# Original Article

# Patients'/Clients' Expectation Toward and Satisfaction from Pharmacy Services

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**ABSTRACT**

**Objective:** Satisfaction is becoming a popular health-care quality indicator as it reflects the reality of service or care provided. The aim of this study was to assess the level of patients' expectation toward and satisfaction from pharmacy service provided and to identify associated factor that might affect their expectation and satisfaction.

**Methods:** A cross-sectional study was conducted on 287 patients, who were served in five pharmacies of Gondar University Hospital in May 2015. Data regarding socio-demographic characteristics and parameters that measure patients' expectation and satisfaction were collected through interview using the Amharic version of the questionnaire. Data were entered into SPSS version 21, and descriptive statistics, cross-tabs, and binary logistic regressions were utilized. $P < 0.05$ was used to declare association.

**Findings:** Among 287 respondents involved in the study, 149 (51.9%) claimed to be satisfied with the pharmacy service and setting. Two hundred and twenty-nine (79.4%) respondents have high expectation toward gaining good services. Even though significant association was observed between the pharmacy type and patients level of satisfaction, sociodemographic characteristics of a patient were not found to predict the level of satisfaction. There is a higher level of expectation among study participants who earn higher income per month (>2000 Ethiopian birr [ETB]) than those who get less income (<1000 ETB).

**Conclusion:** Although patients have a higher level of expectation toward pharmacy services, their satisfaction from the service was found to be low.

**KEYWORDS:** *Ethiopia, expectation, pharmaceutical services, satisfaction, service quality*

## INTRODUCTION

*P*harmacy services have been increasingly expanded beyond simple medication supply to become a more patient-centered and caring service. Pharmacists work in harmony with other health professionals to achieve the best clinical outcome and to improve patients' quality of life. The pharmacist is also expected to have an appropriate caring attitude and to apply his/her pharmacotherapy knowledge and skill for the improvement of patients' health and well-being.[1]

Patient/client satisfaction is the degree of positive feeling that patients/clients experience having used a service. It indicates also the gap between quality of service expectation and the actual experience of the service provided from the patients' point of view.[2] Patient satisfaction has become an integral component of the quality of health-care services.[3] It is becoming a popular health-care quality indicator, in which pharmaceutical services are an essential part as it reflects the reality of service or care provided. It is an established fact that satisfaction influences adherence and seeking for medical attentions.[4]

A review done to explore the link between treatment satisfaction and adherence, compliance, and persistence concluded that greater treatment satisfaction was associated with better compliance and improved persistence.[4] Assessing patient satisfaction is an approach for identifying and meeting patients' needs. Providing better access to quality pharmacies is a way to improve patient satisfaction with health-care services.[1] Low or high level of patient satisfaction and expectation of the pharmacy service might be influenced by a variety of factors. Some of these factors are demographic characteristics of the patient, waiting time, pharmacy setting, medication availability, and service quality.[5,6] Furthermore, the patient satisfaction level is found to be directly associated with the patient's expectation.[7]

It is assumed that high level of customer's satisfaction will be achieved if Good Pharmacy Practice (GPP) is realized in

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the pharmacist workplace, and the roles played by pharmacists are as expected by patients and society. According to the FIP/WHO, GPP is "the practice of pharmacy that responds to the needs of the people who use the pharmacists' services to provide optimal, evidence-based care."[8] A good quality pharmacist service will assure pharmacists to prepare, obtain, store, secure, distribute, administer, dispense, and dispose of medical products, provide effective medication therapy management, maintain and improve professional performance, and contribute to improve effectiveness of the health-care system and public health.

High level of satisfaction in some aspects of the pharmacy service was observed in many studies. A study conducted in Malaysia showed that 91.5% of clients were satisfied with the respectful manner of the pharmacy staff.[9] The study conducted in Malta also showed 90% of patients were satisfied by the professional manner of pharmacists, 94% of the consumers were very satisfied with the provision of instruction on how to take medication, and 95% of patients were satisfied in dealing doubts and question with pharmacists.[10] Nevertheless, in some other aspects of the pharmacy service, significant proportion of patients/clients was not satisfied. In a research conducted in AL-Jabar Ear-Nose-Throat (ENT) Hospital, Saudi, 61.2% of patients do not understand the information provided by pharmacists.[7]

