

Physiotherapist-patient communication in entry-level physiotherapy education: a national survey in Nigeria

Abaraogu, Ukachukwu Okoroafor; Aguji, Kaosisochukwu Rachael; Duru, Deborah Onyinyechukwu; Okafor, Udoka Chris; Ezeukwu, Antoninus Obinna; Igwe, Sylvester Emeka

Published in:
Hong Kong Physiotherapy Journal

DOI:
[10.1142/S1013702519500070](https://doi.org/10.1142/S1013702519500070)

Publication date:
2018

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in ResearchOnline](#)

Citation for published version (Harvard):
Abaraogu, UO, Aguji, KR, Duru, DO, Okafor, UC, Ezeukwu, AO & Igwe, SE 2018, 'Physiotherapist-patient communication in entry-level physiotherapy education: a national survey in Nigeria', *Hong Kong Physiotherapy Journal*, vol. 39, no. 1, pp. 77-87. <https://doi.org/10.1142/S1013702519500070>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please view our takedown policy at <https://edshare.gcu.ac.uk/id/eprint/5179> for details of how to contact us.



Physiotherapist–patient communication in entry-level physiotherapy education: A national survey in Nigeria

Ukachukwu Okoroafor Abaraogu^{1,2,*}, Kaosisochukwu Rachael Aguji¹,
 Deborah Onyinyechukwu Duru¹, Udoka Chris Okafor³,
 Antoninus Obinna Ezeukwu¹ and Sylvester Emeka Igwe^{1,4}

¹*Department of Medical Rehabilitation, Faculty of Health Science and Technology
 College of Medicine, University of Nigeria, Nsukka, Enugu, Nigeria*

²*School of Health and Life Science, Glasgow Caledonian University
 Glasgow G4 0BA, UK*

³*Department of Physiotherapy, University of Lagos, Lagos, Nigeria*

⁴*Coal City University, Emene, Enugu, Nigeria*

*ukachukwu.abaraogu@unn.edu.ng

Received 22 March 2017; Accepted 24 October 2017; Published 11 October 2018

Background: Clinical communication impacts on physiotherapy treatment outcome and its competence warrants being assessed during training for physiotherapists given the increasing need to improve patient outcomes.

Objective: This study aimed to investigate the assessment of clinical communication in entry-level physiotherapy programs in Nigeria.

Methods: In a cross-sectional survey, questionnaires were sent by e-mail or hand-delivered to the heads of physiotherapy programs, asking them to consult with faculty members involved in the assessment of clinical communication in undergraduate education.

Results: Six of seven physiotherapy programs responded (an 86% response rate). Assessment of clinical communication and methods of assessing clinical communication by the programs showed wide variation. There was an average of two assessments per year. The objective structured clinical examination with patients (21; 38%) and written communications (report/chart) (13; 23%) were the most commonly used

*Corresponding author.

assessment methods. Perceived challenges included a lack of facilities, validity, inexperienced examiners, and difficulties in integrating processes and content.

Conclusion: A variety of assessment methods are being used in entry-level physiotherapy programs in Nigeria, which target different components of clinical communication skills acquisition. More effort is needed to improve limited facilities and human resources training to enhance clinical communication assessment in Nigerian physiotherapy programs.

Keywords: Interpersonal skills; patient care communication; clinical competence; physiotherapist–patient communication.

Background

Effective communication is an essential skill that clinicians need in practice to improve the quality and efficiency of care.¹ Therapeutic outcomes in chronic long-term disease management hinge on the quality of a therapeutic alliance.^{2–4} The quality of therapeutic alliance, described as the collaborative nature, the affective bond, and the goal and task agreement between patients and clinicians,⁵ is partly determined by how clinicians and patients communicate.⁶ Hills and Kitchen⁷ posited that the safety of the patients, the quality of care they received, as well as the satisfaction they derived from healthcare services is greatly influenced by communication skills of the healthcaregivers.

Most interventions in physiotherapy are of long-term nature. Accordingly, communication skill is central to engaging patients in a therapeutic relationship, and particularly putting the patient at the center of the care as an active participant in decision-making.^{8,9} The ability to listen, respond, and convey information clearly, considerately, and sensitively is a prerequisite for a successful practice.¹⁰ A physiotherapist who is not competent in clinical communication may miss important information or may be unable to convey the information to the patient during the course of assessment, thereby leading to a wrong diagnosis and treatment. Therefore, physiotherapists are expected to communicate effectively over every area in their curriculum to provide an effective practice.

