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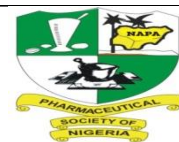

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Assessment of Community Pharmacists' Opinion on Pharmacy Practice Regulation in Oyo State, Nigeria

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A – research concept and design; B – collection and/or assembly of data; C – data analysis and interpretation; D – writing the article; E – critical revision of the article; F – final approval of article.

Abstract
Background: Community pharmacists have different opinion of pharmacy practice regulation in Nigeria and its implementation in practice but no previous studies have critically looked into this divergence opinion.
Objective: This study assessed community pharmacists' opinion on pharmacy practice regulation and how these regulations affect the quality of pharmaceutical services in Nigeria.
Methods: A cross-sectional study of community pharmacists in Oyo state, Nigeria was conducted in March 2015. Respondents were administered semi-structured questionnaire with 37-item questions, centered on seven (7) categories of pharmacy practice regulation. Information was also received from respondents who motivate their responses and data were analysed using descriptive statistics.
Results: Response rate was 86.7%. Respondents (85.7%) agreed that B. Pharm. degree was sufficient as entry qualification for community pharmacy practice, 48.4% suggested minimum years of experience to enter the practice area while 79.1% concurred that continuing professional development was relevant to practice and should be a pre-requisite to licensure. Respondents (72.5%) also kicked against non-pharmacist ownership of community pharmacy while vertical integration was supported by 78% of respondents. 'Rules on the practice' were considered necessary for location approval by 58.2% of respondents and 76.9% saw the need for pricing regulation.
Respondents who provided reasons for their responses generally expressed their opinion about the present regulation and made suggestions that would help to improve pharmacy practice regulations for better implementation.
Conclusion:
Community pharmacists' opinion revealed that the laws regulating pharmacy practice in Nigeria were fairly adequate and better implementation of the various regulations would have effect on the provision of quality pharmaceutical services.
Keywords: community pharmacists; opinion; pharmacy practice; regulation

INTRODUCTION

Regulation has been defined as the government intervention in the private domain or a legal rule that implements such intervention (Orbach, 2012). The regulation of the healthcare professions is designed to protect the health, safety, and well-being of people using their services. Regulation and rules provide a practicable, workable framework for pharmacy professionals to deliver services safely. They are intended to be proportionate and useful, helping practitioners to improve quality (GPhC, 2011a).
Regulation can allow pharmacy practice to develop while protecting the safety of the patients and the public; enhance the confidence of the public and patients by sending out a clear message that patient safety is paramount; ensure that registered professionals are fit to safely deliver a wide range of services to the public; provide a framework for continuing professional development and, in due course, continuing fitness to practise; and provide a

framework for setting standards for advanced levels of practice (GPhC 2011b).

In a report of "study of regulatory restrictions in the field of pharmacies" (Volkerink, *et al.,* 2007), pharmacy practice regulation had been categorised into 7 subcategories:

i. Educational regulation (for example, mandatory education, limitation on the number of students, duration of the compulsory practice);
ii. Regulation regarding obligatory registration, licensing or membership of a professional body (for example, additional practice requirements, examinations and annual costs);
iii. Regulation of the professional monopoly of the pharmacist (which non-pharmacists are allowed to dispense prescription drugs or OTC drugs);
iv. Requirements regarding ownership and operating requirements (such as the possibility to incorporate, the possibility to own multiple pharmacies, and restrictions on the location where one can open a new pharmacy);
v. Restrictions on horizontal and vertical integration (with wholesalers, producers, druggists, etc.);
vi. Rules on the practice (for example, rules regarding floor space, indoor or outdoor advertising, the obligatory presence of a pharmacist); and,
vii. Price regulation (both regulation of prices of prescription medicines and OTCs, and regulation of profit margins).

The law regulating pharmacy practice in Nigeria dated back to 1878 when the Lagos Pilotage and Harbor ordinance was enacted (PCN, 2001). This ordinance established the control and supervision of medicines and medical treatment respectively.

