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Assessing Counseling Practices of Community Pharmacists in Nigeria

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Inadequate counseling by pharmacists on medication–related issues could cause therapeutic failure. This study examined extent of counseling by community pharmacists; appraised their actual counseling activities; and identified barriers to counseling. The study utilized two approaches: (i) an observational cross-sectional survey of 198 randomly selected community pharmacists and (ii) stimulated-patient (SPs) method to appraise counseling practices in 106 pharmacies. Data were summarized with appropriate statistics at $p<0.05$. Extent of counseling was moderate (60%) and gaps exist between SPs and community pharmacists' assessments of counseling practices. Significant associations exist between years in practice as community pharmacists ($\chi^2=31.81$, $p=0.021$), their ages, ($\chi^2=55.48$, $p=0.043$, academic qualifications ($\chi^2=26.79$, $p=0.001$) with extent of counseling. Barriers to counseling include absence of patient medication history (84.6%), insufficient space in pharmacies (79.6%), and training of pharmacists (78.2%). Level of counseling was suboptimal but could be improved if community pharmacists embark on continuous training to acquire more counseling skills.

KEY WORDS: Counseling activities, community pharmacists, Nigeria

INTRODUCTION

Patient counseling in pharmacy setting is the physical interaction between pharmacists and patients on medication-related issues [1, 2]. It has been advocated that for such interaction to be effective, pharmacists are expected to provide information to patients about names of prescribed drugs, what such drugs are used for, how and when the drugs should be taken, their duration of use, precautions to be observed while taking them, as well as their possible side effects [2, 3]. The American Society of Health-System Pharmacists (ASHP) pointed out that patient education about their medications is important especially during the counseling [1]. The ASHP specified four steps of medication counseling process which include (i) development of a caring and professional relationship with the patient; (ii) assessment of the patients' mental capacity of what the patient already know about his/her ailment; (iii) provision of oral information to the patient which could be complemented with visual aids; and (iv) determination of patients understanding of the entire interaction using a feedback mechanism [2].

In addition, the United States Pharmacopeia developed a Medication Counseling Behaviour Guidelines (USP-MCBG) which addressed special needs of patients during counseling process on medication use. The USP-MCBG contains core components of counseling tools which are useful in assessing patient counseling process in healthcare settings including community pharmacies [4]. Community pharmacists are expected to understand and use both the ASHP and USP-MCBG guidelines for counseling patients.

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Community pharmacists are the most accessible healthcare professionals [5]. Patients or clients usually consult them for health-related issues because it costs little or nothing to see the community pharmacist and prior appointments are not required [5]. Moreover, community pharmacists enjoy high level of trust especially at their community level and beyond [6]. Through counseling, community pharmacists have optimized medication therapy management by ensuring among other things; that side effects of medications are minimized, drug-drug interactions are prevented and rational drug use by patients are assured [7]. Patient counseling by community pharmacists in developed countries, helped to improve medication compliance, and patients' satisfaction which has resulted in favourable therapeutic outcomes at reduced costs [8-11].

Studies conducted in Saudi Arabia and Ethiopia, revealed that pharmacists counseling increased patients' level of satisfaction, and quality of life [12-16]. A study conducted in Australia, reported that patient counseling is rarely provided in rural community pharmacies [17]. In spite of this, there is a widely held opinion that pharmacists remain the most qualified health care professional to counsel patients on medication issues [18]. Incidentally, the practice of pharmacy has begun to shift toward the provision of pharmaceutical care with greater emphasizes on the provision of patient-centered care as it is being witnessed in developed countries [19]. However, in developing counties including Nigeria, data on patient counseling practices by community pharmacists and literature reporting such practices are scarce. The provision of such scarce data by this research epitomizes the importance of this study. Results from this study will assist pharmacy educators in the development of pharmacy school curriculum by incorporating more contents in patient counseling activities.

The objectives of this study were to examine counseling practices by community pharmacists; determine the association between the extent of patient counseling and the characteristics of community pharmacists; compare self-reported and actual patient counseling practices by community pharmacists; and identify barriers to patient counseling by community pharmacists.

EXPERIMENTAL

Area of the study

The study was an observational cross-sectional survey of community pharmacists' counseling practices in Oyo State. It was carried out between the months of September to November 2019. The State has a population of about 5.5 million people. It is made up of 33 local Government Councils which are grouped into three senatorial districts. It occupies a land mass of 28,454 km^2 and shares boundaries with Ogun, Osun, Ondo, and Kwara States [20].

