



## Satisfaction towards the services provided by the community pharmacist in north-west India: A qualitative exploratory study



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### ABSTRACT

**Introduction:** Patient satisfaction is an indicator in identifying and assessing the patient health-related needs, it is an important factor in determining the health care facilities being delivered to the patients. The Community Pharmacist-led quality of services can be accessed through patient-reported outcomes (PROs). A cross-sectional survey was conducted to assess the level of client/patient satisfaction towards the services provided by the Community Pharmacist and factors affecting it.

**Methods:** A descriptive questionnaire-based cross-sectional study was conducted for a period of 3 months targeting general community adults who visit community pharmacy settings. Well-trained student pharmacists collected data from the subjects through an interview and the statistical analysis was done using SPSS v 14.

**Results:** A total of 314 participants were included in the study with a mean age of 24.39 years and standard deviation of 9.27 years. A higher number of participants were poorly satisfied (39.5%) with the quality of patient counseling; only fewer (2.2%) participants marked the quality of patient counseling delivered by the pharmacist as excellent. Level of satisfaction was higher for the male participants as compared to female participants, with an adjusted odds ratio of 2.541 at 95% CI 1.221–5.286 with a significant p-value of 0.017.

**Conclusion:** This paper provides an overview of the quality of services provided by Community Pharmacist in India. There is an immense need to organize the continuing education programs for the Community Pharmacist by employing social and administrative pharmacy tools to improve the services.

### 1. Introduction

Over the past decade, there observed a dramatic shift in the role of Community Pharmacists by transferring themselves as a patient-centred, beyond just restricting to medications dispensing.<sup>1</sup> As the name by itself infers that they are the Pharmacists who strive for the welfare and well-being of the community concerning patient-care advocacy.<sup>2</sup> The Community Pharmacists play an essential role in enhancing patient's health-related quality of life by attaining specific positive outcomes that are important from the patient perspective which can potentially reduce their disease and economic burden as well.<sup>3</sup>

Modernization in the field of Pharmacy Practice that has led to Pharmacist involvement in offering various Clinical Pharmacy Services

(CPS) such as, the drug information services, disease counseling, drug storage & administration procedures, blood pressure, and blood sugar monitoring, etc. for the patient well-being.<sup>4</sup> Among the various vital factors, patients' satisfaction would always be on the top of the list for any country in assessing the quality of the healthcare system.<sup>5</sup> Patient satisfaction is the degree of positive feeling that patients experience having used a service. It acts as an indicator in identifying and assessing the patient health-related needs. The Community Pharmacist-led quality of services can be accessed through patient-reported outcome (PRO) which are solely based on the patient's satisfaction towards the services delivered on a visit to the pharmacy.<sup>3</sup> Patient satisfaction towards pharmacy services might vary by a variety of factors such as waiting time, patient expectations, quality services, pharmacy setting &

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facilities, convenience, and availability of medications.<sup>6,7</sup>

Various studies that addressed this question in the past yielded disproportionate results.<sup>4,8–10</sup> However, the findings from the developed countries such as the United States of America, Canada, Australia, United Kingdom, and Europe inferred a positive opinion towards community pharmacy services.<sup>11–14</sup> Thus, the rationale for conducting this study is to explore the patients' satisfaction towards Community Pharmacy Services from the Indian perspective, as the current evidence is not certain about the findings. As a result, as an initiation, a cross-sectional survey was conducted in the north-west part of India to study the level of patient satisfaction towards the services provided by the Community Pharmacist and factors affecting the level of satisfaction.

## 2. Methodology

### 2.1. Study design

A descriptive questionnaire-based cross-sectional study was conducted for the period of 3 months from April to June 2018 targeting general community adults who visit community pharmacy settings after taking informed consent form. The study was commenced after getting approval from the Institutional Ethics Committee and all the studied participants were voluntarily included after obtaining informed consent form from all the study participants.

### 2.2. Study subjects and selection criteria

Study participants were recruited strictly as per the inclusion criteria, i.e., subjects of either gender with  $\geq 18$  years of age, who were willing to participate in the study, and who has visited the community pharmacy in past six months of time for refilling the prescription. Proportionate random sampling was employed in selecting the samples from the population. All the study participants were informed about the objective of the study, and informed consent was taken from all the study participants before the data collection.

