Original Research Article

Older adults' satisfaction with pharmaceutical care in an outpatient pharmacy of a Nigerian teaching hospital

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Abstract

Purpose: To evaluate older adults' level of satisfaction with pharmaceutical care and to identify associated factors.

Methods: A cross sectional survey was conducted among 200 older adults attending the Pharmacy unit of the Consultant Outpatient Department, Olabisi Onabanjo University Teaching Hospital (OOUTH) Sagamu for 4 weeks. A 26- item questionnaire addressing the socio-demographic characteristics and satisfaction variables on a 5-point Likert scale of excellent (5) very good (4) good (3) fair (2) and poor (1) with a range of 20-100 score was utilized. Using IBM SPSS version 20, unpaired t-test and one-way ANOVA were done for further analysis and significant P - value was set at < 0.05.

Results: Response rate was 83.5% and reliability of the questionnaire was 0.842. Most respondents were females 91(54.5%) ranging from 60-69 years 84(50.3%) and married 131(78.4%). Overall satisfaction score was 66.34±16.09. Patients were most and least satisfied with 'The privacy of conversations with the Pharmacist' 81.4±16.8 and 'The availability of the pharmacist to answer your questions" 55 ±23.8 respectively. No significant association was found between demographic variables and satisfaction levels.

Conclusion: Overall satisfaction score with pharmaceutical care was good and there was no significant association with socio-demographic variables.

Keywords: Pharmaceutical Care, satisfaction, outpatient, hospital, Nigeria

Introduction

Pharmaceutical care (PC) as part of health care has assumed global importance. In developing countries like Nigeria where PC is evolving, service gaps are prevalent and customer dissatisfaction abounds. Identifying such gaps from patients' perspectives and providing holistic solution becomes paramount for successful outcomes. A reflection of vulnerability in a perceived health outcome measurement scores with advancing age, gradual deterioration [1] and the higher ill-health burden and disability [2], are vital reasons to obtain the inputs of older adults regarding their satisfaction with pharmaceutical care.

Patient satisfaction is an important outcome measure for evaluating the extent to which the health-care sector meets patients' needs and expectations and can lead to taking corrective measures where discrepancies exist [3-4] and it is referred to as a personal evaluation of the patient on the health care services and providers [5]. Patient satisfaction determines the success of service provision [6], the preferences and expectations of the patient [3], predicts treatment adherence, outcomes [7], continuity of health [7-8], and reflects the reality of service or care provided in pharmacy services making it a popular healthcare quality indicator [9]. It indicates the gap between quality of service expectation and the actual experience of the service provided from the patients' point of view

[10], the success of service provision [6] and it affects the outlook of the pharmacists and pharmacy profession [11-12].

It is important to state that factors like patient demographics, health status, characteristics of the health care provider i.e. technical expertise, interest in patient oriented care, waiting time, pharmacy setting, medication availability, and service quality might be involved in patient satisfaction process [4,13]. This is particularly true for developing countries like Nigeria where medical service is often managed by the government. This coupled with a limited budget, and shortage of quality human resources will impact on service quality level and attendant customers' dissatisfaction.

Studies have developed, described and validated instruments to measure patient satisfaction with pharmacy services including pharmaceutical care [11,14-19]. Larson et al in 2002 further identified 2 dimensions of patient Satisfaction with pharmaceutical care labeled as "Friendly explanation" and ''Managing Therapy'' [16]. Studies have been conducted on satisfaction of patients with pharmaceutical services in Nigeria [8,12,20-22], however directly assessing the satisfaction of the subset (Older adults) is rare and understanding the status of pharmaceutical service provided by the hospital through the customers' level of satisfaction is an important step to improve the service and hence the motivation to conduct the study. The objective of the study was to investigate older adults patient's level of satisfaction with pharmaceutical care and to identify demographic factors that may affect their level of satisfaction.

