Vol. 23 (2020) 9-15

Real World Expectations of Older Adults on Pharmaceutical Care in a Nigerian Teaching Hospital

U.I.H. EZE[1]*, M.S.C. EZE[2], S.A. SAKA[1], B.O. OGBONNA[3], I.S. JAMES-EDWARDS[1]

[1]*Department of Clinical Pharmacy and Biopharmacy, Faculty of Pharmacy, Olabisi Onabanjo University, Sagamu Campus, Sagamu, Ogun State, Nigeria.*

[2]*MicElliot Pharmacy Limited, 2 Abiola Keazor Street Akute, Ogun State, Nigeria.*

[3]*Department of Clinical Pharmacy and Pharmacy Management, Faculty of Pharmaceutical Sciences, Nnamdi Azikiwe University, Awka, Nigeria*

Older adults' level of expectations about pharmaceutical care was assessed. A cross-sectional survey was conducted among 196 patients attending the out-patient pharmacy of Olabisi Onabanjo University Teaching Hospital, Ogun State, Nigeria. An 18-item pretested questionnaire was self-administered for four weeks. Analysis was done with GraphPad Instat. P <0.05 was considered significant. Expectation score ranged from 12 to 60. The response rate was 65.8% (129/196). Nearly a half of the respondents (63, 48.8%) were 60-69 years old; seventy-three (56.6%) were females; 50 (38.8%) were businessmen/women; 104 (80.6%) were married; 61 (47.3%) had tertiary education; and 51 (39.5%) had an income of >N49, 999. Overall mean (SD) of expectations was 3.91 (0.96) with a score of 46.92 (78.2%). 'Expectation to dispense prescriptions accurately' had the highest (53.7), score. Respondents between 50-59 years of age, females, the unemployed, single, secondary educated and those with incomes of ₦40, 000-₦49, 999 had higher expectations with no significant association.

Keywords: Older adults, expectations, operational research.

INTRODUCTION

Rather than mere dispensing of medications, pharmacists have been emboldened to proffer pharmaceutical care to improve patients' health care [1]. This is consequential considering that pharmaceutical care is an outcome-oriented practice alongside patient expectations which are humanistic components in Pharmacy Practice [2]. Successful implementation of pharmaceutical activities will likely meet the expectations of patients that pharmacist work on their behalf [3]. Older adults are known to use high numbers of prescription medications probably due to associated multiple chronic diseases such as hypertension, diabetes mellitus, arthritis, chronic heart disease, and renal diseases [4], which may expose them to greater risk of complications. Understanding patients' expectations of pharmacist-provided services and signaling active listening and attention to patients are essential aspects of patient care and services, especially for older adults.

The need to address the healthcare requirements of these older citizens emanated from their higher ill health burden and disability [5]. With advancing age, there is a gradual deterioration in perceived health outcome measurement scores [6]. The Center for Health Workforce Studies (2006) reported that contemporary older adults are better educated, have greater access to information, and have more socioeconomic resources. These may have accounted for the changing patterns of utilization and different demands for health services [7]. Many studies have supported the notion that patients' expectation of pharmaceutical care varies significantly by many factors, including the type of pharmacy practice site, age, waiting time, medication availability and service quality [8-9]. One study showed that patients' perception of pharmacists was generally positive but majority of the patients were unaware of pharmaceutical care services and this made their understanding very primitive [10].

*Author to whom correspondence may be addressed. Email address: ifyeze3000@gmail.com

Understanding the status of pharmaceutical service provided by the hospital through the customers' level of expectation is an important step to improve the service. Surveys assessing the level of patients' expectations are essential in obtaining an inclusive understanding of the patients' needs and their opinion of the service received. This will help to fill the gap between what the patients need and what they really get [11]. Considering the dearth of information in literature on older adults' expectations of pharmacy services and the sizeable population (16.98%) of 50 years and above in Ogun State, Nigeria [12], it is essential to evaluate pharmaceutical care currently rendered to older adults. This study was undertaken to ascertain older persons' level of expectations towards pharmaceutical care and to identify factors that influence them in Olabisi Onabanjo University Teaching Hospital (OOUTH), a tertiary health institution in Nigeria.