### 2.3. Sample size

The minimum of 300 sample size was calculated using the Raosoft software at a 95% confidence interval with 5% margin of error with the response rate of 29%.<sup>15</sup> As a result, the study analysis was comprised of 314 participants.

### 2.4. Questionnaire and data collection process

The study questionnaire was prepared after reviewing the similarly conducted and published studies around the globe. The questionnaire was undergone for the content validation by the two faculties from Pharmacy field, two from medical sciences, comments of each faculty member were addressed, and changes were made to get the final questionnaire. The study questionnaire comprised of the socio-demographic details of the participants and the sections that focused on the satisfaction of the subjects towards the services provided to them on a visit to the community pharmacy. In total, questionnaire consists of 20 questions in which satisfaction was based on five Likert scale items; (one stands for poor satisfaction, two for fair, three for good, four for very good, and five stands for excellent satisfaction respectively). Before the actual study commences, the study questionnaire was tested on 35 subjects, as a reliability measure, and they were not included in the final analysis. Data were collected from the subjects through an interview by well-trained student pharmacists with regards to seeking of permission and informed consent process before the data collection.

### 2.5. Statistical methods

Data was entered into Statistical Package for Social Sciences (SPSS)

**Table 1**  
Socio-demographic variables of the study participants.

Socio-Demographic Variables	Number (n)	Percentage (%)
<b>Gender</b>		
Male	124	39.5
Female	190	60.5
<b>Age Groups (Years)</b>		
18–29	261	83.1
30–39	22	7.0
40–49	31	9.9
<b>Marital Status</b>		
Single	238	75.8
Married	76	24.2
<b>Educational Status</b>		
Illiterate	21	6.7
Primary School	12	3.8
High School	10	3.2
Higher Secondary School	48	15.3
Diploma	71	22.6
Graduate	124	39.5
Post Graduate	27	8.6
PhD	1	0.3
<b>Employment Status</b>		
Unemployed	207	65.9
Private	39	12.4
Government	27	8.6
Housewife	12	3.8
Others	29	9.2
<b>Type of Worker</b>		
Health Care Worker	130	41.4
Non-Health Care Worker	184	58.6
<b>Residence</b>		
Rural	164	52.2
Urban	150	47.8
<b>Chronic Health Illness</b>		
Absent	289	92.0
Present	25	8.0
<b>Type of Pharmacy Visitor</b>		
Chain	6	1.9
Private	123	39.2
Both	185	58.9
<b>Health Insurance</b>		
No	299	95.2
Yes	15	4.8
<b>No of Visits to Pharmacy in Past 6 Months</b>		
1–5	286	91.1
6–10	25	8.0
11–15	2	.6
16–20	1	.3
<b>Time Spent in Pharmacy</b>		
1–15 min	232	73.9
16–30 min	76	24.2
31–45 min	6	1.9

v. 14, analyzed for both descriptive statistics and inferential statistics. Chi-square and binary logistic regression were used and a p-value of  $< 0.05$  was considered as significant.

## 3. Results

### 3.1. Socio-demographic variables

Of 314 study participants, the mean age was found to be 24.39 years with standard deviation of 9.27 years. Most of the participants (83.1%) were belonging to the age group of 18–29 years, which infers that the cohort comprises of the younger adults. Among the participants, more than half of them (60%) were females, 75.8% were single, and more than one-third (39.5%) of them were graduated; however, 65.9% of the participants who responded to the survey were unemployed. About half of the participants (52.2%) were from rural areas, and most of the respondents (92%) were free from having any chronic illness. The rest of the socio-demographic variables are detailed in [Table 1](#).

Among the study participants, most of them (92.7%) were over the

**Table 2**  
Type of drug therapy user.

Type of Drug Therapy User	Number (n)	Percentage (%)
OTC	291	92.7
Anxiolytics	2	0.6
Anti-Hypertensive + Anti-Diabetes	16	5.1
Ayurvedic Medicines	3	1.0
Antibiotics	2	0.6

**Table 3**  
Patient counseling quality indicators.

Patient Counseling Quality Indicators	Number (n)	Percentage (%)
<b>Average Time Spent on Patient Counseling</b>		
1–15 min	297	94.6
16–30 min	17	5.4
<b>Mode of Patient Counseling</b>		
Not Received	91	29.0
Verbal	175	55.7
Non-Verbal	48	15.3
<b>Aids Used for Patient Counseling</b>		
No Aid	162	51.6
Pictograms	26	8.3
Videos	8	2.5
Labels	100	31.8
Information Leaflets	6	1.9
Pictograms + Labels	12	3.8

counter (OTC) medication users, while 5.1% of them were on anti-hypertensive and antidiabetic drugs. Interestingly, only 0.6% of them were using antibiotics and anxiolytic drugs. The proportions of all other medications were detailed in [Table 2](#).

