

Assessment Of The Willingness Of Hospital Pharmacists In Osun State To Undergo Pharmd Conversion Program

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Abstract

Background: The current minimum requirement to practice pharmacy in Nigeria is a Bachelor of Pharmacy degree. With the approval of the Pharm.D programme by the National University Commission (NUC) in Nigeria, Pharm.D may soon become the minimum qualification to practice. Those with B.Pharm. may be required to convert their B.Pharm to Pharm.D just like it was done in the United States where those that graduated with B.S.Pharm. had to convert their B.S.Pharm. to Pharm.D. for them to be able to practice as pharmacists. This study's main objective was to assess Hospital Pharmacists' willingness in Osun State to undergo Pharm.D conversion program.

Methods: A semi-structured questionnaire was administered to 87 hospital pharmacists in Osun State using a convenience sampling technique. The retrieved questionnaires were coded and entered into Statistical Package for Social Sciences (SPSS) version 21, which was used to analyse the data. Both descriptive (frequencies and percentages) and inferential statistics (Fisher's Exact Test) were carried out on the data.

Results: Out of the 87 respondents, 87.4% indicated their willingness to undergo the Pharm.D conversion program. The majority (78.2%) of the respondents would undertake the program to improve their knowledge of clinical pharmacy and 75.9% would undergo to serve their patients better. Also, 57.0% of the respondents prefer a 12-month duration of the PharmD Conversion Program.

Conclusion: Most hospital pharmacists in Osun State were willing to undergo a Pharm.D. conversion program. They would likely be motivated by the perceived improvement in clinical pharmacy practice, which such a program will confer. A short and flexible conversion program will also encourage participation.

Keywords: Hospital Pharmacy, Attitude, Perception, Conversion, Doctor of Pharmacy (Pharm.D), Clinical Pharmacy.

Introduction

Pharmacy Education has evolved over the ages to meet professional and patients' healthcare needs. Doctor of Pharmacy is one of those innovations in pharmacy education designed to train patient-focused pharmacists with adequate clinical skills to provide pharmaceutical care ^[1]. Doctor of Pharmacy degree was pioneered by the University of Southern California in 1950. Subsequently, several other schools across the United States began to offer the Doctor of Pharmacy program. In 2006, the Doctor of Pharmacy replaced the Bachelor of Science in Pharmacy degree ^[2]. Other countries like Thailand, Japan, South Korea, Saudi Arabia, India, Pakistan, Iran, and Nepal have also taken cues ^[3,4]. In Thailand, many pharmacy schools expanded their curricula to a 6-year Doctor of Pharmacy curriculum in response to increased pharmaceutical products and services needs of patients and society. A Consortium was formed in 1993 between all the schools of pharmacy in Thailand, the American Association of Colleges of Pharmacy, and ten (10) United States colleges of pharmacy, which resulted in the exchange of several students and faculties between the two countries ^[5,6,7].

Doctor of Pharmacy graduates from the United States who returned to Saudi Arabia introduced clinical pharmacy services such as pharmacokinetics, total parenteral nutrition and drug information services. These led to pharmacy schools in Saudi to commence the award of Doctor of Pharmacy Degree followed by a pharmacy residency programme, also established in 1997. In addition, expatriates from the US were employed to improve the training of pharmacists in Saudi ^[8,9].

The observation of the vast differences in the pharmacy curricula and the skills possessed by pharmacists in the ECOWAS (Economic Community of West African States) Region, coupled with the unsatisfactory practice standard observed in the region, WAHO (West African Health Organisation) initiated the process of harmonisation of pharmacy curricula in the region. In the document released in 2015, WAHO has mandated all colleges or faculties of pharmacy in the region to implement the PharmD., which will replace the BPharm ^[10]. Other African countries like Ghana, Liberia and Algeria have commenced the PharmD. programme ^[11].