For healthcare professionals, communication skills need to be taught and learnt in a clinical context, in either clinical practice or clinically relevant simulations.^{11,12} To ensure that graduate physiotherapists are actually competent in communication skills, physiotherapy programs need to provide evidence of skill attainment demonstrated through some forms of assessment. The implication

is that during the course of study, students should be assessed on their level of competence. Miller¹³ described four models of clinical communication competence ranging from aspects of acquiring theoretical knowledge (described as “knows”), knowledge of how to apply these skills (“know-how”), being able to competently carry out the skills on specific occasions (“show-how”), to the ability to competently carry out the skills on a daily basis (“does”). Evidence suggests that integrative assessment strategies better predict clinical performance than assessment targeting a singular competence test.¹⁴ As part of being able to carry out communication skills in every patient contact, the physiotherapist necessarily needs to ensure that the patients “importantly follow through with recommended home programs.” What happens “between” physiotherapy treatments is arguably as important if not more important than the short time that patients spend with the physiotherapist. Thus, the power of communication with the physiotherapist to motivate and encourage the patient to follow through with the “homework” is critical.

There is a growing interest in communication training in the profession of physiotherapy, but research has largely been conducted in high-income countries.¹⁵ Similarly, although there is evidence in physiotherapy supporting the development of effective communication skill as an important aspect of physiotherapy education,^{16,17} time constraints within physiotherapy curriculum appear to limit focus to physical rehabilitation thereby neglecting this important aspect of clinical training.¹⁸ Consequently, there is a dearth of literature on clinical communication training in entry-level physiotherapy. A preliminary study of UK physiotherapy institutions delivering qualifying programs identified a need for more experiential teaching and observing the communication

skills with patients.¹⁵ Internationally, there is dearth of research reporting assessment of physiotherapist–patient communication.⁸

Given the increasing globalization of the health professional workforce, clinical communication training of physiotherapists is important irrespective of the country where they are trained. To the investigators' knowledge, there is no literature reporting on the clinical communication assessment methods being used in physiotherapy programs in Africa. This study, being the first of its kind in Nigeria, aimed to benchmark the current clinical communication assessment in entry-level programs in the Nigerian physiotherapy programs. Specifically, this study aimed to explore if and how clinical communication is addressed in Nigerian physiotherapy entry-level programs. We examined the methods used to assess clinical communication and the frequency of assessment within programs.

Methods

Research design

This was a cross-sectional survey of physiotherapist–patient communication assessment in entry-level physiotherapy programs in Nigeria. Heads of physiotherapy programs in Nigeria constituted the sample for this study and a convenient sampling technique was employed in recruiting eligible participants. In reporting the results of this study, broad terminologies of clinical communication are used in some instances, to refer to the construct of physiotherapist–patient communication.

Data collection procedure

A questionnaire originally developed, following extensive literature review, to undertake a national survey of clinical communication assessment in the medical programs in the UK was adopted.¹⁰ To establish the content validity, the items reported by Laidlaw and co-workers¹⁰ were selected, appraised, and further refined, by two Nigerian academics who have an interest and expertise in physiotherapist–patient communication. To do this, the questionnaires were piloted with an experienced group of six physiotherapy educators from three programs (two at each program) involved in clinical communication. Participants reported that the tool was acceptable and easy to use, and provided comments which helped refine

the questionnaire. Specifically, the responders suggested that an item relating to challenges and facilitators of clinical communication be included in the questionnaire, and the item relating to what happens to students who failed compulsory communication assessment be made open-ended. Two of the investigators independently evaluated the responses and comments and made suggestions for improving the final tool. Areas of disagreements between the two investigators were resolved by consensus.

At the commencement of data collection, there were eight entry-level physiotherapy programs in Nigeria, however, one new program had yet to admit students. This program was eliminated from the pool of eligible participating programs. Between February 2014 and July 2014, questionnaires were sent to the heads of the seven physiotherapy programs in Nigeria through e-mail or hand-delivered depending on the location and convenience. The heads of the physiotherapy programs were asked to complete the questionnaire for clinical communication assessment after consultation with faculty members involved in clinical communication assessment. Reminders were sent in the form of phone calls and e-mails. The questionnaire asked the programs to list occurrences of clinical communication assessment, recording when the assessment occurred, the types and context of assessment, and in case of practical assessment, who was involved as well as the type of scale used. Open responses were sought in some questions, including what are the greatest challenges and facilitators in the assessment of communication in your physiotherapy program?

Ethical approval

Ethical approval was obtained from the Research Ethics Committee of University of Nigeria Teaching Hospital. Written consent for participation was sought and obtained from the heads of the physiotherapy programs before they were involved in the study.

