

Satisfaction with Laboratory Services and Associated Factors Among Patients in Public Health Centers in Addis Ababa, Ethiopia

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Research Article

Received: 03-Apr-2023,
Manuscript No. JMAHS-23-94084; **Editor assigned:** 05-Apr-2023, Pre QC No. JMAHS-23-94084 (PQ); **Reviewed:** 19-Apr-2023, QC No. JMAHS-23-94084;
Revised: 05-Jun-2023, Manuscript No. JMAHS-23-94084 (R); **Published:** 12-Jun-2023, DOI: 10.4172/2319-9865.12.3.008

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Citation: Dametawe A, et al. Satisfaction with Laboratory Services and Associated Factors Among Patients in Public Health Centers in Addis Ababa, Ethiopia. RRJ Med Health Sci. 2023;12:008.

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ABSTRACT

Background: Patient satisfaction is crucial and commonly used indicator for measuring and determine the level of laboratory service, and the results of this study provide health facilities with research and evidence based laboratory services. Numerous studies in various countries which are conducted in hospitals have shown that patient's satisfaction with laboratory services was low. However, consistent studies on patient satisfaction with laboratory services at the public health centers in Addis Ababa have a limited study, and this study has been conducted in this regard.

Objective: To assess patients satisfaction with laboratory services and associated factors at a health center in Addis Ababa, Ethiopia 2021.

Methods: Institutional based descriptive cross sectional study was conducted from December 10, 2020 to February, 2021. Patients satisfaction with laboratory services were assessed by using a previous similar study interviewer administered questionnaire (64). Statistical analysis was performed by using SPSS version soft 24 software. Bivariate and multivariate logistic regression was used to assess the relationship between dependent and independent variables. P value less than 0.05 was considered to be statistically significant association.

Result: A total of 414 study participants were involved a systematic random sampling technique was used to select study participants in the study, 221 (53.4%) were female. About 37.4% of the respondents were found in the age range of 29-38 years. Majority, 245 (58.9%) of the study participants were found to be satisfied, 135 (32.6%) were dissatisfied whereas 35 (8.5%) were neutral towards clinical laboratory services provided at public health center in Addis Ababa.

Conclusion: Patient satisfaction was good where almost six in every ten patients were satisfied with clinical laboratory services in public health centers in Addis Ababa. Availability of all prescribed and gets the service without direct payment is increased patient satisfaction but waiting for a long

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time to get the service decreases the satisfaction of the patient.

Keywords: Addis Ababa; Public health center; Laboratory service; Patient satisfaction; Multiple logistic regression

ABBREVIATIONS

AOR: Adjusted Odds Ratio; ARM: Annual Review Meeting; CI: Confidence Interval; BPR: Business Process Reengineering; OPD: Outpatient Department; AARHB: Addis Ababa Regional Health Bureau; EPHIT: Ethiopian Public Health Institute Tool; OR: Odds Ratio; PI: Principal Investigator; HC: Health Center; COR: Crudes Odds Ratio; TAT: Turn Around Time; WHO: World Health Organization

INTRODUCTION

Satisfaction is, in fact, a psychological condition that arises from what is expected or not. Stimson and Webb have suggested that satisfaction is related to the perception of the outcome of care and the extent to which it meets patient expectations [1].

Patient satisfaction is a crucial and commonly used indicator for measuring the quality in any health care system. Patient satisfaction has a positive effect on clinical improvement, patient adherence and retention, job satisfaction, and appropriate clinical care by physicians. Measuring and improving customer satisfaction with laboratory services are essential aspects of laboratory medicine management.

Patient satisfaction in laboratory services is measured by the quality and professionalism of the staff, adequate information to collect samples, time to receive laboratory results, availability of prescribed laboratory tests, laboratory room, laboratory room location, toilet availability and access.

Customer satisfaction the provider demonstrates the ability to successfully deliver care that meets the needs and wants of the customer. Several factors affect customer satisfaction in consumer health care services, including customer socio-demographic characteristics, physical health status, customer perceptions, and expectations of a variety of health care services. The overall condition of the health center as well as the overall appearance of the premises affect the overall satisfaction of the client [2].