Regarding patients expectation toward the pharmacy service, study conducted in Gondar at community pharmacies revealed that more than two-third of the respondents expect comfortable waiting area (62.2%) and >85% of the clients expect the pharmacist to check prescription for completeness.[11] An article published by College of Pharmacy in Ohio state university showed that patients have a very low expectation on patient counseling services offered by pharmacists.[12]

For general services, pharmacist attitude, medication availability, convenience, pharmacy facilities, and location were found to strongly influence patient satisfaction positively.[13-15] Prescription fill waiting time consistently influenced patient satisfaction negatively.[13] The higher the frequency of counseling and monitoring and the more directed the guidance, the greater the satisfaction rating.[16-18]

Gondar University Hospital (GUH), as all other hospitals and health-care centers, aimed to provide effective health-care services and a satisfying care for all its patients through its departments. All the pharmacies in the hospital are expected to provide quality pharmaceutical services, to have well-organized setting and to avail the necessary pharmaceuticals. Pharmacists are responsible to work to meet the satisfaction of patients by proper professional manners by giving right instruction and counseling about the medication and possible lifestyle modification.[19] Understanding the status of pharmaceutical service provided by the hospital through the customers' level of expectation and satisfaction is the very important step to improve the service. The aim of this study was to determine the level of patient expectation and satisfaction with the pharmacy service and to identify factors that may affect the level of satisfaction and expectation of patients served at GUH pharmacies.

## METHODS

A cross-sectional study was conducted in five pharmacies of GUH, Gondar, Ethiopia, from May 1 to May 30, 2015. Gondar is located 727 km away from the capital Addis Ababa. GUH has 468 beds. It acts as the referral center for four district hospitals in the area.[20] In the hospital, there are seven pharmacies, namely, main pharmacy, antiretroviral treatment (ART) pharmacy, emergency pharmacy, inpatient pharmacy, gynecologic pharmacy, multidrug-resistant tuberculosis (MDR-TB) pharmacy, and ophthalmic pharmacy providing pharmaceutical service to patients. This study was conducted in all pharmacies of the hospital except gynecologic and MDR-TB pharmacies because in these two pharmacies, the medications are dispensed to nurses. Hence, there is no direct contact between the pharmacist and a patient.

A total of 1168 patients were expected to come to the pharmacies in the study period. Using single population proportion formula and taking proportion of satisfaction in pharmacy service from the previous study[21] in Ethiopia, as 0.745 the minimum sample size that we have to take was found to be 234. However, we take 287 patients/clients as a sample to increase the reliability of the study. Study participants were selected by systematic random sampling method by taking every 4th patient served from each pharmacy. Patients who had mental problem, patients who needed emergency attention, and patients/clients who visited the pharmacies more than one time within the study period were excluded from the study.

The data collection format was prepared after review of related literatures on the topic.[13,22,23] Information related to patients' sociodemographic characteristics, parameters that measure their expectation, and satisfaction was collected using face–to-face interview using the Amharic version of the questionnaire. Likert scale of 1–5 was used to rate the responses of participants as regards to expectation and satisfaction.[24] The questionnaire was pretested on 15 patients/clients served in community pharmacies found in Gondar town.

Data were collected by five graduating pharmacy students who took one-day training on data collection tool clarification and procedure. After data were checked for its completeness, it was cleaned and analyzed. The collected data were entered into and analyzed using SPSS statistical software (version 21 (IBM Corp. Released 2012, Armonk, NY: IBM Corp)).[25] The items included in the survey were assessed using an ordinal numerical scale, taking into account quantitative variables. Descriptive statics such as frequency, percentage, and mean were computed. A test of association was done using binary logistic regression. All the perceived factors were considered in the univariate logistic regression, and those variables with $P > 0.2$ were excluded and the rest variables were included in the multivariate logistic regression analysis. $P < 0.05$ was used as a cutoff point for determining statistical significance of association. Patients' expectation and satisfaction level were rated out of five. Points ≤3 were considered as low expectation and satisfaction as the points 1, 2, and 3 represents very poor, poor, and neutral values, respectively.

Points above 3 were considered as high expectation and satisfaction, in which 4 and 5 stand for good and very good points, respectively.

Ethical clearance letter (reference number: SoP 218/15) was obtained from the Research Ethical Review Committee of School of Pharmacy, University of Gondar. Informed consent was given to respondents verbally, and respondents were assured that the information they give will be kept confidential. Privacy and confidentiality was assured throughout the study.

