

# Geriatric clients' satisfaction with pharmaceutical care services among community pharmacies in Ilorin, North-Central, Nigeria

<sup>1</sup>Shakirat Bello, <sup>1</sup>Maryam A. Abdulmalik, <sup>2</sup>Kayode J. Awogbemi and <sup>2</sup>Fullaila O. Aliyu

<sup>1</sup>Department of Clinical Pharmacy and Pharmacy Practice, Faculty of Pharmaceutical Sciences, University of Ilorin, Ilorin, Nigeria

<sup>2</sup>Department of Clinical Pharmacy and Pharmacy Administration, Faculty of Pharmacy, Obafemi Awolowo University, Ile-Ife, Nigeria

## ABSTRACT

**Background:** Client satisfaction in community pharmacies is an essential fundamental indicator of the effectiveness, viability, and sustainability of any healthcare system. Pharmaceutical care for geriatric patients requires a specialized approach as a result of multi-morbidities and subsequent polypharmacy. This study is aimed at evaluating the satisfaction of geriatric clients with community pharmacy services in Ilorin, North-central, Nigeria.

**Methods:** This is a multi-site, cross-sectional study that was conducted in five licensed community pharmacies in Ilorin, between March and June 2023 with ethical approval. Using convenience sampling, a total of 308 consented clients were enrolled. A structured questionnaire was used to collect socio-demographic parameters and their opinions on several aspects of pharmaceutical care services in community pharmacies. Clients' satisfaction was analysed appropriately.

**Results:** The mean age of the clients was 64 years. The most prevalent chronic disease among the clients was cardiovascular disorders 115(37.3%). Most of the clients, 283(91.9%) agreed that pharmacists were regularly available at the pharmacies. All clients 308 (100.0%) agreed that they were satisfied with the pharmacist conduct and the quality of services offered in the community pharmacies. Although few clients, 54(17.5%) requested that the pharmacist should provide them with proper information on the storage of their medications. There was a statistically significant ( $P < 0.05$ ) between the level of education and willingness to pay for the pharmaceutical care interventions.

**Conclusion:** Geriatric clients were satisfied with the pharmacists' accessibility and availability and pharmacists efforts at resolving their medication therapy problems. However, the pharmacists' medication information management was less satisfactory.

**Keywords:** Community Pharmacies, Geriatrics, Ilorin, Pharmaceutical Care Services, Satisfaction

## INTRODUCTION

Pharmaceutical care is defined as patient-focused services associated with medication therapy and disease management that are aimed at ensuring the safety of drug use, improving patient adherence, and enhancing patient outcomes [1]. Pharmaceutical care for geriatric patients is a specialized approach to medication management that focuses on the unique needs and challenges faced by older adults [2]. In developing countries like Nigeria where pharmaceutical care is currently still under development, client dissatisfaction and service lapses are rampant [3]. Patient satisfaction is an essential fundamental indicator of the effectiveness, viability, and sustainability of any healthcare system. Evidence suggests that satisfied patients maintain positive working relationships with their healthcare professionals [4]. According to the World Health Organization, the elderly population are people of the age 60-74 years old, the old population is people of age 75-90 years old and the very old population is people of 90 and above. Internationally, many countries are experiencing aging populations in the 21st century, and Nigeria is inclusive [5]. Nigeria, Africa's leading economy and most populated country has the highest number of older people in the

\* Corresponding author: Email: [bello.is@unilorin.edu.ng](mailto:bello.is@unilorin.edu.ng); Phone: +2348138528940



## **Bello et al: Geriatric clients' satisfaction with pharmaceutical care services among community pharmacies in Ilorin, North-Central, Nigeria**

