ADDIS ABABA UNIVERSITY,

COLLEGE OF HEALTH SCIENCES,

SCHOOL OF ALLIED HEALTH SCIENCES,

DEPARTMENT OF MEDICAL LABORATORY SCIENCES

Assessment on factors influencing the job satisfaction level of medical laboratory professionals working in Addis Ababa government hospitals

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A thesis submitted to the School of Graduate Studies, Addis Ababa University, in partial fulfilment of the requirements for the Degree of Masters in Medical Laboratory Sciences.

June, 2014

Addis Ababa, Ethiopia

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SCHOOL OF GRADUATE STUDIES

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ACKNOWLEDGMENT

I would like to take this opportunity to thank my advisor Mr. Tedla Mindaye for his unreserved support in the whole process; since the draft document till the final research paper. My gratitude will also extend to my family and friends for their day to day follow up and encouraging idea that boosts my morale and energized me throughout this work. It would be worth to mention and acknowledge Mr. Yonas Bekele who is volunteer to be my Co-advisor and also to Abduselam Ahmed who advised me in the process of title selection. I would also like to acknowledge Getnet Hailu who volunteered to support in data entry.

My special thanks is to those volunteer laboratory professionals working in Addis Ababa government hospitals who participated in the study and also to Hawassa referral and teaching hospital, Pawi and Nekemte hospital laboratory staff who participated in the pre-test study of the checklist.

I would like to extend my thanks to department of Medical Laboratory Sciences, School of allied health sciences, College of Health Sciences, Addis Ababa University for opening the evening program otherwise it wouldn't have been possible to go through the process and realize my dreams.

LIST OF ACRONYMS

AAU	Addis Ababa University
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
EHNRI	Ethiopian Health and Nutrition Research Institute
EQA	External Quality Assessment
FHAPCO	Federal HIV/AIDS Prevention and Control Office
FMOH	Federal Ministry of Health
HIV	Human Immunodeficiency Syndrome
ISO	International Organization for Standardization
MDG	Millennium Development Goal
OI	Opportunistic Infections
PLWHA	People Living With HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
QMS	Quality Management System
SLIPTA	Stepwise Laboratory Improvement Process towards Accreditation
SLMTA	Strengthening Laboratory Management towards Accreditation
SOP	Standard Operating procedure
WHO – AFRO	World Health Organization regional office for African

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ABSTRACT

Background: Medical Laboratory professionals have an important role to play in assuring the quality of laboratory test results are accurate, reliable and provided in a timely manner – for better patient care. Job satisfaction level of these professionals is one of the most important factors to deliver quality laboratory services, reduce staff turnover, increase motivation of employee, and active engagement in their current assigned responsibilities.

Objective: To assess the factors influencing the job satisfaction level of medical laboratory professionals working in Addis Ababa government hospitals.

Method: The study has a total of 26 questions with in the questionnaire and expected to measure qualitatively and semi quantitatively the job satisfaction level of medical laboratory professionals in government hospital laboratory in Addis Ababa. Self-administered questionnaire were distributed to laboratory professionals working in Addis Ababa government hospitals. The results were entered and interpreted by using SPSS version 16 analysis and statistical software (SPSS INC, Chicago, IL, USA) quantitatively.

Result: Employees are not satisfied with their job working hour and work environment and the finding further indicates that absence of professional career and presence of job stress are making them dissatisfied. The competency assessment and the lab set up are the other variables that employees are not contented with. The study also identifies that employees working in laboratory are not pleased with work relationship they have and they feel that there is no transparent way to communicate their idea which ultimately is making them dissatisfied. In contrast, the area that employees are satisfied includes relationship with leaders, appraisal policy, recognition and rewards. The study identifies that the existing salary structure, compensation, and the benefit packages are not capable enough to keep the employees satisfied. The study identifies that employees' satisfaction in relation to benefit package policy and the equipment currently working varies with the age group of employees. The test further indicates that all the variables are independent of the work experience group except three variables which are recognition and rewards, employee benefit package policy and growing professionally that employees' satisfaction varies with the work experience of employees against in relation to these variables.

Conclusion: The level of employees' satisfaction is high in terms of relationship with leaders, availability of work equipment, workload and quality of result, and the recognition and reward provided. In contrast, they are dissatisfied with the working hour, work relationship and benefit packages. The study also identifies some job satisfaction variables that are dependent on age, work experience, and level of education which provides information to employers to develop customized strategies to keep the employees satisfied according to their needs. The study further provides recommendations which are triggered from the findings that employers should consider in their human resource activities.

Hence, measuring laboratory professional's job satisfaction level regularly with standard checklist is one of the most important approaches to tackle job related problems on timely bases with in the organization.

1. INTRODUCTION

1.1. Background

A successful organization normally considers the average employees as the primary source of productivity gains. For such organization, satisfied employees are the assets. Such employees are satisfied with their job and are inclined to be more energetic, ardent, inspired, and committed to their work. Job satisfaction is a key element of general satisfaction which gives employees energy to perform and continue his job adequately. Job satisfaction regulates the peace of mind, foster relaxation that leads to more enthusiasm and more innovative work. It gives the clear picture of completeness and accomplishment emanating from his work, a feeling which has nothing to do with money but a feeling of relief that the employee gets out of the work itself (1).

People management is an important aspect of organizational processes. These organizations consider employees rather than capital as the core foundation of the business and contributors to firm development. To ensure the achievement the goals of the organization, it should create an atmosphere of commitment and cooperation for its employees through policies that facilitate employee satisfaction. Satisfaction of human resource finds close links to highly motivated employees. Motivated employees then develop loyalty or commitment to the firm resulting to greater productivity and lower turnover rates (2).

Job satisfaction is one of the important variables in work and organizational psychology, is regarded as an indicator of working-life quality, and is a crucial variable used to determine the quality of health-care systems. Many studies have shown that job satisfaction can be influenced by a wide variety of factors such as competitive pay, adequate staffing, a pleasant working environment, opportunities for personal and professional growth, a reasonable workload, supervision, recognition, noticeable progress of patients, positive relationships with co-workers, autonomy on the job, job security, career advancement and contingent rewards. One study demonstrated the importance of job satisfaction to an organization in terms of its positive relationship with individual performance, employee relations, physical and mental health and satisfaction. Thus, more satisfied employees tend to be more productive and creative. The job satisfaction of health-care workers has a positive association with patients' satisfaction, and contributes to the continuity of care (3).

