ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

DEPARTMENT OF MEDICAL LABORATORY SCIENCES

LEVEL OF HOUSEHOLD SATISFACTION IN COMMUNITY BAESD HEALTH INSURANCE BENEFICIARES ON MEDICAL LABORATORY SERVICES AND ITS ASSOCIATED FACTORS IN SELECTED HEALTH CENTER ADDIS ABABA ,

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Research Project Submission Form

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Abbreviation/Acronym

CBHI - Community Based health Insurance

FMOH - Federal Ministry of Health

HSFR - Health Sectors Financing Reform

OOP - Out of Pocket Payment

SNNPR - Southern nation nationality and peoples

UHC - Universal Health Coverage

Abstract

Background: Community-based health insurance (CBHI) scheme are emerging and growing tool for providing financial protection to deprived individuals against health-related events. Community based health insurance an emerging alternatives to increase primary health care accesses. There is an increasing interest in the role of CBHI scheme in improving equity and access to essential health care of the poor society's particularly informal sector worker. On CBHI benefit package including both outpatient and in-patient services utilization at public facilities, enrolled household may not seek care in private health facilities unless a particular services or drug is unavailable at public health facilities. The scheme exclude treatment abroad and treatment with large cosmetics value such as artificial teeth and plastic surgery. The referral procedure requires members should be to visit health centers before they may be refer to hospital (district or regional). Those who do not follow this referral procedure must need to cover half cost of their medical treatment

Objective: To assess the level of household satisfaction in community based health insurance beneficiaries on medical laboratory services and associated factors in selected health center, Addis Ababa Ethiopia December 2019 to February 2020 G.C.

Methods: Cross sectional study was conducted by using both quantitative and qualitative data collection methods data was collected by structured questionnaire. Descriptive statistics, bivariate and multivariable logistic regression analyses was performed. A 5-point Likert scale with 1 and 5 indicating the lowest and highest levels of satisfaction, respectively, was used and their weighted average was used to categorize the satisfaction level of the patients. Chi square test was used (taking $P<0.05$ as the statistically significant level) to find out if any association existed between the level of satisfaction and different attributes. Data were analyzed using SPSS version 22.

Results: Among the 366 CHBI beneficiaries, 194(53%%) were satisfied, 111(30.3%%) were Neutral and 61(16.7%%) were dissatisfied with general Laboratory service provided at selected health center in Addis Ababa. There was no significant association between socio-demographic characteristics and level of satisfaction of patients (P- value < 0.05) In Likert Scale, the overall mean rate of satisfaction of patients with laboratory services selected health center was 3.5 out of the 5 points. The lowest mean rating of satisfaction were given availability of

service provider explained about diagnostic test during sample collection and Cleanliness and comfort of the latrine of 2.79 and 2.96 respectively.

Conclusion: The overall Household's satisfaction in CBHI beneficiaries on medical laboratory service in selected health centers in Addis Ababa was moderate.

The level of satisfaction of the patients was no statistically significant association by age, sex, educational level, marital status and religion. The availability of service provider explained about diagnostic tests during sample collection ,cleanness and comfort of the latrine, extra payment for laboratory testes out of the health center, interruption of laboratory test services due to electricity and water unavailability also shortage of fuel and lack maintenance for the generator and insufficient waiting area also unavailability of educating and entertaining materials was the main cause of low rating in the overall level of satisfaction in CBHL beneficiaries.

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Key words: - community based health insurance, household satisfaction, laboratory service

1. Introduction

1.1 Background

World Health Organization has recommended that all United Nations members achieve universal health coverage (UHC) status by 2030 as a part of the recent sustainable development goals, as half of the world population still unable to obtain essential health services. According to the UHC scheme, all individuals and communities who need health service should receive them without suffering financial hardship (1).

In the developing countries people faced a considerable challenge in financial health care. Public services are unavailable and unaffordable to the majority of poor people in the difficulty to get those services in those countries. Millions of people in the developing country still suffer and die from health related conditions for which effective but under-utilized interventions exist (2).

In those lower socio economic groups' society out –of- pocket payment for medical expenditure results massive financial barriers and improve shied life in the households. Globally 44 million households (over 150 million people)face financial difficulties due to the health care expenditure consequently, about 25 million households are in deep poverty each years , over 90% of healthcare financial difficulties and their consequence occurred in sub-Saharan Africa countries where resources are limited(3).

Those developing Countries should reduce direct payments of health care by introducing health insurance scheme and health insurance can be complementary or alternative source of health care finance that has been implemented in those poor countries(4). In general different health insurance can be introduced for pre-payment and universal coverage. Many developed countries use tax based system and social health insurance systems (5).

Community-based health insurance (CBHI) scheme are emerging and growing tool for providing financial protection to deprived individuals against health-related events (6). Community based health insurance an emerging alternatives to increase primary health care accesses. There is an increasing interest in the role of CBHI scheme in improving equity and access to essential health care of the poor societies particularly informal sector workers(7).

In June 2011, as part of its health sectors financing reform (HSFR) initiatives, the Ethiopian government launched a pilot CBHI scheme in 13 district in four main regions(Tigray ,Amhara,

Oromia and SNNPS) of the country(8) . Although initially the plan was launch to the pilot scheme in three districts finally an additional district in Oromia region volunteered to join the pilot scheme and was included. Regional administrative bodies selected these districts based on directives provide by the ministry of health (FMOH) the selection criteria was required that the district fulfills five conditions while in the practical selection was based on two conditions: understanding of HSFRs and geographical accessibility of health centers which is located to the main road (9).

On CBHI benefit package including both outpatient and in-patient services utilization at public facilities, enrolled household may not seek care in private health facilities unless a particular services or drug is unavailable at public health facilities. The scheme exclude treatment abroad and treatment with large cosmetics value such as artificial teeth and plastic surgery. The referral procedure requires members should be to visit health centers before they may be refer to hospital (district or regional). Those who do not follow this referral procedure must need to cover half cost of their medical treatment (10).

