56.2)
Cleanliness of Blood drawing area	177(41.9)	147(34.8)	75(17.8)	12(2.8)	11(2.6)	324(76.8)
Information given during specimen collection out of the lab. (n=420)	115(27.4)	132(31.4)	123(29.3)	30(7.1)	20(4.8)	247(58.8)
Access to latrine(n=419)	100(23.9)	42(10.0)	85(20.3)	92(22.0)	95(22.7)	233(55.6)
Cleanliness of latrine (n=419)	81(19.2)	42(10.0)	139(32.9)	70(16.6)	87(20.6)	263(62.8)
Information given when and how to receive lab. Results	168(39.2)	125(29.6)	88(20.9)	31(7.3)	10(2.4)	293(69.4)
Ability of the lab. Personnel to answer question	148(35.2)	193(45.5)	66(15.6)	11(2.6)	11(2.6)	341(80.8)
Measures taken to assures the confidentiality	203(48.1)	135(32.0)	66(15.6)	11(2.6)	7(1.7)	338(80.1)
Laboratory management responsiveness	140(33.2)	137(32.5)	124(29.4)	20(4.7)	1(0.2)	277(65.6)
Overall satisfaction towards Clinical laboratory services ǂǂ						**218(51.7%)**

*V.Sat=Very satisfied, Sat.=Satisfied, Neu=Neutral, Dissat=Dissatisfied, V. Dissat=Very Dissatisfied, No.= Number of respondents

ǂ =Classified by using a median score of that specific indicator as a demarcation threshold

ǂǂ = classified by using overall summary median score as a demarcation threshold.

4.6. FACTORS AFFECTING THE LEVEL OF PATIENTS' SATISFACTION TOWARDS CLINICAL LABORATORY SERVICES

Two hundred and seventy five (66.2%) of the patients waited less than thirty minutes and thirty seven (8.8%) of the patients waited more than two hours to give laboratory specimens. Regarding the number of needle stick attempted, majority (78.9%) of the patients claimed that laboratory workers attempted only one needle stick to draw their blood specimen.

Even though majority (54.7 %) of the patients said that they didn't get information on how to lessen the possible bruise, only seventy one (16.8%) developed bruise due to phlebotomy procedures.

Majority (78.7 % & 89.3%) of the patients claimed that there was no place to put their personal things (like bag etc.) in blood drawing and latrine rooms, respectively. Concerning waiting time to get laboratory results and availability of ordered tests, two hundred and fifteen (50.9 %) of patients waited more than two hours to get their laboratory results, and two hundred and sixty nine (63.7%) of patients reported that all ordered laboratory tests were available in the hospital.

Among 422 patients, two hundred and fifty (50.9%) were satisfied with pre-laboratory services (seven indicators have been employed in order to generate the level of overall satisfaction of patients towards pre-laboratory services including information desk services, registration services and outpatient department services "see table-2")

The chi-square of independence was conducted to assess whether the level of patients' satisfaction had a relationship with explanatory variables. The results from the cross-tabulations analysis showed that there was a statistically significant relationship between waiting time to give laboratory specimen, number of needle stick, bruise development, information provision on how to lessen the possible bruise, availability of place in blood drawing and latrine rooms, turnaround time, availability of ordered tests and satisfaction level with pre-laboratory services with the level of patients' satisfaction towards clinical laboratory services with (p-value <0.05) (Table-6).

Table -6: Factors Affecting Overall Satisfaction of Patients with Clinical Laboratory Services Received at Uniformed Service Hospitals in Addis Ababa, April to May, 2014 (n=422)

Variables	β Sat.(no)	£ Diss.(no.)	Total		X^2	P-Value
			Count	%		
Waiting time to give laboratory specimen					**22.35**	**0.000**
< 30 minutes	163	112	275	65.2		
30 minutes -1 hour	29	45	74	17.5		
1 hour – 2 hours	17	19	36	8.5		
> 2 hours	9	28	37	8.8		
Number of needle stick					**12.36**	**0.002**
Only one time	187	146	333	78.9		
Two Times	30	56	86	20.4		
Three times	1	2	3	0.7		
Bruise Development due to phlebotomy procedures					**16.67**	**0.020**
Yes	21	50	71	16.8		
No	197	154	351	83.2		
Information provision on how to lessen the possible bruise					**15.83**	**0.000**
Yes	119	72	191	45.3		
No	99	132	231	54.7		
Availability of place in blood drawing room to put personal things					**45.96**	**0.000**
Yes	75	15	90	21.3		
No	143	189	332	78.7		
Availability of place in Latrine room to put personal things					**33.19**	**0.000**
Yes	42	3	45	10.7		
No	176	201	377	89.3		
Turn Around Time (TAT)					**9.90**	**0.007**
< 1 hour	82	48	130	30.8		
1 hour -2 hours	37	40	77	18.2		
> 2 hours	99	116	215	50.9		
Availability of ordered tests					**50.47**	**0.000**
Yes all	174	95	269	63.7		
Yes some only	44	109	153	36.3		
Overall satisfaction of patients with pre-laboratory services					**102.41**	**0.000**
Satisfied	163	52	215	50.9		
Dissatisfied	55	152	207	49.1		

β = satisfaction with clinical laboratory services £= Dissatisfaction with clinical laboratory services, no = number

In binary logistic regression analysis, overall patients' satisfaction towards clinical laboratory services showed statistically significant association with educational status, waiting time to give laboratory specimen, number of needle stick attempted to draw blood, bruise development due to phlebotomy procedure, provision of information on how to lessen the possible bruise, availability of place in blood drawing room to put personal things, availability of place in latrine room to put personal things, waiting time to get laboratory results,

availability of ordered tests and overall satisfaction of patients with pre-laboratory services with (p-value < 0.05) (Table 7). However, our data did not show a statistically significant association between overall satisfaction and age group, sex, marital status and hospitals with (p-value >0.05) (Table 7).

When adjusted odds ratios were calculated among these variables, statistically significant associations were found between the overall patients' satisfaction and waiting time to give laboratory specimen, availability of place in blood drawing room to put personal things, availability of place in latrine room to put personal things, availability of ordered tests and overall patients' satisfaction with pre-laboratory services with (p-value < 0.05) (Table 7).

