

Clients' Perception of Pharmacist-provided Medication Counseling and Contemporary Roles in Patient Care in Ibadan, Southwestern Nigeria

¹Rasaq Adisa, ²Adeniran A. Bero and ¹Titilayo O. Fakeye

¹Department of Clinical Pharmacy and Pharmacy Administration, Faculty of Pharmacy, University of Ibadan, Oyo state, Nigeria.

²Hospital Management Board, Saki Division, Oyo state, Nigeria.

Corresponding Author: Rasaq Adisa

E-mail: adisaras73@yahoo.co.uk, Phone: +2348034226199

ABSTRACT

Background: Effective medication counseling is integral to patient-centered pharmaceutical care.

Objectives: This study aimed to evaluate clients' perception of pharmacist-provided medication counseling and contemporary roles in patient care.

Methods: Clients' views of the content and usefulness of pharmacist-provided medication counseling and contemporary roles in patient care were evaluated using questionnaire-guided interviews of patrons of community and hospital pharmacies in Ibadan, southwestern Nigeria. A cross-sectional survey of pharmacists was also carried out. Data obtained were summarized with descriptive statistics. Chi-square was used for test of proportions, Kruskal-Wallis or Mann-Whitney U test for rank variables with $p < 0.05$ considered significant.

Results: Majority (230; 92.0%) believed that pharmacist-provided medication counseling is helpful, and 241 (96.4%) agreed that pharmacists should be actively involved in health decision-making. Patrons of hospital pharmacy (89; 93.7%) largely reported to always receive the combination of verbal and written instructions during prescription refill compared to 117 (80.1%) among the patrons of community pharmacies ($p=0.004$). More than one-half (154; 61.6%) agreed that pharmacists were not always accessible during refill. Forty (80.0%) participating pharmacists understood counseling to comprehensively include verbal and written instructions.

Conclusion: There is need for proactive measures among pharmacists by engaging in core activities that will directly impact on patient care.

Key words: Clients, Medication counseling, Pharmacist, Patient care

La perception des clients des rôles de pharmacien fourni médicaments Counseling et contemporaines dans les soins aux patients à Ibadan, sud ouest du Nigeria

Auteur correspondant: Rasaan Adisa
E-mail: adisaras73@yahoo.co.uk, Phone: +2348034226199

RÉSUMÉ

Contexte: À compter du médicament conseil fait partie intégrante de soins pharmaceutiques centrés sur le patient.

Objectifs: Cette étude visait à évaluer la perception de conseils sur les médicaments de pharmacien fourni et rôles contemporains dans les soins aux patients de clients.

Méthodes: les points de vue des clients du contenu et l'utilité des médicaments conseils de votre pharmacien fourni et les rôles contemporains dans les soins aux patients ont été évalués moyen d'un questionnaire guidé de clients de pharmacies communautaires et hospitalières à Ibadan, sud-ouest du Nigeria. Une enquête transversale des pharmaciens a également été réalisée. Les données obtenues ont été résumées dans les statistiques descriptives. Chi-carré a été utilisé pour le test de proportions, de Kruskal-Wallis ou test de Mann-Whitney pour les variables de rang avec $p < 0,05$ considéré comme significatif.

Résultats: La majorité (230; 92.0%) croyaient que les médicaments conseils de votre pharmacien fourni est utile, et 241 (96.4%) ont convenu que les pharmaciens devraient être activement impliqués dans les décisions de santé. Patrons de pharmacie de l'hôpital (89; 93.7%) largement rapportés à toujours recevoir la combinaison des instructions verbales et écrites au cours de la prescription recharge contre 117 (80.1%) parmi les clients de pharmacies communautaires ($p = 0,004$). Plus de la moitié (154; 61.6%) ont convenu que les pharmaciens ne sont pas toujours accessibles lors de la recharge. Quarante (80.0%) en participant pharmaciens compris conseil et inclure globalement instructions verbales et écrites.

Conclusion: Il est nécessaire de prendre des mesures proactives au sein des pharmaciens en s'engageant dans des activités de base qui auront un impact direct sur les soins aux patients.

