


ORIGINAL RESEARCH ARTICLE

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Nigerian physiotherapists' perception of physiotherapy internship: perceived expectations, experience, and outcomes

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Abstract

Background: Physiotherapy internship in Nigeria was inaugurated in 1994 to allow continuous learning in the clinical setting, connecting theoretical knowledge and workplace practice. The internship program has not been evaluated over the years. The aim of study was to assess physiotherapists' perceptions of the internship in Nigeria in terms of expectations, experiences, and outcomes.

Methods: A mixed method design of a cross-sectional survey and focus group discussion (FGD) was utilized. An adapted questionnaire was used for the survey. Data was assessed using descriptive statistics and content thematic analysis.

Results: The mean age of the physiotherapists who participated in the survey (147 males; 116 females) and FGD (7 males; 2 females) were 27.4 ± 2.5 and 28.8 ± 2.3 years, respectively. Most participants in the survey perceived their internship experience as good (97.7%), the supervision received as adequate (76%), and the outcomes of internship in terms of usefulness as useful (76%). The overall perception of physiotherapy internship in Nigeria was rated as good by 51% and fair by 47% of participants. However, responders in the FGD reported negative experiences including inadequate or lack supervision. They also reported that they were not formally prepared for internship by their training institutions or receiving health institutions before beginning internship.

Conclusion: Physiotherapy internship in Nigeria was perceived as deficient in structural organization and supervision of the interns. The outcome of internship program was perceived as good even though the experiences were negative.

Keywords: Physiotherapy internship, Expectation, Experience, Outcomes, Nigeria

Introduction

Internship programs engage students or graduates in service activities primarily for the purpose of providing them with hands-on experiences that enhance their learning or understanding of issues relevant to a particular area of study [1, 2]. Internships are supervised work

experiences where students or graduates get engaged in work-related programs during which they are closely supervised by experienced job incumbents [3]. Making the transition from being a student into the world of practice as a graduate could be difficult and stressful as graduates often found out that they were not prepared for the realities of practice [4, 5]. Many training institutions have therefore introduced internships into many of their training programs as a mitigatory step to bridge the gap [1, 6].

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Internships have taken on increasingly important roles in education because they present students with many advantages. The advantages include gaining experience, obtaining career-related direction, communicating with other students from various institutions, enhanced employability, work-related and organizational learning [7], helping students make specialization/career choices [8], greater job stability in early job careers, and improved chance of job satisfaction in future [9]. Internship programs in health institutions envisage capacity building in order to provide adequate number of skilled professionals [10, 11]. Clinical internships have been accepted as an effective method of increasing graduates' preparedness for transition to the beginning practitioner role [12]. Physiotherapy profession's growing role in global health requires entry level education that emphasizes not only clinical competence but also adaptability, problem-solving, and an understanding of the impact of globalization on health systems and individual wellness [13]. One strategy to prepare physiotherapists for their future professional responsibilities is through clinical internships. This is achieved through structured program, supervision, and an effective administration to enhance consolidation of theoretical knowledge with practical skills [14], hence promote acquisition and utilization of new skills and confidence already acquired during undergraduate days [15]—thereby develop their professional knowledge and professional skills [16].

Internships have been introduced into physiotherapy in many countries. In India, students embark on internship for only 6 months and this within the 3 years training school period [17]. The internship program in United Arab Emirates is very similar to that of India [18]. In Netherlands, the students embark on a 37-week internship training at two different clinical sites but this is also during school holiday [19]. Physiotherapy internship started in Nigeria in 1994. The Medical Rehabilitation Therapists Registration Board (MRTB) of Nigeria is responsible for overseeing the internship program. The MRTB also accredits facilities where new graduated physiotherapy students may undergo internship. The internship year is mandatory after completion of undergraduate study according to standard regulations in Nigeria and it is for 12 months. The interns are issued a provisional licence to practice by the Board [20]. The prospective interns apply for the internship in a place of their choice accredited by MRTB. The newly graduated student have to rotate over different departments and specialties and supervised by licensed physiotherapists who assesses the interns at the end of each posting [21].