continent and the 19th highest globally, with the population of Nigerians aged 65 and older projected to nearly triple by 2050 [6]. Aging increases an individual's risk of multi-morbidity due to associated physiological and pathological changes which increase the likelihood of being prescribed multiple medications [7]. Due to multi-morbidities and subsequent polypharmacy, they are more likely to encounter medication-related problems [8]. Avoidable adverse effects of medications are among the significant repercussions of inappropriate medication use in older adults. The risk of adverse drug reactions increases by increasing the number of drugs used [7]. The care of the elderly population can be challenging. Optimizing their medication regimen, personalized counselling, and accessibility of the pharmacy are crucial components of comprehensive geriatric care. The health care of elderly people significantly depends on community pharmacy services due to prompt and convenient access to community pharmacies, short waiting time, free consultation, and longer-term availability of community pharmacists to the people [9]. Assessing their level of satisfaction can help identify areas for improvement, enhance the quality of care provided, better communication, reduce the likelihood of medication errors, and adverse events, and ultimately contribute to better health outcomes in this vulnerable population [10]. Therefore, community pharmacies must meet a significant number of needs and expectations from the elderly population, as community pharmacies are the first point of call for health services in Nigeria [9]. Previous studies conducted in Nigeria and elsewhere agreed that geriatrics customers were satisfied with pharmacists' medication information management and pharmacists' efforts at resolving their medication therapy problem [2,8]. However, little is known about the extent to which their concerns are met in community pharmacies. In Nigeria, the experiences of geriatric patients are hardly discussed. Hence the objective of this study was to provide more information about the level of satisfaction of geriatric patients with the pharmaceutical care services rendered by selected community pharmacies in Ilorin, North-central, Nigeria with the view to understand the demands and concerns that geriatric clients have with community pharmacies.

## **2. MATERIALS AND METHODS**

### **2.1 Materials**

#### *2.1.1 Sites of the Study*

This study was conducted at selected licensed, pharmacist-owned community pharmacies in Ilorin. It was carried out in five community pharmacies, targeting elderly clients. These pharmacies are well-recognized and frequently visited among other pharmacies in Ilorin, Kwara State. Kwara State is located in the North Central geopolitical zone of Nigeria. It is the gateway between the Southern and Northern parts of Nigeria and was created on the 27th of May, 1967. According to the National Population Commission in 2014, Ilorin has a population of 854,737 as of 2006 census and an annual growth of 3.2% therefore making it the 30th largest city in Nigeria. The indigenous tribes in Ilorin are the Yorubas and the Hausa-Fulanis [11].

#### *2.1.2 Study Design*

This is a multi-site, cross-sectional study that was conducted in five licensed community pharmacies in Ilorin, with permission from the Kwara State Ministry of Health Ethics and Research Committee. Questionnaires were given to selected elderly clients, who met the inclusion criteria across all selected pharmacies after they consented to participate in the survey.

#### *2.1.3 Study Population*

A selected population of elderly clients in these five pharmacies was used.

#### *2.1.4 Sampling Size and Sampling Technique*

The number of elderly clients that met the inclusion criteria and visited the five community pharmacies in Ilorin from March to June, 2023 was used as the sample size for the study. The name of the pharmacies visited and the number of clients captured include, General Drug Central Pharmacy (64); One Step Pharmacy (80); Aromokeye Pharmacy (48); Laadim Pharmacy (75) and Momrota Pharmacy (41). Each pharmacy was visited by the researchers three days per week during working hours. Elderly clients (aged  $\geq 60$  years) who visited the community pharmacies to consult the pharmacists were selected with their consent. Convenience sampling was used for clients' selection and enrolment which was based on the availability of the clients. A total of 308 clients were enrolled.

#### *2.1.5 Selection of the Clients*

Included in the study were elderly clients who are aged of 60 years and over, those elderly who consented to participate in the study and elderly clients who visited the studied community pharmacies with prescriptions. Elderly clients that



do not have direct encounters with the pharmacists and those elderly with impairments that significantly affect their comprehension were excluded from the study.

#### *2.1.6 Study Instrument*

A 29-item structured instrument was used to evaluate elderly clients' viewpoints about the pharmacists' conduct, provision of medication information, pharmacy practices and operations, and overall satisfaction with the community pharmacy services. The elderly clients' demographic information was also included in this questionnaire. The instrument used in earlier studies was employed to design this questionnaire [2] The structured questionnaire was divided into the following sections:

Section A: Demographic parameters of the respondents.

Section B: Respondents' opinions about the community pharmacists' conduct.

Section C: Respondents' opinions about pharmacists' medication information management.

Section D: Respondents' satisfaction with the quality of services offered in the community pharmacies.

Section E: Respondents' opinions about pharmacy practices and operations.