Mots clés: les clients, les conseils des médicaments, les pharmaciens, les soins aux patients

INTRODUCTION

Patient's counseling to ensure appropriate use of medicine is integral to providing patient-centered pharmaceutical care.¹ In addition to reducing medication-related morbidity and its associated costs; medication counseling benefits patients in many ways including reduction of adverse drug reactions, resolving non-adherence problems and preventing the occurrence of medication errors.¹⁻³ Also, through the provision of effective and purposeful medication counseling, other medication-related problems such as untreated indications, improper drug selection, subtherapeutic dosage, over-dosage, drug interaction and drug use without indications may be uncovered.^{1-3,4,5}

Providing information to patients and caregivers in an effort to ensure safe and appropriate use of medication is therefore considered a professional responsibility of pharmacists.⁶

Strand et al⁷ used the term "Pharmaceutical services" to represent services that pharmacist require to resolve patient's drug therapy problems. These services range from the provision of medicine information, patient counseling and medicine distribution. Considering the enormous benefits of medication counseling for the patient and for the professional responsibility of pharmacist, medication counseling should be incorporated into standard daily interaction with patients in the community and hospital pharmacy settings. However, in spite of the compelling reasons from the pharmacists and patients points of view *vis-a-viz* need for patient's counseling, a large number of pharmacists do not engage in this critical role which is vital to the provision of pharmaceutical care.⁸ Busy schedule of work in the pharmacies, lack of time, and communication problems are among the reasons suggested for this gap.^{9,10} However, the root of the problem especially in poor resource-setting like Nigeria may be related to non-establishment or failure of policies, procedures and implementation programs to motivate and assist pharmacists.^{9,10} In addition, studies show that many patients lack understanding about the expanded counseling roles that pharmacists are prepared to provide.^{3,11} A predominant expectation of the patient of the pharmacist is that of a supplier of prescription products rather than that of a concerned counselor regarding medications.^{11,12,13} This study therefore aimed to evaluate clients' perception of pharmacist-provided medication counseling and contemporary roles in patient care using patrons of community and hospital pharmacies in a metropolitan city of Ibadan, southwestern Nigeria. Opinions of pharmacists on the scope, content and usefulness of

medication counseling in routine pharmacy practice were also explored.

METHODS

Study sites and settings

This study was carried out in two notable pharmacist-own community pharmacies namely Kunle-Ara Pharmacy and Cran Pharmacy, and the out-patient pharmacy of Adeoyo General Hospital in Ibadan, Oyo state. The two community pharmacies have outstanding records of clients' patronage. Adeoyo General Hospital is a secondary healthcare facility specially equipped to provide medical and pharmaceutical services for ambulatory and institutionalised patients within and outside the region. The pharmacy department of the hospital has a staff enrolment of four registered pharmacists and five pharmacy technicians as at the time of this study. Ethical clearance and approval of the study protocol was obtained from the Health Research and Ethics Committee of the Oyo State Hospital Management Board, Ibadan, Nigeria

Study design

This study involved a questionnaire-guided interview of 250 consented clients, who patronized the two registered community pharmacies and the out-patient pharmacy of the hospital between 4th July and 3rd September, 2011. A cross-sectional survey of 50 registered pharmacists selected from the hospital and community pharmacy practice was also carried out for a period of four consecutive weeks using self-administered questionnaire.

Participants' recruitment and sampling procedure

Participants recruited for the study were individuals who had come to the pharmacies for prescription refill, or make health complaints to the pharmacist; and who had previously had at least an encounter with a pharmacist. Individuals who declined participation and those who came for supermarket or non-medicine related items were excluded. Included participants were approached for enrolment while waiting to be attended to by the superintendent pharmacist in-charge or the attending officer at the respective pharmacies. Objectives of the study were explained to the eligible participants, after which individual informed verbal consent to participate in the study was obtained. Total sampling of consented clients in each pharmacy outlet within the study period was done. Confidentiality and anonymity of responses were

assured while participants were informed that participation is voluntary. Only the consented individuals were enrolled.