Population and sample size determination

As at Dec 31, 2018, Oyo State had a total population of 390 registered community pharmacists [21]. Assuming a response rate of 95%, error margin of 0.05 and precision of 5%, the required sample size of 198 was computed using Yaro Yamane's formula [22].

Study design

Two study approaches namely simulated patients (SPs) method and cross-sectional survey of community pharmacists were used to compare real counseling practice as observed in the community pharmacies by the SPs with community pharmacists' self-reported counseling practice. Similar approaches were used in previously published works [3, 8, 14].

The simulated patients method

Three scenarios were created using the SPs. The SPs were 12 final year clinical pharmacy students (7 males and 5 females) who had completed their clerkship programmes and had passed their examinations in therapeutics. The students were selected to role-play the SPs because they are knowledgeable in the field of clinical pharmacy and secondly, were fluent in English and Yoruba languages which are the dominant languages in the study area. A simulated patient in pharmacy practice is "an individual who is trained to visit a pharmacy to enact a scenario that test a specific behaviour of the pharmacist or pharmacy staff [23]. In this study, three diseases namely asthma, diabetes and ulcer were chosen for the scenarios because managing them requires the use of prescription-only medicines (POM) and over-the-counter (OTC) medications. The SPs were randomly assigned to asthma, diabetes and ulcer scenarios. The SPs were previously briefed about the objectives of the study before volunteering to participate. To ensure consistency and reliability of the results, the SPs were trained in role-plays severally by the authors and they repeatedly rehearsed various scenarios before they were allowed to enter the community pharmacies to assess pharmacists' patient counseling practices.

Documentation of data obtained by the SPs

The study area was divided into three according to their senatorial districts. Stratified random sampling technique was employed to choose the community pharmacies. The current and actual counseling practice by community pharmacists were assessed based on the guidelines for counseling [24]. In each scenario, SPs audio-tapped their conversations with the pharmacists and immediately filled an assessment form once they leave the pharmacies documenting their experiences with the pharmacists. The assessment form was adapted from a previous study [24] with slight modification to suit the study environment. In each scenario, community pharmacist is expected to provide information on the best way to use the medications requested for by the SPs. When the SP was not asked of previous medications taken, the concomitant use of other medicines, allergies, and other issues from using the medicines, this was regarded as "No questioning". If no verbal information was given to the SP by the community pharmacists about name of the medicines, dose, how the medicine should be taken, duration of use, and possible drug-drug interaction, this was classified as "No information provided". When no questioning and information was provided to the SPs by community pharmacists, this was classified as "No counseling". The difference between the time the SPs enter and leave the pharmacies was regarded as the counseling time. The customer traffic in each pharmacy was also noted by individual SPs.

Description of the scenarios

All the scenarios focused on drug-drug interactions. The SP in Scenario 1 is asthmatic and on theophylline but has a chronic productive cough and asked for Ciprotab® a brand of ciprofloxacin. The enzyme cytochrome P-450 which metabolizes theophylline is hindered by ciprofloxacin. Concurrent administration of theophylline and ciprofloxacin may thus lead to toxic increase of theophylline that may precipitate severe headache, dizziness, hypotension, hallucination, tachycardia and seizures [25]. Therefore, the patient should be advised not to take ciprofloxacin but instead take levofloxacin or ofloxacin which do not interfere with cytochrome P-450. Moreover, Ciprotab® should only be dispensed on prescription because it is a POM.

In the second scenario, a diabetic patient on tolbutamide is asking for aspirin, an OTC antipyretic/analgesic. It is expected that

pharmacists should inform the SP that aspirin may potentiate the action of tolbutamide by stimulating the pancreas to release insulin causing severe hypoglycemia with loss of consciousness [26]. In scenario 3, the SP is an ulcer patient and frequently took mist magnesium trisilicate (MMT). SP walked into the pharmacy to complain of running stool and was asking for tetracycline capsules. It is expected that the pharmacists should advice that MMT; should not be taken concurrently with tetracycline to avoid the formation of a complex which would render both medications ineffective.

The cross-sectional survey method used for community pharmacists

The pretested questionnaire was divided into three sections. Section one contained questions that elicited information on the demographic characteristics of the community pharmacists; such as age, gender, marital status, year of graduation, practice experience, qualification(s), among others. In section two, community pharmacists were asked to respond to a 24-item statements on patient counseling and the extent to which they provided such information to patients during counseling. The statements were presented on a 5-point scale (and score) of "Very low extent" (1), "Low extent" (2), "Moderate" (3), "High extent" (4) and "Very high extent" (5). Community pharmacists were asked to choose any scales that best represent their opinion.