## **2.2 Methods**

### *2.2.1 Data Collation*

The questionnaire took about five minutes to complete. Opinions about the Pharmacists' conduct were evaluated using 4-point Likert scale ranging from "Regularly" to "Rarely". The Pharmacists' conducts that were evaluated included his courtesy, accessibility, availability to clients and how attentively he listened to the health complaints of the clients. Closed-ended questions were used to explore clients' opinions about the adequacy of medication information, their satisfaction with pharmaceutical care services offered in the community pharmacy and their satisfaction with the pharmacy practices and operations. A close-ended question on willingness to pay for services was also included. The questionnaire was self-administered among consented clients. Consented clients who were unable to fill out the questionnaire were assisted by the researchers with face-to-face interviews. The questionnaire was translated into local languages for easy comprehension. To ensure appropriate responses and quality of data, all the interviews were conducted based on the client's availability in terms of location and time.

### *2.2.2 Ethical Consideration*

Ethical approval was obtained from the Kwara State Ministry of Health Ethics, Ilorin (ERC/MOH/2023/02/072). All clients who agreed to participate in the study were briefed about the study objectives and were required to provide verbal consent.

## **2.3 Statistical Analysis**

Socio-demographic characteristics and levels of satisfaction were described using descriptive statistics. Chi-square was used for the test of proportions while a relationship between various variables was determined using cross-tabulation. Statistical significance was considered with a two-sided probability of  $p < 0.05$ .

## **3. RESULTS**

The majority of the respondents were males 172(55.8%). The mean age of the respondents was 64 years and most were in the age group of 60-65 years (43.8%). A few 18 (5.8%) of the selected clients had no formal education, while the majority 199 (64.6%) had tertiary education. Most of the clients 271 (88%) were married. Of the respondents, 84.7% (261) were of Yoruba ethnicity. More than half 174 (56.5%) of the clients were retirees (Table 1).

The most prevalent chronic disease was cardiovascular disorders 115 (37.3%), of which hypertension was the commonest. Of the respondents, 62 (20.1%) were managing diabetes, and 31 (10.1%) had gastrointestinal diseases, especially peptic ulcer disease at the time of the study. The remaining 32.5 (28%) had different comorbid diseases. Overall, the male gender had the highest occurrence of gastrointestinal disorders, orthopaedic problems, urinary tract infections, ophthalmic disease and dermatological disorders. Cardiovascular and respiratory disorders were mostly found among women (Table 2).

## Bello et al: Geriatric clients' satisfaction with pharmaceutical care services among community pharmacies in Ilorin, North-Central, Nigeria

Table 1: Demographic parameters of the clients

Variables	Characteristics	n (308)	(%)
Gender	Male	172	55.8
	Female	136	44.2
Age (Years)	60-65	135	43.8
	66-70	82	26.6
	71-75	57	18.5
	>75	34	11.1
	Mean age-64 years		
Educational level	No Formal education	18	5.8
	Primary school	31	10.1
	Secondary school	60	19.5
	Tertiary	199	64.6
Occupation	Unemployed	3	1.0
	Retired	174	56.5
	Self-employed	94	30.5
	Privately employed	37	12.0
Marital status	Single	0	0
	Married	271	88.0
	Separated	2	0.6
	Widowed	35	11.4
Ethnicity	Yoruba	261	84.7
	Ibo	20	6.5
	Hausa	9	2.9
	Others	18	5.9

Table 2: Diseases for which clients visited the pharmacies

Disease condition	Gender	(n)	Total	Percentage (%)
Gastrointestinal disorders	Male	22	31	10.1
	Female	9		
Respiratory infections	Male	12	25	8.1
	Female	13		
Cardiovascular disorders	Male	56	115	37.3
	Female	59		
Orthopaedic problems	Male	24	42	13.6
	Female	18		
Urinary tract infections	Male	2	2	0.6
	Female	0		
Eye diseases	Male	14	25	8.1
	Female	11		
Dermatological problems	Male	4	6	1.9
	Female	2		
Other diseases	Male	38	62	20.1
	Female	24		

In the opinion of a large number of respondents 283 (91.9%), pharmacists were regularly available at the premises whenever they come for their prescription refills. Twenty-three (7.5%) respondents claimed that they sometimes meet pharmacists on duty during their visits. Only 2 (0.6%) respondents asserted they met pharmacists on the ground occasionally. None of the respondents mentioned that they were rarely shown courtesy by the pharmacists. Additionally, none of the respondents stated that the pharmacists were rarely accessible to them and none claimed they



rarely met the pharmacists during prescription refills. All 308 (100%) respondents attested that the pharmacists regularly listened attentively to their complaints about their health challenges (Table 3).

