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Article

Building Capacity in Paediatric Specialty Practice: Educational Priorities for Nigerian Occupational Therapy Practitioners

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ABSTRACT

Background: Although occupational therapy (OT) educational priorities have been studied globally, evidence specific to pediatric practice in Nigeria remains limited, leaving a knowledge gap that may hinder entry-level practitioners' preparation for this specialist practice area. This study aimed to identify educational priorities for paediatric specialty practice among occupational therapy practitioners in Nigeria. **Methodology:** An exploratory mixed-method design comprising a cross-sectional survey and a two-round Delphi process was used. In Phase 1, 55 occupational therapy practitioners generated paediatric occupational therapy competencies using an online questionnaire. In Phase 2, these competencies were rated by paediatric occupational therapy experts (n = 17 in Round 1; n = 16 in Round 2). Data were analysed using thematic content analysis, descriptive statistics, and the content validity index (CVI). Competencies with CVI ≥ 0.80 were retained, those scoring 0.70–0.79 were revised, and items below 0.70 were excluded. **Results:** With a response rate of 57.3%, practitioners from diverse practice settings, with a mean professional experience of 4.6 ± 2.8 years, identified 46 competencies that were organised into five educational themes: basic medical and behavioural sciences; assessment and evaluation; professional values, attitudes, and skills; knowledge of paediatrics and occupational therapy; and intervention processes. Following Round 1, two competencies were revised and four were excluded. Consensus was achieved on 41 competencies after Round 2. Fifteen competencies were rated as essential, 17 as important, and 9 as optional. Twenty competencies were reported as met during entry-level training, while 15 were partially met and 11 were unmet. **Conclusion:** Priority educational needs for paediatric occupational therapy practice in Nigeria span assessment, foundational biomedical and behavioural sciences, paediatric-specific OT knowledge, intervention processes, and professional values. These priorities reflect gaps in entry-level preparation and may inform curriculum development.

Keywords: Educational priorities, Occupational therapy, Paediatric specialty, occupational therapy education, Nigeria

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INTRODUCTION

Globally, childhood disability is a concern because of its public health impact and the substantial demand it places on specialised rehabilitation care. This burden disproportionately affects low- and middle-income countries (LMICs). For instance, recent global estimates indicate that approximately 240 million children live with disabilities, with the overwhelming majority residing in LMICs, where access to rehabilitation services is often scarce (Olusanya et. al., 2020; UNICEF, 2021). Sub-Saharan Africa bears a substantial proportion of the disease burden within this population, with a reported disability prevalence rate ranging from 3.1% to 15.3%.

In Nigeria, estimates specific to paediatric populations, though sparse, consistently highlight the significant burden of developmental and acquired disabilities (Ishola et al., 2025). According to surveys conducted in Ibadan and Enugu states, neurological conditions - including cerebral palsy, spina bifida, brachial plexus injury, and meningitis form the bulk of conditions that cause physical disabilities in children (Peters et al., 2024; Onwuekwe & Ezeala-Adikaibe, 2011). Conditions such as intellectual disability, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder and oppositional defiant disorder can also contribute to functional limitations that affect children's ability to perform their roles and participate in everyday occupations. (Abdulmalik & Sale, 2012; Oshodi et al., 2017). Without timely rehabilitation and integration, these conditions may result in persistent limitations that affect children's occupational performance in self-care, school participation, play, and social interaction, extending into adulthood (Ishola et al., 2025).

Because early childhood development is important for human capital development of any nation, timely intervention to promote health and well-being of children has been recognised as a global health agenda through the Sustainable Development Goals (SDG) (Attanasio et al., 2022). As such, a multidisciplinary approach involving healthcare professionals is recommended for paediatric rehabilitation. Occupational therapy (OT), as a rehabilitation profession, plays an essential role in addressing paediatric disability by enabling children to participate in meaningful occupations within their daily contexts. Through a client-centred approach, occupational therapy can integrate activity-based assessments and interventions to improve functional independence, health, and development of the child (Law & Darrah, 2014). As a specialist area of occupational therapy practice, paediatric OT requires practitioners to apply specialised knowledge and skills to the occupational needs of children and young people.

Paediatric OT practitioners design and implement developmentally appropriate interventions that support participation in activities of daily living (ADLs), education, play, social roles, and leisure, with the aim of enhancing functional independence, participation, and overall quality of life. Paediatric occupational therapy focuses on supporting children's engagement and participation in meaningful life roles through a range of intervention approaches (Novak & Honan, 2019). Preparation for practice in this specialist area varies across countries. In some contexts, entry-level occupational therapy education provides the foundational competencies for working with children, whereas in others, additional postgraduate education, specialist training, credentialing, or recognised clinical experience may be required for formal recognition as a paediatric occupational therapist.

