

## **Evaluation of the Challenges of Continuing Professional Development Training**

**Title:** Evaluation of the Challenges of Continuing Professional Development Training among Clinical Physiotherapists in Nigeria

**Authors:** Babatunde Gbolahan Ogundunmade (DPT)<sup>1</sup> and Onigbinde Ayodele Teslim (PhD)<sup>2</sup>

<sup>1</sup> Physiotherapy Department, Jos University Teaching Hospital, Jos, Nigeria.

<sup>2</sup> Department of Physiotherapy, Faculty of Medical Rehabilitation, University of Medical Sciences, Ondo, Ondo State, Nigeria.

**Corresponding Author:** Babatunde Gbolahan Ogundunmade,

Email: [bogundunmade@gmail.com](mailto:bogundunmade@gmail.com)

## Evaluation of the Challenges of Continuing Professional Development Training

### Abstract

**Background:** Training and development are essential for acquisition of clinical skills for better competence, relevance and efficiency. In view of this, it is important to continually appraise training and professional development in the field of physiotherapy. The main objective of this study was to evaluate the challenges of continuing professional development training among clinical physiotherapists.

**Methods:** Three hundred and fifty one clinical physiotherapists were recruited using sample of convenience. Data were collected through the creation of a google form questionnaire which sought for relevant information on sociodemographic details, work settings, source of information on Continuing Professional Development (CPD), impacts, challenges and barriers to attending CPD training. The google link were provided to two professional bodies of physiotherapy in Nigeria. The data were collated and analyzed using descriptive statistics and Chi- square test of association to determine the association between CPD and and selected sociodemographic variables, alpha Level being  $p \leq 0.05$ .

**Results:** The result showed the ages of the physiotherapists ranged from 20 to 59 years. Most respondents sourced for information about CPD through the social media using WhatsApp medium (84.7%) and among colleagues (76.1%). Majority (90.9% and 80.1%) of the respondents reported that CPD contributed to career advancement and the improvement of clinical skills, respectively. Furthermore, the respondents faced different challenges in engaging in CPD training which included high cost of registration (61.5%), time constraints (26.2%), non-provision of adequate support to participate (59.5%) and lack of relevant programs 13 (3.7%).

**Conclusion:** In conclusion, the main challenges of attending CPD training are due to huge cost of participation, time constraint due to heavy workload and lack of adequate support from

## **Evaluation of the Challenges of Continuing Professional Development Training**

employers. Almost all the physiotherapists acknowledged that CPD training contributed to career advancement and the improvement of clinical skills and were receiving most information from the social media and among colleagues.

**Key words:** Evaluation, CPD, Constraints, Clinical Physiotherapists

# Evaluation of the Challenges of Continuing Professional Development Training

## Introduction

Professional development is critical in the life of every organization in positioning her resources to meet changing trends of globalization (Yaqub et al., 2020). Training and development are one of the key components for the professionals who focus on the continuing professional development (Anis et al., 2011). Owusu (2011) as cited in Yaqub et al., (2020). opined that a regular investment of time in learning and development should be seen as an essential part of professional life and not as optional extra, learning being an integral part of work. Across health professions, CPD is an umbrella term incorporating formal and informal approaches in a multicomponent approach being educational programs for post licensure health professionals (Samuel et al., 2021).

Continuing professional development (CPD) is the process of ongoing learning that helps professionals improve their skills and knowledge and makes them stay relevant in their field (Vinas et al., 2020; Aldakhil et al., 2024; Daniel-Ebune and Joda 2023; Sargeant et al., 2018; Sherman and Chappell 2018; Campbell et al., 2010; Anis et al., 2011; Samuel et al., 2021). Personal skills and proficiencies for professional career are developed in the process of participation in CPD with additional benefits of keeping up-to-date with the latest developments in rapidly evolving world. CPD improves confidence, competence and effective therapeutic relationships with patients and team members (Gunn and Goding 2009). CPD may involve courses, trainings, seminars, conferences, events, webinars, studying, learning new aspects of practice, sharing best practice techniques and ideas (The CPD Certification Service 2020). The scoping review by Samuel et al. (2021) showed the current landscape of CPD in the health professions. The knowledge syntheses included in their review suggest some practical strategies for CPD providers. CPD programs must be offered through a combination of formal learning approaches (e.g., lectures and workshops) and informal learning approaches