METHODS

Study design

A cross-sectional survey was conducted among consecutively selected older adults ≥50 years waiting either for their prescriptions to be assessed/billed or to receive medicines in the general outpatient pharmacy unit for the duration of one month using a pretested questionnaire.

Study setting

The study was carried out at the General Outpatient Pharmacy unit of the OOUTH, Sagamu. The hospital is a 218-bed facility with several divisions including a pharmacy department with several subunits. The study was conducted in the general outpatient pharmacy because of the direct contact between the pharmacists and patients who come to purchase prescribed medicines after consultation with their doctors.

Study population and sample size

Older adults aged ≥50 years formed the population. The Raosoft sample size calculator was used to obtain the sample size. Assumptions used were a margin error of 6.98%, confidence level of 95% and 50% distribution to give a sample size of one hundred and ninety-six (196) older persons.

Study instrument, selection criteria and data collection techniques

A pretested 18-item structured self-administered questionnaire adopted from a previous study [2] was used. Information on patients' socio-demographic characteristics including age, sex, marital status, monthly income, level of education and items that measure patients' expectations of services rendered by pharmacists such as pharmacist friendliness, dispensing accuracy and the concern of medicine working effectively were obtained. Responses were validated by incorporating comparable item response questions. A 5- point Likert scale ranging from strongly disagree = 1, disagree = 2, neutral l = 3, agree = 4 and strongly agree =5 was used to rate the responses of the participants on twelve expectation items. Three items (1, 9 and 12) were negatively worded to reduce response bias. Responses were provided by indicating the extent to which the respondent agreed with each survey item. Consenting patients were administered questionnaires consecutively. Explanations and help were rendered to those who had difficulties with filling and questionnaires were collected immediately after completion. Fifty years was used based on Nigeria's peculiar life expectancy of 53 for males and 55 for females [13]. Patients who were in the wards, unconscious, had mental problems, those who were in need of emergency attention and those making repeat visits to the pharmacy within the study period were excluded from the study. Ethical approval was obtained from the management of the hospital (Approval number-OOUTH/DA.326/T/5) and verbal consent was obtained from each patient before issuing of questionnaires. Participants were assured of privacy by eliminating every form of identifier from the questionnaire. Confidentiality and total anonymity were maintained throughout the study.

Data analysis

Responses were entered into Microsoft Excel and crosschecked for accuracy and completeness before loading into GraphPad Instat for further analysis**.**

Descriptive statistics such as frequency, percentage, and mean were computed. Patients' expectation level was rated out of five. Points <3 or > 3 were considered as low or high expectation, respectively. Negatively worded items were reverse scored and the expectation score ranged from 12 to 60 with a midpoint of 36 since there were 12 expectation items. Expectation score was obtained by multiplying the overall mean by 12. Unpaired t- test and one-way ANOVA were used to test for significant association which was set at P< 0.05.

RESULTS

The response rate was 65.8% (129/196). The mean age of the respondents was 60.16 ± 5.71 years, with the majority (63 (48.8%)) aged 60-69 years. More than half, 73 (56.6%), were females and married 104 (80.6%). Sixty-one (47.3%) had tertiary education and 51(39.5%) earned more than ₦49, 999 (1 Nigerian Naira = 0.002778 United States dollar). The socio-demographic characteristics of the patients are indicated in Table 1. The overall mean score (standard deviation) of expectation was 3.91(0.963) with an expectation score of 46.92 (78.2%). Items on dispensing prescriptions accurately' and pharmacist asking how medications are working had high expectation scores with mean values of 4.48 ± 0.675 and 4.26 ± 0.723, respectively. The lowest scored item on expectation was, 'I do not expect my pharmacist to ask me about the side effect of my medications on phone'with a mean value of 2.07 ± 1.17. The frequencies and mean responses to expectation items are shown in Table 2. Older adults who were females, those in the age of 50-59 years, the unemployed, the single, those earning between ₦40, 000 - ₦49.999 and those with secondary education had higher expectations than their counterparts. However, these variables were considered not significant (gender (p = 0.8328), age (p = 0.9092), occupation (p = 09968), marital status (p = 0.4354), income (p = 0.1287) and education (p = 0.1287). Expectation scores of different levels of socio-demographic variables expressed as mean and P-values are shown in Table 3.