CBHI beneficiaries' satisfaction is an important indicator of health care quality and often associated with greater adherence to medical technology, health services utilization and health outcomes in the community based health insurance program. One of the measurements to identify the quality delivery of medical laboratory services for clients is by assessing the customer satisfaction has a great roll. Furthermore client experience and opinion are very crucial for improving health care services, shaping health polices and providing feedback on the quality, availability and responsiveness of medical laboratory services (11).

1.2 Statement of the problem

The Healthcare Financing Strategy of Bangladesh emphasized the community-based health insurance, micro health insurance or other innovative initiatives as forms of social protection which are being tested in different parts of the country and those are still in their early stage of implementation. However, none of the studies focused on benefit packages as well as client experiences and satisfactions toward health care services organized by this scheme although clients' satisfactions are as important measures of health system performance. Patient satisfaction is an important indicator of health care quality and often associated with greater adherence to medical technology, health service utilization, and health outcomes (12).

Already there has been insufficient knowledge and awareness of the health insurance activities by those enrolled in the scheme. Complaints have arisen where providers denied enrollees their full entitlements and some providers have charged additional fees on the pretext of non-inclusion of the service in the benefit package. Again, Insured-persons have complained of poor attitude and behavior of service providers operating in the health insurance scheme. Assessing the appropriateness of care and clients satisfaction is crucial to have assured the continuous attractiveness of the care contracted (13).

An absence of any form of health insurance increases the risk of poverty due to high health care related costs. As the result, households may leave illness untreated or opportunity for the use of poor quality healthcare or self-administered medication (14).

The health care service scenario in Ethiopia is expected to evolve into a more developed stage, the laboratory sector being the main focus. Considering 70% of all medical decisions are based on laboratory results, more emphasis needs to be given on patient satisfaction as this is an important consideration for the assessment of the laboratory services. In the face of increasing demand and resource constraints, the challenge that exists today is to reach the whole population with adequate health services and ensure their utilization. The problem with health care providers and programs in developing countries is that they have overwhelming emphasis on quantitative aspect of service delivered, which means that, , we neglect the concept of quality of care, which is also a right of clients.(15).

The satisfaction of customers in the study done in Nekemete hospital on CBHI overall services delivery and the auteurs concluded that more and more work is needed in the laboratories services to the improvement for the quality services and to satisfy the clients by doing research on the specific areas to roll out the specific problem like this study focus on the laboratory services. (23)

1.3 Significance of the study

This study will be an instrumental in helping government agencies to identify target groups, clarify objectives, define measures of performance, and develop performance information systems. Supportively, patient satisfaction is a dominant concern that is intertwined with strategic health services decision.

This study also tried to measure the degree of client satisfaction towards medical laboratory services based on their experiences in utilizing medical laboratory services and factors associated with the satisfaction which will serve as the future reference point to implement quality improvement initiatives of community based health insurance program similar to country context.

2. Literature review

According to WHO report 60 % of countries with incomes below $1000 per capita, OOP spending constitutes over 40 % of total public healthcare expenditure .About 1.3 billion people on very low incomes still lack access to effective and affordable Laboratory Services, drugs, surgeries, and other interventions due to weaknesses in health financing (16).

Community based health insurance have the following characteristics which is must be voluntary membership, a non-profitable objective, they are linked the health care provider ,the pool risk and underlining ethics of mutual aid trust enrollment and solidarity(17).

Study done Bangladeshi showed that participants those who are involved in the research on satisfaction reported 68% were very satisfied with laboratory diagnostic services as they believed that service provider or community based health service explained about diagnostics test properly, more than 50% of clients were rarely satisfied with the friendly behavior of service provider and staff, confidentiality of patient information ,facility evolvement and about comprehensive health care service provide by the benefit packages(18).

Another study done in India showed that participant's on laboratory services somewhat satisfactory as only 15.77% were not satisfied with service level. But most of the patient were unsatisfied with biochemistry laboratory services as facilities for advanced biochemical investigations like antibody detection not available in the department.46% were referred to other private facilities for investigation, and 29% are reported problem with timely delivery of investigation reports (19).

Another study done among insured and uninsured children in Nigeria reported that 42.1% were more satisfied according to the study a clients were live inside city have were lower satisfied (58%) than who were live outside the city (60%), In this study laboratory services are less satisfaction among the study population(20) .also another study in Nigeria age was associated with community based health insurance satisfaction which is older clients more satisfied with service provision than younger (21).

Rwanda is one of few African countries to implement the CBHI program as integral part of its National healthcare financing system. The country started to implement the program, locally Referred to as Mutuelle de santé, in 2004 and reported that 86% of clients were satisfied according to the study (22).

A study done in Tanzania showed that the main compliant reported on the laboratory service were: long waiting time for result notification, privacy and timely instructions. In addition to this level of privacy in the consultation room was described as unsatisfactory by 24.1% of clients (23).

Another study done in Egypt respondents was satisfied with the availability of laboratory tests. However they were dissatisfied with explanation of phlebotomy caution by the phlebotomists (24).

In Ethiopia due to the limited access to well-developed health insurance system, about 80% of private health care expenditure in Ethiopia is via out of pocket and only 1.5 % of private health care expenditure is covered by private insurance institutions (25).

To overcome financial hardships associated with out-of-pocket payments, the Ethiopian Government has introduced two types of health insurance schemes since 2010.The first Kind is CBHI and the other one is social health insurance (SHI).The SHI intends to cover 10.46% of the population who are engaged in formal sectors. CBHI, on the other hand, intends to cover 83.6% of the populations of Ethiopia who are engaged in the informal sectors (26).

Another study done on evaluating a community based health insurance scheme in rural Ethiopia stated that CBHI scheme are consider useful in addressing this problem by pooling risk and resource promised better access to health care and risk protection for poor households against the cost of illness (27).

In wolaita Zone which is located the southern government of Ethiopia study shows reveled that over all house hold satisfaction with CBHI was 91.38%, moreover there was a significance association between health services provision and CBHI members' satisfaction scores. For instance house hold heads that strong disagreed with laboratory services provision and an average 0.878 decrease in CBHI satisfaction scores compared to households that strong agreed. CBHI process and management related factors also significant association with satisfaction (28).

