

Type 2 Diabetes Mellitus Patients' Satisfaction With Pharmacy Services in Wollega University Referral Hospital, Western Ethiopia

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ABSTRACT

Background: Ensuring the quality of pharmaceutical services in hospitals is an integral aspect of ensuring the quality of health care. In this regard, it has long been proven that adoption of the concept of pharmaceutical care is essential to improve the quality of pharmaceutical services. Hence, this study aimed to assess type 2 Diabetes mellitus (DM) patients' satisfaction with pharmacy services in Wollega university referral hospital, West Ethiopia.

Method: Descriptive cross-sectional study design was used. Data was collected using both close and open-ended questionnaires from the sample of type 2 D patients. The collected data was analyzed using Statistical Package for Social Science version 20.

Results: From total of 195 respondents; 124(64%) were satisfied with pharmacy service. Patients who have satisfied with pharmacy service have some of the possible factors like availability of the prescribed drugs, affordability and notice of information on the food that is not taken with drugs. Contrary to this, patients were dissatisfied with other pharmacy related factors like reflection of negative attitude from the pharmacists, withholding information on what to do during the occurrences of drugs adverse effect. About two thirds (67.8%) patients were agree with the availability of prescribed medicines. None of the patients had negative attitude towards the pharmacists. About 43.1% of the patients strongly disagree regarding unclear instruction of taking medicines

Conclusion: The patients satisfaction level with pharmacy service was affected by different pharmacy service-related factors. The management of Wollega University Referral Hospital has to establish and activate information centers to sufficiently provide drug information for the patients and has to morally and financially motivate pharmacist employees.

Keywords: Patient satisfaction; Diabetes Mellitus; Pharmacy service; Ethiopia

INTRODUCTION

Diabetes is a chronic metabolic disorder characterized by persistent hyperglycemia due to a deficiency in insulin secretion, insulin action or both. The prevalence of type 2 diabetes (T2D) is increasing over time. Likewise, the prevalence of people living with diabetes in Ethiopia is substantially increased from time to time. Thus, increased from 3.8% in 2014 to 5.2% in 2017.

Glycemic control is the ultimate goal of management of diabetes. Adequate glycemic control helps to reduce or delay the burden of diabetes complications. According to the International Diabetes Federation (IDF) and the American Diabetes Association (ADA)

guidelines, glycated hemoglobin (HgA1c) value is the most recommended monitoring parameter for appropriate glycemic control status. Thus, the value of HgA1c within the last 3 months is indicators of patients' glycemic control. Many studies reveal that there an association between HgA1c values and diabetes complications. Reducing HgA1c values significantly decreases diabetes complications and the overall death from diabetes. Thus, early and adequate glycemic control improves macrovascular outcomes and diabetes complications. Achieving optimal glycemic level may not be an easy task. It depends on the type of treatment received patients' adherence and comorbidities. Likewise, risk factors, obesity, biological and psychosocial factors are responsible

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Received: February 26, 2021, **Accepted:** March 12, 2021, **Published:** March 19, 2021

Citation: BekeleF, Dereje S, Fekadu G, Dugassa D, Simegnaw D (2021) Type 2 Diabetes mellitus patients' satisfaction with pharmacy services in Wollega University referral hospital, Western Ethiopia. *JDiabetes Metabl.*12:86.7

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for differences in glycemetic control.

The development of new and innovative technological methods and the increased need for specialized healthcare services have brought about a distinct transformation in pharmacy services. In 2011, the International Pharmaceutical Federation (FIP) and the World Health Organization (WHO) jointly recommended good pharmacy practice guidelines. Consequently, pharmacists have been increasingly involved in marketing their services with a focus on patient satisfaction. Furthermore, pharmacists have been persuaded to become mutually accountable for healthcare consequences and the enhancement of the patient's quality of life [21-23]. However, the clinical training of pharmacists is not advanced, and the activities that represent the usual practice of pharmacists are still executed, in most cases, without direct interaction with the patient.

Pharmacy staff are in a position to clearly define how the patient should use the medication they have been prescribed. Several studies have indicated that these factors are associated with patient satisfaction [26-28]. The pharmacy is an important physical service within a hospital, where patients get information about medication [28]. Ensuring the quality of pharmaceutical services in hospitals is an integral aspect of ensuring the quality of health care. In this regard, it has long been proven that adoption of the concept of pharmaceutical care is essential to improve the quality of pharmaceutical services.

Patient satisfaction has many different facets, reflecting the type and quality of service provided by healthcare providers. It includes how well service is delivered, and the extent to which the expectations and needs of patients are met [30]. Patient satisfaction is an important humanistic outcome as a patient's subjective assessment of health care services. Growing interest in patient satisfaction initially arose as a result of consumerism. Studies have shown that rightful medication counseling by pharmacists identify and correct potential drug therapy problems, side effects and adverse drug reactions. This was providing patient satisfaction with the pharmaceutical services and consequently optimizes the patient quality of care [1].

