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PERCEPTIONS OF UNDERGRADUATE PHARMACY STUDENTS OF AHMADU BELLO UNIVERSITY ZARIA, NIGERIA ON THE INTRODUCTION OF THE PHARM.D. DEGREE TO NIGERIAN PHARMACY SCHOOLS

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ABSTRACT

As a result of the increasing scope of Pharmacy practice over the years, many countries (Nigeria inclusive) are introducing or undertaking major transformations in pharmacy education. The main aim of this work is to explore the knowledge and perceptions of selected 4th and 5th year undergraduate students of Ahmadu Bello University, Zaria on the introduction of the proposed Pharm.D. Degree to Nigerian pharmacy schools. The study was qualitative, and used focus group discussions (FGDs) to collect data. Two focus group discussions with ten students (Five participants per group), lasting an average of one hour were audiotaped in June 2017. Data obtained from the FGDs was then transcribed and checked for accuracy and the transcripts analyzed using summative qualitative content analysis. Most participants highlighted both advantages and disadvantages to introducing the new degree. Advantages identified included the potential for specialization and better career prospects. On the other hand, they expressed worries that the degree change would be disadvantageous to people interested in other (non-clinical) areas of pharmacy practice. Several participants also felt that the degree change was going to be unsuccessful because of several factors within our environment including the unharmonious working relationship between healthcare professionals, inadequate infrastructure in pharmacy schools and the unwillingness of several lecturers to embrace the new degree. In conclusion, participants believed that the proposed Pharm.D. Degree was both potentially advantageous and problematic. Their recommendations include increasing the awareness of both staff and prospective students on what the degree entailed, and allowing concurrent coexistence of both B.Pharm and Pharm.D. Degrees

Keywords: Focus group, Curriculum change, Students, Nigeria, Pharm.D., Perceptions,

INTRODUCTION

Pharmacy education and practice are facing remarkable changes following new scientific discoveries, evolving patient needs and the requirements for advanced pharmacy competencies for current and future practices (Anderson *et al.*, 2012). Therefore, many countries are introducing or undertaking major transformations in pharmacy education. The World Health Organization (WHO), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the International Pharmaceutical Federation Education Development Team (FIPEd) are working together with the aim of improving global pharmacy education and have developed a "needs-based education model" (Anderson *et al.*, 2010). The model stipulates that pharmacy education programmes must be designed to ensure that specific competencies are achieved

by all pharmacy graduates, and that they deliver pharmacy services that meet the needs of national populations (Manasseh, 2013).

Many countries have upgraded their pharmacy degree programmes to the Doctor of Pharmacy (Pharm.D.) degree (Frankel, 2014). Each of these countries have their peculiarities but generally the paradigm shift in the training of pharmacists to meet divergent patients' medicines needs is a common denominator across the globe (Yoo *et al.*, 2014).

Over the past three decades, the roles of pharmacists globally have changed dramatically. The professional roles of pharmacists in hospitals and community pharmacies is changing from a focus on preparation, dispensing, and sales of medications to one in which pharmacists are involved in medication management and review consultation (Steyer *et al.*, 2004).

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Thus, the focus of pharmacy education should be shifting toward competencies in medicines-related needs of the community rather than on products (Steyer *et al.*, 2004).

The Pharm.D. programme is the model for the pharmaceutical care programmes employed by many countries (Kapool *et al.*, 2008). Today, the program has been introduced to many countries including Canada, Qatar, United Arab Emirates, India and Nigeria. University of Benin is the only institution in Nigeria offering the doctor of pharmacy degree, which the university commenced in 2001 following approval by the regulatory government agency for pharmacy education and practice in Nigeria. It has been mentioned in many countries who have adopted, or plan to adopt the degree that it leads to the production of pharmacy graduates who have high levels of knowledge and skill in pharmaceutical care and who work well together with other health care providers (Babar, 2013).

