

Barriers to Continuous Professional Development (CPD) participation for radiographers in Kenya

Online ISSN: 2078-5127

ABSTRACT

Background: Updating knowledge and skills on an ongoing basis is an important requirement if one is to remain professionally relevant. Formalized CPD is, therefore, essential in order to stay current in a dynamic work environment. The majority of radiographers in Kenya work in remote rural health facilities where CPD activities are limited. The question thus arose: “To what extent are radiographers participating in CPD activities and what constitute barriers to participation?”

Objective: The aim of this article is to describe the challenges which affect diagnostic radiographers’ participation in CPD activities in Kenya.

Methods: The study targeted radiographers who were registered with the Society of Radiographers in Kenya (SORK). Two hundred and fifty prospective participants were recruited from the SORK data base, using the fish bowl sampling method. Questionnaires with self-addressed stamped envelopes were posted by ordinary mail to facilitate ease of return, while telephone follow-ups improved the response rate.

Results: The study revealed that 69% of diagnostic radiographers in Kenya were effectively participating in CPD activities. Barriers to CPD participation included time constraints (62%); financial constraints (66%); lack of information (54%); organizational culture (47%); paucity of resources (58%); and difficulty in being selected by their organisation to attend CPD activities (42%).

Conclusion: Professional development in a rapidly developing and expanding profession such as radiography is critical for best practice. Although the majority of diagnostic radiographers in Kenya participate in CPD, a large number are not participating due to various challenges such as lack of finances which featured as the most significant in this study.

Recommendations: The SORK, employers and Institutions of Higher Education all have a responsibility towards the culture of life-long learning. As the professional organisation representing radiographers, the SORK should engage all stakeholders to collectively address the barriers to CPD participation for radiographers in Kenya.

INTRODUCTION AND BACKGROUND

Obtaining a qualification can be viewed as a starting point which demonstrates the minimum level of competence within a given field of study. ^[1] The half-life of knowledge varies between two and five years and is, therefore, insufficient to support an individual throughout a life time of professional practice without creating new learning opportunities which can translate into advanced professional competencies. ^[2] Professional practitioners are thus required to improve their knowledge and skills in order to stay abreast and meet the demands of the dynamic environment in which they operate.

Continued Professional Development (CPD) thus evolved from the need for a platform allowing professionals to become lifelong learners and stay up-to-date with new knowledge, developments and skills.

CPD can be defined as “the continuous and systematic maintenance, improvement and broadening of knowledge, expertise and skills for the execution of professional duties

throughout the practitioners' working life".^[3] CPD is thus an ongoing process, encompassing formal and informal education, which builds on an initial qualification and addresses the learning needs of practitioners in preparation for new responsibilities or extended roles.

After CPD was made compulsory for Kenyan health professionals in 2004, the Society of Radiography in Kenya (SORK) established CPD guidelines for Radiography in which they undertook to:

- a) Ensure that CPD addresses the short-term learning needs of radiographers while maintaining high competence standards for the profession in the longer term;
- b) Encourage radiographers to participate in CPD by providing a systematic framework which supports lifelong learning;
- c) Accredite all CPD activities;
- d) Promote CPD by working in partnership with employers, academic institutions, government agencies and other relevant bodies.

The current CPD requirement for Radiographers in Kenya is based on 40 credits obtained over a two (2) year cycle. Numerous factors may influence CPD participation among members of any profession. These can include factors such as professional attitude, work pressure, job satisfaction, organisational culture, dissemination of information, financial or time constraints, or a lack of resources including access to journals or educational videos. Some of these factors are especially detrimental to those in rural and remote work environments.^[4]

Since the majority of radiographers in Kenya work in remote and rural health facilities, the question arose: "What constitute barriers to CPD participation in Kenya?" The aim of this article was thus to determine the barriers which affect diagnostic radiographers' participation in CPD activities in Kenya.