Interns' perception, experience, and satisfaction have been reported. A study concluded that Australian physiotherapy interns' experience did not meet their needs and

expectations [15]. The interns felt that their preparation for new and alternative career pathways, their knowledge, and skills acquired through their university education were underutilized in practice [15]. Interns' satisfaction with training was reported to vary widely with different clinical rotations and institutions [22]. Determinants of effective training associated with an intern's perception and satisfaction include quality of supervisors, effective supervision, adequate opportunity in experiential learning, conducive environment, good support system, personal attributes, and reasonable workload [23, 24]. Only one previous study has evaluated physiotherapy internship in Nigeria [25]. The study focused on interns' welfare package and supervisors' opinions on the impact of the internship on physiotherapy profession, governance, and clinical practice. There is therefore the need for another study that focuses on interns' perceived expectations, experience, and outcomes of the program. This study therefore assesses (descriptive and thematic) the physiotherapists' perceptions of physiotherapy internship in Nigeria in terms of expectations, experiences, and outcomes.

Methods

Relevant domains of Mixed Methods Article Reporting Standards (MMARS) of the APA Style Journal Article Reporting Standards was used to report methods in this study [26]. Ethical approval from the University of Ibadan/University College Hospital (UI/UCH) Research Ethics Committee was obtained, and the procedure for the study was explained to the participants and their informed consent was obtained before participation in the study.

Research design

This study was a mixed research design comprising a cross-sectional survey and focus group discussion. We employed mixed method design to gather more information on the subject matter with the view to explain quantitative survey results with qualitative interviews in an explanatory sequential manner. A mixed method will provide an in-depth knowledge which cross-sectional survey alone may not provide.

Participants

The study involved physiotherapists who have completed their internship program in Nigeria within 10 years before the study (August 2008–July 2017) and are registered with the MRTBN. Prior to the study, sample size was calculated for the survey aspect of the study. Since the number of physiotherapists who completed the internship program in Nigeria within 10 years prior to the study was 1580 [27], estimate sample size for population

<10,000 was used with assumption that the standard normal deviate = 1.96, degree of accuracy = 0.05, and 80% of the population will have good perception of internship experience [28]. It was estimated that minimum sample size of 212 will power the study.

Between five and 25 informants are required for a qualitative study [29]. Therefore, a purposive sample of nine physiotherapists who have completed the internship within 10 years' prior the study was recruited for the focus group discussion.

Data collection

Survey

The questionnaire used for survey aspect of the study was adapted from two questionnaires used in previous studies [30, 31]. Items were selected and/or adapted from the previous questionnaire into the one used in this study by a group of three physiotherapy researchers during two meetings. The questionnaire was titled perception of physiotherapy internship among physiotherapists in Nigeria. It was a four-section, 45 items questionnaire:

Section 1 was used to obtain the socio-demographic information of the participants (age, sex, university attended, year of graduation, period of internship, type of hospital where internship was done). Section 2 assessed the perception of internship experience (section 2A) and the perception of supervision (section 2B), which was rated on a 5-point Likert scale, ranging from strongly agree (SA) to strongly disagree (SD). Section 3 contained seven items on perception of outcomes to which each participant had to respond using a 5-point Likert scale, ranging from very useful to not useful/not Available. Section 4 contained eight items on overall perception of physiotherapy internship in Nigeria rating on a 5-point Likert scale ranging from SA to SD.

Scoring: Numerical values were assigned to each response as strongly agree/agree/very useful/useful=2, undecided/uncertain=1, and strongly disagree/disagree/not very useful/not useful=0. The maximum obtainable scores were 34, 14, 14, and 16 for sections 2a, 2b, 3, and 4, respectively. Cut-off scores were generated based on the 75th percentile and 25th percentile scores of scores obtained by participants in this study (Table 1).