### 3.2. Patient counseling quality indicators

From our study findings, the average time spent by the pharmacist on patient counseling for most of the study participants (94.6%) was found between 1 and 15 min. The mode of patient counseling used by

**Table 4**  
Level of satisfaction among participants towards the services provided by community pharmacist.

Question	Poor (%)	Fair (%)	Good (%)	Very Good (%)	Excellent (%)	Chi Square, P value
Quality of Patient Counseling I Receive from My Pharmacist	124 (39.5)	82 (26.1)	71 (22.6)	30 (9.6)	7 (2.2)	125.68, < 0.001*
Waiting area of Pharmacy I Visit	72 (22.9)	125 (39.8)	76 (24.2)	32 (10.2)	9 (2.9)	126.92, < 0.001*
Pharmacist's Advice on Non-pharmacological Treatment	100 (31.8)	80 (25.5)	99 (31.5)	25 (8)	1 (0.3)	200.17, < 0.001*
Availability of Drugs Stock (Adequate Inventory)	50 (15.9)	39 (12.4)	101 (32.2)	83 (26.4)	41 (13)	49.79, < 0.001*
Behaviour of my Pharmacist	40 (12.7)	47 (15)	100 (31.8)	82 (26.1)	45 (14.3)	45.20, < 0.001*
Suggestion of my Pharmacist for Substitution with Generic Drugs (Low Price Drugs with same Results)	76 (24.2)	68 (21.7)	98 (31.2)	55 (17.5)	17 (5.4)	57.31, < 0.001*
My Pharmacist Maintains Privacy during consultation	77 (24.5)	102 (32.5)	77 (24.5)	44 (14)	14 (4.5)	36.06, < 0.001*
My Pharmacist Understands me Well	40 (12.7)	69 (22)	115 (36.6)	66 (21)	24 (7.6)	76.41 < 0.001*
Satisfaction on Advise of my Pharmacist	54 (17.2)	68 (21.7)	117 (37.3)	51 (16.2)	24 (4.6)	77.65, < 0.001
Satisfaction on the bill charged for the medicines by my Pharmacist	68 (21.7)	63 (20.1)	108 (34.4)	53 (16.9)	22 (7)	268, < 0.001*
Information Provided by my Pharmacist on Drug Administration	78 (24.8)	63 (20.1)	80 (25.5)	76 (24.2)	17 (5.4)	44.57, < 0.001*
Satisfaction on Drug Information Provided by Pharmacist	78 (24.8)	93 (29.6)	63 (20.1)	46 (14.6)	34 (10.8)	35.9, < 0.001*
My Pharmacist dispenses the Narcotic and Psychotropic Substances on Prescription and handles with Extreme Care	145 (72)	72 (22.9)	44 (14)	33 (10.5)	20 (6.4)	157.88, < 0.001*
Satisfaction on information being provided by Pharmacist on Poisoning and its management	94 (29.9)	92 (29.3)	98 (31.2)	20 (6.4)	10 (3.2)	122.37, < 0.001*
Satisfaction with the Pharmacist's responsibility towards Handling of Prescription Drugs	82 (26.1)	94 (29.9)	78 (24.8)	43 (13.7)	17 (5.4)	64.9, < 0.001*
Satisfaction on Advise of my Pharmacist on Family Planning	107 (34.1)	60 (19.1)	86 (27.4)	48 (15.3)	13 (4.1)	82.78, < 0.001*
Satisfaction on Advise of my Pharmacist on Hygiene Maintenance	67 (21.3)	76 (24.2)	112 (35.7)	44 (14)	15 (4.8)	83.61, < 0.001*
Advise on Management of Minor Ailments like Cold Flue, Diarrhea, Vomiting etc.	85 (27.1)	66 (21)	79 (25.2)	63 (20.1)	19 (6.1)	43.0, < 0.001*
My Satisfaction on Ambulatory Services like monitoring of BP, RBS/FBS provided by my Pharmacist	95 (30.3)	71 (22.6)	78 (24.8)	40 (12.7)	30 (9.6)	46.7, < 0.001*
Overall Satisfaction towards the Services Provided by Pharmacist	29 (9.2)	60 (19.1)	129 (41.1)	79 (25.2)	17 (5.4)	125.68, < 0.001*