The quality of medical laboratory operations is driven by technical skills, quality management systems and the motivation of human resources. The technical competency of personnel plays a critical role in ensuring strict adherence to the numerous procedures of the total testing process as defined by the quality management system. To achieve proficiency, laboratory professionals need both targeted training and an appropriate working environment to turn acquired knowledge into technical skills. A survey was developed to assess these factors among 224 laboratories working in the laboratory programme in the University of Maryland implemented in seven Sub-Saharan African countries showed that lack of professional development was the major reason for leaving the previous job for 28% of interviewees who changed jobs in the past five years. Professional development/training opportunities was indicated by almost 90% (195/224) of total interviewees as the most important or a very important factor for satisfaction at their current job. Similarly, regular professional development/opportunities for training were the highest rated incentive to remain at their current job by 80% (179/224). Laboratory professionals employed in the private sector were more likely to change jobs than those working in the public sector (4).

Someone may be satisfied by achieving higher authority and responsibility where some other person merely needs flexibility in work schedule or someone may be motivated by sense of accomplishment (5).

Conversely, job dissatisfaction has a negative impact on the structure and work flows of organizations. Some negative impacts identified include greater non-conformance with procedures and policies, increases in work accidents, and organizational conflicts that may increase the rate of medical errors, thus jeopardizing patient safety, and higher employment costs, that contribute to the shortages of health-care providers. Job satisfaction is necessary to retain existing doctors, as well as to promote recruitment of new ones (6).

The aim of this study was to assess factors affecting job satisfactions level of laboratory professionals in government hospital laboratory and forward possible recommendation to improve both satisfaction of the laboratory professional and provided laboratory services.

1.2. Statement of the problem

Ethiopia is one of the active participants to implement quality system essentials in different government hospital laboratories of the country. The findings from the trainings carried on, the mentoring and supportive supervisions, monitoring and evaluation reports shows that the progress of the laboratories is not per the expectation of different stakeholders after evaluating them against WHO AFRO standardized checklist. The first and the second phase Stepwise Laboratory (Quality) Improvement Process Towards Accreditation **(**SLIPTA) processes as well as to Strengthen Laboratory Management Towards Accreditation (SLMTA) trainings taught us basic comparable gaps of facilities who have majority of the staff having been involved for the success were scored well and those with few staff involvement scored relatively low. Hence, staff motivation or satisfaction is one of the major inputs for the success of the program. This is why the title is selected so as to see the status of the laboratory professionals' job satisfaction level in Addis Ababa government hospitals (7).

According to a study conducted in Jimma University Specialized Hospital, Southwest Ethiopia, the finding was as follow. "A total of 145 health professionals have responded for the self-administered questionnaire. The result showed that sixty seven (46.2%) of the health workers are dissatisfied with their job" (8).

A study by Ch'ing-Sheng Chang and his colleagues in Taiwan on the topic "Motivating medical information system performance by system quality, service quality, and job satisfaction for evidence-based practice" says that "Inadequate human resources are a major constraint in improving global health. The insufficient numbers, skill imbalances, mal-distribution, low motivation, and poor performance of health workers in low-and middle-income countries compromise the delivery and expansion of priority health programs"(9).

According to Marinucci and his colleagues study from the University of Maryland indicated that "Numerous global initiatives in Africa have focused on Medical laboratory harmonization and standardization and as well on laboratory accreditation activity supports "(10).

"There are at least three reasons why managers must focus on the job satisfaction of its employees:

1. Evidence suggests that unsatisfied individuals leave organizations.

2. Satisfied employees are in better health and have longer life expectancy. Lack of job satisfaction has been associated with symptoms like anxiety, depression and poor physical and psychological health, which have concomitant consequences for absenteeism and commitment.

3. Job satisfaction in the work place also affects individual's private life which in turn has an effect on absenteeism and other important work related attitudes and behaviors (11)."

The attempt of this study is, therefore, to see employees' perceived work overload problems in relation to job satisfaction in public health facilities. The study was conducted to identify the major gaps and their possible solutions.

1.3. Literature review

Studies shows that, the job satisfaction level of laboratory professionals is dependent on the level of recognition given to the profession, relatively lower social and economic status given to the profession and professionals in the society adversely affects job satisfaction level of the professionals. This also leads to frustration among the medical laboratory professionals, dissatisfaction and as a result high staff turnover which ultimately affects the quality of the laboratory services (7, 8, 17).

According to Yafang, the role of management of the organization is vital for the satisfaction of the employee and he stated “Through communicating and promoting the organizational vision to subordinates, and in getting their acknowledgement of the vision, it is possible to influence their work behaviour and attitudes. When there is good interaction between the leader and subordinates, there will be contributions to team communication and collaboration, and encouragement of subordinates to accomplish the mission and objectives assigned by the organization, which in turn enhances job satisfaction”(11).

There are controversial study results in the job satisfaction level of health professionals with an evidence of above 50% satisfaction and some with below 50% satisfaction. The most important information is that with the level of satisfaction below 50%, high staff turnover and a significant decrease in the quality of the laboratory services have been noted. Therefore, different literatures suggest looking for a remedy to retain skilled, knowledgeable and experienced laboratory professionals as well to retain customers that are looking for the best and quality services from the organizations (9, 11).

According to a study conducted in seven countries of Sub- Saharan African by University of Maryland, it has been found that “Effective implementation and sustainability of quality laboratory programmes in Sub-Saharan Africa relies on the development of appropriate staff retention strategies. Assessing the factors responsible for job satisfaction and retention is key for tailoring specific interventions aiming at improving the overall impact of health programmes” (10).

The study in, Comparing the job satisfaction and intention to leave of different categories of health workers in Tanzania, Malawi, and South Africa, by global health actions, 2013, shown “differences in the levels of job satisfaction and intention to leave between different groups of health workers from Tanzania, Malawi, and South Africa. The results caution against generalizing about the effectiveness of interventions in different contexts and highlight the need for less standardized and more targeted human resource for health strategies than has been practiced to date”(12).

Jackie Mamitsa in his research showed that **“**The healthcare industry requires a more skilled workforce today as a result of advancement in medical technology and the demand for more sophisticated patient care. Job satisfaction among healthcare professionals is increasingly being recognized as a measure that should be included in quality improvement programs. Low job satisfaction can result in increased staff turnover and absenteeism, which affects the efficiency of health services” (13).