Measuring the satisfaction of laboratory service users is an indicator of the importance of the quality management system and is required for laboratory quality standards such as ISO 15189: 2012 and ISO17025: 2017, Studies show that satisfied clients receive treatment and counseling and are more likely to return to a health facility and, if necessary, pay for their services. According to the World Bank, studies in developing countries, including Ethiopia, show that customer satisfaction is low.

Various studies have shown that the reasons for dissatisfaction with patients in all hospitals in Ethiopia are the lack of infrastructure and certification systems. Low quality of laboratory services, inconvenience, and accessibility, lack of information. Toilet cleaning, long hours, wrong results, poor manpower management, poor resource supply, lack of

commitment to leadership, weak communication system, and poor quality assurance management system. The lack of required laboratory services and the cost of services [3].

One of the major problems facing our country today is the lack of quality health care and customer satisfaction, which are the top officials and staff in the health system. A satisfied patient recommends the services of a center that expresses satisfaction to four or five people, and the satisfaction complains to twenty or more. Therefore, evaluating customer satisfaction with laboratory services is an important indicator to improve the quality of laboratory services.

As part of this effort, improvements in the Ethiopian health sector have been improved through the implementation of a new concept called SLMTA. There is not enough literature in a series of a laboratory on the implementation of laboratory services in Addis Ababa. In addition to the 100 health centers in Addis Ababa, customer satisfaction is limited to a few health centers and some hospitals to have already been covered by some scholars. Therefore, this work was guided patients to quantify their satisfaction and influence the delivery of appropriate laboratory services at selected and uncovered public health centers in Addis Ababa, Ethiopia [4].

MATERIALS AND METHODS

Setting and procedures

The institutional based cross-sectional study design was conducted in the Addis Ababa public health centers. Thus, study was conducted in 5 sub-cities and 30 health centers. A total of 423 study participant were participated in our study valid response rate of 97.8% [5].

Instruments

The structured questionnaire consisted of four parts:

- **Demographic questionnaire:** The demographic questions included sex, age, educational status, occupational status, and marital status.
- **Socioeconomic factors:** Income of patients.
- **Service related factors:** Types of payment of services, How many times visit the health center, proximity to the health facility, waiting time to get the service, opening and closing hours of the service, needle stick attempted to draw blood, develop bruise, availability of prescribed test.
- **A facility related:** Cleanness of waiting area, location of the laboratory, adequacy of sitting arrangement, cleanliness of the blood drawing area, accessibility of sample collector place, location and cleanness of latrine [6].

Statistical analysis

Data were entered using Epi Info version 7.2 and analyzed using SPSS version 24. Descriptive statistics were computed to describe the data. A 5 point Likert scale rating of very dissatisfied (1 point), dissatisfied (2 points), neutral (3 points), and satisfied (4 points), and very satisfied (5 point) was used (Table 1) [7].

Table 1. Likert scale to evaluate the extent of the level of satisfaction with laboratory services and associated factors among patients at a public health center in Addis Ababa, The mean were interpreted as follow: December 10, 2020–2021.

Value	Rating	Interpretation
5	4.21-5.00	Very satisfaction
4	3.41-4.20	Satisfaction
3	2.61-3.40	Neutral
2	1.81-2.60	Dissatisfaction
1	1.0-1.80	Very dissatisfaction

The use of the liker scale has endeavored in this study to measure the level of satisfaction among laboratory services clients to effectively manage its operation [8].

Satisfaction measures were used for each laboratory:

- Overall mean satisfaction score=(No. of excellent rating × 5)+(No. of good rating × 4)+(No. of average ratings × 3)+(No. of below average ratings × 2)+(No. of poor ratings × 1) for overall satisfaction/total No. of rating (1-5) for overall satisfaction with laboratory services.
- Percentage of excellent or good ratings: (No. of excellent or good ratings for specific laboratory service category × 100)/Total No. of ratings (1–5) for specific laboratory service category.
- Percentage of below average or poor ratings: (No. of below average or poor ratings for specific laboratory service category × 100)/Total No. of Ratings (1–5) for specific laboratory service category [9].

