

Evidence-Based Practice: Knowledge, Attitudes And Beliefs Of Physiotherapists In Nigeria

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Citation

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Abstract

Background & Purpose: The physiotherapy profession has been undergoing a period of change and have been encouraged to prove the effectiveness of clinical interventions by scientific evidence. This study was therefore designed to describe the knowledge, attitudes and beliefs of physiotherapists in Nigeria to evidence-based practice (EBP) and to generate the relationship between these attributes and practice.

Methods: A total of 280 questionnaires were distributed and 217 were returned. Participants were required to complete a 45 item closed ended questionnaire, which collected information on demographic data, practice settings, knowledge, attitudes and beliefs regarding EBP. Responses were summarized for each item, and general log linear analyses as well as Pearson chi-square test were used to examine relationships among variables at 95% confident interval.

Results: Respondents agreed that the use of EBP was necessary and that the quality of patient care was better when evidence was used, with the younger physiotherapists at the fore front. About 50% of the respondents had access to online information; the majority of these respondents only had time to access the internet more at home rather than at work place. The primary barrier to implementing EBP was insufficient time. Statistical analysis showed there was a significant correlation between understandings and implementation of EBP and educational attainment and/or years since licensure.

Conclusion: The respondents had a positive attitude towards EBP and were interested in improving the skills necessary to implement EBP. There was a need to increase the use of EBP in clinical practice and decision making among Physiotherapists. The respondents who were recently licensed and those with post-graduate education expressed more positive attitudes toward EBP than those who were not.

INTRODUCTION

The physiotherapy profession has been undergoing a period of change as a result of pressure from different health professional group in recent times. In order to meet this challenges, physiotherapists (PTs) have been encouraged to prove the effectiveness of their interventions through scientific evidence known as evidence-based practice.^{1,2} Evidence-based practice (EBP) is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient.² It is the integration of the best available clinical research evidence with clinical experience and patient value.³ There is growing acceptance of EBP within the international physiotherapy community and it is referred to as evidence-based Physiotherapy.⁴

Evidence-based physiotherapy has become feasible with the enormous increase in the volume and accessibility of high

quality clinical research in recent years. More than 70 articles pertaining directly to EBP have appeared in professional journals lately.⁵ The demand for and interest in applying evidence to physiotherapy practice has grown in the past decade. This is evidenced by the increase in publications of articles related to evidence in physiotherapy practice.^{6,7} Studies have shown that clinically relevant researches as well as clinical expertise are important component of EBP, and that identification and application of patient's preferences should be part of clinical decision making.⁴

The concept of EBP marks a shift among health care professionals from a traditional emphasis on action based on the "opinions of authorities to guide clinical practice" to an emphasis on "data based clinically relevant studies and researches".⁸ Although strongly held views based on belief rather than sound information still exerts much influence in healthcare delivery.⁹ EBP has gradually been widely

adopted by the physiotherapy profession in recent times, although its importance was identified decades ago. However, there are a number of challenges for PTs who are attempting to use research to aid clinical decision-making, and most of these challenges have been grouped into three areas; research methods, clinician's skill, and administrative factors.¹⁰

The goal of EBP highlighted by Harisson⁵ is to use the knowledge created by scientific research in clinical practice. Much of what PTs do awaits definitive research to establish its efficacy. In many instances there is little evidence to support or refute current practices. Clinicians' negative attitudes about research further compound the difficulties.¹¹ Most clinicians want to provide the best possible care for their patients, when they do not, it is usually due to a lack of knowledge, their attitudes or their beliefs.¹² The transition to EBP may not readily occur if clinicians do not know about the evidence, do not understand it, believe it, or know it.

At the 13th general meeting of the World Confederation for Physiotherapy (WCPT) in 1995, several "Declarations of Principle" were adopted relative to EBP. One of the principles adopted include the fact that PTs have a duty and responsibility to use techniques and technologies that have been evaluated scientifically.⁵

Despite numerous calls for a shift toward the use of research and scientific evidence to guide practice, most PTs continued to base practice decisions largely on anecdotal evidence, intuition, and trial and error and utilize treatment techniques with little scientific support.^{13,14} Physiotherapists appeared to rely more heavily on initial education and training when selecting treatment techniques or modalities instead of using scientific evidence to guide practice thus; clinical decision making had been guided by personal experience and expert opinion.¹³

It is not clear to what extent PTs in Nigeria has been integrated into this newer model of clinical practice. Till date PTs, particularly those in Nigeria are still faced with many questions and uncertainties about the relevance of EBP to clinical practice, more so there seems to be little research regarding the knowledge, attitudes and beliefs of PTs in Nigeria to EBP. This study was therefore designed to determine the knowledge, attitudes and beliefs of PTs in Nigeria towards EBP.

