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WHAT PATIENTS WANT TO KNOW ABOUT THEIR MEDICATION? : A SURVEY OF INPATIENTS AND OUTPATIENTS AT GONDAR UNIVERSITY HOSPITAL

Alemayehu Berhane*, Abiey Getahun, Asfaw Azanaw and Sherefedin Hamza

School of Pharmacy, University of Gondar, Gondar, Ethiopia

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Correspondence to Author:

Alemayehu Berhane

School of Pharmacy, University of Gondar, Gondar, Ethiopia

E-mail: alemayehuber@yahoo.com

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ABSTRACT

Patients want and are seeking more information about drug and nondrug treatment options. While a great deal of patient information about medications, treatments, and diseases exists, much of it contains conflicting, inaccurate, poorly written, or non–evidence-based information. The objective of the study was thus, to assess what patients want to know about their medications at Gondar University Hospital. The study was conducted in Gondar University Hospital over 1 month period from March 1- 30, 2012. Data was collected using convenience sampling technique from 384 respondents using structured questionnaire which consists of 40 items. All data collected were then analyzed using the Statistical Package for Social Sciences (SPSS), v19 software. In the study 238 (68%) male and 146(32%) female patients were included. From the total questions forwarded for the total population 165(43%) responded drug information as very relevant, 156(40.6%) responded drug information as relevant, 40(10.4%) responded drug information as somewhat relevant and 23(6%) answered drug information as not relevant. Concerning drug information source the result showed that 49%, 49% and 2% of the patients got drug information from pharmacists, doctors and nurses respectively. Physicians, pharmacists and other health professionals should provide both written and oral information with their medication in order to meet the need what patients want to know about their medication.

INTRODUCTION: The provision of relevant and appropriate information to patients is a fundamental aspect of health care [1]. One of the most noticeable changes in health care over the last few decades has been the increased involvement of patients in their treatment decisions.

Patients want and are seeking more information about drug and nondrug treatment options. While a great deal of patient information about medications, treatments, and diseases exists, much of it contains conflicting, inaccurate, poorly written, or non–evidence-based information [2].

Patient's appetite for information about their treatment is often greater than doctors believe. Patients vary in the extent of their desire for partnership in making medical decisions. It follows that part of the duty of a health professional is to work out how much partnership a patient wants, and what information he or she needs to support that level of partnership [3]. Berry *et al*., described between 50 and 90% of patients express a desire for more information about adverse effects [4]. However, there is a question of whether to inform patients about possible side effects of prescribed medication has given rise to considerable debate in recent years [4, 5].

On the one hand, studies have shown that people do want to be told about the possibility of any adverse effects they might suffer as a result of taking medicines [4]. On the other hand, another study have shown that if people are given a written explanation about prescribed medication which conveys information about possible negative side effects, they then judge the explanation to be less satisfactory, they perceive risk to health to be higher, and say that they would be less likely to take the medication [5].

Worldwide more than 50% of all medicines are prescribed, dispensed or sold inappropriately [6]. Inappropriate use of drugs results in poor patient outcomes and adverse drug reactions. In order to improve patient health care and reduce the number of medication related errors, a greater emphasis must be placed on pharmacists' patient counseling. Pharmacists are usually the final link between the medication and the patient. A number of studies [7, 8, 9] reported that health care professionals including pharmacists should provide appropriate, understandable and relevant information to patients about their medication.

Although providing patients with adequate and clear information on drugs is one of the basic services expected to be rendered by the pharmacist, it seems that it has received little attention in Ethiopia. The purpose of this study was thus; to assess what patients want to know about their medication among patients attended Gondar University Hospital.

METHODS AND MATERIALS: Gondar University Hospital is one of the oldest public hospitals in the country. Geographically, it is located in Gondar town 738 kms North West of Addis Ababa, Ethiopia. The study was conducted among inpatients and outpatients admitted at Gondar University Hospital over 1 month period from March 1- 30, 2012. A cross-sectional study was conducted by using semi-structured interview questionnaire. Patients under 15 years of age, those not taking drugs and terminally ill patients were excluded from the study. Convenience sampling method was used to collected data from 384 inpatients and outpatients taking medication. The questionnaire developed for the purpose of this study contained socio- demographic characteristics and drug information need by patients comprising of seven groups such as usage and administration, adverse drug reaction and side effect, production and storage, property of a drug, cost consideration and source of drug information. The questionnaire was first written in English and then translated into the local language, Amharic then translated back to English. About 40 questions concerning drug information were prepared and interviewed during a hospital stay or as outpatients attending a specific clinic at the hospital. Those who fulfilled the inclusion criteria were selected from the wards and clinics during the recruitment periods, and were asked their information need concerning drugs and their demographics.