## RESULTS

The mean age of the study participants was 34 years with the standard deviation of 12 years. Majority (52.3%) were 30 years old or less. More than half of the participants were males (58.9%). Two-third of the study participants live in urban areas. About quarter (24.7%) of the respondents had finished secondary school and only 2.8% had a postgraduate degree. Most of the respondents were students (24.7%) and civil servants (23.7%). Forty-seven percent of the respondents earn <500 ETB whereas only 9.4% were able to earn >2500 ETB.

### PATIENTS'/CLIENTS' SATISFACTION WITH THE PHARMACY SERVICE

From the total respondents, 165 (57%) were satisfied with the setting of the pharmacy. As indicated in Table 1, most of the respondents were satisfied (good and very good satisfaction) with convenience of pharmacy location whereas they were poorly satisfied with availability of enough waiting chair in the waiting area. About half of the study participants 137 (49.9%) were unsatisfied with the service given by the pharmacist. The highest value was given for the use of language that clients can understand well (mean 3.9; 78%) while least value was given for taking history of health condition and medication (2.46; 49.2%).

### PATIENTS'/CLIENTS' EXPECTATION FROM GONDAR UNIVERSITY HOSPITAL PHARMACIES

From a total of 287 respondents, 229 (79.4%) had a high expectation (4 or above out of 5) for the services. The mean overall expectation was found to be 3.62 out of 5 (72.3%) when calculated through all the five pharmacies. As shown in Table 2, the maximum expectation of patients was toward gaining pleasant and courteous services from pharmacists with the mean value of 4.17 (83.4%).

### FACTORS AFFECTING PATIENTS'/CLIENTS' SATISFACTION AND EXPECTATION TO PHARMACY SERVICE

As illustrated in Table 3, patients who were served in emergency pharmacy, inpatient pharmacy, and main pharmacy had significantly lower satisfaction rate as compared to ophthalmic pharmacy. Clients who got <1000 Ethiopian birr (ETB) has lower expectation (adjusted odds ratio = 0.335, 95% confidence interval = 0.078–0.990) than those who got a monthly income of >2000.

**Table 1: Patient/clients' satisfaction with pharmacy setting and service, Gondar University Hospital, Ethiopia, 2015**

| | Questions | Very poor<br>n (%) | Poor<br>n (%) | Neutral<br>n (%) | Good<br>n (%) | Very good<br>n (%) |
|---|---|---|---|---|---|---|
| Pharmacy setting | Convenience of pharmacy location | 19 (6.6) | 52 (18.1) | 17 (5.9) | 172 (59.9) | 27 (9.4) |
| | Enough waiting chair in the waiting area | 48 (16.7) | 97 (33.8) | 16 (5.6) | 100 (34.8) | 26 (9.1) |
| | The pharmacy is clean and tidy | 31 (10.8) | 51 (17.4) | 21 (7.3) | 136 (47.4) | 48 (16.8) |
| | The time to get service is reasonable | 28 (9.8) | 92 (32.1) | 39 (13.6) | 111 (38.7) | 17 (5.9) |
| Service given by the pharmacist | Took important drug and health-related history | 63 (22) | 118 (41.1) | 26 (9.1) | 71 (24.7) | 9 (3.1) |
| | Pharmacist explain how to take medication | 42 (14.6) | 101 (35.2) | 32 (11.1) | 95 (33.1) | 17 (5.9) |
| | Pharmacist mention information about medication side effect | 43 (15) | 103 (35.9) | 32 (11.3) | 90 (31.4) | 19 (6.6) |
| | Pharmacist mentions information about drug-drug and drug-food interaction | 59 (20.6) | 106 (36.9) | 23 (8) | 80 (27.9) | 19 (6.6) |
| | Pharmacist treated me with dignity and respect | 26 (9.1) | 50 (17.4) | 21 (7.3) | 156 (54.4) | 34 (11.8) |
| | Pharmacist is available at the time of visit | 18 (6.3) | 38 (13.2) | 19 (6.6) | 164 (57.1) | 48 (16.7) |
| | I get written information about medication use whenever I need | 58 (20.2) | 106 (36.9) | 44 (15.3) | 67 (23.3) | 12 (4.2) |
| | The pharmacist keeps my privacy | 22 (7.7) | 44 (15.3) | 63 (22) | 120 (41.8) | 38 (13.2) |
| | Pharmacist served me equally with others | 15 (5.2) | 39 (13.6) | 15 (5.2) | 165 (57.5) | 53 (18.5) |
| | I get information on how to solve medication side effects if occur at any time | 68 (23.7) | 106 (36.9) | 24 (8.4) | 69 (24) | 19 (6.6) |
| | Pharmacist answers my questions properly | 29 (10.1) | 61 (21.3) | 37 (12.9) | 124 (43.2) | 36 (12.5) |
| | The language used is easy and understandable | 9 (3.1) | 25 (8.7) | 19 (6.6) | 166 (57.8) | 68 (23.7) |
| | Pharmacist labels my medication in readable and understandable instruction | 25 (8.7) | 94 (32.8) | 25 (8.7) | 112 (39) | 31 (10.8) |
| | Pharmacist gives me the medication with appropriate packaging | 30 (10.5) | 100 (34.8) | 26 (9.1) | 103 (35.9) | 28 (9.8) |
| | I get information about proper storage of medication | 48 (16.7) | 101 (35.2) | 17 (5.9) | 91 (31.7) | 30 (10.5) |
| | I get all the drugs I need | 28 (9.8) | 40 (13.9) | 24 (8.4) | 112 (39) | 83 (28.9) |