Methods

Study Setting

The study was carried out at the Pharmacy Unit of the Consultant Outpatient Department, Olabisi Onabanjo University Teaching Hospital (OOUTH) Sagamu. OOUTH a 218- bedded hospital is a tertiary health institution as well as a training centre for medical and pharmacy students. It caters for the medical and pharmacy needs of a large majority of patients coming from Ogun State and other parts of Nigeria. The outpatient clinics run from Monday to Friday every week, except on public holidays and it has a pharmacy insitu. It is a well-organized setting with essential pharmaceuticals available. Pharmacists in this hospital have been trained on

pharmaceutical care through the Mandatory Continuing Professional Development and Education (MCPDE) run by the Pharmacists Council of Nigeria, Workshops and Seminars and it is expected that they provide quality pharmaceutical services.

Study design

The study employed an observational, cross-sectional design.

Study population

Older adults from the age of 50 years and above who visited the outpatient pharmacy served as respondents. Fifty years was used due to peculiarities in Nigeria Life expectancy of **53/55** [23].

Sample size

A sample size of 200 was estimated using Raosoft online Sample Size Calculator with a confidence interval of 95% and 6.89% margin of error.

Inclusion/ Exclusion criteria

Patients, who visited the pharmacy unit of the outpatient clinic of OOUTH, within the age of 50 and above and were willing to complete the questionnaire, were included while those patients below 50 years, inpatients and those who were too ill to respond to the questionnaire were excluded.

Instrument used

A pretested 26- item structured questionnaire was used to identify the older adults' satisfaction with the pharmaceutical care services rendered to them. The questionnaire consisted of two sections; the first part had items on socio-demographic characteristics of the respondents (age, sex, marital status, monthly income, and level of education).The satisfaction section contained 20 items with a score range of 20-100 with an assumed midpoint of 60 and anchored on a 5-point Likert scale format of excellent (5), very good (4), good (3), fair (2) and poor(1) indicating their level of satisfaction with pharmacy services.

Validity and reliability of instrument

To guarantee data validity, questionnaire items were adopted from a study by Larson et al 2002

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[16], and screened out for the appropriateness of the contents based on peculiarities of the study population and setting. The questionnaire was pretested among 20 older adults (face validity), who were not part of the sample size and Chronbach alpha was determined to test its reliability. This further revalidates the questionnaire besides previous studies [12,16].

Data collection

Data were obtained through a survey conducted for 4 weeks among the older adults either waiting for their prescriptions to be billed or to receive medications from the outpatient pharmacy. Data were collected by two research assistants who were previously trained on the data collection process. The purpose of the interview, confidentiality of the information to be provided and areas of difficulties were explained to each patient and verbal consents were obtained from the participants.

Data analysis

The responses were entered into Microsoft Excel to check for completeness and easy sorting and further analyzed by the IBM Statistical Package for the Social Sciences software Version 20.0 for Windows. Socio-demographic characteristics and satisfaction levels of patients were described using frequencies, percentage, mean, and SD. Scoring of the responses was done to classify the patient satisfaction into sublevels. Scores ranged from 20-100 with an assumed midpoint of 60 and were rated as; 20-39 = Low satisfaction, 40-59 = Moderate Satisfaction; 60-79 = Good Satisfaction and 80-100= Excellent Satisfaction. Excellent rating of respondents' satisfaction items and overall satisfaction score were obtained.

The items were grouped into 2 dimensions: "friendly explanation" (11 items) and "managing" therapy'' (9 items). Student's *t*-test and One-way analysis of variance (ANOVA) were used to evaluate the differences in satisfaction levels of patients. *P*-values of less than 0.05 and 95% confidence interval were used as cut off points for determining the significant associations among different variables

Results

Of the 200 patients interviewed, 167 completed the questionnaire, giving a response rate of

83.5%. The instruments reliability was found to be 0.842 (Cronbach alpha).

Most respondents were females 91(54.5%), ranging from the age group of 60-69 years 84 (50.3%) and 131(78.4%) were married. They were mainly business people 57(34.1%) with tertiary education being 76(45.5%) and income of N49,999 per month 50(29.9%). Further results on socio demographic characteristics of the patients are indicated in Table 1.