Furthermore, the 24-item statements were categorized as low, moderate and high by dividing 24 with three to give a score of 8. The, scores between 0-8(0-33%) were considered as "low extent"; between 9-16(34-69%) represents "moderate extent"; while scores between17-24(70-100%) were categorized as "high extent". In addition, community pharmacists were asked to indicate the techniques, namely verbal, visual aids, demonstration and a combination of all, that they employed when counseling their patients. The third section investigated barriers to counseling and the degree of agreement of the community pharmacists to the influence of such barriers on a 5-point response scale of strongly agree (5) to strongly disagree (1) from which they choose any scale which reflect their opinion. Before the self-administration of the questionnaire to community pharmacists, the researchers briefly introduced themselves, disclosed the purpose of the study and assured the community pharmacists of the confidentiality of their responses.

Reliability and validity of research instrument

The research instrument was pre-tested among 10 locum (part-time) community pharmacists practicing in a neighbouring State (Osun State). These sets of pharmacists did not take part in the final study. Results from the pre-tested questionnaire were used to make corrections where necessary in the final questionnaire. The pretest reliability coefficient was determined and the internal consistency of the questionnaire was evaluated with the Cronbach alpha test.

Inclusion and exclusion criteria

All registered pharmacists working as full-time staff in community pharmacies within Oyo State at the time the study was conducted, were eligible for the study. Pharmacists, who were working in other practice settings, other than community pharmacies, were excluded from the study.

Ethical considerations

Ethical approval number AD/19/247/633 of 23rd November, 2019 for the study, was obtained from Oyo State Ministry of Health, Department of Planning, Research and Statistics Division, Ibadan.

Data analysis

Data obtained were coded, cross-checked for accuracy and carefully entered into Microsoft Excel® spread sheet, and analyzed using Statistical Package for Social Sciences (SPSS) version 18 for Windows. Categorical data were summarized using descriptive statistics such as frequency and percentages. Continuous data were presented as means ± SD. Differences in proportions and associations between variables were determined using Chi-square test. Probability values of $p<0.05$ were considered significant.

RESULTS

A Cronbach alpha value of 0.87 was obtained during the pretesting of the research instruments. This value was higher than the generally accepted value of 0.70 indicating that the instruments exhibited a high degree of reliability and validity [27, 28]. Response rate was 100% because all the sampled community pharmacists participated in the study implying that all respondents clearly understood the questionnaire. Among the respondents, the male to female ratio was 2:1 and the majority of the community pharmacists (79.8%) were first degree (B. Pharm) holders and 83% of them were married. The average age of the community pharmacists was 43.5±10.04 years; while their average duration of experience in community practice was 14.44.5±7.7years. The demographic characteristics of the community pharmacists are presented in Table 1.

Three counseling techniques namely, verbal, visual and demonstration, were used by 133(67%) of community pharmacists to counsel clients. Specifically, 75(38%) of the community pharmacists counsel clients verbally, while 40(20%) claimed they employed only demonstration as their counseling tool. Furthermore, 12(6%) used visual technique only for counseling. These numbers did not add up to the number of community pharmacists sampled because of the use of multiple counseling tools at the same time by majority of the community pharmacists.

Table 1: Demographic characteristics of community pharmacists N= 198

Characteristic	Frequency	%
Gender		
Male	132	66.7
Female	66	33.3
Experience (years)		
1-5	40	20.2
6-10	30	15.2
11-15	26	13.1
16-20	37	18.7
21+	65	32.8
Age (years)		
10-19	0	0
20-29	17	8.6
30-39	59	30.0
40-49	56	28.3
50+	66	33.3
Academic qualification		
B.Pharm	158	79.8
PharmD	15	7.6
Postgraduate	25	12.6
Marital status		
Single	29	14.6
Married	164	82.8
Widowed	3	1.5
Divorced	2	1

Key: B. Pharm: Bachelor of Pharmacy; Pharm D: Doctor of Pharmacy.