Like other developing countries, Nigeria's National Universities Commission (NUC) has approved the Pharm.D programme in its benchmark for Nigerian Universities ^[12]. The Pharmacy Council has also given the Schools of Pharmacy an ultimatum to commence the Doctor of Pharmacy programme. In order for schools of Pharmacy in Nigeria to build human capacity to be able to commence the Doctor of Pharmacy (Pharm.D) programme, a Special Doctor of Pharmacy Programme was floated in the University of Benin in Collaboration with the Pharmacy Council of Nigeria and Nigerian Association of Pharmacists and Pharmaceutical Scientists in the Americas which ran for two sessions: 2017/2018 and 2018/2019 sessions. This is similar to the approach adopted by countries like Thailand, South Korea and Saudi Arabia ^[5,9,13,14]. With the approval of the Pharm.D programme by the National University Commission (NUC) in Nigeria, PharmD. may soon become the minimum qualification to practice, just like it was done in the United States. Those that graduated with BPharm. may be required to undergo a conversion programme to be eligible to practice as pharmacists in Nigeria ^[15]. Similarly, there is a paucity of data in the literature on the attitude of hospital pharmacists towards the pharmD conversion program and the barriers to participation. Therefore, it is imperative to assess the willingness of hospital pharmacists with a BPharm degree to undergo the PharmD conversion programmes.

This study aimed to assess the willingness of hospital pharmacists in Osun State to undergo a PharmD conversion programme. Other specific objectives of the study were to evaluate factors that may encourage participation in the conversion program and identify perceived barriers to participation in the conversion program.

Methods

Study Design

This cross-sectional study was carried out to assess the willingness of hospital pharmacists in Osun State to undergo PharmD. conversion programme.

Study Population

The study covered Pharmacists working in hospital settings in Osun State. Five major hospitals (secondary and tertiary) in four major towns in the state were selected, and the pharmacists working in those hospitals were then sampled. The hospitals covered were

1. Obafemi Awolowo University Teaching Hospital Complex [OAUTHC], Ile-Ife.
2. Obafemi Awolowo University Teaching Hospital Complex [OAUTHC], Ilesha
3. UNIOSUN Teaching Hospital [UTH], Osogbo
4. State Hospital [Cottage], Ede
5. State Specialist Hospital, Asubiaro, Osogbo

Inclusion/Exclusion Criteria

The principal criterion in the study was that the respondent must be a registered and practising Hospital Pharmacist in Osun State. Only hospital pharmacists that graduated with a Bachelor of Pharmacy (BPharm.) Degree were included in the study, while those that graduated with a Doctor of Pharmacy (PharmD.) Degree and those who graduated with a BPharm but have undergone a PharmD conversion program were excluded from the study. Practising Pharmacists were directly approached at their various offices within the Hospitals. Some questionnaires were filled on the spot, while others were left with the respondents and collected later.

Research instrument

The research instrument used for the study was a semi-structured questionnaire comprised of two key sections. The questionnaire contained both open and closed-ended questions. The first section was designed to obtain information on the demographics of respondents, such as gender and age, while the second section focused on the willingness of the respondents to enrol for the PharmD conversion program, factors that may serve as encouragement to enrol for the conversion program and perceived barriers to the conversion program.

Ethical Approval

Ethical approval for this study was obtained from the Ethics and Research Committee of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife. Individual voluntary consent of the respondents was also obtained before administering.

Administration of Questionnaires

One hundred and five questionnaires were successfully administered using the convenience sampling technique, but only 87 were returned and appropriately filled. Retrieved questionnaires were cross-checked to ensure proper filling by the respondents at the point of collection and before data entry. Data was analysed using Statistical Package for Social Sciences (SPSS) software version 21. Data were summarised using frequencies, percentages, and mean, while the inferential statistics utilised was Fisher's Exact Test.

Results

Socio-Demographic Characteristics of Respondents

From the total of 87 responses (82.9% response rate) obtained from the study, 59.8% were males, and the majority fell within the age range of 20-29 (32.2%). Other demographic information of the respondents is contained in Table 1. Of the 87 respondents, 76 (87.4%) were willing to undergo the conversion program. Fisher Exact Test showed a significant relationship ($p < 0.05$) between respondents' age and willingness to upgrade their BPharm degree to a PharmD degree. The majority (78.2%) would undergo the conversion program to improve their clinical pharmacy knowledge and 75.9% would undergo to serve their patients better. Other reasons for wanting to enrol in the program are summarised in Table 2.