As indicated in Table-7, patients who waited less than thirty minutes to get blood drawing services were about two times more likely to be satisfied than those who waited more than thirty minutes (AOR= 1.99; CI 1.10-3.58).

Similarly, it was found that the respondents who got place in blood drawing room to put personal things were about seven times more likely to be satisfied than those who did not get (AOR= 6.83; CI 3.06-15.20). In this study, it was also found that the respondents who got place in the latrine room to put their personal things were about twenty-one times more likely to be satisfied than those who did not get (AOR=21.95; 5.38-89.51).

In addition, patients who got all ordered laboratory tests were about three times more likely to be satisfied than those who did not get all the ordered tests (AOR=2.98; CI 1.68-5.34). Moreover, patients who satisfied with pre-laboratory services were eight times more likely to be satisfied with clinical laboratory services than those who are not satisfied with pre-laboratory services (AOR=7.99; CI 4.47-12.28).

Table-7: Determinants on Satisfaction of Patients towards Clinical Laboratory Services Received at Uniformed Services Hospitals in Addis Ababa, April to May, 2014 (n=422)

Variables	Overall satisfaction		Odds Ratio (95% CI)			
	Sat. (no.)	Dissat. (no.)	Crude	P-Value	Adjusted	P-Value
Age Group in Year						
18 – 27	55	45	1		1	
28 – 37	80	78	1.24(0.84-1.85)	0.29	1.03 (0.21-2.01)	0.93
38 – 47	59	66	1.33(0.41-4.25)	0.64	1.49(0.72-3.10)	0.28
48-57	18	8	1.08(0.34-3.41)	0.90	0.70(0.16-3.01)	0.63
≥ 58	6	7	2.32(0.63-9.97)	0.19	1.71(0.28-10.51)	0.56
Sex						
Male	118	120	1		1	
Female	100	84	1.21(0.82-1.78)	0.33	0.93(0.52-1.67)	0.82
Marital Status						
Unmarried	62	69	1		1	
Married	137	119	0.78(0.51-1.19)	0.25	1.32 (0.72-2.42)	0.37
Divorced	9	6	0.60(0.20-1.78)	0.33	0.29(0.06-1.31)	0.11
Widowed	10	10	0.90(0.35-2.30)	0.82	0.32(0.08-1.25)	0.10
Educational Status						
Uneducated	8	2	1		1	
Read and write	15	6	1.60(0.26-9.83)	0.61	1.38 (0.10-19.30)	0.81
Grade 1- Grade 6	13	16	4.92(0.89-27.32)	0.06	2.40 (0.20-28.48)	0.49
Grade 7- Grade 12	85	106	**4.99(1.03-24.11)**	**0.05***	2.47 (0.24-25.20)	0.45
Collage	97	74	3.05(0.63-14.80)	0.17	1.85 (0.18-18.99)	0.61
Hospital						
Armed Forces R. Hospital	67	78	1		1	
Federal Police R. Hospital	151	126	1.40(0.93-2.09)	0.12	1.59 (0.86-2.94)	0.14
Waiting time to give laboratory Specimen						
>30 Minutes	55	92	1		1	
≤30 Minutes	163	112	**2.43(1.61-3.67)**	**0.00****	**1.99 (1.10-3.58)***	**0.02***
Number of Needle Stick						
Two times & above	31	58	1		1	
Only one time	187	146	**2.40(1.47-3.99)**	**0.00****	1.98 (0.98-4.04)	0.62
Bruise Development due to phlebotomy Procedure						
Yes	21	50	**1**		1	
No	197	154	**3.05(1.76-5.29)**	**0.00****	1.72(0.80-3.70)	0.17
Information provision on how to lessen the possible bruise						
No	99	132	**1**		1	
Yes	119	72	**2.20(1.49-3.26)**	**0.00****	1.76 (0.34-3.31)	0.80
Availability of Place in blood drawing room						
No	143	189	**1**		**1**	
Yes	75	15	**6.61(3.64-11.94)**	**0.00****	**6.83 (3.07-15.20)**	**0.00****
Turn Around Time (TAT)						
>2 hours	136	156	**1**		1	
<=2 hours	82	48	**1.96(1.28-2.99)**	**0.002****	1.59(0.87-2.89)	0.13
Availability of Place in Latrine room						
No	176	201	**1**		**1**	
Yes	42	3	**15.99 (4.87-52.49)**	**0.00****	**21.95 (5.38-89.51)**	**0.00****
Availability of ordered tests						
Yes some only	44	109	**1**		**1**	
Yes all	174	95	**4.54(2.95-6.97)**	**0.00****	**2.98(1.68 -5.34)**	**0.00****
Overall satisfaction of patients with pre-laboratory services						
Dissatisfied	55	152	**1**		**1**	
Satisfied	163	52	**8.66(5.59-13.44)**	**0.00****	**7.99(4.47-12.28)**	**0.00****

* Statistically significant P<0.05. **statistically high significant P<0.005. Reference categories are indicated by 1 and Adjustment was done for the socio demographic variables and with waiting time to give laboratory specimen, availability of requested laboratory tests, Bruise development, information provision about bruise, waiting time to get lab result, availability of space in blood drawing room to put things, number of needle stick attempted to draw blood, availability of place in latrine and level of satisfaction with pre-laboratory services.

4.7. QUALITATIVE FINDINGS FROM PATIENTS' COMMENT AND COMPLAINT

Of 422 patients, 165 of the patients were providing their comments and complain at the end of their interview, and it has been recorded on the comments section of the structured questionnaire.