The SPs made a total of 106 visits to community pharmacies (Table 2). The percentage visits by each SP were as follows: Scenario 1= (30.2%), Scenario 2= (24.5%) and Scenario 3= (45.3%). The average time spent by the SPs in 78(74%) out of 106 visits was 1-8 minutes and less than five minutes in 28(26%) visits. There was no customer in 57(53.8%) out of the 106 pharmacies at the time of SP visit. At least a pharmacist was always on duty each time an SP

visited and a total of 31(29.2%) of the pharmacies visited had pharmacy assistants. However, according to reports from the SPs, 56% of the pharmacies had no befitting counseling spaces. What they saw were small pharmacist offices which may have been carved out from the main pharmacy and was devoid of privacy.

Table 2: Simulated patient counseling practices in community pharmacies

Parameters	Scenarios			Total N=106(%)
	1 (n =32)	2 (n =26)	3 (n =48)	
How many community pharmacists asked the SPs the under-listed questions about their medicines?				
▪ Who the medicine is for?	2	1	5	8(7.6%)
▪ Any previous use of such medicine?	0	0	4	4(3.8%)
▪ Are you presently using other medicines?	0	0	1	1(8.5%)
▪ Did you experience any previous allergies?	1	6	3	10(0.94%)
▪ Any concerns about using requested medication?	1	2	4	7(6.6 %)
How many community pharmacists provided the following information to the SPs about their medicines?				
▪ Name of medication	8	3	1	2(7.5%)
▪ Dose of medicine	30	23	41	94(88.7%)
▪ How to take the medicine	29	21	42	92 (86.8%)
▪ Duration of use	6	8	3	17(16%)
▪ Possible adverse effects	2	3	2	7 (6.6%)
▪ Storage condition for medicine	0	0	0	0 (%)

Majority of the pharmacists neither asked the SPs about previous medications that they had used, nor about drugs that they are presently using. The pharmacists laid much emphasis on dosages and uses of medications that SPs asked for. If no question was asked and information was provided by the community pharmacists to the SPs, then it is assumed that no counseling took place. In some instances, the total number of questions and information exceeds the total number of visits because community pharmacists may have asked more than one question and provided a lot of different information during each SPs visit.

Results in Table 3 revealed the extent of counseling activities by the community pharmacists (based on their degree of agreement to statements on extent of counseling) as moderate with a mean weighted average score of 3.30 which was computed by dividing the total weighted average score of 55.93 by the number (17) of counseling statements. Their counseling practice activities were more pronounced in core pharmacy practice areas such as dosage, drug use, interactions and side effects, compliance, and monitoring the display of effective non-verbal behaviour by patients.

The association between the extent of patient counseling activities and the demographics of the community pharmacists is presented in Table 4. There were significant associations between years in practice (χ^2=31.81, p=0.021),

age (χ^2=55.48, p=0.043) and academic qualification (χ^2=26.79, p=0.001) of community pharmacists with the extent to which counseling activities were carried out in their premises. Marital status and gender of community pharmacists had no effect on the quality of counseling rendered to clients.

Table 3: Pharmacists-reported patient counseling practices in community pharmacies n=198

Statements on patient counseling	Very low extent n(%)	Low extent n(%)	Moderate extent n(%)	High extent n(%)	Very High extent n(%)	Weighted average
The purpose of medication and expected benefits	32(16.2)	41(20.7)	18(9.1)	67(33.8)	40(20.2)	3.21
Dosing of the drugs	30(15.1)	11(5.6)	40(20.2)	51(25.8)	66(33.3)	3.57
Information on how to use the medication and how its applied	2(1%)	37(18.7)	45(22.7)	51(25.8)	63(31.8)	3.69
Medication to be taken with food or in an empty stomach	9(4.6)	8(19.2)	43(21.7)	48(24.2)	60(30.3)	3.57
Duration of use	33(16.7)	25(12.6)	32(16.2)	50(25.3)	58(29.3)	3.38
Possible side effects and adverse reaction associated with the medication	28(14.1)	45(22.7)	17(8.6)	64(32.3)	44(22.2)	3.26
Drug interactions	31(15.7)	48(24.2)	26(13.1)	46(23.2)	47(23.7)	3.15
Food interactions	41(20.7)	59(29.8)	51(25.8)	25(12.6)	22(11.1)	2.64
Importance of compliance	20(10.1)	14(7.1)	45(22.7)	51(25.8)	68(34.3)	3.67
Storage conditions	7(3.5)	68(34.3)	65(32.8)	41(20.7)	17(8.6)	2.97
Availability of generic medication	41(20.7)	49(24.8)	58(29.3)	32(16.2)	18(9.1)	2.68
Previous use of same medicine and present use of other medicines	13(6.6)	4(2.0)	26(13.1)	56(28.3)	99(50.0)	4.13
Contraindications	6(3.0)	9(4.6)	33(16.7)	89(44.9)	61(30.8)	3.96
Potential precautions	0(0)	0(0)	47(23.7)	59(29.8)	92(46.5)	4.23
Obtains pertinent initial drug related information	32(16.2)	54(27.3)	63(31.7)	29(14.7)	20(10.1)	2.75
Presents facts and concepts logically	50(25.3)	53(26.8)	14(7.1)	17(8.6)	64(32.3)	2.96
Introduction by identifying self and the patient or patients' agent	32(16.2)	49(24.7)	68(34.3)	9(4.6)	40(20.2)	2.88

