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Research Article

**CLIENTS' SATISFACTION WITH THE PROVISION OF
SERVICES OF AN OUT-PATIENT PHARMACY AT A
TERTIARY CARE HOSPITAL IN LAHORE, PUNJAB,
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Abstract:

Background: Determining the clients' satisfaction with the provision of pharmaceutical services is crucial because it not only helps in identifying the areas which needs improvement but it also enhances the positive changes in the current system.

Objectives: The aim of this study is to assess the level of clients' satisfaction with the services provided at the outpatient pharmacy of Bahria International Hospital (BIH) in Lahore, Punjab, Pakistan.

Methods: A descriptive, cross-sectional study design was employed. The study involved 400 clients, who had prescriptions/orders filled at the outpatient pharmacy of a tertiary care hospital between 1st March and 20th April, 2017. Data was obtained according to the objective of study using a standardized data collection form. The data was analyzed by using Statistical Packages for Social Sciences (IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.)

Results: The overall mean score for the satisfaction with the pharmaceutical services was 3.11 out of a maximum of 5.00 score. The mean scores for all the individual parameters rated were less than 4.00. Among the mean scores, maximum scores were given to "the clarity of the pharmacy professional's instructions about how to take your medication" (3.88 ± 0.69 ; 77.6%) and "the courtesy and respect showed to you by the pharmacy staff" (3.71 ± 0.78 ; 74.2%). On the other hand, the parameters rated lowest included "the availability of medications in the pharmacy that are prescribed to you" (1.54 ± 0.69 ; 30.8%) and "the way your pharmacist works together with your doctor to make sure your medications are the best for you" (1.64 ± 0.76 ; 32.8%). Female clients had a higher level of mean satisfaction (2.99 ± 0.21) as compared to male clients (2.93 ± 0.19). Furthermore, higher levels of satisfaction were also reported among older adults, those having primary education level, low income class, and those with moderate self-reported health status.

Conclusions: The overall mean satisfaction level of clients of the outpatient pharmacy was found to be of "moderate" level and there was variation in level of satisfaction with respect to different socio-demographic and health-related characteristics. Future studies focusing on the underlying reasons behind the moderate satisfaction may lead to appropriate solutions for improving the service.

Key words: Patients' satisfaction; Pharmacy services; Clients; Tertiary care hospital.

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INTRODUCTION:

Improvement in the “process of medicine use” is mandatory for achieving good therapeutic outcomes. Therefore, responsibilities lie on the pharmacists regarding many aspects of this process. The first step is to assure the integrity of the medicine supply chain. The integrity of medicines is ensured by the detection of spurious/false-labelled/falsified/counterfeit drugs, confirmation of proper storage conditions, and quality assurance of medicines, when needed. Furthermore, it also includes rational prescribing to assure appropriate dose regimens, dosage forms. This is probably because of the facts that the relevant information and clear instructions are provided regarding use, all sorts of drug interactions, contraindications and predictable adverse drug reactions (ADRs) e.g. allergies. Thus, this is the way to avoid or minimize unnecessary treatments and eventually the treatment cost [1]. This program is also beneficial for the patients and the individuals responsible for administration in understanding the importance of appropriate medication which includes correct time of administration, drug-drug or food-drug interactions and the expected outcomes. In other words, the important and fundamental part of this process is to monitor and verify the therapeutic effectiveness along with the ADRs.

The term “patient satisfaction” can be defined as, “the reaction of a healthcare recipient on the salient aspects of the services that he or she has received” [2]. For the development of the service improvement strategies, the proper understanding of satisfaction and quality in service has been recognised as the critical points. The inaugural work of Donabedian, on the quality assurance, identified the importance of patient satisfaction. That work also gave much of the basis for further research in the area of healthcare regarding quality assurance [3]. In the healthcare sector, the significance of measuring patient satisfaction is very well articulated. With the extensive study on the topic of the patient satisfaction, it has been evaluated that the satisfactory level of the patient is a measure of extensively stand-alone construct, a component of outcome quality, and a component in assessment studies particularly in quality care [4-6].

In healthcare settings, there is a limited research data available on the patients’ perceptions regarding dimensions of service quality (perceived service quality). However, patient satisfaction has tried to measure by those studies that evaluate the components of the quality of care in health services [7]. But no consensus has been drawn till date that conceptualise the relationship between satisfaction of patients and their perceptions regarding quality of healthcare. O’Connor and Shewchuk highlighted that much of the work on patient satisfaction is

deficit of theoretical framework. Simply it is based on descriptive and correlation analyses [8]. They concluded that, with regard to health services, the focus should be on measuring technical and functional (how care is delivered) quality rather than on patient satisfaction. Within this context, till date there is paucity of data from Pakistan which focus on the clients/patients satisfaction with the pharmacy services, despite the presence of anecdotal evidence that pharmacy practice in Pakistan has traditionally involved into product oriented approach majorly. So this study is aimed to fill this gap.