Almost all of the comments and complains were explained that there was a problem in communication, physical facility and waiting time. The findings from patients' comment and complain were summarized as follows:

4.7.1. Communication

Seven of the patients commented that there was a great problem in providing clear, understandable and complete information on when and how to collect laboratory results. One of the respondent said *"We use to encounter problem with getting our results, it takes too long and some results are missing. Moreover, some health providers used medical terminologies while they are talking with us".*

4.7.2. Physical facility

Hundred and twenty patients were complained not only on difficulty in accessing but also poor cleanliness of latrine in the study Hospitals. A 25 years old male patient said "*It is better to say there is no latrine in your hospital because it has bad odor, dirty and it is not comfortable to use it at all"*

4.7.3. Waiting Time

Thirty and eight patients commented that there was a problem in getting services on time due to unavailability of healthcare provider. One patient said "*I'm a diabetic patient and have appointment today with my Doctor. Before being visited by him, I had to give blood specimen for sugar testing but laboratory workers were not around the blood collection site in the morning. Therefore, I spent more than one hour to give blood sample and even for getting my laboratory result I used to spend more than 6 hours".* Similarly, another patient said "*Yesterday, the laboratory worker informed me to arrive here (laboratory) just at 8 a.m. with my full bladder, but today in the morning he was not around here. How can I retain my urine more than half an hour once I feel to urinate?"*

5.0. DISCUSSION

This study has revealed that the overall satisfaction level of the patients with clinical laboratory services rendered at Uniformed Service Hospitals in Addis Ababa was 51.7 % and this is lower than reports from other studies conducted in Jimma (77%), Addis Ababa (85.5%), Eastern Ethiopia (87.6%) and Southern Ethiopia (90.8%) [23, 31, 34 and 35]. The possible reason for lower patients' satisfaction in this study might be the use of different method of calculating the demarcation threshold and use of higher number of indicators to generate the summary score of overall patients' satisfaction. Whereas, study conducted in Eastern Ethiopia the overall satisfaction of patients with laboratory services was calculated from single question's response. Besides the above reason, study conducted both in Addis Ababa and southern Ethiopia was revealed only about patients' satisfaction with ART monitoring laboratory services which is a focus of attentions for government and many donors.

However, our finding was comparable with finding in Eastern Ethiopia Hospitals, Mozambique Hospital and Jimma Hospital with patients' satisfaction level of 54.1%, 55% and 57.1%, respectively [22, 33, and 40]. On the other hand this finding is higher when compared to studies conducted in the hospitals of the Amhara region and Tigray zonal hospitals which showed satisfaction level of 22.0% and 43.6%, respectively [21, 24]. The difference might be due to the fact that this study was conducted in referral hospitals where there are relatively adequate number of health professionals and better diagnostic facilities.

Among the different services rendered by the laboratory, patients were relatively satisfied with Courtesy/respect of the laboratory workers (84.6%), ability of the laboratory personnel to answer question and measures taken by laboratory worker to keep confidentiality (80.8% & 80.1%, respectively), which is consistent with other studies in Ethiopia [31, 34 & 35]. The

reason for this finding could be due to the fact that professionals had taken similar trainings, and also could be due to introduction of social desirability biases by respondents.

In this study patients were relatively dissatisfied with the unavailability of laboratory workers on working hours (48.6%) and this is lower than report from other study conducted in Eastern Ethiopia where higher rate of patient's satisfaction was reported on the availability of laboratory staff on working hours [35]. In a similar manner, patients were highly dissatisfied with difficulty in access of latrine (44.4%), lack of privacy during blood specimen collection (43.8%), laboratory worker's professional dressing (42.7%) and incomplete information provision on collection of specimen outside the laboratory (41.2%). This finding is consistent with other studies in Ethiopia [23, 31, 33, 34, and 35]. These findings could be due to low attention given for the activities outside the laboratory examination room.

This study has also revealed that 33.85% and 50.9% of the patients waited more than thirty minutes to give laboratory specimen and more than two hours to get their laboratory results, respectively. On the contrary, study conducted in Addis Ababa [31] reported that 66 % and 70 % of the patients were spent more than thirty minutes and more than two hours to give laboratory specimen and to get laboratory results, respectively. These differences could be explained in many ways like the advancement of laboratory instruments especially clinical chemistry analyzers, increment of number of laboratory professionals in the health facility and implementation of laboratory information system. Therefore, speed of the analytical process could be increased, waiting time to give laboratory specimens could be relatively reduced and redundant recording of patients could be avoided.

About 63.7 % of the patients reported that all ordered laboratory tests were available in the hospital during the study period which is relatively consistent with the study conducted in Jimma and Addis Ababa [23, 31]. Similarly, 45.3%, 78.7%, and 78.9% of the respondents claimed that they didn't get information on how to lessen the possible bruise, there is no place to put personal things in blood drawing room and laboratory workers were attempt only one needle stick to draw their blood specimen, respectively. The study conducted in Addis Ababa [31] documented similar findings.

In this study, statistically significant associations were found between the overall satisfaction of patients and waiting time to give laboratory specimen, availability of place in blood drawing room to put personal things, availability of place in latrine room to put personal things, and availability of ordered tests. In contrary, socio-demographic characteristics, such as age group, sex, marital status and Hospitals of the respondents did not have any independent statistically significant association with overall satisfaction of patients towards clinical laboratory services. The study conducted in Addis Ababa, Jimma and Eastern Ethiopia [23, 31, and 35] documented similar findings.

In the present study, overall patients' satisfaction towards clinical laboratory services showed statistically significant association with the overall satisfaction of patients towards pre-laboratory services including information desk services, registration services and outpatient department services. Waiting time to get registration services and waiting time to be visited by the Doctor at outpatient department were found to be a determinant factor for overall patients' satisfaction with pre-laboratory services. This finding was similar to other study done in Gondar, Ethiopia [21].

Among the different services rendered by the Hospital before patients arrived at the laboratory (pre-laboratory services), patients were relatively satisfied with courtesy/respect of Doctors at outpatient department (82.7%), which is similar finding with study conducted in India [30] while patients were dissatisfied with courtesy/respect of staff at registration services (30.8%), difficulty to locate different section in the hospital (30.3%), the information provision on hospital services and flow (28%). This finding was similar to other studies in Ethiopia [21, 23].

The overall patients' satisfaction towards pre-laboratory services showed statistically significant with waiting time to get registration services and waiting time to get the Doctor. Long waiting hours during registration, and long waiting time between registrations and being seen by the Doctor were made patients to be dissatisfied with pre-laboratory services. This finding was similar to other study done in Gondar and Eastern Ethiopia [21, 33]. Patients

dissatisfied with pre-laboratory services were more likely to be dissatisfied with clinical laboratory services.

Generally, some of the patients commented that information provision about the process of receiving laboratory results, difficulty in locating the latrine, cleanliness of latrine and getting services on time due to unavailability of healthcare provider on working hours were the major problems. In addition, some patients commented that using medical terminologies to communicate with them was also a problem and make them to be dissatisfied. This finding is in agreement with study conducted in India [6] showing that laboratory inconvenient location, use of medical terminologies with patients and hospital cleanliness especially toilet were associated with dissatisfaction.