MATERIAL AND METHODS

PARTICIPANTS

The respondents for this study were PTs who were member of the Nigerian Society of Physiotherapy (NSP) practicing in various Hospitals and Clinics within Nigeria with at least two years post qualification. They included all grades of PTs working in primary health care centres, state government owned hospitals, University Teaching Hospitals, Federal Medical Centres, private physiotherapy clinics, homes and schools of children with special needs, old people home, sports centres and physiotherapy training institutions. The participants are described in Table 1.

QUESTIONNAIRE DESIGN

The study was descriptive survey using a structured 45-items closed ended questionnaire, adapted from a similar study by McColl et al¹⁵ which inquire about the evidence-based medicine among general practitioners in the USA.

The questionnaire was divided into three parts, the first part obtained demographic and personal data, years since licensure, highest educational qualification, years of experience and work setting, number of patient treated and status as a PT. The second part contained information on attitudes and belief about EBP, level of attention to and use of literatures, while the third part contained information on interest in and motivation to engage in EBP, access to and availability of information to promote EBP, and the perceived barrier to the use of EBP.

QUESTIONNAIRE ADMINISTRATION

The questionnaire was distributed in two phases; first, it was distributed to PTs during the 2006 Annual Scientific Conference of the NSP, held in October 2006 in Ibadan, Oyo State Southwestern Nigeria. The second phase involved a personal visitation to various physiotherapy departments in hospital in the southwestern part of Nigeria. A directory of PTs in Nigeria by Akintaro¹⁶ served as a guide. A total of 217 copies of the questionnaire, out of 280 copies administered, were properly completed and returned, providing a 78% response rate.

SCORING

Responses to most items concerning attitudes, belief and education, knowledge and skill related to EBP was scored using a 5-point likert scale with 'strongly disagree' and 'strongly agree' as anchor. Several items related to access information requires 'yes/no' response.

Items with a 5-point Likert scale and a positive response set

(i.e. agreement with the statement suggested positive regard for EBP), the 'strongly agree' and the 'agree' categories were combined. Strongly disagree and disagree categories were combined so that responses fall into either 'agree' or 'disagree'. For the 'yes/no/do not know' choice set, the 'do not know' category was combined with the 'no' category, based on the belief that lack of knowledge about whether a facility has access to the internet was as unhelpful to a respondent as not having access.

Items categorized by the number of times articles were read or database were accessed in an average month, the lowest category (i.e. less than 2) was distinguished from the higher categories based on our belief that the lowest level of access represented poor attention to the literature that was inconsistent with the intent of EBP.

DATA ANALYSIS

The data collected were analyzed using the SPSS version 10.0 for Microsoft windows. Data were summarized using percentages, mean and standard deviation and charts. General log linear analysis and Pearson chi-square tests were used to determine significant associations between variables at 95% confident interval.

RESULTS

CLINICAL CHARACTERISTICS, EDUCATIONAL ATTAINMENT AND WORK EXPERIENCE

Sixty three percent and 37% of the respondents were male and female PTs respectively. The ages ranged between less than 20 and 70 years with the majority between the ranges of 30 – 39 years. The majority (67%) of the respondents had first degree in physiotherapy and (33%) had post-graduate degree {masters degree = 54 (25%); doctorate degree = 18 (8%)}. Eighty three percent of the respondents were clinicians. Fifty six percent of the respondents practice physiotherapy in federal government hospital (teaching hospitals and federal medical centers). Forty three percent of the respondent had been licensed for between 6 - 10 years, 19% less than three years, 17% between 3 and 5 years and 21% licensed for more than 10 years. Ninety-eight (45%) respondents treated between 5-10 patients daily, 16% less than 5 patients, 18% treated between 11 & 15 patients daily (Table 1).