Currently, Pharmacists Council of Nigeria (PCN), Decree No. 91 of 1992 (now Act P.17 LFN, 2004) regulates pharmacists, pharmacy technicians, pharmaceutical premises and patent medicine shops across Nigeria. PCN is the statutory regulatory body for the pharmacy professions in Nigeria and a federal government parastatal under the Federal Ministry of Health, charged with the responsibilities of regulating and controlling the education and practice of pharmacy profession in all aspects and ramifications (The government of Nigeria, 2004). In discharging of statutory functions, the PCN also had made regulations such as Regulation No. 79 of 2005 on Inspection, Location and Structure of Pharmaceutical premises and Regulation No.81 of 2005 on Registration of Pharmaceutical premises (The government of Nigeria, 2005a&b).

Community pharmacists are the health professionals most accessible to the public. They supply medicines in accordance with a prescription or when legally permitted, sell them without a prescription (WHO, 1994). They represent the public image of the profession and are in the majority of the pharmacists' population in Nigeria (PCN, 2014, Oseni, 2017). Community pharmacists' have divergence opinion on pharmacy practice regulation and how it affects the quality of professional and pharmaceutical services in Nigeria. Till date, there has been no published study in Nigeria that has critically assess the effect of regulation on community pharmacy practice or sought community pharmacists' opinion on pharmacy practice regulation in Nigeria.

The main objective of the study was to assess community pharmacists' perception on the effect of statutory regulation on their practice. This is important because their perception will influence their practice and in knowing this will assist regulatory bodies and policy makers to respond appropriately to ensure optimum service delivery. Nigeria is a major player in health care delivery in the West African Health Organisation. It does means that the result of this study will also provide some data that may guide pharmaceutical regulation in other countries in the region.

METHODOLOGY

Study design

The survey was cross-sectional, conducted between January and March 2015 among registered community pharmacists in Oyo State, Nigeria.

Setting

Oyo State is one of the 36 States of the Federal Republic of Nigeria. It was created in 1976. It is homogenous, mainly inhabited by the Yoruba ethnic group who are primarily agrarian but have a predilection for living in high-density urban centres. It covers approximately an area of 28,454 square kilometres and is ranked 14th by size in Nigeria. Located in the South-West geopolitical zone of Nigeria, Oyo State consists of 33 Local Government Areas (LGs). Eleven (11) of which are situated in Ibadan metropolis consisting of five (5) LGs in Urban area and six (6) LGs in semi-urban areas tagged as lesser city (Oyo State Government, 2015).

Sample:
Information on the number of community pharmacies in Oyo State was obtained from the PCN Register (PCN, 2014). As at December 2014, the PCN Register revealed that there were 105 community pharmacies registered in Oyo State. Ninety (90) of them were concentrated in the eleven (11) L.G.As in the Ibadan metropolis and lesser city (i.e. sub-urban area of Ibadan), while the remaining fifteen (15) were sparingly distributed in four (4) other major cities in the State. The participants for the study consisted of all superintendent pharmacists working in all the 105 community pharmacies registered by PCN as at December 31, 2014. The questionnaire was distributed to all the superintendent pharmacists in the registered community pharmacies and Ninety-one (91) community pharmacists responded to the survey.

Survey instrument:
The questionnaire was adapted from an instrument used in an EU study (Volkerink, *et al.,*2007). It was subjected to face and content validity by Expert review of a group of two (2) experienced pharmacists from a pharmacy regulatory body and Professor of Pharmacy Administration in a Nigerian University. Based on their contribution, the questionnaire was modified and pretested among ten (10) community pharmacists to ascertain the reliability of the instrument using Chronbach's alpha value.