The Pharm.D. course is quite different from conventional courses such as the Bachelor of Pharmacy (B. Pharm) and Master of Pharmacy (M. Pharm) degree. Pharm.D. degree holders are specially clinically oriented, i.e., patient specific. They provide patient care that optimizes medication therapy and promotes health, wellness, and disease prevention (Deshpande *et al.*, 2012). They also emphasize on lifestyle modifications to be adopted by patients. The doctor of pharmacy curriculum is designed to produce a scientifically and technically competent pharmacist who can apply this education in such a manner as to provide maximum health care services to patients. Students are provided with the opportunity to gain greater experience in patient care through close cooperative relationships with other health practitioners. On the contrary, the B. Pharm and M. Pharm.D. degrees are industry oriented, i.e., deal with aspects of drug formulation, studying different drug sources, molecular structure of drugs, steps involved in the syntheses of drugs, methods of synthesizing drugs, analyses of the synthesized drugs, pharmacological actions of drugs, and so on (Mateti *et al.*, 2011).

A good degree transition requires cooperation between colleges of pharmacy, pharmacy councils, government, and pharmacists already in the workforce to encourage better pharmacy education in terms of quality of the curriculum, curriculum validation, competencies of

pharmacy graduates, training (e.g., training site accreditation, preceptor development plan) (Chanakit *et al.*, 2014).

The main aim of this work is to explore knowledge and perceptions of selected undergraduate students of Ahmadu Bello University, Zaria on the introduction of the proposed Pharm.D. Degree to Nigerian pharmacy schools.

MATERIALS AND METHODS

Study Background

As at the time of this research, there are about 99 public and private universities in Nigeria with only 16 universities offering pharmacy degrees. At the time of this study, fifteen of these universities offer the five-year bachelor of pharmacy programme (B. Pharm) while one offers the Doctor of Pharmacy (Pharm.D.) programme (Udeogaranya, 2009). Ahmadu Bello University, Zaria is one of the Universities offering the five-year B. Pharm.D. degree program and this study was carried out on selected students from its Faculty of Pharmaceutical Sciences.

Study Population

The study was conducted on 10 undergraduate students of the Faculty of Pharmaceutical Sciences of the University. The participants were purposively selected because they were very vocal and seemed to have an idea of what the new degree was about, they were also ready to participate in the study. Four participants were fourth year students, while the remaining six participants were fifth year students.

Ethical Considerations

Before the FGDs were carried out, all participants were appropriately informed about the objectives as well as the purpose of the study and informed that their participation was voluntary. Thereafter, verbal consent was then obtained from each participant before the FGDs were held. Both the audiotaped FGDs and transcripts were only handled by those directly associated with the study, and any information which could lead to the identification of participants was not included in the report.

Study design

The study was qualitative, and used focus group discussions (FGDs) to collect data. Two focus group discussions were held in June 2017 with 10 students (Five participants per group), and lasted for an average of 1 hour.

The discussion was moderated by a lecturer in the Department of Clinical Pharmacy and audiotaped. Questions asked during the FGDs included: what the student understood by the Doctor of Pharmacy degree and what they thought it entailed, what their perceptions of the programme were and how they thought the new degree was going to affect future student and their families

Data analysis

Data obtained from the focus group discussion was transcribed and checked for accuracy. The contents of the transcribed interviews were then analyzed using summative qualitative content analysis. This was done by grouping similar responses and reporting them. Representative quotes were then used to highlight pertinent results.

RESULTS

Theme 1: Participants knowledge/understanding of the Pharm.D. degree and what it entailed

There was a consensus amongst participants that the Pharm.D. degree was a more clinically oriented degree and represented a shift in the focus of pharmacists from “products” to “patients”

“With Pharm.D. where you will have more emphasis on patient oriented practice You are being trained with skills to follow up your patient and more of pharmaceutical care in taking care of your patient or so.” (5th year student)

“Actually for me, the Pharm.D. programme is nothing more than a shift of paradigm in the pharmacy profession from drug oriented to a more like patient oriented pharmacy. “ (5th year student)

Participants also generally perceived that the degree would confer several potential benefits on holders including ability to prescribe, higher career prospects and ability to specialize.