A principal purpose of occupational therapy programmes is to adequately equip trainees with the core competencies, comprising

knowledge, skills, and professional attitudes and values required for practice (Scanlan et al., 2017). However, often foundational OT programmes may not fully prepare trainees for the advanced knowledge and skills required for subsequent specialist practice (Welch, 2002). Because curricula are broad and instructional time is limited, OT practitioners may experience challenges in identifying the core competencies needed for different specialty areas of practice. This theory–practice gap can leave entry-level therapists feeling inadequately prepared in their knowledge and skills (Welch, 2002).

Although studies identifying educational priorities have been conducted in mental health (Scanlan et al., 2017), as well as neurology and anatomy (McCluskey, 2000; Schofield, 2014), in Australia and New Zealand, research specific to OT in the Nigerian context remains limited. The perspectives of OT practitioners can be useful in identifying and streamlining the core competencies needed for different specialty areas of practice (Scanlan, 2017; McCluskey, 2000; Schofield, 2014). The practice context can also present difficulties for practitioners despite the generalised competencies they possess, with potential implications for the quality of service provided (Mahoney & Kiraly-Alvarez, 2019). Given the substantial burden of paediatric disability in Nigeria and its impact on children's activity and participation in life roles, timely and evidence-based OT intervention is required (Ishola et al., 2025; Peters et al., 2024; Novak & Honan, 2019). Eliciting the perspectives of practitioners with substantial paediatric practice experience may help address the theory–practice gap. Consequently, this study aimed to identify the educational priorities and competencies required for specialist paediatric OT practice in Nigeria from the perspectives of OTs registered with the Occupational Therapists Association of Nigeria (OTAN).

Positionality Statement

We are Nigerian-trained occupational therapists whose shared professional backgrounds informed the study design and interpretation. The first author holds a doctorate in OT, specialises clinically in adult neurology, and serves as an OT educator and chairperson of OTAN Education Committee. The second author specialises in paediatric practice, while the third is a generalist practitioner without formal paediatric specialisation. This combination provided specialist expertise alongside the perspective of generalist practitioners who constitute a substantial proportion of Nigeria's paediatric OT workforce. All three authors share educational backgrounds and professional experiences shaped by the curricula and resource constraints encountered by the survey respondents.

We recognise that our professional positions may have influenced the study. The first author's educational leadership role may favour curriculum reform over alternative approaches, such as continuing professional development or mentorship. The first author's lack of paediatric specialisation also necessitated reliance on the expert panel to identify ambiguities in competency wording. Conversely, the second author's specialist background may have reinforced established assumptions about paediatric practice, while the third author's generalist perspective may have led to an underestimation of specialist practice demands. Our professional training has also been influenced by competency frameworks developed in high-income countries. We therefore sought to avoid treating these frameworks as normative standards for evaluating Nigerian OT curricula. Furthermore, given the relatively small Nigerian OT community, some participants were

personally known to us or had previously been our students.

To mitigate these potential influences, competencies were generated by participating OT practitioners rather than the research team. Expert ratings were anonymised and collected independently across Delphi rounds, with predetermined thresholds for retaining, revising and excluding competencies applied consistently. Disagreements among authors were resolved through discussion rather than deference to seniority. Nevertheless, we acknowledge that decisions concerning consensus thresholds, item wording and domain grouping may have influenced the findings. We also recognise that Delphi consensus reflects agreement among participating experts rather than independent evidence of competency validity. Accordingly, the findings represent the perspectives of OTAN-affiliated practitioners on paediatric OT education and should be interpreted within this professional and contextual setting.

METHODS

This study used an exploratory mixed-method research design comprising two phases: an item-generation phase using a cross-sectional survey and a consensus phase using the Delphi technique. Ethical approval for the study was obtained from the Institute of Public Health, Obafemi Awolowo University, Ile-Ife, with number: IPH/OAU/12/1677.