Mean weighted average score of 3.3 was obtained by dividing the sum of weighted averages =55.93 with the number of statements (17) on patient counseling.

Table 4: Association between extent of patient counseling and pharmacist characteristics

Pharmacist characteristics	Level of patient counseling n(%)				Chi-square	
	Low extent	Moderate extent	High extent	Total	χ^2	p-value
Experience						
1-5 years	7(3.53)	29(14.65)	8(4.04)	44(22.22)	31.808	0.021*
6-10 years	8(4.04)	13(6.57)	5(2.53)	26(13.13)		
11-15 years	11(5.56)	27(13.64)	6(3.03)	44(22.22)		
16-20 years	18(9.09)	10(5.05)	10(5.05)	38(19.19)		
21+ years	15(7.58)	11(5.56)	20(10.10)	46(23.23)		
Total	59(29.80)	90(45.45)	49(24.75)	198(100)		
Age group						
<29 years	9(4.54)	22(11.11)	9(4.54)	40(20.20)	55.48	0.043*
30-39 years	14(7.07)	23(11.61)	6(3.03)	43(21.72)		
40-49 years	24(12.12)	11(5.56)	10(5.05)	45(22.72)		
50+ years	10(5.05)	10(5.05)	50(25.25)	70(35.35)		
Total	57(28.78)	66(33.33)	75(37.87)	198(100)		
Gender						
Male	52(26.26)	40(20.20)	40(20.20)	132(66.67)	0.774	0.679
Female	23(11.61)	19(9.59)	24(12.12)	66(33.33)		
Total	75(37.87)	59(29.79)	64(32.32)	198(100)		
Academic qualification						
B.Pharm	10(5.05)	39(19.69)	5(2.53)	54(27.27)	26.79	0.001*
PharmD	23(11.61)	21(10.60)	11(5.56)	55(27.78)		
Postgraduate	26(13.13)	31(15.65)	32(16.16)	89(44.95)		
Total	59(29.80)	91(45.94)	48(24.25)	198(100)		
Marital status						
Single	15(7.57)	8(4.04)	6(3.03)	29(14.65)	10.146	0.119
Married	59(39.80)	51(25.75)	54(27.27)	164(82.83)		
Widow	0(0)	0(0)	3(1.51)	3(1.51)		
Divorced	1(0.50)	0(0)	1(0.50)	2(1.01)		
Total	75(37.87)	59(29.79)	64(32.31)	198(100)		

Note: *Significant at 5%.

The perceived barriers to counseling activities in community pharmacies were ranked using their weighted averages (Table 5) in order to determine the actual effect of each of the

variables on counseling activities and perhaps identify the ones that pose greater barriers to achieving desirable counseling activities. Lack of access to patients medical records (84.6%) was perceived as contributing the highest impediment to counseling activities while inadequate drug information sources (39.0%) available to pharmacists contributed the least impediment.

Table 5: Barriers to patient counseling activities of community pharmacists n=198

Barrier	Strongly disagree n(%)	Disagree n (%)	Unsure n (%)	Agree n (%)	Strongly agree n(%)	Weighted average
Pharmacists have limited drug information sources	87(43.9)	73(36.9)	8(4.0)	21(10.6)	9(4.6)	1.95
Pharmacists are too busy	38(19.2)	18(9.1)	11(5.6)	71(35.9)	60(30.3)	3.49
Pharmacists do not have access to patients' medical records	23(11.6)	11(5.6)	9(4.6)	4(2.0)	151(76.3)	4.23
Pharmacists lack confidence in their knowledge	83(41.9)	76(38.4)	13(6.6)	6(3.0)	20(10.1)	2.01
Lack of conducive counseling room/space	16(8.1)	15(7.6)	7(3.5)	73(36.9)	87(43.9)	3.98
Long waiting time	54(27.3)	15(7.6)	20(10.1)	60(30.3)	49(24.7)	3.18
Reimbursements	32(16.2)	21(10.6)	17(8.6)	75(37.9)	53(26.8)	3.49
Busyness of the patients	13(6.6)	34(17.2)	44(22.2)	12(6.1)	95(48)	3.72
Regulations	37(18.6)	18(9.1)	15(7.6)	78(39.4)	50(25.3)	3.43
Type of training pharmacists received	12(6.1)	30(15.2)	10(5.1)	58(29.2)	88(44.4)	3.91