METHODOLOGY

This study was empirical in nature and therefore relied on perceptions, experiences and observations of participants. A quantitative descriptive survey allowed for the statistical comparison between variables.

Population and sampling

The population comprised of approximately 1000 diagnostic radiographers who were registered as members of SORK at the time of the study. To determine the sample size, a confidence level of 95% with a confidence interval of 5% was set by using the following formula:

$$N = \frac{P(100\% - P)}{(SE)^2}$$

N = Sample size (296).

P = Proportion of radiographers (74%) expected to participate in CPD activities as derived from responses in the pilot study (N = 19).

SE = Standard error calculated by dividing the confidence interval by 1.96 (5/1.96 = 2.55).^[5]

A sample size of 296 participants was ideal, but due to financial constraints, only 250 questionnaires were dispatched to radiographers who were randomly selected from the SORK data base, using the fish bowl technique.^[6]

Data Collection

The dependent variable was defined as CPD participation while the independent variables consisted of a number of factors with the ability to influence participation rate, as identified from literature.^[4] Data was collected with the aid of a self-administered questionnaire.

Content validity of the questionnaire was addressed by providing a set of questions as derived through an extensive literature review.^[4] External consistency was pretested by subjecting the questionnaire to a pilot study, allowing for information which was not clearly understood to be addressed before data collection commenced. The pilot study thus measured the reliability of the instrument.

Questionnaires with an explanatory letter were mailed to prospective participants with a stamped self-addressed envelope to facilitate the ease of return. Questionnaire items targeted information regarding barriers to CPD participation while questionnaires were completed anonymously.

Statistical analysis

Data analysis was performed using the Statistical Package for Social Sciences (SPSS) version 14.0. While descriptive analysis aimed to describe the sample and summarize variables, cross tabulations were employed to demonstrate relationships between variables. The Pearson Chi-Square test was likewise employed to compare variances between categorical data in non- 2 x 2 tables, followed by the Cramer's V test, used as a post test to determine the strength of the association with a value between 0 and 1. (Low association = <0.3; Moderate association = between 0.3 - 0.5; High association = >0.50).^[6] A p-value of <0.05 indicated that a relationship exists between two variables and the null hypothesis was rejected.

Ethical considerations

Participants were safeguarded against ethical misconduct by seeking permission to collect the data from the National Council for Science and Technology (NCST/5/002/R/537/5) in the Ministry of Higher Education, Science and Technology of the government of Kenya. The research was further approved by the Higher Degrees and Research Ethics Committees of the University of Johannesburg (HDC 40/2009). By completing the questionnaire anonymously participant consent was given by implication.

RESULTS

Of the 250 questionnaires 162 (65%) were returned and available for analysis. Factors influencing CPD participation in the Kenyan context are displayed in Figure 1. Financial/time constraints and a paucity of resources were seen as the most significant barriers to fulfilling CPD obligations.