The rating was on a 4-point Likert scale, whereby the patients rated the relevance of each item as 1= not relevant, 2= somewhat relevant, 3 =relevant and 4= very relevant. Pretesting of the questionnaire was carried out on 10 patients and was corrected accordingly. The validity of the questionnaire was assessed after it was piloted to ascertain its internal consistency (Cronbach's alpha coefficient was 0.91). The collected data was cleared, categorized, and coded. All data collected were then analyzed using the Statistical Package for Social Sciences (SPSS), v19 software. Verbal consent from a patient was requested to interview a patient. Privacy and confidentiality was ensured during patient interview.

RESULTS: In the data collection, 384 patients were included in the analysis. In the study 238 (68%) male and 146(32%) female patients were included to investigate drug information need of patients. Of these 65(16.9%) are farmers, 117(30 %) civil servants, 65(16.9%) merchants and others 137(35.7%) were participated in the study and age with 15 years old and above were included. Majority of the age group belongs to 15-30 years (67.2%). Other demographic data, such as academic status were also included, illiterates 15(13%), elementary schools 37(9.6%), secondary schools 113(29.4%) and higher education 184(47.9%) (**Table -1**).

For all items measuring drug information need of patients related to drug usage and administration, the mean response is between 3 and 4. Majority of patients responded relevant 152 (39.6%) and very relevant 209 (54.4%) with respect to 'the indication of a drug' information with a mean± SD (3.46±0.66) (**Table 2**).

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS, GONDAR UNIVERSITY HOSPITAL, ETHIOPIA, MARCH 1-30, 2012

Socio-demographic variables	Frequency	Percent
Age		
15-30	258	67.2
31-45	82	21.4
>45	44	11.5
Sex		
Male	238	62.0
Female	146	38.0
Occupation		
Farmer	65	16.9
Civil servant	117	30.5
Merchant	65	16.9
Others	137	35.7
Academic status		
Illiterate	50	13.0
Elementary	37	9.6
Secondary school	113	29.4
Higher education	184	47.9

TABLE 2: DRUG INFORMATION NEED OF PATIENS RELATED TO USAGE AND ADMINISTRATION, GONDAR UNIVERSITY HOSPITAL, ETHIOPIA, MARCH 1-30, 2012 (N=384)

Usage and Administration	Frequency (%)				Mean± SD†
	NR	SWR	R	VR	
The indication of a drug	7(1.8)	16(4.2)	152(39.6)	209(54.4)	**3.46±0.66**
How drugs administered	14(3.6)	23(6.0)	146(38.0)	201(52.4)	3.39±0.76
How much dose a drug is taken	14(3.6)	26(6.8)	128(33.3)	216(56.2)	3.42±0.77
For how long a drug should be taken	4(1)	28(7.3)	161(41.9)	191(49.7)	3.40±0.67
Frequency of a drug	10(2.6)	28(7.3)	146(38.0)	200(52.1)	3.39±0.74
When you should not take or use a drug	8(2.1)	30(7.8)	170(44.3)	176(45.8)	3.33±0.71
How to take a drug with other drugs	10(2.6)	17(4.4)	149(38.8)	208(54.2)	3.44±0.7
Restrictions available on food and other beverages	1(0.3)	29(7.6)	151(39.3)	203(52.9)	3.44±0.64
Precaution and measures to improve treatment out comes	7(1.8)	33(8.6)	184(47.9)	160(41.7)	3.29±0.70
Demonstration and adequate information about special dosage forms	13(3.4)	35(9.1)	145(37.8)	191(49.7)	3.33±0.78
Education on techniques for self monitoring and self administration	17(4.4)	51(13.3)	168(43.8)	148(38.5)	3.16±0.82
Measures taken during missed dose	23(6.0)	38(9.9)	181(47.1)	142(37.0)	3.15±0.83

†Responses were made on a 4-point Likert scale where 1= not relevant, 2= somewhat relevant, 3 =relevant, 4= very relevant.

With regard to adverse drug reaction and side effect question items, 'organ affected by a drug' was considered relevant 125(32.6%) and very relevant 197(51.3%) drug information need by majority of patients with a mean± SD (3.29±0.87) (**Table 3**).

Concerning production and storage of drugs, most patients responded relevant 124(32.3%) and very relevant 209(54.4%) for information related to 'expiry date or shelf life of a drug' with a mean± SD (3.34±0.87). 'Efficacy of a drug' information was the most patients want to know under property of a drug question item with a mean ±SD (3.30± 0.76). Like other drug information need, in relation to cost, majority of patients responded 'alternatives to the prescribed drug' was the most relevant 181(47.1%) and very relevant 141(36.7%) information need with a mean± SD (3.17±0.79) (**Table 4**). Concerning drug information source, the result showed that 49%, 49% and 2% of patients wanted to get drug information from pharmacists, doctors and nurses respectively.