**Table 2: Patient/clients' expectation toward pharmacy setting and service, Gondar University Hospital, Ethiopia, 2015**

| Questions (I expect) | Strongly disagree *n* (%) | Disagree *n* (%) | Neutral *n* (%) | Agree *n* (%) | Strongly agree *n* (%) |
|---|---|---|---|---|---|
| Comfortable waiting area | 30 (10.5) | 34 (11.8) | 18 (6.3) | 138 (41.1) | 67 (23.3) |
| The pharmacist to check prescription for completeness and legality | 10 (3.5) | 24 (8.4) | 35 (12.2) | 154 (53.7) | 64 (22.3) |
| Pharmacist to ask me how well my medical conditions are controlled | 32 (11.1) | 38 (13.2) | 57 (19.9) | 106 (36.9) | 54 (18.8) |
| Pharmacist to explain how each of my medication supposed to help me | 29 (10.1) | 31 (10.8) | 27 (9.4) | 138 (48.1) | 62 (21.6) |
| Pharmacist to offer me a choice of information sources | 28 (9.8) | 45 (15.7) | 49 (17.1) | 111 (38.7) | 54 (18.8) |
| Pharmacist to ask me if I have concerns about medication | 52 (18.1) | 69 (24.0) | 43 (15) | 93 (32.4) | 30 (10.5) |
| Pharmacy staff to be pleasant and courteous | 12 (4.2) | 10 (3.5) | 18 (6.3) | 124 (43.2) | 123 (42.9) |
| Reasonable privacy during discussing | 12 (4.2) | 13 (4.5) | 19 (6.6) | 120 (41.8) | 12.3 (42.9) |
| Pharmacist to advise me on current medical condition and about lifestyle modification | 35 (12.2) | 23 (8) | 39 (13.6) | 123 (42.9) | 67 (23.3) |
| Pharmacist to involve me in decision making about medication | 24 (8.4) | 36 (12.5) | 55 (19.2) | 121 (42.2) | 51 (17.8) |

## DISCUSSION

Surveys assessing the level of patient expectation and satisfaction are essential in obtaining a comprehensive understanding of the patients need and their opinion of the service received. This will help to fill the gap between what the patients need and what they really get.[2]

This study showed that patients coming to the hospital pharmacy have high expectations to get a good setting and good service from pharmacists. Most of the respondents expect comfortable waiting area before being served and >75% of the patients expect the pharmacist to check prescription for completeness and legality. In line with this, a study conducted in Gondar at community pharmacies revealed that more than two-third of the respondents expect comfortable waiting area (62.2%) and >85% of the clients expect the pharmacist to check prescription for completeness.[11] More than two-third of the patients/clients expect the pharmacist to council on current medical condition and lifestyle modification. In contrast to this, an article published by College of Pharmacy in Ohio state university showed that patients have a very low expectation on patient counseling services offered by pharmacists.[12]

Even though almost half of the respondents (48.1%) were unsatisfied with the overall pharmacy service, 90.6% of patients were found to be satisfied with the language pharmacist's use. This is different from the result obtained in a research conducted in AL-Jabar ENT Hospital, Saudi, which mentions 61.2% of patients do not understand the information provided by pharmacists.[7] The good satisfaction rate in understanding pharmacists' information in the current study might be due to the use of local language by pharmacists while providing information to the patient.

