

Assessment of satisfaction with community pharmacy services using SERVQUAL; Implications for quality of service

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Abstract:Introduction: In recent years there have been increased role for pharmacist in healthcare services. Pharmacists in addition to traditional dispensing and medication supply functions are expected to participate in multidisciplinary patient care services. Pharmacy services now lay emphasis on appropriateness of drug selection, cost effectiveness, safety, public health, prevention of adverse events and drug information to mention but a few. Ineffective pharmacy services are reported to increase incidence of dosage errors, adverse drug reactions and irrational drug use. Satisfaction with services is increasingly being recognized as a quality indicator in healthcare services. There is need to ensure that expectations of patients and service performance is given due consideration in service delivery operations.

Objectives: To identify common pharmacy services, assess level of satisfaction and identify dimensions associated with high level of satisfaction.

Methods: A total of 450 SERVQUAL questionnaires were administered in 33 community pharmacies evenly spread in ten districts of Abuja, Nigeria's capital city. Customers who orally consented to participate were given one questionnaire before and after receiving services in selected community pharmacies. Response was on five point Likert scale which ranged from strongly agree to strongly disagree.

Result/Discussion: Most community pharmacies were largely providing traditional dispensing and medication counseling services. Satisfaction level ranged between 28 – 37% well below 80% threshold required to be considered satisfactory. Patients expectation of service quality far exceeded perceived performance in most of the pharmacies which indicates that structural, administrative and personnel quality challenges is widespread. Quality improvement initiatives must aim to transit to integrating traditional with cognitive services which has the potential to improve service quality and satisfaction.

Conclusion: The level of satisfaction across all dimensions of service was very low indicating that service experience needs to be improved across all domains of service in community pharmacies.

Keywords: Community pharmacy, Satisfaction, Expectations, Perception, SERVQUAL

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I. Introduction

The past few decades has witnessed dramatic changes in the scope and responsibilities of pharmacists in health care delivery system. The focus has changed from that of a dispenser and supplier of medication related needs of patients to that of being an integral part of multidisciplinary patient care team. Consequently, there has been an increased focus on cognitive pharmacy services that place emphasis on improving patient treatment outcomes ^[1]. The new philosophy of pharmaceutical care therefore represent an integration of traditional roles with the rapidly evolving clinical roles in which pharmacists takes responsibility for medication related needs of patients and therapy outcomes often in collaboration with other healthcare professionals ^[2].

Service delivery pharmacies is increasingly laying emphasis on appropriateness of therapy, safety, cost effectiveness, prevention of medication therapy problems, drug information and ultimately improvement in patients quality of life to mention but a few. Several studies reported that ineffective pharmacy services increases the risk of morbidity ^[3], cost of medical care ^[4] and mortality rate among patients ^[5]. There have been reports that up to 20% of drug prescriptions for in-patients have dosage errors of which 40% of them are potentially life threatening ^[6].

In many urban areas in Nigeria, community pharmacies represent the closest healthcare facility to residents; they are readily visible and sometimes represent the first contact with healthcare service in the community. Many patients access care services there for treatment of common ailments, malaria, health information, medicine supply, reproductive health services, nutritional advice and drug information. Pharmacist council of Nigeria has in recent years expanded the scope of training to enable pharmacists actively participate

in patient care in collaboration in multidisciplinary health care settings. While patient satisfaction is not a legal or regulatory requirement for now, it's imperative that it should be given due consideration as an integral part of service quality assessment.

In recent years some countries have introduced mandatory patient satisfaction assessment as service quality indicator, because healthcare is now seen as a service [7,8,9,10]. The concept of patient satisfaction has been a subject of intense debate in literature [11,12] however according to some school of thought, patient satisfaction is "patient reported outcomes" [13]. Satisfaction is a significant factor in sustaining patronage, revisits and loyalty to retail pharmacies and healthcare insurance organizations [14,15]. Some studies opined that satisfaction occurs when expectations converge with perception of actual service received from providers [16].

The relationship between quality service and patient satisfaction is believed to be linear, despite conflicting opinions existing in defining quality and its measurement [17]. One widely held view of quality is that which regards it as the extent to which a service meets the expectations of customers [18,19,20]. Quality based on this definition is therefore the difference between expectations and perceived service received and where perception of quality is greater than or equal to expectation. Therefore expectation and perception underlie the basic definition of quality and satisfaction and they have been reported to be important predictors of behaviour and attitudes [21] and quality improvement initiatives of corporate organizations [22].