The mean score of satisfaction for each participant was calculated as the average of all satisfaction items. The binary logistic regression model was fitted to identify predictors of patients’ satisfaction with laboratory services. Those variables significant at a p-value of 0.20 in the univariate analysis was included in multiple regression models. A p-value of less than 0.05 was used to determine statistical significance. Adjusted Odds Ratio (AOR) with 95% Confidence Interval (CI) was used to identify factors affecting patient’s satisfaction level of laboratory service [10].

RESULTS

Demographic characteristics

All 414 sampled respondents participated in the study making a 97.8% response rate. The majority in this study were 221 (53.4%) female, the age group between 29-38 which covers 182 (44.0%) and married group 224 (54.1%), and the monthly household income of 5001-7000 Ethiopian birr 100 (35.8%). Also, this table shows that the majority of respondents are from college and above, covering about 170 (41.1%) of the participants, and most of the respondents in the field of occupation were 117 (28.3%) government employees in Table 2 [11].

Table 2. Sociodemographic characteristics of patients attending laboratory services in public health centers in Addis Ababa, Ethiopia, December 10, 2020-2021.

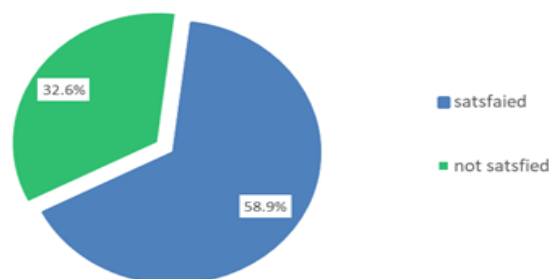
S.No	Variable	Characteristics	Frequency	Percent
1	Sex	Male	193	46.6
		Female	221	53.4
2	Age	19-28	140	33.8
		29-38	182	44
		Above 39	92	22.2
3	Level of education	Primary	106	25.6
		Secondary	138	33.3
		Collage and above	170	41.1
4	Marital status	Single	121	29.2
		Married	224	54.1
		Divorced	41	9.9
		Widowed	28	6.8
5	Monthly income	<5000	121	43.4
		5001-7000	100	35.8
		7001 and above	58	20.8
		Non-respondent	144	34
6	Occupation	Un Employed	83	20
		Government employee	117	28.3
		Merchant	102	24.6
		Non-Gov't employee	98	23.7
		Others	14	3.4

Patient's satisfaction with clinical laboratory services

Regarding patients satisfaction with clinical laboratory services, 245 (58.9%) of respondents were satisfied 134 (32.6%) of respondents dissatisfied and 35 (8.5%) of respondents Neutral with the laboratory service or scored above the mean with score of 3.06, St. deviation 1.05 (Figure 1).

Figure 1. Patient satisfaction with laboratory service in public health center at Addis Ababa, Ethiopia, 2021.

Over all level of satsfaction in Addis Ababa public hospitals,2021



Level of satisfaction of patients' towards laboratory services

The cumulative score for overall satisfaction of patients with laboratory services are as follows: To determine the

overall satisfaction of the participants who came to the laboratory and participated in the study which are very satisfied and satisfied considered as satisfied and very dissatisfied and dissatisfied considers as dissatisfied and neutrals are excluding. As a result, the mean rate of overall satisfaction in Addis Ababa health center in the use of the Likert scale was 3.06. In a different aspect of laboratory service satisfaction, the mean rate range was 1.00 to 5.00. Out of twenty one measuring variables, the majority of the respondents are satisfied: the location of laboratory (69.5%), hygiene during blood sampling (67.9%), measures taken to maintain the confidentiality of laboratory staff (65.9%), the approach to keeping the service confidentiality with using of the screen to keep the patient safety (58.7%), the number of seats in the health center (52.9%) The distance from the sample collection point to the customer reception area (66%), service charge (76.3%) and yet many patients due to the presence of laboratory staff during working hours (73.2%) Satisfied and we have listed a total of twenty one indicators of satisfaction the mean of the services shows below (Tables 3, 4 and Figure 2) [12].