Table 1: Socio-demographic characteristics of respondents (n=129)

Characteristics	Frequency (%)	Characteristics	Frequency (%)
Age (years)		***Sex***	
50-59	61 (47.3)	Male	56 (43.4)
60-69	63 (48.8)	Female	73 (56.6)
70-79	5 (3.9)		
Occupation		**Income*(Naira)**	
Civil servant	27 (20.9)	< 10,000	3 (2.3)
Business man/woman	50 (38.8)	10,000-19,999	3 (2.3)
Trader	25 (19.4)	20,000-29,999	9 (7.0)
Teacher	8 (6.2)	30,000-39,999	33 (25.6)
Unemployed	12 (9.3)	40,000-49,999	30 (23.3)
Others	7(5.4)	>49,999	51 (39.5)
Marital status		**Education**	
Single	1 (0.8)	No formal education	9 (7.0)
Married	104 (80.6)	Primary	11 (8.5)
Divorced	6 (4.7)	Secondary	48 (37.2)
Widowed	14 (10.8)	Tertiary	61 (47.3)
Others	4 (3.1)		

Table 2: Respondents expectations of pharmacists (n=129)

Expectation items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
1. I do not expect my pharmacist to be friendly.	56(43.4)	47(36.4)	8(6.2)	4(3.1)	14(10.9)	3.94	1.307
2. I expect my pharmacist to dispense my prescriptions accurately	-	-	13(10.1)	40(31.0)	76(58.9)	4.48	0.675
3. I do not expect my pharmacist to make me wait a long time to get my prescriptions filled	-	4(3.1)	27(20.9)	60(46.5)	38(29.5)	4.02	0.795
4. I expect my pharmacist to ask how my medications are working.	-	1(0.8)	18(13.9)	56(43.4)	54(41.9)	4.26	0.723
5. I expect my pharmacist to discuss my health with me	-	1(0.8)	24(18.6)	50(38.8)	54(41.8)	4.22	0.770
6. I expect my pharmacist to communicate with my physician about my medication	-	3(2.3)	33(25. 6)	55(42.6)	38(29.5)	3.99	0.805
7. I expect my pharmacist to help me identify the desired effect of my medications	-	1(0.8)	19(14.7)	70(54.3)	39(30.2)	4.14	0.682
8. I expect my pharmacist to understand my feelings and /or situations	3(2.3)	6(4.7)	24(18.6)	60(46.5)	36(27.9)	3.93	0.929
9. I do not expect my pharmacist to explain my medications to me.	50(38.8)	53(41.1)	6(4. 6)	12(9.3)	8(6.2)	3.89	1.98
10. I expect my pharmacist to come up with ways to make it easier to take my medications.	1(0.8)	3(2.3)	36(27.9)	61(47.3)	28(21.7)	3.87	0.804
11. I expect my pharmacist to spend as much time as necessary with me	3(2.3)	12(9.3)	56(43.4)	40(31.0)	18(14)	3.45	0.927
12. I do not expect my pharmacist to ask me about the side effect of my medications on phone.	11(8.5)	21(16.3)	40(31.0)	36(27.9)	21(16.3)	2.72	1.17
Overall Mean±SD						**3.91**	**0.963**

Table 3: Socio demographic variables expressed as mean, standard deviation and p-value of expectations scores n=129