Table 1: Socio -demographic characteristics of respondents (n= 167)

Characteristics	Frequency (%)
Age (years)	
50-59	65(38.9)
60-69	84(50.3)
70-79	18 (10.8)
Sex	
Male	76 (45.5)
Female	91(54.5)
Occupation	
Civil servant	29(17.4)
Business man/woman	57(34.1)
Trader	31(18.6)
Teacher	10(6.0)
Unemployed	25(15.0)
Artisans	15(9.0)
Marital status	
Single	1(0.6)
Married	131(78.4)
Divorced	8(4.8)
Widowed	21(12.6)
Others	6(3.6)
Education	
No formal education	17(10.2)
Primary	14(8.4)
Secondary	60(35.9)
Tertiary	76(45.5)
Income(Naira/Month)	
< 10,000	3(1.8)
10,000-19,999	3(1.8)
20,000-29,999	7(4.2)
30,000-39,999	33(19.8)
40,000-49,999	29(17.4)
>49,999	50(29.9)
No response	42(25.1)

Respondents were most satisfied with "The privacy of your conversations with the pharmacist" (Managing Therapy) 81.4± 16.8;''The courtesy and respect shown by the pharmacy staff' (Friendly Explanation) 80.2 ± 18.44 and 'How well the pharmacist instructs you about how to take your medications (Friendly Explanation) 71.8±14.92. Respondents were least satisfied with "The availability of the Pharmacist to answer your questions" (Friendly

Explanation) 55.4 ± 23.8; 'The amount of time the pharmacist offers to spend with you'' (Managing Therapy) 56.2±15.36 and 'The promptness of prescription drug service' (Friendly Explanation) 59±18.26. Further results are shown in Table 2.

Table 2: Respondents satisfaction with Pharmacy services   (n=167)

Satisfaction items	Poor No (%)	Fair No (%)	Good No (%)	Very Good No (%)	Excellent No (%)	Mean ±SD	Satisfaction Score
1. The professional appearance of the pharmacy	14(8.4)	21(12.6)	56(33.5)	50(29.9)	**26(15.6)**	3.32±1.14	66.4±22.8
2. The availability of pharmacist to answer your questions	31(18.6)	38(22.8)	45(26.9)	44(26.3)	**9(5.4)**	2.77±1.19	55.4±23.8
3. The pharmacist professional relationship with you	4(2.4)	22(13.2)	86(51.5)	38(22.8)	**17(10.2)**	3.25±0.897	65±17.94
4. The pharmacist ability to advise you about problems that you might have with your medications	4(2.4)	13(7.8)	86(51.5)	51(30.5)	**13(7.8)**	3.34±0.826	66.8±16.52
5. The promptness of prescription drug service	5(3.0)	51(30.5)	67(40.1)	36(21.6)	**8(4.8)**	2.95±0.913	59±18.26
6.The professionalism of pharmacy staff	5(3.0)	19(11.4)	91(54.5)	44(26.3)	**8(4.8)**	3.19±0.811	63.8±16.22
7. How well the pharmacist explain what your medications do	1(0.6)	15(9.0)	86(51.5)	54(32.3)	**11(6.6)**	3.35±0.761	67±15.22
8.The pharmacist interest in your health	-	11(6.6)	101(60.5)	42(25.1)	**13(7.8)**	3.34±0.718	66.8±14.36
9. How well the pharmacist help you to manage your medications	-	16(9.6)	108(64.7)	38(22.8)	**5(3.0)**	3.19±0.639	63.8±12.78
10. The pharmacists effort to solve problem that you might have with your medication	1(0.6)	11(6.6)	86(51.5)	62(37.1)	**7(4.2)**	3.38±0.700	67.6±14
11.The responsibility that the pharmacist assumes for drug therapy	1(0.6)	19(11.4)	95(56.9)	46(27.5)	**6(3.6)**	3.22±0.715	64.4±14.3
12. How well the pharmacist instruct you about how to take your medication	1(0.6)	10(6.0)	59(35.3)	84(50.3)	**13(7.8)**	3.59±0.746	71.8±14.92
13.Your pharmacy service overall	-	19(11.4)	83(49.7)	58(34.7)	**7(4.2)**	3.32±0.729	66.4±14.58
14. How well the pharmacist answer your questions	1(0.6)	4(2.4)	93(55.7)	60(35.9)	**9(5.4)**	3.43±0.663	68.6±13.26
15. The pharmacist effort to help you improve health or stay healthy.	-	6(3.6)	95(56.9)	56(33.5)	**10(6.0)**	3.42±0.662	68.4±13.24
16. The courtesy and respect shown by the pharmacy staff.	2(1.2)	10(6.0)	28(16.8)	72(43.1)	**55(32.9)**	4.01±0.922	80.2±18.44
17. The privacy of your conversations with the pharmacist.	2(1.2)	5(3.0)	26(15.6)	80(47.9)	**54(32.3)**	4.07±0.84	81.4±16.8
18. The pharmacist efforts to ensure that your medications do what they are supposed to do.	1(0.6)	5(3.0)	110(65.9)	41(24.6)	**10(6.0)**	3.32±0.661	66.4±13.22
19. How well the pharmacist explains possible side effects.	3(1.8)	31(18.6)	91(54.5)	35(21.0)	**7(4.2)**	3.07±0.796	61.4±15.92
20. The amount of time the pharmacist offers to spend with you.	1(0.6)	59(35.3)	84(50.3)	17(10.2)	**6(3.6)**	2.81±0.768	56.2±15.36