Section A included questions on the socio-demographic characteristics of the respondents such as sex, age, qualification, and years of experience as a pharmacist while Section B consisted of 37 item questions on a three (3) point Likert scale which was centre on the seven (7) categories of regulation earlier identified. The instrument was rated on a scale of 1-3 and prefaced 'yes = 3, to some extent = 2, No = 1 and respondents were requested to rate their opinions on the scale. Respondents were also allowed to 'motivate their responses' by giving further reasons for their responses in each section.

Questionnaire administration and Data collection method:
The self- administered questionnaire was distributed to pharmacists during pharmacy association meetings while others were targeted at their premises. Three (3) Research Assistants were engaged in the distribution of the questionnaire to premises and in the collection only since the questions were self-explanatory to the respondents. They include pharmacists and administrative officers with at least National Diploma certificate. Reminder through text messages and phone calls were employed before collection. Some of the completed questionnaires were received on site during the association meeting while others were collected after a week or two visits to their premises.

STATISTICAL ANALYSIS
The retrieved copies of the questionnaire were coded, imputed and analyzed using Statistical Package for the Social Sciences (SPSS) version 21.0 for descriptive statistics including percentage, frequency, mean and standard deviation. On a 3-point scale, '3' represented the highest mean score while '1' represented the lowest mean score. The neutral point is assumed to be 2 which is the midpoint between 1 and 3. Scores above 2 were taken to be positive. The standard deviation was calculated as a measure of item variability from the mean score. Any low standard deviation indicated cluster of responses to the mean while high standard deviation reflected high variability of opinions from the mean. Thematic analysis was done on the motivated responses provided by the respondents regarding their views on the regulation.

RESULTS
Chronbach's alpha value of 0.76 was obtained from the result of the pre-test which demonstrates internal consistency of the survey instrument. Out of 105 superintendent pharmacists targeted for the study, ninety-one (91) community pharmacists responded to the survey which gave a response rate of 86.7%. The demographic characteristics of the respondents shown in Table 1 revealed that 74.7% of the respondents were male and B. Pharm only was their main qualification (71.4%). A large percentage of the respondents (67%) owned their pharmacies.

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency N=91	Percentage (%)
Sex		
Male	68	74.7
Female	23	25.3
Age group of respondents(years)		
21-30	9	9.9
31-40	24	26.4
41-50	26	28.6
51-60	17	18.7
61-70	15	16.5
Qualification		
B.Pharm	65	71.4
B.Pharm & others	26	28.6
Years of qualification post-graduation (years)		
1-10	25	27.5
11-20	27	29.7
21-30	13	14.3
31-40	21	23.1
41-50	5	5.5
Years of experience as community pharmacist (years)		
1-10	47	51.6
11-20	17	18.7
21-30	19	20.9
31-40	8	8.8
Ownership of the community pharmacy		
Self	61	67.0
Co-owned with another pharmacist	5	5.5
Another pharmacist	21	23.1
Non – pharmacist	4	4.4

Table 2 shows respondents' opinion on the pharmacy practice regulation in accordance with the eighteen (18) response themes analysed. Total mean score obtainable was 40.94 $\pm$ 14.869 (range 3-54, midpoint 28.5). On each item, mean score exceed the midpoint of 2 except on three (3) response themes where respondents (73.6%) did not agree that non-pharmacist should be allowed to own a community pharmacy (mean 1.31$\pm$ 0.700), a significant percentage (81.3%) did not agree to barrier to practice other areas of pharmacy (e.g. wholesale, importation) by a community pharmacist (mean1.34 $\pm$ 0.734) and 67% of the respondents did not consider indoor advertisement as against the ethics of the profession (mean 1.47 $\pm$ 0.861).