Table 1: Socio-Demographic Characteristics of Respondents

	Variables	Frequency	Percentage (%)
Gender	Male	52	59.8
	Female	35	40.2
	Total	87	100
Age in Years	20-29	28	32.2
	30-39	22	25.3
	40-49	22	25.3
	50-59	12	13.8
	>60	3	3.4
	Total	87	100
	Highest Qualification	BPharm	68
MPharm/MSc		8	9.2
FPCPharm		11	12.6
Total		87	100
Cadre/Rank	ADPS	8	9.2
	Assistant Director	9	10.3
	Chief Pharmacist	4	4.6
	Asst. Chief Pharmacist	2	2.3
	Principal Pharmacist	10	11.5
	Senior Pharmacist	6	7.0
	State Officer	1	1.1
	Unspecified	47	54.0
	Total	87	100
Years of Experience in Current Job	1-5 years	35	40.4
	6-10 years	13	14.9
	11-15 Years	10	11.5
	16-20 Years	10	11.5
	21-25 Years	5	5.7
	26-30	2	2.3
	>30	1	1.1
	Unspecified	11	12.6
	Total	87	100

Table 2: Reasons for Wanting to Undergo the Conversion Program

S/No	Variable	Yes (%)
1.	To Improve knowledge of clinical pharmacy	68 (78.2)
2.	To be able to serve patients better	66 (75.9)
3.	To Improve Clinical Skills	63 (72.4)
4.	To be involved in direct patient care	52 (59.8)
5.	For an opportunity for career development later	52 (59.8)
6.	For image improvement as a pharmacist,	50 (57.5)
7.	To improve and build curriculum vitae (CV)	40 (46.0)
8.	For better chances of practising abroad	39 (44.8)
9.	Because it may soon become the minimum qualification to register with the Pharmacists Council	37 (42.5)
10.	Possibility of teaching pharmacy students (associate lecturers)	30 (34.5)
11.	To become a preceptor for pharmacy students	29 (33.3)
12.	To be called a doctor	7 (8.0)

Reasons for Lack of Interest in Conversion Program.

Some respondents (5 respondents) gave reasons why they may not be willing to undergo a conversion program (from BPharm to PharmD). The reasons given are;

"Because of the challenges of time and work I have at hand."

"It will greatly benefit those who want to pursue a clinical or community pharmacy career."

"It will not be useful in my current vocation - Pharmacy management."

"The conversion program will afford one no benefit in status or relevance to my area of practice".

"The program will require financial and time commitment, and one is already committed to other things at this stage of career".

Three of the five responses are centred around the thought that undertaking the training has no relevance or any known benefit to their current vocation, while the other respondents may be willing to undertake the training program if given time in their workplaces for the training.

The majority (70.1%) of respondents indicated that proximity to a Faculty of Pharmacy was a factor that could encourage participation in the conversion program, but believed that sponsorship by the employer (57.5%) as well as consideration of the certification for salary scale (56.3%) would encourage them to participate. Other perceived factors that may encourage participation in the conversion program are contained in Table 3.

Factors That May Serve As Barriers towards Enrolling On the Conversion Program

The major factors perceived as barriers to participation in the conversion program are the cost of running such a program (75.9%) and distance from a faculty of pharmacy (67.8%). Table 4 summarises the respondents' perceived barriers towards enrolling for the conversion program.