There was no significant association between satisfaction items and socio demographic variables of age, sex, occupation, marital status, education and income respectively (P > 0.05). Further details are indicated in Table 3.

Table 3: Satisfaction level differences among various groups

Variable	N value	Mean $\pm$ SD	P- value
Age (years)			
50-59	65	3.36 $\pm$ 0.79	
60-69	84	3.32 $\pm$ 0.81	0.6436
70-79	18	3.16 $\pm$ 0.78	
Sex			
Male	76	3.26 $\pm$ 0.81	0.615
Female	91	3.32 $\pm$ 0.80	
Occupation			
Civil servant	29	3.22 $\pm$ 0.72	
Business man/woman	57	3.42 $\pm$ 0.85	
Trader	31	3.25 $\pm$ 0.71	0.4941
Teacher	10	3.56 $\pm$ 0.85	
Unemployed	25	3.12 $\pm$ 0.76	
Artisans	15	3.35 $\pm$ 0.80	
Marital status			
Married	131	3.32 $\pm$ 0.81	
Divorced	8	3.22 $\pm$ 0.85	0.9554
Widowed	21	3.38 $\pm$ 0.78	
Others	6	3.32 $\pm$ 0.71	
Education			
No formal education	17	3.29 $\pm$ 0.81	
Primary	14	3.30 $\pm$ 0.79	0.8837
Secondary	60	3.38 $\pm$ 0.77	
Tertiary	76	3.37 $\pm$ 0.82	
Income			
< 10,000	3	3.19 $\pm$ 0.91	
10,000-19,999	3	3.35 $\pm$ 0.77	
20,000-29,999	7	3.63 $\pm$ 0.81	
30,000-39,999	33	3.35 $\pm$ 0.76	0.7302
40,000-49,999	29	3.30 $\pm$ 0.82	
>49,999	50	3.41 $\pm$ 0.84	
No response	42	3.16 $\pm$ 0.72	

Overall, pharmaceutical care services received a satisfaction rating of 66.34±16.097 slightly above the mid-point of 60 and overall mean± SD of 3.32 ± 0.87. Frequencies, percentages, Mean+ SD and percentage positives (good to excellent) responses of items of satisfaction on pharmaceutical care are shown in Table 2. Percentage of respondents with excellent rating is emphasized.

Friendly explanation had a satisfaction rating of 66.41 ± 17.451 and mean ± SD score of 3.32 ± 0.87 while Managing therapy had a Satisfaction rating of 66.27 ± 14.442 and mean ± SD score of 3.31 ± 0.722.

Table 4 shows the satisfaction parameters categorized into 2 dimensions (Friendly Explanation and Managing Therapy) versus the Excellent and Poor ratings.

Discussion

This survey assessed older adults' satisfaction with pharmaceutical care which as a part of health care services has become important globally [24-25]. Response rate was high and provides the investigators with a high degree of confidence that the data are reflective of the outpatient population of older adults. Most respondents were females; studies by Owonora *et al.,* (2017) revealed that more female participated in their study [8]. This is not surprising since female visit to the hospital is more common and frequent [26]. The reliability of the questionnaire was high and similar to that of a previous Nigerian study by Oparah *et al.*, 2002 [27].