It has been suggested that patients' satisfaction is multidimensional and largely dependent on preferences and expectations; other aspects of care services such as technical and cognitive skills, competencies are also believed to be contributory components to satisfaction [23]. Community pharmacies are expected to bring their technical knowledge, experience, cognitive skills and competencies to bear in the provision of highest quality care services. The degree to which patients perceive that their needs are being met will reflect on their level of satisfaction [19,24]. Satisfaction can therefore be used as a performance assessment of pharmacy services on a broad spectrum of care services provided in pharmacies [25,26]. Therefore regular evaluation of satisfaction can be a useful tool in improving service delivery in community pharmacies.

II. Objectives

- Identify common community pharmacy services
- Determine level of satisfaction with pharmacy services
- Identify satisfaction level with different dimension of services
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III. Methods

Setting: The study was carried out in thirty three community pharmacies across ten districts of the city. A public health facility was identified and three pharmacies within 2 kilometer radius were randomly selected in each district of the capital city.

Study design: This was a cross sectional survey design using information obtained from SERVQUAL questionnaire administered on customers who came to access pharmacy services.

Inclusion criteria

- The community pharmacy must be licensed by pharmacist council of Nigeria
- There must be a licensed pharmacist on duty
- Respondents must be 18 years and above and have given informed consent

Sample size: This was calculated using the formula

$$N = \frac{Z^2PQ}{e^2}$$

Where

N = sample size

P = proportion

Q = 1 – P

e² = level of precision (95% confidence level)

Survey areas: The survey areas included ten districts of the federal capital territory and they include Wuse, Garki, Maitama, Asokoro, Jabi, Utako, Lugbe, Nyanya, Kubwa, Gwagwalada and Mpape. In each of these districts three community pharmacies that met inclusion criteria were randomly selected for the study.

Questionnaire administration: A total of 450 SERVQUAL instrument consisting of twenty two items were equally distributed equally at the rate of 15 per selected pharmacy. Each respondent was given one questionnaire before and after receiving services in the community pharmacy. The questionnaires which were self-administered required that respondents indicate the extent to which they agree or disagree with statements that

were on a five point Likert scale. The responses ranged from strongly agree to strongly disagree and only completed questionnaires were used for analysis.

Data collection: The questionnaires were self-administered by trained pharmacy assistants that also assisted with explanations for patients. Demographic data was entered into a data collection form attached to the SERVQUAL instrument. All completed questionnaires were retrieved for data analysis.

Data analysis: A total of 385 questionnaires were eventually used for analysis giving a return rate of 85.5%. The data was entered into SPSS 21 for descriptive and factor analysis [Cronbach alpha – 0.989]. Factor analysis using varimax rotation with Keyser-Meyer-Olkin normalization was done and loadings with ≤ 0.4 were suppressed. The difference between mean item scores of expectation and perception were obtained, and using weighted gap score satisfaction level of each dimension was calculated.

IV. Results

The demographic characteristics showed that more than half of respondents were married (49.1%) and majority of respondents were civil servants (40.5%). Most respondents were either degrees or post graduate degrees accounting for about 63.2%. Above half of them were males (53.7%) and mean age was 47.2 ± 15.1 years.

Table 1: Demographic data of respondents (n = 385)

Number	Percentage
Gender	
Male	207 53.7
Female	178 46.3
Marital status	
Married	189 49.1
Single	97 25.2
Divorced	52 13.5
Widow	47 12.2
Occupation	
Civil servants	156 40.5
Self-employed	93 24.2
Private sector employed	77 20.0
Unemployed	42 10.9
Others	17 4.4
Educational status	
Secondary	50 12.9
NCE/HND	92 23.9
Degree	181 47.1
Postgraduate	62 16.1