To ensure wider coverage of physiotherapists in Nigeria, both web- and paper-based were employed in the distribution of the questionnaires.

Focus group

A focus guide (Appendix I) based broadly on the perception of clinical internship program was used during a focus group discussion with physiotherapists. The focus group discussion guide contained 13 questions. These questions only served as a guide as the moderator asked

Table 1 Cut-off generated from 75th and 25th percentile scores

Category	Score	Section of the questionnaire
Good perception	> 25.5	2A
Fair perception	< 25.5 but > 8.5	2A
Poor perception	< 8.5	2A
Adequate supervision or useful	> 10.5	2B and 3
Fairly adequate supervision or fairly useful	< 10.5 but > 3.5	2B and 3
Not adequate supervision or not useful	< 3.5	2B and 3
Good perception	> 12	4
Fair perception	< 12 but > 4	4
Poor perception	< 4	4

other questions and used other comments as necessary to stimulate the focus group discussion. The discussion was audio-taped. One focus group discussion was carried out and members included 2 moderators (physiotherapy researchers), a note taker (student physiotherapist), participants (nine physiotherapists), and a transcriptionist. The focus group was guided by a moderator (NO) who is knowledgeable in focus group discussions. This moderator is a physiotherapy lecturer. The note taker took notes of all vital information given by the participants during the discussion, and the researcher also recorded all information given by the participants during the discussion. The focus group discussion lasted for 90 min. The audio-taped information from the discussion was transcribed verbatim by the transcriptionist, and the content of the transcript was analyzed by categorizing linked statements into themes and identifying emerging sub-themes.

Data analysis

Survey

Data obtained was coded and entered in Microsoft Excel, and analysis was done using IBM-SPSS (version 20). Descriptive analysis such as frequency, percentages, mean and standard deviation, and charts was used to summarize data on socio-demographic characteristics of participants and data obtained from the questionnaire administered.

Focus group

Content thematic analysis was used to analyze the data obtained from the focus group discussion. This was achieved by allocating short descriptive codes to sections of the text, and codes expressing related concepts were grouped together to form themes. Data were organized using deductive thematic content analysis of key themes and narrations were presented [32]. During analysis, peer

debriefing was done to limit the possible biases related with the positionality of the moderating/interviewing author. Themes were reviewed and audited to ensure that they were grounded in the transcripts and well represented within the data with adequate examples thereby increasing the trustworthiness of the study. The lead analyst (EAB) is a biostatistician and lecturer who consults with the moderators who were physiotherapy lecturers to ensure reflexivity. An audit trail also was used to verify the validity (trustworthiness) of the study outcome.

Results

Two hundred ninety-one physiotherapists were invited to participate in the survey. One hundred and eleven copies of the online questionnaire were submitted, but only 109 completed copies were deemed fit for analysis (two were excluded because of missing responses of more than 50%). One hundred fifty-four out of the 180 hard copies of the questionnaire distributed were returned. In all, a total of 263 duly completed copies of the questionnaire were analyzed.

The mean age of the physiotherapists (147 males; 116 females) who participated in the survey was 27.4 ± 2.5 years. Majority of the participants (74.5%) was aged between 25 and 29 years. Almost half of the participants (47%) finished internship between 2016 and 2017. Majority (68.1%) of the physiotherapists had their internship in teaching hospitals (Table 2). Nine physiotherapists (7 males; 2 females) aged 28.8 ± 2.3 participated in the focus group discussion. Five responders were in teaching hospitals for their internship, two were in state hospitals and two were in Federal Medical Centres.