Registered pharmacists who were practicing in retail and hospital pharmacies within Ibadan metropolis were visited at their practice sites using the contact address as stated in the Pharmacists Council of Nigeria (PCN) register for the year of study. PCN is the official regulatory body for the practice of pharmacy profession in Nigeria. Only pharmacists who were in attendance at their respective place of practice at the time of visit, and who gave voluntary informed consent for participation were recruited. Total sampling of consented pharmacists was carried out. Non-registered pharmacists for the year were excluded.

Validation and pre-test of the instrument

The questionnaire for data collection was assessed for content validity by two pharmacists chosen from the academia, and two seasoned community pharmacists who subsequently did not take part in the study. Pre-test of the instrument was done among 10 clients chosen from Kunle-Ara Pharmacy to ascertain the appropriateness of the sampling procedure and ease of comprehension of the questions. Based on the feedback from the pre-test and validity assessments, modifications were made to some questions, especially questions that were meant to explore respondents' views on the content and usefulness of medication counseling.

Questionnaire design and construction

The data collection instrument for clients' interview consisted of a 38-item structured questionnaire divided into two sections. Section A obtained information on socio-demographic characteristics including age, sex, occupation, and highest education qualification. Section B contained questions with a Yes/No response options to explore respondents' views on the content and usefulness of pharmacist-provided medication counseling, as well as pharmacist's accessibility where prescriptions were refilled. Clients' views and opinions on statements focusing on the perceived contemporary roles of pharmacists in patient care were also evaluated

using a 4-point likert scale ranging from strongly agree (assigned 1) to strongly disagree (4).

The self-administered questionnaire among the registered pharmacists comprised a 29-item question structured into two sections. Section A clarified socio-demographic information and year of experience in practice. Section B contained questions with relevant prompts to explore pharmacists' perception and understanding of medication counseling as applicable to their routine practice. Pharmacists' opinion on the importance of medication counseling, and frequency of counseling in their practice area was also explored. The instrument which took about 30 minutes to complete in each phase was administered by the investigators. Clarifications and translation into local dialect (Yoruba) was done for clients (10; 4.0%) who did not understand English, while back-translation was subsequently done to ensure consistency and minimize response bias.

Data analysis

The data were sorted, coded, and entered into Predictive Analytics Software Statistics [PASW; formerly Statistical Package for Social Sciences (SPSS) Inc. Chicago, IL., USA] for Windows version 17.0. Descriptive statistics including frequency and percentage were used to summarize the data, with the median value (50 percentile) used in describing respondents' opinion to specific statements in ordinal scale. Chi-square was used for test of proportions, while rank variables were evaluated using Mann-Whitney U or Kruskal-Wallis test as appropriate. The priori level for statistical significance was considered at $p < 0.05$.

RESULTS

Out of the 256 clients who were approached within the study period, 250 (97.7%) consented to partake in the study and these were considered for analysis; while the 50 questionnaires administered to the consented registered pharmacists were completely returned and analysed.

The details for socio-demographic variables of the clients are shown in Table 1.

Table 1: Socio-demographic characteristics of the clients

	Classification	Frequency %
Age	< 20 years	53 (21.2)
	20-39 years	121 (48.4)
	40-59 years	59 (23.6)
	60-79 years	17 (6.8)
Sex	Male	125 (50.0)
	Female	125 (50.0)
Educational qualification	No formal education	2 (0.8)
	Primary	8 (3.2)
	Secondary	87 (34.8)
	Tertiary	128 (51.2)
	Post-graduate	25 (10.0)
Occupation	Students	25 (10.0)
	Civil servants	75 (30.0)
	Artisans	79 (31.6)
	Professionals	54 (21.6)
	Retirees	17 (6.8)
Marital status	Married	108 (43.2)
	Single	133 (53.2)
	Divorced	4 (1.6)
	Widowed	5 (2.0)

The likely reasons for prescription refills in either a community or hospital pharmacy were cited to include in different combinations; authenticity and genuineness of medicines sold in pharmacies (134; 34.2%), opportunity to see a pharmacist for advice during refill (118; 30.1%), enjoying the explanation or advice when refilled in a pharmacy (110; 28.1%), nearness of pharmacy to residence (12; 3.1%), nonavailability of the prescribed medicines in the patent medicine store (6; 1.5%), physician recommendation of the pharmacy to refill (4; 1.0%), cheaper medicines (4; 1.0%), personal safety purposes (2; 0.5%), personal relationship with the pharmacy or the pharmacist (1; 0.3%) and 1 (0.3%) reported lack of time to go to the hospital for complaint.