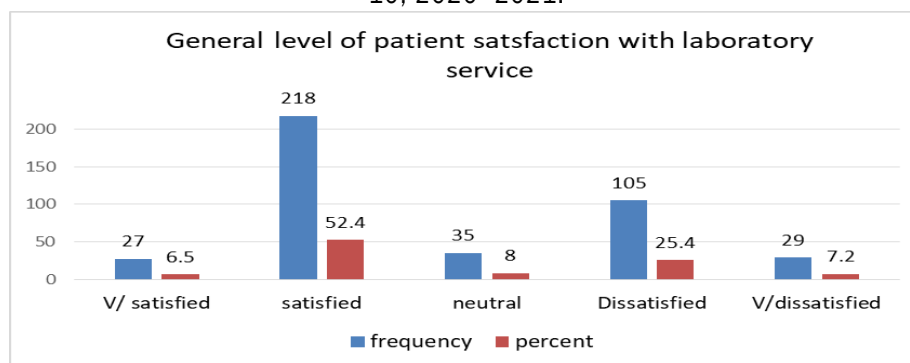
Table 3. Patients ratings of satisfaction with different aspects of laboratory services received at the health center, Addis Ababa, December 10, 2020–Jul/2021.

Variables	Overall satisfaction							Sati/percentage
	V/satisfied	satisfied	neutral	Dissatisfied	V/dissatisfied	Mean	S.D	
Pre laboratory service quality	13 (3.1%)	210 (50.7%)	74 (17.9%)	92 (22.2%)	25 (6%)	3.23	1.024	223 (53.8%)
The time it takes to get laboratory services	9 (2.2%)	237 (57.2%)	84 (20.3%)	76 (18.4%)	8 (1.9%)	3.39	0.876	246 (59.4%)
The queue to get the service	20 (4.8%)	227 (54.8%)	59 (14.3%)	72 (17.4%)	36 (8.7%)	3.3	1.085	247 (59.6%)
Respect and hospitality of the providers	50 (12.1%)	137 (33.1%)	30 (7.2%)	147 (35.5%)	50 (12.1%)	2.98	1.287	188 (45.2%)
Approach to keeping the service confidential? For example, private room space	17 (4.1%)	226 (54.6%)	2 (0.5%)	154 (37.2%)	15 (3.6%)	3.18	1.094	243 (58.7%)
Waiting time to get a laboratory result	27 (6.5%)	184 (44.4%)	42 (10.1%)	122 (29.5%)	39 (9.4%)	3.09	1.171	211 (50.9%)
Location of the laboratory	38 (9.2%)	250 (60.3%)	28 (6.8%)	81 (19.6%)	17 (4.1%)	3.51	1.036	288 (69.5%)
Getting the ordered tests	37 (8.9%)	226 (54.6%)	31 (7.5%)	105 (25.4%)	15 (3.6%)	3.4	1.07	263 (63.5%)
Cleanliness and comfort of the laboratory	31 (7.5%)	158 (38.2%)	18 (4.3%)	175 (42.5%)	31 (7.5%)	2.96	1.186	189 (45.7%)
Number of seats in the health center	27 (6.5%)	192 (46.4%)	59 (14.3%)	105 (25.4%)	31 (7.5%)	3.19	1.116	219 (52.9%)
Cleanliness of blood sample site	31 (7.5%)	250 (60.4%)	11 (2.7%)	101 (24.4%)	21 (5.1)	3.41	1.089	281 (67.9%)

Table 4. Patients ratings of satisfaction with different aspects of laboratory services received at the health center, Addis Ababa, December 10, 2020–Jul/2021.

