

CONTINUING PROFESSIONAL DEVELOPMENT IN RADIOGRAPHY: PRACTICE, ATTITUDE AND BARRIERS

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ABSTRACT

Aim: The study aimed to examine attitudes and practice of radiographer in the fields of CPD and ascertain barriers of CPD in Sudan. **Method & Material:** A questionnaire to collect quantitative data and all participants were working in the field of radiography or medical imaging. The questionnaire was derived from previous studies and consisted of close-ended and some open-ended questions. **Result:** The study revealed positive attitudes and opinions towards CPD as most of respondents agreed that CPD is important and should be mandatory but on contrary it reflected poor participation in CPD activities. The most common barriers were cost, staff shortage and lack of activities and resources. **Conclusion:** This study has provided an insight into radiographers' perceptions of CPD in Sudan. Most of radiographers agreed that CPD improve practice and it is important to them but there is poor participation in CPD activities. Therefore, there is a need to cultivate continuous learning culture to improve the existing knowledge and skills.

Keywords: Radiography, Continuing Professional Development (CPD), Radiographer, Medical Imaging, Attitudes, Barriers

INTRODUCTION

Continuing Professional Development (CPD) has been defined by multiple authors in different professions. The Health Professions Council [1] defined CPD as "a range of learning activities through which health professionals maintain and develop throughout their career to ensure that they retain their capacity to practice safely, effectively and legally within their evolving scope of practice".

The Society and College of Radiographers (Scor)[2] Defines CPD as "systematic maintenance, improvement and broadening of knowledge and skills and the development of personal qualities necessary for the execution of professional and technical duties throughout the practitioner's working life". This definition was revised in 2008[3] to "CPD is an ongoing professional activity in which the practitioner identifies, undertakes and evaluates learning appropriate to the maintenance and development of the highest standards of practice within an evolving scope of practice".

White [4] has a concise definition for CPD that states "the ongoing maintenance, acquisition and development of knowledge, skills, and attitudes to enable a medical practitioner to improve constantly as a practicing professional."

Henwood [5] defined CPD as "continuous and systematic maintenance, improvement and broadening of knowledge and skills along with the development of personal qualities necessary for the execution of professional and technical duties throughout the practitioner's working life that constantly works to improve the service provided".

Multiple definitions for CPD was publicized, but most emphasized ongoing learning to ensure current and future competence[6], increase professional performance and promote accountability [7], which will benefit individuals, organizations and the wider community.

Reasons for CPD: Professional qualification is the minimum requirements of knowledge and competencies within a specific profession[8], and multiple authors claimed that knowledge has a half-life of two to five years[9, 10, 11] after which competencies and skills decline. Since the late 1960s and early 1970s[12], it became evident that undergraduate education alone could not prepare individuals for professional life or ensure lifelong knowledge and competence. Henwood[5] contended that numerous changes occur after graduation and relying on initial qualifications are inadequate; thus, knowledge and competencies must be updated especially considering recent trends and the rapid growth of information and changes in technology and health care. Previous studies suggested that the driving force to undertake CPD includes fearing of litigation, a need to provide evidence of professional competence, compliance with employers, regulatory or professional organization requirements and awareness of shortcomings[13, 14].

Aims and objectives of CPD: The Health Professions Council [1] stated that the ultimate goal of CPD for healthcare professionals is quality care provided by skilled and knowledgeable professionals who

continuously maintain, develop and improve their professional practice. Sadler-Smith et al.[15] identified three roles of CPD as follows: the maintenance role, which promotes lifelong learning; the survival role, which requires healthcare professional to demonstrate ongoing competency; and the mobility role, which aims to increase employability. Gambling[16] argued that CPD will improve radiographers' skills, sustain and enhance their knowledge and allow them to cope with professional changes and expanding roles. Furthermore, participating in CPD activities allows radiographers to provide competent patient care according to current standards and up-to-date knowledge. Henwood[5] contended that CPD added value to the quality of services provided, which will help in sustaining facilities in a competitive health care system.

The purpose of CPD is to develop individual abilities, change practices and improve provided services. CPD should be a continuous process of learning and personal growth. The responsibility for CPD lies with a range of different partners, radiographers, managers and organizational bodies.