Presentation of individual reports

Data are presented in the tables of frequency, expressing the assessment method, examiner types, and frequency of assessment. Responses to questions regarding challenges and facilitators in assessing clinical communication were analyzed

thematically,¹⁹ and further synthesized using a narrative synthesis. First, a line-by-line coding of the responses was conducted. This was followed by the organization of these “codes” into related areas to construct “descriptive” themes. These descriptive themes were further development into “analytical” themes. Two of the investigators independently provided the data coding, with themes derived from the data, and consensus was reached on any discrepancies by discussion and reflection. Participants’ direct quotes are used in some instances, to illustrate the themes.

Results

The details about the physiotherapy entry-level programs in Nigeria schools and types of clinical assessment among them are presented in [Table 1](#).

Six of the seven eligible physiotherapy programs in Nigeria have comparable entry qualification requirement: credit in ordinary level (high-school level) in English, Mathematics, Biology, Chemistry, and Physics; advanced level pass in English plus two subjects chosen from Biology, Chemistry, and Physics; or a first degree in science/premedical courses.

The duration of study for the six programs is the same: five years for students who entered through the Unified Tertiary Matriculation Examination, and four years for direct-entry students. There were variations in the course offerings of the six programs. Two programs (33%) had a traditional course (emphasis on lectures); one program (17%) had a problem-based course; one program (17%) had an integrated course (similar emphasis on both lectures and didactic teaching); one program (17%) combined both integrated and problem-based learning; while one program (17%) each had a mid-sectional/semester course utilizing varied learning approaches. The mean cohort was 49 (range 30–80). Four (67%) of the six programs had no compulsory communication assessment. For the two programs with compulsory assessments, provisions like re-sits, repeat courses, or carryover of courses to the next class were made available for students who failed the assessment.

Types of clinical assessment used among the physiotherapy programs are shown in [Table 2](#). Seven methods were listed: Actor/simulated patient type of objective structured clinical examination (actor/simulated patient OSCE); objective structured clinical examination with patients

[OSCE (patients)]; long case; mini clinical evaluation exercise (mini-CEX); portfolio/reflection; written communication (report/chart); written multiple choice questions (MCQs) or short written answers (SWAs).

Totally 56 clinical communication assessments were reported across the six programs, with a mean of nine assessments per program (range 6–13). The OSCE (patients) and written communication (report/chart) were the most used methods, occurring twice in the programs on average. Three methods — OSCE (patients), written communication (report/chart), and written communication (SWAs/MCQs) — were used by all the programs, and none used a workplace method. On average, the programs assessed clinical communication in five ways.

The stages in progression of the program during which clinical communication is assessed, by whom, and the mark sheet used are shown in [Table 3](#). No assessment was recorded in the first year and only one program (17%) reported conducting clinical communication assessment in the second year. All programs assessed clinical communication during the third, fourth, and fifth years. The highest number of assessments occurred during the final (4.5 times on an average) and penultimate (three times on an average) years. Assessments were completed by physiotherapists and other health communication teachers, while one program reported inclusion of non-health professionals.

Mark sheets used by the programs in grading students in clinical communication assessment varied widely. One program did not provide answer mark sheets used in the assessment. Among the remaining five programs, two (40%) programs made use of a checklist alone; two others (40%) used both a checklist and a global rating, while one (17%) program applied a global rating alone. Respondents were asked if their clinical communication assessment is formative or summative in nature. Five (83%) of the physiotherapy programs responded that the assessments are summative, while one (17%) program included formative assessment in addition.

Four (67%) of the programs responded that they have no compulsory communication assessment for which failure would prevent progression, but communication assessment forms a significant part of their clinical examinations. Two (33%) programs, in addition to having compulsory courses like introduction to clinical, communication skills and ethics, and patient care communication as the

Table 1. Summary of information on types of clinical assessment among the physiotherapy entry-level programs in Nigeria.