“With Pharm.D., I think there are some issues especially public health pharmacy..... There are some public health practices like all this public awareness and drug vaccination that Pharm.D. can do but currently with B. Pharm we cannot.....” (4th year student)

“I think even in public service there is an advancement I think now with the Pharm.D. now you can reach up to level 17 (within the civil service). There is also more room for specialization with the Pharm.D. now even in hospital what we do we are jack of all trades, one pharmacy student will be in oncology, will be in all other sorts of departments, but with the programme there is room for

specialization. Probably you can have this pharmacist specialize in cardiology, another specialize in endocrinology and so on” (5th year student)

Theme 2: Participants perceptions of the new degree

Positive

Views of the participants on the introduction of the new degree varied widely, with most participants highlighting both advantages and disadvantages of the Pharm.D. degree. Most of the advantages have already been covered in the previous section and included the potential for specialization and better career prospects. However, a significant advantage foreseen by many participants was that the new degree would afford pharmacists a better chance to have an actual impact on our communities

“.....In every profession your recognition is dependent on your societal role. Once you are not playing any role in the society you will not be regarded as anything. And this is the present situation that we are in. If you go to the hospital people will like even be asking you in Hausa and they come to buy drug from the pharmacy they will ask you “ya kasuwa?” Because of the way they see you, they see you unprofessional because they just see you collecting money and giving them drugs and you are not doing anything.....So to me now this shift will like gain us the societal recognition and the society will now recognize us because of the role we will be playing concerning pharmaceutical care, patient counselling and the rest.” (5th year student)

Negative

Disadvantages identified by participants could be loosely classed into two. Those directly associated with the degree and problems/shortcomings within our environment that could affect the impact of the degree change in our communities and possibly render it ineffective. For the first scenario, several participants expressed fears that the degree change would be disadvantageous to people interested in other (non-clinical) areas of pharmacy practice and would lead to neglect of these areas.

“.....Pharm.D. is shifting pharmacists to more clinical practice and this may be good for those that want to go into the hospitals to practice pharmacy,.....If you are not going for pharmacy practice in hospitals or any clinical settings it will become a problem for you because is like okay once you are done with pharmacy you just have to work in hospital or you don't have a choice.

If you don't want to work in the hospital you sit at home or you go for community practice apart from community and hospital you don't have any place to practice again.....I think Pharm.D. is streamlining us to do a particular thing at all cost. You must just do hospital work or you do clinical work whether you like it or not. And while it is good for people who are going for clinical practice and it is not so good for others that are going for other aspects.” (5th year student)

On the other hand, quite a number of participants felt that the degree change was not going to be successful because of several factors within our environment

“I think Pharm.D. is not a good idea because based on my perception is not going to address our problem as far as Nigeria is concerned. In Nigeria our problem is a lack of collaboration within the healthcare sector...For the healthcare to function effectively, there must be collaboration right from training. Doctors and Pharmacists sometimes they need to collaborate during training of their students and it doesn't happen (here).....” (4th year student)

A particularly interesting point was also raised by one participant

“I think certain things just have to be change up there because I think if certain policies on pharmacy practice remain with or without Pharm.D. basically it may be the same thing for pharmacists.....Okay now, training a pharmacist to become more of a clinician or to be better clinicians in the hospital, okay are we going to leave our dispensing jobs as pharmacists?...and then we will be in the wards and then leave the dispensing aspects may be to pharmacy technicians? but if we are still going to be involved in our dispensing and still be doing our ward rounds, issues are going to arise; it is either may be consultants or senior colleagues will be involved in the ward rounds and leave the dispensing to the junior ones or all of you will go for the ward rounds and when you people come back then do the dispensing or I don't know how is going to be.” (5th year student)

DISCUSSION

Changes in pharmacy education in developing countries have been dramatic and relatively rapid due to the strong desire to advance the science and practice of pharmacy in most countries (Kheir *et al.*, 2009). Over the past three decades, the roles of pharmacists globally have changed dramatically. Responsibilities of pharmacists have shifted from merely compounding or dispensing medicines to playing

a professional role in patient care. Doctor of pharmacy programs are expected to produce pharmaceutical care experts and to provide more clinical experiences during training (Chanakit *et al.*, 2014). This is particularly important because one of the main limitations for pharmacists developing advanced clinical roles is a lack of clinical skills (Frankel *et al.*, 2014).