METHODS:**Study settings**

The study was conducted at the outpatient pharmacy of Bahria International Hospital (BIH) located in Bahria town of Lahore, Pakistan. Lahore is the 2nd most populated city in Pakistan and 32nd most populated city in the world with an approximate population of 15,245,000 people [9]. BIH is a referral hospital, has more than 200 beds capacity and provides its services in various departments including internal medicine, surgery, paediatrics, pulmonology, gynaecology and obstetrics, dermatology, urology, dentistry, ophthalmology, pharmacy, medical laboratory and others.

Study design, sample size and study population

A descriptive, cross-sectional study was employed to assess the level of client satisfaction with the services of the outpatient pharmacy. The minimum sample size was 384, as calculated using the Raosoft sample size calculator, with 95% confidence interval (CI) and 5% margin of error. With an added contingency of 5% for non-response and inappropriate responses, the final sample was calculated to be 400 clients.

In selecting participants of the study, adult clients (18 years or older) who were willing and had their prescript/orders filled at the outpatient pharmacy of the hospital were included in the study. A systematic random sampling technique was used to select the study participants. On an average 100 clients visited the pharmacy and the total number of clients to be investigated during the 50 days of data collection was 400. By dividing the daily client flow to the pharmacy with the number of clients to be surveyed per day, every 12th client was approached. The first client was selected daily through drawing a number from 1 up to 12 and continuing with every 12th number until the daily sample limit was reached.

Data collection process

The data was collected between 1st March and 20th April, 2017 from the clients who had their prescriptions/orders filled in the pharmacy. The

investigators who collected the data were properly trained on the instrument and ways of approaching clients and securing their permission prior to data collection.

A questionnaire was used for collecting data on the level of satisfaction of clients with the services of the outpatient pharmacy in BIH hospital. The questionnaire was adapted from a study done in Gondar University Referral Hospital in north-western Ethiopia to assess the level of satisfaction of clients with the services of the outpatient pharmacy in the hospital [10]. The reliability and internal consistency of the questionnaire was assessed by conducting a pilot study on 10% of target population. The Cronbach's alpha value obtained was 0.84.

Statistical analysis

Data was analyzed by using Statistical Package for Social Sciences (IBM SPSS Statistics for Windows, version 21.0, Armonk, NY: IBM Corp.). Descriptive statistics such as frequencies, percentages, mean, and standard deviation were used to present the data. Independent t test was

employed to assess the difference in satisfaction of clients between gender, employment status, residence and health service utilization. $P < 0.05$ was used for deciding statistical significance of differences observed.

Ethical considerations

Before conducting the study permission was obtained from the hospital and the pharmacy administrators to proceed with the study. The purpose of study was explained to every client and their consent was obtained prior to study.

RESULTS:

Demographic characteristics of the study respondents

A total of 405 clients were approached and 400 patients (response rate: 99%) were selected according to the study inclusion & exclusion criteria. 55.8% ($n = 223$) of the patients were female while 26.5% ($n = 106$) of the patients were 50-59 years of age. One hundred and sixty eight (42.0%) had secondary education and 81% were employed as shown in Table 1.

Table 1: Demographic characteristics of the study respondents

Characteristics	Frequency	Percentage
Gender		
Male	177	44.3
Female	223	55.8
Age (years)		
18-29	57	14.3
30-39	61	15.3
40-49	92	23.0
50-59	106	26.5
≥ 60	84	21.0
Marital status		
Single	66	16.5
Married	243	60.8
Widowed	39	9.8
Divorce	52	13.0
Education level		
Primary	109	27.3
Secondary	168	42.0
Tertiary	123	30.8
Income		
Low class	40	10.0
Middle class	205	51.3
Upper class	155	38.8
Employment status		
Employed	324	81.0
Unemployed	76	19.0
Self reported health		
Good	14	3.5
Moderate	173	43.3
Poor	213	53.3

Clients' satisfaction with the services of the pharmacy

Out of a maximum of 5.00 score for the satisfaction with the pharmacy services, the respondents gave a mean score of 3.11. Furthermore, the mean scores for the individual parameters were less than 4.00 (80%). Among the mean scores, the maximum scores were given for parameters including *“the clarity of the pharmacy professional's instructions about how to take your medication”* (3.88±0.69), *“the courtesy and respect shown to you by the*

pharmacy staff” (3.71±0.78), and *“the amount of time you spend waiting for your prescription to be filled”* (3.71±0.62). On the other hand, the parameters rated lowest included *“the availability of medications in the pharmacy that are prescribed to you”* (1.54±0.69), *“the way your pharmacist works together with your doctor to make sure your medications are the best for you”* (1.64±0.76), and *“how well the pharmacy professional answers your questions”* (1.70±0.73) as show in Table 2.