ATTITUDES AND BELIEFS TO EBP

Respondents stated that they held general attitudes and beliefs regarding EBP, with the majority contending that: they agreed or strongly agreed that EBP is necessary (99%),

literature is useful to practice (98%), EBP improves the quality of patient care (98%), that they needed to increase the use of evidence in their daily practice (99%), and evidence helps in decision making (88%). Sixty nine percent stated they either disagreed or strongly disagreed that using EBP places unreasonable demand on them. Respondents chose a neutral (indifferent) response more frequently than other responses when asked whether EBP takes into account the limitation of their practice setting (32%), and increases reimbursement rates (35%) (Table 2).

EDUCATION, KNOWLEDGE AND SKILL

The respondents were diverse in expressing whether or not they had completed educational sessions either in school or through continuing education on EBP or search strategies. Forty seven percent disagreed or strongly disagreed that their facility supports the use of research. Twenty six percent agreed or strongly agreed that they learnt EBP as part of academic pursuit. Twenty nine percent agreed or strongly agreed that they were confident in their ability to critically review professional literatures.

ATTENTION TO LITERATURE & ACCESS TO AND AVAILABILITY OF LITERATURE

In this category, we included literature related to clinical practice, using literature to inform decision making, and searching for relevant literature using online database. Eight percent of the respondents reported reading fewer than 2 articles in a typical month. The majority of the respondents (72%) reported reading between 2 and 5 articles in a month. Twenty eight percent reported performing fewer than 2 database searches in a month. Fifty six percent respondents reported using professional literature in the process of clinical decision making between 2 to 5 times per month (Table 3). Fifty one percent of the respondents has access to online database at work place (e.g. MEDLINE and CINAHL) while majority (64%) has access to paper journal. Also 80% has access to online practice guideline (Table 4).

Analysis between respondents' age, attitudes, beliefs, knowledge, year since licensure, knowledge of meta-analysis and confident interval is described in table 5. Statistical analysis (Chi square test) showed that there was a significant association between year since licensure and respondents' self-reported knowledge of meta-analysis and confidence intervals, thus respondents with less than 5 years since licensure appeared to have more knowledge of these terms than those with greater than 15 years since licensure. There was also a significant association between age, education

attainment and knowledge (and skills) of EBP (i.e. search strategies and use of databases). The younger PTs appeared to be more familiar with EBP and were more confidence in the use of evidence in their practice.

BARRIERS TO EBP

In 136 (64%) of the respondents, insufficient time was the most reported important barrier to the use of EBP. Eighty seven percent of the respondents rated insufficient time as one of the top three barriers. Eighty-nine (41%) of the respondents rated lack of information resources and 37% rated the inability to apply findings to individual patients with unique characteristics as important barriers while lack of interest was chosen as important barrier by 10% of the respondents (Figure 1).

Figure 1

Table 1: Demographic & Clinical Characteristics of Respondents

| Characteristics | Frequency (n) | Percentage (%) |
|--------------------------------------|---------------|----------------|
| Sex | | |
| Male | 137 | 63 |
| Female | 80 | 37 |
| Total | 217 | 100 |
| Age distribution | | |
| < 20 - 29 years | 59 | 27 |
| 30 - 39 years | 126 | 58 |
| 40 - 49 years | 27 | 13 |
| >50 years | 5 | 2 |
| Total | 217 | 100 |
| Qualification | | |
| Bachelor | 145 | 67 |
| Master | 54 | 25 |
| Doctorate | 18 | 8 |
| Total | 217 | 100 |
| Year since Licensure | | |
| < 3 years | 41 | 19 |
| 3 - 5 years | 36 | 17 |
| 6 - 10 years | 94 | 43 |
| > 10 years | 46 | 21 |
| Total | 217 | 100 |
| No of Patient treated per Day | | |
| < 5 | 34 | 16 |
| 5 - 10 | 98 | 45 |
| 11 - 15 | 38 | 18 |
| >15 | 47 | 22 |
| Total | 217 | 100 |
| Work setting | | |
| Rural | 5 | 2 |
| Urban | 189 | 87 |
| Sub - Urban | 23 | 11 |
| Total | 217 | 100 |