The results of the survey showed that most participants (97.7%) perceived their internship experience as good (Fig. 1). Fifty-seven percent strongly agreed that their internship experience helped improve their skills in clinical decision making and 68.4% respondents strongly agreed that internship experience helped them improve their skills in patient assessment. Although majority of participants (76%) perceived the supervision they received during internship as adequate, few participants (16.1%) disagreed that they had adequate supervision of

Table 2 Socio-demographic characteristics of the participants

Variable	Category	Survey n (%)	Focus group n (%)
Sex	Male	147 (56)	7 (77.8)
	Female	116 (44)	2 (22.2)
Age (year)	20–24	17 (6.5)	0 (0)
	25–29	196 (74.5)	6 (66.7)
	30–34	48 (18.3)	3 (33.3)
	35–39	2 (0.7)	0 (0)
University Attended	UI	53 (20.2)	
	UNILAG	55 (20.9)	
	OAU	50 (19)	
	UNN	44 (16.7)	
	UNIZIK	27 (10.3)	
	BUK	26 (9.9)	
	UNIMAID	7 (2.7)	
	OTHERS	1 (0.4)	
Year of internship (Periods)	2008 - 2009	9 (3.4)	1 (11.1)
	2010 - 2011	15 (5.7)	1 (11.1)
	2012 - 2013	40 (15.2)	0 (0)
	2014 - 2015	75 (28.5)	3 (33.3)
	2016 - 2017	124 (47.2)	4 (44.4)
Place of Internship	University Teaching Hospital	179 (68)	5 (55.6)
	Federal Hospital/ Medical Centre	37 (14.5)	2 (22.2)
	State/General Hospital	30 (11.3)	2 (22.2)
	Military Hospital	10 (3.8)	0 (0)
	Private Hospital	3 (1.1)	0 (0)
	Specialist Hospital	3 (1.1)	0 (0)

Key: UI University of Ibadan, UNN University of Nigeria Nsukka, UNIZIK Nnamdi Azikwe University, BUK Bayero University Kano, UNIMAID University of Maiduguri, OAU Obafemi Awolowo University, UNILAG University of Lagos

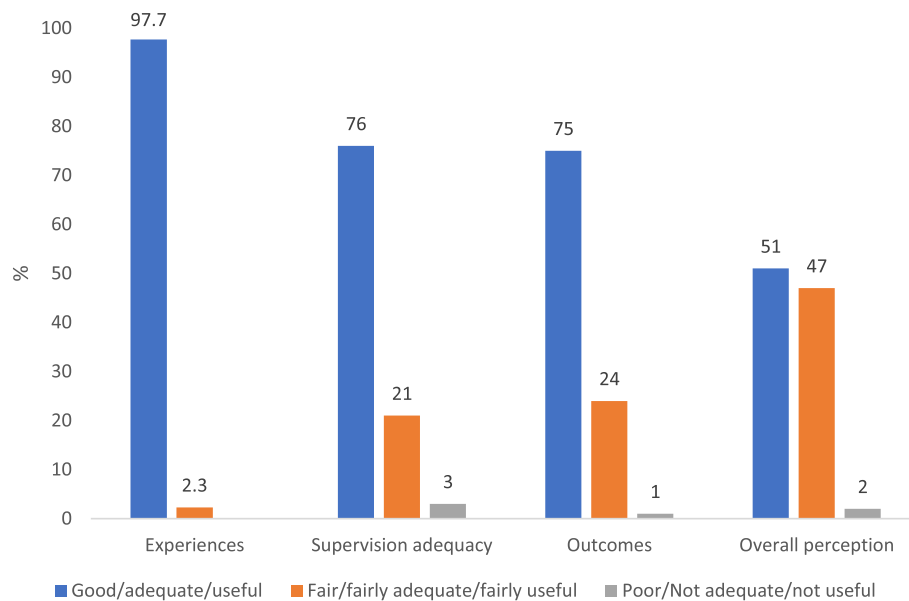


Fig. 1 Physiotherapists' perception of internship experiences, supervision adequacy, outcomes, and overall perception

their physical examination skills and only 30% strongly agreed to have adequate supervision of their patient interview skills (Fig. 1).