Table 3: Respondents' opinions about community pharmacists' attitude

Question items	Regularly	Sometimes	Occasionally
How often are you shown courtesy by your pharmacists?	300 (97.4%)	3 (1.0%)	5 (1.6%)
How will you describe pharmacists' accessibility to you?	285 (92.5%)	22 (7.1%)	1 (0.3%)
How regularly do you meet pharmacists on duty during your prescription refill?	283 (91.9%)	23 (7.5%)	2 (0.6%)

There was no significant relationship between the respondents' opinions about community pharmacists' attitudes and gender, level of education, and employment status. Most of the male clients 168 (54.5%) claimed that the pharmacists showed courtesy during their visit to Pharmacies. Those clients with higher educational qualifications described accessibility to pharmacists than clients with lower educational attainment.

Table 4: Respondents' opinions about community pharmacists' attitudes in relation to Socio-demographic parameters

Question items		Regularly	Sometimes	Occasionally	P- value
How often are you shown courtesy by your pharmacists?	Male	168(54.5%)	1 (0.3%)	3 (0.9%)	0.721
	Female	132(42.8%)	2 (0.6%)	2 (0.6%)	
How will you describe pharmacists' accessibility to you?	No formal	16 (5.1%)	2 (0.6%)	0 (0%)	0.865
	Primary school	30 (9.7%)	1 (0.3%)	0 (0%)	
	Secondary school	54 (17.5%)	6 (1.9%)	0 (0%)	
	Tertiary	185(60.0%)	13 (4.2%)	0 (0%)	
How regularly do you meet pharmacists on duty during your prescription refill?	Unemployed	3 (0.9%)	0 (0%)	0 (0%)	0.314
	Retired	163(52.9%)	9 (2.9%)	2 (0.6%)	
	Self-employed	82 (26.6%)	12 (3.8%)	0 (0%)	
	Privately employed	35 (11.3%)	2 (0.6%)	0 (0%)	

\*Chi-square test, level of significance  $p < 0.05$

Table 5: Respondents' opinions about pharmacists' medication information management

Question items	Yes	No
Does the pharmacist enquire about your health problems?	305 (99.0%)	3 (1.0%)
Does the pharmacist give you proper information on the storage of your medication?	262 (85.1%)	46 (14.9%)
Does your pharmacist work with you to plan your medication for effectiveness?	308 (100%)	0 (0%)
Do you get help from your pharmacist when you have a health problem related to your medication?	306 (99.4%)	2 (0.6%)
Does the pharmacist provide you with advice on lifestyle modification?	283 (91.9%)	25 (8.1%)
Are you satisfied that the instructions on your medications are easily readable?	306 (99.4%)	2 (0.6%)
Does the pharmacist provide easy-to-understand information to you?	308 (100%)	0 (0%)
Does the pharmacist always explain the possible side effects of medication to you?	254 (82.5%)	54 (17.5%)

The majority of the clients agreed that they get help from the pharmacists when they have a health problem related to their medications 306 (99.4%). A large number of the clients were also satisfied that the instructions on their medications were easily readable, and that the pharmacist provided easy-to-understand information to them. Although a significant number of clients, 54(17.5%), attested that the pharmacist does not always explain the possible side

## Bello et al: Geriatric clients' satisfaction with pharmaceutical care services among community pharmacies in Ilorin, North-Central, Nigeria

effects of the medications to them, the pharmacist does not also give them proper information on the storage of their medications 46(14.9%), and the pharmacist does not provide them with advice on lifestyle modifications 25(8.1%). The majority of the clients, 307 (99.7%) agreed that pharmacists' efforts helped improve their health conditions. All clients 308 (100.0%) agreed that they were satisfied with the way the pharmacists answered their questions and the pharmacists' assistance when a medication did not have the expected effect. Also, the majority 288 (93.5%) of the respondents were willing to pay for the pharmaceutical care services offered by the community pharmacists (Table 6).