Provision of CPD: Universities and colleges have the educational experience to provide CPD^[17], workplaces and managers handle providing CPD opportunities to their workers^[18]. Moreover, professional organizations provide CPD to their members as a benefit of membership; for example, the Scor provides online CPD activities that promote an outcomes-based approaches via a web-based portfolio^[19].

CPD Models : There are three main models of CPD; voluntary, which is not monitored and not linked to professionalism; obligatory, which is expected, but not monitored or linked to the professionals code of conduct; and mandatory, or compulsory, which is monitored and linked to some sort of penalty if not fulfilled^[20]. In the UK, mandatory CPD for radiographers was introduced in 2005. In New Zealand, CPD is mandatory for continuing registration with professional bodies^[21]. The Australian Institute of Radiography has made CPD mandatory for all members since 2005^[22]. Although CPD is mandatory, poor participation has been documented among different professions, such as nursing^[23] and physiotherapy^[24]. Nevertheless, some studies have demonstrated relatively positive attitudes towards mandatory CPD ^[25, 26, 27].

In general, radiographers should be aware that CPD participation does not mean participation in academic courses and does not necessarily need to lead to academic qualification^[2]. The role of the professional bodies is to ensure that radiographers are aware of their preferred learning style and to identify their learning needs, as well as the needs of the organization, to consequently determine for which activities they are best suited^[13, 28].

METHODS

Study design: The study used a descriptive study design utilizing a questionnaire to collect data.

Ethical approval: Ethical approval was granted from Research Ethics Committee in College of Radiologic

Science-Sudan University for Sciences and Technology. Each participant signed a written informed consent as a prerequisite to participate in the study.

Inclusion criteria: Radiographers were invited to participate in the study if they were working in hospitals or academic institutions in Sudan.

Exclusion criteria: Radiographers who were not working or working in a field not related to radiography and others who refused to participate in the study was excluded.

Sample size and method: A convenient sample was used based on availability and willingness to participate in the study. Total of 376 questionnaires were distributed among radiographers working in Khartoum state.

Instrument for Data Collection: Data was collected through questionnaire, which was derived from previous studies and completed anonymously [29,30,31,32,21]. The questionnaire consisted of mostly close-ended and some open-ended questions that allowed respondents to comment freely. A five-point Likert scale^[33] was used to examine the attitudes and practices of the radiographer in the fields of CPD.

Pilot study:

A pilot study was carried out to determine the time, understandability, validity and reliability of the questionnaire. The questionnaire completed anonymously and it consisted of mostly close-ended and some open-ended questions that allowed respondents to comment freely. It was self-designed questionnaire but most of the questions were derived from previous studies [21,29,30,31,32].

15 participants were selected randomly to complete the pilot study, and the questionnaire was accompanied by a cover letter that explained the purpose of the study to the participants. Based on the comments and suggestions received from the respondents in the pilot study, the presentation and wording of the questionnaire were finalized with minor amendments to wording and arrangement of the questions. Data gathered from the pilot study were not included in the main study.

Data collection:

An introductory cover letter was provided for the respondents to introduce the study authors, explain the purpose and proposed benefits of the study and assure participant confidentiality. The researchers visited the radiographers in their workplaces and invited them to participate in the study. The questionnaire examines the attitudes of radiographer in the fields of CPD, their participation and barrier to CPD. Radiographers who agreed to participate in the study signed the consent form and completed the questionnaire at the same time. Other participants requested that the researcher came back within a week to collect the completed questionnaire. During the survey period, respondents were left on their own to complete questionnaires, and the data were collected from October 2013 to May 2014.

Data analysis : All statistical analyzes in the study were completed using the SPSS Statistical Package for Social Sciences (SPSS) Version 15®, and all graphs were created using Microsoft Office Excel 2007®. The participation in CPD activities score was determined by determining the number of "yes" responses out of the 13 activity questions. The score were graded to determine

whether a radiographer's participation level was low (0-4 activities), medium (5-8 activities) or (9-13 activities) high. The scoring system was designed by the researcher as there is no standard scoring system available in the literature.