The outcomes of internship in terms of usefulness of learning during different work activities were perceived as useful by most participants (75%) (Fig. 1). Specifically, 92% of the participants perceived learning during ward rounds was useful, 80% of participants also indicated that learning during formal teaching by supervisors was useful. Learning during formal teaching by supervisors and informal teaching by supervisors/senior physiotherapists was perceived as useful or very useful by 79.5% and 96.1% of the participants, respectively. However, certain work activities such as participation during intern education meetings and learning during handover case discussions were reported to be unavailable by 11% and 14% of participants. Based on percentiles, participants' overall perception of physiotherapy internship in Nigeria was good (51%) and fair (47%) (Fig. 1). Fifty-five percent of the participants disagreed to the statement that physiotherapy internship in Nigeria is well organized; 93.6% agreed that physiotherapy internship was a means of providing additional workforce for hospitals rather than a training program, and 58.2% agreed to have been sometimes, unfairly treated by senior physiotherapists during their internship.

The themes and descriptions from the focus group discussion are shown in Table 3. Most of the responders said they were not formally prepared for internship

by their training institutions or receiving health institution before beginning internship. They only had informal anticipatory awareness about internship. One of them had these to say:

From my training institution, we had no formal preparation or training, none from the board either before our induction into the profession. The receiving health institution did an informal orientation to introduce us to the institution. (P3)

A responder said he had to prepare himself mentally because of his future goal.

I had a form of orientation in my final year as an undergraduate, which influenced my preparedness and self-motivation to learn as much as I could during my internship because of my future goal to go into academics. (P7)

Prior to commencement on internship, responders expected that their clinical practice would be supervised by senior physiotherapists. Some thought they would gain more knowledge and improve their professional/clinical skills. The responders had these to say:

As a fresh graduate I expected to practice what I had been taught under maximal supervision. (P5)

I expected to gain a lot of knowledge on different conditions from senior physiotherapists. (P7)

Table 3 Themes and descriptions from the study

Category	Theme	Description
Physiotherapist perception	Formal or informal preparedness for internship before starting internship	<ul style="list-style-type: none"> • Responders had received no formal preparation for internship from either their training institution or the MRTBN. • Most responders had informal preparation for internship in form of orientation or advice from training institution upon graduation • Only 2 out of 9 responders had formal orientation and introduction in their receiving health institution for internship
	Expectations before starting internship	<ul style="list-style-type: none"> • Most of them expected that their clinical work would be supervised by senior physiotherapists, to improve on their clinical skills and to increase their knowledge base on clinical conditions
	Nature of experiences during internship	<ul style="list-style-type: none"> • Only one out of nine responders reported good perception about his experience during internship. • Most of them had experiences that did not meet the expectations which they had before starting the internship.
	Outcome on clinical practice after completing internship	<ul style="list-style-type: none"> • The outcomes of internship reported by all responders were improved confidence and clinical skills.
	General overview and recommendations to improve physiotherapy internship in Nigeria	<ul style="list-style-type: none"> • Physiotherapy internship was perceived as not properly structured or organized in Nigeria • Recommendations were from availability of guidelines and instructions from the MRTBN to the receiving health institutions; improved communication between the training institutions and receiving health institutions; improved awareness among clinical physiotherapists about their roles in training interns.

I expected to learn and improve my clinical skills based on exposure. (P8)

The responders reported both negative and positive experiences. Only one responder shared positive experiences, most had negative experiences to share. One of the responders said his experience was worthwhile.

I was able to apply theoretical teachings in real life situations. There was a little bit of supervision and teaching. Communication between senior physiotherapists and interns were available. We were taught on ward-rounds and helped to make meaning of what we learnt as undergraduates. (P3)

One of them said he was not treated as a new comer or fresh graduate.

The senior physiotherapists did not acknowledge that I was fresh out of school, I was left alone to do things on my own. (P2)

Another responder said his experience differed according to the unit he was in.

My experience depended on the senior physiotherapist I worked with. Some were enthusiastic about disseminating knowledge while the others cared less. (P7)

One responder said she had to learn all by herself due to lack of supervision.