Pharmaceutical care is key in pharmacy practice globally. This is designed at providing a better outcome for the patients. Patient satisfaction is likely to affect the image of the Pharmacist and pharmacy profession. Medication counseling is one area that enhanced rational use of medicines by the patients and health professionals. Currently, the management of many diseases requires multidisciplinary approach, which according to evidence-based medicine, has improved treatment outcomes of many patients. However, the role of a pharmacist has not been adequately explored and is often regarded as passive by many medical personnel. It is a well-known fact that patient compliance to medication is an important factor in the prediction of numerous diseases. Poor patient compliance is a problem worldwide. Seeking advice from a pharmacist before purchasing drugs may be cost effective as well as promote compliance [2].

Ethiopia is undergoing a major transition as far as the health sector is concerned (the health sector reforms) and hence the services and education availed to patients by the pharmacists are increasingly becoming important. Investigation on the contribution of pharmacists in a different disease treatment found that patients who were suffering from their disease showed significant improvement when given "directive guidance" by a pharmacist [3] regarding their

treatment. Hence, the current study is intended to identify factors influencing patient satisfaction with pharmacy services provision in Wollega University referral hospital (WURH).

METHODS

Study area, design and period

Descriptive cross-sectional study was conducted from May to June 2019 at Wollega University Referral Hospital which is one of the youngest public hospitals in the Western Ethiopia.

POPULATIONS

Source populations

- All type 2 DM patients in Wollega University Referral Hospital.

Study population

- The study populations are all type 2 DM patients who are fulfilling the inclusion criteria and attending at Wollega University referral hospitals during the study period.

ELIGIBILITY CRITERIA

Inclusion criteria

- Patients who were diagnosed to have type 2 DM and having at least one year follow up at the DM clinic.
- Willingness to participate in the study.

Exclusion criteria

- Critically ill patients
- Newly diagnosed patients
- Pregnant women
- Patient with mental disorders.

STUDY VARIABLES

Dependent variable

- Patient satisfaction

Independent variables

- Accessibility of health services
- Availability of medications
- Pharmacy staff attitude
- Provision of drug information

SAMPLING DESIGN AND PROCEDURE

Sample size

In order to collect necessary data through questionnaire, the target populations of the study were the patients who are currently visiting Wollega University referral hospital. The total population for this study were 400 as per WURH Record office of 2019. The sample size was determined based on the following simplified formula

After sample has determined using the above formula, convenient sampling was be used to collect data from the element in the sample. This sampling method involves collecting information

from members of the population who are conveniently available to provide it. The self-administered questionnaire with both open and close ended questions was distributed to sample respondents in the hospital. Two Bachelor nurses were participated in data collection process. Orientation was given for them regarding the data collection processes. Hence, both qualitative and quantitative data was gathered and subjected to descriptive analysis. Pre testing was done before the actual study, and also the data was cleared and checked every day for completeness and consistency before data processing and analysis. Both in-house and field editing was employed to detect errors that may be committed by respondents during filling up the questionnaires [4].

Data processing and analysis

Data was analyzed with the help of modern statistical data analysis software called SPSS version 20. Data collected through questionnaires was analyzed quantitatively where statistical tools such as tabulation and bar- graphs were used to present data and descriptive statistics such as frequency and percentage were used to analyze and interpret data. After data has been presented and analyzed, the findings were used to draw necessary conclusion and recommendations [7].

ETHICS APPROVAL AND CONSENT-TO-PARTICIPATE

This study was approved by the ethical review committee of the Institute of Health Science, Wollega University. In addition, permission was secured from the hospital and the pharmacy administrators to proceed with the study. Each of the clients were provided with explanations on the purpose of the study and asked for their consent to participate in the study. Only when they were willing to proceed with the interview were, they involved in the study. In addition, patient identifiers were not used in the study and the data collected was used by the investigators only for the purpose of the study [6].

Operational Definitions

- **Medication counseling:** Refers to “providing medication information orally or in written form to the patients or their caregivers on directions of use, advice on side effects, precautions, storage, diet and lifestyle modifications.
- Availability is defined as the presence in a country of products that meet the population’s health needs.
- Accessibility refers to physical access to the products, or where the products can be delivered to patients.
- Affordability refers to a product’s cost vs. the ability and willingness of people (patients) to pay for it.
- Patient satisfaction is viewed as his/her “personal evaluation of healthcare services and providers”.

DISCUSSION

About two-thirds (64.1%) respondents were in the age range between 41-50 years which was similar with study done in Pakistan. The highest proportion of respondents was elementary school with the percentage of 48.2% which is different from study conducted in Gondar University Referral Hospital where secondary school is highest percentage. A person's level of education affects one's perspective in the use of health services. High level of education

allows a person to process the received information into a certain attitude. A person who has a low education has a low stance also in the maintenance of health. This indicates that the need for training and development is there and worth considering in order processing the received health information for maintaining of one’s health.