Item Generation Phase

The item-generation phase entailed a cross-sectional survey of OT practitioners who were selected from the official register of the Occupational Therapists Association of Nigeria (OTAN). To establish a well-defined sampling framework, the inclusion criteria required participants to hold an up-to-date practising licence from the Medical Rehabilitation Therapist Board of Nigeria (MRTB) and to have a minimum of 2 years of post-graduation experience. Practitioners with a provisional licence in OT were excluded. A target sample of 96 OT practitioners was estimated using the Raosoft online sample-size calculator, based on the total registered national workforce. The margin of error was set at 5%, with a 95% confidence level. Data were collected using a validated questionnaire adapted from Scanlan et al. (2017). The face and content validity of the questionnaire were assessed by a panel of expert occupational therapists who were not part of the study sample. The questionnaire comprised closed- and open-ended questions exploring paediatric OT educational priorities and competencies. Closed-ended items sought information on sociodemographic characteristics, OT qualifications, and experience, while the open-ended questions asked participants to itemise 10 content areas of paediatric OT and 10 OT practice skills considered essential in an entry-level bachelor's OT programme in paediatrics. Participants indicated whether the content areas and practice skills were met, partially met, or unmet during their entry-level training with the highest level assigned by the largest proportion of participants reported as its classification.

Eligible participants were invited to participate in the study via email through OTAN communication channels. The invitation outlined the study's purpose and provided information about participation. Those who provided signed informed consent subsequently received an email containing a Google Forms link to the questionnaire, along with detailed instructions for its completion. Three reminder emails were sent to participants over a four-month period before the survey was closed. Participants were also asked to indicate whether they were willing to participate in the follow-up Delphi survey. Quantitative data were summarised using measures of central tendency, frequencies, and percentages, while

data from the open-ended questions were thematically analysed to generate preliminary items for the subsequent phase.

Consensus Phase

This phase used the Delphi technique to establish expert consensus on the relevance of items derived from the initial cross-sectional survey phase. Selection of the expert panel proceeded in two steps. First, the eligible pool was restricted to Phase 1 participants who had indicated their willingness to participate in the follow-up phase. Second, from within this pool, experts were purposively selected if they met two additional criteria: a minimum of five years of overall clinical experience and a minimum of two years of experience specifically in paediatric OT. This two-step process was used to ensure that the consensus panel comprised practitioners with substantive paediatric content expertise rather than general clinical experience alone. Using established Delphi recommendations, a panel size of 17 was determined (De Villiers et al., 2005).

Eligible experts who indicated an interest in the follow-up were sent an initial email with a detailed description of this phase of the study. Subsequently, experts who provided signed informed consent were asked to complete an electronic, closed-ended Delphi questionnaire via Google Forms. The questionnaire contained items generated from Phase 1, which were rated on a 10-point Likert scale (1 = irrelevant; 10 = very important). Item ratings were dichotomised to calculate the content validity index (CVI), with scores ranging from 0–5 recoded as 0 (irrelevant) and scores ranging from 6–10 recoded as 1 (relevant). Subsequently, each expert rated educational themes and their corresponding items as essential, important, or optional, according to predefined criteria: essential items were those considered necessary for inclusion in every entry-level OT programme; while important items were those considered appropriate for inclusion in most entry-level OT programmes; and optional items were those considered suitable for inclusion in some entry-level OT programmes. Similarly, the priority level assigned by the largest proportion of experts was reported as its final classification. The CVI was calculated for each item as the proportion of experts rating it as relevant. Consensus was achieved on all items by the end of the second Delphi round. The CVI was used to assess item relevance. Items with CVI values of 0.80–1.00, 0.70– 0.79, and below 0.70 were retained, revised, and excluded, respectively.

RESULTS

Item Generation Phase

Fifty-five OT practitioners completed the item-generation phase, yielding a response rate of 57.3%. The sociodemographic profile of participants reflected a predominantly early-career workforce, with a mean duration of professional practice of 4.6 ± 2.8 years, ranging from 2–13 years. Educational backgrounds primarily comprised diplomas (47.3%) and bachelor's degrees (38.2%), with fewer participants holding master's degrees (12.7%) or doctoral degrees (1.8%). The majority of participants practised in Nigeria (92.7%) as OT assistants (47.3%) or clinical occupational therapists (29.1%), across di- verse practice settings, most commonly independent practice (41.8%). Generalist practice predominated (65.4%), although smaller proportions specialised in paediatrics (10.9%), mental health (10.9%), or neurology (7.3%). The sociodemographic and work characteristics are presented in Table 1.