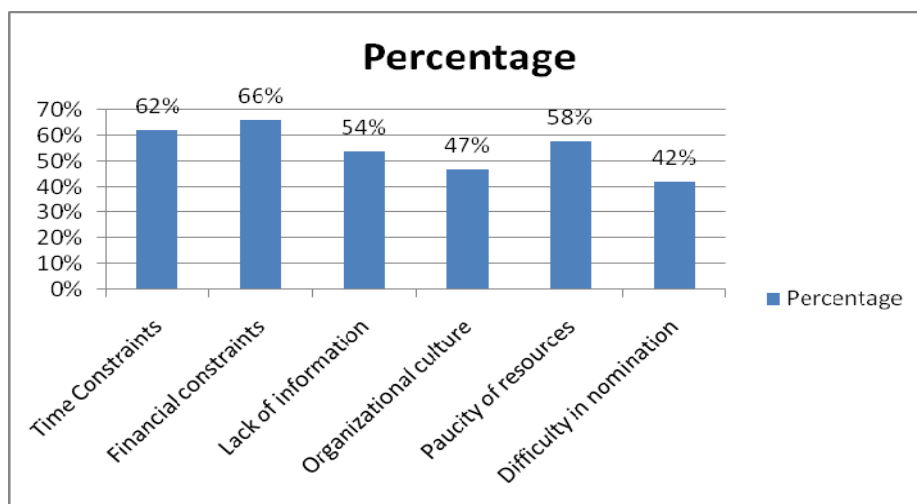


Figure 1: Barriers to CPD participation among diagnostic radiographers in Kenya

Table 1. Overall participation in CPD activities

| CATEGORY | FREQUENCY | PERCENTAGE |
|---|----------------|------------|
| Are you enrolled in a CPD programme? | N = 162 | % |
| Yes | 112 | 69 |
| No | 49 | 30 |
| No response | 1 | 1 |

Table 1 demonstrates that just over two thirds (69%) of diagnostic radiographers, registered with SORK, were enrolled in a CPD programme.

Tables 2 & 3 show the extent to which each of the factors in Figure 1 affected participation in CPD activities by ticking the option which best showed the degree to which their participation was affected:

Table 2: Barriers to CPD participation

| Extent to which CPD participation is affected by: | | Financial constraints | Time constraints | Paucity of resources | Organisation culture | Lack of information | Difficulty in getting nominated or selected by the organisation to attend CPD activities |
|---|---|-----------------------|------------------|----------------------|----------------------|---------------------|--|
| N = 162 | | % | % | % | % | % | % |
| Not affected | 0 | 3 | 7 | 7 | 20 | 15 | 27 |
| Least extent (minimal chance) | 1 | 7 | 9 | 12 | 14 | 24 | 12 |
| Some extent (some chance) | 2 | 25 | 30 | 29 | 25 | 20 | 15 |
| Great extent | 3 | 34 | 23 | 17 | 8 | 10 | 15 |
| No response | | 31 | 31 | 35 | 33 | 31 | 31 |
| Total | | 100 | 100 | 100 | 100 | 100 | 100 |

Table 3: Cross tabulations between barriers and CPD participation

| Effect of financial constraints on CPD participation. | | |
|--|--------------|----------------------|
| N = 112 | | |
| 1. Were you enrolled in any formal training programme in the last 12 months? | | |
| Test | Value | P value |
| Pearson Chi-Square | 10.240 | 0.017 |
| Cramer's V | 0.302 | Moderate association |
| 1. How often do you read scientific journals? | | |
| Test | Value | P value |
| Pearson Chi-Square | 22.117 | 0.036 |
| Cramer's V | 0.258 | Weak association |
| 3. Do you subscribe to scientific journals? | | |
| Test | Value | P value |
| Pearson Chi-Square | 7.894 | 0.048 |
| Cramer's V | 0.267 | Weak association |
| Effect of lack of information on CPD participation attending seminars and workshops | | |
| 1. How regularly do you attend seminars/ workshops? | | |
| Test | Value | P value |
| Pearson Chi-Square | 18.745 | 0.027 |
| Cramer's V | 0.238 | Weak association |
| 2. How often do you read scientific journals? | | |
| Test | Value | P value |
| Pearson Chi-Square | 18.745 | 0.027 |
| Cramer's V | 0.238 | Weak association |

Table 3 shows that lack of finances mostly affected involvement in formal training programmes ($p = 0.017$; Cramer's $V = 0.302$) as well as the acquisition ($p = 0.048$; $\phi = 0.267$) and reading ($p = 0.036$; Cramer's $V = 0.258$) of scientific journals.

Although time constraints ($p = 0.576$), organisational culture ($p = 0.341$), the availability of resources ($p = 0.46$) and difficulty in getting nominated or selected by the organisation to attend CPD activities ($p = 0.226$) affected CPD participation to some extent, it was of no statistical significance.