As far as the marital status of the respondents concerned, from the total sample respondents 84 (43.1%) were married. Majority of the respondents 84 (43.1%) were orthodox which was similar to study conducted in Gondar University Referral Hospital. Moreover, majority of the respondents’ monthly income ranges between 1000-2000 birr per month which was less than study conducted in Pakistan.

Majority of the respondents 124 (63.6%) were happy and satisfied with Wollega University Referral Hospital Pharmacy service. This finding was comparable to other community pharmacy reports in some developed countries including Spain and Portugal .

Regarding drug information provided at the pharmacy in the study area, most of the respondents reported that they were satisfied with information on adverse effects of drugs/side effects was provided to them, food not to be taken with drugs. This finding was in line with several studies conducted in different parts of the world.

Patients were willing to receive pharmaceutical information. The satisfaction is likely associated with the provision of service promptness, pharmacist attitude/ communication skills, medication counseling and availability of enough waiting area. However, most of the respondents have reported that they did not receive information on what to do when adverse effects of drugs/ side effects occurs, importance/ need for loyalty to medication and no change of drugs if any side effects or adverse effects occurs.

Moreover, majority of the respondents also reported that pharmacist did not provided voluntary detail advice about medications, screening prescriptions and any other management work related to the stocking of medications and rather they have reflected negative attitude and sometimes irritated and even attempted insulting the patients which has negative effect on their satisfaction level with pharmacy service which was similar study conducted in Nigeria.

Regarding availability and affordability, majority of the respondents have reported that most of prescribed drugs were available and affordable compared to the private pharmacy service. The availability and affordability of prescribed drugs might have its own influence on patients’ level of satisfaction with pharmaceutical services. Majority of the respondents 132 (67.8 %) are agreed on the availability of the required medicine. On the other hand, satisfaction rates in Baghdad were much higher. Clarity of instruction of taking medicine where 84(43.1%) of the respondents have strongly disagreed on un- clear instruction of taking prescribed medicine which was higher than study conducted in North Ethiopia [39]. As far as the facility concerned majority of the respondents 106 (54.4%) have disagreed followed by those who have strongly disagree 89(45.6%) on poor facility of the hospital regarding pharmacy service whereas none of the respondents have agreed on this issue. This indicated that almost all the respondents have satisfied with the facility of the hospital. The pharmacist’s attitude towards treating patients and majority of the respondents 126(64.6%) has agreed that reflects negative attitude because of the working environment, while a few of them 23(11.8%) have strongly agree. The result indicates that the respondents have dissatisfied with the negative attitude of the pharmacists in the study area which

has its own influence on satisfaction level of the patient. Majority of the respondents 144(73.8%) strongly agree on informing patient side effect of the drugs while a few of them 24(12.3%) have strongly disagreed that they received information on the adverse effect of the drugs from the pharmacists in the study area. Regarding availability of good patient follow up majority of the respondents 121(62.1%) disagreed followed by neutral 52(26.7%) whereas a few respondents 22(11.3%) agreed. Concerning the information on food not to be taken with prescribed drugs majority of the respondents 131(67.2%) agreed that the received information while a few of them 13(6.7%) have strongly disagreed. On the change of drugs in case of occurrence of adverse drug effect majority of the respondents 92(47.2%) have disagreed while a few of them 24(12.3%) have strongly refused. Since majority of the respondents did not get the opportunity of drug change in case of adverse effect reflection it has negatively affect patient satisfaction level of pharmacy service in the study area?

CONCLUSION

The study revealed that pharmaceutical services were provided and patient reported that the services provided were beneficiary to them in maintaining their health. Moreover, the respondents have reported that their satisfaction level with pharmacy service was affected by different pharmacy service-related factors. In the current situation of our country this is very less to purchase the required drugs from different drug stores because it is expensive from there. Since the price of the prescribed drugs from this referral hospital is faire compared to the price of nonpublic drug stores the respondents were satisfied. Among other factors patient satisfaction level of pharmacy service were information provision on what to do when adverse effect of drug occurs, not voluntary to change drugs in case of adverse drug effect and negative attitude of pharmacists towards patients.

Improving service delivery for the customer using better procedure and technique for service rendering institutions plays crucial role for their survival and success. Therefore, to improve the problem with shortage of information provision on what to do during occurrence of drug side effect, WURH management has to establish medication information center and activate it properly so that the patients have to be cultivated with different detail information about the prescribed drugs. Moreover, creating conducive working environment for the pharmacist's employees, motivation them morally and financially, through better compensation package, and giving them extra vacation can alleviate problem of de-motivation and reflection of negative attitude to the customers.

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