The report of European foundation for the improvement of living and working conditions, 2007 on measuring job satisfaction in surveys, Comparative analytical report stated the following. “Strategies to improve the performance of the health workforce must initially focus on existing staff because of the time lag in training new health workers. Substantial improvements in the availability, competence, responsiveness and productivity of the workforce can be rapidly achieved through an array of low-cost and practical instruments. Supervision makes a big difference. Supportive yet firm and fair supervision is one of the most effective instruments available to improve the competence of individual health workers, especially when coupled with clear job descriptions and feedback on performance.

Moreover, supervision can build a practical integration of new skills acquired through on-the-job training. Fair and reliable compensation, decent pay that arrives on time is crucial. The way workers are paid, for example salaried or fee-for-service has effects on productivity and quality of care that require careful monitoring. Financial and non-financial incentives such as study leave or child care are more effective when packaged than provided on their own. Critical support systems, no matter how motivated and skilled health workers are, they cannot do their jobs properly in facilities that lack clean water, adequate lighting, heating, vehicles,

reagents, working equipment and other supplies. Decisions to introduce new technologies for diagnosis, treatment or communication should be informed in part by an assessment of their implications for the health workforce. Lifelong learning should be inculcated in the workplace. This may include short term training, encouraging staff to innovate, and fostering teamwork. Frequently, staff devises simple but effective solutions to improve performance and should be encouraged to share and act on their ideas" (14).

The Malaysian journal of medical sciences research indicates that "employee satisfaction is important to an organization's success. It is a widely studied construct in organizational behavior as it influences other organizational variables like productivity, turnover and absenteeism. Many organizations are spending much time on employee satisfaction initiatives in an effort to reduce turnover, improve productivity and help organizations succeed. The popularity of this field of study is also due to its relevance to the physical and mental well-being of employees. Furthermore, managers have a humanistic responsibility to provide employees with jobs that are challenging, rewarding and satisfying (15)."

Hence, staff satisfaction will increase motivation, productivity, ownership, decreases turnover, absenteeism etc. that alerts the upper management to give due attention to follow and measure their staff job satisfaction periodically and regularly which will decrease costs that will be incurred to replace the employee that will be leaving the organization.

1.4. Rationale of the study

This study was conducted to investigate job satisfaction of laboratory professionals, which is one of the requirements in the WHO-AFRO Laboratory accreditation checklist. WHO-AFRO Laboratory accreditation checklist contains 12 main sections (a total of 334 questions) for a total of 258 points with questions that will address the twelve quality system essentials, which in the meantime will measure directly or indirectly the motivation of staff in the health facilities, during the interview, the interaction will also show the internal feeling of the interviewee (16).

Most laboratorian are not able to cope with the contemporary life style by their monthly income and considered as one of the reasons behind dissatisfaction or high staff turnover. Additionally, the working environment and day to day changing science and technology is not that easy to catch up and be in the same level, which shows the management support to the professionals is not as per the need and expectation of the profession (17).

Africa is currently moved in on accreditation process that needs motivated, determined and satisfied staff for the implementation of quality system essentials. The base line and final assessment findings revealed that the difference between the results of the health facilities participated in the SLIPTA process are dependent on the status of the employee being ready to perform the given activities, called “improvement projects” within a given time frame. Hence, health facilities participated with majority of the staff involvement performed much better than from those with few staff involvement, which is related with the satisfaction level of the employees.

The findings of the assessments conducted as baseline and final for health facilities enrolled in SLIPTA process in Ethiopia, revealed that hospitals that have highly motivated staff scored better than those who do not. On the other hand staff turnover is also exhibited in those health facilities with less job satisfaction in general.

Hence, conducting this research is helpful to see the major reasons for the employee not to be satisfied in their daily routines. This reference focused on health workers in general but not specifically to medical laboratory professionals. There is limitation on

researches conducted on “assessment of the factors influencing the job satisfaction level of medical laboratory professionals” to show the magnitude in figures.

2. OBJECTIVES

2.1. General objective

To assess the factors influencing the job satisfaction level of medical laboratory professionals working in Addis Ababa government hospitals.

2.2. Specific objectives

- To assess the job satisfaction level of laboratory professionals working in the hospitals
- To assess factors which affect the job satisfaction level of employee
- To identify factors which improves the satisfaction level of employees
- To see the relationship between age, service year, educational level, and job satisfaction.

3. METHOD

3.1. Study design

A cross-sectional survey was used to assess job satisfaction level and factors influencing among medical laboratory professionals working in Addis Ababa government hospitals.

3.2. Study population

The study population were all medical laboratory professionals who were volunteers to participate in the study and working in Addis Ababa government hospitals.

3.3. Study area

This study was conducted in Addis Ababa. All Laboratory professionals working in Addis Ababa government hospitals and who were voluntary to participate in the research were target population of the study. Addis Ababa was considered because is a reference centre for the country and the population of the city is growing day to day. The study result would put significant information to the health system that can be comparable to regions as Addis Ababa is “a better working place” in comparison to regions and have high laboratory professionals’ diversity.

3.4. Sample size

Since the total number of laboratory professionals at the hospitals were 221 all of them were included in the study to increase the reliability and accuracy of the study result. For the purposes of sample size calculations, the infinite population formula is used to calculate the infinite population result and the result is used to calculate the finite population n for the study. The power of the study will be 95% and the level of job satisfaction being unknown, will be at the expected frequency of 50% to obtain the power of 95% level of confidence; the calculated sample size using the below finite population formula will be 154. Participants will be contacted by the researcher and invited to complete the self-administered questionnaire.

By using the following formula, a minimum of 154 samples were included for the study:-

Sample Size - Infinite Population

The sample size required was calculated using formula for estimating single population proportion. Since there was no priority study in the study sites an expected satisfaction level of 50% and desired precision of 0.05 and 95% confidence interval was used for the calculation.

$$n = \frac{z^2 \text{ X } p \text{ X } (1-p)}{d^2}$$

n = Sample Size

Z = Z-value (1.96 for a 95 percent confidence level)

P = Percentage of population picking a choice, expressed as decimal (0.5)

d = Confidence interval, expressed as decimal (0 .05 = +/- 5 percentage points)

Z-values (Cumulative Normal Probability Table) represent the probability that a sample will fall within a certain distribution.

The Z-values for confidence levels are:

1.96 = 95 percent confidence level

$$SS = \frac{3.84 \text{ x } 0.5 \text{ x } 0.5}{0.0025} =$$

n = 384

Because, the sample is taken from a relatively small population (N = 221, i.e. < 10, 000) the required minimum sample obtained from the above estimate adjusted using finite population correction n/ (1+ (n/N)). Where n= sample from an infinite population, N= finite population size. Therefore calculated sample size is equal to 384/ 1+ (384/221)) is equal to 140+14= 154.