Patrons (89; 93.7%) of hospital pharmacy largely reported to always receive the combination of verbal and written instructions during prescription refill compared to 117 (80.1%) among the patrons of community pharmacies ($p=0.004$). However, patrons of community pharmacies (130; 88.4%) mostly reported to have received unsolicited counsel on medication side effects and drug-interaction when refilling prescriptions compared to patrons (62; 62.6%) of hospital pharmacy ($p=0.032$). The details of clients' opinion of the content and usefulness of pharmacist-provided medication counseling are shown in Table 2.

Table 2: Clients' opinions on the content and usefulness of pharmacist-provided medication counseling

Statements/Questions	Contact site respondents	for Patients' Yes n (%)	response No	Chi-square p-value
1. Did your pharmacist always indicate direction for medication use in writing (n = 247)	Community Hospital	132 (89.2) 95 (96.0)	16 (10.8) 4 (4.0)	0.061
2. Did your pharmacist usually supplement/re-emphasize written instructions with verbal explanation (n=241)	Community Hospital	117 (80.1) 89 (93.7)	29 (19.9) 6 (6.3)	0.004*
3. Did your pharmacist give advice on possible side effects (n = 246)	Community Hospital	71 (48.3) 34 (34.3)	76 (51.7) 65 (65.7)	0.014*
4. Did your pharmacist usually provide information on frequency and duration of medication use (n = 246)	Community Hospital	141 (95.3) 94 (95.9)	7 (4.7) 4 (4.1)	1.000
5. Did your pharmacist freely give counsel on medication use especially medication side effects and interaction (n = 246)	Community Hospital	130 (88.4) 62 (62.6)	17 (11.6) 37 (37.4)	0.032*
6. Was the pharmacist - provided medication information helpful to you (n = 246)	Community Hospital	143 (96.9) 98 (100.0)	5 (3.4) 0 (0.0)	0.160
7. Should pharmacist be part of decision making with respect to patients' healthcare (n = 248)	Community Hospital	142 (95.3) 98 (99.0)	7 (4.7) 1 (1.0)	0.150

Number may not add up to 250 because only the valid respondents were considered, n = number,

*Significant difference with Chi-square test, Level of significance $p < 0.05$

Opinion of the clients on the perceived contemporary roles of pharmacist in patient care revealed that majority (230; 92.0%), agreed that the pharmacist-provided medication counseling is helpful. Two hundred and forty-one (96.4%) agreed with the active involvement of pharmacists in health decision-making, while 223 (91.0%) were in support of unsolicited medication counseling by pharmacists at every patient encounter. A substantial number of respondents (154; 61.6%) agreed that pharmacists were not always accessible during prescription refill. There was a significant association between genders and respondents' opinion on whether pharmacists are more knowledgeable than physicians with respect to giving instructions on medication use ($p=0.032$). Female respondents when compared with their male

counterparts disagreed with the statement that pharmacists are more knowledgeable than physicians *vis-a-vis* medication use with a mean rank of 132.9 and 114.2 respectively. Details of the clients' response on the perceived contemporary roles of pharmacist in patient care are shown in Table 3.

Table 3: Clients' opinion on the perceived contemporary roles of pharmacists in patient care