There was poor supervision and poor work ethics

by the senior physiotherapists. Most of them did not show good examples. (P5)

Some of the responders said they were compelled to do clinical procedures they did not agree with by senior physiotherapists in the unit. One of them had this to say:

Mine occurred in paediatric posting, during the management of patients with Erb's palsy, I was compelled to recommend airplane splint for all the patients presenting with Erb's palsy. Positioning and electrical stimulation were also compulsory and I belonged to the school of thought for exercises. (P5)

Most of the responders had a lot of challenges during their internship. They had these to say:

I had poor supervision and the work place setting made me struggle as an intern. (P6)

We were regarded as extra staff, working as full physiotherapists despite having only provisional licenses. (P4)

Low staff strength and lack of clear specialization units made my interest in my previously preferred field, cardiopulmonary, to drop because I could not get hands-on experience. (P1)

Some responders said the challenges they faced such as poor supervision helped build their confidence and improve some clinical skills. They had these to say:

It helped me develop confidence as a physiotherapist. (P6)

It helped to sharpen my decision making skills and ability to take initiative. (P6)

After several trial and error methods, my clinical skills improved. I was able to build confidence in carrying out some procedures which might not necessarily be correct. (P8)

One responder said it exposed disparities between theory and practice.

I noticed some disparities between theoretical and practical knowledge. (P8)

One responder said it helped him gain knowledge about practice.

During the seminar presentations as an intern, I was able to learn, make clarifications and gain more understanding. (P9)

One responder said it helped him develop professionally and it improved his sense of responsibility.

Going through internship improved my sense of responsibility and the supervision and guidance I got from some senior physiotherapists helped me develop. (P7)

Some of the responders said that the lack of structure and freedom of interns to practice under poor supervision was detrimental. Two of them had this to say:

Some interns have the freedom to carry out procedures and practice the way they wish to, which is dangerous. In as much as self-learning builds confidence, interns are prone to learning wrongly. (P4)

Unchecked over-confidence and freedom makes physiotherapy interns develop wrongly in terms of practices over time. This can also cause a proliferation of wrong practices. (P6)

The responders had different advice for improving physiotherapy internship in Nigeria. They had this to say:

Communication of guidelines and purpose of internship by the board and training institutions to the receiving/health institutions. (P7)

The MRTBN is expected to reveal expectations and expected outcomes of internship to the health institutions, not just via use of signing logbooks' (P6)

'Senior physiotherapists would be more willing and

motivated to train interns if they fully understood their expected duties and job description via sensitization programmes and periodic updates. (P2)

All the curricula for training institutions and internship should be unified to bridge the gap. Also, information/knowledge sharing between clinical and academic physiotherapists can be improved. (P8)

Discussion

The finding that majority of the participants had their internship in university teaching hospitals may suggest that physiotherapy facilities accredited by the MRTBN to employ physiotherapy interns are more in university teaching hospitals than federal or state hospitals.

Majority of participants perceived their internship experience as good, corroborating earlier studies [33, 34]. This may be due to the fact that internship experience helped them to develop their confidence in managing patients, based on the number of participants that strongly agreed and agreed that their internship experience improved their communication and human relation skills, work ethics, and attitude towards work and problem-solving skills. The questionnaire survey also showed that majority of the participants had adequate supervision. However, findings from the focus group discussion indicated that participants' experiences during the internship were negative, especially in terms of poor or lack of supervision by senior physiotherapists and the feeling that they were been used as additional workforce rather than being trained. These negative experiences or challenges, according to the responders at the focus group discussion helped to improve their confidence in clinical decision making and clinical practice because they had to undergo self-learning indicating good outcomes of their experiences. This apparent contradiction may be attributed to the fact that the questionnaire used in this study was close-ended leaving no opportunity for further expression. This gives credence to the use of focus group discussions in studies investing the people's perceptions of issues.