3.5. Sampling procedure

Self-administered questionnaire were distributed to volunteer participants and the questionnaires were collected on time from the participant health facilities. All 177 laboratory professionals from elven government hospital laboratories in Addis Ababa even though the calculated sample size is 154.

3.6. Data collection procedure

Data were collected through a self-administered questionnaire from April 14, 2014 and completed on May 2, 2014. The periods of data collection were 3 weeks. Over the 3 weeks period, all volunteer laboratory professionals who were working in Addis Ababa government hospitals were part of the study.

Hence, the principal investigator in person distributed and collected the questionnaire from the participant government hospitals laboratory professionals found in Addis Ababa.

3.7. Operational definitions

For the purpose of this study, the following definitions are used to clarify terms used in this document.

Strongly agree: - designated a score of five and have a meaning of high score with the

satisfaction level of study participants in this study.

Agree: - designated a score of four and have a meaning of medium score with the

satisfaction level of study participants in this study.

Neutral: - designated a score of three and have a meaning of neutral score with the

satisfaction level of study participants in this study.

Strongly disagree: - designated a score of two and have a meaning of low score with the

satisfaction level of study participants in this study.

Disagree: - designated a score of one and have a meaning of very low score with the

satisfaction level of study participants in this study.

3.8. Data analysis procedures

Qualitative data from the questionnaires coded and entered into SPSS version 16 data analysis and statistical software (SPSS INC, Chicago, IL, USA). Questionnaire were checked for completeness, entered in Microsoft office Excel 2010 and verified before data analysis. Statistical analysis carried on using SPSS version 16 data analysis and statistical software. Data summarized in tables and figures for the interpretation of findings and Job stratification were determined

3.9. Ethical clearance

Permission to conduct the study was obtained from Addis Ababa University, College of health Sciences, School of allied health sciences, department of medical laboratory science, Departmental Research and Ethics Review Committee (DRERC). Before communicating the study participants' permission from specific hospital management and other relevant managerial hierarchy to conduct the study were obtained. Each legible study participant were informed about the purpose of the study as well were informed that they are free to refuse in participating or answering any of the questions and agreement were reached/signed for the confidentiality of the responses that were attached in the appendix.

3.10. Dissemination of results

The results were to describe the overall findings of the study in descriptive statistics. The result of the data will be presented in different workshops, publications in peer reviewed journals, etc. for its intended purpose.

3.11. Validity and reliability

To ensure content validity of the tool, the draft questionnaire was submitted to the supervisor for expert scrutiny regarding the relevance of each item. Pre-testing of the questionnaire is done on twenty two, eight and nine laboratory professionals at Hawassa teaching and referral, Nekemte and Pawi hospital laboratory with a total of 39 (22.0%) laboratorians have participated, and there are no comments or suggestion on the clarity of the questions. The pre-test sites are selected to have diversified

settings and to insure that the questions have no significant variations under different settings, geographical locations and environments.

3.12. Inclusion and exclusion criteria

Inclusion criteria;

- Laboratory professional with diploma and above.
- Permanently hired professional who are working in the hospital for a year and above.
- Who were willing to participate in the study

Exclusion criteria:

- Teaching staff
- Contract hire
- Free service providers

3.13. Data quality assurance

The following precautions were considered so as to assure the quality of the data. The data were collected by the researcher. The questionnaire tool were pre-tested at Hawassa teaching and referral, Nekemte and Pawi hospital laboratory professionals. Based on the recommended percentage of participants for pre-testing more than fifteen percent were considered. The purposes of the selected hospital laboratories were to increase the clarity of the checklist in different setups. Based on the findings of the pre-test, there were no vague questions in the checklist. The participants were explained about the purpose of the study and it's confidentiality of the information they have provided. Additionally, the data that were collected during the study period were reviewed on a daily bases to minimize any non-conformity and there were no discrepancy at all.

4. RESULTS

4.1. Socio demographic characteristics of respondents

A total of 177 laboratory professionals working at Addis Ababa Government Hospitals completed the survey. Sixteen incomplete questionnaires were excluded from the analysis. Twenty eight laboratory professionals were below one service year and excluded from the survey. The frequency distribution of 177 laboratory professionals according to demographic and work related variables, were as follows. A total of 95 (53.7%) participants were male and the rest 82 respondents (46.3%) were female. Of the study participants 66 respondents (37.3%) were Diploma, 61 respondents (34.4%) BSc. Direct, 23.2% BSc. Upgrade, and 3.4% were MSc. With laboratory specialty and 1.7% were others. Of the total study participants, 102 respondents (57.6%) were bachelor and 71 respondents 40.1% were married. The frequencies of age group distribution of participants showed; 28.2% were age group of 20-25, 64 respondents (36.2%) were 26-30 age group, 23 respondents (13.0%) were age group 31-35, 8.5% were of age group 36-40, and age group of 41-45 were 6.2% whereas above 45 years of age were 14 respondents (7.9%).

Majority of the study participants, 91 respondents (51.4%) had 2-5 years long work experience, 48 respondents (27.1%) and 21 respondents (11.9%) had 6-10 years and above 20 years work experiences respectively and the rest accounts for the remaining 17 respondents (9.6%). Based on the current position majority of the respondents i.e 139 respondents (78.5%) were laboratory personnel.

Table 1: Socio-demographic characteristics of participants, Addis Ababa Government Hospital, Ethiopia, 2014

		Frequency	Percent
Age Group	20-25	50	28.2
	26-30	64	36.2
	31-35	23	13.0
	36-40	15	8.5
	41-45	11	6.2
	Above 45	14	7.9
	Total	177	100.0
Sex	Male	95	53.7
	Female	82	46.3
	Total	177	100.0
Marital Status	Married	71	40.1
	Single	102	57.6
	Divorced	3	1.7
	Widowed	1	.6
	Total	177	100.0
Education	Diploma	66	37.3
	BSc. direct	61	34.5
	BSc. Upgrade	41	23.2
	MSc	6	3.4
	Others	3	1.7
	Total	177	100.0
Work Experience	2-5yrs	91	51.4
	6-10yrs	48	27.1
	11-15yrs	10	5.6
	16-20	6	3.4
	>=21	21	11.9
	Total	177	100.0
Current Position	Lab head	7	4.0
	Quality officer	6	3.4
	Safety officer	7	4.0
	Lab personnel	139	78.5
	Other	18	10.2
	Total	177	100.0

4.2. Assessing factors important for job satisfaction

A total of 177 laboratory professionals working at Addis Ababa Government Hospitals were involved in the study. The Study participants who responded for each variable as Agreed and Disagree were considered as satisfactory and non-satisfactory respectively.