Variables	Strongly agree and agree	Disagree and strongly disagree	Median (50-percentile)	K-W ^a p-value	MW-U ^b p-value
Pharmacist should be an integral part of the healthcare delivery system (n=250)	243 (97.2)	7 (2.8)	1.00	0.494	0.320
Pharmacist should be actively involved in health decision-making (n=250)	241 (96.4)	9 (3.6)	1.00	0.413	0.948
Pharmacist should offer unsolicited counseling to patients at every encounter (n=245)	223 (91.0)	22 (8.9)	2.00	0.574	0.191
Pharmacist should only be involved in the sales of medicines and not necessarily patient counseling (n=248)	34 (13.7)	214 (86.3)	3.00	0.266	0.650
Pharmacy profession is only a business and of no benefit to the patient apart from sale of medicines (n=249)	22 (8.8)	227 (91.2)	3.00	0.006*	0.660
Medication counseling by pharmacist should be encouraged by stakeholders (n=245)	215 (87.7)	30 (12.2)	2.00	0.002*	0.868
Counseling received from pharmacist has benefit to patients (n=250)	230 (92.0)	20 (8.0)	2.00	0.072	0.389
There may be a need to go back to the physician for clarification on medication use after pharmacist's counseling (n=250)	105 (42.0)	145 (58.0)	3.00	0.172	0.635
Pharmacist is not always accessible to patients during prescription refill (n=250)	154 (61.6)	96 (38.4)	2.00	0.821	0.487
Encounter with a pharmacist does not make positive impact on medication usage since the physician has given directions on how to take the medication (n=250)	40 (16.0)	210 (84.0)	3.00	0.153	0.790
Pharmacists are more knowledgeable about medication usage than physicians from my personal experience (n=248)	111 (44.4)	137 (55.2)	3.00	0.401	0.032*

Number may not add up to 250 because only the valid respondents were considered, n = number, Strongly agree = 1, Agree = 2, Disagree = 3, Strongly disagree = 4, K-W^a = Kruskal-Wallis test for the distribution of rank variables among respondents with different educational background, MW-U^b = Mann-Whitney U test for rank variables and genders, * Significant difference at p < 0.05

In the survey conducted among pharmacists, there were equal number of males and females (25; 50.0%). Nineteen (38.0%) had been in the practice for less than 5 years, 20 (40.0%) for 5-10 years, 3 (6.0%) for 11-15 years, 1 (2.0%) for 16-20 years and 7 (14.0%) for 21 years and above. Of the pharmacists that participated, 41 (82.0%) and 9 (18.0%) were from the community and

hospital practice respectively. Opinion on the scope and understanding of medication counseling summarily indicated that 40 (80.0%) of the pharmacists reported medication counseling to comprehensively include provision of verbal and written instructions to client at every encounter, while 10 (20.0%) thought giving out written instructions on the frequency and duration of

dosage regimen without verbal supplementation is enough as medication counseling. Of these, 37 (74.0%) reported to render medication counseling incorporating both verbal and written instructions to clients who come in for new and refill prescriptions in their practice site, and 13 (26.0%) reported to render medication counseling by providing written instructions to selected clients.

The average time per counseling session ranged from less than 5 minutes (13; 27.7%), 5-10 minutes (14; 29.8%), and 10-15 minutes (8; 17.0%). Twelve (25.5%) reported the counseling time to be dependent on client's needs and demand. The frequency of offering counsel to clients was reported to range from always (23; 46.0%), sometimes (25; 50.0), and rarely (2; 4.0%). The reasons cited for engaging in medication counseling included in different combinations; professional satisfaction (38; 31.4), client's satisfaction (34; 28.1%), increased medication compliance (32; 26.4%), increased sales (12; 9.9%), encourage trust and mutual pharmacist-patient relationship (3; 2.5%), ensure confidence in pharmacist' professional capability (2; 1.7%). The barriers mentioned for non-engagement in medication counseling included time constraints (25; 64.1%) and clients who were always in a hurry (8; 20.5%). Four (10.3%) reported that many clients only come for prescription refill that may not necessitate for further counseling on medication use, and 2 (5.1%) reported that medication counseling is not yet a statutory job description for pharmacist. Majority (36; 72.0%) were in support of the need for pharmacists to continue acquiring additional knowledge in communication skills as a means to enhance their counseling proficiency.