Views of the participants on the introduction of the new degree varied widely, with several participants highlighting advantages of the Pharm.D. degree. These advantages included the potential for specialization and better career prospects. This is similar to findings from Chanakit *et al.*, (2015) study, that reported that students in Thailand also thought that the transition to the 6-year program would improve pharmacy competencies from generalists to advance general pharmacists or specialists. In addition, Raman *et al.* (2012) reported that majority of the educated Indians surveyed in their study felt that pharmacists with the Pharm.D. degree play vital roles in providing pharmaceutical care by taking responsibility for fulfilling the drug related needs of patients. This was a sentiment shared by several participants in this study, who anticipated that the new degree would afford future pharmacists a better chance to have an actual impact on our communities. Furthermore, FGD participants also felt that because the future students would be better trained and have enhanced clinical skills, they would be more confident than their B. Pharm counterparts. This is a definite advantage as Pharm.D. graduates have the skills to approach other health care providers, are more confident and work well within health care teams (Chanakit *et al.*, 2015).

Abdelhadi *et al.* (2014) reported in their study that nearly all respondents (90.9 %) reported that Pharm.D. holders would be well-paid. This was a similar sentiment echoed by several participants in this study, even though there is no evidence as at this time to suggest that their salaries will in fact be higher than B. Pharm holders.

Quite a number of participants felt that the degree change was not going to be successful because of several factors within our environment especially poor collaboration among healthcare professionals within the country and intra-disciplinary disagreement within the profession. This is a valid fear because one of the challenges facing pharmacy education in developing countries is the inharmonious working relationship between different health care professionals (Hassali *et al.*, 2013).

Another important factor highlighted by participants that could hinder the success of the degree, was that the infrastructure (both staff and facilities) available in Pharmacy schools within the country currently was not adequate to deliver the training and skills required for the new degree. There is also some evidence to show that several academics (both pharmacists and non-pharmacists) in various universities were also not willing to embrace the idea of the new degree. These included some senior professors who were British trained and or had a strong sentimental attachment to the British tradition of science /product focused pharmacy education (Okhamafe, 2016)

Furthermore, various participants expressed worries that the degree change would be disadvantageous to people interested in other areas of pharmacy practice and would lead to neglect of these areas. Pharmacists are known to be experts on drugs, and abandoning this aspect and focusing only on patient-oriented practice will make other people take over the core science aspects of the profession. Thus, several participants recommended that the new curriculum have an all-inclusive design in order to avoid neglecting the other non-clinical aspects of pharmacy.

Some participants suggested that there should be increased awareness for both lecturers and

students on what the degree entailed because they felt that there are several misconceptions about the degree harboured by both groups. This is related to findings from Abdelhadi *et al* (2014) study, where they found out that as many as 66 % of the respondents, who were enrolled in a school that confers the Pharm.D. degree, admitted that they didn't understand what Pharm.D. meant/entailed when they entered pharmacy school.

CONCLUSION

Participants believed that the proposed Pharm.D. degree was a more clinically oriented degree and represented a shift in the focus of pharmacists from product-oriented to patient-oriented services which was both advantageous and problematic. The advantages foreseen by participants included potential for specialization, better career prospects and the potential for pharmacists to have a greater impact on their communities. On the other hand, several participants expressed worries that the degree change would be disadvantageous to people interested in other (non-clinical) areas of pharmacy practice and would lead to the neglect of these areas.

Conflict of interest

The authors report no conflict of interest

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