DISCUSSION

Three counseling techniques namely, verbal, visual aids and demonstration were used by community pharmacists to counsel clients. This showed that the pharmacists employed effective tools and steps in their counseling. They also monitored the display of effective non-verbal behaviour of patients. Their actions were in conformity with the views of the American Society of Health System Pharmacists (ASHP) that the use of visual aids in addition to oral information and monitoring of non-verbal signs are necessary for effective counseling process [2]. The result of our study showed that community pharmacists counseling activities were more pronounced in core pharmacy practice areas such as dosage, drug use, drug-drug and food-drug interactions, side effects and compliance. This finding is consistent with the result obtained in a similar study [29]. In the other three domains of counseling namely needs assessment, precautions and waning, and management and treatment, community pharmacists scored themselves high. Similar findings were obtained in a study carried out in Saudi Arabia [13].

The significant associations between the extent of patient counseling and the demographic characteristics of community pharmacists such as age, years of practice and educational qualification imply that the extent of patient counseling depended on age, years of practice

and educational qualification of the community pharmacists. These demographic variables may have increased the exposure and deepened the understanding of the community pharmacists in the act and content of counseling patients. However, this finding is in contrast with the result from a similar study carried out in Qatar [3] that did not show any significant association between demographic characteristics of community pharmacists and extent of patient counseling. The difference in results may be due to variations in the study settings and environment.

In the assessment of the actual counseling practice, the SPs were not asked by the community pharmacists whether they were on any medication which is different from the one they came to buy. This finding contradicts the result obtained from the cross-sectional survey of community pharmacists on their counseling activities where a large number of them claimed that they always ask their clients if they had used the medicines that they want to buy and whether they were on any other medications. Similar contradictions were reported by studies on community pharmacists counseling activities in Saudi Arabia, Qatar, and Ethiopia [3, 8, 14].

However, the SPs were given information on the names, dosage, duration of use, and how to use their medications tallying with the cross-sectional survey results of the community pharmacists. However, no information was given to the SPs about storage requirements of purchased medicines and very little information was provided regarding side effects. These findings were similar to what were obtained from a study carried out in Ethiopia [13, 14]. A major domain of counseling process, which is the determination of patients' understanding of the entire interaction using a feedback mechanism, was inadequately executed for majority of the SPs. Meanwhile, community pharmacists claimed in the cross-sectional survey study that apart from providing information to clients on names, dose, contraindications, side effects and possible drug-drug interactions, issues about compliance and contraindications were discussed too. Similar studies reported the same [30, 31]. These claims contradict the reported experiences of the SPs. Therefore, in the cross-sectional survey, community pharmacists may have reported what they are expected to do which represents their mere aspirations that were not satisfactorily demonstrated during the simulations. This is a form of Hawthorne effect [32].

The barriers to counseling activities were majorly pharmacists-related. This study revealed that not having patient medical history was indeed the strongest perceived potential barrier to counseling activities in community pharmacies, a comparable finding by Alageel and Abanmy [8]. In most cases, community pharmacists do not keep patients case files and therefore cannot effectively track patient's medication history. This is a typical barrier in the domain of pharmacists-related factors in counseling practice. A study conducted in Belgium also revealed that community pharmacists had limited information about their patients and had challenges delivering proper counseling to them [37]. This barrier could be overcome by advocating for appropriate laws to empower pharmacists to request and have patients' medical history. The second main barrier to counseling practice was lack of conducive counseling room/space (79.6%.). Other studies have also highlighted this perceived barrier [3, 33]. To overcome this barrier, a suitable area should be carved out in the pharmacy for counseling. Such a place should attract a reasonable degree of confidentiality in the minds of patients.