DISCUSSION

From the present study, it is obvious that clients in majority agreed that the pharmacist-provided medication counseling is helpful in patient care, as well as had confidence in the authenticity and genuineness of prescription refill in a pharmacy. The increased confidence in the authenticity of medicine purchased in a pharmacy may partly be linked to the constant awareness and campaign by the National Agency for Food Drug Administration and Control (NAFDAC) and other stakeholders including Pharmacists Council of Nigeria (PCN) on the need to be wary of fake and counterfeit medicines. The incessant campaign may have helped to caution and encourage the public to patronize registered pharmacies for prescription refills. Patrons of hospital pharmacy largely reported to frequently receive both verbal and written instructions

during prescription refill compared to patrons of community pharmacy. Wiederholt and Rosowski¹⁴ have reported that the types of pharmacy practice site can influence patient expectations. Notwithstanding the area of practice, effective pharmaceutical care to ensure better therapeutic outcome requires pharmacist engaging a patient in a purposeful and meaningful counseling, while patient's autonomy in decision making should be respected. In this study, the importance of the counseling roles of pharmacists was appreciated by a sizeable number of clients which perhaps imply that if pharmacists would utilize effective and accurate communication skills in obtaining information from and sharing information with patients¹⁵, pharmacists will be able to regain their lost professional status with the public.

It is however noteworthy to mention that a substantial number of clients reported the non-accessibility of pharmacist during prescription refill. This is consistent with many other studies which reported that pharmacists are not always available for medication and disease information.^{6,16,17,18} Nonetheless, for effective practice of pharmaceutical care, pharmacist's accessibility by patient at every encounter should be unhindered, and pharmacist should be actively involved in patient counseling to resolve medication-related problems, as well as assisting the patients in other health-related issues. The non-availability of pharmacists for medication counseling constitute an important issue which needs to be addressed by stakeholders in the pharmacy profession especially in the 21st century when the practice of pharmacy focuses more on effective provision of pharmaceutical care.¹⁹

A considerable number of clients disagreed with the fact that pharmacists are more knowledgeable than physicians with respect to giving instructions on medication use. This finding may partly imply that respondents may not have perceived pharmacist as a professional with the core responsibility of providing medication-related information more than any other healthcare practitioners. In essence, it appears that while pharmacists view their roles as adding value to a patient's healthcare above and beyond a level that can be provided by a physician alone. The clients however view the pharmacist's role as one that fits into their overall healthcare and is controlled by their physician.¹¹ The lack of awareness on the part of the public about distinct professional roles of the pharmacist in patient care is a call for concern among stakeholders. A predominant patient expectation of pharmacist is that of a supplier of prescription products rather than that of a concerned counselor regarding medications.^{11,12,13}

Regardless of the area of practice, pharmacists need to focus more on patient-oriented services rather than concentrate solely on product-oriented service.

Medication counseling incorporating verbal and written instructions was largely supported by the participating pharmacists but less than one-half reported to always perform the counseling roles at every encounter. A considerable number of the pharmacists mentioned engagement in medication counseling to give professional satisfaction, as well as ensuring clients' satisfaction. These are vital outcomes of the pharmacist-patient interaction which should be encouraged. Once patient is satisfied with the pharmacist-patient relationship, there is a greater likelihood that patient's therapeutic adherence will improve thereby ensuring better outcome.

The most predominant reasons cited by the pharmacists for not engaging in medication counseling were mentioned to include time constraints and lack of patience by clients when they are collecting their dispensed medicines. Lack of time and communication problems have been reported as some of the obstacles that pharmacists face when trying to provide effective medication counseling to patients.^{9,10} Notwithstanding the barriers to counseling, it may be essential for pharmacists to discard activities that do not directly add value to patient care thereby focusing more on communication of relevant instructions to the patient. Once an effective communication strategy is employed in an encounter, there is a greater tendency that patient will listen and will be able to internalize the information or counseling tips from the interaction.

This study is limited by the fact that clients were selected from only two community pharmacies and an out-patient pharmacy of a secondary healthcare facility. Thus, there may be need for future research to expand the scope of the study sites to include patrons of out-patient pharmacy of a tertiary hospital which perhaps would have a more organized and operational pharmaceutical care services.

CONCLUSION

This study showed that clients in majority agreed that the pharmacist-provided medication counseling is helpful in patient care and largely supports the involvement of pharmacist in health decision-making. However, the non-accessibility of pharmacist by clients during prescription refill is a concern which underscores the need for proactive measures among pharmacists by engaging in core activities that will directly impact on patient care. In addition, the participating pharmacists largely agreed that medication counseling should

comprehensively include verbal and written instructions at every encounter as it ensures professional and client's satisfaction.

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