



INFLUENCE OF DEMOGRAPHIC FACTORS ON SATISFACTION WITH COMMUNITY PHARMACY SERVICES IN ABUJA, NORTH CENTRAL NIGERIA

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ABSTRACT

Title: Influence of demographic factors on satisfaction with community pharmacy services in Abuja, North central Nigeria.

Introduction: Satisfaction with health services has gained prominence in recent years and recent studies have established a direct relationship between satisfaction and patient cooperation with therapy. While some studies reported high level of satisfaction others have mixed results. Some attributes reported to influence satisfaction have poor correlation with demographic variables. Demographic variables such as age, educational status and gender have been reported to influence satisfaction, though there have been inconsistencies in conclusions. Community pharmacies in Nigeria are the most accessible source of

drugs to the population, so satisfaction with service delivery is important and can be used as a quality assessment indicator. **Objectives:** To identify available community pharmacy services, asses the level of patient satisfaction and determine influence of demographic variables on satisfaction. **Methods:** This was a cross sectional survey using SERPERF instrument. A total of 385 respondents spread over 33 community pharmacies were involved in the study. Respondents were selected by simple random sampling and asked to tick the option on a five point Likert scale that best reflect their opinion. **Data analysis:** The data were entered in SPSS 20 for descriptive and inferential analysis. Analysis was done using one way Anova and student's t test. Factor analysis using Varimax rotation with KMO

normalization was carried out and items with factor loading ≥ 0.4 were selected for further analysis. **Results/ Discussion:** Satisfaction level varied widely between the items, however when 50% score was considered only 6 out of 22 items had appreciable satisfaction. Satisfaction was influenced by age, educational status and gender ($P < 0.001$), respondents above 40 years of age, graduates and females have low level of satisfaction pharmacy services. This result suggests that there is increasing demand for quality services which is not being met with the current operational structure of community pharmacies. **Conclusion:** The level of satisfaction with community pharmacy services is low and there is need to reorganize service administration to deliver quality services to patients.

KEYWORDS: Satisfaction, pharmacy services, Demographic factors, Quality.

INTRODUCTION

In recent years satisfaction with healthcare services has gained increased prominence as an important component of quality of health services. Initially, satisfaction surveys were targeted at marketing purposes rather than quality assessment reasons, in recent years however, the trend is that patient opinion on service experience is now an integral part of quality standards of care. In the last few decades studies have established the link between satisfaction with healthcare services and other critical areas of patient cooperation with therapy.^[1] There is a bidirectional relationship between low quality health services and utilization of health services.^[2]

In the past it was thought that patients were passive recipients of healthcare services, however studies have shown that patients are able to assess service quality in relation to organizational administrative and environmental aspects of care.^[3] Health services in many advanced countries having noted the importance of patient satisfaction has passed legislations making it mandatory for its routine evaluation.^[4,5,6] In community pharmacies many studies have reported generally high levels of satisfaction with services^[7,8], though service gaps exist in areas of health promotion, confidentiality, privacy and inequalities in attention.^[9,10] There are varying levels of satisfaction with community pharmacy services that have been reported in literature.^[11,12,13,14,15] Service areas where high level of satisfaction have been reported included their role in healthcare team^[12], provision of medication advice^[16], medication use information^[17], convenient opening hours^[15], interpersonal relations^[18] and friendliness.^[14]

It has been suggested that perception of service quality in both advanced and developing countries have some common attributes that influence satisfaction^[19] and correlation between satisfaction and demographic variables have produced conflicting conclusions. While some studies reported that demographic factors such as age, health status, and educational level had significant influence on satisfaction^[20,21], other similar studies concluded that these factors had only marginal influence on satisfaction.^[22,23] In a Norwegian study demographic factors were found not to have influence on satisfaction which sharply contrasts with earlier reports^[24,25] that age and health status were the most consistent predictors of satisfaction.

Some researchers have argued that satisfaction is subjective; however the availability of reliable tools for its measurement offers an objective and clear view of patient experiences which can be used for quality improvement initiatives. While technical and professional cognitive inputs contribute to satisfaction^[26], satisfaction is usually viewed from the perspective of patients' experience which ultimately reflects the totality of performance.

In Nigeria community pharmacy practice is exclusively privately owned and operated with only government regulation through the Pharmacist council of Nigeria. There was an effort to integrate community pharmacies into the national health insurance scheme when it was launched over a decade ago with limited success. At the moment patient satisfaction is not a key consideration for most pharmacy services in the country, and because community pharmacies are the first point of contact of healthcare services in many communities, satisfaction should receive more than a passive attention.