STRENGTH AND LIMITATION OF THE STUDY

STRENGTH

- In this study, relatively high number of indicators were employed to determine the overall patients' satisfaction towards clinical laboratory services (it had seventeen indicators).
- This study assessed the association between satisfactions towards pre-laboratory services and satisfaction towards clinical laboratory services.

LIMITATIONS

- The study did not assess the laboratory personnel awareness on patients' need and also did not assess set up of the laboratory.
- Face -to- face interview of respondents may expose the study for social desirability bias.

6.0. CONCLUSSION AND RECOMMENDATION

6.1. CONCLUSSION

The present study showed that the current status of the overall satisfaction of patients towards hospital based clinical laboratory services was not satisfactory. From the fact that, of 422 respondents only 51.7 % of patient was satisfied with clinical laboratory services.

Among the services rendered by the laboratory, patients were relatively satisfied with courtesy/respect of laboratory workers, clarification of queries, measure taken by laboratory workers to keep confidentiality. In contrary, patients were highly dissatisfied with availability of laboratory workers on working hours, accessibility and cleanliness of latrine, measure taken to assure privacy during blood collection and information provision on how to collect laboratory specimens outside the laboratory.

This study also showed that, waiting time to give laboratory specimen, availability of place in latrine and blood drawing rooms to put personal things, and availability of ordered laboratory tests were significantly associated with the overall satisfaction of patients towards clinical laboratory services. Therefore, these might be the possible determinants for the dissatisfaction of patients with clinical laboratory services.

Finally, this study also showed that overall satisfaction of patients towards pre-laboratory services was significantly associated with the overall satisfaction of patients towards clinical laboratory services. Therefore, those patients who were dissatisfied with pre-laboratory services might have a high tendency to be dissatisfied with clinical laboratory services.

6.2. RECOMMENDATION

- Patient waiting time (waiting time to give laboratory specimen, waiting time to get laboratory results, waiting time to get registration services and waiting time to get Doctor at outpatient department) should be reduced.

- Patient comfort in blood drawing room and latrine should be improved by assuring patients privacy during conducting phlebotomy procedures and maintaining cleanliness of latrine.

- Provision of relevant information to patients also needs improvement.

- Based on the finding, dissatisfaction of patients towards pre-laboratory services could be a possible factor for the lower rate of patients' satisfaction towards clinical laboratory services. Therefore, the hospital administration and responsible body in each service should work together in improving the rate of patients' satisfaction towards pre-laboratory services. By doing so, the satisfaction rate of clinical laboratory services could be improved.

- Periodic patients' satisfaction survey should be institutionalized to provide feedback for continuous quality improvement.

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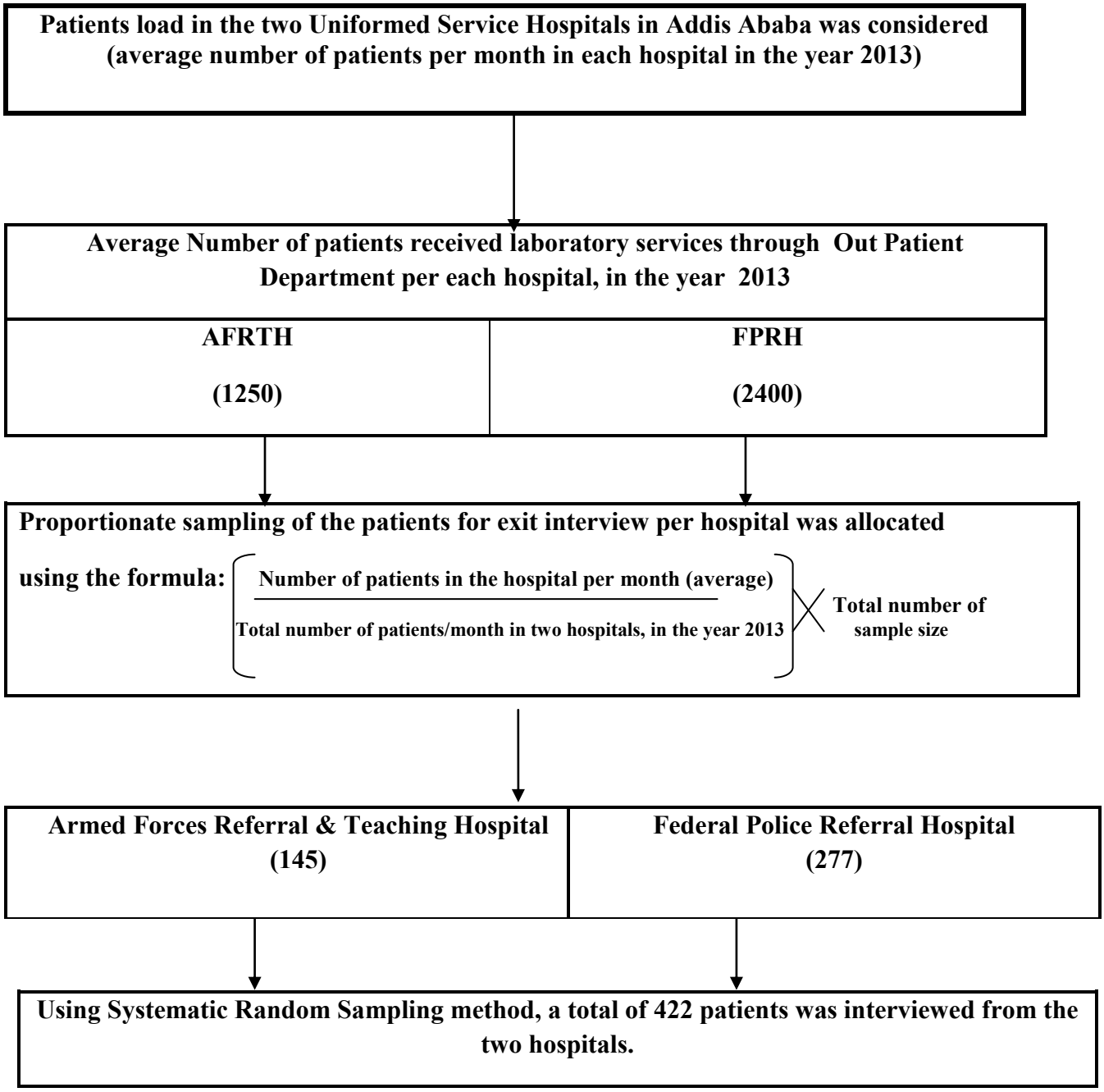
ANNEX-1: SAMPLINIG SCHEME