## **Evaluation of the Challenges of Continuing Professional Development Training**

(e.g., feedback and reminders, academic detailing). CPD programs should incorporate this combination beginning with the design phase. eLearning must be adopted more widely in CPD, especially in multicomponent interventions. The eLearning modality is advantageous as it can be leveraged to provide greater flexibility and make resources more widely available. Using a multicomponent approach should not imply added costs. Rather, adopting a thoughtful approach during the design phase can alleviate or minimize cost concerns. For example, lectures can be offered through eLearning platforms and enhanced with printed materials and reminders (Gunn & Goding 2009).

Factors motivating CPD engagement included a strong sense of professional obligation and wishing to provide the best possible service to patients (Gunn & Goding 2009). Professional growth requires more than knowledge transfer; it requires curiosity, humility, self-awareness and a motivation for mastery (Ramani et al., 2019). The effectiveness of CPD relates to the impact on knowledge, skills, values, attitudes, behaviours and changes in practice in workplace (Schostak, et al. 2010). The quality of CPD was seen as inextricably linked to any improvement in the quality of the professional practices required for service delivery (Schostak et al., 2010). Considering CPD from a wider perspective offers the opportunity for many creative approaches to designing interventions to advance health professionals' continued learning (Samuel et al., 2021). In the era of rapid evolution of technology, systems that will remain technologically competitive must ensure regular training of their teams (Anis et al., 2011). Haywood et al., (2013) in a CPD study amongst nurses and allied health professionals working within musculoskeletal services, a national UK survey with 354 responses reported that lack of funding and having too many other tasks to complete at work were the most frequently reported barriers to CPD. Many had difficulty in accessing CPD in the face of increasing workload pressure and tightened budgets. Furthermore, Haywood et al., 2013 in another study on CPD (Continuing professional development: issues raised by nurses and allied health professionals

## **Evaluation of the Challenges of Continuing Professional Development Training**

working in musculoskeletal settings), it was reported that the main issues raised were: funding and time for CPD, providing examples of ways to provide CPD in spite of the challenges faced; that CPD needs changed with level of experience; initiatives by clinical specialists to reduce professional isolation; and future trends in CPD, including concerns about succession planning. The views of people with MSK conditions demonstrated an emphasis on communication skills that was seldom raised by managers and clinicians. Sufficient time, funding and provision of study leave were key to facilitating CPD activity for nurses and AHPs working in MSK services. This study thus aimed to address the caveat in knowledge on the challenges and impact of CPD programmes and activities.

### **Methods**

#### **Research design**

This study was a cross-sectional survey.

#### **Respondents**

The study population was recruited using sample of Convenience. The participants for this study were three hundred and fifty-one clinical physiotherapists. The major inclusion criteria were that the clinical physiotherapists must be practicing with current license obtained from The Medical Rehabilitation Therapists Board of Nigeria (MRTBN), and have been working for not less than 5 years. Those excluded were Physiotherapists with less than 5 years of clinical experience and retired clinical physiotherapists.

#### **Sampling Technique**

The study population was recruited using sample of convenience.

## **Evaluation of the Challenges of Continuing Professional Development Training**

### **Instrument**

The instrument for data collection was a structured closed-ended questionnaire administered electronically (online). The questionnaire was developed from extensive study and review of research works on CPD. The contents of this questionnaire are informed consent, biodata, awareness of CPD, CPD participation, assessment of practice setting, barriers to CPD participation, preferred CPD formats and impact of CPD. This questionnaire had expert validation for face and content validity in a pilot study that involved 10 physiotherapists who have had at least 15 clinical-experience prior to the main research, and were not part of the main work. The scale-level content validity index had excellent content validity (0.95-0.97), the item-level content validity index was 0.84-1.00 while the interrater agreement on the relevance of all items was 0.84-1.00. The questionnaire has 7 domains and 24 items; these domains and items on each domain are biodata (sex, age, marital status, educational background, post-qualification years of practice/experience, specialty, current level of practice); awareness of CPD (familiarity with the concept of CPD, accessibility of information about CPD requirements in the field, knowledge of professional body mandates on CPD for license renewal); CPD participation (participation in any CPD activities in the past one year, types of CPD activities engaged in, how often CPD opportunities are sought after, how many CPDs attended in the last one year); assessment of practice setting (rating of the staff strength in practice setting, has the staff strength of practice setting affected participation in CPD?); barriers to CPD Participation (the main challenges faced when trying to participate in CPD activities, does workplace provide adequate support for your CPD endeavours?, how could professional body improve access to CPD opportunities); preferred CPD formats (format of CPD found most convenient in view of practice setting constraints, satisfaction with the current CPD guidelines and monitoring system by professional regulatory body, are there sufficient mechanisms to ensure quality and relevance of CPD programs being offered?) and impact of