Table 2: Job location characteristics of participants, working hours and work environment characteristics of participants, Addis Ababa Government Hospital, Ethiopia, 2014

Variable	Mean	S.D.	Scale	Frequency	Percent
Job location	2.31	1.02	Disagree	125	70.6
			Neutral	25	14.1
			Agreed	27	15.2
			Total	177	100.0
Work hour	2.34	0.99	Disagree	125	70.6
			Neutral	26	14.7
			Agree	26	14.7
			Total	177	100.0
Working environment	2.87	1.23	Disagree	80	45.2
			Neutral	39	22
			Agreed	58	32.7
			Total	177	100.0

Among the total study participants (177), 27(15.2%) agreed with their job location. This indicated that 125(70.6%) laboratory professionals were not satisfied with the location of the job. The mean value of this factor is 2.31 with a standard deviation of 1.02. 125 (70.6%) of the respondents were not satisfied with the working hour of their institutions. But 26(14.7%) of the respondents were neutral and not satisfied with the job location. The mean value for the working hour is 2.34 implying that they are not satisfied with it. Similarly, the calculated mean value for the working environment factor is 2.87 that 80 respondents (45.2%) are not satisfied with the work environment while 58 respondents (32.7%) are satisfied.

Table 3: response on satisfaction variables related to work, Addis Ababa Government Hospital, Ethiopia, 2014.

Variable	Mean	S.D.	Scale	Frequency	Percent
With the equipment currently working	3.10	1.21	Disagree	64	36.2
			Neutral	43	24.3
			Agree	70	39.5
			Total	177	100.0
Do not feel stressed in my jobs	2.86	1.14	Disagree	80	45.2
			Neutral	47	26.6
			Agree	50	28.2
			Total	177	100.0
Growing professionally since I started work	2.65	1.17	Disagree	99	55.9
			Neutral	34	19.2
			Agree	44	24.9
			Total	177	100.0
Comfortable with lab setup	2.70	1.14	Disagree	94	53.1
			Neutral	34	19.2
			Agree	49	27.6
			Total	177	100.0
With workload and quality of result	3.00	1.16	Disagree	73	41.2
			Neutral	38	21.5
			Agree	66	37.3
			Total	177	100.0
With planed competency assessment	2.88	1.12	Disagree	78	44.1
			Neutral	46	26
			Agree	53	30
			Total	177	100.0
Act in the lab in professional manner	2.32	1.01	Disagree	119	67.2
			Neutral	36	20.3
			Agree	22	12.4
			Total	177	100.0

As per the above table, the mean value of the working equipment variable is 3.1 that the employees are satisfied with this factor which is (70) 40 % of the total respondent while 24% stays neutral. In terms of job stress variable, 80 respondents (45%) replied that they are not satisfied with their job as it elicits a stress limiting the mean value to 2.86. Availability of professional career is the other variable considered for the study. Out of the total respondents, 56% (99) replied that absence of professional career is making them dissatisfied and thus the mean value for this factor is 2.6

The statistical output further indicates that employees are not satisfied with lab set up as 94 respondents (53%) responded while 34 (19.2%) stays neutral. The mean value for this variable is 2.7. The table further indicates that majority of the respondents are not satisfied with the planned competency assessment and with workload and quality of result as the mean value is 3 and 2.88 respectively. 119(67%) respondents replied that they are not comfortable with the absence of professionalism in during working hours while 36 respondents (20%) stays neutral and thus the mean value is 2.32.

Table 4: Job satisfaction variables related to work responsibility and work relationships, Addis Ababa Government Hospital, Ethiopia, 2014.

Variable	Mean	S.D.	Scale	Frequency	Percent
With work responsibility	2.25	1.1	Disagree	126	71.2
			Neutral	27	15.3
			Agree	24	13.6
			Total	177	100.0
Comfortable for carry out responsibility	2.27	.97	Disagree	120	67.8
			Neutral	34	19.2
			Agree	23	13
			Total	177	100.0
Relationship with around me	2.13	.92	Disagree	130	73.5
			Neutral	29	16.4
			Agree	18	10.1
			Total	177	100.0
With various activities in lab	`2.30	1.05	Disagree	108	61
			Neutral	37	20.9
			Agree	32	18.1
			Total	177	100.0
With overall job security	2.99	1.21	Disagree	72	40.7
			Neutral	41	23.2
			Agree	64	36.2
			Total	177	100.0
Right for forwarding opinion	2.83	1.08	Disagree	79	44.7
			Neutral	47	26.6
			Agree	51	28.8
			Total	177	100.0

The table depicts that 126 respondents (71%) react that they are not pleased with their work responsibility restricting the mean value to 2.25 while 24 respondents (13%) are satisfied with their current responsibility. In addition 120 (68%) respondents replied that there is no comfortable environment to discharge responsibility and thus the mean value is 2.27 implying that their satisfaction level is highly affected by this factor.

The above table also shows that respondents are not satisfied with the relationship they have with their colleague as 130 respondents (74%) reacted. While 32 (18%) respondents replied that they are satisfied with this variable. The mean value for this factor is 2.13. The reaction to the right for forwarding opinion is also inclined to dissatisfaction as the calculated mean value for the total of 177 respondents is 2.83.

Table 5: Job satisfaction variables associated with organizational set up, Addis Ababa Government Hospital, Ethiopia, 2014.

Variable	Mean	S.D.	Scale	Frequency	Percent
Leader	3.09	1.25	Disagree	60	33.9
			Neutral	51	28.8
			Agree	66	37.3
			Total	177	100.0
Appraisal policy	3.15	1.16	Disagree	56	31.6
			Neutral	56	31.6
			Agree	65	36.7
			Total	177	100.0
Recognition & rewards	3.22	1.22	Disagree	58	32.8
			Neutral	46	26
			Agree	73	41.2
			Total	177	100.0
Awarded as per my ability	3.12	1.20	Disagree	66	37.3
			Neutral	43	24.3
			Agree	68	38.4
			Total	177	100.0
Fulfilling my responsibility	2.20	0.95	Disagree	124	70
			Neutral	34	19.2
			Agree	19	10.8
			Total	177	100.0
Leave policy	2.83	1.03	Disagree	76	42.9
			Neutral	51	28.8
			Agree	50	28.3
			Total	177	100.0

From the total laboratory personnel involved in the study, 66 respondents (37%) are satisfied by the relationship they have with their leader while 60 respondents (34%) are not satisfied. The mean value for this variable is 3.09. The response for the appraisal policy is that 65 respondents (37%) are satisfied whereas 56 respondents (31%) are dissatisfied. The mean value for this variable is 3.15.