Table 2: Level of clients' satisfaction and mean scores of respondents with the pharmacy services

Variable	Very low (%)	Low (%)	Moderate (%)	High (%)	Very high (%)	Mean (% ,SD)
The pharmacy professional's interest in your health	40 (10.0)	97 (24.3)	145 (36.3)	100 (25.0)	18 (4.5)	2.90 (58.0, 1.03)
The professionalism of all the pharmacy staff	19 (4.8)	96 (24.0)	193 (48.3)	83 (20.8)	9 (2.3)	2.92 (58.4, 0.85)
The courtesy and respect shown to you by the pharmacy staff	0 (0.0)	27 (6.8)	118 (29.5)	201 (50.3)	54 (13.5)	3.71 (74.2, 0.78)
The privacy of your conversations with the pharmacist	8 (2.0)	47 (11.8)	156 (39.0)	163 (40.8)	26 (6.5)	3.38 (67.6, .850)
How well the pharmacist explains possible side effects	177 (44.3)	155 (38.8)	50 (12.5)	18 (4.5)	0 (0.0)	1.77 (35.4, 0.83)
The promptness of prescription medication service	8 (2.0)	42 (10.5)	153 (38.3)	125 (31.3)	72 (18.0)	3.53 (70.6, 0.97)
The care the pharmacy professional takes while supplying your medications	14 (3.5)	60 (15.0)	147 (36.8)	165 (41.3)	14 (3.5)	3.26 (65.2, 0.88)
The fairness of cost of medications in the pharmacy	8 (2.0)	84 (21.0)	174 (43.5)	107 (26.8)	27 (6.8)	3.15 (63.0, 0.89)
The amount of time the pharmacy professional spends with you	102 (25.5)	103 (25.8)	133 (33.3)	38 (9.5)	24 (6.0)	2.45 (49.0, 1.15)
The clarity of the pharmacy professional's instructions about how to take your medication	0 (0.0)	5 (1.3)	108 (27.0)	218 (54.5)	69 (17.3)	3.88 (77.6, 0.69)
The information the pharmacist gives you about the proper storage of your medication	8 (2.0)	8 (2.0)	230 (57.5)	146 (36.5)	8 (2.0)	3.35 (67.0, 0.65)
How well the pharmacy professional answers your questions	174 (43.5)	181 (45.3)	36 (9.0)	9 (2.3)	0 (0.0)	1.70 (34.0, 0.73)
The information the pharmacy professional gives you about the results you can expect from your medication therapy	9 (2.3)	143 (35.8)	213 (53.3)	35 (8.8)	0 (0.0)	2.69 (53.8, 0.66)
The way your pharmacist works together with your doctor to make sure your medications are the best for you	205 (51.3)	144 (36.0)	42 (10.5)	9 (2.3)	0 (0.0)	1.64 (32.8, 0.76)
The amount of time you spend waiting for your prescription to be filled	0 (0.0)	8 (2.0)	128 (32.0)	237 (59.3)	27 (6.8)	3.71 (74.2, 0.62)
The availability of medications that are prescribed to you in the pharmacy	230 (57.5)	126 (31.5)	44 (11.0)	0 (0.0)	0 (0.0)	1.54 (30.8, 0.69)
The clarity of the label on the medication supplied to you	0 (0.0)	36 (9.0)	158 (39.5)	188 (47.0)	18 (4.5)	3.47 (69.4, 0.72)
Your feelings of the quality of medication dispensed to you	18 (4.5)	45 (11.3)	183 (45.8)	144 (36.0)	10 (2.5)	3.21 (64.2, 0.84)
The overall cleanliness and comfort of the waiting area	0 (0.0)	17 (4.3)	169 (42.3)	186 (46.5)	28 (7.0)	3.56 (71.2, 0.69)
The location of the pharmacy relative to other service areas	18 (4.5)	36 (9.0)	157 (39.3)	162 (40.5)	27 (6.8)	3.36 (67.2, 0.90)
Your pharmacy services overall	0 (0.0)	73 (18.3)	211 (52.8)	116 (29.0)	0 (0.0)	3.11 (62.2, 0.68)

Difference in satisfaction level among respondents

The difference in the mean satisfaction levels of the respondents was checked with independent samples t-test and one way ANOVA test with respect to their characteristics. Independent samples t-test showed statistically significant difference (p -value = 0.008) for gender. Female clients had a higher level of mean satisfaction. One way ANOVA showed statistically significant difference (p -value = 0.000) for age. Clients having the age ≥ 60 years had a higher level of mean satisfaction as compared to other age groups. Furthermore, statistically significant difference (p -value = 0.012) were observed for self-reported health. Clients reported moderate self-reported health had a higher level of mean satisfaction as compared to others. However, no significant association was observed among other study variables.