Respondents were most satisfied with "The privacy of your conversations with the pharmacist". The privacy of patients' conversations with pharmacists may be encouraged by the provision of a separate space for counseling [9]. Past studies showed that patients were dissatisfied about the comfort and convenience of the counseling area [7, 24]. Results on satisfaction with 'The courtesy and respect shown by the pharmacy staff' were high and in agreement with previous studies [7, 9, 24, 28-29]. This satisfaction item could be linked to the age range of these respondents ($\geq$ 50 years). In this part of the world, privacy, courtesy and respect are held in high esteem as one gets older. Being polite and respectful towards patients improves business prospects and professional ethics [9].

The importance of being satisfied with the instructions they receive is a plus for pharmacists that have being exposed to pharmaceutical care which is a practice that enables the pharmacists to be his best in his role as a counselor. Respondents were least satisfied with ''the availability of the Pharmacist to answer your questions'; 'the amount of time the pharmacist offers to spend with you'' and 'the promptness of prescription drug service'. The comparable response of these three items lends confidence to the reliability of responses given by the respondents. The low satisfaction score for "the availability of the pharmacist to answer your questions" differs from results reported in another study [24].

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Table 4: Respondents' satisfaction levels categorized into Friendly Explanation and Managing Therapy (n=167)

Satisfaction items	Poor No (%)	Excellent No (%)	Mean ±SD	Satisfaction Score Score ± SD
Friendly Explanation				
16. The courtesy and respect shown by the pharmacy staff.	2(1.2)	**55(32.9)**	4.01±0.922	80.2±18.44
12. How well the pharmacist instruct you about how to take your medication	1(0.6)	**13(7.8)**	3.59±0.746	71.8±14.92
14. How well the pharmacist answer your questions	1(0.6)	**9(5.4)**	3.43±0.663	68.6±13.26
7. How well the pharmacist explain what your medications do	1(0.6)	**11(6.6)**	3.35±0.761	67±15.22
4. The pharmacist ability to advise you about problems that you might have with your medications	4(2.4)	**13(7.8)**	3.34±0.826	66.8±16.52
1. The professional appearance of the pharmacy	14(8.4)	**26(15.6)**	3.32±1.14	66.4±22.8
13. Your pharmacy service overall	-	**7(4.2)**	3.32±0.729	66.4±14.58
3. The pharmacist professional relationship with you	4(2.4)	**17(10.2)**	3.25±0.897	65±17.94
6. The professionalism of pharmacy staff	5(3.0)	**8(4.8)**	3.19±0.811	63.8±16.22
5. The promptness of prescription drug service	5(3.0)	**8(4.8)**	2.95±0.913	59±18.26
2. The availability of pharmacist to answer your questions	31(18.6)	**9(5.4)**	2.77±1.19	55.4±23.8
Overall Mean Scores			3.32±0.87	66.4±17.45
Managing Therapy				
17. The privacy of your conversations with the pharmacist.	2(1.2)	**54(32.3)**	4.07±0.84	81.4±16.8
15. The pharmacist effort to help you improve health or stay healthy.	-	**10(6.0)**	3.42±0.662	68.4±13.24
10. The pharmacists effort to solve problem that you might have with your medication	1(0.6)	**7(4.2)**	3.38±0.700	67.6±14
8. The pharmacist interest in your health	-	**13(7.8)**	3.34±0.718	66.8±14.36
18. The pharmacist efforts to ensure that your medications do what they are supposed to do.	1(0.6)	**10(6.0)**	3.32±0.661	66.4±13.22
11. The responsibility that the pharmacist assumes for drug therapy	1(0.6)	**6(3.6)**	3.22±0.715	64.4±14.3
9. How well the pharmacist help you to manage your medications	-	**5(3.0)**	3.19±0.639	63.8±12.78
19. How well the pharmacist explains possible side effects.	3(1.8)	**7(4.2)**	3.07±0.796	61.4±15.92
20. The amount of time the pharmacist offers to spend with you.	1(0.6)	**6(3.6)**	2.81±0.768	56.2±15.36
Overall Mean Scores			3.311±0.722	66.27±14.4

A low satisfaction in "the promptness of prescription drug service" may be due to a large number of patients served in the pharmacies [21] which is not proportional to the number of pharmacists and their workload. It reflects the fact that patients recognize that they have a need for their medicines to be delivered promptly. It then challenges the pharmacists in this setting to improve their activities that go with delivery of medicines (costing of prescriptions, dispensing of medicines and actual stocking of such medicines on time) to older adults.