Dissemination of CPD information to SORK members appears to be the least significant barrier. However, statistical significance with a weak association was recorded between communication from SORK to its members and the regularity with which seminars or workshops are attended.

DISCUSSION

Knowledge and skills become obsolete if no effort is made to update them on an ongoing basis. [7] However, diagnostic radiographers experience barriers to CPD participation which need to be addressed.

Financial constraints

A large proportion of radiographers in Kenya work in health facilities in rural areas. Participants in rural areas generally experience additional infrastructure challenges such as poorly maintained transport networks which increase the cost of CPD participation outside their work stations. ^[8] It thus explains why only 34% were not affected by financial constraints.

Although employers could provide financial support, managers rarely see the need for CPD as a high priority when allocating resources. ^[9] Since salaries are inadequate, a good scheme of service can act as a catalyst for the improvement and broadening of knowledge and skills. ^[10] This can be achieved by linking remuneration to minimum educational standards and experience for each professional level. Professionals will, therefore, strive to acquire the qualifications and or competencies required to advance professionally. Although not applicable to all radiographers, the Scheme of Service in the public sector makes provision for the acquisition of additional qualifications or specialization to enhance work performance and facilitate advancement within the scheme. ^[11] It thus seems as if the relatively low salaries prevent radiographers from furthering their studies or subscribing to expensive scientific journals, when personally held responsible for the financial implications thereof.

Time constraints

Lack of time to attend CPD activities affected 62% of the diagnostic radiographers in this study. Although not probed in our study, work pressure and family responsibilities were found to have an adverse effect on CPD participation previously. ^[12]

Paucity of resources

The lack of resources contributes greatly to the challenges facing professionals, especially in rural settings, where access to resources such as scientific journals, professional videos, internet access and study clubs are limited. Most respondents in our study (58%) indicated that they were negatively affected by a limitation of resources.

Lack of information and communication

Competency cannot be separated from effective communication, while the stimulus provided by personal relations and communication enhances participation in CPD. ^[13] Although the communication between SORK and its members seems to be good, a lack of information still affects the rate at which radiographers in Kenya attend seminars or workshops.

Organizational culture

Organizational culture greatly contributes to non-participation of diagnostic radiographers in CPD and employers are, therefore, responsible to ensure that their workforce is practising to the appropriate standards by adopting a pro-CPD culture. ^[3]

Furthermore, professionals who work in a supportive environment maintain their motivation and job satisfaction. ^[14] In our study, only 20% of the participants expressed satisfaction with their organizational culture towards CPD (Table 1). This implies that there were factors within the organization which did not favour CPD participation, affecting service delivery adversely since professionals lack opportunities to update their professional knowledge and skills. Organizations should, therefore, support CPD to enhance the provision of quality services to the benefit of the society.

Difficulty in getting nominated or selected to attend CPD forums

In our study, 42% of participants encountered difficulties in getting nominated by their employers to attend CPD activities (Figure 1). It seems easier to get approval to enrol in distance learning programmes than in formal face-to-face programmes. Although not statistically significant ($p = 0.226$), radiographers might feel deprived of formal learning opportunities due to a lack of goodwill from their employers.

CONCLUSION

Professional development in a rapidly developing and expanding profession such as radiography is critical for best practice. Although the majority of diagnostic radiographers in Kenya participate in CPD, a large number are not participating due to various challenges (Figure 1).

While organizations need to take a vested interest in CPD activities in order to optimize the benefit to the organization, it is problematic that some still value CPD as a cost and not an investment. Although the majority of radiographers in our study considered CPD as an investment, the associated cost made it difficult for them to fully engage in CPD activities which may have a negative impact on the standard of radiological services in Kenya.

LIMITATIONS

The sample was restricted since all legally practising radiographers are not registered members of the SORK. The organization currently has no power to compel radiographers to become members due to the lack of a legislative framework and, therefore, the study was limited to SORK members.