Objectives

- To identify common pharmacy services
- To assess the level of satisfaction with services provided
- To investigate influence of demographic factors on satisfaction

METHODS

Settings: The study was carried out in thirty three community pharmacies in ten districts of the federal capital territory. Three pharmacies were randomly selected in each district of Asokoro, Garki, Wuse, Wuye, Utako, Maitama, Kubwa, Nyanya, Karu and Jabi.

Study design: This was a cross sectional survey study using survey of patients who came to the pharmacies for services using SERVPERF model.

Sample size: The sample size of three hundred and thirty was determined using the formula below, though three hundred and eighty five were used for analysis.

Formula

$$N = \frac{1.96^2 PQ}{0.025}$$

95% confidence level covers ± 1.96 S.E i.e. confidence interval is ± 0.025

N = Sample size

P = proportion / Prevalence

Q = 1 – P

Data collection: The 22 item SERVPERF questionnaire was self-administered on four hundred and fifty respondents after informed consent, however only three hundred and eighty five responses were found usable. In each of the thirty three selected community pharmacy fifteen respondents were randomly selected after receiving services. The SERVPERF questionnaire is a five Likert scale instrument with responses ranging from strongly agree to strongly disagree with neutral in the middle. Respondents were asked to select the option that best reflect their level of satisfaction with service quality.

Data analysis: The data were entered into SPSS 20 and Graphpad InStat 2.0 for descriptive and inferential statistics. The data were analyzed using Student t test, one way ANOVA. Factor analysis was carried using principal component analysis, varimax rotation with Kaiser Olkin Meyer normalization. Items with factor loading higher than 0.4 were used for further analysis. Mean item scores less than 3.0 are considered positive response (satisfaction) and higher score represent dissatisfaction.

RESULTS

Demographic data showed that majority were males (56.8%) and are civil servants. Most of the respondents were married (73.1%) and about 40% of them have a University degree.

Table 1: Demographic data of respondents.

	Number	Percentage
Gender		
Male	217	56.8
Female	168	43.2
Occupation		
Civil service	222	60.8
Self employed	85	21.3
Private sector employed	51	9.4
Unemployed	24	8.5
Marital status		
Married	241	73.1
Single	32	9.7
Divorced	34	10.3
Widow	23	6.9
Educational status		
Secondary	25	10.3
Diploma	63	17.6
Degree y	153	40.3
Masters degree	77	17.3
PHD	67	14.5

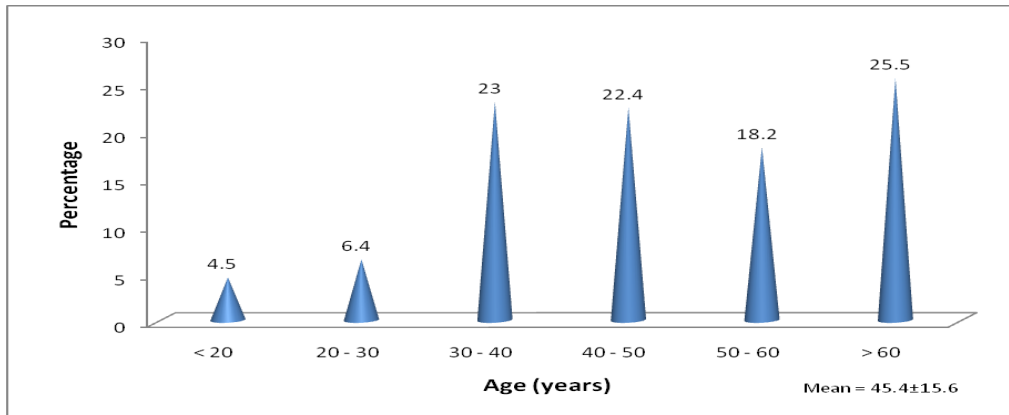


Figure 1: Age distribution of respondents.