TABLE 3: DRUG INFORMATION NEED OF PATIENS RELATED TO ADVERSE DRUG REACTION GONDAR UNIVERSITY HOSPITAL, ETHIOPIA, MARCH 1-30, 2012 (N=384)

ADR and side effect	Frequency (%)				Mean± SD†
	NR	SWR	R	VR	
Side effect of a drug	24(6.2)	41(10.7)	163(42.4)	156(40.6)	3.17±0.86
Organ affected by a drug	22(5.7)	40(10.4)	125(32.6)	197(51.3)	**3.29±0.87**
Measure to recognize, prevent or manage side effects and adverse effects	16(4.2)	43(11.2)	138(35.9)	187(48.7)	**3.29±0.89**
How drug resistance occur	21(5.5)	37(9.6)	149(38.8)	177(46.1)	3.25±0.84
Drug interaction(drug -drug, drug -diseases, drug-herb)	23(6.0)	55(14.3)	139(36.2)	167(43.5)	3.17±0.89
Incompatibility between a drug and Iv fluids	26(6.8)	51(13.3)	169(44.0)	138(35.9)	3.09±0.87

†Responses were made on a 4-point Likert scale where 1= not relevant, 2= somewhat relevant, 3 =relevant, 4= very relevant.

TABLE 4: DRUG INFORMATION NEED OF PATIENTS, GONDAR UNIVERSITY HOSPITAL, ETHIOPIA, MARCH 1-30, 2012 (N=384)

Drug information need	Frequency (%)				Mean± SD†
	NR	SWR	R	VR	
Production and storage					
Where to store drugs	21(5.5)	58(15.1)	183(47.7)	122(31.8)	3.05±0.83
Manufacturing date of a drug	62(16.1)	41(10.7)	112(29.2)	169(44.0)	3.01±1.09
expiry date or shelf life of a drug	26(6.8)	25(6.5)	124(32.3)	209(54.4)	3.34±0.87
where drugs are manufactured	94(24.5)	70(18.2)	124(32.3)	96(25.0)	**2.58±1.11**
Property of a drug					
Efficacy of a drug	14(3.6)	30(7.8)	166(43.2)	174(45.3)	**3.30±0.76**
How long a drug will take to show an effect	11(2.9)	38(9.9)	182(47.2)	153(39.8)	3.24±0.74
Formulation of a drug	52(13.5)	72(18.8)	136(35.4)	124(32.3)	**2.86±1.02**
Cost consideration					
Cost of a drug	47(12.2)	57(14.8)	169(44.0)	111(28.9)	2.89±0.96
Alternatives to the prescribed drug	15(3.9)	47(12.2)	181(47.1)	141(36.7)	**3.17±0.79**
Place where less expensive drugs are found	38(9.9)	63(16.4)	152(39.6)	131(34.1)	2.98±0.95
Others					
Name and abbreviation of a drug	57(14.8)	53(13.8)	142(37.0)	132(34.4)	2.90±1.03
Discussion on religious and cultural issue that may affect drug use	52(13.5)	61(15.9)	167(43.5)	104(27.1)	**2.84±0.97**
Life style changes	19(4.9)	45(11.7)	180(46.9)	140(36.5)	**3.14±0.81**

†Responses were made on a 4-point Likert scale where 1= not relevant, 2= somewhat relevant, 3 =relevant, 4= very relevant.

DISCUSSION: All the patients rated the need of all types of drug information highly. None of the mean values was lower than 2, implying patients were agreed that all aspects of drug information about their treatment were relevant. From the total questions forwarded for the total population, 43% responded drug information as very relevant, 40.6% responded drug information as relevant, 10.4% responded drug information as somewhat relevant and 6% answered drug information as not relevant (**Fig.1**).

This showed that for greater than 95%, patient's desire for drug information is important in their course of drug use. This agreed with Dickinson et al which stated that patients may want to know more than we think of them [3]. Similarly, Regensberg and Tanchel [8] indicated more than half the patients expressed a desire to know more about their drug treatment.

Recently, there has been a growing interest in providing drug information to support patients' participation in choosing treatments [10] and thus, the output of this study give more emphasis on what patients want to know about drugs in deciding on strategies for managing health problems.

In our study, most of the patients respond very relevant and relevant in relation to drug usage and administration. Importantly, the need for the indication of a drug was cited as most patients want to know. About 98.8% of patients responded as this is the most they want to know about medication. A study by Tarn et al [11] showed that physician's communication when prescribing medications, physicians explained the purpose of their medication for 87% of patients.