RECOMMENDATIONS TO MINIMIZE BARRIERS TO CPD PARTICIPATION

1. Responsibility of the SORK in CPD compliance.

As the professional body representing radiographers in Kenya, SORK has a key role in supporting the education, lifelong learning and professional development of its members. SORK should thus support members to engage in CPD by:

- a) Creating a platform where diagnostic radiographers can share scientific knowledge; a journal is ideal for this purpose.
- b) Ensuring that the website provides the most current information about a range of CPD issues and activities.
- c) Organizing regular seminars and ensuring that CPD activities address key educational issues in order to improve professional practice, knowledge, skills and attitudes of radiographers.
- d) Exploring the internet as a means to provide a range of CPD opportunities.
- e) Improving communication with their members.
- f) Formulating a CPD policy to guide employers in developing an organization culture conducive for participation.
- g) Partnering with tertiary institutions to ensure availability of credit bearing CPD courses for its members.

2. Responsibility of employers in improving CPD participation.

Employers should recognise that investment in staff development is a pre-requisite for a competent and well-motivated workforce. This could be achieved by advocating for an organizational culture which supports employees:

- a) In maintaining and improving their professional knowledge and skills for optimal service delivery and personal advancement.
- b) Financially through funding or subsidizing of CPD activities.
- c) With learning resources in the workplace inclusive of current and relevant scientific publications and internet access.

REFERENCES

- ¹Henwood, S., Edie, J., Flinton, D., & Simpson, R. (1998). Continued professional development: A re-examination of the facts, *Radiography*, Vol.4, Issue 1, 5-8.
- ²Hughes, P. (1990). Evaluating the impact of continual professional education (ENB 941). *Nurse Education Today*, Vol.10, Issue 6, 428-436.
- ³Henwood, S. M. & Taket, A. (2008). A process model in continuing professional development: Exploring diagnostic radiographers' views, *Radiography*, Vol.14, Issue 3, 206-215.
- ⁴Brink, H. (2006). *Fundamentals of research methodology for health care professional practitioners*, second edition, Cape Town, JUTA and company.
- ⁵Fox, N., Hunn, A. & Mathers, N. (2009). *Sampling and Sample Size Calculation*, the National Institute for Health Research, Yorkshire & the Humber.
- ⁶Kothari, C. R. (2008). *Research Methods, Research Methodology: Methods and Techniques*, Second Revised Edition, New Delhi, New Age International (P) Limited Publishers.
- ⁷Chisholm, C. U. & Burns, G. R. (1999). The Role of Work-Based and Workplace learning in the Development of Life-long Learning for Engineers, *Global Journal of Engineering Education*, Vol.3, No.3, 235.
- ⁸Henwood, S.M., Yields, J. & Flinton, D. (2004). Radiographers attitudes to mandatory CPD: a comparative study in the United Kingdom and New Zealand, *Radiography*, Vol.10, Issue 4, 251-258.
- ⁹Brown, C.A., Belfield, C.R. & Field, S.J. (2002) Cost effectiveness of continuing professional development in health care: a critical review of the evidence, *British Medical Journal*, Vol. 324, 652-655
- ¹⁰Palarm, T., Jones, K. & Gilchrist, M. (2001). Personal and professional development: a survey of radiographers employed in the South West Region, *Radiography*, Vol.1, 43-53.
- ¹¹ Directorate of personnel management (2009). Scheme of service for radiographers in Kenya.
- ¹²Schweitzer, D. J. & Krassa, T.J. (2010). Deterrents to nurses' participation in continuing professional development: an integrative literature review. *Journal of Continuing Education in Nursing*, 41(10):441-447.
- ¹³Groopman, J. (2007). *How Doctors Think*, New York: Houghton-Mifflin.
- ¹⁴Broad, K. & Evans, M. (2006). A Review of Literature on Professional Development Content and Delivery Modes for Experienced Teachers, the Ontario Ministry of Education, Ontario, Canada.