ANNEX-2: ENGLISH VERSION QUESTIONNAIRE
INFORMATION SHEET

ADDIS ABABA UNIVERSITY
POST GRADUATE STUDIES
SCHOOL OF CLINICAL LABORATORY SCIENCES

Questionnaire for data collection on the assessment of patients' satisfaction towards clinical laboratory services received at Uniformed Services Hospital in Addis Ababa
Identification: Name of facility_____

Institution code_____

Address: Kifle Ketema_____ Kebele_____
Telephone_____

My name is…… I am a data collector for the study conducted by Addis Ababa University, school of clinical laboratory science on clinical laboratory services. I would like to interview you few questions about your experiences with laboratory services received in this hospital. The objectives of the survey are to assess the level of patients' satisfaction and identify factors that affect satisfaction of patients with clinical laboratory services in this hospital, which will be important to improve health laboratory service delivery of the hospitals. Your cooperation and willingness for interview will be very helpful in identifying the problems related to the issue. Your name will not be written in the form and I assure you all the information you give will be kept strictly confidential. Your participation is voluntary and you are not obliged to answer any questions that you do not want to answer. If you are not comfortable with the interview, please feel free to stop any time you like. Do I have your permission to continue?

If yes, continue to the next page for the interview
If no, continue to the next patient
For any information you can contact:

- **Mr. Tedila Mindaye**
  E-mail:tedlamin@yahoo.com/mindaye.tedla@gmail.com
  Tel: +251 911 63 43 24
- **Mr. Tadesse Tesfaye**
  E-mail:tadessetsfy@yahoo.com/tade999963@gmail.com
  Tel: +251 911 99 99 63
- **Departmental Research and Ethics Review Committee (DRERC)**:
  E-mail: SMLT@ethinet.et **Tel: (251) 112-75-51-70**
  Fax: (251) 112-75-46-69

CONSENT FORM

I have read the information sheet above and clearly understood the purpose and anticipated benefit of the research. I hereby need to assure with my signature below that I, without any coercion or forceful act by the research team, have decided to voluntarily participate in the study to contribute my part in the effort being made for the betterment of clinical laboratory services.

Unique ID. No. _____

Signature _____

Date_____

Interviewer's name_____

Signature_____

Date of interview_____Time started_____ Time finished_____

Supervisor's Name_____ Signature_____

I thank you for your cooperation

PART-I: SOCIO-DEMOGRAPHIC CHARACTERSTICS OF THE CLIENTS			
No	**Questions**	**Response classification**	**Code**
101	Sex of the respondents	Male = 1 Female = 2	
102	Age in years	Age in completed years___ Do not Know = 99 No response = 909	
103	Rank	Privet – Sergeant=1 2nd Leftenant – Captain =2 Higher officer=3 Other specify…… No response = 909	
104	What is your marital status?	Single = 1 Marries = 2 Divorced = 3 Widowed = 4 Other specify = 5 No response = 909	
105	What is your ethnicity (Region)?	Oromo = 1 Amhara =2 Tigray = 3 Gurage =4 Other specify……	
106	To which religion are you belonging?	Orthodox = 1 Muslim = 2 Protestant =3 Other specify…….	
107	Where is your place of residence currently?	Addis Ababa = 1 Outside Addis Ababa = 2 No response=909	
108	What is your last level of education?	Illiterate = 1 Read and write = 2 Grade 1-6 = 3 Grade 7-12 College = 5 No response = 909	
109	What is your current occupation?	Military = 1 Police =2 Prisoner=3 Civil Government employee=4 Others specify…….. No response=909	
110	How much income you earn monthly?	…… Ethiopian Birr Do not Know = 99	

		No response = 909	
PART-II: PATIENTS' SATISFACTION TOWARDES NON-LABORATORY SERVICES (BEFORE LABORATORY SERVICES)			
No	**Questions**	**Patients' response classification**	**Codes**
201	How much are you satisfied with the availability of staffs on working hours in information desk services?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
202	How much are you satisfied with friendliness and helpfulness of personnel in the information services?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
203	How much are you satisfied with the information provided about the hospital services and flow?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
204	How much are you satisfied with the sign found in the hospital ?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
205	How long do you wait to register in the registration office?	< 30 minutes = 1 ½-1 hour = 2 1-2 hours = 3 >2 hours = 4	
206	How satisfied are you with the courtesy/respect of the personnel registered you in the registration office?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	

207	Did Registration staff say your primary medical records are lost?	Yes = 1 No = 2	
208	How much are you satisfied with the information provided where you go after being registered?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
209	How long do you wait to get the doctor?	< 30 minutes = 1 ½-1 hour = 2 1-2 hours = 3 >2 hours = 4	
210	How satisfied are you with the courtesy/respect of the doctor?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
211	How do you rate the overall satisfaction of the services received before you get laboratory services?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
PART-III: PATIENTS' SATISFACTION TOWARDES CLINICAL LABORATORY SERVICES			
301	How satisfied are you with the location of the laboratory within the hospital?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
302	How much satisfied are you with the cleanliness of waiting area?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
303	How satisfied are you with the adequacy of sitting arrangement in waiting area?	Very satisfied = 1 Satisfied = 2	

		Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
304	How long do you wait to get the specimen collection services (e.g. Phlebotomy initiation)?	< 30 minutes = 1 ½-1 hour = 2 1-2 hours = 3 >2 hours = 4	
305	How much are you satisfied with the availability of laboratory staff on working hours?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
306	How much are you satisfied with laboratory personnel welcoming approach?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
307	How much are you satisfied with the lab personnel's body signaling?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
308	How satisfied are you with the employees' appearance (Neatness, professional dressing)	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
309	How satisfied are you with the courtesy/respect of the laboratory personnel?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
310	How satisfied are you with measures taken to assure privacy during specimen collection (e.g. during blood drawing)	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4	