Table 1: *Socio-demographic and work characteristics of participants*

Variable	Item-Generation Phase		Delphi Phase	
	Frequency(n)	Percentage (%)	Frequency(n)	Percentage (%)
Sex				
Male	29	52.7	12	70.6
Female	26	47.3	5	29.4
Highest level of education				
Diploma	26	47.3	3	17.6
Bachelor's degree	21	38.2	11	64.7
Master's degree	7	12.7	3	17.6
Doctorate degree	1	1.8	-	-
Country of practice				
England	3	5.5	-	-
Nigeria	51	92.7	17	100
Rwanda	1	1.8	-	-
Place of Practice				
Academia	2	3.6	-	-
Private practice	23	41.8	-	-
Private hospital	7	12.7	-	-
Government-owned secondary hospitals	10	18.2	2	11.8
Government-owned tertiary hospitals	8	14.5	11	64.7
Rehabilitation centres	3	5.5	-	-
Special Schools	2	3.6	4	23.5
Current Job Design				
Assistant lecturer	1	1.8	-	-
Chief OT	2	3.6	2	11.8
OT	16	29.1	7	41.2
OT Assistant	26	47.3	3	17.6
Principal OT	1	1.8	1	5.9
Senior lecturer	1	1.8	-	-
Senior OT	3	5.5	4	23.5
Area of Specialisation				
Community Based Practice	3	5.4	3	17.6
Mental Health	6	10.9	1	5.9
Neurology	4	7.3	-	-
Paediatrics	6	10.9	6	35.3
None	36	65.4	7	41.2
Duration of practice (years)				
2-5	37	67.3	3	17.6
6-10	15	27.3	12	70.6
Above 10	3	5.4	2	11.8

A total of 944 items were generated from the open-ended questions, averaging 17 priorities per respondent. These items were categorised into 46 core competency areas, which were subsequently grouped into five educational themes: Basic Medical and Behavioural Sciences (2); Assessment and Evaluation (3); Professional Values, Attitudes and Skills (9); Knowledge in Paediatrics and OT (14); and Intervention Process (18). In terms of perceived importance, 15 core competencies were rated as essential, 17 as important, and 14 as optional. Furthermore, 20 competencies were predominantly reported as met during entry-level training, 15 as partially met, and 11 as unmet by most participants (Tables 2, 3, and 4).

Consensus Phase

At the end of the first Delphi round, all five educational themes included in the Delphi round, were ranked as important (Table 5). Most of the core competency areas were ranked as very important with the exception of six. Four core competency areas: "Foundations of Neonatal, Prenatal, and Paediatric Cardiology", Joint Protection, Approximation Techniques, and Introduction to Kinesiotaping" (Table 2), "Hydrotherapy and Aquatic Interventions in Paediatrics", and "Foundations of Vocational Rehabilitation in Paediatric and Transitional Practice" (Table 3)—were rejected because their content validity indices were below 0.70. Two other core competencies, "Behavioural and Cognitive Intervention Approaches" and "therapeutic use of music", were revised because their content validity indices were both 0.76 (Table 3). The Behavioural and Cognitive Intervention Approaches item was clarified by adding examples applicable to paediatric care, such as behavioural modification and cognitive training. The "Therapeutic use of music" item was revised to "Therapeutic use of Music and Expressive Modalities in Paediatric Practice". Sixteen of the 17 experts rated the revised core competencies in Round 2. On completion, "Behavioural and Cognitive Intervention Approaches applicable in paediatric care" was deemed important and retained by the experts, whereas "Therapeutic use of Music and Expressive Modalities in Paediatric Practice" was rejected. The item-level results and Delphi consensus outcomes are presented in Tables 2–4, with the finalised educational themes summarised in Table 5.

Table 2: *Distribution of Educational Priorities for Knowledge in Basic Medical and Behavioural Sciences, and Knowledge of Paediatrics and Occupational Therapy (N = 17)*

	Educational Themes and Core Competencies	n	I-CVI	PL	TS
Knowledge of Basic Medical and Behavioural Sciences					
1	Foundational knowledge in anatomy, biochemistry, physiology, pharmacology, and radiology	27	0.882	Essential	Partially met
2	Foundational knowledge of child and abnormal psychology as well as sociology and anthropology	3	0.941	Important	Met
Knowledge in Paediatrics and Occupational Therapy					
1	Pathophysiology of Common Paediatric Conditions: Cerebral palsy, Erb's palsy, autism spectrum disorders, traumatic brain injury	60	1.000	Important	Met
2	Pathology of Selected Uncommon and Acute Paediatric Conditions: Visual–perceptual disorders, burns, paediatric ICU-related conditions	3	0.824	Important	Partially met
3	Paediatric Prosthetics, Orthotics, and Splinting: Principles of design, fabrication, application, bandaging, casting, and clinical use	32	0.882	Optional	Unmet
4	Foundations of Neonatal, Prenatal, and Paediatric Cardiology	2	0.588**	Optional	Unmet
5	Therapeutic Use of Occupation and Activity in Paediatrics: Enabling activities, activities of daily living, paediatric roles, activity analysis, adaptation, and grading	80	0.941	Essential	Met
6	Developmental Psychology and Cognitive Development: Foundations of child psychiatry and psychology relevant to occupational performance	18	0.941	Essential	Met
7	Child Development and Motor Maturation: Developmental stages, milestones, primitive reflexes, and motor control	22	0.941	Essential	Met
8	Paediatric-Specific Frames of Reference, Models, and Approaches: Neurodevelopmental treatment, sensory integration, Rood's approach, and related models	112	0.941	Essential	Partially met
9	Occupational Therapy Scope of Practice Application in paediatric setting	11	1.000	Important	Partially met
10	Performance Skills and Occupational Engagement in Paediatrics: Fine motor, cognitive, visual–motor, handwriting skills; play, sports, creative arts; feeding, eating, swallowing; pelvic floor considerations; hand therapy and rehabilitation	53	0.882	Important	Met
11	Evidence-Based Practice and Scholarly Inquiry: Application of research evidence and appraisal of scholarly literature	6	0.941	Essential	Partially met
12	Occupation, Health Promotion, and Disease Prevention: Impact of pathology on occupational performance and participation	7	0.941	Important	Partially met
13	Foundations of Paediatric Neurology	2	0.941	Optional	Partially met
14	Applied Kinesiology for Paediatric Practice	8	0.941	Optional	Met