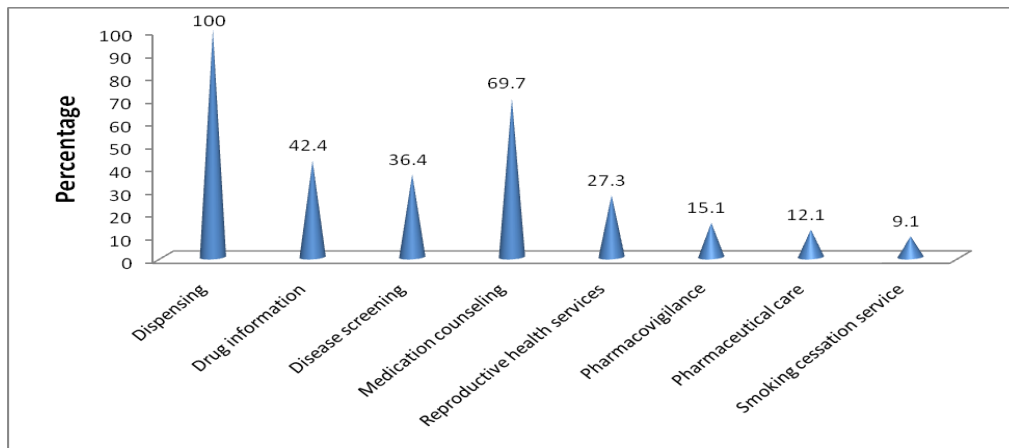


Figure 2: Community pharmacy services.

The overall level of satisfaction ranged between 12 – 86% among the various items spread over the five domains of the satisfaction instrument. Satisfaction considered to be a positive response [$\geq 50\%$] showed that only six of the 22 items achieved above this threshold. These clearly indicate that overall satisfaction with community pharmacy services is generally low.

Table 2: Overall satisfaction response (n = 385)

		Yes (%)	No (%)	Neutral (%)
1.	Pharmacies have appropriate modern equipments	66(20.1)	189(57.2)	77(22.7)
2.	Appearance of Pharmacy is neat and attractive	263(79.7)	58(17.6)	9(2.7)
3.	Employees are professionally dressed and neat	229(69.4)	70(21.2)	31(9.4)
4.	Equipments and materials used are related to service	119(36.1)	158(47.9)	53(16)
5.	They render services timely as promised	159(48.2)	144(43.6)	27(8.2)
6.	The staffs show genuine concern and willing to help	100(33.3)	83(25.1)	147(44.6)
7.	Services are provided correctly all the time	42(12.7)	237(71.8)	51(15.5)
8.	Services are provided promptly and on time	56(16.9)	240(72.8)	34(10.3)
9.	They keep accurate records of services I received	45(13.6)	224(67.9)	61(18.5)
10.	I receive information when certain services are available	52(15.7)	257(77.9)	21(6.1)
11.	Staffs always provide services on request	132(40)	178(53.9)	20(20.1)
12.	I always see willingness and readiness to help	138(41.8)	124(37.6)	68(20.6)
13.	Staffs are not too busy to respond to my request for service	64(19.4)	248(75.1)	18(5.5)
14.	Staff behaviour instill confidence and trust	155(46.9)	145(43.9)	30(9.2)
15.	I always feel safe in my interactions with staff	63(19.2)	244(73.9)	23(6.9)
16.	There is always courtesy and respect for me	211(63.9)	101(30.6)	18(5.5)
17.	The staffs answer my questions satisfactorily at all times	280(84.8)	36(10.9)	14(4.3)
18.	I always received individual attention and service	144(43.6)	121(36.7)	65(19.7)
19.	The operating hours is suitable and convenient for me	284(86.1)	27(3.2)	19(5.7)
20.	The staffs always provide personalized service to me	81(24.6)	205(62.1)	44(13.3)
21.	The staffs have my best interest at heart	141(42.7)	98(29.7)	91(27.6)
22.	The staffs always understand my service needs	181(54.8)	124(37.6)	25(7.6)

Age of respondents is observed to influence level of satisfaction; younger respondents (< 40years) generally expressed satisfaction compared with those above 50 years of age. There appear to be reduction of level of satisfaction as age increased. The difference in the level of satisfaction between respondents below 40 years and 60 years is statistically significant ($P < 0.001$).

Table 3: Influence of age (years) on satisfaction.