		Very dissatisfied =5	
311	How much are you satisfied with the cleanliness of the blood drawing area?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
312	How much needle stick attempted to draw blood?	One vein puncture = 1 Two vein puncture =2 Three vein puncture = 3 Four or more vein punctures =4	
313	Do you develop bruise after the phlebotomy procedures (Today)?	Yes=1 No =2	
314	Do you get information on how to lessen the size of a possible bruise due to blood drawing	Yes = 1 No=2	
315	Is there a place in blood drawing room to put your personal things (jacket, bag etc)	Yes = 1 No=2	
316	How satisfied are you with clear, understandable and completeness of information when & how you collect specimen out of the laboratory (e.g. stool, urine)?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
317	How satisfied are you with the access to latrine to collect stool and urine specimens?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
318	How much are you satisfied with the cleanliness of latrine?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
319	Is there a place in latrine room to put patients personal things (e.g. bag)	Yes = 1 No=2	
320	How satisfied are you with clear,	Very satisfied = 1	

	understandable and completeness of information when and how you receive laboratory result?	Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
321	How satisfied are you with the ability of the Laboratory person to answer your questions?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
322	How long do you wait to get lab result	<1 hour = 1 1-2 hours = 2 >2 hours = 3	
323	How satisfied are you with laboratory personnel measures taken to assure the confidentiality about your health problem?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
324	Does any lab requests ordered for you available in this hospital?	Yes all = 1 Yes some only = 2 None=3	
325	How much are you satisfied with the laboratory management responsiveness?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	
326	How do you rate the overall satisfaction of the clinical laboratory service given in this facility?	Very satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Very dissatisfied =5	

Comments:

ANNEX- III: AMHARIC VERSION QUESTIONNAIRE

አዲስ አበባ ዩኒቨርሲቲ
የድህረ-ምረቃ ጥናት
የሕክምና ላቦራቶሪ ት/ቤት

የመረጃ ቅጽ

ይህ ማከፍቅ በላብራቶሪ አገልግሎት ዙሪያ የታካሚዎችን የእርካታ ደረጃ ለማጥናት የተዘጋጀ ነው፡፡

ማሳያ ሚጃ፤ የሆስፒታሉ ስም _____

አድራሻ፤ ክፍለ ከተማ _____ ቀበሌ _____

የሆስፒታሉ ኮድ _____

የሆስፒታሉ ስልክ ቁጥር_____

የ ቃል ስምምነት፤

የኔ ስም _____ ይባላል፡፡ እኔ በአዲስ አበባ ዩኒቨርስቲ ህክምና ላብራቶሪ ት/ቤት በላብራቶሪ አገልግሎት ዙሪያ ለሚደረገው ጥናት ሚጃ ሰብሳቢ ስሆን፤ አሁን በዚህ አጋጣሚ እርስዎ በሆስፒታሉ ስለሚሰጠው የላብራቶሪ አገልግሎት ጥቂት ጥያቄዎች ለማቅረቅ እወዳለሁ፡፡ የዚህ ጥናት አላማ በዚህ ሆስፒታል በሚሰጠው የላብራቶሪ አገልግሎት ተጠቃሚዎች የእርካታ ደረጃ፤ የእርካታውን ደረጃ የሚወስኑ ወሳኝ ጉዳዮች ለይቶ ለማወቅ ሲሆኑም፤ ይህም ሆስፒታሉ ለተጠቃሚው የሚሰጠውን አገልግሎት የበለጠ ለማሻሻል ይጠቅማል፡፡ በዚህ ቃለ ማከፍቅ የእርስዎ በፈቃደኝነት መሳተፍ እና ትብብር በላብራቶሪ አገልግሎት ዙሪያ ያሉትን ችግሮች ለማወቅ ከፍተኛ የሆነ ጠቀሜታ አለው፡፡ የእርሶ ስም በዚህ ማከፍቅ ላይ አይጠቀስም፡፡ በተጨማሪም የሚሰጡ ሚጃ ከተባለለት ጉዳይ ወጪ እንደማይወል እና ሚስጥራዊነቱ የተጠበቀ እደማሆን አረጋግጣለሁኝ፡፡ በዚህ ጥናት ላይ መሳተፍ በእርሶ ፍቃደኝነት ላይ የተመሰረተ እና መመለስ የማይፈልጉትን ማንኛውም ጥያቄ አለመመለስ ይችላሉ፡፡ በቃለ-ማከፍቁ ምክት ካልተሰማዎት በማንኛውም ጊዜ ማከፍቁን ማቋረጥ ይችላሉ፡፡

ወደ ማከፍቁ መቀጠል እንድንችል ፈቃደኛ ነዎት?
አዎ ከሆነ – ወደ ማቁጥለው ገጽ ይሂዱ፤
አይሆንም ከሆነ . . .ወደ ማቁጥለው በሽተኛ ይሂዱ

ሚጃ ካስፈለግዎ

- **አቶ ተድላ ምነዳዬ**
  ኢ ሜይል :tedlamin@yahoo.com/mindaye.tedla@gmail.com
  ስልክ ቁጥር: +251 911 63 43 24
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  ኢ ሜይል :tadessetsfy@yahoo.com/tade999963@gmail.com
  ስልክ ቁጥር: +251 911 99 99 63
- **የ ት/ቤቱ የጥናት ክፍል አድራሻ**:
  ኢ ሜይል: SMLT@ethinet.et **ስልክ ቁጥር:: (251) 112-75-51-70**
  ፋክስ: (251) 112-75-46-69

የስምምነት ቅጽ

ከላይ የተገለፀዉ የሚገኘ አንቀፅ የዕናቱን ይላማኛ ዕkም በግልጽ ተረድቻለሁ፡ በዚህም መሰረት Áለ ዕናት ቡድኑ ይባላት ተጎእኖ በመሉ ፈጽደኝነት በዚሁ ዕናት በመሳተፍ የላብራቶሪ አገልግሎት ለማሻሻል በሚደረገው ዕረት ወስዕ የሚጠkብኝን አስተዋጸአ ለማርከት መመሰኔን በፊርሜ አረጋግጣለሁ፡