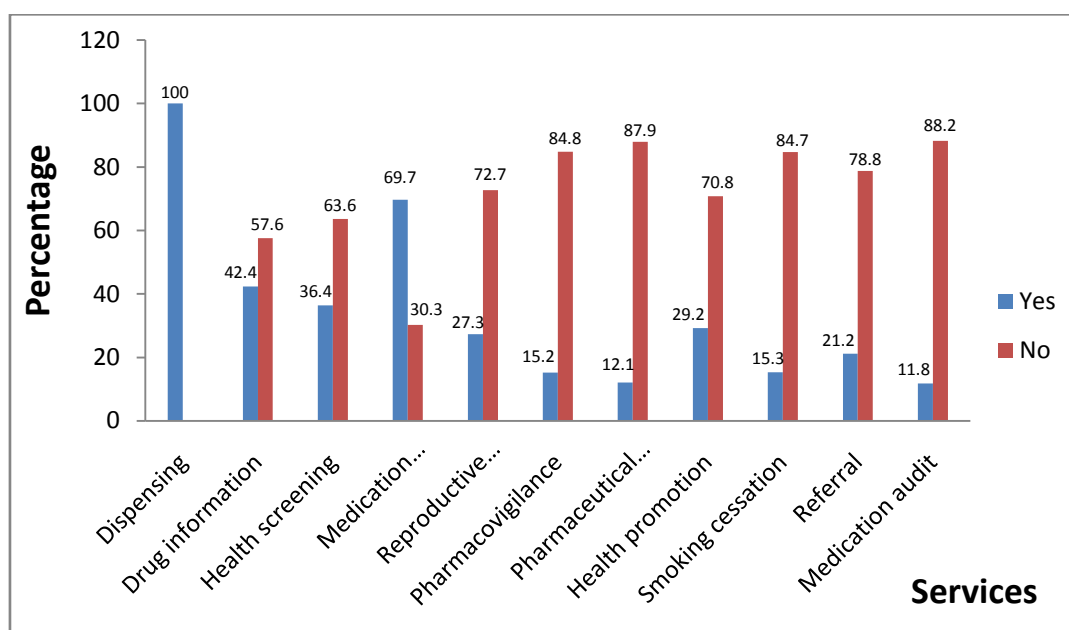


Figure 1: Community pharmacy services(n = 33)

Tangibility SERVQUAL results: This dimension consists of four items covering aspects of equipments, materials, physical appearance of facility and personnel. The gap score of 2.35 was highest for equipments and least for appearance indicating low level of satisfaction for equipment but high for appearance. The overall satisfaction level with this dimension was 36.9%

Table 2: SERVQUAL result on tangibility

Tangibility	Factor	Expectation	Perception	Gap score
Loading	F	E	P	P - E
Modern looking equipments	0.799	1.42	3.77	2.35
Attractive and neat appearance	0.912	1.64	1.77	0.08
Professional appearance of staff	0.917	1.73	2.25	0.52
Appropriate materials and equipments	0.726	1.99	3.10	1.11
Average score		1.69	2.72	1.01
Weight dimension	3.3			
Average unweighted tangibility gap score	1.02			
Weighted gap score	3.37			
Satisfaction level	36.9%			

Reliability SERVQUAL results: The average gap score of 1.58 showed that expectations exceeds perception and thus overall satisfaction is low [28.9%]

Table 3: SERVQUAL result on reliability

Reliability	Factor	Expectation	Perception	Gap score
Dimensions	F	E	P	P - E
They provide services as promised	0.7012.00	2.91	0.91	
They showed willingness to solve problems	0.698	1.83	2.88	1.05
The services are provided correctly all the time	0.856	1.70	3.75	2.04
The services are provided at the time promised	0.911	1.60	3.50	1.98
They kept accurate records of services	0.930	2.21	4.14	1.93
Average Score		1.87	3.44	1.58
Dimension weight	50.5			
Average unweighted reliability gap score	1.5			
Weighted gap score	79.8			
Satisfaction level	28.9%			

Responsiveness SERVQUAL results: Patient satisfaction for this dimension is low as indicated by high gap score [3.42]. Overall level of satisfaction was 29.2%.

Table 4: SERVQUAL responsiveness result

Responsiveness	Factor	Expectation	Perception	Gap score
Dimensions	F	E	P	P - E
They inform me when services will be provided	0.918	1.30	3.63	2.31
Services are provided promptly on request	0.755	1.75	3.14	1.39
They are always willing to help	0.699	1.89	3.02	1.13
They are never too busy to respond to requests	0.930	1.39	3.90	2.51
Average Score		1.58	3.42	1.83
Dimension weight	11.2			
Average unweighted responsiveness gap score	1.83			
Weighted gap score	20.5			
Satisfaction level	29.2%			

Assurance SERVQUAL results: The weighted gap score for items in this dimension showed perception of service delivery is not satisfactory. The level of patient satisfaction with this dimension was 36.9%

Table 5: SERVQUAL results for assurance

Assurance Factor	Expectation	Perception	Gap score	
Dimensions	F	E	P	P-E
Staff behaviour instill confidence	0.758	1.77	2.81	1.04
I feel safe in my interactions with staff	0.887	1.70	3.67	1.97
Staffs are courteous and friendly	0.852	1.49	2.43	0.94
Staff answer my questions satisfactorily	0.872	1.47	1.91	0.44
Average Score	1.61	2.71	1.09	
Dimension weight	20.4			
Average unweighted assurance gap score	1.09			
Weighted gap score	22.2			
Satisfaction level	36.9%			