The lowest level of satisfaction was obtained regarding taking of history about medications and health conditions of patients. This might be because of the absence of separate counseling room in most of the pharmacies of GUH that may hinder the pharmacists to have a detailed communication with the patient.

Around three-fourth of the respondents are satisfied for being served with respect and dignity by pharmacist. Closer to our finding, a study conducted in Malaysia showed that 91.5% of clients were satisfied with the respectful manner of the pharmacy staff.[9] The study conducted in Malta also showed 90% of patients were satisfied by the professional manner of pharmacists.[10]

When dealing with waiting time to get service, provision of information on how to take medications and getting of proper answers for questions and doubts raised by the patients only 53%, 56.2%, and 55.7% of the respondents were satisfied, respectively. In addition to this, 62% of respondents were unsatisfied with the information given by the pharmacist about the possible side effects of medications. In contrast to this, the Malta study showed 94% of the consumers are very satisfied with the provision of instruction on how to take medication and 95% of patients were satisfied in dealing doubts and question with pharmacists.[10] A study conducted in Tanzania also indicates 76.3% of patients were satisfied with waiting time to get service.[26] The lower satisfaction rate in these regards in our setting might be due to the large number of clients served in some of the pharmacies which is not proportional to the number of pharmacists working there which makes the pharmacists too busy and concentrate only on provision of drugs.

About two-third of the patients (67.9%) were satisfied on the availability of medications. Closer result was also obtained from a study done in the United Arab Emirate which showed around 70% of patients were satisfied with the availability of prescription and nonprescription medications.[3]

No significant association is seen between sociodemographic characteristics and level of satisfaction in this study. Similarly, research conducted in Malaysia indicated 85.2% of patients were adequately satisfied with general services irrespective of age and gender.[9] In the cross-sectional national level study conducted in Korea also indicated there was no significant association between the level of satisfaction and respondents' gender, age, and educational status.[27] Meanwhile, a significant

**Table 3: Association between sociodemographic characteristics and pharmacy type with patient satisfaction and expectation, Gondar University Hospital, Ethiopia, 2015**

| Variables | Satisfaction/ expectation | | COR (95% CI) | AOR (95% CI) | *P* |
|---|---|---|---|---|---|
| | Low | High | | | |
| Association with satisfaction of patient/client | | | | | |
| Pharmacy type | | | | | |
| Main | 45 | 53 | 0.221 (0.060-0.807) | 0.210 (0.051-0.85) | 0.030§ |
| ART | 9 | 39 | 0.813 (0.194-3.396) | 0.861 (0.185-4.019) | 0.849 |
| Emergency | 37 | 17 | 0.086 (0.022-0.36) | 0.067 (0.015-0.293) | 0.000§ |
| Inpatient | 44 | 24 | 0.102 (0.027-0.387) | 0.087 (0.020-0.374) | 0.001§ |
| Ophthalmic | 3 | 16 | 1.00 | 1.00 | |
| Age category (in years) | | | | | |
| <30 | 71 | 79 | 0.556 (0.161-1.927) | 1.366 (0.2879-6.4) | 0.649 |
| 31-60 | 63 | 62 | 0.89 (0.124-2.154) | 0.813 (0.167-4.310) | 0.859 |
| >60 | 4 | 8 | 1.00 | 1.00 | |
| Education status | | | | | |
| Illiterate | 26 | 28 | 3.231 (0.598-17.456) | 2.29 (0.318-16.526) | 0.410 |
| Under diploma and diploma | 106 | 119 | 3.62 (0.477-16.392) | 1.86 (0.391-11.862) | 0.644 |
| Postgraduate | 6 | 2 | 1.00 | 1.00 | |
| Area of residence | | | | | |
| Urban | 91 | 100 | 1.054 (0.645-1.722) | 0.823 (0.432-1.567) | 0.55 |
| Rural | 47 | 49 | 1.00 | 1.00 | |
| Income in ETB | | | | | |
| <1000 | 80 | 92 | 2.322 (0.845-5.799) | 1.833 (0.672-5.513) | 0.327 |
| 1000-2000 | 40 | 48 | 2.460 (1.003-8.484) | 2.381 (0.850-7.92) | 0.097 |
| >2000 | 18 | 9 | 1.00 | 1.00 | |
| Association with expectation of patient/client | | | | | |
| Age category (years) | | | | | |
| <30 | 31 | 119 | 2.74 (0.815-9.230) | 3.714 (0.981-14.060) | 0.074 |
| 31-60 | 23 | 102 | 3.881 (0.764-14.704) | 3.626 (1.103-18.872) | 0.085 |
| >60 | 5 | 7 | 1.00 | 1.00 | |
| Education status | | | | | |
| Illiterate | 14 | 40 | 0.952 (0.172-5.227) | 3.583 (0.463-27.734) | 0.222 |
| Under diploma and diploma | 43 | 182 | 1.658 (0.286-9.423) | 3.257 (0.564-22.385) | 0.233 |
| Postgraduate | 2 | 6 | 1.00 | 1.00 | |
| Area of residence | | | | | |
| Urban | 30 | 161 | 2.323 (1.295-4.168) | 2.926 (1.468-5.833) | 0.44 |
| Rural | 29 | 67 | 1.00 | 1.00 | |
| Income in ETB | | | | | |
| <1000 | 37 | 135 | 0.463 (0.203-1.964) | 0.335 (0.078-0.990) | 0.04§ |
| 1000-2000 | 18 | 70 | 1.279 (0.254-6.083) | 1.05 (0.244-4.681) | 0.328 |
| >2000 | 4 | 23 | 1.00 | 1.00 | |