የታካሚው መለያ ቁጥር _____ ፊርማ _____

ቀን_____

የሚጃ ሰብሳቢ ሥም _____ ፊርማ _____

መጃ የተሰበሰበበት ቀን_____የተጀመረበት ሠዓት _____ያለቀበት ሰዓት _____

የተቆጣጣሪ ሥም _____ ፊርማ_____
ቀን_____

ክፍል አንድ ፡ – የታካሚው ግላዊ ሚጃ

ተ.ቁ	ጥያቄ	ምላሽ	ኮድ
101	የማከይቁ ማላሽ ጸታ ምንደን ነው?	ወንድ= 1 ሴት= 2	
102	ዕድሜ	---------- ዓመት አላወቅም=99 ምላሽ የለም=909	
103	ሜረግ	ከወ/ር – የሀ/ዓለቃ ከም/መ ዓለቃ – ሻምበል ከፍተኛ መኮንን ሌላ ..... ምላሽ የለም	
104	የጋብቻዎ ሁኔታ ምን ይመስላል ?	ያላገባ/ች =1 ባለትዳር እና አሁን በትዳር ላይ=2 የተፋታ/ች=3 የትዳር ጓደኛ የሞተበት/ባት=4 ሌላ ሁኔታ =5 ምላሽ የለም =909	
105	ብሔር ?	ኦሮሞ =1 አሜራ = 2 ትግራይ = 3 ጉራጌ =4 ሌላ ብሔር ይግለጹ ----------	
106	የየትኛው ሐይማኖት ተከታይ ነዎት ?	ኦርቶዶክስ=1 እስልምና=2 ፕሮቴስታንት=3 ምላሽ የለም=909 ሌላ ሐይማኖት ይግለጹ----------	
107	አሁን የመኖሪያ አድራሻዎ የት ነው ?	አዲስ አበባ = 1 ከአዲስ አበባ ወጪ=2	
108	የትምህርት ደረጃዎ ሁኔታ ምን ይመስላል ?	ያልተማረ/ች =1 ማንበብና መጻፍ እችላለሁ=2 ከ1-6 ክፍል =3 ከ7-12 ክፍል/10+2 =4 ኮሌጅ የተማረ/ች = 5 መልስ የለም = 909	
109	በአሁኑ ጊዜ የሚሠሩት ስራ ምን ዐይነት ነው?	ወታደር =1 ፖሊስ 2 ታራሚ=3 ሲቪል የመንግስት ሰራተኛ=4 ሌላ አይነት ሥራ ይገለጽ ----------	
110	የወር ገቢዎ ምን ያህል ነው ?	---------- ብር አይታወቅም = 99 ምላሽ የለም =909	

ክፍል ሁለት፡ – የታካሚ እርካታ ማከይቅ ላቦራቶሪ ከመድረሶ በፊት ስላለው አገልግሎት

ተ.ቁ	ጥያቄ	ምላሽ	ኮድ
201	ወደ ሆስፒታሉ ሲሞጡ በሚጃ ሰጪው ሰራተኛ በስራ ቦታው መገኘት ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጭቻለሁ = 4 በጣም አረካሁም፡ ተበሳጭቻለሁ = 5	
202	በሚጃ ሰጪው ሰራተኛ እርሶን ለሚዳት እና ለማቅረብ የተደረገው ጥረት ምን ያህል አርክቶታል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጭቻለሁ = 4 በጣም አረካሁም፡ ተበሳጭቻለሁ = 5	
203	ከሚጃ ክፍል ሰራተኛ ስለሆስፒታሉ አግልግሎቶች እና ወደታ መሄድ እንዳለቦዎት በተሰጠው ሚጃ ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጭቻለሁ = 4 በጣም አረካሁም፡ ተበሳጭቻለሁ = 5	
204	ሆስፒታሉ ወስጥ ባሉ የቦታ ማጠቆሚያ ግልፅነት ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጭቻለሁ = 4 በጣም አረካሁም፡ ተበሳጭቻለሁ = 5	
205	ካርድ ለማውጣት ምን ያህል ሰዓት ጠበቁ (በስራ ሰዓት)	< 30 ደቂቃ =1 ½ – 1 ሰዓት=2 1-2 ሰዓት =3 >2 ሰዓት =4	
206	በካርድ ክፍል ሰራተኛ ለእርሶ በተደረገሎት መስተንግዶ ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጭቻለሁ = 4 በጣም አረካሁም፡ ተበሳጭቻለሁ = 5	
207	ከዚህ በፊት የታከማት ካርድ ጠፍቷል ተብለዋል	ተብያለሁ 1 አልተባልኩም 2	
208	ካርድ ካወጡ በሓላ ወደታ እንደሚሄዱ በተነገረዎት ሚጃ ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጭቻለሁ = 4 በጣም አረካሁም፡ ተበሳጭቻለሁ = 5	
209	ካርድ ካወጡ በሓላ ሐኪምዎን ምን ያህል ሰዓት ጠበቁ	< 30 ደቂቃ =1 ½ – 1 ሰዓት=2 1-2 ሰዓት =3 >2 ሰዓት =4	
210	በሐኪምዎት መልካምነትና አክብሮት ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጭቻለሁ = 4 በጣም አረካሁም፡ ተበሳጭቻለሁ = 5	
211	በአጠቃላይ ላቦራቶሪ ከመጣትዎ በፊት በተሰጠዎት አገልግሎት ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2	

		ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	

ክፍል ሦስት፡ – የታካሚ እርካታ በላቦራቶሪ አገልግሎት

ተ.ቁ	ጥያቄ	ምላሽ	ኮድ
301	ላቦራቶሪውን በሆስፒታሉ ወስጥ በሚኝበት ቦታ ምን ያህል ረክተዋል (በቀላሉ ማገኘት መቻሉትን…)	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	
302	በአጠቃላይ በሆስፒታሉ ተራ መጠበቂያ ንጽህና ምቾት ምን አይነት ስሜት አለዎት?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	
303	በሆስፒታሉ ተራ መጠበቂያ የመቀመጫ (መንበር) መጠን (በቁጥር) ምን ያህል ረክተዋል (ለመቀመጥ የመንበር ብዛት…)	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	
304	የታዘዘሎትን ናሙና ለመስጠት ምን ያህል ጊዜ ቆዩ?	< 30 ደቂቃ =1 ½ – 1 ሰዓት=2 1-2 ሰዓት =3 >2 ሰዓት =4	
305	በስራ ሰዓት ባለመያ በላቦራቶሪ ወስጥ መገኘት ምንያህል አርክቶዎታል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	
306	ምን ያህል በላቦራቶሪ ሰራተኛው የዕንኳን ደህና ማጡ አቀባበል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	
307	በሰራተኛው/ዋ ፈገግታ ምንያህል ረክተዋል (Body Signaling….)	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	
308	በሰራተኛው/ዋ ንጽህና ሞያዊ አለባበስ ምን ያህል እርካታ ተሰምቶዎታል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሁም፡ ተበሳጫለሁ = 4 በጣም አረካሁም፡ ተበሳጫለሁ = 5	
309	በዚህ ሆስፒታል ወስጥ በላቦራቶሪ ባለመያ የተደረገ የጨዋነትና ክብር አቀባበል የተሰሞት እርካታ ምን ያህል ነው?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3	