Table 6: Respondents' satisfaction with the quality of services offered in the community pharmacies

Question items	Yes	No
Does your pharmacist's effort help to improve your health?	307(99.7%)	1(0.3%)
Are you satisfied with the way your pharmacist answers your medication related questions?	308(100%)	0(0%)
Are you satisfied with your pharmacist's assistance when a medication does not have the expected effect?	308(100%)	0(0%)
Are you satisfied with how your pharmacists use information about your previous conditions when assessing your therapy?	306(99.4%)	2(0.6%)
Will you be willing to pay for the services rendered to you by your pharmacist?	288(93.5%)	20(6.5%)

There was no significant association between age, employment status, and willingness to pay in this study  $p=0.554, 0.127$ . However, there was a significant association between the level of education and the willingness to pay for the services rendered by the pharmacists ( $p=0.047$ ) (Table 7).

Table 7: Association between willingness to pay and demographic parameters

Demographic parameter	Variables	Frequency (%)	P-value
Age (years)	60-65	135 (43.8%)	0.554
	66-70	82 (26.6%)	
	71-75	57 (18.5%)	
	>75	34 (11.1%)	
Level of education	No schooling	18 (5.8%)	0.047*
	Primary school	31 (10.1%)	
	Secondary school	60 (19.5%)	
	Tertiary	199 (64.6%)	
Employment status	Unemployed	3 (1.0%)	0.127
	Retired	174 (56.5%)	
	Self-employed	94 (30.5%)	
	Privately employed	37 (12.0%)	

A considerable number of clients, 306 (99.4%), were satisfied with the location of the pharmacy and the cleanliness and counselling area of pharmacy 308 (100%). The majority of the clients, 299 (97.1%), were satisfied with the operational hours of the pharmacy. Although, very few 33 (10.7%) clients were not satisfied with the number of staff in the pharmacy (Table 8).

Table 8: Respondents' opinions about pharmacy practices and operations

Question items	Yes	No
Are you satisfied that the number of staff is adequate for pharmacy operational requirements?	275 (89.3%)	33 (10.7%)
Are you satisfied with the operational hours of the pharmacy?	299 (97.1%)	9 (2.9%)
Is the location of the pharmacy suitable for you?	306 (99.4%)	2 (0.6%)
Are you satisfied with the cleanliness and hygienic condition of the pharmacy shop?	308 (100%)	0 (0%)
Are you satisfied with the counselling area of the pharmacy? (Noise-free/separate)	304 (98.7%)	4 (1.3%)