		< 20 [n=24]	20 – 30 [n=31]	30 – 40 [n=86]	40 – 50 [n=84]	50 – 60 [n=71]	> 6 [Years] [n=89]	
Item	F	Mean+SD	Mean+SD	Mean+SD	Mean+SD	Mean +SD	Mean+SD	P value
Q2	0.912	1.00±0.00	1.00±0.00	1.00±0.00	1.00±0.00	1.25±0.44	3.56±0.93	< 0.001
Q3	0.917	1.00±0.00	1.00±0.00	1.00±0.00	1.22±0.44	2.27±0.45	4.73±0.65	< 0.001
Q7	0.856	1.00±0.00	1.00±0.00	1.00±0.00	3.22±0.60	4.00±0.00	4.00±0.00	< 0.001
Q8	0.911	1.00±0.00	1.00±0.00	1.00±0.00	3.05±0.99	4.00±0.00	4.00±0.00	< 0.001
Q9	0.930	1.00±0.00	1.00±0.00	1.00±0.00	3.13±0.87	4.00±0.00	4.00±0.00	< 0.001
Q10	0.918	1.00±0.00	1.00±0.00	1.00±0.00	3.33±0.82	4.00±0.00	4.00±0.00	< 0.001
Q13	0.930	1.00±0.00	1.00±0.00	1.00±0.00	2.75±1.32	4.26±0.44	5.00±0.00	< 0.001
Q15	0.887	1.00±0.00	1.00±0.00	1.00±0.00	2.89±1.17	4.00±0.00	4.00±0.00	< 0.001
Q16	0.782	1.00±0.00	1.00±0.00	1.00±0.00	1.76±0.43	1.76±0.43	4.43±0.52	< 0.001
Q17	0.852	1.00±0.00	1.00±0.00	1.00±0.00	1.47±0.50	2.00±0.00	3.25±1.22	< 0.001
Q19	0.891	1.00±0.00	1.00±0.00	1.00±0.00	1.00±0.00	1.05±0.22	2.99±1.12	< 0.001
Q22	0.686	1.00±0.00	1.00±0.00	1.38±0.49	2.05±0.23	3.68±0.47	4.08±0.27	< 0.001

There is significant difference between level of satisfaction between graduate and non-graduate respondents ($P < 0.001$). Non graduate respondents appear to be more likely to be satisfied with pharmacy services, higher the academic status were less satisfied.

Table 4: Influence of educational level on satisfaction.

		SSCE [n=25]	Diploma [n=63]	Degree [n=153]	Masters [n=77]	PHD [n=67]	
Item	F	Mean+SD	Mean+SD	Mean+SD	Mean+SD	Mean+SD	P value
Q2	0.912	1.00±0.00	1.00±0.00	1.00±0.00	1.85±0.80	4.00±0.00	< 0.001
Q3	0.917	1.00±0.00	1.00±0.00	1.28±0.45	3.07±0.88	4.95±0.23	< 0.001
Q7	0.856	1.00±0.00	2.22±0.89	3.89±0.39	4.22±0.42	5.00±0.00	< 0.001
Q8	0.911	1.00±0.00	1.83±0.86	3.95±0.21	4.00±0.00	5.00±0.00	< 0.001
Q9	0.930	1.00±0.00	2.02±0.98	4.47±0.65	5.00±0.00	5.00±0.00	< 0.001
Q10	0.918	1.00±0.00	2.24±0.84	4.00±0.00	4.00±0.00	4.13±0.34	< 0.001
Q13	0.930	1.00±0.00	1.40±0.75	4.27±0.51	5.00±0.00	5.00±0.00	< 0.001
Q15	0.887	1.00±0.00	1.59±0.77	3.79±0.17	4.22±0.42	5.00±0.00	< 0.001
Q16	0.782	1.00±0.00	1.00±0.00	1.58±0.49	3.69±0.61	4.53±0.51	< 0.001
Q17	0.852	1.00±0.00	1.00±0.00	1.42±0.49	2.00±0.00	3.55±0.91	< 0.001
Q19	0.891	1.00±0.00	1.00±0.00	1.00±0.00	1.46±0.50	3.11±0.83	< 0.001
Q22	0.686	1.00±0.00	1.00±0.00	2.14±0.53	4.00±0.00	4.00±0.00	< 0.001

There is significant difference in satisfaction levels based on gender of respondents ($P = < 0.001$). Males appear to be more likely to be satisfied with services compared to women who generally showed dissatisfaction except in areas of staff courtesy, convenience and satisfaction with response to enquiries.

Table 5: Influence of gender on satisfaction.