		አረካሀም፡ ተበሳጭቻለሁ = 4 በጣም አረካሀም፡ ተበሳጭቻለሁ = 5	
310	በዚህ ሆስፒታል የላቦራቶሪ ናሙና በሚሰጡት ወቅት ቦታና ጊዜ ለእርስዎ ብቻ ለማስጠ በተደረገው ጥረት ምን ያህል እርካታ ተሰምቶታል (ለብቻ የተዘጋጀ የደም ናሙና ማሳጫ ክፍል፣ መጋረጃ፣ ማስለያ እስክሪን ወይም ሌለ...)	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምንም አልተሰማኝም = 3 አረካሀም፡ ተበሳጭቻለሁ = 4 በጣም አረካሀም፡ ተበሳጭቻለሁ = 5	
311	በደም ናሙና ማሳጫ ስፍራ ንጽህና ምን ያህል እርካታ ተሰምቶታል?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጭቻለሁ = 4 በጣም አረካሀም፡ ተበሳጭቻለሁ = 5	
312	የደም ናሙና ሲወሰድልዎ በሚፈ ስንት ጊዜ ተወጉ?	አንድ ጊዜ ተወግቻለሁ=1 ሁለት ጊዜ ተወግቻለሁ= 2 ሦስት ጊዜ ተወግቻለሁ=3 አራት ጊዜና ከዚያ በላይ ተወግቻለሁ = 4	
313	ደም ከተቀዱ በሗላ ብልዘት አጋጥሞታል	አላጋጠመኝም =1 አጋጥሞኛ = 2	
314	ደም በሞቀዳበት ሰዓት በእጅዎ አካባቢ ሊያጋጥም የሚችለው ብልዘት ማጡ እንዳይጨሞር ሚጃ አግኝተዋል?	አዎ =1	
315	በደም ናሙና ማሰብሰቢያ ክፍል ወስጥ የግል መልገያ ዕቃዎች ሚቀመጫ ቦታ አለ (ጃኬት፣ ቦርሳ፣ ወዘተ...)	አዎ =1 የለም = 2	
316	ከላቦራቶሪ ወጪ ናሙና እንዴት ማሰብሰብ እንዳለቦዎት በሚባዎት አንዲሁም ግልጽ በሆነ ሜኳኩ ባለሞያው ስለማገሩ ምን ያህል ረክተዋል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጭቻለሁ = 4 በጣም አረካሀም፡ ተበሳጭቻለሁ = 5	
317	የሽንት ቤት አቅርቦትና አገልግሎት በዚህ ሆስፒታል ወስጥ ምን ያህል እርካታ አስገኝቶሎታል?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጭቻለሁ = 4 በጣም አረካሀም፡ ተበሳጭቻለሁ = 5	
318	በሽንት ቤቱ ንጽህና ምን ያህል እርካታ ተሰምቶዎታል?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጭቻለሁ = 4 በጣም አረካሀም፡ ተበሳጭቻለሁ = 5	
319	በሽንት ቤት ክፍል ወስጥ የግል መልገያ ዕቃዎች ሚቀመጫ ቦታ አለ (ጃኬት፣ ቦርሳ፣ ወዘተ...)	አዎ =1 የለም = 2	
320	የላብራቶሪ ውጤት መቼና እንዴት መቀበል እንደሚባዎት በተሰጠዎት ሚጃ ምን ያህል ረክተዋል?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጭቻለሁ = 4 በጣም አረካሀም፡ ተበሳጭቻለሁ = 5	
321	የላቦራቶሪ ባለሞያ የእርስዎን ጥያቄ ለመሚስ ባለው ችሎታ ምን ያህል ረክተዋል?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጭቻለሁ = 4	

		በጣም አረካሀም፡ ተበሳጫለሁ = 5	
322	የላብራቶሪ ውጤት ለማገኘት ምን ያህል ጊዜ ቆዩ?	ከ 1 ሰዓት በታች =1 ከ1 -2 ሰዓት = 2 ከ2 ሰዓት በላይ = 3	
323	በዚህ ሆስፒታል ወስጥ በምርመራ ግዜ ሚጥርዎን ለማጠቅ በተደረገው ጥረት ምን ያህል እርካታ ይሰማዎታል?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጫለሁ = 4 በጣም አረካሀም፡ ተበሳጫለሁ = 5	
324	የታዘዘልዎት የላብራቶሪ ምርመራ በዚህ ሆስፒታል ወስጥ ይገኛል ወይ?	አዎ ሁሉም =1 አዎ የተወሰኑት = 2 ምንም = 3	
325	በላቦራቶሪው ኃላፊዎች የእርሶን ችግር ለመፍታት ወሰዱት ምላሽ ምን ያህል እርሶን አርክቶዎታል	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጫለሁ = 4 በጣም አረካሀም፡ ተበሳጫለሁ = 5	
326	በአጠቃላይ በዚህ ሆስፒታል ስለተደረገልዎት የህክምና ላብራቶሪ አገልግሎት የሚሞሉት እርካታ ደረጃ ምን ያህል ነው?	በጣም እርካታ አግኝቻለሁ =1 እርካታ አግኝቻለሁ= 2 ምን አልተሰማኝም = 3 አረካሀም፡ ተበሳጫለሁ = 4 በጣም አረካሀም፡ ተበሳጫለሁ = 5	

ተጨማሪ አስተያየት ካለዎት፡

ስለ ትብብርዎ ከፍተኛ ምስጋና በአዲስ አበባ ዩኒቨርስቲ ስም አቀርባለሁ ፡፡

ANNEX VI: DECLARATION

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

Name: Tadesse Tesfaye

Signature: _____

Place: Addis Ababa University

Date of submission: June 22, 2014

This thesis has been submitted with my approval as University advisor.

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