Table 3: Factors that may Encourage Participation in the Conversion Program

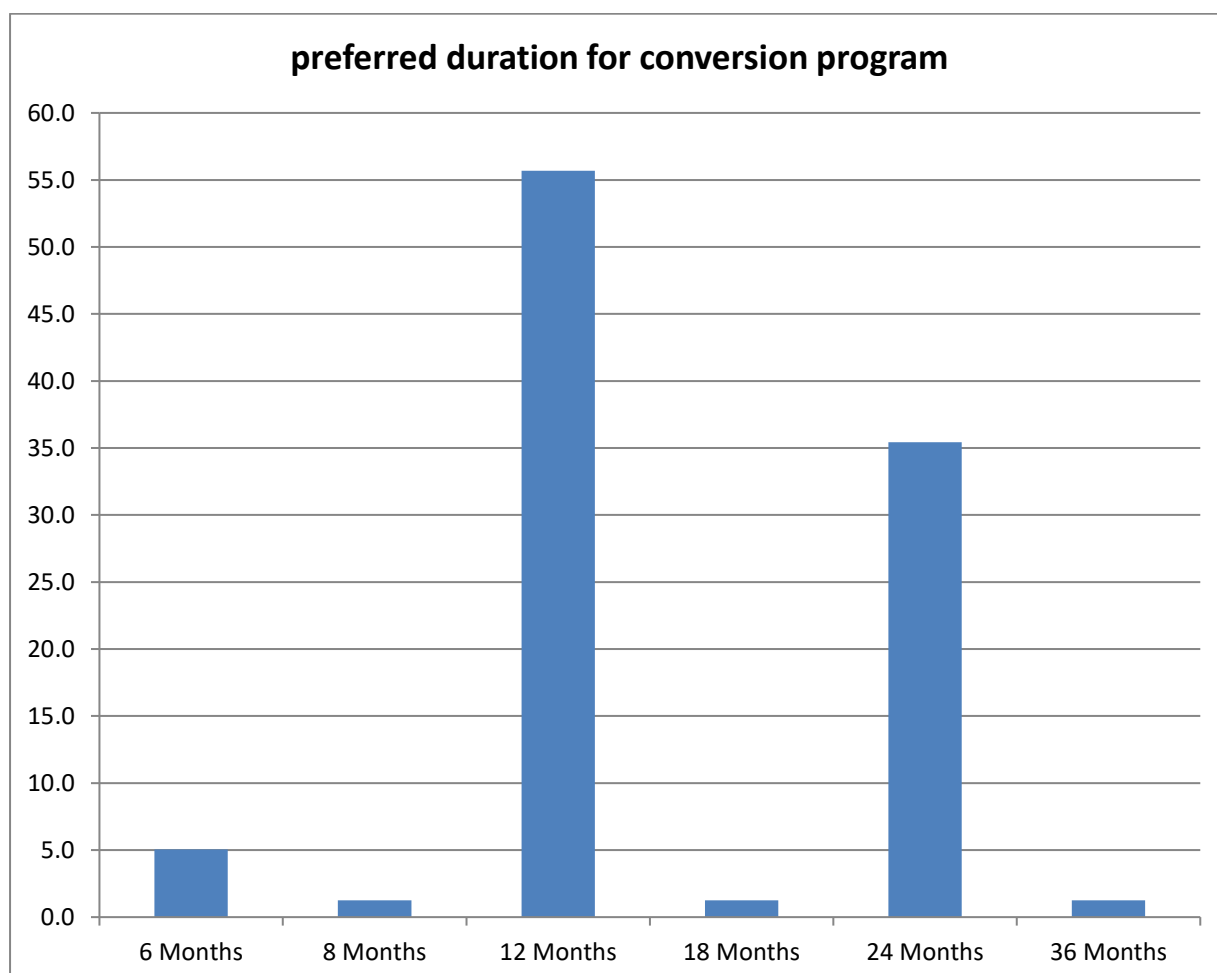
S/No	Variables	Yes N (%)
1.	Proximity to a faculty of Pharmacy	61 (70.1)
2.	Implementation of clinical pharmacy services	56 (64.6)
3.	Release by employer	55 (63.2)
4.	Sponsorship by employer	50 (57.5)
5.	A consideration for salary scale	49 (56.3)
6.	Consideration for promotion	47 (54.0)

Table 4: Factors that may serve as Barriers towards Enrolling for the Conversion Program

S/No	Variable	Yes N (%)
1.	The cost of running such a program	66 (75.9)
2.	Distance from a faculty of pharmacy	59 (67.8)
3.	Time to study for such a program	55 (63.2)
4.	It is not a requirement for promotion	12 (13.8)
5.	It adds nothing to the area of practice	9 (10.3)
6.	Age consideration is not favourable, so why bother	4 (4.6)

Most (62) of the respondents (71.3%) believed that the conversion program should be an online program, while 54 (62.1%) would prefer it to be a weekend program.