Variables	Overall satisfaction							
	V/satisfied	satisfied	neutral	Dissatisfied	V/dissatisfied	Mean	S.D	Sati/percentage
Information giving by a service provider	18 (4.3%)	183 (44.2%)	65 (15.7%)	108 (26.1%)	40 (9.7%)	3.07	1.123	201 (48.5%)
Confidentiality of service provider	6 (1.4%)	267 (64.5%)	24 (5.8%)	102 (6.3%)	89 (1.9%)	3.37	0.953	273 (65.9%)
Communication skills of laboratory profesional	31 (7.5%)	249 (60.1%)	24 (5.8%)	79 (19.1%)	31 (7.5%)	3.41	1.107	280 (67.6%)
Distance from the sample collection point to the customer reception área	35 (8.3%)	239 (57.7%)	13 (3.1%)	98 (23.7%)	29 (7%)	3.37	1.14	274 (66%)
Quality of the service provider	42 (10.1%)	167 (40.3%)	28 (6.8%)	146 (35.3%)	31 (7.5%)	3.1	1.206	209 (50.4%)
Cost of laboratory services	20 (4.8%)	296 (71.5%)	21 (5.1%)	58 (14%)	19 (4.6%)	3.58	0.948	316 (76.3%)
Distance to the toilet and the place	38 (9.2%)	240 (58%)	49 (11.8%)	78 (18.8%)	9 (2.2%)	3.53	0.971	278 (67.2%)
Toilet cleanliness	54 (13%)	131 (31.6%)	34 (8.2%)	139 (33.6%)	56 (13.5%)	2.97	1.311	185 (44.6%)
Punctuality of service provider	15 (3.6%)	288 (69.6%)	32 (7.7%)	74 (17.9%)	5 (1.2%)	3.57	0.866	303 (73.2%)
In general, satisfaction level	15 (3.6%)	224 (54.1%)	41 (9.9%)	108 (26.1%)	26 (6.3%)	3.23	1.072	239 (57.7%)

Figure 2. General level of patient satisfaction with laboratory service at Addis Abba public health center, December 10, 2020–2021.



Factors associated with patient’s satisfaction with laboratory services

The analysis began with bivariate logistic regression analysis in which explanatory variables with a p-value less than 0.2 were selected for multiple logistic regression models to control for possible confounding. Accordingly; seven variables; marital status, occupation being merchant and government employed, Monthly income (<5000), time duration to get laboratory result, waiting time to give the sample ordered with in <30 minute, payment type to get the service, Needle stick attempted to draw blood, and availability of test ordered in the health center were variables which had significant association with patients satisfaction in bivariate logistic regression analysis (P-value <0.2) [13].

In multiple logistic regression analysis four variables; monthly income (<5000), payment type to get the service, waiting time to get laboratory service result, and availability of prescribed laboratory tests had a statistically significant association satisfaction in bivariate logistic regression analysis. But on multivariate logistic regression analysis four variables; Monthly income (<5000), time duration to get laboratory result, availability of prescribed laboratory tests at HC (yes there are some) and payment for laboratory service (yes) had statistically significant association. Therefore income (<5000); AOR=2.4,95% CI (1.02-5.9) receiving laboratory result within one hour and 1-hour; AOR=2.5,95% CI (1.04-6.2) and AOR=3.4,95% CI (1.2-9.3) and prescribed laboratory test available at this HC yes, they are all AOR=0.19,95% CI (0.04-0.09) and Yes, there are some AOR=0.9, 95% CI (0.3-0.4) were found to be more likely to satisfy patients. While pay for laboratory service rather than insured AOR=0.45, 95% CI (0.2-0.7) were found to be less likely to satisfy patients (Table 5) [14-18].

Table 5. To determine the overall patients satisfaction level towards laboratory services multivariable logistic regression results of predictors of patient’s satisfaction in public health centers in Addis Ababa, Ethiopia December 10, 2020–January 10, 2021.