The statistical output further indicates that respondents are satisfied with the recognition and reward provided as 73 respondents (41%) agreed with its positive impact on their satisfaction level. The mean value for this variable is 3.22. 68 respondents (34%) of the total respondents agreed that they are awarded for their ability while 66(37%) respondents are dissatisfied with this aspect. The mean value for this variable is 3.12. 124 respondents (70%) are not satisfied in relation to the fulfilment of their responsibility and thus the mean value is limited to 2.2. Furthermore, 76 respondents (43%) are not pleased with the leave policy ultimately affecting their job satisfaction.

Table 6: With existing salary structure and with compensation characteristics of participants, Addis Ababa Government Hospital, Ethiopia, 2014

Variable	Mean	S.D.	Scale	Frequency	Percent
Existing salary structure	2.04	1.06	Disagree	21	11.9
			Neutral	27	15.3
			Agreed	129	72.9
			Total	177	100.0
B/n work and family	2.95	1.09	Disagree	63	35.6
			Neutral	50	28.2
			Agree	64	36.2
			Total	177	100.0
Compensation	2.64	1.18	Disagree	86	48.6
			Neutral	40	22.6
			Agree	51	28.9
			Total	177	100.0
Employee benefit package policy	2.36	1.18	Disagree	110	62.1
			Neutral	28	15.8
			Agree	39	22.1
			Total	177	100.0
Benefit and insurance policy	2.09	**1.08**	Disagree	127	71.8
			Neutral	27	15.3
			Agree	23	13
			Total	177	100.0

Among the total participants of laboratory professionals, 67(37.9%) and 62(35.0%) were strongly disagreed and disagreed on the existing salary structure. This indicated that, majority of the respondents were not satisfied with the salary structure of their organizations. But only 21(11.9%) of the respondents were satisfied.

Only 51(28.9%) of the laboratory personnel were satisfied with the compensations but majority 86(48.6%) were not satisfied in the compensation strategies they offered from the organization they are working for.

63(35.6%) and 64(36.2%) of the respondents were strongly disagreed and disagreed on the benefit and insurance policy of their organization respectively. Which yielded the dissatisfactory level to 127(71.7%). But only small number of the respondents, 23(13%) were satisfied with the benefit and insurance policy of their organization.

From the total study participants, 110(62.1%) of them were not satisfied with the employee benefit package policy that the hospital have. From this, 51(28.8%) were strongly disagreed and the rest were disagreed on the benefit package policy of their institute. But only small number of participants, 39(22.1%) were satisfied and the rests were neutral with the employee benefit package policy.

Table 7: Job satisfaction level among medical laboratory professionals in selected government health facilities, Addis Ababa, Ethiopia, 2014

Variables	**Number**	**Percent**
Satisfied	**34**	**19.2**
Not Satisfied	143	80.8
Total	177	100

Additionally, the cumulative mean was calculated and the following result was obtained. From a total of 177 laboratory professionals working in Addis Ababa government hospital laboratories who were involved in the study found satisfied 34 (19.2%). On the other hand, majority of the study participants were not satisfied in general with 143 (80.8%).

Table 8: Relationship between job satisfactions with selected demographic characteristics among laboratory professional in selected government hospital laboratories, Addis Ababa, Ethiopia, 2014.

Variables	Satisfied	Not satisfied	Chi-square	DF	P-value
	Yes n(%)	No n(%)			
Sex					
Female	16(9.0%)	66(37.3%)	0.009	1	0.924
Male	18(10.2%)	77(43.5%)			
Marital status					
Married	12(6.8%)	59(33.3%)			
Single	22(12.4%)	84(47.5%)	0.407	1	0.524
Educational status					
Diploma	18(10.2%)	48(27.1%)			
BSc. Direct	11(6.2%)	50(28.2%)			
BSc. Upgrade	5(2.8%)	36(20.3%)			
MSc.	0(0%)	6(3.4%)	6.259	4	0.181
Year of service s	22(12.4%)	74(41.8%)			
Working hours	29(16.4%)	47(26.6%)	4.367	1	0.037
Salary	4 (2.3%)	143(80.7%)	17.213	1	0.000

The null hypothesis of sex, marital status and educational status is independent of the above mentioned satisfaction variables are not rejected as the P value of the chi-square test for all variables is greater than 0.05 except two variables which are working hours and salary. These two variables are dependent for the job satisfaction level of laboratory professional's i.e. employee's satisfaction in relation to working hours and salary needs further analysis to confirm the association with job satisfaction of the employee.

Table 9: Factors associated with job satisfaction level of laboratory professionals in government hospital of Addis Ababa, Ethiopia, 2014.

VARIABLE	Dependent variable Job satisfaction		COR, (95% CI)	P-Value	AOR, (95% CI)	P-Value
Salary	**Satisfied**	**Not satisfied**				
Yes	**4**	**0**	**1.625 (1.134- 2.323)**	**0.000**	**1.31(1.298-5.957)**	**0.048***
No	**30**	**143**	**1**		**1**	
Working hours						
Yes	**29**	**96**	**0.808 (0.454-1.435)**	**0.037**	**2.40(0.846-6.813)**	**0.390**
No	**5**	**47**	**1**		**1**	
Sex						
Female	**16**	**18**	**1.037 (0.490-2.194)**	**0.924**	**1.9(1.109-3.602)**	**0.038***
Male	**66**	**77**	**1**		**1**	
Marital status						
Yes	**22**	**84**	**1.288 (0.591-2.804)**	**0.524**	**1.026(1.651-2.007)**	**0.049***
No	**12**	**59**	**1**		**1**	

**-indicate statically significant level and reference categories are indicated by 1.*

The above table shows us there is a relationship between job satisfaction level with salary, and working hours of participant professionals.