Most respondents (51.7%) believed the average duration for the conversion program should be one year. The bar chart contained in Figure 1 depicts others' responses.

**Figure 1**

Discussion

Most hospital pharmacists in Osun State were males and were mainly between 20-39 years of age. Most were holders of the BPharm degree certificate as the highest qualification and had a job experience of 1-10 years. Hospital pharmacists in the state were aware of the PharmD conversion program. They were also willing to enrol for the PharmD conversion program. This may be seen as a

positive attitude towards the conversion program. It was also observed that the younger age groups were more willing to enrol than the older ones. This is likely because they still have more time to serve their patients, as noticed in their responses.

Improvement in clinical pharmacy knowledge is one of the primary reasons most hospital pharmacists were willing to enrol for Pharm.D. conversion. They were also observed to be interested in the conversion program because they wanted to improve their clinical skills. Incorporating a curriculum rich in clinical components will, therefore, encourage participation. Previous reports in the literature showed a favourable attitude of Nigerian pharmacists toward patient-centred care, i.e. the provision of pharmaceutical care ^[16]. Smith (2014) also noted that improvement in the practice area is why most Canadian pharmacists seek post-baccalaureate Pharm.D ^[17]. A larger percentage of hospital pharmacists were not interested in becoming preceptors for pharmacy students, nor were they interested in the possibility of teaching pharmacy students. Strategies must be developed to stimulate interest in these services, such as financial compensation, among other considerations. Also, hospital pharmacists' interest is born from a desire to render service rather than the 'doctor' title. Most pharmacists did not see the title as a motivating factor for enrolment in the program.

Respondents who were not interested in the program had that perspective because they did not have sufficient time from their work to undergo such training. Such people can be encouraged by creating opportunities for continuing education in their various places of employment. Another concern for lack of interest was that "the conversion programme will afford one no benefit in status or relevance". This can be ameliorated by ensuring financial and promotional consideration for people who have undergone the training. Supportive regulation, as was done in the United States, is one major factor that enhanced pharmaceutical care practice ^[4].

Most pharmacists thought that factors such as proximity to a Faculty of Pharmacy, sponsorship by an employer and implementation of clinical pharmacy services in Nigerian health facilities would encourage interest in the conversion programme. These are, therefore, factors that the pharmacy regulatory body (PCN) and the professional body (PSN) must strive to address. This is because the clinical pharmacy knowledge and skills that such a conversion programme is expected to provide will improve the services of pharmacists in the state, which will benefit the patients. Studies have shown that the involvement of clinical pharmacists in patient care led to many interventions and ultimately improved patient outcomes ^[18].

Barriers such as the cost of running the program and distance to a Faculty of Pharmacy were identified by respondents. This is understandable as most hospital pharmacists, especially in Nigeria, are usually very busy due to the inadequate number of pharmacists employed to manage Nigerian health facilities. Hence, sparing time for further development becomes challenging as this will only lead to more staff shortages for the study period. One of the reasons why they may not be interested is that the degree is not a requirement for promotion. Also, it was observed that most of the older respondents were not interested in undergoing the conversion program. There was a significant relationship between age and willingness to enrol.

Most of the respondents prefer the conversion programme to be run as a weekend part-time programme. Others believed that the conversion programme should run as an online programme. Similarly, most respondents would prefer the conversion programme to run for just one year. However, if the post-baccalaureate PharmD will be run as a part-time programme, it may not be easy to make it a year programme. Most part-time post-baccalaureate programmes in Canada are three (3) years ^[16].

Conclusion

Hospital Pharmacists in Osun State were willing to undergo the PharmD conversion program. They would likely be motivated by proximity to a Faculty of Pharmacy, implementation of clinical pharmacy services and additional benefits in the form of improved salary scale placement. A short and flexible conversion program will also encourage participation.

Limitations of the study

The study is limited to hospital pharmacists in selected cities in Osun State; it does not include pharmacists in other settings such as community and academics.

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