S.No	Predictors	Response	Overall satisfaction		COR (95%CI)	AOR (95%CI)	P-Value
			Not satisfied	Satisfied			
1	Sex	Male	83	110	1.01 (0.6,1.5)	1.2 (0.6,2.1)	0.47
		Female	89	132	1	1	
2	Age	19-28	62	78	1.614 (0.6,4)	0.5 (0.03,7.3)	0.6
		29-38	80	102	1.197 (0.5,2.5)	0.8 (0.2,2.6)	0.7
		Above 39	30	62	1	1	
3	Income	<5000	52	69	2.5 (1.2,5.1)	2.4 (1.02,5.9)	0.04*
		5001-7000	45	55	1.09 (0.6,1.8)	1.1 (0.6,2.1)	0.6
		7001 and above	25	33	1	1	
4	Occupation	Merchant	34	49	0.459 (0.2,0.8)	0.64 (0.1,2.3)	0.5
		Government employee	50	67	0.61 (0.35,1.1)	0.78 (0.2,2.8)	0.7
		NGO	43	59	0.717 (0.3,1.3)	0.69 (0.2,2.1)	0.5
		Other	4	10	1	1	
5	Marital status	Single	61	60	0.33 (0.1,1)	0.49 (0.1,1.7)	0.29
		Married	86	138	0.27 (0.09,0.8)	0.49 (0.1,1.8)	0.26
		Divorced	14	27	0.28 (0.08,0.9)	0.5 (0.1,2.3)	0.4
		Widowed	11	17	1	1	
6	Waiting	1 -2 hour	59	58	2.8 (1.4,5.3)	2.5 (1.04,6.2)	.039*

	time to get the result	Less than 1 hr	101	153	3.2 (1.6,6.6)	3.4 (1.2,9.3)	.014*
		More than 2 hour	12	31	1	1	
7	Needle stick attempted to draw blood	One vein puncture	126	169	0.8 (0.4,1.9)	0.3 (0.03,2.8)	0.102
		Two vein puncture	32	59	0.9(0.3,2.4)	0.5(0.06,5.2)	203
		Three vein puncture	14	14	1	1	
8	Prescribed laboratory test available at this health enter	Yes, they are all	111	132	2.5 (1.01,6.1)	0.198 (0.04,0.09)	0.011*
		Yes, there are some	58	62	2.9 (1.1,7.4)	0.9 (0.3,0.4)	0.039*
		Nothing	3	18	1	1	
9	The laboratory service paired	Yes	80	120	0.6 (0.4,0.9)	0.45 (0.2,0.7)	0.003*
		No	92	122	1	1	
10	The developed bruise after the Phlebotomy procedures	Yes	22	48	0.4 (0.28,0.78)	0.62 (0.3,1.2)	0.188
		No	150	194		1	

DISCUSSION

Socio demographic and level of patient satisfaction

This study was set out with the aim of assessing laboratory service satisfaction of patients towards laboratory services in those public health centers under Addis Ababa health bureau, implementing strengthening laboratory management. Hence this study first of its kind to assess laboratory service satisfaction of patients towards laboratory services compared with prior studies conducted in Addis Ababa, Nekemte, Tikur Anbesa, Eastern Ethiopia, and St. Paulo's hospital, Gondar university hospital, Shenen Gibe hospital, India, Nigeria, Ghana, Pakistan, Korea, Nepal and Iran [19]. In this, using the mean score as cut off point 3.06 and 245 (58.9%) of patients among 414 participant were satisfied with clinical laboratory service. It was in line with a study in Pakistan 54.2 %, almost all of studies in Ethiopia (Nekemte Referral Hospital 60.4%, Shenen Gibe Hospital 60.3%, Gondar university hospital 51.1%, Tikur Anbesa specialized hospital 59.7% and St. Paul's hospital millennium medical college 55.9%.

It was found lower compared to studies conducted in Tehran 82%, Nepal 67%, Korea 70.5%, India 73%, Iran 62.5%, Nigeria 68.1%, Ghana 61% and Addis Ababa ART clinic 85.5%. The discrepancy might be due to the difference in sample size, the assessment tools used, the design used for example in the Indian study mixed method was used. In addition to the various services provided in the laboratory, patients were relatively satisfied with the cleanliness and convenience of the laboratory (67.8%), providing the necessary information to the laboratory staff (64.1%), and the cost of service (63.8%), which is consistent with other studies in Ethiopia. This may be since professionals and senior management of the institute have received similar training on laboratory services, as well as societal bias against respondents [20].

In our study, laboratory service users were relatively dissatisfied with the absence of laboratory staff during working hours (50.1%), which is a higher finding than another study which is conducted in eastern Ethiopia (90%), Similarly,

patients were very dissatisfied with toilet hygiene (43.4%), lack of privacy during blood sampling (48%), laboratory workers professional dressing (56.3%), and inadequate information during sampling (57.2%). This finding is consistent with other studies in Ethiopia. These may be due to a lack of attention to activities outside the laboratory room.