Table 2: Respondents' opinion on pharmacy practice regulation in Nigeria

Variable N= 91	**Yes N (%)**	**To some extent N (%)**	**No N (%)**	**Mean**	**S.D.**
Response theme	**3**	**2**	**1**		
Education					
B. Pharm. degree is adequate as entry qualification for community pharmacy practice	79(86.8)	9(9.9)	3 (3.3)	2.84	0.454
There should be a minimum entry requirement to community pharmacy practice post qualification in terms of years of experience	43(47.3)	10(11.0)	38(41.8)	2.05	0.947
Mandatory Continuous Professional Development (MCPD) is relevant to community pharmacy practice in Nigeria	71(78.0)	12(13.2)	6(6.6)	2.67	0.700
Attendance at MCPD should be pre-requisite for annual licensure	37(40.7)	11(12.1)	42(46.2)	1.92	0.957
Registration & Licensing, membership of professional body					
Registration with PCN should be made mandatory to practice pharmacy in Nigeria	88(96.7)	0(0)	3(3.3)	2.93	0.359
Membership with Pharmaceutical Society of Nigeria/ Association of Community Pharmacists of Nigeria (PSN/ACPN) should be a pre-requisite to community pharmacy practice in Nigeria	68(74.7)	6(6.6)	16(17.6)	2.55	0.820
Title Protection/Scope of the monopoly					
In Nigeria, Patent medicine vendors are allowed to dispense **OTC only** to the patient. This should be encouraged	40(44.0)	16(17.6)	35(38.5)	2.05	0.911
Non-pharmacist should be allowed to own a community pharmacy	10(11.0)	12(13.2)	67(73.6)	1.31	0.700
Agreement with the regulation on the right to own a community pharmacy by pharmacists only	74(81.3)	5(5.5)	12(13.2)	2.68	0.697
Ownership& operating requirements of establishing a pharmacy					
To own more than one pharmacy, the pharmacist is expected to employ another pharmacist. This is very necessary	62(68.1)	10 (11.0)	19 (20.9)	2.47	0.821
Distance of 200m should be a rule between two existing pharmacies	54(59.3)	18(19.8)	18(19.8)	2.37	0.839
Vertical and horizontal integration / Mergers					
There should be a barrier to practice other areas of pharmacy (e.g. Wholesale, importation) by a community pharmacist	14(15.4)	3(3.3)	74(81.3)	1.34	0.734
Chain pharmacies should be encouraged in Nigeria	65(71.4)	9(9.9)	12(13.2)	2.47	0.923
Rules on the Practice					
The presence of a superintendent pharmacist should be mandatory to operate a community pharmacy	74(81.3)	6(6.6)	10(11.0)	2.68	0.713
Indoor advertisement is considered to be against the ethics of the profession	19(20.9)	8(8.8)	61(67.0)	1.47	0.861
Outdoor advert of a community pharmacy should be restricted	47(51.6)	11(12.1)	33(36.3)	2.15	0.930
Price regulation					
There is need for price regulation of medicines in Nigeria	70(76.9)	6(6.6)	14(15.4)	2.59	0.789
There should be a price margin for medicines sold at pharmacy	60(65.9)	8(8.8)	22(24.2)	2.40	0.893
Total score				*40.94*	*14.869*

Thematic analysis of motivated responses by respondents on different categories of pharmacy practice regulation in Nigeria

Response 1: Minimum entry to community pharmacy practice post qualification in terms of years of experience

"Community pharmacy is now patient-care, therefore some experience are necessary"

"A pharmacist/ new graduate needs experience before being a community pharmacist"

"Clinical pharmacy and hospital pharmacy setting should be included in the undergraduate curriculum"

Response 2: Relevance of Mandatory Continuous Professional Development (MCPD) for community pharmacy practice in Nigeria

"Course fee should be affordable for those who are qualified to attend"
"The training should not only be academic"
"It is necessary in order not to remain static"
"Training should be tailored specifically"
"MCPD should not be loaded with so many things. It should be practice-based or according to technical groups"

Response 3: Mandatory registration with PCN to practice in Nigeria

"Yearly registration is a standard practice"
"Registration is very important and will regulate the system"
"It is an avenue to track down pharmacists dealing with fake drugs"