Another study on Satisfaction rate of patient with medical laboratory services in Nekemet which is located the western government of Ethiopia in Nekemet hospital stated that 60.4% were satisfied, 17% were neutral and 21.8% were dissatisfied The mean rate of satisfaction for different aspects of laboratory services ranged from 2.15 to3.82. The lowest mean rating of satisfaction were given for cleanness of latrine and location of the laboratory in the hospital with mean rating of 2.15 and 2.17 respectively. Higher mean rating of satisfaction was obtained for the language the clinical laboratory workers use (3.82) and the presence of waiting place nearby laboratory building in the Hospital (3.72) as indicated in (29).

In Tehuledere District Wello which is located the northern government of Ethiopia study on Design and implementation of community based health insurance in the study was most respondents were male (77%), majority (46%) respondents were with age group of 36-50, and significant majority (94.25%) belongs to the same religious category (Muslim), among the respondents, most of them (87.5%) are married. Regarding family size, half of respondents do have family size of 4-5 members and more than half respondents can't read and write. Moreover, nearly half (46.2%) belongs to low income category (30).

CBHI satisfaction with laboratory services in selected government Hospitals, Eastern Ethiopia, revealed that the mean rating values ranged from 2.93 (±1.67) to 4.78 (±0.6) out of a possible 5 Likert scale. The Likert scale results of patient satisfaction of the laboratory Services in selected governmental hospitals, Sidamma zone, southern Ethiopia indicated that the mean rating values ranged from 3.07 (±0.96) to 4.25 (±0.56) (31).

Other auteurs studied in Tikur Anbesa referral hospital in the capital city of Addis Ababa, Ethiopia shows that the overall level of patient satisfaction towards clinical laboratory services was 59.7% with the percentage of 100. Among the different indicators patient were highly satisfied with the cleanness of facility (82%), maintenance of privacy and confidentiality (83.2%), the cost of laboratory services (86.5%).While they were dissatisfied with the location of the laboratory (56%), latrine accessibility (58.4), and latrine cleanness and comfort (32).

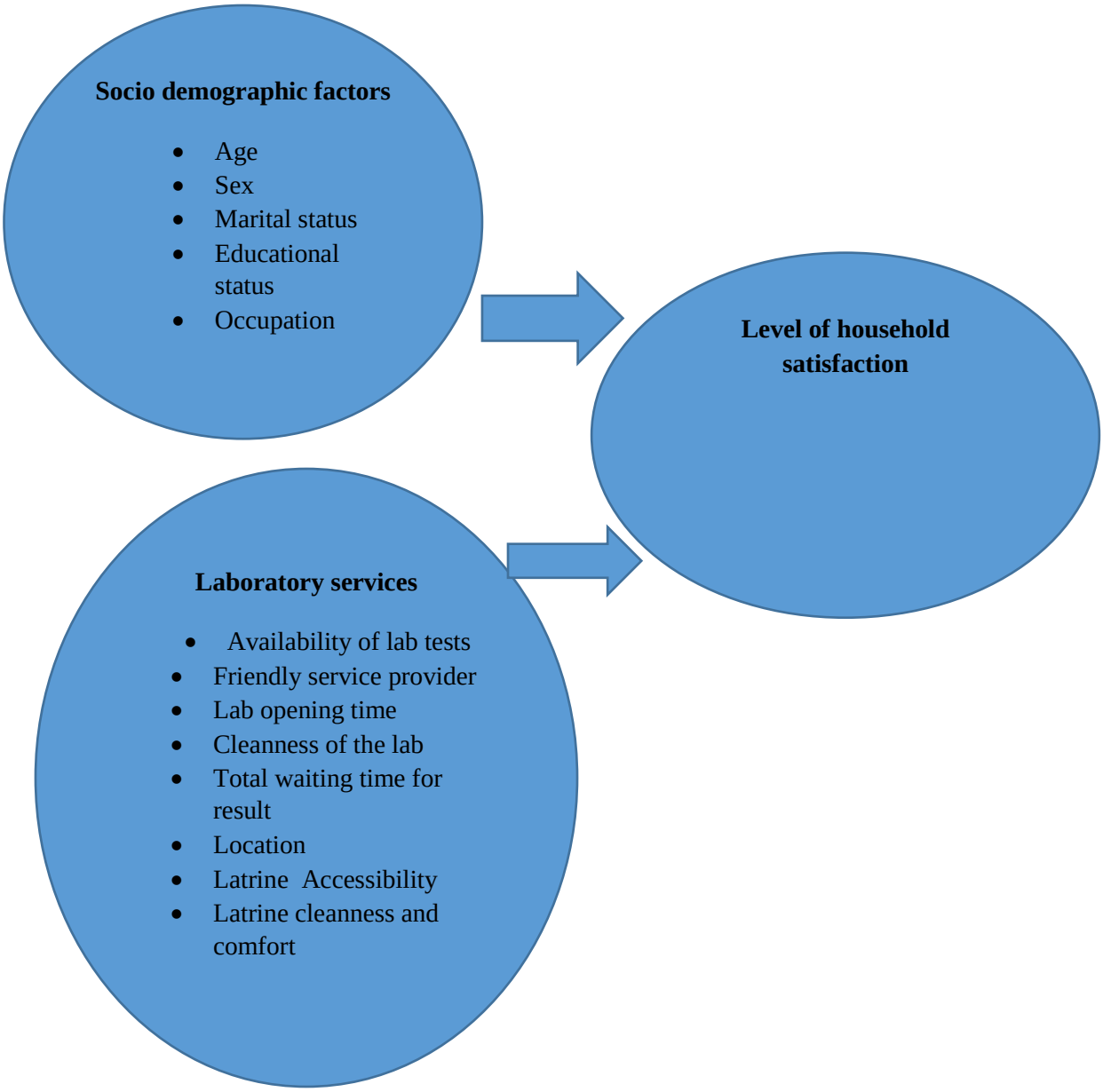

Figure 1: conceptual frame work for level of community based health insurance beneficiaries' satisfaction in CBHI program on medical laboratory services

3. Objective of the study

3.1 General objective

- To assess the level of household satisfaction in community based health insurance beneficiaries on medical laboratory services and associated factors in selected health center, Addis Ababa Ethiopia December 2019 to March 2020 G.C.