		Male [n=217]	Female [n=168]	
Item	F	Mean±SD	Mean±SD	P value
Q2	0.912	1.00±0.00	2.57±1.36	< 0.001
Q3	0.917	1.10±0.29	3.68±1.34	< 0.001
Q7	0.856	3.13±1.30	4.43±0.51	< 0.001
Q8	0.911	3.03±1.25	4.19±0.46	< 0.001
Q9	0.930	3.38±1.49	5.00±0.00	< 0.001
Q10	0.918	3.21±1.13	4.13±0.33	< 0.001
Q13	0.930	3.04±1.49	5.00±0.00	< 0.001
Q15	0.887	2.99±1.33	4.49±0.53	< 0.001
Q16	0.782	1.31±0.46	3.80±0.99	< 0.001
Q17	0.852	1.20±0.39	2.70±1.10	< 0.001
Q19	0.891	1.00±0.00	2.14±1.25	< 0.001
Q22	0.686	1.59±0.55	3.91±0.39	< 0.001

DISCUSSION

Community pharmacies are increasingly becoming an important player in services related to health promotion, reproductive healthcare, pharmacovigilance and disease prevention etc. Overall level of satisfaction with pharmacy services is low; most of the items score were below 50% threshold. Satisfaction was found with six items out of twenty two items relating to pharmacy appearance, pharmacist interaction and convenient hours of operations. This result is similar to other findings^[8,18] in which it was reported that pharmacist attitudes, convenient hours of operations and specialized pharmacist services were strong influencers of satisfaction.

The problem of low satisfaction with pharmacy services has been reported in several studies; it was noted that high expectations and poor service delivery may be driving dissatisfaction^[27,28,29] Expectation is generally dependent on educational level and prior service experience, so the higher the academic attainment the more skills have to be deployed to satisfy demands for high quality service delivery. In the era of increasing consumer knowledge and insistence on quality, the community pharmacist often find themselves in the dilemma of balancing professional, ethical and commercial interests particularly when providing services that are free.^[30] The findings of this study sharply contrast with other studies that reported high level satisfaction.^[12,32]

A number of demographic factors have been reported to have influence on satisfaction, though conclusions vary widely. The results showed that age has influence on satisfaction.

Respondents above forty years old were generally dissatisfied with pharmacy services as against respondents below that age who generally reported high level of satisfaction, the difference is statistically significant. While several studies noted that age has a strong influence on satisfaction, their conclusion was that the elderly were comparatively more satisfied; a result that is in contrast with the findings of this study.^[33,34,35,36] The differences may arise out of the fact that most of the studies were in hospital pharmacies where there is a more predictable administrative structure. More so, hospitals have more highly trained professionals with requisite skills and competencies that may be lacking in a privately owned pharmacy.

The elderly generally have more encounters with community pharmacies due to age related multiple morbidities, so dissatisfaction is more likely to arise out of experience(s) with service failures. Younger patients do have less frequent need for pharmacy services so frustration with service quality may not be that pronounced. Educational level is believed to influence satisfaction and the result of this study is no different^[37], however satisfaction progressively declined as academic status began to rise. Respondents with graduate degree and above were far less satisfied with services compared to those with lower academic qualifications. Individuals with high educational status generally expect and demand higher quality services, so unlike others, they are not content with “what is available” kind of service. As population becomes more educated, the demand for quality service delivery will correspondingly rise, so it’s important that managers of community pharmacies begin to pay attention to services quality and customer relations.

Gender differences has been reported to influence satisfaction and the results of this study is no exception, males appear to be more satisfied than females. While there are reports that gender is strong predictor of satisfaction^[38,39,40], the nature and aspect of influence vary widely.^[31] Male gender is reported to consider time and travel costs while females tend to report satisfaction if attended to by a female, though conflicting conclusions abound in literature.^[35] While majority of females were dissatisfied males reported the opposite, which goes to underscore the fact that satisfaction is coloured by gender based perception of quality and service experience. Futhermore women being the primary care giver for children and the entire family tend to be the first to visit a pharmacy for medication either for themselves or for the children. So frustration and dissatisfaction with service may likely be more frequently encountered by women compared to men. It is pertinent for community pharmacies to

become aware that satisfaction is a component of quality consideration by patients that should not be overlooked.

CONCLUSION

Satisfaction with services in community pharmacies is generally low, though evidence of isolated aspects of satisfaction exists. While there is general satisfaction with appearance of pharmacy and staff, it takes more than aesthetics to give quality services that will sustain or improve satisfaction. There is need for community pharmacies to hire skilled staff who will be able to improve service quality and patient service experience.

Conflict of interest – None.

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