#### **4. DISCUSSION**

The mean age of the clients that visited the pharmacies was 64 years. This could be a result of an increased risk of frailty in the geriatric population above the age of 65 [12]. The prevalence of frailty in Africans rises with increasing age for both men and women, particularly over the age of 70 years [13]. Hence, this could reduce the mobility of elderly clients above the age of 70. This study showed that most of the clients were males. This finding contrasts with other studies where a majority of the clients were females [2, 3]. The clients who had tertiary education visited the pharmacies more than those with other levels of education. This indicates that the frequency of visits to pharmacies was impacted by the level of literacy. This could be a result of customers with higher levels of education often having better health literacy. They can understand and interpret health-related information more effectively, including medication instructions, warnings, and the importance of pharmaceutical care. This increased health literacy can lead to a greater awareness of the need for pharmacy services. A higher number of visits to the pharmacy contributes greatly to higher patient satisfaction. This correlates with other studies where geriatric clients who had tertiary education patronized the community pharmacies most and were more satisfied than clients with lower levels of education [2,14]. However, this observation counters a study where their findings indicated that patients with higher education had lower patient satisfaction scores compared to patients with lower education [10]. However, there was an insignificant association between the level of education and the level of satisfaction with pharmacists' attitudes. This suggests that the respondents were satisfied or dissatisfied with the pharmacists' conduct regardless of their level of education. However, the pharmacists' availability on their premises at all times is a fundamental requirement of the profession and significantly contributes to clients' satisfaction [2]. Additionally, pharmacists have a responsibility to show adequate courtesy and respect to clients irrespective of their age and social status. A good pharmacy practice is described as one in which the clients feel they are treated like any other customer. In the current study, there was no significant association between demographic parameters (gender and employment status) and clients' opinions about community pharmacists' attitudes. Therefore, none of these variables had a major influence on clients. This observation correlates with an earlier study which also found no correlation between satisfaction items and socio-demographic variables [3]. Almost all (92.5%) respondents believed that pharmacists created enough time to address their medication needs by being regularly accessible. Few respondents, however, claimed that pharmacists had never given them some medication information. A notable finding was that the majority of community pharmacists appropriately explained the dosage regimen by planning their medication for effectiveness but did not always explain the possible side effects of their medications. More than half of the clients, attested that the pharmacist does not always explain the possible side effects of the medications to them. A minority of the clients observed that the pharmacist does not provide them with proper information on the storage of their medications (14.9%), as well as not providing them with advice on lifestyle modifications (8.1%). This corroborates with a study where the patients' expectations about medication information management did not match their experience [8]. They expected to receive information about the effect of other medicines on their chronic condition and medicines. Also, they were not always told how to store the medicines and what the side effects could be. Satisfaction of the clients with community pharmacy services was generally high and this translated to their willingness to pay for the pharmaceutical care services, as the majority of respondents were willing to pay for the services rendered by the pharmacists. This same observation was shared in a previous study where the participants had been and would be willing to pay for pharmaceutical care services at the pharmacy [8]. Furthermore, there was statistical significance between the current willingness to pay for services and the expectation to pay. Another study discovered that there was a significant association between pharmacists' accessibility and the willingness to pay for pharmacy services. However, pharmacists' accessibility was found to have no significant effect on willingness to pay, as well as age and employment status [2]. Level of education was the only factor found to influence clients' willingness to pay for pharmaceutical care services. This implies that the level of education and customers' satisfaction with services may be major factors responsible for willingness to pay for community pharmacy services. Customers with a higher level of education may be more inclined to pay for pharmaceutical care services as a result of having a better understanding of health-related concepts, including the importance of medication management and pharmaceutical care. They are more likely to appreciate the value of these services in optimizing their health. Additionally, customers with higher education levels may have a better understanding of the link between medication adherence and improved health outcomes. They may be more willing to invest in pharmaceutical care services as a means to achieve better health and quality of life. The majority of the respondents were satisfied with the number of staff in the pharmacy establishment which they believed was adequate for pharmacy operational requirements. In contrast, very few were not satisfied with the number of staff in the pharmacy as a result of the long waiting time and overcrowding of the pharmacy. The majority of the clients were very satisfied with the locations of the pharmacies. This is probably because of convenience as the pharmacies were



## Bello et al: Geriatric clients' satisfaction with pharmaceutical care services among community pharmacies in Ilorin, North-Central, Nigeria

easily accessible for the reason that they are situated by the roadside. Conversely, an earlier study reported that pharmacy location had a very minimal influence on patients' satisfaction levels. The conduciveness of the pharmacy environment for professional roles helps in developing general satisfaction in community pharmacy services. General satisfaction with the pharmacy environment was observed among the study population irrespective of age and gender [15].

### 5. CONCLUSION

Geriatric clients were satisfied with the pharmacists' accessibility and availability and pharmacists' efforts at resolving their medication therapy problems. However, few respondents would want better information on side effects of their medications, storage and required lifestyle modifications. Geriatric clients' level of education may have an effect on their willingness to pay for pharmacy services.

### Conflict of interest

No conflict of interest is associated with this study.

### Contribution of the Authors

Shakirat I. Bello and Fullaila O. Aliyu contributed to the study's conception and design. Data collection and analysis were performed by Maryam A. Abdulmalik. The first draft of the manuscript was written by Shakirat I. Bello. Joshua K. Awogbemi commented on previous versions of the manuscript. The authors read and approved the final manuscript.

### Acknowledgment

The authors are most grateful to all the staff members of the community pharmacies and the Kwara State Ministry of Health for the permission and continuous assistance to conduct this study. Also, we are thankful to all the clients for their willingness to take part in the study.