## **Evaluation of the Challenges of Continuing Professional Development Training**

CPD (the impact of CPD on professional practice, believe about CPD contribution to career advancement within field).

## **Procedure**

Ethical approval was obtained from University of Medical Sciences, Ondo, Nigeria (Ethical clearance certificate number UNIMED-HREC/Apv/2025/057). Informed consent from the participants was also obtained. The structured closed-ended questionnaire was converted into a google form format and posted in social media platforms of professional organizations of physiotherapists in Nigeria (Nigeria Society of Physiotherapy, NSP and Association of Clinical Academic Physiotherapists of Nigeria, ACAPN). The required data was extracted from google form at the end of the research. The data were collated for analyses.

## **Data Analyses**

The data were analyzed using descriptive statistics of frequency, percentage, means and standard deviation. Chi-square test of association was used to determine if there was significant association between specialties of practice and frequency of participation in CPD training. SPSS version 23 was used and the level of significance, set at  $p = 0.05$ .

## **Results**

Two hundred and eight (59.3%) of the physiotherapists were males while 137 (39.0%) were females (Table 1). The participant's ages ranged from 20 to 59 years. The physiotherapists within the ages of 25-29 years were 74 (21.1%) while those between 30-34 were 77 (21.9%). The result further showed that most of the participant were married 222 (63.2%) (Table 1). The results showed that the specialties with preponderance were 120 (34.2%) orthopedics and musculoskeletal physiotherapists; neurology 70 (19.9%); and pediatrics 36 (10.3%); cardiopulmonary physiotherapy 31 (8.8%), (Table 1). Basic Physiotherapists were 104 (29.6%) and Senior Physiotherapists 54 (15.4%), physiotherapists in private practice were 33 (9.4%).

343 participants (97.7%) were familiar with the concept of CPD while 3 (0.9%) were not familiar with CPD concept.

The information on CPD were mostly accessed through WhatsApp social media [294 (84.7%)] and colleagues 264 (76.1%). Handbills/fliers, LinkedIn and newsprint were 63 (18.2%), 36 (10.4%) and 20 (5.8%) respectively. The staff strength in participants' practice setting was rated to be 'adequate' 63 (17.9%), 'moderately adequate' 147 (41.9%) while 'grossly adequate' was 114 (32.5%). Also, 178 (50.7%) of the respondents practice in a setting where low staff strength has affected their participation in Continuous Professional Development (CPD) while 163 (46.4%) respondents opined otherwise. The main challenges faced by the participants when trying to participate in CPD activities were huge cost of registration, 216 (61.5%); time constraints 92 (26.2%); lack of relevant programs 13 (3.7%); geographical location 9 (2.6%); non-release from the office 13 (3.7%), (Table 2). However, only 142 (40.5%) work in clinical settings where there was provision of adequate support for CPD attendance.

**Table 1: Biodata of the participants**

<b>Biodata</b>	<b>Frequency</b>	<b>%</b>
<b>Sex</b> Male	208	59.3
Female	137	39
<b>Age</b> 20-24	10	2.8
25-29	74	21.1
30-34	77	21.9
35-39	47	13.4
40-44	44	12.5
45-49	33	9.4
50-54	34	9.7
55-59	19	5.4
<b>Marital Status</b>		
Married	222	63.2
Single	115	32.8
Divorced	2	0.6
Widow/Widower	6	1.7
<b>Educational Levels:</b>		
B. Physio	131	37.3
BSc Physio	98	27.9
DPT	12	3.4
MSc	77	21.9
PhD	27	7.7
<b>Specialties:</b>		
Cardiopulmonary	31	8.8
Ergonomics	2	0.6
Geriatrics	15	4.3
Neurology	70	19.9
Orthopaedics	120	34.2
Paediatrics	36	10.3