RESULTS

The study had a response rate of 56%, as 376 questionnaires were distributed, and 212 completed questionnaires were returned. Fifty-seven percent of respondents were female, and 43% were male. The majority of respondents were between 25- to 34-years-old (62%), and the smallest age group was 45- to 54-years-old (12%). Most of the respondents (67%) had BSc degrees, whereas 23% had a diploma, 9% had MScs, and only 1% had PhDs. Sixty-eight percent of the participants were working in public hospitals, 18% in educational hospitals and 1% in military hospitals. Ninety percent of respondents were working in diagnostic imaging, 5% in ultrasound, 2% in medical physics, 2% in radiotherapy and 1% in nuclear medicine. Sixty percent of respondents were not enrolled in postgraduate studies, whereas 8% were completing Bachelor degrees, 27% Masters degrees, 4% PhDs, and 1% were enrolled in other programs. Thirty-two percent of participants had less than five years of experience and 6% 21 to 25 years of experience.

Participation in CPD : Participation in CPD activities was categorized to low, medium and high participation. Eleven percent of the respondents received high scores (H), 45% medium scores (M) and 44% low scores (L) (Fig 1). Categorization based on the scoring system designed by the researchers as there is no standard scoring system available in the literature. The score was determined by defining the number of "yes" responses to 13 questions related to participation in CPD activities. Participation in 0 to 4 activities categorized as low participation, 5 to 8 activities as medium participation and from 9-13 considered as high participation.

During the past two years, 50% of the respondents attended local conferences, 54% attended local workshops, 57% attended local training courses, 59% read scientific journals and 68% attended local seminar

and training courses, 37% attend international CPD activities, 26% participated in research, 19% participated in online activities, 17% conducted workshops, 6% had local publications, 5% presented papers at international conferences, and 1% had international publications (Fig 2).

Attitudes towards CPD: The study revealed that 99% of respondents agreed that CPD is important, improves practice and ensures better patient care, and 89% agreed that they will participate in CPD activities even if it is not mandatory. Only 28% agreed that they are financially supported to participate in CPD. The majority of respondents agreed that CPD should be a requirement for employment (94%), and 85% agreed that CPD should be mandatory (Fig 3). Most of the radiographers had positive attitudes towards CPD, and when this attitude was compared with their actual participation scores, there were minimal variations in attitudes towards CPD among different scores.

Barriers: The most common barriers to CPD participation were cost (77%) and staff shortages (77%). Seventy-four percent of respondents were unable to obtain leave to participate in activities. Seventy percent agreed that a lack of time prevented them from attending CPD activities, and 68% agreed that a lack of resources inhibited their participation in CPD activities. Sixty-six percent had family responsibilities, 61% lacked access to CPD activities due to location, 59% lacked encouragement from supervisors, and 46% agreed that the topics were irrelevant to their learning needs (Fig 4).