*n = numbers of competencies; PL = most common priority level; TS = most common training status; *Revised and retained; †Revised but later rejected; **Rejected.*

Table 3: *Distribution and Delphi Consensus Results for Assessment and Evaluation, and Intervention Process Educational Priorities (N = 17)*

	Educational Themes and Core Competencies	n	I-CVI	PL	TS
Assessment and Evaluation					
1	Comprehensive paediatric assessment and evaluation	41	1.000	Essential	Met
2	Record keeping and clinical documentation	13	0.941	Essential	Met
3	Early referral and identification of paediatric conditions	14	0.941	Important	Unmet
Intervention Process					
1	Hydrotherapy and Aquatic Interventions in Paediatrics	3	0.647**	Optional	Unmet
2	Adjunctive Therapeutic Modalities: Facilitation and inhibition techniques including massage, vibration, thermotherapy, cryotherapy, radiation, and paraffin therapy	9	0.824	Optional	Met
3	Assistive Technology and Mobility Solutions: Assessment, recommendation, and prescription of assistive devices and mobility aids	42	0.882	Essential	Met
4	Environmental and Contextual Paediatric OT Practice: Home, school, and community-based interventions; environmental modification, adaptation, ergonomics, and resettlement	42	0.941	Essential	Met
5	Biofeedback Applications in Paediatric Rehabilitation	5	0.882	Optional	Met
6	Behavioural and Cognitive Intervention Approaches: Applied behaviour analysis (ABA), behavioural modification, cognitive training and retraining strategies	5	0.765*	Important	Partially met
7	Paediatric Pain Management	1	0.882	Important	Partially met
8	Foundations of Vocational Rehabilitation in Paediatric and Transitional Practice	8	0.588**	Optional	Unmet
9	Paediatric Intervention Planning and Implementation: Goal setting, functional training, and outcome-oriented intervention for children	49	0.882	Essential	Met
10	Joint Protection, Approximation Techniques, and Introduction to Kinesiotaping	4	0.647**	Optional	Unmet
11	Safe Rehabilitation Practice and Risk Management: Guarding, safeguarding, energy conservation, and basic rehabilitation procedures	11	0.882	Essential	Partially met
12	Family-Centred Occupational Therapy Practice	8	0.824	Essential	Met
13	Therapeutic Handling and Manual Techniques: Positioning, handling, and exercise techniques for children	7	0.882	Important	Met
14	Transfer and Mobility Training Techniques in Paediatrics	5	0.882	Essential	Met
15	Postural Control and Training: Sitting and standing management in cerebral palsy and related conditions	2	0.941	Important	Met
16	Therapeutic use of music and Expressive Modalities in Paediatric Practice	6	0.765†	Optional	Unmet
17	Therapeutic Use of Self in Paediatric Occupational Therapy	8	0.941	Important	Partially met
18	Emergency Care and Child Safety Skills: First aid, neonatal resuscitation, and essential childcare competencies	3	0.882	Essential	Partially met

*n = numbers of competencies; PL = most common priority level; TS = most common training status; *Revised and retained; †Revised but later rejected; **Rejected.*

Table 4: *Distribution and Delphi Consensus Results for Professional Values, Attitudes and Skills Educational Priorities (N = 17)*