Pelvic, O & G	14	4.0
Sports	12	3.4
Palliative	2	0.6
Community	9	2.6
Others	28	8.0

**Table 2: Challenges, Source of information and preferred methods of CPD**

<b>CPD</b>	<b>Frequency</b>	<b>%</b>
<b>Challenges</b>		
Time Constraints	92	26.2
Cost	216	61.5
Non-release	13	3.7
CPD content	13	3.7
Location	9	2.6
<b>Source of receiving Information</b>		
WhatsApp	294	84.7
Through Colleagues	264	76.1
Facebook	43	12.4
LinkedIn	36	10.4
Newsprints	20	5.8
Handbills/Fliers	63	18.2
Emails	86	24.8
Other unspecified means	49	14.1
<b>Staff Strength</b>		
Adequate	63	17.9
Grossly Inadequate	114	32.5
Moderate	147	41.9
I am the only Staff	22	6.3
<b>Staff strength effect</b>		
Yes	178	50.7
No	163	46.4

<b>Workplace CPD support</b>		
Yes	142	40.5
No	202	57.5
<b>Improving accessibility to CPD</b>		
Geographical spreading	55	15.7
Convenient timing	263	74.9
Repeating same CPD in different locations	25	7.1
<b>Preferred CPD format</b>		
In-person	188	53.6
Online course	151	43.0
Peer to peer	2	0.6
Others	2	0.6
<b>CPD Impact</b>		
Improved skill	281	80.1
Enhanced knowledge	57	16.2
Better decision	7	2.0

The results showed that 263 (74.9%) opined that the professional bodies should organize regular CPDs in order to enhance participation. One hundred and eighty-eight physiotherapists (53.6%) opined that despite the constraints, organizing ‘In-persons workshop’ was the most convenient method of conducting the CPD in clinical practice. Other delivery methods are; Online courses 151 (43.0%) and Peer-to-peer learning 2 (0.6%), (Table 2). The result also showed that the physiotherapists opined that the impacts of CPD on professional practice were: improvement of clinical skills 281 (80.1%); enhanced knowledge 57 (16.2%) and better clinical decision-making 7 (2.0%), (Table 2).

The result of the Chi-square test of association ( $\chi^2$ ) showed that there were significant associations between gender, participation ( $\chi^2 = 390.64, P = 0.723$ ); type; frequency ( $\chi^2 = 390.64, P = 0.723$ ) and satisfaction with participation in CPD ( $\chi^2 = 390.64, P = 0.723$ ). The result further showed that there were significant associations between age and frequency of participation ( $\chi^2 = 390.64, P = 0.723$ ) and the number of attendance ( $\chi^2 = 390.64, P = 0.723$ ). There was also significant association between rank of the physiotherapists and frequency of participation in CPD ( $\chi^2 = 131.353, P = 0.000$ ). However, no significant association between the ranks and number of CPD attended (Table 3). Furthermore, there was significant association between Specialty and type of CPD ( $\chi^2 = 131.353, P = 0.000$ ), (Table 3). Other results on association are presented in Tables 4 and 5.

**Table 3: Association between Ranks of the Physiotherapists and the number of CPD attended**

<b>Rank</b>	<b>CPD Number</b>	$\chi^2$	<b>p</b>	
Basic Physio	30	390.664	0.723	
Senior Physio	18			
Principal Physio	11			
Chief Physio	8			
Asst. Director	16			
Deputy Director	15			
Director	10			
Private Physio	16			
<b>Specialties</b>	<b>CPD Participation</b>		$\chi^2$	<b>p</b>
	No	Yes	86.828	0.001
Cardiopulmonary	1	30		
Ergonomics	0	2		
Geriatrics	1	14		
Neurology	2	68		
Orthopaedics	8	111		
Paediatrics	0	36		
Pelvic, O & G	0	14		
Others	4	23		
Sports	1	11		
Palliative	0	2		
Community	0	9		

**Table 4: Association between areas of specialties of the Physiotherapists and methods of delivery of CPDs; Gender and CPD participation and CPD type**