Figure 2

Table 2: Responses of Subjects about Attitude, Belief & Knowledge on EBP

| RESPONDENTS' ATTITUDES & BELIEF TO EBP (N = 217) | Strongly Agree n % | Agree n % | Indifferent n % | Disagree n % | Strongly Agree n % |
|---|-----------------------|--------------|--------------------|-----------------|-----------------------|
| EBP is necessary in physiotherapy practice | 189 87 | 27 12 | 1 1 | 0 0 | 0 0 |
| Literature and research findings useful in practice | 161 74 | 52 24 | 2 1 | 2 1 | 0 0 |
| I need to increase the use of evidence in my daily practice | 154 70 | 62 29 | 1 1 | 0 1 | 0 0 |
| Adoption of EBP places unreasonable demand on the physiotherapist | 16 7 | 19 9 | 32 15 | 33 24 | 97 45 |
| Interested in learning skills to incorporate EBP in my practice | 152 70 | 59 27 | 3 1 | 3 1 | 0 0 |
| EBP improves quality of patient care. | 166 77 | 46 21 | 4 2 | 1 1 | 0 0 |
| EBP does not take into account limitation in clinical practice | 36 17 | 49 23 | 70 32 | 38 18 | 24 12 |
| Reimbursement rate will increase with incorporation of EBP | 30 23 | 33 16 | 76 35 | 27 12 | 28 13 |
| Strong evidence lacking in most interventions used | 14 7 | 38 18 | 34 16 | 95 44 | 36 17 |
| EBP helps make decision about patient care | 116 53 | 75 35 | 22 10 | 3 1 | 1 1 |
| EBP does not take into account patient preferences | 17 8 | 29 13 | 51 24 | 70 32 | 30 23 |
| Responses Related to Education, Knowledge and Skills Associated with EBP (N = 217) | | | | | |
| Faculty Supports use of current researchers | 17 8 | 36 12 | 72 33 | 90 41 | 12 6 |
| Learned foundation of EBP as part of Academic pursuit | 24 11 | 32 15 | 68 31 | 75 35 | 18 8 |
| Formal training in search engines | 44 20 | 39 18 | 69 31 | 52 24 | 13 6 |
| Familiar with search engines | 21 10 | 18 8 | 76 35 | 90 41 | 12 6 |
| Formal training in critical appraisal of research literatures | 31 14 | 42 19 | 62 29 | 67 31 | 13 7 |
| Confident in ability to critically review professional literatures | 18 8 | 45 21 | 74 34 | 78 36 | 2 1 |
| Confident in the ability to find relevant research | 10 5 | 27 12 | 72 33 | 106 49 | 2 1 |

Figure 3

Table 3: Responses of Subjects to Literature Search

| | Read Literature Search per Month n % | Use Professional Literature Search per Month n % | Use Database Search per Month n % |
|---------|--|--|---|
| 1 | 18 8 | 12 6 | 61 28 |
| 2 - 5 | 157 72 | 122 56 | 98 45 |
| 6 - 10 | 41 19 | 63 29 | 38 18 |
| 11 - 15 | 1 1 | 20 9 | 20 9 |
| Total | 217 100 | 217 100 | 217 100 |

Figure 4

Table 4: Responses Related to Access to & Availability to Literature/Journals

| Availability of Literature | Yes n % | No n % | Don't Know n % |
|--|------------|-----------|-------------------|
| Access to paper Journals | 138 64 | 69 32 | 10 4 |
| Relevant practice guideline availability | 180 83 | 11 5 | 26 12 |
| Access to online practice guidelines | 174 80 | 25 12 | 18 8 |
| Access to online database at work | 111 51 | 98 45 | 8 4 |
| Access online database away from work | 170 78 | 42 19 | 5 2 |