§Significant association; COR=Crude odds ratio, AOR=Adjusted odds ratio, CI=Confidence interval, ETB=Ethiopian Birr, ART=Antiretroviral treatment

association was observed between the pharmacy type and patients' level of satisfaction. This may be due to the difference between different pharmacies in the hospital in their customer load, cleanness, setting, and the complexity of service provided.

Higher level of expectation among respondents who earn higher income per month (>2000 ETB) than those having less income (<1000 ETB) is in line with a study conducted in Gondar town community pharmacies showing those who have an income of 1500–2499 ETB have higher expectation than those who earn <500 ETB.[11]

This is a single-centered study conducted in one hospital so that the result of the study may not be generalized to other hospitals. Other factors that may affect satisfaction such as qualification, years of experience, and training experience of pharmacists were not addressed.

Although patients have a high level of expectation toward pharmacy services, they have a low level of satisfaction with the service that they had received. The highest expectation was observed regarding receiving pleasant and courteous services whereas the lowest was for concern of pharmacists

on checking how well the medical conditions were controlled. Patients/clients with higher income had a higher expectation than those with a lower income. The highest level of satisfaction observed was regarding receiving instructions with clear language, while the taking of medication and health condition history from a patient/client were the parameter to which most of the respondents were unsatisfied. The patients' sociodemographic characteristics have no association with their level of satisfaction, but it was observed that patients/clients were more satisfied with services provided in ophthalmic, main, and ART pharmacies than the other two pharmacies.

## Authors' Contribution

Mohammed Biset Ayalew and Kaleab Taye had contributed in proposal writing; write up of the final research, and manuscript preparation and finalization. Daniel Asfaw, Haile Tazeze, and Filagot Dadi had participated in proposal writing and data analysis and interpretation. Bethlehem Lemma, Habtamu Solomon, and Bayew Tsega had contributed in questionnaire design and write up of the final research.

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## Conflicts of interest

There are no conflicts of interest.