Program ID	Course ID	Entry qualification	Course duration	Course type	Cohort size	Any compulsory communication assessment	What happens to students who failed the compulsory communication assessment
01	Entry level	Five-level credit in English, Biology, Chemistry, and Physics. Good first degree in science or premedical courses	Five years for UTME examination; four years for DE	Integrated and problem-based	25	None	Not applicable
02	Entry level	Five-level credit in English, Biology, Chemistry, and Physics. Good first degree in science or premedical courses. "A"-level pass in English, Biology, Chemistry, and Physics	Five years for UTME examination; four years for DE	Integrated	40	None	Not applicable
03	Entry level	Five-level credit in English, Biology, Chemistry, and Physics. Good first degree in science or premedical courses. "A"-level pass in English, Biology, Chemistry, and Physics	Five years for UTME examination; four years for DE	Problem-based	59	No	Not applicable
04	Entry level	Five-level credit in English, Biology, Chemistry, and Physics. Good first degree in science or premedical courses. "A"-level pass in English, Biology, Chemistry, and Physics	Five years for UTME examination; four years for DE	Mid-sectional/semester	60	Yes	Re-sit
05	Entry level	Five-level credit in English, Biology, Chemistry, and Physics. Good first degree in science or premedical courses. "A"-level pass in English, Biology, Chemistry, and Physics	Five years for UTME examination; four years for DE	Traditional	80	Yes	Repeat course/carryover to next class
06	Entry level	Five-level credit in English, Biology, Chemistry, and Physics. Good first degree in science or premedical courses. "A"-level pass in English, Biology, Chemistry, and Physics	Five years for UTME examination; four years for DE	Traditional	30	No	Not applicable

Notes: UTME = Unified Tertiary Matriculation Examination; DE = direct entry; Course ID: It represents the type studied; reference program studied was entry level.

Table 2. Summary of the number of occurrences and types of clinical assessment among the physiotherapy entry-level programs in Nigeria.

Program ID	OSCE (actor/simulated patient)	OSCE (real patient)	Long case	Mini-CEX	Workplace	Portfolio	Written communication (report/chart)	Written communication (SWAs/MCQs)	Total
01	2	3	0	0	0	0	2	1	8
02	2	2	1	1	0	0	4	3	13
03	0	1	2	1	0	0	1	1	6
04	1	2	1	0	0	0	2	2	8
05	1	2	1	0	0	2	2	1	9
06	1	4	2	1	0	0	2	2	12
Total	7	14	7	3	0	2	13	10	56

Notes: Program ID represents the different PT programs; numbers are given in the order of how responses were returned. OSCE: Objective Structured Clinical Examination; MCQ: multiple choice questions; SWA: short written answers; Mini-CEX: mini clinical evaluation exercise.

Table 3. Summary of the stages in the progression of Nigeria physiotherapy entry-level program at which clinical communication is assessed.

Program ID	First year of study	Second year of study	Third year of study	Fourth year of study	Fifth year of study	Total	Who assesses communication	Mark sheet used	Summative/formative
1	0	0	1	3	4	8	<ul style="list-style-type: none"> • Communication teacher, health professional • Physiotherapist 	Checklist	Summative
2	0	2	2	4	5	13	<ul style="list-style-type: none"> • Communication teacher, health professional • Communication teacher, non-health professional • Actor/simulator • Physiotherapist 	Checklist and global	Summative and formative
3	0	0	1	2	3	6	<ul style="list-style-type: none"> • Communication teacher, health professional • Physiotherapist 	Global	Summative
4	0	0	1	3	4	8	<ul style="list-style-type: none"> • Lecturers 	Checklist and global	Summative
5	0	0	1	3	5	9	<ul style="list-style-type: none"> • Physiotherapist • Communication teachers • Physiotherapist 	Checklist	Summative
6	0	0	2	4	6	12	<ul style="list-style-type: none"> • Communication teachers 	—	—

compulsory clinical courses, also reported having integrated assessment in which communication skills are assessed as part of the course and pre-requisite courses. Support for students who failed compulsory communication assessments included examination re-sits after an extended period of revision tutorials, and/or transfer to other program in the university when the student could not cope with rigor.

Respondents were asked to state what the major challenges and facilitators are in implementing clinical communication assessment in their various physiotherapy programs. Qualitative responses regarding challenges and facilitators to the assessment of clinical communication were coded and synthesized thematically. With respect to challenges, five themes emerged: uncertainty relating to validity of the method of assessment; inadequate resources and facilities compared to the student population; inexperienced examiners; difficulty in prioritizing process; and content integration.

One of the respondents stated:

“Financial and human costs are limiting factors when considering which form of assessment to adopt per time or the tool to use; but again, we are concerned that at some point the tool we have chosen may not have been the best choice to accurately measure students’ performance.”

Another respondent puts it this way:

“It’s my experience that sometimes the student who is being examined possesses a better communication skill compared to an examiner; and may result in a situation where a good student is undermarked by poorly skilled examiner.”

Themes emerging from responses regarding facilitators to assessing clinical communication were identified and included: prior budgetary provisions that considered student cohort, adequate training and retraining of personnel, and attention to validity of methods, content, and processes employed in assessment.