3.2 Specific objective

- To assess the level of house hold satisfaction in community based health insurance beneficiaries on medical laboratory services in selected health centers, Addis Ababa Ethiopia.
- To describe factors associated with household satisfaction in community based health insurance beneficiaries on medical laboratory services.

4. Materials and method

4.1 Study area

The study was conducted in two selected health centers in Addis Ababa those are Felege melese health center and Ras emeru health center. Those health centers are selected randomly from model health centers in the city and also in the sub city based on the performance on community based health insurance program, number of clients members in this program and availability of sustainable laboratory services, those health centers selected from deferent sub city which makes the data was representative. Felege melese health center is found in Addis ketema subcity located around pastor that severs 31370 populations. These health center starts community based health insurance program since September 2019G.C that incorporates 4474 household in this program and Ras emeru health center is found in Arada subcity located around gojam bereneda that severs 30062 populations. These health center starts community based health insurance program since September 2019G.C that incorporates 3995 household in this program

4.2 Study Design and period

Facility Based cross-sectional study was conduct from December 2019 to March 2020 G.C, at Felege melese and Ras emeru health centers which are located in Addis Ababa, the capital city of Ethiopia.

4.3 Population

All Household members using in Ras Emeru health center and Felege Melese heath center which is located in Addis Ababa, the capital city of Ethiopia.

4.4 Source of population

All Household beneficiaries in health centers which are getting community based health insurance in Addis Ababa, the capital city of Ethiopia.

4.5 Study population

In the Selected health centers household beneficiaries who are using community based health insurance, getting laboratory services at least three times since this program was started and willing to participate in Addis Ababa, the capital city of Ethiopia.

4.6 Inclusion and Exclusion criteria

4.6.1 Inclusion criteria

The Household beneficiaries at least attending three attachments on the community based health insurance program and getting medical laboratory services at selected health centers in Addis Ababa.

4.6.2 Exclusion criteria

The household beneficiaries who are not member of the community based health insurance.

4.7 Sample size

Sample size is calculated using single proportion with the following formula and assumptions.

$$n = \frac{[z\alpha/2^2 \; p(1-P)]}{d^2}$$

Equation 1: Sample size

The sample size was determined by using single proportion and assuming the proportion is 50 % most of the research done overall satisfaction of the households in CBHI not specifically the satisfaction of the household on community based health insurance in medical laboratory service and with 5% marginal error and 95% confidence interval of certainty (alpha = 0.05). Based on this assumption, the actual sample size for the study is computed using one-sample population proportion formula as indicated below. Where: n = Sample size z = critical value 1.96 p = assume stabilized adherence prevalence rate 50% d = precision (marginal error) = 0.05 Thus the sample size is n = (1.96)2 x 0.5(1-0.5) 0.052 = 384 Since N: 6433 which is <10,000 we use nf=n/1+1/N; 384+384/1+1/6433= 366 so my sample size is **366**

4.8 Sampling technique

There are seventeen health centers which conducted community based health insurance in Addis Ababa since starting from September 2019. Considering the population of the health centers are homogeneous and taken as a cluster. From those health centers two health centers are selected randomly. And the sample was selected from the two health center therefore first the total sample size was be equally divided in to two for the two health center. Then by using quota

sampling methods those clients getting service at the above mentioned health center laboratory department was included in the study with in the study period until the total sample size was be fulfilled.

4.9 Variables

4.9.1Dependent variable

- ✓ Level of satisfaction of the households

4.9.2Independent variable

- ✓ Socio-demographic characteristics of the households
- ✓ Laboratory services provision-related determinants of CBHI members' satisfaction

4.11 Data collection methods

Data was collected by face to face interview through using structured pre-tested interviewer-administered questionnaire done in kolefe heath center . One day prior to the beginning of actual data collection. the data collectors (2 medical laboratory technicians) who work in selected health centers will be trained in order to have a common understanding on each question. During the training, the importance of obtaining the respondents verbal consent and respecting their rights to respond and not to respond to any part of a question will be emphasized in addition to ensuring the respondents privacy and confidentiality. And also the data collection will be supervised by the principal investigator; the questioners was prepared in English and translated to local language Amharic and the back to English to verify the translation. Beside their socio-demographic characteristics study participants asked to rate each aspects of their laboratory services on a five-point scales (very dissatisfied, dissatisfied, Neutral, Satisfied, and very satisfied).

A 5-point Likert scale rating of very dissatisfied (1 point), dissatisfied (2 points), neutral (3 points), satisfied (4 points), and very satisfied (5 points) was used. To calculate the level of patient satisfaction on different laboratory services, very dissatisfied and dissatisfied were considered as dissatisfied and satisfied and very satisfied were considered as satisfied. Patients with neutral rating responses were excluded. The percentage satisfaction or dissatisfaction was calculated by dividing the number of satisfied or dissatisfied responses by the total number of respondents excluding neutral response ratings, respectively.

The overall rate of satisfaction by Likert scale was calculated as (number of very satisfied rating ×5) + (number of satisfied rating ×4) + (number of neutral rating ×3) + (number of dissatisfied rating ×2) + (number of very dissatisfied rating ×1) divided by the total number of ratings (1–5) for the specific laboratory service. Association of the variables with level of satisfactions on laboratory services was checked by using chi-square test. P-value >0.05 was considered as statistically significant.

4.12 Data analysis methods

After the data collection was finalized, data entry will be made by SPSS version 22 then the data was coded, leaned and analysis was made by using p.value, descriptive analysis, and ordinary regression. Finally the analyzed data was described by using tables, pie chart and lists accordingly. After accurate handling of each data, interpretation was going on using proportion or percentage.

4.13 Data quality assurance plan

In order to enhance the validity of the data, pre-test of the data collection tools was conducted before starting the actual data collection process. During actual data collection process, adequate training was made for data collectors and also supervision. After the data collection was finalized,

The quality of data entry was assured by using double data entry, Data analysis and interpretations was assured by using appropriate statistical tools or methods.