Factor association with the level of satisfaction

Based on the results of this study, it was found that the availability of the requested laboratory tests during their visit in the laboratory has a significant factor towards laboratory service satisfaction. This finding is consistent with the results of a study conducted in the Addis Ababa public hospitals on long waiting hours. It may be due to the patients who fail to get the requested laboratory tests at the time could have been forced to get the laboratory service at the private facility with high costs.

In logistic regression long wait hour to get a laboratory result has association with patient satisfaction, Monthly income (<5000) to get the service has increased patient satisfaction 2 times more likely (AOR: 2.4; 95% C.I; 1.02-5.9) than those patients income (>7000), increase waiting time decrease their patient satisfaction level towards TAT between less than one hours was about 3 times more likely than those (AOR: 3.4; 95% C.I; 1.2-9.3) when compared to those patients awaiting their laboratory results 1-2 hours which had statistically significant association (P value=0.039) with patient satisfied towards clinical laboratory services. This finding consistent with the research conducted in Addis Ababa Black lion hospital. Patient satisfaction is higher if the service is insured, the finding shows that the patients who are insured to get the service are 55% more likely to be satisfied (AOR 0.45, 95% CI 0.2-0.7) than those patients who without direct payment by laboratory service, Moreover those clients who waited less than one hours to get laboratory results were 3 times more likely to be satisfied (AOR=3.4; CI: 1.2-9.3) than those who waited more than two hours and clients who got all requested laboratory tests were 81% more likely to be satisfied (AOR=0.19; 95CI: 0.04-0.09) than those who did not got laboratory services (p-value; 0.011) this finding is similar to the study conducted at Addis Ababa public hospitals.

In general, some of the participants commented that the main problems in the process of receiving laboratory results, the cleanliness of the toilets, the absence of health laboratory workers during work hours, and the lack of timely information on service delivery were the main problems. Some participants also commented that there was a problem with the experts' use of medical terms and that they were not satisfied. Respect from the laboratory personnel, adequate information to collect specimen, adequate information when and how to receive laboratory results as well as TAT less than 30 minutes and between 1 and 2 hours were the predictors for patients` satisfaction towards clinical laboratory services This finding is supported by a study in India, which found that laboratory inconvenience, use of medical terms with patients, and lack of hospital hygiene, especially toilets, were associated with poor hygiene.

CONCLUSION

In this study Age group, sex, marital status, educational level and occupation of the respondents did not have any independent statistically significant association with the satisfaction of patients towards laboratory services. The findings of the current study are consistent with those of studies conducted in Nekemte, Tikur Anbesa specialized

Hospital and Eastern Ethiopia documented similar findings.

RECOMMENDATIONS

Still patient satisfaction needs improvement because close to half of the patients are not satisfied with services.

- Most people who attend laboratory services at a public health center have a low monthly income. The stakeholders (Health centers, FMOH, regional health bureau, regional laboratory, professionals), should be aware of this and provide the essential support to the health facilities and provide them with the necessary professional and resources.
- The health centers, MOH, regional health bureau, regional laboratory, professionals, and researchers should develop strategies to avail all prescribed laboratory tests.
- The laboratory professionals should be given the service at a time.
- FMOH needs some modification
- FMOH should create the awareness of the community to be a member of community based health insurance to utilize it.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study was approved by the ethical committee of Kotebe Metropolitan university Minillik II health science college. All participants signed the informed consent before answered the questionnaire.

CONSENT FOR PUBLICATION

All authors have agreed with the content and approved the submission of the manuscript.

ACKNOWLEDGMENT

First of all, I would like to express my deepest gratitude to my advisor Mr. Zewdu Shewangizawe for his continuous guidance, support, and constructive input in my work, and then I would like to express my heartfelt gratitude and appreciation for my advisor Mr. Eyob Hailu and also my mentor Mr. Nigatu Nassir for their Kind and constrictive comments. We thank all participants.

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