DISCUSSION:

The mean level of satisfaction was found to be the “moderate” level in the five point Likert scale. This is in contrast with the studies conducted in Spain and in Portugal which reported high level of satisfaction of clients visiting the community pharmacies [11, 12]. This might be generally due to the different development levels of the countries and particularly because of the differences in pharmacy services. Similarly, a study conducted in Botswana also reported a high level of clients’ satisfaction with pharmacy services [13]. The different levels of satisfaction could be attributed to the gap in current system and service related aspects of pharmacy services in the institution.

Similar to our findings a study conducted in Al-Dahera and Muscat governorates also reported moderate satisfaction of clients [14]. The mean level of clients’ satisfaction (3.11) was higher than a study conducted in Addis Ababa (mean level of clients’ satisfaction 2.7) [15]. Similar results have been reported from a Nigerian study where the mean level of satisfaction for medication counseling by pharmacists was less before intervention at a psychiatric hospital [16].

The parameter including “the clarity of the pharmacy professional’s instructions about how to take your medication” had the highest score (3.88 out of 5.00) in the current study. This is due to the fact that pharmacists play a pivotal role in patients’ counselling and he must be capable enough of providing basic drug information to the patients i.e., appropriate drug usage, administration, dosage, etc. [17]. Getting an insight about opinions and views of patients about pharmacy services is crucial for improving the current situation, to evaluate the need for new services and for the sake of enhancing

communication and expectations between them [18]. The parameter “the courtesy and respect showed to you by the pharmacy staff” was rated 2nd highest (3.71 out of 5.00) in the current study. It could be attributed to the fact that pharmacists are trained in terms of good communication skills and counselling. This is in line with a study conducted by Smith, et al., where majority of the respondents reported that the pharmacy staff was proficient in executing their duties and they respected and valued their patients as well [19].

The lowest rated parameter in the present study was “the availability of medications in the pharmacy that are prescribed to you”, followed by “the way your pharmacist works together with your doctor to make sure your medications are the best for you”, and “how well the pharmacy professional answers your questions”. In contrast to this, “the information the pharmacist gives you about the proper storage of your medication”, and “how well the pharmacist explains possible side effects” were among lowest rated parameter in a study conducted at an outpatient pharmacy in Addis Ababa [15]. This showed that services linked with specific medications, particularly their storage, availability, information on side effects, expected results from the medications and other were accountable for the lower level of satisfaction. The results of an Ethiopian study revealed that only 32.8% of the counselling in the outpatient pharmacies was satisfactory [20].

In this study, the results of independent samples t test showed that female clients have had higher level of mean satisfaction compared to male clients. This might be due to the fact that females visit the same pharmacy and hence establish a relationship with their pharmacist as compared to males who do not show patronage of individual pharmacy. Moreover, it has been reported that females are more contented with interpersonal skills as compared to males [21]. Keeping in view the current findings it might be assumed that females are more anxious to have knowledge about their drugs from the pharmacist. Future studies should explore the reasons for higher level of satisfaction with the pharmacy services among female patient.

One way ANOVA showed statistically significant differences among different age groups, and self-reported health of clients in the study. The higher level of satisfaction reported among elderly clients compared to the young ones and among primary education level clients than in those having tertiary education was interrelated. The increased satisfaction among the clients who were elderly and had primary education level can be linked to the fact that these people have less awareness about the

details of the functions in the pharmacy and the associated services. A Portuguese study also elucidated the differences in satisfaction among different age groups [12].

CONCLUSION:

The mean level of satisfaction was of “moderate” level in the five point Likert scale and it varied statistically between different groups including gender, age and self-reported health status. This satisfaction level should be studied further for finding the solutions and improving the current situation. The hospital must try to provide best services to the patients and continue professional development of their staff for improving the clients’ satisfaction with the services provided in the pharmacy. Moreover, special attention must be given to improve the clinical and communication skills of the pharmacists.

Study limitations

As with any study this has limitations. First, the results cannot be generalizable to all of Pakistan because the study was conducted in an outpatient pharmacy only. Secondly, the specific services clients got in the pharmacy were not assessed. This may limit the study’s ability for accessing the clients’ level of satisfaction linked with particular kind of services.

Disclosure

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