4.13 Ethical consideration

Ethical approval was obtained from Addis Ababa university department of medical laboratory science and permission was obtained from each selected health centers. Informed consent was obtained from each of the study participant after explanations of the importance of the study. They were having all the right not to be included in the study or not to answer any questions or withdraw anytime they want. They were also being informed that the data they provided was strictly confidential and privacy of the study participants was highly maintained.

4.14 Dissemination of result

The findings of this study will submitted to the Addis Ababa university department of medical laboratory science. Then, it will be in medical laboratory science department in the presence of an advisor and evaluator. The copy of the result will be shared to each health centers included in the study and the city's Health Bureau. Finally, it will be published in peer reviewed journals.

5. Results

1. Socio-demographic characteristics of the participants

A total of 366 community based health insurance beneficiaries were enrolled in the study and the response rate was 100%. 226(61.7%) of respondents were female, , The majority 130 (35.5%) of the participants lie within the age group of 35–45 years, 120(32.8%) of the participants lie in the age group 25-34 years followed by 56(15.3) people in the age group 18–24 years, and 49 (13.4%) in the age group 45–54 years. The smaller group 11(3%) consists of those aged >55years, Also this table showed that most of the respondents had attended at least secondary school education 112(30.6%) and About 199 (54.4%) of them were Orthodox Christians and 205(56%) were married. (Table1).

Table 1 socio-demographic characteristics of respondents on patient satisfaction with clinical laboratory services received at, selected health center Addis Ababa, 2020 (n=366)

No	Variable	Frequency	Percentage
1	Age		
	18-24	56	15.3%
	25-34	120	32.8%
	35-44	130	35,5%
	45-54	49	13.4%
	>55	11	3.0%
2	Sex		
	Male	140	38.3%
	Female	226	61.7%
3	Marital status		
	Married	205	56.0%
	Single	147	40.2%
	Divorced	14	3.8%
4	Educational Status		
	Illiterate	73	19.9%
	Read and write	73	19.9%
	Primary education	56	15.3%
	Secondary school	112	30.6%
	College diploma/Degree	52	14.2%
5	Religion		
	Orthodox	199	54.4%
	Muslim	127	34.7%
	Protestant	33	9.0%
	0thers	7	1.9%

2. Satisfaction level of patient on clinical Laboratory Services

Of 366 respondents, 194(53%) were satisfied, 111(30.3%) were neutral and 61(16.7%) were dissatisfied with general Laboratory service provided at selected health center(Figure 1)

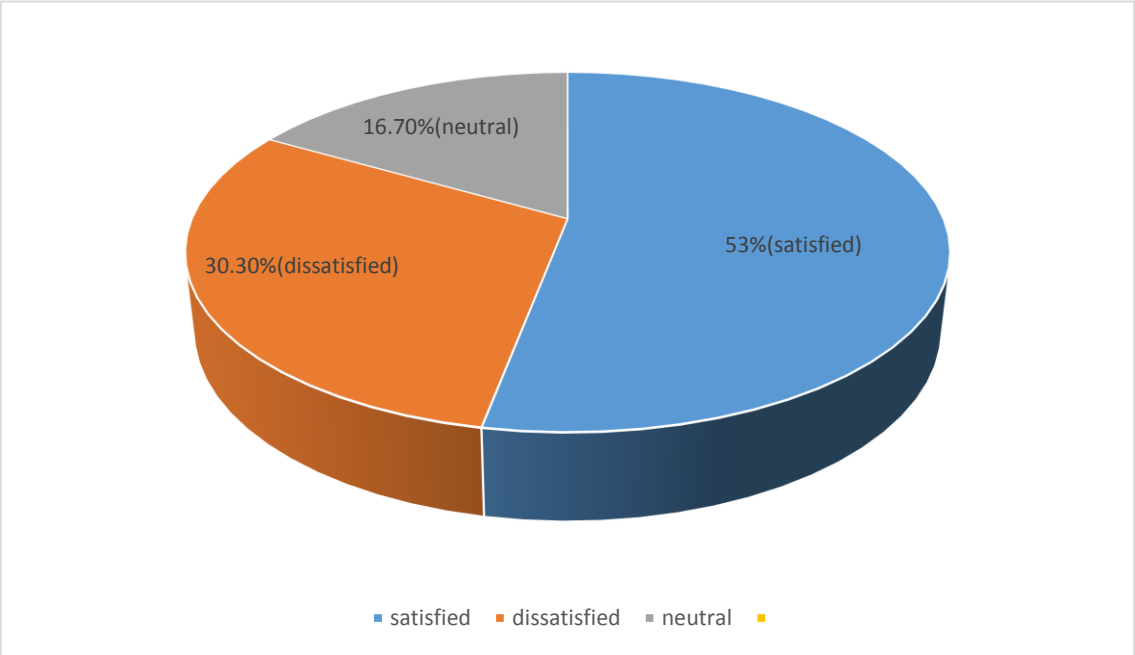

Figure 2: Level of household beneficiaries satisfaction on laboratory services at selected health center 2020(n=366)

The relationship between the CBHI beneficiary's level of satisfaction and associated factors

In Likert Scale, the overall mean rate of satisfaction of patients by laboratory services at Addis Ababa in selected health centers was 3.50. The mean rate of satisfaction for different aspects of laboratory services ranged from 2.79 to 3.80. The lowest mean rating of satisfaction were given for the availability of service provider explained about diagnostic test during sample collection, Cleanliness and comfort of the latrine in the health centers with mean rating of 2.79 and 2.96 respectively. Higher mean rating of satisfaction was obtained for laboratory professional physical appearance (3.80), confidentiality (3.77), Cleanliness of the laboratory (3.77) and location of the laboratory (3.75) as indicated in (Table 2)

Table -2:-CBHI beneficiaries ratings of satisfaction with different aspects of clinical laboratory services given at Addis Ababa in selected health centers, 2020, (n=366).