the pharmacist for half of the candidates (55.7) was a verbal while, 2.9% of participants responded that they never received any counseling, and 43 (15.3%) of participants received non-verbal mode of patient counseling. Unfortunately, half of the participants (51.6%) responded that their pharmacist does not use any aid for patient counseling, while very few responded that their pharmacist uses patient information leaflet as an aid for patient counseling. The rest of the information on time spent, modes used, and aids used by the community pharmacists are detailed in [Table 3](#).

### 3.3. Patient's satisfaction with pharmacy services

Unfortunately, more than one-third of the study participants were poorly satisfied (39.5%) with the quality of patient counseling, and only fewer participants (2.2%) marked the quality of patient counseling delivered by the community pharmacist as excellent. More than one-third of the participants (39.5%) had marked waiting area of pharmacy as fair, while 2.9% marked it as excellent. From the study findings, it was observed that nearly one-third (31.8%) of the participants were poorly satisfied with the advice of pharmacist on non-pharmacological treatment, while only one participant (0.3%) marked it as excellent. Only 31.8% of the participants had marked behaviour of the pharmacist as good, while 12.7% of participants marked it as poor. Interestingly, 31.2% of the participants marked as good for pharmacist suggesting the generic medicines, while very few participants (5.4%) were highly satisfied with it. The overall satisfaction of participants towards the services provided by the community pharmacist was good. The rest other parameters of patient satisfaction toward the services provided by the community pharmacist are detailed in [Table 4](#).

### 3.4. Factors affecting the level of satisfaction

From the study findings, the level of satisfaction was noticed as higher for the male participant when compared to the female participant with an adjusted odds ratio of 2.541 (95% CI; 1.221–5.286) at p-value 0.017. Majority of the participants in the age group of 18–29 were least satisfied with the services provided by the community pharmacist with an adjusted odds ratio of 0.866 (95 CI; 0.261–2.869). On the other

**Table 5**  
Factors associated with the level of satisfaction among the study participants.

Variables	Satisfaction		COR (95% CI)	AOR (95% CI)	P
	Low	High			
Gender					
Male	80	44	1.490 (0.910–2.440)	2.541 (1.221–5.286)	0.017
Female	138	52	1	1	
Age Category (in Years)					
18–29	181	79	0.866 (0.261–2.869)	1.496 (0.619–3.617)	0.371
30–39	13	10	0.631 (0.164–2.431)	2.637 (0.812–8.569)	0.107
40–49	24	7	1	1	
Marital Status					
Single	163	75	1.205 (0.680–2.136)	.806 (0.267–2.433)	0.702
Married	55	21	1	1	
Chronic Health Illness					
Absent	199	90	1.432 (0.553–3.707)	1.525 (0.399–5.819)	0.537
Present	19	6	1	1	
Residence					
Rural	113	52	0.911 (0.563–1.474)	1.065 (0.568–1.998)	0.845
Urban	105	44	1	1	
Type of Pharmacy Visited					
Chain	5	1	2.906 (0.333–25.394)	0.371 (0.038 3.578)	0.391
Private	96	27	2.066 (1.227–3.480)	0.457 (0.229–0.914)	0.27
Both	117	68	1	1	
Health Insurance					
No	206	93	0.536 (0.165–1.740)	0.536 (0.165–1.740)	0.299
Yes	12	3	1	1	
Employment Status					
Unemployed	144	63	1.132 (0.437–2.929)	0.925 (0.308–2.782)	0.890
Private	26	13	1.212 (0.356–4.123)	1.134 (0.288–4.466)	0.857
Government	19	8	0.917 (0.255–3.296)	1.078.(254–4.575)	0.918
Housewife	9	3	0.940 (0.166–5.315)	1.282 (0.186–8.856)	0.801
Others	20	9	1	1	

hand, participants who did not have the health insurance were least satisfied with the services, and unemployed participants were less satisfied with the quality of service provided by the community pharmacist with an adjusted odds ratio of 0.925 (95% CI; 0.308–2.782). All the other factors affecting the quality of services are well detailed in [Table 5](#).