### 6. REFERENCES

- [1] Cheng Y, Raisch DW, Borrego ME, Gupchup GV. Economic, clinical, and humanistic outcomes (ECHO) of pharmaceutical care services for minority patients: A literature review. *Research in Social and Administrative Pharmacy* 2013;9(3):311–329. <https://doi.org/10.1016/j.sapharm.2012.05.004>.
- [2] Ajibola SS, Adebisi OA, Samuel AO. Geriatric customers' satisfaction with community pharmacy services in Sagamu South West Nigeria. *West African Journal of Pharmacy* 2016;27(1):54-62.
- [3] Eze UIH, Ojielebu WA, Eze MSC. Older adults' satisfaction with pharmaceutical care in an out-patient pharmacy of a Nigerian teaching hospital. *Journal of Science and Practice of Pharmacy* 2018;5(2):240-248.
- [4] Aziz MM, Ji W, Masood I, Farooq M, Malik MZ, Chang J, Jiang M, Atif N, Fang Y. Patient satisfaction with community pharmacies services: A cross-sectional survey from Punjab; Pakistan. *International Journal of Environmental Research and Public Health* 2018;15(12). <https://doi.org/10.3390/ijerph15122914>.
- [5] De Tran V, Dorofeeva VV, Loskutova EE, Lagutkina TP, Kosova IV, Gribkova EI, Galkina GA, Pak T V, Ibragimova AN, Le MH, Cao TTN. Elderly consumers' satisfaction with the quality of community pharmacy services in Ho Chi Minh City, Vietnam: a Q-methodology study. *Pharmacia* 2020;67(4), 303–309. <https://doi.org/10.3897/pharmacia.67.e56511>.
- [6] Mbam KC, Halvorsen CJ, Okoye UO. Aging in Nigeria: A Growing Population of Older Adults Requires the Implementation of National Aging Policies. *The Gerontologist* 2022; 62(9):1243–1250. <https://doi.org/10.1093/geront/gnac121>.
- [7] Varghese D, Ishida C, Haseer Koya H. Polypharmacy. Treasure Island (FL): StatPearls Publishing 2023 PMID: 30422548.
- [8] van Rensburg AJ, Kotze I, Lubbe MS, Cockeran, M. An elderly, urban population: Their experiences and expectations of pharmaceutical services in community pharmacies. *Health SA Gesondheid* 2017;(22):241–251. <https://doi.org/10.1016/j.hsag.2016.12.002>.

- [9] Bamgboye AO, Hassan IA, Adebisi YA, Farayola RO, Uwizeyimana T. Towards improving community pharmacy-based mental health services in Nigeria. *Journal of Pharmaceutical Policy and Practice* 2021;14 (1). <https://doi.org/10.1186/s40545-021-00316-9>.
- [10] Ismail A., Gan YN, Ahmad N. Factors associated with patient satisfaction towards pharmacy services among outpatients attending public health clinics: Questionnaire development and its application. *PLoS ONE* 2020;15(11). <https://doi.org/10.1371/journal.pone.0241082>.
- [11] Ahmed A, Uthman MMB, Osinubi MO, Bolarinwa AO, Musa OI, Aderibigbe AA. Assessment of quality of life among patients attending HIV clinics in Ilorin metropolis. *Research Journal of Health Sciences* 2018;6(4), 226. <https://doi.org/10.4314/rejhs.v6i4.9>.
- [12] Leng, S., Chen, X., & Mao, G. (2014). Frailty syndrome: an overview. *Clinical Interventions in Aging*, 433. <https://doi.org/10.2147/cia.s45300>.
- [13] Payne CF, Wade A, Kabudula CW, Davies JI, Chang AY, Gomez-Olive FX, Kahn K, Berkman LF, Tollman SM, Salomon JA et al. Prevalence and correlates of frailty in an older rural African population: Findings from the HAALSI cohort study. *BMC Geriatrics* 2017;17(1). <https://doi.org/10.1186/s12877-017-0694y>.
- [14] Odili VO, Ihenyen A, Okhawere M. Patients' Satisfaction with Pharmacy Services in a Secondary Health Care Facility. *Nigerian Journal of Pharmaceutical and Applied Science Research* 2020; 6(1):65–72.
- [15] Nitadpakorn S, Farris KB, Kittisopee T. Factors affecting pharmacy engagement and pharmacy customer devotion in community pharmacy: A structural equation modelling approach. *Pharmacy Practice* 2017;15(3):999. <https://doi.org/10.18549/PharmPract.2017.03.999>