Characteristics	Mean	Standard Deviation	P-value	Remarks
Age (years)				
50-59	3.943	0.874	0.9092	Not significant
60-69	3.886	0.882		
70-79	3.817	0.831		
Sex				
Male	3.889	0.905	0.8328	Not significant
Female	3.928	1.129		
Occupation				
Civil servant	3.911	0.864	0.9968	Not significant
Business man/woman	3.893	0.898		
Trader	3.872	0.918		
Teacher	3.979	0.941		
Unemployed	4.026	0.934		
Others	3.854	0.8344		
Marital status				
Single	4.333	0.000	0.4354	Not significant
Married	3.938	0.8821		
Divorced	3.888	0.902		
Widowed	3.848	0.923		
Others	3.251	0.739		
Education				
No formal education	3.249	0.1516	0.1287	Not significant
Primary	3.73	0.848		
Secondary	3.975	0.856		
Tertiary	3.915	0.916		
Income (Naira)				
< 10,000	3. 61	0.858	0.9788	Not significant
10,000-19,999	3.943	0.817		
20,000-29,999	3.93	0.9445		
30,000-39,999	3.85	0.906		
40,000-49,999	3.981	0.857		
>49,999	3.939	0.888		

DISCUSSION

Most of the respondents were below the age of 70 years owing to the young older population of the country [14]. The older adults had high expectations (>70%) about the services rendered to them by pharmacists particularly in areas of dispensing prescriptions accurately' and pharmacist interest in treatment outcomes by asking the patients how their medications work. This was expected since dispensing of medicines was a primary duty of pharmacists before the era of pharmaceutical care. This was typically exemplified in a previous study [15] where pharmacists engaged in various forms of dispensing duties (administering of medicines, prescription labeling, and verbal explanations). Similar high expectations of pharmacy services were obtained by Workye et al. in Ethiopia which emphasized on affordability of medicines. The study suggested that >85% of the clients expected

the pharmacist to check prescription for completeness [16]. In another study most elderly patients showed interest on the pharmacists explaining how to use medications [17]. Older female adults who were within the age of 50-59 years, the unemployed, the single, those earning between ₦40, 000 - ₦49.999 and those with secondary education had higher expectations than their counterparts, with insignificant association. Similar results were obtained on income and occupation in another study [16]. There was a low score on expectations of respondents on their pharmacists not asking them questions about the side effect of their medications on phone. It implied that the older adults actually want their pharmacist to call them on such issues. Use of cell phones must be encouraged for detecting and abating side effects among such categories of patients. Use of mobile phones and other electronic tracking systems for older adults have been studied previously [18-22]. Patient/pharmacist cordiality in the health care system must be encouraged and improved upon. The foregoing discussion supports patients wanting pharmacists to play an advocacy role in drug therapy management. This further emphasizes the high level of patients' expectations of pharmacists' roles such as monitoring patients' response to medications as a part of an integrated clinic model.

It is expected that hospital pharmacies in Nigeria have well organized settings to provide effective pharmaceutical care services. Pharmacists are responsible for giving the right instructions and counselling about medication use and possible lifestyle modification [23]. Overall, older adults need this comprehensive pharmaceutical service even much more than the rest of the population.

The fact that the questionnaire may have omitted some essential aspects of the respondents' attitude and the inability to fully determine respondents' sincerity are some possible limitations in this study.

CONCLUSION

The expectations of older adults about pharmaceutical care services were high with no significant association when compared with socio-demographic variables. This calls for improvement for future geriatric–pharmacist relationship. Pharmacists should bear these expectations in mind when interacting with older adults. This study suggests that comprehensive pharmaceutical care can improve adherence to therapy and treatment outcomes.

ACKNOWLEDGMENTS

We wish to acknowledge all the staff at the Pharmacy Department of OOUTH who supported this work.

REFERENCES

[1] C.D. Hepler and LM. Strand. Am. J. Pharm. 47(3), 1990, 533-543.

[2] C.A. Oparah, E.F.O. Enato, J. Soc. Adm. Pharm. 6(20), 2002, 219-224.