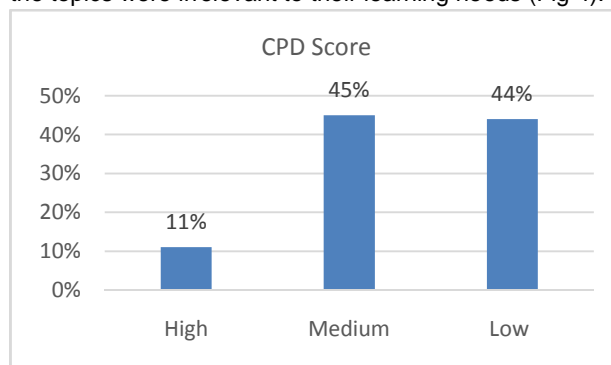


Fig 1: CPD score

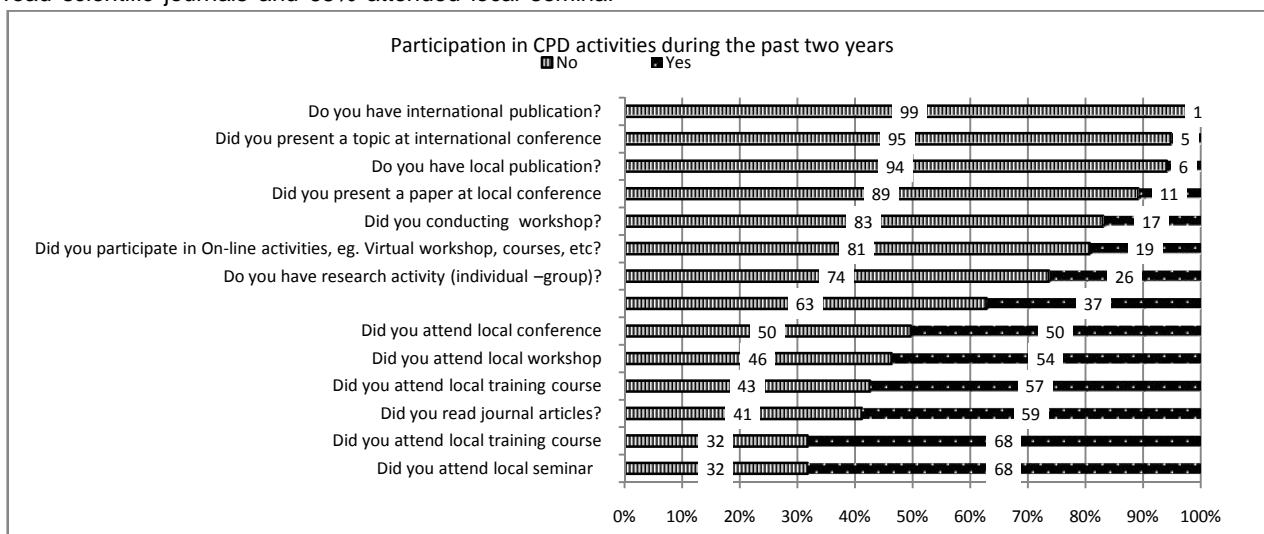


Fig 2: Participation in CPD activities during the past two years

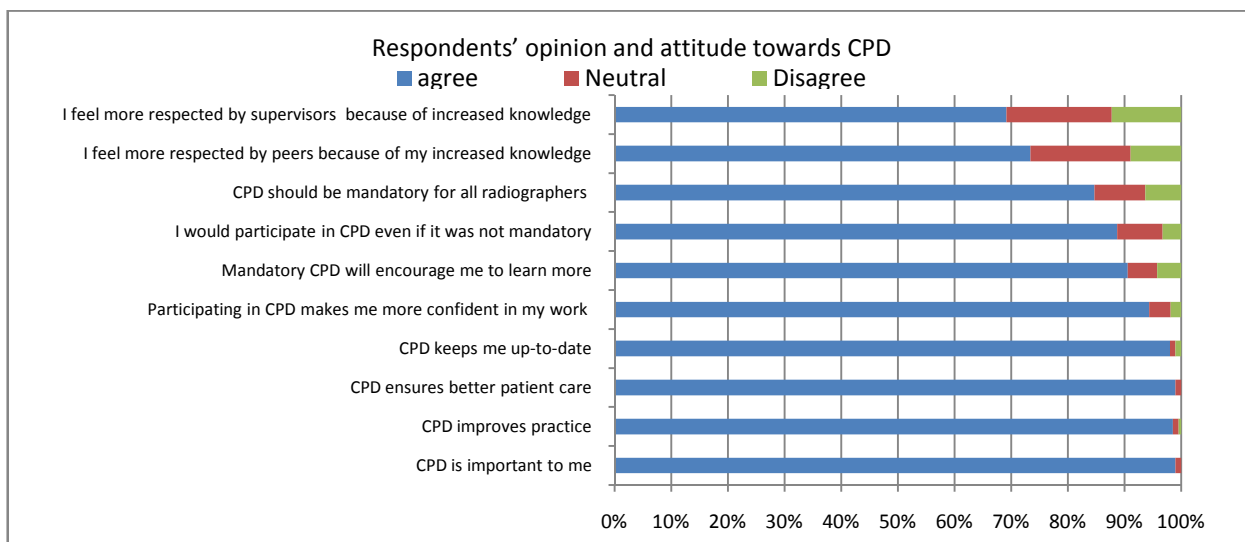


Fig 3: Respondents' opinions and attitudes towards CPD

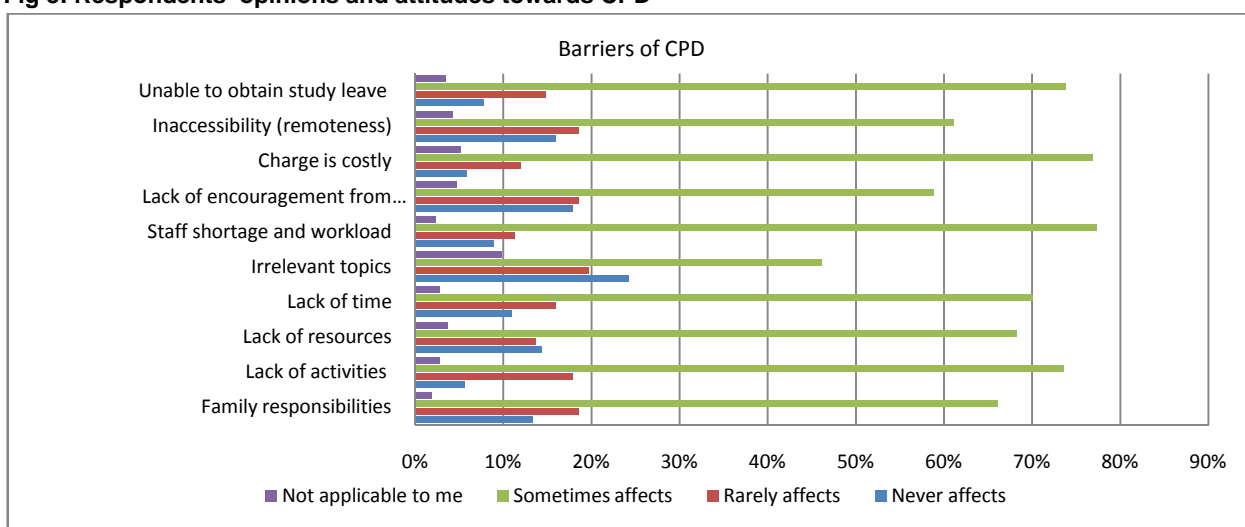


Fig 4: Barriers to CP

DISCUSSION

The study had a response rate of 56%, which is comparable to similar studies conducted in the UK[30], New Zealand [29] and Ghana[34]. By contrast, compared with studies conducted in Europe[31] and Australia,[22] this could be considered a low response rate. The majority of radiographers were between 25- to 34-years-old (62%) and thus required more participation in CPD activities to improve and enhance their initial knowledge and skills to provide high quality service[34, 35].

Attitudes: Ninety-nine percent of respondents agreed that CPD is important, improves practice and ensures better patient care. It is very similar from the percentages reported by Marshall[31] in Europe. Ninety-four percent believed that CPD increased confidence, whereas, in an Australian study [22] 20% believed that CPD increased confidence. The high percentage observed in this study may be due to fact that the radiographers surveyed needed to update their knowledge as 98% agreed that CPD will keep them up-to-date in this study whereas 60% agreed to the same in the Australian study [22].

Currently, a shift from optional CPD to mandatory CPD is occurring worldwide, and the majority of respondents

(85%) agreed that CPD should be mandatory, including all high score respondents and 80% of the medium score and low score respondents. This percentage is comparable to that observed in Ghana[34], whereas it is higher compared with those observed in Australia[22], the United Kingdom, New Zealand[29] and New South Wales[36]. This high percentage is because 91% percent of the respondents in this study agreed that CPD activities are an opportunity to learn more.