Response 4: Membership with PSN/ACPN as a pre-requisite to community pharmacy practice in Nigeria

"These points are basic requirement"
"The professional bodies are gulping too much money. PCN registration should be adequate"
"It is the way to go and so far, so good"
"The money/ fee involved should be affordable"

Response 5: Regulation on the right to own a community pharmacy by pharmacist only

"Practice should be strictly restricted to pharmacists"
"Wholesale can be allowed for non-professionals"
"Patient medicine vendors should be allowed to dispense in rural areas"

Response 6: Superintending of a pharmacy by a pharmacist, distance between two existing pharmacies

"The rule will help the community pharmacists"
"There must be a pharmacist at all times in a pharmacy outlet"
"The pharmacy should be fully covered by a pharmacist"

Response 7: Barrier to practice other areas of pharmacy (e.g. wholesales, importation) by a community pharmacist

"Community pharmacists should not be restricted"
"Chain pharmacies can be encouraged if the laws are strictly followed by the pharmacist"

Response 8: Requirement of floor space of a pharmacy as a pre-requisite to location approval of a community pharmacy, advertisement in a pharmacy, etc.

"Enough space is needed to get the necessary respect by customers"
"Advertisement should be based on the level of education of the majority of the populace"

Response 9: Possible dispensing of ethical drugs and /or OTC in Nigeria via the internet

"ICT is a thing of the future"
"It is possible"

Response 10: Need for price regulation of medicines in Nigeria

"Different pharmacists varies the price due to different cost of living"
"We need standard price of drugs"
"Price of drugs should be affordable, that all level of economy class will be able to afford it"

DISCUSSION

This study provides insight into community pharmacists' perceptions on pharmacy practice regulation in Nigeria. It revealed that the laws regulating pharmacy practice in Nigeria were fairly adequate while respondents made recommendations on better implementation of the various regulations that would have effect on the provision of quality pharmaceutical services.

B. Pharm. degree is the minimum requirement for entry into pharmacy profession in Nigeria and in all countries in Wes Africa. This regulation for qualification requirements is justifiable as it creates trust and minimizes the risk for consumers and users of pharmaceutical services. However, the B. Pharm degree curriculum has been discovered to lack social, behavioural and clinical sciences (Puspitasari *et al.,* 2015) which are important for the expanded role of pharmacists in clinical practice, hence the recent approval of Pharm. D program in Nigeria is commended by pharmacists in Nigeria.

Recently the National Drug Distribution Guidelines in Nigeria (FMOH, 2012) stipulated a minimum of five years' post-graduation experience for a pharmacist to superintend a community pharmacy. Respondents in this study were of varied opinion on this as 41.8% saw no need for such while 47.3% agreed with the regulation. A respondent stated that "experience gained during a twelve-month Internship training and one-year National service after a five-year university training should be adequate for practice" while some other respondents identified the reasons for post-graduate experience as follows:

"Community pharmacy practice is now patient-care, therefore some experience are necessary"
"A pharmacist/ new graduate needs experience before being a community pharmacist"

Pharmacists are health care professionals whose professional responsibilities include seeking to ensure that people derive maximum therapeutic benefit from their treatments with medicines. This requires them to keep abreast of developments in pharmacy practice

and pharmaceutical sciences, professional standards requirements, the laws governing pharmacy and medicines and advances in knowledge and technology relating to use of medicines. This can only be achieved by an individual's personal commitment to Continuing Professional Development (CPD) (FIP, 2002).