Specialty	Delivery of CPD						$\chi^2$	p	
	Online	Others	Physical	Self-directed	Virtual	Mentorship			
Cardiopulmonary	0	0	14	0	16	1	131.353	0.001	
Ergonomics	0	0	0	0	2	0			
Geriatrics	0	0	11	0	4	0			
Neurology	2	0	41	1	26	0			
Orthopaedics	5	2	66	2	44	1			
Paediatrics	0	0	24	0	12	0			
Pelvic, O & G	0	0	12	0	0	2			
Others	0	2	12	0	13	1			
Sports	1	0	8	0	3	0			
Palliative	0	0	0	0	2	0			
Community	1	0	6	0	2	0			
<b>Gender Vs Participation</b>									
	Male	Female							
<b>Gender: No</b>	13	5					85.996	0.001	
<b>Yes</b>	193	131							
<b>Gender Vs Types of CPD</b>									
Online	8	2					69.729	0.001	
Physical	119	80							
Self-directed	2	1							
Virtual	72	52							
Mentorship	3	2							
Others	4	0							

**Table 5: Association between areas of specialties of the Physiotherapists and adequacy of Staff strength; rank and frequency of participation in CPD**

Specialty	CPD Type				$\chi^2$	p
	Adequate	Grossly inadequate	Only Staff	Moderate		
Cardiopulmonary	4	12	1	14	103.121	0.001
Ergonomics	0	2	0	0		
Geriatrics	1	5	0	9		
Neurology	12	21	2	35		
Orthopaedics	31	31	11	47		
Paediatrics	2	14	2	18		
Pelvic, O & G	2	7	0	5		
Others	4	8	4	11		
Sports	2	4	2	3		
Palliative	2	0	0	0		
Community	1	6	0	2		
<b>Rank Vs Frequency of participation in CPD</b>						
Rank	Occasionally	Rarely	Regularly		$\chi^2$	p
Basic Physio	49	5	49		148.215	0.001
Senior Physio	12	1	41			
Principal Physio	11	0	13			
Chief Physio	5	0	21			
Asst. Director	9	0	28			
Deputy Director	6	0	35			
Director	1	0	21			
Private Physio	9	0	24			

## Discussion

The ages of this study's participants ranged from 20 to 59 years, predominantly made of 30-34 years (21.9%). This is similar to the report of Akodu et al. (2017) where majority of the respondents were between the ages 30 and 39 years (46.9%). This study has more male than the female participants and previous reports were very similar to this (Anwara et al.; 2020 and Akodu et al.; 2017). A larger proportion of the respondents were Basic physiotherapists and they are likely to have few years' experiences. This corroborated the findings of Akodu et al, (2017) and Anwara et al. (2020) who found that most physiotherapists have less than 10 years of clinical exposure in a similar study. Furthermore, the specialty with predominance was orthopedics physiotherapy (34.2%). This is consistent with previous report of Anwara et al. (2020) study (29.8%) who found that most physiotherapists are into Orthopaedic specialty.

This study reported that information about CPD requirements in physiotherapy field were mostly accessed through WhatsApp pages followed by getting information from colleagues. This makes social media to be important as a medium of disseminating information about CPD. Handbills/fliers were observed to be less effective (18.2%) when compared to the previous two media. Almost all the physiotherapists reported that the CPD contributed to their career advancement, improvement in clinical skills and enhancement of knowledge. However, very few opined that CPD has made meaningful impact on better decision-making, whereas, one of the reasons for professional development and training is to acquire skill and knowledge in order to make useful clinical decisions. All these may have contributed to career advancement. Most previous reports advantages of CPD to include acquiring confidence, competence and effective therapeutic relationships with patients and team members as means of career advancement (Gunn and Goding 2009, Allen et al., 2019; Phillips et al., 2019).

The financial implication of CPD is high as most physiotherapists attributed challenges faced by the participants to huge cost of associated with attendance. Other factors identified as impediments were time constraints; lack of relevant programs; geographical location and not being granted permission or approval to attend CPD. Most Previous studies also identified lack of time, cost and limited financial support as challenges to participation in CPD activities (Zou et al., 2020; Aldakhil et al., 2024). The time constraints may be majorly due to the demanding nature of patient care, especially due to heavy workload. High patient load, multiple work responsibilities, regional distribution of CPD training and dissatisfaction with available CPD resources were previously reported as barriers (Aldakhil et al., 2024). Furthermore, cost and timing need to be given due consideration in planning for CPD training. It is noteworthy that more than half of the participants work in a place where there was no provision for adequate support to attend CPD. Institutions need to garner more support for the clinical physiotherapists, and make it a statutory regulation or policy, to attend Continuing Professional Development. Beckman et al., (2019) and Olson et al., (2022) identified lack of leadership support and lack of workplace culture as other barriers to CPD. There appears to also be a disconnect in systematic and comprehensive training needs analysis, and weak interaction between the institution seeking the training and the institution providing the training (Yaqub et al., 2020). Haywood et al., (2013) had reported that the main issues raised as challenges to CPD training were funding and time for CPD.