Discussion

This survey provides a snapshot of the status of the assessment of patient communication in the population of eligible entry-level physiotherapy programs in Nigeria. Based on our survey, the

duration of physiotherapy entry-level programs was five years for students who entered through the Unified Tertiary Matriculation Examination, and was four years for the ones who gained admission after passing the requisite “A”-level examinations or have obtained a good first degree in applicable science course. The Unified Tertiary Matriculation Examination is a requisite entrance examination for getting into the undergraduate programs of universities, polytechnics, and colleges of education in Nigeria.²⁰ Through this examination suitably qualified candidates are placed into the available places in these institutions.

Apart from the first year (when no assessment was conducted) and the second year (when only one program reported conducting assessment), Nigerian physiotherapy programs engaged in clinical communication assessment in a fairly uniform frequency — an average of three times a year. There is no benchmark study on the number of assessments in physiotherapy required to adequately assess clinical communication competence. Reports from studies in other health professions varied between 7 (Ref. 21) and 14.²² It is however difficult to argue against the reliability and generalizability of the number of assessments reported in this study because the modes of assessments also showed wide variability — which is an advantage. Involving a mixture of multiple methods of assessment has been shown to be the most effective approach to evaluating communication and interpersonal competence.²³

Our findings show that, unlike the physiotherapy programs in the UK which begin clinical communication assessment for students early in their programs,¹⁵ Nigerian physiotherapy programs assess clinical communication mostly beginning from the third year and throughout their curriculum in many ways. The durations of the UK entry-level physiotherapy programs are shorter (three or four years Bachelor of Science and two years pre-registration Master of Science physiotherapy programs)²⁴ compared to their Nigerian counterparts (five years for the students who gained entrance through the university Unified Tertiary Matriculation Exams and four years for those admitted through direct-entry admission).²⁵ These shorter program durations of the UK programs perhaps warrant clinical skill education including clinical communication to be started off early in their programs. Whether or not there is any effect of the length of the programs or the time

point at which clinical communication assessments begin during the training on the competence of the graduate has not been investigated.

For the Nigerian entry-level physiotherapy programs, the most frequent forms in which clinical communication assessments were reportedly done were the OSCE (involving patients) and writing communication (report/chart), occurring 14 times and 13 times, respectively. Again these differ with the UK programs which concentrate on theoretical knowledge over practical and experiential learning.¹⁵ The OSCE was initially described by Harden and Gleeson²⁶ in the 1970s and has since gained popularity. However, the OSCE in its most common form measures only one aspect of clinical communication from Miller's pyramid model of assessment, the "show-how" component.¹³ Laidlaw et al.¹⁰ report that using this method of assessment alone could miss out testing the other components of skills acquisition. This assertion is supported by several other researchers who independently opined that the OSCE assessment has little correlation with the assessment of knowledge, verbal competence, or written communication, and called for the use of several methods to ensure rounded assessment.²⁷⁻²⁹

It is important to highlight, however, that from this study Nigerian physiotherapy programs were reported to use an average of five methods of assessment, including the written communication (SWAs/MCQs) and written communication (report/chart) assessments. The SWAs and the MCQs could be used to address student responses to patient attitude, while the written communication (report/chart) could be used to either test student knowledge about management strategies or explore students' communication skills through presentation of cases associated with challenging communication issues. The present study did not inquire from our respondents what communication skill was targeted by the use of each specific assessment methods. This needs to be further examined in future studies.

In this study, the OSCE was used mostly during the senior years, with five out of the six programs using only the OSCE (patients) in 75% of assessments in the fifth year. Similar finding was reported among the UK physiotherapy programs.¹⁵ Like these UK physiotherapy programs, knowledge assessment was more common in the early years, through written communication like the MCQs, reports, and charts. Long cases were used

throughout the duration of the study. The aspect of understanding how to apply that knowledge ("know-how") through portfolio and performance ("does") seems to be lacking in these programs, as only one program engaged in the portfolio method and no program engaged in the workplace-based method. This is certainly an area needing improvement, as certain outcomes such as attitudes and professionalism, which are difficult to assess by traditional methods, could be accurately evaluated by portfolio assessment.³⁰ Attributes relating to attitudes and professionalism are increasingly emphasized in the proposal on contemporary and future direction of physiotherapy training and practice.³¹

This study considered the issue of examiners. Assessments were carried out mainly by the physiotherapists with patients sometimes involved as examiners. This finding is encouraging given the experts opinion that evaluation of competence in communication should be based on direct observation by persons who competently perform these skills,³² and actual participants in an interaction may be better placed to judge the appropriateness of the communication than an impartial observer.³⁰ Involving patients as evaluators may give accuracy to evaluation of some of the interpersonal skills that create the therapeutic relationship.³³ Although physiotherapists were mostly involved in the assessment, it was not clear if physiotherapy clinicians were part of the assessments or whether only academic physiotherapists were involved. This warrants further investigation.