In this study, pharmacists (78%) applauded the initiative of CPD and saw its introduction as an opportunity for pharmacists to update themselves with new developments, fill the knowledge gaps to improve the quality of pharmaceutical services they provide and an avenue for older and younger pharmacists to rub minds. However, respondents complained of the relevance of the topics offered during the updates to their practice and saw it as revenue generating activity for the regulatory body. They suggested that each module should be practice focus rather than generalised. The following were specifically identified by the respondents:

"Course fee should be affordable for those who are qualified to attend"

"The training should not only be academic"

"It is necessary in order not to remain static"

"Training should be tailored specifically"

"MCPD should not be loaded with so many things. It should be practice based or according to technical groups"

The respondents agreed that registration, licensing or membership with a regulatory body is in compliance with global best practices and should be upheld. A previous study reviewed that all EU States require either registration, licensing or membership within their territory for practice except Denmark (GPhC, 2011a). Lowe and Montagu (2009) also in their study revealed that registration and licensing were pre-requisite to practice in all the twelve (12) countries under their study which was either the responsibility of the pharmacists' association or society, department in the Ministry of Health or government agency. A respondent stated that "the professional bodies are gulping too much money, hence PCN registration should be adequate" while another described it as "the way to go and so far so good but that the money/ fee involved should be affordable". However, respondents required that the high cost of membership fee and rigid regulatory procedure should be carefully looked into.

Restrictions to own a community pharmacy by non-pharmacists and patent medicine vendors to sell **OTC only** are applicable in Nigeria and respondents agreed that this should be sustained. About 74% of the respondents disagreed that non-pharmacists should be allowed to own a community pharmacy. A respondent stated that "Wholesale practice can be allowed for non-professionals" while another added that "patient medicine vendors should be allowed to dispense in rural areas only"

Many EU States also apply this in their different States where professional monopoly of OTC extends to druggists and/ or other stores (Volkerink *et al.,* 2007). In Cambodia (Sievleang, 2015) pharmacist without sufficient funds may jointly own premises with another non-pharmacist with maximum of one pharmacy per pharmacist license.

Also, the study in 12 low-income countries including Nigeria, only pharmacists with B.Pharm or Pharmacy diploma were allowed to own pharmacies as individual or sole proprietor while ownership was often limited to one pharmacy per pharmacist (Lowe and Montagu, 2009). In Ethiopia, pharmacies are run only by pharmacists with qualification on a university degree, drug shops by druggists with diploma in pharmacy and rural drug vendors run by health assistants (Surur *et al.,* 2017).

About 60% of the respondents believed that rules on distance between two premises should be maintained. Restriction to location of new pharmacies is applicable in some EU States as well as in Cambodia where location of new pharmacies could be based on a minimum number of customers required for a pharmacy, minimum distance to another pharmacy or based on commune needs (Volkerink *et al.,* 2007; Sievleang, 2015). This rule in Nigeria is therefore not out of place for spread on location of premises. Hence respondents urged that the regulation on ownership and operating requirements for establishing a pharmacy should be binding to prevent risk of irregular distribution and poor storage.

Respondents (81.3%) were of the opinion that community pharmacists should be allowed to explore other areas of pharmacy practice such as wholesaling and importation in addition to retail pharmacy practice. In Nigeria area of practice are separated and a pharmacist is not allowed to engage in double practice in a pharmacy premises. However, chain pharmacy which respondents (76.9%) also agreed to, is new in Nigeria and about to find its footing. A respondent stated that "chain pharmacies can be encouraged if the laws are strictly followed by the pharmacist"

Prohibition on advertising is to prevent the asymmetric information that might degrade the ethics of pharmacists. Respondents (67%) in this study did not consider indoor advertisement against the ethics of the profession while about of half of them (51.6%) believed that outdoor advert should be regulated. The pharmaceutical industry is the most heavily regulated of all industries and pharmacy profession is most

heavily reliant on code of ethics in its everyday practice. Restriction of prescription drugs and pharmacies to advertisement is mostly targeted at health professional media only (Wzorek *et al.,* 2007). Hence, advertisement of community pharmacy is restricted in Nigeria and in other countries as stipulated by the code of ethics for Pharmacists (PCN, 2005; PMA, 2007; PSA, 2011). However, pharmacists have used different marketing idea to bring in new customers to their pharmacy through offer of health promotions.