In-persons workshop format of CPD was the most favored convenient way to access regular CPD followed closely by Online courses, unlike the report of Olufemi et al., (2024) that physiotherapists preferred face to face mode of delivery, about half preferred blended pattern. This study showed that a professional body can improve access to CPD opportunities: by conducting regular CPD workshops and regularly repeating same topics to allow some flexibility for participation. There should be geographical spread in the provision of practical

classes in order to reduce travelling distance, lessen transportation cost and reduce the risk of travelling. It further revealed that most of the respondents were satisfied with the current CPD guidelines and monitoring system by the professional regulatory body. Similarly, majority were of the opinion that there are sufficient mechanisms to ensure quality and relevance of CPD programs being offered. The effectiveness of CPD directly impacted knowledge, skills, values, attitudes, behaviours and changes in practice in workplace (Schostak, et al. 2010).

There was significant association between ranks of the respondents and the frequency of attendance; and between specialty, type, participation, staff strength and numbers of CPD attended. There was significant association between age and satisfaction, frequency of attendance, type, age and CPD Participation, Furthermore, there was significant association between gender and satisfaction with CPD Number, frequency of participation, CPD type and Participation. There was significant association between gender and frequency of participating, and type of CPD with male having higher participation rate and physical attendance. The report of Anwara et al. (2020) showed that the primary place of work was significantly associated with CPD activities, either in terms of benefits and barriers being experienced.

## **Conclusion**

In conclusion, the main challenges of attending CPD training are due to huge cost of participation, time constraint due to heavy workload and lack of adequate support from employers. Almost all the physiotherapists opined that CPD training contributed to career advancement and the improvement of clinical skills; and were receiving most information from the social media and among colleagues.

## References

Akodu A, Ileyemi BL, Ekanem ED. Evaluation of the perception and participation in continuing professional development among physiotherapists in south-western, Nigeria. *Nigerian Journal of Medical Rehabilitation*. 2017. 19(1). DOI:10.34058/njmr. v19i1.147

Aldakhil S, Baqar SM, Alosaimi B, Almuzirie R, Farooqui M, Alsahali S, Almogbel Y. Perceived Needs, Barriers, and Challenges to Continuing Professional Development (CPD): A Qualitative Exploration among Hospital Pharmacists. *Pharmacy (Basel)*. 2024 Sep 12; 12(5): 140. Doi: 10.3390/pharmacy12050140.PMID:39311131; PMCID: PMC11417784

Allen L.M., Palermo C., Armstrong E., Hay M. Categorising the broad impacts of continuing professional development: A scoping review. *Med. Educ.* 2019; 53:1087–1099. doi: 10.1111/medu.13922. PubMed

Anis A, Nasir A, Safwan N. Employee retention relationship to training and development: A compensation perspective. *African journal of business management*, 2011, 5(7), 2679-2685. <https://doi.org/10.5897/AJBM10.1036>.

Anwara SU, Nmecha CE, Moses EA, Okarekpe E, Mgbeojedo U, Ekechukwu END, Ezeukwu AO. Attitudes and Barriers towards Continuing Professional Development among Physiotherapists in South-Eastern Nigeria. *African Journal of Health Sciences and Technology*. Vol. 2(1), pp. 97-105, June 2020. Article Number: 0849BA768880. ISSN: 2805-4202. <http://www.academicjournals.org/AJHST>.

Beckman D, Wardian J, Sauerwein TJ, True MW. Evaluation of an Interprofessional continuing professional development course on comprehensive diabetes care: A Mixed-Methods approach. *J Evaluation Clin Pract*. 2019; 25(1):148-54. Google Scholar.