Several challenges were reported by the respondents in assessing clinical communication, which were grouped under four main themes: validity; difficulty in prioritizing process and content integration; inadequate resources and facilities compared to the student population; and incompetent examiners. Addressing these challenges may promote the effectiveness of assessment and perhaps competence of clinical communication in students. As reported by the respondents, prior budgetary provisions that considered student cohort size may ensure that adequate arrangement are made in time. Generally, funding is a major issue to the Nigerian institutions.³⁴ All the physiotherapy programs are within the public institutions and solely depend on government funding. Some of the respondents posited that clinical communication generally, and more particularly in physiotherapy clinical education, appears to

compete with other priority funding. Accordingly, resource allocation may be generally skewed towards funding teachings centered on imbibing theoretical knowledge and understanding of disease. Again this calls for review of stakeholders' priority to explore how best generic skill and attributes in area such as physiotherapist–patient communication are included as a priority within current teaching in physiotherapy entry-level training.

Similarly, there is a need for adequate training of those involved in clinical communication teaching and assessment. Generally, there is a dearth of literature regarding adequacy of skills possessed by physiotherapy educators to efficiently conduct clinical communication assessment, and particularly in Africa. Nonetheless, several challenges have been documented,¹⁵ as well as responses from the present study. For instance, respondents in this study typically expressed as a barrier the perceived lack of competence by some examiners; and the possibility of this leading to a situation where a student is underscored. While this may indicate the need for personnel competence training, there was no clear evidence whether or not graduates of these physiotherapy programs are in fact competent in therapist–patient communication based on the current approach. Nonetheless, there is an increasing call for evidence-based clinical education as the foundation for future evidence-based practice of entry-level practitioners.³⁵ Similarly, there is a growing demand that health professional educators be held accountable to the funds invested in training healthcare professionals.³⁶ These demands, in addition to the barriers raised by our respondents, highlight the need for future investigation of the clinical communication competence possessed by the entry-level graduates of these programs in order to evaluate if the current approach needs amendment.

Ensuring that entry-level graduates possess the clinical communication skill required for optimum interaction with patients is the responsibility of the clinical educators and the education programs they represent. Whether or not these are in place is a subject of growing research focus. Although challenges were reported by the respondents, it is not apparent whether or not the identified challenges are greater for the specific assessment type. This is so given that our questionnaire did not seek information on the assessment-type specific challenges. Arguably, this information may be important for a

tailored intervention. Among others, studies establishing specific assessment-type challenges are needed to inform intervention for improving the training and assessment of physiotherapist–patient communication in entry-level physiotherapy program in Nigeria.

This study provides a base, albeit modest, from which future studies can be developed. Despite its general modesty, there are implications for at least beginning to reflect on optimal physiotherapist–patient communication in physiotherapy professional programs around the world. Specifically, strengthening the physiotherapist–patient communication in entry-level curricula needs to be a priority clinical competency required to be taught and evaluated comparable to other clinical competencies. There are few research works on the medical professionals that have examined the elements of strong positive communication with patients (e.g., trust, respect).

In addition, research is needed from the patient's perspective. Do the patients feel respected, do they feel trusting, do they believe their treatment was well explained, do they believe their “home programs” are well described, do the physiotherapists follow up each visit, are the physiotherapists motivating and encouraged adherence, and do the physiotherapists show alternatives if the patient was unable to follow through with the “home programs?” Finally, given the variability of the findings across Nigerian programs, not only are the studies needed in other countries, but minimum accreditable standards (like other clinical competencies) may be needed to minimize variability.

Conclusion

Assessment of physiotherapist–patient skills in entry-level programs of Nigeria's physiotherapy programs seems adequate to meet the standard for inclusion of clinical communication skill, as prescribed by Norcini *et al.*³⁷ and Guiton *et al.*²¹ Physiotherapy students have their clinical communication assessed on an average of three times a year. The OSCE and written communication were the most common forms of assessment used by programs. It is encouraging that a variety of assessment methods were used, and these methods target different components of clinical communication skills.