The type of training received by the pharmacists in and out of the university (78.2%) influenced counseling activities as revealed in this study. Properly trained pharmacists would conduct

quality counseling to clients. For instance, in studies conducted in Europe and Malaysia, pharmacists training positively affected the quality of counseling practice and patients care [38, 39]. Busyness of patient (77.4%) was a notable factor that acted as barrier to counseling activities. Understandably, patients/clients would have spent quality time with the physicians before coming to the pharmacy to fill their prescriptions. This is in line with the findings of a study conducted in Saudi Arabia [40]. Equally, a majority (69.8%) of the community pharmacists were of the opinion that they are too busy to conduct comprehensive counseling activities. Many authors have reported similar results [14, 33, 34, 35]. Community pharmacists must create time to adequately counsel their patients if they intend to achieve optimal therapeutic outcomes and give quality care. Lack of reimbursements for counseling clients (69.8%) act as a disincentive to counseling clients by community pharmacists and therefore constitute a barrier to counseling. A similar finding was reported in Saudi Arabia by Alageel and Abanmy [8]. Regulations governing pharmacy practice (68.6%) in Nigeria do not facilitate community pharmacists to engage in intensive and extensive counseling exercise as physicians do. The former can only carry out detailing, in terms of drug-related information. Most patients are aware of this, and may feel reluctant to submit themselves to pharmacists counseling exercises. Barriers posed by such regulations were overcome in the United States of America by the inclusion of pharmacy laws and communication skills into pharmacy curricula [34]. Although pharmacy laws and communication skills are already included in all pharmacy curricula in Nigeria, a clause should be inserted in the existing pharmacy law that would empower pharmacist to conduct detailed counseling of patients beyond drug-related information.

Long waiting time (63.6%) was potential barrier to patient counseling as revealed by this study. Similar result was reported in the US [34]. Clients waiting time could be reduced if pharmacists assign non-clinical jobs to other staff (task-shifting) and dedicate more time to counseling activities. Some respondents (40.2%) were of the opinion that pharmacists lack confidence in their knowledge and ability to carry out effective counseling of patients and have limited drug information sources (39.0%) to conduct counseling activities. Similar opinions were expressed in a study on patient counseling activities in community pharmacies in Ethiopia [14].

CONCLUSION

Patient counseling activities by community pharmacists were suboptimal despite the fact that significant associations exist between the degree of patient counseling and some demographic characteristics of community pharmacists. To improve the quality of counseling, it is suggested that continuous training of community pharmacists, especially in their mandatory continuous education programme, is needed. Furthermore, counseling skills could be imparted during pharmacy training through didactic lectures, video reviews with simulated-patient interactions as well as role-playing focused on patient-centered care. There is also the need to train pharmacy students to develop confidence and ability to relate effectively and interact with other health care providers. Group ward rounds involving student pharmacists, doctors, nurses and their preceptors should be encouraged. This will provide the opportunity for such interactions. Moreover, training on communication skills should be introduced early in pharmacy curricula in order to reinforce the skill by experiential learning. In addition, pharmacy practice environment could be improved to enhance the ability of community pharmacists to counsel their clients by effective utilization of practice space and reorganization of workflow processes.

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REFERENCES

[1]. L. Boom and I. Krass. Patient Edu. Couns. 83 (2011) 285-287.

[2]. American Association of Health-System Pharmacists (ASHP). Am. J. Health Syst. Pharm. 54 (1997) 431-434.

[3]. B. Javed, N. Kheir and A. Yousil. Qatar Foundation: Annual Research Conference Proceedings 2016. http://dx.doi.org/10.5339/9farc.2016.HBPP1645. Accessed January 14, 2020.

[4]. I. Puumalainen, H. Kansanaho and M. Varunki et al. Pharm. World Sci. 27 (2005) 465-468.

[5]. S. Du Pasquier and P. Aslani. Pharm. World Sci. 30 (2008) 846-853.

[6]. K.H. Gamble. Pharmacy Times 2006-2012. Available at: www.pharmacytimes.com/pharmacists. Accessed March 17, 2019.

[7]. E.C. Tan, K. Stewart, R.A. Elliot and J.O. George. Res. Soc. Adm. Pharm. 10 (2014) 623-632.

[8]. S. Alageel and N. Abanmy. BMC Health Serv. Res. 15 (2015) 557.

[9]. N. Nkansah, O. Mostovetsky, C. Yu, T. Chheng, J. Beney, C.M. Bond and L. Bero. Cochrane Database Syst. Rev. 7 (2010) CD000336.

[10]. A call to Action: Protecting US citizens from inappropriate medication use. Institute of Safe Medication Practices, 2007. Available online at: https://communitypharmacyfoundation.org/docs/CPF_Doc_312222.pdf.