	Educational Themes and Core Competencies	n	I-CVI	PL	TS
Professional Values, Attitudes and Skills					
1	Clinical reasoning skills and sound professional judgement	32	0.941	Important	Partially met
2	Interprofessional collaboration, communication, and therapeutic relationship building	44	0.941	Important	Partially met
3	Leadership, supervision, and scholarly communication	4	1.000	Optional	Unmet
4	Advocacy	7	0.941	Optional	Unmet
5	Professional autonomy and reflective lifelong learning	7	1.000	Important	Partially met
6	Time management skills	5	0.882	Important	Met
7	Practice administration and resource management	11	0.882	Optional	Unmet
8	Professional and workplace ethics	12	0.941	Important	Met
9	Digital literacy	2	0.941	Optional	Unmet

n=numbers of competencies; PL=most common priority level; TS= most common training status

Table 5: *Distribution of Educational Themes*

Educational Theme	n	N	I-CVI	PL	TS
Basic Medical and Behavioural Sciences	2	11	0.909	Essential / Important (tied)	Met / Partially met (tied)
Assessment and Evaluation	3	17	0.882	Essential	Met
Professional Values, Attitudes and Skills	9	13	0.923	Important	Unmet
Knowledge of Paediatrics and OT	14	17	0.882	Essential / Important (tied)	Met / Partially met (tied)
Intervention Process	18	17	0.882	Essential	Met

n=numbers of competencies; N=number of experts that responded; PL=most common priority level; TS= most common training status

DISCUSSION

This study identified educational priorities and core competencies that were considered essential for practice within paediatric specialty among OT practitioners in Nigeria. The sociodemographic profile of the practitioners provides important background for interpreting these results. As most participants held a diploma or bachelor's degree as their highest qualification and reported a mean professional experience of approximately five years, this profile reflects an early-career and predominantly entry-level workforce. This is consistent with previous descriptions of OT education and workforce development in Nigeria (Eleyinde et al., 2018). This early-career, generalist workforce profile recurs as an explanatory factor throughout the discussion below and is subsequently referred to simply as the 'workforce profile' to avoid repetition. A workforce composition with relatively fewer senior clinicians or academics and a high number of OT assistants may partly explain the strong emphasis on foundational knowledge and core clinical skills observed in this study.

In addition, the absence of formal postgraduate specialty programmes in OT in Nigeria was reflected in the predominance of generalist practice, alongside smaller proportions of practitioners identifying paediatrics, mental health, and neurology as areas of specialisation. While the WFOT provides clear guidance on specialisation, implementing the standard in most LMICs is challenging. Ongoing workforce shortages in Nigeria could have shaped a model of "adaptive generalism" aimed at meeting population needs rather than supporting narrow specialisation (Jesus et al., 2025). In the absence of locally available postgraduate clinical pathways, practitioners therefore have limited opportunities to progress from generalist practice to recognised specialisation, including paediatrics. Consequently, those who wish to advance their training often acquire skills informally through practice experience or enrol in non-OT postgraduate programmes (Eleyinde et al., 2018). Similar constraints on educational pathways and the development of specialised practice have been reported in other LMICs (WFOT, 2020). These contextual realities in Nigeria influenced the development of a clinical pathway within an MRTB rehabilitation competency framework designed to standardise advanced competencies across the professions regulated by the board, including OT.

Although the present study was not designed to appraise the strength of the priorities identified by the expert panel, it is nevertheless important to consider the thematic areas and core competencies that were rated as essential and partially met or unmet during entry-level training. The prioritisation of knowledge in basic medical and behavioural sciences among the identified themes shows the value placed on biomedical and psychosocial foundations for paediatric practice in OT. Competencies related to anatomy, physiology, pharmacology, radiology, and medical biochemistry were considered essential, reflecting the need for OT practitioners to understand both structural and functional aspects of childhood conditions. Moreover, this emphasis aligns with the individual-level components of the WHO ICF biopsychosocial framework, which recognises body structures and functions as integral to understanding activity performance and engagement in age-appropriate roles within the paediatric population. Internationally, anatomy and physiology remain core components of OT curricula and are strongly associated with competence in musculoskeletal assessment, tone management, and orthotic intervention (Schofield, 2014; Giles et al., 2021). In addition, advances in diagnostic imaging and medical technologies increasingly influence clinical reasoning and interdisciplinary communication,

reinforcing the relevance of radiology knowledge in contemporary practice (Roll, 2015; Dolan, 2022). Although rated as essential, this competency area was reported as only partially met during entry- level training.

This finding may be attributed to the workforce profile described above, which suggests limited exposure to advanced biomedical content, limited opportunities to apply biomedical sciences to paediatric-specific clinical reasoning within generalist practice settings, and a continued lack of structured postgraduate pathways through which this knowledge could be consolidated.