Campbell C, Silver I, Sherbino J, Cate OT, Holmboe ES. Competency-based continuing professional development. *Med Teach*. 2010; 32:657-662. Google Scholar.

Daniel-Ebune E O & Joda A E (2023). Assessment of continuing professional development activities among pharmacists in Nigeria. *West African Journal of Pharmacy*, 28(1), 119-128. <https://doi.org/10.60787/wapcp-28-1-145>.

Gunn H, Goding L. Continuing Professional Development of physiotherapists based in community primary care trusts: a qualitative study investigating perceptions, experiences and outcomes. *Physiotherapy*. 2009 Sep; 95(3):210-5. Doi: 10.1016/j.physio.2007.09.003. Epub 2007 Dec 31. PMID: 19635341.

Haywood H, Pain H, Ryan S, Adams J. The continuing professional development for nurses and allied health professionals working within musculoskeletal services: a national UK survey. *Musculoskeletal Care*. 2013 Jun;11(2):63-70. doi: 10.1002/msc.1032. Epub 2012 Sep 7. PMID: 22961706.

Haywood H, Pain H, Ryan S, Adams J. Continuing professional development: issues raised by nurses and allied health professionals working in musculoskeletal settings. *Musculoskeletal Care*. 2013 Sep;11(3):136-44. doi: 10.1002/msc.1033. Epub 2012 Sep 24. PMID: 23001899.

Olufemi BS, Olanike ST, Precious OO, Henrietta AF. Perceptions of Nigerian Physiotherapists Regarding Online Learning for Continuous Professional Development. October 2024. Asian Journal of Advanced Research and Reports 18(10):216-225. DOI:10.9734/ajar/2024/v18i10768

Olson AK, Babenko-Mould Y, Tryphonopoulos PD, Mukamana D, Cechetto DF. Nurses' and nurse educators' experiences of a Pediatric Nursing Continuing Professional Development program in Rwanda. *Int J Nurs Educ Scholarsh.* 2022; 19(1): 20210155.

Owusu C. Comparative study of HRD practices in the University of Cape Coast and Valley View University. Unpublished Master's dissertation, University of Cape Coast, Cape Coast. 2011

Phillips J.L., Heneka N., Bhattarai P., Fraser C., Shaw T. Effectiveness of the spaced education pedagogy for clinicians' continuing professional development: A systematic review. *Med. Educ.* 2019; 53:886–902. doi: 10.1111/medu.13895. PubMed.

Ramani S, McMahon GT, Armstrong EG. Continuing professional development to foster behaviour change: from principles to practice in health professions education. *Med Teach.* 2019; 41(9):1045-52.

Samuel A, Cervero RM, Durning SJ, Maggio LA. Effect of Continuing Professional Development on Health Professionals' Performance and Patient Outcomes: A Scoping Review of Knowledge Syntheses. *Academic Medicine* 96(6): p 913-923, June 2021. DOI:10.1097/ACM.0000000000003899

Sargeant J, Wong BM, Campbell CM. CPD of the future: a partnership between quality improvement and competency-based education. *Med Educ.* 2018; 52(1): 125-35. Google Scholar.

Schostak J, Davis M, Hanson J, Schostak J, Brown T, Driscoll P, Starke I D, Jenkins N. Effectiveness of Continuing Professional Development's project: A summary of findings *Med. Teach.* July 2010. 32(7): 586-92. DOI:10.3109/0142159X.2010.489129. PMID: 20653382. PubMed

Sherman LT, Chappell KB: Global perspective on continuing professional development. *Asia Pac Scholar.* 2018; 3(2):1. Google Scholar.

The CPD Certification Service. What is CPD Continuing Professional Development Explained. 2020. <https://cpduk.co.uk/explained>.

Yaqub EN, Owusu-Cole C, Ofosua CF. Challenges facing continuing professional development (CPD) of academic staff of the colleges of education in Ghana. *International Journal of Educational Administration and Policy Studies.* Vol. 12(2), pp. 112-120, 2020. DOI: 10.5897/IJEAPS2020.0653. Article Number: 52769DC64353. ISSN 2141-6656. <http://www.academicjournals.org/IJEAPS>

Zou C, Liao X-Y, Spicer J, Hayhoe B. Ten years GP training in China: progress and challenges. *Brit J Gen Pract.* 2020; 70:511-2