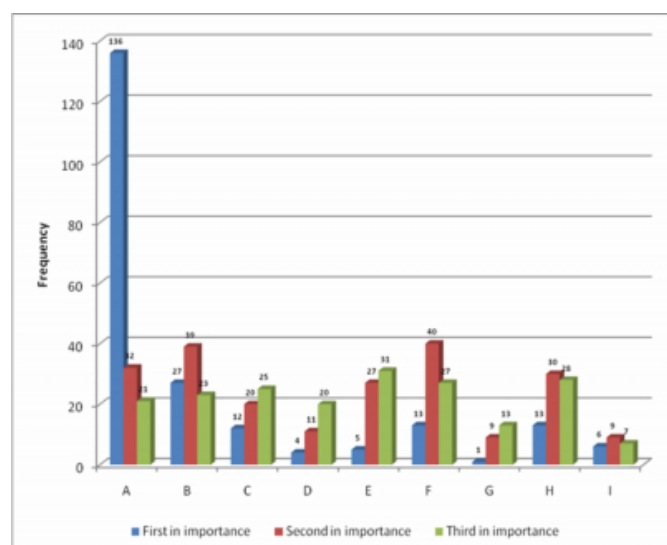
Figure 5

Table 5: Analysis between Respondents' Age, Attitudes, Beliefs, knowledge, Year since Licensure, Knowledge of Meta-Analysis and Confident Interval.

| EBP Variables | 20-29 yrs n % | 30-39 yrs n (%) | 40-49 yrs n (%) | 50+ yrs n (%) | X ² | p-value |
|--|---------------------|----------------------|-----------------------|----------------------|----------------|---------|
| Age, Attitudes & Beliefs: | | | | | | |
| EBP is Necessary | 59 27.2 | 125 57.6 | 27 12.4 | 5 2.3 | 6506 | <0.001 |
| EBP improves patient care | 58 26.7 | 125 57.6 | 29 13.4 | 5 2.3 | 6963 | <0.001 |
| EBP improves reimbursement rates | 22 10.1 | 54 24.9 | 9 4.1 | 3 1.4 | 7852 | <0.001 |
| Age, Education & Knowledge: | | | | | | |
| Formal Training in Critical Appraisal | 34 15.7 | 78 36.0 | 17 7.8 | 2 0.9 | 8721 | <0.001 |
| Formal Training in Search Strategies | 33 15.2 | 64 29.5 | 20 9.2 | 3 1.4 | 7829 | <0.001 |
| Familiar with Medical Search Engine | 46 21.2 | 96 44.2 | 20 9.2 | 3 1.4 | 7621 | <0.001 |
| Critical Literature Review Confidence | 41 18.9 | 99 45.6 | 17 7.8 | 3 1.4 | 8430 | <0.001 |
| Year since Licensure, Attitudes & Beliefs: | | | | | | |
| EBP is Necessary | <3 years 42 19.4 | 3-5 years 34 15.7 | 6-10 years 95 43.8 | 10+ years 46 21.2 | 6506 | <0.001 |
| EBP improves patient care | 42 19.4 | 38 17.5 | 92 42.4 | 45 20.7 | 6963 | <0.001 |
| EBP improves reimbursement rates | 22 10.1 | 16 7.4 | 28 12.9 | 20 9.2 | 7852 | <0.001 |
| Years since Licensure and Knowledge of Meta-Analysis & Confident Interval | | | | | | |
| Meta-analysis | 22 10.1 | 18 8.3 | 56 25.8 | 26 12.0 | 6897 | <0.001 |
| Confident-interval | 32 14.7 | 29 13.4 | 82 37.8 | 31 14.3 | 7641 | <0.001 |

Figure 6

Figure 1: Frequency Distribution of Respondents on Barriers to the use of EBP.



KEYS

A = Insufficient time B = Lack of information resources C = Lack of research skill D = Poor ability to critically appraise E = Lack of generalisability of the literature findings to patient F = inability to apply research findings to individual patient with unique characteristic G = Lack of understanding of statistical analysis H = Lack of collective support among colleague I = Lack of interest

DISCUSSION

ATTITUDES AND BELIEFS

The respondents believe that the use of evidence in practice

is necessary and that literature has been very helpful to their practice and decision making. The quality of patient care was reported to be better when evidence is used. This belief had been previously reported about the physicians and nurses.^{17,18} These findings suggest that practicing PTs in Nigeria had a positive attitude toward EBP and are interested in giving quality care to patients or clients. The respondents were not sure if EBP could take into account the limitations in their practice settings but agreed that good evidence existed to support the interventions they provided.

The majority of the respondent belief that incorporating evidence into practice may lead to improvement in clinical skills and most of the respondents wanted to improve professionally and get better results in practice where it is possible. This finding is corroborated by the findings of McColl et al¹⁵ and Freeman and Sweeney.¹⁸ The finding that more of the younger respondents and those who were recently licensed (i.e. less than 10 years) had more positive beliefs than older and those licensed for more than ten years suggests that there might have been a more recent focus on the topic of EBP among PTs in Nigeria.