[3] I.C. Volume, K.B. Farris, R. Kassam, C.E. Cox and A. Cave. J. Am. Pharm. Assoc. (Wash). 41(3), 2001, 411-420.

[4] R.J. Dagli and A. Sharma. J. Int. Oral Health. 6(6), 2014, i–ii.

[5] Z.N. Kabir, C. Tishelman, H. Aguero Torres, A.M.R. Chowdhury, B.Winbland and B. Hojer. Arch. Gerontol. Geriatr. 37(1), 2003, 77-91.

[6] S.M. Ahmed, A.K.M.N Rana, M .Chowdhury and A. Bhulya. J. Health Popul. Nutr. 20(4), 2002, 334-342.

[7] Center for Health Workforce Studies 2006 -The Impact of the Aging Population on the Health. Workforce in the United States 2006: Summary of Key Findings March Center for Health Workforce Studies School of Public Health, University at Albany 7 University Place Rensselaer, NY

12144-3458 http://www.albany.edu/news/pdf_files/impact_of_aging_excerpt.pdf. (assessed March 2015.

[8] S.B. Hamra and B. Al‑Zaid. J. Stud. Gulf Arabian Peninsula. 24, 1999, 95.

[9] A.H. Al Doghaither, B.M. Abdelrhman and A.A. Saeed. J.R. Soc. Promot. Health. 120(3), 2000, 170-174.

[10] M.U. Khan, A.N. Khan, F.R. Ahmed, Z. Feroz, S. A. Rizvi, S .Shah, R. Hussain and Z. Adil. J. Young Pharm. Sep; 5(3), (2013), 90–94.

[11] A. Iftikhar, N. Allah, K. Shadiullah, K. Habibullah, A.R. Muhammed and H.K. Muhammed. GJMS; 9(2) 2011, 183‑188.

[12] S.M. Dauda, G. Agidi and M.A. Shotunde. Afr. J. Gen. Agric. 6(3), 2010, 95-103.

[13] Key Development Forecast for Nigeria. IFs Version 7.08 International Futures (IFs) forecasting system and the Pardee Center for International Futures at the University of Denver. http://www.ifs.du.edu/ifs/frm_CountryProfile.aspx?Country=NG(assessed May 2015)

[14] H.R. Rubin, B. Gandek, W.H. Rogers, M. Kosinski, C.A. McHorney and J.E. Ware Jr. JAMA. 270(7), 1993, 835-840.

[15] H.Z. Toklu, A.S. Akici, S. Cali, S.F. Sezen, M. Keyer-Uysal. Marmara Pharm. J. 14, 2010, 53-60.

[16] M. Workye, S. Admasu, T. Abura, Y. Belete, Y. Getaye, F.S. Teni and A.S. Surur. IPRP. 4, 2015, 1-12.

[17] S. Hasan, H. Sulieman, K. Stewart , C.B. Chapman and D.C. Kong. Int. J. Pharm. Pract. 23(5), 2015, 340-348.

[18] K. Kotani, M. Morii, Y. Asai and N. Sakane. Aust. J. Rural Health. 13(3), 2005, 193-194.

[19] V. Faucounau, M. Riguet, G. Orvoen, A. Lacombe, V.Rialle, J Extra and A.S. Rigaud. Ann. Phys. Rehabil. Med. 52(7-8), 2009, 579-587.

[20] F. Miskelly. Age Ageing. 34(5), 2005, 497-499.

[21] M.E. Rollo, S. Ash, P. Lyons-Wall and A. Russell. J Telemed. Telecare. 17(6), 2011, 318-323.

[22] R.Y.W Lee and A.J .Carlisle. Age Ageing. 40(6), 2011, 690–696. doi: 10.1093/ageing/afr050.

[23] Ethiopian Pharmaceutical Association Code of ethics and standard of practice for pharmacists practicing in Ethiopia. 2nd ed. Addis Ababa, Ethiopia: Ethiopian Pharmaceutical Association; 2013