Only about half (51%) of the participants showed a good perception of physiotherapy internship in Nigeria. Studies outside Nigeria have shown that it is common for interns to be sometimes fairly untreated or maltreated by senior colleagues [35, 36]. This has also been shown in this study as 58.2% of the participants agreed or strongly agreed to been victims of unfair treatment. Mismatch during 1-year clinical internship is common in Nigeria [21]. This coupled with Nigeria health system dysfunction may be responsible for a substantial number of physiotherapists expressing bad perception about

the internship program. Eighty-six participants (32.7%) reported that they were undecided or agreed their expectations of internship were not met at the completion of internship. This could also be due to lack of formal guidelines indicating necessary expectations by the training institutions or the receiving health institution. More than half (54.8%) of the respondents reported that physiotherapy internship in Nigeria is not well organized compared to 23.9% that reported good perception of the organizational structure of physiotherapy internship in Nigeria. There were no found previous studies on perception of physiotherapy internship among physiotherapists in Nigeria, hence the lack of references to previous findings.

Majority of the responders from the focus group discussion reported that they had no formal preparation for internship. They had informal knowledge and preparations majorly from senior colleagues; this has also been shown in previous studies [37, 38]. Many authorities have developed measures to prepare students for internships. Tomorrow's doctor curriculum by the general medical council, UK, is an example [39]. Supervision and improvement of clinical skills and knowledge base are key expectations before commencing internship according to a study [23]. All the responders of the focus group discussion also reported and agreed on this.

Freedom given to manage patients without direct supervision during physiotherapy internship in Nigeria as shown in the study by Onigbinde [25] may be detrimental. Three responders in the focus group discussion opined that this can make interns "learn wrongly" and this process may also cause a proliferation in wrong practices. This observation had also been indicated in a study [22]. A study by Allen and Colls [40] indicated that lack of formal guidelines and instructions about the purpose and objectives of internship could lead to abuse of the program by both the interns and the trainers. Majority of the responders agreed that the physiotherapy internship program in Nigeria needs a formal guideline from the MRTBN to improve awareness of the program's purpose and aims.

Conclusion

Physiotherapy internship in Nigeria was perceived as deficient in structural organization and supervision of the interns. The outcome of internship programme was perceived as good even though the experiences were negative.

Appendix I

Focus group discussion guide

1. What were your internship experiences?
2. What were your expectations?

3. Were you assigned a supervisor in each posting?
4. How was supervision by senior colleagues?
5. Was there any formal preparation for internship? Either from your training institution or place of work.
6. How well prepared were you for the roles taken during internship?
7. How did you go about handling a case you have never seen before?
8. How have unexpected roles taken affected your practice?
9. Were you compelled to do any clinical procedure you did not agree with?
10. Should Physiotherapy internship in Nigeria go on as it currently is?
11. Were your skills were sharpened at the end of your internship?
12. How has your experience during internship affected your clinical practice?
13. What are your recommendations to improve internship and make it worthwhile?

Abbreviations

FGD: Focus group discussion; MRTBN: Medical Rehabilitation Therapists Registration Board of Nigeria; MMARS: Mixed Methods Article Reporting Standards; UI/UCH: University of Ibadan/University College Hospital; SA: Strongly Agree; SD: Strongly Disagree.

Acknowledgements

The authors appreciate all the participants.

Authors' contributions

AOA and OO made substantial contributions to the conception and design of the study; the acquisition, analysis, and interpretation of data. NO and ACO participated in the acquisition, analysis, and interpretation of the data and substantively revised the manuscript. EAO analyzed and interpreted the data while OOO and AOA drafted the manuscript and substantively revised it. The authors read and approved the final manuscript.

Funding

The authors receive no funding for this study.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Ethical approval from the University of Ibadan/University College Hospital (UI/UCH) Research Ethics Committee was obtained (approval no: UI/EC/17/0331). The participants give informed consent.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Received: 10 January 2022 Accepted: 12 March 2022

Published online: 25 May 2022

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