Community pharmacists have consistently requested for regulated price as revealed in this study (76.9%). Most of them experience poor sales because some took advantage of no price regulation and undersold, thereby diverting customers to themselves while others were left unserved. A respondent noted that “pharmacists vary the price of drugs due to varied cost and standard of living in their area” while another believed that “the price of drugs should be affordable so that all level of economy class should be able to afford it”. Majority still agreed on the need for standard price of drugs. This agitation is in compliance with the regulation in the EU States where all member States except Malta had regulated price for prescription-only medicines and others also set price for OTC medicines (Volkerink *et al.,* 2007).

Studies had shown that establishing regulation is not enough but the implementation and its enforcement are considered important to ensure that the right things are done to ensure the quality of pharmaceutical services provided (Erhun, *et al*., 2001). It has been reported that compliance with regulations is mostly violated. Such as regulation on pharmacist’s presence in a pharmacy at all time (Indonesia), compliance with dispensing of prescription drugs (Larsson et al., 2006; Surur, *et al*., 2017), qualification of dispenser in community pharmacies (Larsson, *et al.,* 2006) and regulation of advertisement of prescription drugs (Wzorek *et al.,* 2007) among others. Hence, researchers had concluded that compliance with regulations in community pharmacies is low or very poor because commercial pressure exceeds the deterrent effect of current drug regulations and their implementation (Larsson, *et al.,* 2006). The regulatory authorities also lack resources for effective implementation and enforcement, limiting their ability to influence private sector activity (Stenson *et al.,* 1997; Hongoro and Kumaranayake, 2000).

Strengths and limitations:

The high response rate indicated community pharmacist’ willingness to answer the questionnaire and possibly their wish for improved pharmacy practice regulation in Nigeria. The data revealed divergence opinion of community pharmacists on pharmacy practice regulation as against unfounded information or hearsay about pharmacy practice regulation in Nigeria. The target respondents were only superintendent pharmacists of community pharmacies in Oyo State. Only one State out of 36 States in Nigeria as target respondent may reduce the generalizability of the result, though the characteristics of the pharmacists are similar.

CONCLUSION

Pharmacy is a noble profession and quality of pharmaceutical services can be enhanced by enabling rules and regulations. Regulation is not expected to create additional burden, but should be proportionate to the risk it addresses and the benefit it brings. Hence, it should not be seen purely as a means of discipline.

The study provides insight into community pharmacists’ perceptions on pharmacy practice regulation in Nigeria. It revealed that the laws regulating pharmacy practice in Nigeria were fairly adequate while respondents made recommendations on better implementation of the various regulations that would have effect on the provision of quality pharmaceutical services.

The respondents who motivated their responses made the following recommendations that would help to improve pharmacy practice regulation in Nigeria and improve quality pharmaceutical services: 1) Exposure of pharmacy students to hospital practice and clinical oriented training should be incorporated into B. Pharm and Internship training programme in order to launch graduate pharmacist to practice, 2) Continuing Professional Development (CPD) which enables professionals to update themselves should be practice focus to improve its relevance in practice, 3) Membership of professional body should be encouraged, as it could be an avenue for professionals to meet and share ideas to improve practice, however high membership fee and rigid procedures associated with membership registration should be carefully assessed to increase motivation, 4) Rules of entry should be made more stringent to eliminate quackery, 5) Regulation on ownership and operating requirements for establishing a pharmacy should be binding in order to prevent irregular distribution and poor storage, 6) Superintendent pharmacist is a necessary requirement for a pharmacy to operate for ease of regulating the practice, 7) Many factors may affect pricing of medicines, hence the need to streamline drug distribution in Nigeria and instil price regulation

DECLARATIONS

Ethical approval

The purpose of the study was explained to all the respondents during their meeting before the distribution of the questionnaire. The questionnaire

was accompanied by information sheet explaining to respondents the purpose of the study while seeking their cooperation in answering the questionnaire. Informed consent implied if they completed the study questionnaire.

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