## References

1. Khudair IF, Raza SA. Measuring patients' satisfaction with pharmaceutical services at a public hospital in Qatar. Int J Health Care Qual Assur 2013;26:398-419.
2. Iftighar A, Allahe N, Shadiullah K, Mabibullah K, Muhammed A. Predicters of patient satisfaction. GJMS 2011;9:183-8.
3. Hasan S, Sulieman H, Stewart K, Chapman CB, Hasan MY, Kong DC. Assessing patient satisfaction with community pharmacy in the UAE using a newly-validated tool. Res Social Adm Pharm 2013;9:841-50.
4. Barbosa CD, Balp MM, Kulich K, Germain N, Rofail D. A literature review to explore the link between treatment satisfaction and adherence, compliance, and persistence. Patient Prefer Adherence 2012;6:39-48.
5. Hamra SB, Al-Zaid B. Users satisfaction of level of service in the primary health care clinics in Kuwait: Field study. J Stud Gulf Arabian Peninsula 1999;24:95.
6. al-Doghaither AH, Abdelrhman BM, Saeed AA. Patients' satisfaction with physicians' services in primary healthcare centres in Kuwait City, Kuwait. J R Soc Promot Health 2000;120:170-4.
7. Alturki M, Khan TM. A study investigating the level of satisfaction with the health services provided by the Pharmacist at ENT hospital, Eastern Region Alahsah, Kingdom of Saudi Arabia. Saudi Pharm J 2013;21:255-60.
8. World Health Organization. Joint FIP/WHO Guidelines on Good Pharmacy Practice: Standards for Quality of Pharmacy Services. WHO Technical Report Series, No. 961, 2011. Geneva: World Health Organization; 2011.
9. Molugulu N, Nee NS, Matanjun D, Urban J, Balana R. Patient satisfaction on general, intervention and cognitive services among retail pharmacies in Kota Kinabalu, Malaysia. IRJP 2012;3:141-4.
10. Wirth F, Tabone F, Azzopardi LM, Gauci M, Zarb-Adami M, Serracino-Inglott A. Consumer perception of the community pharmacist and community pharmacy services in Malta. J Pharm Health Serv Res 2010;1:189-94.
11. Workiye M, Admasu S, Bura TA, Getaye Y, Sebsibe F, Shemsu A. Client expectation from and satisfaction with MRO in Gondar town. Integr Pharm Res Pract 2015;4:1-12.
12. Schommer JC, Wiederholt JB. Patients' satisfaction with pharmacist consultation services: Application of a model of service encounter evaluation. J Consum Satisf Dissatisf Complaining Behav 1994;7:74-86.
13. Briesacher B, Corey R. Patient satisfaction with pharmaceutical services at independent and chain pharmacies. Am J Health Syst Pharm 1997;54:531-6.
14. Kamei M, Teshima K, Fukushima N, Nakamura T. Investigation of patients' demand for community pharmacies: Relationship between pharmacy services and patient satisfaction. Yakugaku Zasshi 2001;121:215-20.
15. Oparah AC, Kikanme LC. Consumer satisfaction with community pharmacies in Warri, Nigeria. Res Social Adm Pharm 2006;2:499-511.
16. Liu MY, Jennings JP, Samuelson WM, Sullivan CA, Veltri JC. Asthma patients' satisfaction with the frequency and content of pharmacist counseling. J Am Pharm Assoc (Wash) 1999;39:493-8.
17. Bultman DC, Svarstad BL. Effects of pharmacist monitoring on patient satisfaction with antidepressant medication therapy. J Am Pharm Assoc (Wash) 2002;42:36-43.
18. Singhal PK, Gupchup GV, Raisch DW, Schommer JC, Holdsworth MT. Impact of pharmacists' directive guidance behaviors on patient satisfaction. J Am Pharm Assoc (Wash) 2002;42:407-12.
19. Ethiopian Pharmaceutical Association. Code of ethics and standard of practice for pharmacists practicing in Ethiopia. 2nd ed. Addis Ababa, Ethiopia: Ethiopian Pharmaceutical Association; 2013.
20. Admassie E, Begashaw B, Hailu W. Assessment of drug use practices and completeness of prescriptions in Gondar university teaching referral hospital. Int J Pharm Sci Res 2013;4:265-75.
21. Federal Ministry of Health of Ethiopia, Medical Service Directorate and USAID/SIAPS; APTS Baseline Assessment from 17 Federal, University and Addis Ababa Hospitals, Addis Ababa; 2014.
22. Ware JE Jr., Snyder MK, Wright WR, Davies AR. Defining and measuring patient satisfaction with medical care. Eval Program Plann 1983;6:247-63.
23. Gastelurrutia MA, de San Vicente OG, Erauncetamurgil O, Odriozola I, Fernández-Llimós F. Customers' expectations and satisfaction with a pharmacy not providing advanced cognitive services. Pharm World Sci 2006;28:374-6.
24. Rensis L. A technique for the measurement of attitudes. Arch Psychol 1932;22:1-55.
25. IBM Corp. IBM SPSS Statistics for Widows, Version 21.0. Armonk, NY:IBM Corp. Released; 2012.
26. Jande M, Liwa A, Kongola G, Justin Temu M. Assessment of patient satisfaction with pharmaceutical services in hospital pharmacies in Dare s Salaam, Tanzania. East Cent Afr J Pharm Sci 2013;16:24-30.
27. Lee S, Godwin OP, Kim K, Lee E. Predictive factors of patient satisfaction with pharmacy services in South Korea: A cross-sectional study of national level data. PLoS One 2015;10:e0142269.