Limitations

There are several limitations in this study. First, although the first ever attempt to benchmark therapist–patient communication assessment in physiotherapy program in Africa, data collection relied on heads of departments of the physiotherapy programs instead of all persons involved in the assessment. Although an 85% response rate was achieved, this is still not a comprehensive report of the clinical communication assessment occurring within Nigerian physiotherapy programs, as it relies on a self-report from the heads of the programs. However, it does provide a snapshot of the assessment practices in this area in the majority of programs. Whereas the heads of the programs were requested to consult staffs involved in the assessment prior to completing the questionnaire, the fidelity of this could not be guaranteed as no questions probed regarding the number of assessors each program had or how many were actually consulted. This is another limitation of this study. Furthermore, the nature of the questionnaire did not provide the opportunity for answers to some subtle but important questions. For example, we did not inquire if challenges noted by the respondents were greater for any specific assessment type. Also, emphasis of the present research was on the assessment and not the content and the teaching of patient communication. Given that clinical communication is a singular important competency, its content and teaching in the undergraduate curriculum warrant being assessed. Lastly, in a bid to get optimum response rate, we administered the questionnaire in different ways — e-mail and hand delivery. This might have implications for response rates. These deficiencies should be addressed in future researches.

Conflict of Interest

The authors have no conflict of interest to declare.

Funding/Support

This research was a self-funded study.

Author Contributions

Ukachukwu Okoroafor Abaraogu: Study conception, design, data collection, and analysis and

critical revision of the manuscript. Kaosisochukwu Rachael Aguji: Contributed to the study design, data collection and analysis, and initial drafting of the manuscript. Deborah Onyinyechukwu Duru: Study design, data collection and analysis, and manuscript drafting. Udoka Chris Okafor: Study design, data collection, and critical revision of the manuscript. Antoninus Obinna Ezeukwu: Study design, data analysis, and critical revision of the manuscript. Sylvester Emeka Igwe: Study conception, data analysis, and critical revision of the manuscript. All authors approved the final version of this manuscript.

References

1. Mauksch LB, Dugdale DC, Dodson S, Epstein R. Relationship, communication, and efficiency in the medical encounter: Creating a clinical model from a literature review. *Arch Intern Med* 2008;168:1387–95.
2. Hall AM, Ferreira PH, Maher CG, Latimer J, Ferreira ML. The influence of the therapist-patient relationship on treatment outcome in physical rehabilitation: A systematic review. *Phys Ther* 2010;90:1099–110.
3. Ferreira P, et al. The therapeutic alliance between physiotherapists and patients predicts outcome in chronic low back pain. In: *Proceedings of the International Forum X Primary Care Research on Low Back Pain*, Boston, USA, 2009:131.
4. Fuertes JN, Mislowack A, Bennett J, Paul L, Gilbert TC, Fontan G, Boylan LS. The physician-patient working alliance. *Patient Educ Couns* 2007;66:29–36.
5. Kidd MO, Bond CH, Bell ML. Patients' perspectives of patient-centredness as important in musculoskeletal physiotherapy interactions: A qualitative study. *Physiotherapy* 2011;97:154–62.
6. Pinto RZ, Ferreira ML, Oliveira VC, Franco MR, Adams R, Maher CG, Ferreira PH. Patient-centred communication is associated with positive therapeutic alliance: A systematic review. *J Physiother* 2012;58:77–87.
7. Hills R, Kitchen S. Satisfaction with outpatient physiotherapy: Focus groups to explore the views of patients with acute and chronic musculoskeletal conditions. *Physiother Theory Pract* 2007;23(1): 1–20.
8. Woodward-Kron R, van Die D, Webb G, Pill J, Elder C, McNamara T, Manias E, McColl G. Perspectives from physiotherapy supervisors on student-patient communication. *Int J Med Educ* 2012;3:166–74.