In Regensberg and Tanchel study [8], who surveyed a group of patients of all races and sexes, 71% indicated that the indications for the medication had been explained. Berry et al reported patients were interested in knowing whether the medication prescribed for them was the most appropriate for them. For these patients, it was important to know that the treatment under consideration reflected their individual health situations [5]. Physicians' explanation of the use of a medication to their patients is due to patient's desire for drug information related to this [11]. This is the reason why some patients take their medication as prescribed while others not [12]. Patients who better report health care professional communication and more drug information are more adherent [11, 12].

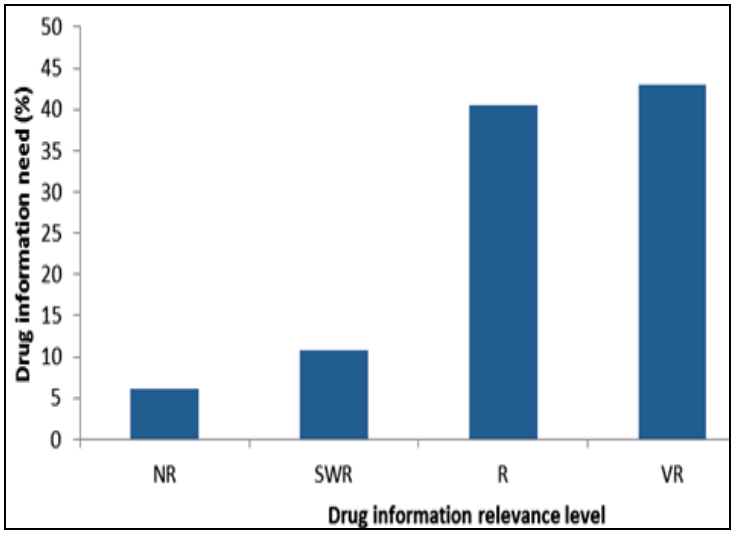

FIGURE 1: DRUG INFORMATION NEED OF PATIENTS IN GONDAR UNIVERSITY HOSPITAL

Improving patient safety is an important priority for any health care system. Organ affected by a drug and measures taken to prevent and manage adverse effects were responded by patients as the most relevant safety issues they want to know. This indicates drug information on adverse drug reaction is important for enhancing safety and well beingness of the patient.

This result coincide with Nair *et al* [2], the need for side-effect and risk information was the first mention of what patients wanted to know about medication. Ziegler *et al*, described about 76.2% of patients desired to be told of all possible adverse effects [13]. Berry *et al*, described between 50 and 90% of patients express a desire for more information about adverse effects [4].

In another study, patients believed that full disclosure of side-effect information would help them make more informed treatment decisions [3]. Although such studies can inform us patients desire for adverse drug reaction information, there are worries that informing patients about side effects might reduce compliance with the medication [4, 5].

However, informing patients about side effects does not increase the incidence of their occurrence, nor does it have a negative effect on compliance [5].

One of the rational use of drugs is whether patient's receive medication at the lowest cost or not [6]. In our study, however, patient's concern was desire for information related to alternatives to the prescribed drug than the cost alone. This might be due to implementation of health care financing in the hospital recently. Most patients get health service free of charge. Because of this, some patients did not care about cost of a drug rather their concern is to know places where less expensive drugs are found when there is unavailability of drugs. Most studies showed that cost is an important consideration patients required to have. The finding in Pakistan showed that 58% of patients marked cost as important to them [14]. In another study, cost of medication is cited as important in many groups [2].

Nair *et al,* in addition, showed as patients want to know more about cost-effective alternatives available. This is consistent with our study which showed patients want to know more about the effectiveness of the drug for the disease condition. Despite of this, there was less concern where the drug is manufactured. Some doctors inclined to prescribe brand drugs to their patients. Moreover, patients did not worry much about the constituents or formulation of the drug and religious and cultural issues that may affect drug use.

Most of the population in our community gave high value to religious and cultural issue, and less attention for life style changes. But patients in our study noticed the relevance of life style changes more than either religious or cultural issues in achieving the desired health outcome. This may be the patient gave priority for their cure beside these issues.

Our study confirmed that most patients received their information from both a pharmacist and a doctor. This result indicates that drug information source should be a shared responsibility.

Nasir *et al* [9], further strengthened our result. Where as Regensberg et al found that most of this information was obtained from their doctors [8].

One of the limitations of the study was its difficulty in generalizing the results to the whole geographic areas. Because of the convenience nature of the study, the study didn't inferred to areas other than the study setting. The use of convenience sampling in one general hospital may result in selection bias and limit the generalizability of the results.

CONCLUSION: We conclude that patients want to know any type of information related to their medication. They want more information about their medication information related to usage and administration, adverse drug reaction and side effect, production and storage, property of a drug, cost consideration. Physicians, pharmacists and other health professionals should provide both written and oral information with their medication in order to meet the need what patients want to know about their medication.

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