KNOWLEDGE OF EBP

The finding that the respondents reported some understanding of technical terms used in literatures was corroborated by the report of McColl et al¹⁵. The Knowledge of technical terms and confidence in skills needed to retrieve and critically appraise information was related to age and years since licensure. Age and education attainment were significantly associated to knowledge. This further suggests that there might have been an increased emphasis on the knowledge (skills) needed to implement EBP in physiotherapy education programs in recent years. This might have been responsible for the finding that the respondents who were younger (i.e. less than 39 years) and those who were more recently licensed reported more confidence in knowledge and use of EBP than the oldest respondents (i.e. above 50 years).

ATTENTION TO LITERATURE

The findings that 8% of the respondents read fewer than 2 articles per month and that 6% used literature in their clinical decision making less than twice per month may suggest that Nigerian PTs had not too good reading habits, in spite of their believe that the use of evidence in practice is necessary and very helpful to their practice and decision making. This finding is in contrast with the report of Turner and Whitfield¹⁹ about PTs in Australia and UK that reported good reading

habits. The deficient reading habit observed amongst PTs in Nigeria (compared with their counterparts in Australia and United Kingdom), might be due to poor access to literatures. The irregularity in the publications of the professional journals may also be a factor. The level of attention to the literature in our sample may not however be consistent with the intention of EBP. More so, experienced clinicians who treat patients with similar problems on a day-to-day basis may not find it necessary to refer frequently to the literature. The finding that only 28% of PTs reported using online databases to access literature less than 2 times per month is not surprising considering the fact that a large number of PTs (49%) do not have access to relevant databases and the internet at their facilities (i.e. places of work) and those that had access would probably not have enough time to access it during the working hours.

ACCESS TO AND AVAILABILITY OF LITERATURE.

The finding that the majority of the respondents who had access to online information were only able to access at home (78%) may not be unconnected to the pressure at work (i.e. long working hours). This finding agrees with study of McColl et al,¹⁵ who reported that the majority of their respondents had access to the internet at home than at work. It was therefore asserted that the use of evidence in practice can therefore be made possible only when there is sufficient time to access the information.

BARRIERS

Insufficient time was belief to be a primary barrier to implementing EBP by the respondents in this study. This may probably be due to the volumes of patients that were daily attended to. Interestingly other researchers have corroborates this finding.^{15,20,21} Lack of collective support amongst colleagues was also believed to be an important barrier. These facts may be as a result of difficulty in accessing results of relevant research databases which may not be available free of charge. These factors have been reported as somewhat related problems and appeared as barriers to the use of evidence by physicians and nurses in UK.^{17,20,21} Haines and Jones²² have also suggested that one factor working against the implementation of evidence in practice is the 'cultural divide' among researchers, clinicians and administrators. Our respondents did not view lack of interest as a primary barrier to implementing EBP. This finding implies that PTs in Nigeria are interested in implementing EBP.

CONCLUSION AND RECOMMENTATIONS

The respondents had a positive attitude toward EBP, as they were interested in increasing their skills and the amount of evidence used in their practices. Respondents who were younger, that is, recently licensed and those with higher degree appeared to express more positive attitudes. The fact that most of the respondents who expressed positive attitude toward EBP were those with higher degree suggests that the knowledge and importance of EBP may not be fully incorporated into the curriculum of physiotherapy students at the undergraduate level. It was therefore recommended that the Nigerian Universities Commission (NUC) and the Medical Rehabilitation Therapists' Registration Board (MRTB) of Nigeria should ensure the inclusion of EBP into undergraduate physiotherapy curricula in Nigeria as this will provide the baseline knowledge needed for the implementation of EBP in Nigeria. The Nigerian Society of Physiotherapy (NSP) can also be involve in providing continuing education (i.e. continuous professional development), with more emphasizes on EBP. Also emphasis should be placed on ensuring a regular publication and wide circulation of the professional journals on physiotherapy in Nigeria.

A potential limitation to this study is the small sample size of the respondents. This is due to the fact that as at the time of this study, Nigeria has about 1,500 registered PTs.²³ Well over half of these numbers practice physiotherapy outside Nigeria.

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