[11]. S. Shaini, T. Morginstin and A. Hoffman. Isr. Med. Assoc. 2 (2000) 438-441.

[12]. L.M. Okumora, I. Rotta and C.J. Correr. Int. J. Clin. Pharm. 36 (2014) 882-91.

[13]. L. Laygah. J. Anal. Pharm. Res. 7 (2018) 472-476.

[14]. A.S. Suru, E. Getachew, E. Teressa, B. Hailemeskel, N.S. Gentaw and D.A. Erku. Pharm. Pract. 15 (2017) 890.

[15]. M. Rubio-Valera, M. March and A. Pujol et al. Eur. Neuropsychopharmacol. 23 (2013) 1057-1066.

[16]. J.L. Collum, T.R. Marcy, E.L. Stevens, C.F. Burns and M.J. Miller. Res. Soc. Adm. Pharm. 2 (2013) 472-481.

[17]. B. Sunderland, S. Burrows, A. Joyce, A. McManus and B. Maycock. Aust. J. Rural Health 14 (2006) 116-119.

[18]. E.F.O. Enato, A.E. Eferakeya and C.A. Oparah. J. Soc. Adm. Pharm. 20 (2003) 59-63.

[19]. C.D. Hepler and L.M. Strand. Am. J. Hosp. Pharm. 50 (1993) 1720-1723.

[20]. Oyo State Handbook. Oyo State Government Printing Press, 5th Edn. Ibadan, 2019, p 34.

[21]. Pharmacists Council of Nigeria, Abuja, 2018.

[22]. Y. Yamani. Statistics. An Introductory Analysis, 3rd Edn. Harper and Row Publishing Limited. New York, 1967, p 280.

[23]. D.A. Gelayee and M.K. Birara. J. Sci. Res. Pharm. 4 (2015) 74-77.

[24]. M.P. Tully, A. Beckman-Gyllenstrand and C.B. Bernsten. Patient Edu. Couns. 83 (2011) 3-6.

[25]. R.E. Polk. Am. J. Med. 87 (1989) 763-815.

[26]. J.D.P. Graham. An Introduction to Human Pharmacology, Oxford Medical Publication, 1st Edn. Oxford University Press, 1979, p 24.

[27]. O.A. Ogunbameru. Research Methods in Social Sciences. D-Net Communications, E-Book Press, Vidje Vein 18, 4310 Hommersaak Norway, 2003, p 159.

[28]. I. Offor and E.F.O. Enato. Trop. J. Pharm. Res. 10 (2011) 507-516.

[29]. B.A. Berger. Communication Skills for Pharmacists: Building Relationships, Improving Patient Care, 2nd Edn. American Pharmacists Association, 2005, p 145.

[30]. C.R. Rodrigues and N.A. DiPietro. Pharm. Pract. (Granada) 10 (2012) 168-172.

[31]. G.C. Halila, E.H. Junior, M.F. Otuki and C.J. Correr. Pharm. Pract. (Granada) 13 (2015) 597.

[32]. D. Nestel and M. Bearman. Simulated Patient Methodology Theory Evidence and Practice. Wiley, Hoboken, NJ, 2015.

[33]. A. Awad, S. Al-Ebrahim and E. Abahussain. J. Pharm. Pharm. Sci. 9 (2006) 149-157.

[34]. H.L. Svarstand, D.C. Bultman and J.K. Mount. J. Am. Pharm. Assoc. 44 (2004) 22-29.

[35]. A. Poundel, S. Khanal, K. Alam and S. Palaian. J. Clin. Diag. Res. 3 (2009) 1408-1413.

[36]. M.I. Ibrahim, S. Palaian, F. Al-Sulaiti and S. El-Shami. Pharm. Pract. (Granada) 14 (2016). Available at: http://dx.doi.org/10.18549/pharmpract2016.04.800.

[37]. S. Liekens, T. Smits, G. Laekeman and V. Foulon. Int. J. Clin. Pharm. 34 (2012) 452-459.

[38]. S. Liekens, E. Vandael, D. Roter, S. Larson, T. Smits, G. Laekeman and V. Foulon. Patient Educ. Couns. 94 (2014) 110-115.

[39]. Y.X. Wong, T.M. Khan, Z.J. Wong, A.F. AbRahman, and S.A. Jacob. Mental Health J. 56 (2020) 88-98.

[40]. A.M. Albekairy. J. Appl. Pharm. Sci. 4 (2014) 70-73.