#### 4. Discussion

As survey serves as an effective tool in bridging the gap between the services delivered and the expectations of participants towards the services, we attempted to evaluate the quality of services provided by the community pharmacist and opinion of the patients towards the services delivered.<sup>8</sup> The findings of this study have revealed that the public has much expectation towards the services being provided by their community pharmacist.

The findings of overall satisfaction among our study participants were found to be similar with the study conducted by Surur S A et al. in north-west Ethiopia,<sup>16</sup> while the study conducted in Botswana had shown a higher level of satisfaction as compared to the findings of our study. The reason for the lower level of satisfaction in our study might be due to the difference in the practice of pharmacy in India.<sup>17</sup> The majority of the participants were poorly satisfied and wanted the waiting area of the pharmacy to be comfortable, and these findings were similar to the study conducted by Surur S A et al.,<sup>16</sup> The reason

for the demand of a comfortable waiting area would be, as most often sick and diseased patient visit pharmacy to get their prescriptions refilled, they prefer to sit in a comfortable place and wait for their turn. Most of the participants in our study were poorly satisfied with the quality of patient counseling given to them, which was lower as compared to the study findings by Surur S A et al.,<sup>16</sup> This indicates that there is a need to sensitize and skill the community pharmacist of Punjab on the patient counseling and its importance. The pharmacists' advice on the non-pharmacological management of diseases was on the lower level of satisfaction, in fact, the pharmacist has to make his/her clients aware about the available non-pharmacological options for their treatment.<sup>18</sup>

As best of the authors' knowledge, this is the first study of this kind in India, which tried to assess the satisfaction of patients in context to the services and facilities provided by the community pharmacist. The results of the previously conducted studies on patients' perception and satisfaction towards the services provided were varied from country to country. In a study conducted at Al-Jabar ENT hospital, Saudi Arabia had only 61.2% of patients who were satisfied by the services provided by the pharmacist, while the similar study conducted in Malta and Malaysia had almost 95% of the patient satisfaction rate.<sup>12,19</sup>

Most of the participants were poorly satisfied with pharmacist's handling of Psychotropic and narcotic drugs which is a serious concern, and it cannot be ignored. As per the best of our knowledge, we did not find any study, which reported the patients' satisfaction on the handling of Psychotropic and narcotic drugs by a pharmacist. Satisfaction of other services as poison information services, information on home remedies, hygiene maintenance, etc. provided by the pharmacist was found to be satisfactory. In contrast, a study conducted in Malta had reported that most of the patients were satisfied with the services provided by the pharmacist. In our current study, we found that people claimed the poor advice of a pharmacist to the public towards family planning.

Moreover, from our survey we found that most of the males were satisfied with the services provided by the community pharmacist as compared to female, this may be due to lack of interaction due to gender difference, as in India most of the pharmacist are male. On the other hand, patients without health insurance had the least overall satisfaction, might be due to lack of communication. Unemployed people and participants belonging to age group 18–29 years were also least satisfied with the overall quality of the services delivered to them. The reason behind the lower level of satisfaction among unemployed people can be lack of education, and it might be difficult for them to learn about drugs and disease conduction. The reason behind this might be the higher expectations from a pharmacist. It is a fundamental duty of the pharmacist to provide the services to all the people without any discrimination.

#### 5. Conclusion

In a nutshell, the satisfaction level among the study participants of north-west India was found to be low. The Pharmacy licensing authorities in India should organize continuing education programs for the Community Pharmacist in order to enhance their quality of the services. The level of satisfaction varied by different socio-economic variables including gender, age group, marital status, occupation, and health insurance; which must be investigated for their strength of associations by using quantitative study designs in the near future.

#### 6. Limitations

The major limitation of this study would be the generalizability of its results to the entire country, as the study is restricted to only north-western part of India.

### Conflicts of interest

The Authors declare no conflict of interest.

### Author's contribution

All the authors have equal contribution in designing the research, collecting data and drafting the manuscript.

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### Appendix A. Supplementary data

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