	Variable	Strongly dissatisfied	Dissatisfied	Neutral	satisfied	Strongly satisfied	Mean rating	Satisfaction
1	Are you happy with opening time	20(5.5%)	25(6.8%)	183(50%)	121(33.1%)	17(4.6%)	3.25	138(37.7%)
2	The availability of the requested lab test	12(3.3%)	35(9.6%)	198(54.1%)	106(29%)	15(4.1%)	3.21	121(33.1%)
3	Service provider friendly	13(3.6%)	42(11.5%)	114(31.1%)	168(45.9%)	29(7.9&)	3.43	197(53.8%)
4	Location of the laboratory	9(2.5%)	17(4.6%)	68(18.6%)	233(63.7%)	39(10.7%)	3.75	272(74.4%)
5	Cleanliness of the laboratory	6(1.6%)	10(2.7%)	93(25.4%)	212(57.9%)	45(12.3%)	3.77	257(70.2%)
6	The total waiting time to get laboratory result	35(9.6%)	63(17.2%)	140(38.3%)	106(29%)	22(6%)	3.05	128(35%)
7	Latrine accessibility	33(9%)	46(12.6%)	144(39.3%)	129(35.2%)	14(3.8%)	3.12	143(39%)
8	Cleanliness and comfort of the latrine	42(11.5%)	65(17.8%)	133(36.3%)	116(31.7%)	10(2.7%)	2.96	126(34.4%)
9	The availability of service provider explained about diagnostic test during sample collection	25(6.8%)	122(33.3%)	134(36.6%)	76(20.8%)	9(2.5%)	2.79	85(23.3%)
10	Cleanliness of blood drawing area	3(0.8%)	16(4.4%)	134(36.6%)	199(54.4%)	14(3.8%)	3.56	213(58.2%)
11	Availability of laboratory staffs on working time	24(6.6%)	38(10.4%)	132(36.1%)	156(42.6%)	16(4.4%)	3.28	172(47%)
12	Laboratory personnel professionals appearance	2(0.5%)	16(4.4%)	66(18%)	252(68.9%)	30(8.2%)	3.80	282(77.1%)
13	keeping patient's privacy of the laboratory professional's	-	26(7.1%)	68(18.6%)	238(65%)	34(9.3%)	3.77	272(74.3%)
14	General satisfaction by the health center laboratory service	17(4.6%)	60(16.4%)	60(16.4%)	140(38.1%)	54(14.9%)	3.50	194(53%)

3. Factors associated with level of patients' satisfaction on CBHI

The results from the cross-tabulations analysis showed that there was no significant relationship Between age, sex, Educational background, marital status, and religion with level of patients' satisfaction laboratory services (Table 3)

Table 3:-Comparisons of overall level of patients satisfaction with clinical laboratory services provided at selected health center and Socio Demographic, 2020. (n=366)

Variables	**Satisfaction no**		**Chi square value**		
	satisfied	**Dissatisfied**	**Df**	**X2**	**p-value**
Age (years)			4	1.639	0.996
18-24	19	30			
25-34	65	45			
35-44	91	25			
45-55	15	9			
>55	4	2			
Sex			3	0.903	0.825
Male	96	21			
Female	98	90			
Marital status			2	0.624	0.732
Married	145	25			
Single	46	83			
Divorced	3	3			
Religion			3	0.765	0.858
Orthodox	149	19			
Muslim	42	62			
Protestant	0	27			
Others	3	3			
Educational status			4	1.944	0.746
Illiterate	51	7			
Can read and write	52	12			
Elementary school	29	18			
Secondary school	51	45			
College diploma/degree	11	29			

4. Qualitative result

In addition respondents were answer the question and compiled the answered question based on similarity in a group form as below. The respondents' ages are from 18 to 45 years. Respondent's educational status varied from illiterates to college diploma or degree holders, varied sex and also has varied religion.

The question was: What challenge did you faced while getting laboratory service other than the above mentioned?

Fifties respondents answered as" the expense of extra payment for laboratory testing to private laboratories is more than the total expense of CBHI annual payment because of unavailability of testes in the health center laboratory, Nineteen respondents answer "there is insufficient waiting area in the health centers for the purpose of give a sample and receive laboratory results and also no health educating and entertaining materials in the area" and Eighteen respondents answered "there is interruption of laboratory services due to light, water and also shortage of fuel and maintenance of generator"

6. Discussion

Establishing health insurance services is gaining traction in resource-limited countries to improve health care utilization and ensure financial protection for households to mitigate against poverty. Patients are the ultimate customers of laboratory medicine and the importance of customer satisfaction in driving quality improvement has been increasing in laboratory medicine, Satisfaction of clients is one of the outcome measures for health care services and it serves as a useful quality improvement tool, required by most clinical laboratories (11).

This study has revealed that the overall satisfaction level of the CBHI beneficiaries with clinical laboratory services rendered at selected health centers in Addis Ababa was 53%, however this is lower than reports from other studies conducted in wolaita Zone (91.38%), and Nekemet (60.4%), (28 and 29). This is due to the excess flow of patient in the selected health centers laboratory leads the professionals was not capable to delivery of standard and quality services for the beneficiaries and understanding of the beneficiaries on the new program which is CBHI in the detailed explanation of the overall benefits of the program was not fully covered by the health centers laboratory services was the main reasons for lower satisfaction. However, this finding was higher than the findings in southern Ethiopia Sidama zone Hospitals, with patient satisfaction levels of 51.7% (31).

The mean rating of satisfactions for different aspects of clinical laboratory services in Addis Ababa at selected health centers laboratory services ranged from 2.79 to 3.80. This range was lower as compared with some studies done in eastern Ethiopia (31). This could be due to differences in the living place life style for satisfaction and also might be the patients had more comorbid disease in Addis Ababa have a chance to pay extra payment for private diagnostic centers which is not available tests in the health center laboratory.

From different laboratory service given in Addis Ababa at selected health centers, the lowest mean rating of satisfaction were given for the availability of service provider explained about diagnostic test during sample collection, Cleanliness and comfort of the latrine in the health centers with mean rating of 2.79 and 2.96 respectively.