5. DISCUSSION

In this study 26 major questions included and expected to measure the job satisfaction level of the laboratory professionals in government hospitals at Addis Ababa. Hence, the results found agreed with other studies in Africa; in different Studies in Africa the result shown that, the job satisfaction level of laboratory professionals is dependent on the level of recognition given to the profession, relatively lower social and economic status given to the profession and professionals in the society adversely affects job satisfaction level of the professionals. This also leads to frustration among the medical laboratory professionals, dissatisfaction and as a result high staff turnover which ultimately affects the quality of the laboratory services (7, 8, 17).

The result of the study findings also evidenced these factors as follows. Among the total participants of laboratory professionals, 129(73%) are not satisfied on the existing salary structure. This indicated that, majority of the respondents were not satisfied with the salary structure of their organizations. But only 21(11.9%) of the respondents were satisfied. Among the respondents, 73(41.2%) of the laboratory professionals were not satisfied with the recognition and reward practices of their organizations. But, 58(32.8%) were satisfied and the rests were neutral. 70(39.5%) of the participant laboratory professionals were not satisfied with the equipment currently working with. But 64(36%) were satisfied.

This study result also found figures and information relevant to the above idea. To exemplify some; from the total study participants, 110(62.1%) of them were not satisfied with the employee benefit package policy that the hospital have. From this, 51(28.8%) were strongly disagreed and the rest were disagreed on the benefit package policy of their organization. But only small number of participants, 39(22.1%) were satisfied and the rest were neutral with the employee benefit package policy. From the total number of laboratory professionals involved in the study, 126(71.6%) were satisfied with their work responsibility. But 27(15.3%) were not satisfied. Among the total study participants (177), 31(17.5%) and 94(53.1%) were strongly agreed and agreed with their job location. This indicated that 125(70.6%) were satisfied with the location of the job. But 27(15.2%) of the laboratory professionals were not satisfied with the job location.

6. LIMITATION AND STRENGTH OF THE STUDY

6.1. Strength

This study is the first in its kind to assess the job satisfaction level of laboratory professionals who are working in Addis Ababa government hospital laboratories. Hence, the result of the study will be used for further study in this or related areas. The findings are comparable with other studies carried on other countries in same and or other study topics.

6.2. Limitation

The limitations of the study were as follow.

1. The study was conducted in Addis Ababa and it does not include regional hospital laboratories.
2. The study also does not include all health facilities in Addis Ababa, like health centers etc.
3. One of the activities commented were to conduct in depth interview, but because of various reasons professionals invited for refused in-depth interview.
4. The expected participants were 250 based on telephone communication to each health facility but the actual numbers of participants were found to be 221 which decreased the number by 11.6% for the main reasons as annual leave, sick leaves and others.
5. The non-respondent rate was 16/221 (7.2%) and reduced the number of participants to 205.
6. There was also 28/221(12.7%) laboratory professionals below one service year, in which reduced the number of participants from 205 to 177.

7. CONCLUSION AND RECOMMENDATION

7.1. CONCLUSION

The finding of this study enables the researcher to conclude that employees are not satisfied with their working hour, work environment, and job location from the various proposed variables that can affect job satisfaction whereas they are pleased with the laboratory equipment used to perform tasks is found fine effecting positively to the satisfaction level of the employees considered for the study.

The finding further allows to conclude that employees are performing their tasks with feeling of stress and there is no platform to grow professionally that there is no career path which can support personal development which is ultimately making them dissatisfied with their job. The layout and set up of laboratory location is the other variable the study tried to assess which indicates that employees are not content in their stay at the laboratory room inferring that there is much more to do about this aspect in order to make the work environment conducive.

Based on the result of data analysis it is possible to figure out that the level of satisfaction against planned competency assessment of the hospitals and the manner of doing tasks professionally during working hour is low. However, the finding indicates that they are satisfied with their workload and quality of result.

The attitude of employees towards responsibility greatly affects the satisfaction of employees towards their job in terms of this issue; the finding shows that they do not have a pleasure to their job ultimately making them dissatisfied. Moreover the result parts of the study shows that the employees are not happy with the relationship they have with their work team members. Employees feeling to the overall job security and the right to forward opinions are also the areas which can affect the job satisfaction level of employees; regarding this the finding indicates that employees do feel that there is no transparent means to forward their opinion and they are not feeling secured about job which indicates that they are dissatisfied with their job.

The data analysis allows the researcher to take a broad view and conclusion that employees working in laboratory are pleased by the relationship they have with leader and the appraisal policy of the hospitals. In addition the recognition and rewards provided is adequate to keep them satisfied but still there is much more to do

as the figure shows there are reservations. However, the leave policy of the hospitals is rated negatively that employees' satisfaction level is being affected negatively by this factor.

The existing salary structure and the compensation of the hospitals are not in line with the interest of the employees making them dissatisfied with their job. Furthermore, beyond the basic salary availability of benefit package and insurance do significantly affect the satisfaction of employees toward their job. Regarding this employees are dissatisfied with this variable inferring that there is a lot to do by the employers.

According to the test conducted by the study, it is possible to put that the job satisfaction level of employees for all the variables considered are independent of the age of employees. Except two factors which are employee benefit package policy and equipment currently working that these two variables are dependent of the age count. i.e employees satisfaction in relation to benefit package policy and the equipment currently working varies with the age group of employees . The test further indicates that all the variables are independent of the work experience group except three variables which are recognition and rewards, employee benefit package policy and growing professionally that employees' satisfaction varies with the work experience of employees against in relation to these variables.

In addition the test allows the researcher to conclude that level of education influence some satisfaction variables which are compensation, relationship with around me, overall job security, awarded as per my ability, growing professionally, and workload and quality of result.

Based on the chi-square result, it was also possible to do crude odds ratio (COR) and adjusted odds ratio (AOR) further to strengthen the result. Hence, the relevance of the chi-square result was calculated for crude odds ratio and adjusted odds ratio for selected factors based on the p value less than 0.05. from Table 8: for compensation, job security and reward are found to be relevant for job satisfaction level of the laboratory professionals.

7.2. RECOMMENDATION

The hospitals management better revise the working hour of the employees and the overall work environment set up in order to create a conducive work place which can increase the satisfaction level of their employees.

The hospitals' human resource team should develop a career path plan for the employees that allow them to grow professionally which further enable the employees to be engaged to their work and keep them satisfied with their job.

The physical set up of the laboratory should be improved in order to make employees stay pleasant in their working hour. In addition the competency assessment should be developed in a way that the employees are participated and that they should have their consent on it in order to make them engaged in its implementation.