Foundational knowledge in behavioural and social sciences, including child and abnormal psychology, was considered important and well-integrated into entry-level training. This finding aligns with the holistic and biopsychosocial orientation of the OT profession, which recognises children's occupational engagement as shaped by physical functioning alongside cognitive, emotional, and social processes (WFOT, 2016; American Occupational Therapy Association, 2020). Training that integrates behavioural sciences may therefore better prepare OT practitioners to address the complex developmental and psychosocial needs of children.

Assessment and evaluation emerged as a central educational priority. Respondents emphasised competence in selecting appropriate tools, conducting comprehensive evaluations, and documenting findings accurately. These skills are foundational to clinical reasoning and evidence-informed intervention planning. Recent literature continues to highlight the importance of occupation-centred assessment while acknowledging the limited availability of culturally relevant and context-sensitive tools in many settings (Naidoo et al., 2020; Hinkley et al., 2021; Thomas, 2025). The emphasis placed on clerking and documentation further reflects growing recognition of docu- mentation as important to both clinical practice and professional accountability.

The theme "knowledge of Paediatrics and OT" represents competencies directly related to specialty practice, including paediatric frames of reference, conceptual models of practice, and condition-specific knowledge. Practitioners frequently identified sensory integration, neurodevelopmental, and client-centred approaches, mirroring international evidence that these are commonly used frameworks in paediatric OT (Watling & Hauer, 2015; O'Brien & Kuhaneck, 2020). This finding suggests that Nigerian practitioners, despite resource constraints, are drawing on approaches commonly used in international paediatric OT practiceth. Similarly, the prioritisation of activity analysis, play-based intervention, and functional skill development reinforces occupational therapy's core focus on enabling participation through meaningful occupations.

Although paediatric-specific frames of reference and models were rated as essential, they were nonetheless reported as only partially met. This may be linked to the workforce profile and compounded by limited paediatric fieldwork exposure, scarce specialist supervision and a lack of structured postgraduate specialisation pathways. Limited paediatric fieldwork exposure, scarce specialist super- vision, and the dearth of structured postgraduate specialisation pathways might have further limited opportunities for respondents to consolidate their theoretical knowledge and competence in applying these approaches. In a similar vein, EBP and scholarly inquiry were rated as essential but only partially met, a finding that reflects trends in health professions education (HPE), in which teaching EBP is valued but difficult to implement fully within curricula (Hitch & Nicola-Richmond, 2016).

Although EBP concepts such as database searching and literature reviews are part of all entry-level OT programmes in Nigeria, strategies for supporting sustained application and integration into clinical decision-making remain underexplored. This disconnect is consistent with international findings indicating that, while educators value EBP, they often struggle to bridge the gap between classroom theory and clinical reality (Thomas et al., 2013, DeAngelis et al., 2013). For instance, limited access to research resources, a lack of structured mentorship, and insufficient opportunities to apply evidence during clinical placements are documented barriers to EBP uptake in allied health and OT education. These systemic constraints frequently leave trainees unable to translate their academic research skills into the fast-paced, resource- limited context of clinical practice (Hitch & Nicola-Richmond, 2016). Together with the workforce pro- file described earlier, these constraints likely contributed to practitioners' perception that formal training only partially prepared them for evidence-informed paediatric practice, despite recognising EBP as fundamental to quality care.

The theme "intervention process" encompasses core competencies reflecting knowledge of OT interventions used in paediatric populations. Assistive technology prescription, environmental modification, and structured goal setting were frequently identified competencies considered by practitioners to be essential and met during entry-level training. This finding validates the profession's core theoretical lens, which prioritises the dynamic transaction between the person and their environment. OT practitioners have a holistic perspective, focusing on adapting the environment to fit an individual and, in turn, ensuring that the individual becomes an integral part of the treatment team (AOTA, 2020). Consistent with conceptual OT mod- els and the ICF framework, the theme high- lights environmental factors as key influences on participation and essential elements to be addressed during intervention planning and implementation (WHO, 2001; Novak & Honan, 2019). Similarly, evidence suggests that structured intervention-planning frameworks support clearer goal formulation, improved intervention coherence, and better client outcomes. By systematically linking evaluation findings to occupation-focused goals, these frameworks ensure that treatment remains relevant to the client's daily life (Fisher & Marterella, 2019).

By contrast, safe rehabilitation practice and risk management were rated as essential but only partially met. This finding is consistent with international data indicating that, while safety principles are introduced theoretically, students often lack sufficient opportunities for contextualised, hands-on application before clinical placement. Consequently, safety violations remain a leading cause of field- work failure and a critical gap in entry-level preparedness (World Health Organization [WHO], 2011; Nielsen et al., 2017). Furthermore, evidence indicates that psychomotor skills such as safe patient handling and energy conservation are most effectively developed through repeated, hands-on simulation rather than didactic teaching. For this study's predominantly early-career workforce, limited supervised exposure during training might have contributed to the observed gaps between perceived importance and preparedness for safe paediatric practice (Grenier, 2015; Nielsen et al., 2017).