Higher mean rating of satisfaction was obtained for laboratory professional physical appearance (3.80), confidentiality (3.77), Cleanliness of the laboratory (3.77) and location of the laboratory (3.75) my finding is higher than the finding in Tikur Anbesa (32). However this study done in CHBI Beneficiaries and this may the health centers is newly established building and that is more appropriate designed for the location of laboratory and Cleanliness of the laboratory.

The level of satisfaction of the patients was no statistically significant association by age, sex, educational level, marital status and religion and which is similar to the finding by Nekemet referral hospital (29).

The study conducted in Addis Ababa (33) and Debre Markose Northern Ethiopia (34) reported that patients who were able to read and write and who had diplomas and above educational level were less likely to be satisfied with the laboratory service compared to those who cannot able to read and write, However results of this study focused on only CBHI beneficiaries showed that there was no relationship between the educational status of the CBHI beneficiaries and their overall satisfaction with laboratory services this could be due to the fact that most of patients were completing only secondary school; hence there was no difference in their expectations.

Most Study shows that the overall health services delivery the main reason for the low customer satisfaction was laboratory service (13), this study focus on the possible reason on specificity laboratory services which have a great roll to improve the customer satisfaction with standard and quality services in clinical laboratory as well as the overall health services and this will increase the satisfaction of CBHI beneficiaries.

About 18 customers had unsatisfied on availability of soap and insufficient water availability in the toilet area the problem and this may lead the customers for different communicable diseases.

According to my research finding interruption of laboratory services due to electricity and water interruption fuel and maintenance of generator and insufficient waiting area also shortage of educating and entertaining materials have great roll to decrease the satisfaction of CBHI beneficiaries on the laboratory services.

7. Conclusion

The overall Households satisfaction in CBHI beneficiaries on medical laboratory service done in selected health centers in Addis Ababa was moderate

The level of satisfaction of the patients was no statistically significant association by age, sex, educational level, marital status and religion.

The availability of service provider explained about diagnostic tests during sample collection ,cleanness and comfort of the latrine, extra payment for laboratory testes out of the health center, interruption of laboratory test services due to electricity and water unavailability also shortage of fuel and lack maintenance for the generator and insufficient waiting area also unavailability of educating and entertaining materials was the main cause of low rating in the overall level of satisfaction in CBHL beneficiaries.

8. Study limitation

This study only focused on the demand side point of view (CBHI beneficiaries who enrolled), and the supply side view (provider side) was not explored and the study did not assess the association between satisfactions toward pre-laboratory services and satisfaction toward clinical laboratory services.

9. Recommendations

The overall recommendation is that selected health centers should strive to maintain the high standard it has in order to keep the CBHI beneficiaries satisfied with the services they receive.

The health centers administrators and laboratory chiefs should work on the enhancement of laboratory services. Health centers administration needs to work with laboratory units in designing laboratory infrastructure such as waiting area and maintenance of generators. And also in the latrine areas should solve the problem mentioned by CBHI beneficiaries.

Addis Ababa Health Bureau should work on it to solve the complained on the extra payment for laboratory tests out of health centers whether by buildup the test capacity of the laboratory and man power of the health centers staffs and for those sophisticated testes will signed make a linkage with the referral laboratory by minimizing the tests cost for those CBHI beneficiaries even if it is possible from the private laboratories by signed the agreement will minimize the cost for the beneficiaries.

A specific recommendation relates to the need to encourage the staff to treat patients with courtesy and respect in line with the Health Sector Reforms and patient-centered quality assurance. Allocate adequate man power to avoid delays and overcrowding. Lastly it a concerted effort to improve the explanation about diagnostic tests during sample collection and cleanliness, comfort also accessibility of the latrines is needed.

The Addis Ababa city administration CBHI office should work with the health centers to improve the patient satisfaction based on the findings mentioned on this paper by minimizing the extra-payment for laboratory tests by making agreements with diagnostic centers to discount for CBHI members' and also build up the capacity of health center laboratories.

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Annex I: Information sheet. (English Version)

Title of the Research Project: To assess level of household satisfaction in community based health insurance beneficiaries on medical laboratory services and associated factors in selected health centers of Addis Ababa.

Principal Investigator: Dawit Gashaw (BSc, MSc candidate)

Name of the Organization: Addis Ababa University College of Health Sciences Department of medical laboratory science.

Introduction

You are invited to participate as a study subject in a research conducted by MSc candidate, from Addis Ababa University. Your participation is voluntary. The research teams will include one principal investigator, two advisors; from Addis Ababa University clinical laboratory management department. Please take as much time as you need to read or listen to the information sheet.

Purpose of the Research Project

I am asking you to take part in this study because I will try to assess level of household satisfaction in community based health insurance program on medical laboratory services and associated factors in selected health centers of Addis Ababa.

Procedures and the expected participation: I invite you to participate in this project. If you are willing to participate in this project you need to understand and sign the agreement form. Then, you will be interviewed by the data collectors. You do not need to tell your name or to give your telephone number to the data collector and all your responses and the results obtained will be kept confidentially by using coding system whereby no one will have access to your response.

Potential risks and Discomforts

By participating in this research project, you may fill that it has some discomfort especially on wasting time. I hope you will participate in the study for the sake of the benefit of the research result. There is no risk in participating in this research project

Confidentiality

I respect your privacy and confidentiality. Any information that identifies you will not be shared with anyone else outside the study team. The information we will collect from you as part of the study will be kept in a locked file cabinet, or be protected by a password on the computer only accessible to personnel involved in the study. There is no sensitive issue that you will be asked related with your social desirability but any information that is obtained in connection with this study and that can be identified with you will remain confidential.

Potential benefits to subjects and/or to the society

You will not receive any payment for your participation in this research study as compensation but your participation likely helps us to meet the research objective. Ultimately, this will help to improve the quality of laboratory services and improve the customer satisfaction.

Participation and Withdrawal from the Study

The participation is voluntary and you have the right not to participate in this study. You can choose not to respond to all questions if you do not want to give your response. You have also full right to withdraw from this study at any time you wish without losing any of your rights.