Practice: However, although the study showed positive attitudes towards CPD, it revealed that 44% of radiographers have had low CPD participation in the past two years, 45% had medium participation and 11% had high participation.

Most of the CPD activities utilized by radiographers were local seminars and training courses (68%), and online activities were utilized by a small proportion of participants (19%). However, 74% used online activities in Europe[31] and 59% read journal articles, whereas Sholer [22] found higher rates of reading scholarly literature in Australia (51%).

Barriers: The most common barriers were cost (77%), staff shortages and workload (77%), inability to obtain

leave (74%), lack of resources (68%), family responsibilities (66%) and lack of time (70%). Time and workload were the most common constraints documented in previous study [21] with minimal differences and variations in percentage, which may be due to differences in culture and work environment. In Ghana [34], only 1.6% agreed that time hindered them from CPD but the most constraints were staff shortage, lack of support and motivation and lack of CPD activities.

CONCLUSION

This study has provided insight into radiographers' perceptions of CPD in Sudan. All radiographers agreed that CPD is important and improves practice, but there is poor participation in CPD activities. Radiographers identified that time constraints and workload prevented them from participating in CPD. In addition, the lack of activities and resources were verified as barriers. Therefore, a culture of continuous learning through effective CPD activities must be cultivated to improve existing knowledge and skills. Consequently, competent radiographers will provide quality healthcare services.

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