Competencies relating to emergency care and child safety skills, including first aid, neonatal resuscitation, and critical childcare, were rated as essential by practitioners but consistently perceived as only partially met through entry-level training. In OT education, foundational safety and emergency response training is typically introduced at a basic level; however,

developing confidence and competence in applying these skills within a paediatric context requires repeated, supervised clinical exposure and structured reinforcement, which may be limited in many programmes. Simulation-based and experiential learning have been suggested as ideal approaches to support such knowledge acquisition because they provide a low-risk learning environment without adverse consequences and allow repeated practice for the skill development that may be needed in paediatric emergency care training for entry- level practice (Hung et al., 2021; Bienstock et al., 2022). By allowing students to rehearse rare but critical events, such as paediatric resuscitation, simulation ensures that entry-level practitioners do not encounter these scenarios for the first time with actual patients (Cheng et al., 2014; Grant et al., 2019). However, such opportunities are unevenly available, particularly in resource-constrained settings.

Furthermore, the continued absence of formal specialisation pathways within OT in Nigeria means that many practitioners lack systematic post-graduation support to build advanced emergency care skills beyond entry level (Eleinde et al., 2018). Taken together, these factors help explain the gap be- tween the recognised importance of child safety and emergency response competencies and practitioners' self-reported preparedness in these areas, highlighting the need for more intentional integration of paediatric emergency care training within both curricula and clinical placements.

In this study, the theme "professional values, attitudes and skills" was considered important, particularly with regard to clinical reasoning skills and professional judgement, interprofessional collaboration, communication, therapeutic rapport, ethical practice, and reflexive lifelong learning. These findings are consistent with research highlighting communication and teamwork as core com- ponents of professional identity formation and effective practice (Souto-Gomez et al., 2023; DeIuliis, 2024). Given the early-career workforce profile described earlier, the emphasis on these competencies may reflect perceived gaps in professional socialisation and workplace preparedness. Overall, the convergence between the present findings and international competency frameworks suggests that many educational priorities for paediatric occupational therapy are globally shared, while the Nigerian context adds important distinctions related to workforce com- position and educational pathways. Collectively, these findings offer empirically grounded guidance for curriculum review and development aimed at strengthening paediatric OT capacity.

Implications for Occupational Therapy Education and Clinical Practice: The educational priorities developed from this study provide a foundation to which other stakeholder perspectives can be added to strengthen the curriculum in Nigerian OT programmes. Entry-level OT curricula in Nigeria should intentionally strengthen paediatric-specific content while maintaining robust biomedical, behavioural, and professional foundations. While these priorities offer a useful starting point for reviewing curricula, they represent only one part of a much larger picture. Educators must also consider the nature of the knowledge being taught, how students learn best, and how to strike a work- able balance between developing conceptual understanding and building professional skills (Biggs & Tang, 2011).

In addition, the findings from this study indicate a need for continuing professional development programmes in paediatric assessment, intervention planning, and interprofessional collaboration. MRTB and OTAN should consider developing short courses, mentorship schemes, and practice guide- lines to support

early-career OT practitioners who frequently manage paediatric caseloads.

Limitations and Future Research: This study relied on self-reported data, which may be influenced by recall bias and personal perceptions of competence. The predominance of early-career practitioners and OT assistants may also have shaped the prioritisation of foundational competencies. In addition, most respondents practised in Nigeria, which may limit transferability to other contexts. Future research may use a mixed-methods design to further explore how the identified competencies translate into observable clinical behaviours and outcomes. Longitudinal research examining the impact of curriculum revisions on graduate competence and paediatric service quality would also be valuable.

CONCLUSION

Key educational priorities for Nigerian OT practitioners in paediatric practice include a strong biomedical and behavioural science foundation, paediatric-specific knowledge and models, occupation-centred assessment and intervention, professional competencies, and safe practice. Although many competencies were rated as essential, several were only partially met during entry-level training, reflecting gaps linked to generalist education pathways, limited paediatric practice expo- sure, and the absence of formal specialisation routes.

Declarations

Consent for publication: Participants provided written informed consent for publication prior to their inclusion in this study. They were informed that data would be anonymised and used for research dissemination, including publication in peer-reviewed journals.

Availability of data and material: The datasets generated and materials in the current study are available from the corresponding author on reasonable request.

Competing interests: The authors declare no competing interest.

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