Almost one third of the respondents felt 'fair to poor" about the availability of the pharmacist to answer their questions and the amount of time the pharmacist offers to spend with them. The role of proper planning and effective time management cannot be overemphasized in pharmaceutical care delivery.

These responses could be attributed to low level of patients' awareness about patient /pharmacist cordiality in the health care system and this may also reflect the fact that some pharmacists may be negligent in those areas. The low satisfaction with pharmaceutical services in some variables may be connected to too high expectation from the patients [30-31]. This may be connected to the high percentage in those having secondary

and tertiary education though there was no significant association. Low satisfaction has been observed in literates in previous studies [12,30-31]. There was no significant association between the socio-demographic characteristics and the satisfaction scores so then medical conditions (i.e. disease conditions) can be considered their major concern. Similar results have been obtained by Molugulu *et al., 2012, Jayaprakash et al.,* 2009 [28,32].

The insignificant association between the level of satisfaction of patient about pharmaceutical care and education implied that a good fraction of the respondents are well satisfied with pharmaceutical care services rendered to them and that none of these variables has a major influence on patients other than their medical conditions. This leads to a suspicion that how "good" or "bad" respondents felt at the time of completing the survey influenced patients' perceptions about satisfaction. Patients who are less healthy are likely to be less satisfied with the care or services they receive. Respondents scored items on the Managing Therapy scale lower than they did items on the Friendly Explanation scale. Overall, satisfaction of patients about Pharmaceutical Care in OOUTH was rated as good. The overall satisfaction scores conducted were lower than scores obtained in the US (85%) [33] but similar to values obtained by Workye et al 2016 (60.5%) [24]. Lower scores (56.04%) were obtained by Oparah *et al.,* 2002 in Nigeria[27] among adults and in Ethiopia by Abebe *et al.,* 2016 among HIV/AIDS Patients [7].

The reported low satisfaction level parameters should be further studied to find appropriate solutions in solving the problems. The hospital should implement good dispensing practice systems in relation to the services and continuing professional development to professionals to improve the knowledge base of the practicing pharmacists, continuing education program. A suitable fee for providing pharmaceutical care services will motivate the pharmacists' professionalism, restructuring of the syllabus of the various courses to meet the ever changing needs of pharmacy [32] to improve the satisfaction of patients. This study helps in obtaining an understanding of the older adults' needs and their opinions of the services received and it will help to fill the gap between what they need and what they actually obtain [10]. 1Our study is a single institution study; given the variability in the scope and practice of PC in Nigeria, extrapolation of our study results to other tertiary care facilities in Nigeria should be done cautiously

Conclusion

Respondents overall satisfaction with pharmaceutical care in an outpatient pharmacy of OOUTH was good with an excellent score in the privacy of conversations with the pharmacist, the courtesy and respect shown by the pharmacy staff and how well the pharmacist instructs about how to take medications and poor scores in the availability of the pharmacist to answer questions, the amount of time the pharmacist .offers to spend with patients and 'the promptness of prescription drug service. There was no significant association between demographic data and older persons' satisfaction with outpatient pharmaceutical care.

Acknowledgment

Conflict of Interest

No conflict of interest is associated with this work.

Contribution of Authors

We declare that this work was done by the authors named in this article and all liabilities pertaining to claims relating to the content of this article will be borne by the authors. Study conception and design: UIHE, WAO, MSCE, Acquisition of data: UIHE, Analysis and interpretation of data: UHIE, MSCE, Drafting of manuscript: UHIE, WAO, MSCE, Critical revision: UHIE, WAO, MSCE

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