Empathy SERVQUAL results: Analysis of this dimension showed that providing individual attention had the highest gap score of 2.04 meaning that perception of quality was less than satisfactory. The satisfaction with level of service delivery was 37.6%

Table 6: SERVQUAL result for empathy

Empathy Dimension	Factor	Expectation		Perception	Gap score
	F	E	P	P- E	
They provide individualized attention	0.706	1.74	2.82	1.07	
The operating hours is convenient	0.891	1.38	1.56	0.18	
Staffs provide personalize attention	0.776	1.63	3.67	2.04	
They have my best interest at heart	0.712	1.72	2.65	0.93	
Staffs understand my service needs	0.686	1.45	2.62	1.17	
Average Score	1.58	2.66	1.08		
Dimension weight	14.6				
Average unweighted empathy gap score	1.08				
Weighted empathy gap score	15.8				
Satisfaction level	37.6%				

V. Discussion

The result of this study clearly showed that satisfaction with quality of pharmaceutical services in both public and private community pharmacies is low. The expectation of patients far exceeds perceptions of service quality. Patient satisfaction is an essential indicator of how well clients believe they are being served by pharmacists^[27]. Over all, the level of satisfaction of most respondents averaged just over thirty percent across all dimensions of satisfaction. This low level of satisfaction with services is a reflection of the inability of pharmacies to transit from dispensing and drug supply functions to patient oriented services as well as respond to diverse needs of patients. The problem may be due to a number of factors which may include structural, administrative and personnel quality challenges. Where there is no resident pharmacist round the clock, support staffs tend to carry out dispensing functions and because they don't have the requisite training and knowledge to respond to unique needs of patients, there tend to be dissatisfaction.

The result of this study is at variance with other studies where high level of satisfaction was reported^[25,28,29,30]. Similar studies reported patient satisfaction levels of between 55 – 75%^[31,32,33], which suggests that patient satisfaction can indeed be improved by better understanding and responding to health and information needs of patients. The differences in satisfaction levels may be due to the fact that some of the studies were carried in hospitals rather than in community pharmacy setting. Patients visit community pharmacies for medication related needs, health and drug information, medication use advice, side effects and challenges with administration of medications; they usually depend on the expertise of the pharmacist to identify and resolve these and other health challenges. The extent to which these needs are met will to a large extent influence satisfaction. One of the reasons for comparatively high level of satisfaction in hospital setting is because of high manpower quality and existence of clear administrative processes that support quality services.

It is clear from this study that transition from traditional dispensing functions to comprehensive pharmaceutical care services is yet to take firm root in most community pharmacies. The slow integration of pharmaceutical care services into community pharmacy settings may be due to challenges in areas of financial, structural, manpower deficit as well as constraints of skills within community pharmacy management process^[34,35,36].

The relationship between service quality and customer satisfaction is linear and it's said to occur when perception of service quality is greater than or equal to expectation^[37]. The low level of satisfaction recorded in this study underscore the fact that perception of service delivery is low in scope and content and did not meet the needs of patients. The gap scores indicated that expectations were consistently higher than perception of service quality across all dimensions^[38].

A number of studies had provided insight into structural and administrative barriers affecting quality of pharmacy services^[39,40,41]. Some of these factors includes lack of time by pharmacists, poor adoption of technology, inexperience or limited number of staff, work flow challenges, prescription volumes, work load on pharmacist arising from low pharmacist –patient ratio etc. Product oriented services in community pharmacies as currently practiced may no longer be enough or satisfactory to most patients.

Poor quality service represents the last stage of structure and process defects in the service delivery cycle. The opportunity for positive patient pharmacist interaction is comparably higher in community pharmacies; therefore administrative, structural and process reforms must aim not only at provision of medicines, but also improvement in scope of services across the whole range of service experience. The range of services provided is small compared to the capacity and competences expected in a community pharmacy. It is unclear if this was because pharmacists are not on duty round the clock or that patients are being served by

lower cadre staff most of who are not so competent to provide high skilled services. While it must be acknowledged that other outside factors may influence satisfaction, the type of services provided in community pharmacies leaves a lot of room for patient dissatisfaction.

VI. Conclusion

The satisfaction level of patients with community pharmacy services is very low, so there is need to initiate re-engineering of structures, processes and administrative systems that will ultimately improve service experience and satisfaction.

Conflict of interest – None

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