Contact information

If you have any questions about this study you can contact the following principal investigators and advisors for further information.

Dawit Gashaw Phone: 0911536744 E-mail: dagamemplc@gmail.com

Annex II: consent form: (English version)

Informed consent (study participants)

Name of main researcher: Dawit Gashaw, MLS; AAU.

Advisors/Co-investigators:

Fatuma Hassen (Msc,Phd Fellow)

Alemayehu Nigatu (Msc)

Name of the institute: AAU

Funded by: self

Reviewed by: DREC (AAU)

RESEARCH TITLE: Level of household satisfaction in community based health insurance program on medical laboratory services and associated factors in selected health center, Addis Ababa Ethiopia December 2019 to March 2020

If you agree to take part, please read this form and sign the consent sheets at the end.

I have read, or it was read to me, the information sheet concerning this study and I understand what will be required of me if I take part in the study.

I am aware of the possible risk and benefits of this study.

I know that being in this study is voluntary.

I understand that at any time I may withdraw from this study without giving a reason and without affecting my normal care.

My questions concerning this study have been answered

I know that there is no special payment for being participating in the study.

I agree to take part in this study.

Name: Signature: Date: _____

The participant is unable to sign. As a witness, I confirm that all the information about the study was given and the participant consented to take part.

Signature: Date:

I thank you for consenting to take part in the study

Questionnaire

1. Socio-demographic data

No	Question	Response
101	Age	1.18-24 2. 25-34 3. 35-44 4. 45-54 5. >55
102	Gender	1. Male 2. Female
103	Religion	1. Orthodox Christian 2. Muslim 3. Protestant 4 Other specify _____
104	Marital status	1. Single 2. Married 3. Divorced/widowed
105	Educational level	1. Illiterate. 2. Read and write 3. Elementary education 4. Secondary education 5. College diploma/degree

2. Laboratory services provision-related determinants of CBHI members' satisfaction

No	Question	Response				
		Strongly dissatisfid	Dissatisfid	Neutral	Satisfid	strongly Satisfied
201	The availability of the requested laboratory tests					
202	Services providers friendly					
203	Are you happy with laboratory opening time?					
204	keeping patient's privacy of the laboratory professional's					
205	comfortable with the laboratory setup					
206	Cleanliness of the laboratory					
207	Total waiting time to get laboratory result					
208	The location of the laboratory to patient					
209	Latrine accessibility					
210	Cleanness and comfort of the latrine					
211	The ability of service provider explained about diagnostic test during sample collection					
212	Cleanness of the blood drawing area in the laboratory					
213	Availability of laboratory staff on working hours					
214	Laboratory personnel's professional appearances (neatness, professional dressing)					
215	General satisfaction of laboratory services					
216	What challenge did you faced while getting laboratory service other than the above mentioned?					

Annex III የታካሚዎች የእርካታ መጠን መለኪያ መጠየቅ

የታካሚዎች የእርካታ መጠን መለኪያ መጠየቅ

101. እድሜ .....

102. ሀይማኖት .....

ሀ. ኦርቶዳክስ ለ. ሙስሊም ሐ. ፕሮቴስታነት መ. ሌላ

103. ፆታ

ሀ. ወንድ ለ. ሴት

104. የጋብቻ ሁኔታ

ሀ. ያገባ ለ. ያላገባ ሐ. የፈታ

105. የትምህርተ ደረጃ

ሀ. ማንበብና መፃፍየማይችል ለ. ማንበብና መፃፍ የሚችል ሐ. የመጀመሪያ ደረጃ ትምህርት ያጠናቀቀ

መ. ሁለተኛ ደረጃ ትምህርት ያጠናቀቀ ሠ. ኮሌጅ ዲፕሎማ ወይም ዲግሪ ያጠናቀቀ

2. <u>የላብራቶሪ አገልግሎት ተጠቃሚ የሆኑ ታካሚዎች እርካታ መጠን መገምገሚያ ጥያቄዎች</u>

201. ላብራቶሪው ስራ ወይም የሚከፈትበት ሰአት

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

202.የታዘዙ የላብራቶሪ ምርመራዎችን በጤና ጣቢያው ላብራቶሪ የማግኘት ሁኔታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

203.በላብራቶሪ ያሉ አገልግሎት ሰጪ ባለሙያዎች ለታካሚው የአገልግሎት አሰጣጥ ሁኔታቸው

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

204. የታካሚው ሚስጥር አጠባበቅ ሁኔታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

205. በላብራቶሪው ሚገኝበት ቦታና አቀማመጥ ለታካሚዎች ምቹ መሆን

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

206. በላብራቶሪው የፅዳት ሁኔታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

207. ናሙና ስጥተው ውጤት እከሚወስዱ በቆዩበት ሰአት

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

208. የሽንት ቤት አቅርቦት በቂ መሆን

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

209. የሽንት ቤቱ ላታኪዎች ምቹ መሆኒና የንፅህና ሁኔታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

210. የላብራቶሪ ባለሙያዎች ናሙና በሚወስዱበት ሰአት ስለምርመራዉ እና ስለዊወሰደው ናሙና ለታካሚዎች የመግለፅ ሁኔታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

211. የደም ናሙና መስጫው ቦታ የንፅጎና ሁኔታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

212. የላብራቶሪ ሰራተኞች በስራ ሰአት ተሟልቶ መገኘት

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

213. የላብራቶሪ ባለሙያዎች የደንብ ልብስ መልበስና የልብሳቸው ንፅህና መጠበቅ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

214. አጠቃላይ በላብራቶሪ ላይ ያለ እርካታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

215. በላብራቶሪው አቀማመጥ ሁኔታ ያለ እርካታ

ሀ. በጣም አልረካሁም ሐ መሀከለኛ ነው ሠ በጣም ረክቻለሁ

ለ. አልረካሁም መ ረክቻለሁ

216. ከላይ ከተጠቀሱት ጥያቄዎች ውጪ በላብራቶሪው አገልግሎት ያልረኩበትን ወይም እንዲሻሻል የሚፈልጉትን የጠቁሙ፡፡