Hospitals should come up with a system that allows the employees to forward their opinion and make them to accept responsibility with own initiative.

Hospitals should also provide recognition and reward for best performers. Linking significant changes with professionals who achieved it, learning from and excelling it to others and make it valuable to function as a system is crucial by establishing standards of performance and rewarding people for meeting or exceeding them;

The leave policy of the hospitals should also consider the best interest of the employees.

The upper management leading the medical laboratory of the hospital should give emphasis to human resource development that has significant impact in the overall activity of the laboratory professionals

In order to make employees engaged and contented on their job the compensation system and the benefit packages should be improved in order to retain trained professional and then ultimately reduce staff turnover.

Hence, measuring laboratory professional's job satisfaction level regularly with standard checklist will be one of the approaches to identify problems and to propose possible solutions.

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9. APPENDIX

9.1. Questionnaire

Addis Ababa University

College of Health Sciences

School of Allied Health Sciences

Department of medical Laboratory Sciences

Questionnaire on Laboratory Professionals Job Satisfaction level in Addis Ababa Government Hospital Laboratories.

Instruction

1. The respondents of the questionnaire are all laboratory professionals who are willing to participate in the study during this period.
2. Each study participant should fill the questionnaire separately and discussion is not allowed.
3. **"Circle"**; on the alphabet for the choice you think is correct from the given choices.
4. The purpose of this study is only for academic purpose. Hence, Confidentiality will be given due emphasis.

Part I: Socio-demographic characteristics of the participants

1. Sex:- Male ☐ Female ☐
2. Age:- (in years)

   A. 20 - 25 Y B. 26 -30 Y C. 31 - 35 Y D. 36 - 40 Y E. 41 - 45 Y F. Above 45 years.
3. Marital status:-

   A. Married B. Single C. Divorced D. Widowed
4. Religion:-

   A. Orthodox B. Muslim C. Catholic D. Protestant E. Other (specify).....
5. How long have you been in the laboratory profession (year-month)?

……

6. Your level of education?

A. Diploma B. BSc (direct) C. BSc (upgrade) D. MSc E. Other (Specify)……..

7. Your current position?

A. Lab head B. Quality officer C. Safety officer D. Lab personnel E. other (Specify).....

Part II: Evaluation of job satisfaction

Kindly select how you feel about the level of your job satisfaction from the given alternates.

The following questions are designed only for research purpose. The researcher has no intention to represent this information negatively in his paper. The information will be kept confidently. For the following questions, respondents should be asked to indicate whether they strongly Agree (SA), Agree (A), Neutral (N).Disagree (D), Strongly Disagree (SD),

SL	Survey Question	SA	A	N	D	SD
1	I am satisfied with the working environment of the hospital.					
2	I am satisfied with job location.					
3	I am satisfied with the present working hour.					
4	I am satisfied with the existing salary structure of the hospital.					
5	I am satisfied with the compensation I get and I think it matches with my responsibility.					
6	I am happy with my work responsibilities.					
7	I feel comfortable in carrying out my responsibilities.					
8	I am satisfied with work relationships with the people around me.					
9	I am satisfied with various activities in the laboratory and I love participating in them.					
10	I am happy with your overall job security.					
11	I am satisfied with the given right to put forward my opinions.					

12	I am satisfied with the leaders in my workplace as positive role models.					
13	I am satisfied with the present performance appraisal policy of the hospital.					
14	I am happy with the recognition and rewards for my outstanding works and contributions.					
15	I am satisfied and I think I've been awarded right set of duties, as per my ability.					
16	I am satisfied and able to maintain a healthy balance between work and family life.					
17	Fulfilling my responsibilities give me a feeling of satisfaction and personal achievement.					
18	I am satisfied with the leave policy of the hospital.					
19	I am satisfied by the employee assistance policy (e.g. - lunch and transport etc.) support of the hospital.					
20	I am satisfied with long term benefit and insurance policies of the hospital.					
21	I am satisfied by the daily routines I am working on regularly					
22	I do not feel stressed in my job					
23	I am growing professionally since I started working here.					
24	I am comfortable with the daily routines workload and the quality of the result is assured.					
25	I am comfortable with the planned competency assessment result carried on yearly in a regular manner.					
26	I am comfortable with my act in the laboratory in a professional manner.					

9.2. Information Sheet

Addis Ababa University Medical Faculty, School of Medical Laboratory Sciences. Dear Participant, my name is Tesfaye Mekonnen, Post graduate student of Addis Ababa University, School of Medical Laboratory Sciences; I am going to conduct a study on laboratory professionals' job satisfaction level and distribute checklist to laboratory professionals working in Addis Ababa government hospitals laboratory. The objective of this study is to collect contemporary information on the job satisfaction level of laboratory professionals working in all governmental hospitals in Addis Ababa. The information you provide will be used as an input for further detailed study in the same or related topics in Addis Ababa University or other teaching Universities. The study will identify gaps and challenges and provide recommendations for proper intervention to the upper management of the hospitals that the study will be conducted for future improvement in the management of laboratory professionals. If you decide to participate, I will guarantee that there is no any influence related to the study but you are kindly requested to provide all relevant information based on the checklist. We cannot guarantee, however, that you will receive any benefits from this study. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Your name will not be written on the questionnaire or be kept in any other records. Your participation is voluntary and you are free to withdraw your consent and to discontinue participation at any time without consequence. Your participation or not, do not have any influence for your position or responsibilities in your health facility. The interview may take about 30-40 minutes. For the successes of our study, you are kindly requested to respond genuinely and voluntarily. Your signature below indicates that you have read the information above and have decided to participate in the study.

Thank you for your participation; Contact address of PI, 0911650163.

9.3. Consent form in English

I_____ here by giving my consent to provide accurate

Information about the job level satisfaction status based on the checklist provided to my hospital laboratory professionals, as I am one of the participants. I understand there is no problem within my position in the health facility by participating in this assessment at the beginning as well as at the end of the study. I believe that the result of the study will help to recommend possible interventions to elevate laboratory professional's job satisfaction under contemporary situations in the health facilities. The improvement recommendation will be based on the findings and recommendations of the study and it can be implemented to the participant laboratories primarily and to the nation in general.

Participants name:-_____Signature_____ Date_____

9.4. Declaration of the Author

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: Tesfaye Mekonnen

Signature _____

Place_____

Date of submission _____

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

Name: Tedla Mindaye (B.Sc., M.Sc., PhD fellow)

Signature _____

Place _____

Date of submission _____