9. Resnik L, Jensen GM. Using clinical outcomes to explore the theory of expert practice in physiotherapy. *Phys Ther* 2003;83(12):1090-106.
10. Laidlaw A, Salisbury H, Doherty EM, Wiskin C. UK Council for Clinical Communication in Undergraduate Medical Education: National survey of clinical communication assessment in medical education in the United Kingdom (UK). *BMC Med Educ* 2014;14:10. doi: 10.1186/1472-6920-14-10.
11. Kurtz S, Silverman J, Benson J, Draper J. Marrying content and process in clinical method teaching: Enhancing the Calgary-Cambridge Guides. *Acad Med* 2003;78:802-9.
12. Silverman J. Teaching clinical communication: A mainstream activity or just a minority sport? *Portland Educ Couns* 2009;76:361-7.
13. Miller GE. The assessment of clinical skills/competence/performance. *Acad Med* 1990;65(9):S63-7.
14. Wilkinson TJ, Frampton CM. Comprehensive undergraduate medical assessments improve prediction of clinical performance. *Med Educ* 2004;38(10):1111-6.
15. Parry RH, Brown K. Teaching and learning communication skills in physiotherapy: What is done and how should it be done? *Physiotherapy* 2009;95:294-301.
16. Goldingay S. Communication and assessment: What are the issues for physiotherapists? In: Gifford L, ed. *Topical Issues in Pain 5*. Falmouth, UK: CNS Press, 2006:57.
17. Stenmar L, Nordholm LA. Swedish physical therapists' beliefs on what makes therapy work. *Phys Ther* 1994;74:1034-9.
18. Reynolds F. *Communication and Clinical Effectiveness in Rehabilitation*. Edinburgh: Elsevier/Butterworth-Heinemann, 2005.
19. Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol* 2008;8:45.
20. The Joint Admission and Matriculation Board. About Jamb: Board History. Available at: http://jamb.gov.ng/About_JAMB.aspx. Accessed on 26 March 2016.
21. Guiton G, Hodgson C, Delandshere G, Wilkerson L. Communication skills in standardized-patient assessment of final-year medical students: A psychometric study. *Adv Health Sci Edu Theory Pract* 2004;9:179-87.
22. Norcini JJ, Blank LL, Duffy FD, Fortna GS. The mini-CEX: A method for assessing clinical skills. *Ann Intern Med* 2003;138:476-81.
23. Epstein RM, Hundert EM. Defining and assessing professional competence. *JAMA* 2002;287:226-35.
24. NHS Health Education England. Explore roles: Entry requirement and training (physiotherapist). 2017. Available at: <https://www.healthcareers.nhs.uk/explore-roles/allied-health-professionals/physiotherapist/entry-requirements-and-training>. Accessed on 5 January 2017.
25. Medical Rehabilitation Therapists (Registration) Board of Nigeria (2009). Harmonized curriculum of studies for the Bachelor of Physiotherapy (B.PT) degree programme in Nigerian universities. Available at: <http://www.mrtbnigeria.org.ng/media/archive1/docs/curricula/professional/BPTCurriculum.pdf>. Accessed on 5 January 2017.
26. Harden RM, Gleeson FA. Medical education booklet no. 8: Assessment of clinical competence using an objective structured clinical examination (OSCE). *Med Educ* 1979;13(1):39-54.
27. Humphris GM. Communication skills knowledge, understanding and OSCE performance in medical trainees: A multivariate prospective study using structural equation modelling. *Med Educ* 2002;36:842-52.
28. Boulet J, Rebbeschi T, Denton E, Mckinley D, Whelan G. Assessing the written communication skills of medical school graduates. *Adv Health Sci Edu Theory Pract* 2004;9:47-60.
29. Nuovo J, Bertakis KD, Azari R. Assessing resident's knowledge and communication skills using four different evaluation tools. *Med Educ* 2006;40(7):630-6.
30. Davis MH, Ponnampuruma GG. Portfolio assessment. *J Vet Med Educ* 2005;32(3):279-84.
31. Hunt A, Adamson B, Higgs J, Harris L. University education and the physiotherapy professional. *Physiotherapy* 1998;84(6):264-73.
32. Duffy FD, Gordon GH, Whelan G, Cole-Kelly K, Frankel R. Assessing competence in communication and interpersonal skills: The Kalamazoo II report. *Acad Med* 2004;79(6):495-507.
33. Zoppi K, Epstein R. Is communication a skill? Communication behaviours and being in relation. *Fam Med* 2009;34(5):319-24.
34. United States Embassy in Nigeria. Nigeria Education Fact Sheet 2012. Available at: <http://photos.state.gov/libraries/nigeria/487468/pdfs/JanuaryEducationFactSheet.pdf>. Accessed 15 March 2017.
35. Olsen NR, Bradley P, Lomborg K, Nortvedt MW. Evidence based practice in clinical physiotherapy education: A qualitative interpretive description. *BMC Med Educ* 2013;13:52.
36. Rowe K, Moodley K. Patients as consumers of health care in South Africa: The ethical and legal implications. *BMC Med Ethics* 2013;14:15.
37. Norcini J, Anderson B, Bollela V, Burch V, Costa MJ, Duviver R, Galbraith R, Hays R, Kent A, Perrott V, Roberts T. Criteria for good Assessment: Consensus statement and recommendations from the Ottawa 2010 Conference. *Med Teach* 2011;33:206-14.