

Original Article

Radiation Therapists' and Diagnostic Radiographers' participation in continuing professional development and knowledge of Regulatory Body Registration

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Abstract

Background: Irish healthcare has seen radical reforms in recent years. Regulatory Body Registration was introduced to improve patient care and regulate professionals. Continuing Professional Development (CPD) is a requirement of registration. Professionals need to keep up-to-date with new techniques and technologies while maintaining their skills.

Purpose: This research assessed the factors affecting CPD participation in Radiation Therapists and Diagnostic Radiographers and their knowledge and attitudes towards Regulatory Body Registration.

Materials and methods: Online surveys were designed and made available on the Irish Institute of Radiography and Radiation Therapy (IIRRT) Website for IIRRT members. The responses were analysed using descriptive statistics and χ^2 tests in a statistical computer programme.

Results: Personal development, time, cost and staff shortages negatively affect CPD participation. Reflective practise is not a barrier to CPD. Knowledge and attitudes to Regulatory Body Registration varied.

Conclusion: CPD must be developed in Radiation Therapy and Diagnostic Radiography. Funding, time and increased staffing could result in effective implementation of CPD. Regulatory Body Registration has been communicated but more information regarding the process is required.

Keywords: Continuing Education (CE); Continuing Professional Development (CPD); diagnostic radiography; radiation therapy; reflective practice

INTRODUCTION

This study explored the factors affecting Continuing Professional Development (CPD) participation and Irish Institute of Radiography and Radiation Therapy (IIRRT) members' knowledge and attitudes towards Regulatory Body Registration.

The IIRRT was founded in 1996 and is the professional body representing Radiation Therapists (RTs) and Diagnostic Imaging Radiographers (DIs).¹ This body was set up to support the science and practice of Radiation Therapy and Radiography. The IIRRT facilitates CPD and role development by encouraging research and producing best practice guidelines.¹ CORU, Ireland's first multi-professional health regulator,² was set up under the Health and Social Care Professions Act 2005.³ CORU is very similar to other regulatory bodies recognised worldwide, for example, Health and Care Professions Council founded in the United Kingdom. CORU's role is to 'protect the public by promoting high standards of professional conduct, education, training and competence'.²

Personal and professional development is vital in building and maintaining expertise and will become an integral component of healthcare professional (HCP) development. Regulatory Body Registration, through CORU, for RTs and DIs was introduced on the 31 October 2013 and the initial registration period for qualified professionals will last for 2 years.⁴ This 'grand-parenting' period will allow registrants to conduct voluntary CPD. Mandatory CPD will be required by all RTs and DIs in 2015.⁵ A demonstration of competence through reflective practice (RP) to assess ones knowledge and skills, identify learning needs and implement a learning plan is a core element of CPD.⁶

CPD can be defined as a process of ongoing educational activities where an individual updates and learns new skills or knowledge relevant to their profession, which can then be integrated into clinical practice.⁷

In 2004, a study conducted in the United Kingdom and New Zealand⁸ into attitudes of

radiographers to mandatory CPD concluded that there was a poor awareness and understanding of what constituted a CPD activity with less formal activities not being recognised and valued. Barriers and drivers of CPD were identified. Personal development and better patient and work outcomes were considered drivers for CPD participation but RP and cost were identified as barriers. A follow-up study,⁹ after mandatory CPD was introduced, concluded that intrinsic motivation could be fostered by inhibiting perceived barriers and promoting perceived drivers. The study also showed that managers are key to promoting CPD activity participation and a positive culture of learning in the workplace can impact on CPD activities.

Aims and objectives

The aim of this research was to assess the factors affecting CPD participation in Ireland by designing an online survey for RTs and DIs. The second aim was to assess the participants' knowledge and attitudes towards Regulatory Body Registration by including questions in the survey to investigate the participants' knowledge of the process of Regulatory Body Registration and their attitude with regard to Regulatory Body Registration requirements.

MATERIALS AND METHODS

Population and recruitment

In total, 711 RTs and DIs, within the IIRRT, were asked to participate. Students and professionals who were not members were excluded from the participant population.

The main method of recruitment involved creating and posting flyers to service managers in Radiation Therapy and Diagnostic Radiography departments in Ireland 1 week before the surveys were available for members to complete. These flyers included information regarding the nature of the project and stated that the surveys would be available on the IIRRT Website.

A second method of recruitment was devised to increase participation. The IIRRT CPD officer placed sign-up sheets at CPD events.

These sheets contained information regarding the aims and purpose of the project. IIRRT members provided their contact details if they were interested in participating. The invitation letter and participants information leaflet were then e-mailed when the surveys were available.

To encourage participation, a reminder letter was posted to service managers midway through the project and a link to the survey information was posted on the IIRRT Facebook page.

The online anonymous surveys were available from 16 to 27 September 2013 on the IIRRT Website.

The response rate was low (3.8%) when the surveys closed.

Permission was sought from the IIRRT President for a sign-up sheet and flyers to be made available at the IIRRT annual conference in October. The surveys were re-opened for 1 week (October 2013).

Ethical approval was received from Trinity Health Sciences Ethics Committees.

Data collection

A literature search was performed in the EMBASE, PubMed and Google Scholar databases using key words, which included CPD, Continuing Professional Development, Continuing Education, CE, healthcare, allied healthcare professionals, radiation therapy, and radiography. Before survey design, a meeting with the IIRRT CPD officer was held to confirm background information regarding CPD and Regulatory Body Registration in Ireland. Surveys were designed in 'SurveyMonkey' based on the findings in the literature and discussion with the IIRRT CPD officer.

Demographic information included closed multiple choice questions about the participant. A series of open and closed questions were designed to establish factors affecting participation. A Likert scale question detailing various CPD activities was created to determine the participant's preference of activity.

As the evidence suggests that reflective practice can be considered a barrier to CPD,^{10,11} multiple choice and Likert scale questions were developed to ascertain the participants' knowledge and attitudes towards reflective practice.

Information from the CORU Website (www.coru.ie) was used to assess the participants' knowledge of Regulatory Body Registration.

The survey was reviewed by two IIRRT council members. Minor modifications were required to improve the structure and enhance comprehension of the survey. A question was added to the survey to obtain more detailed demographic information. The survey was piloted with a small sample of non-clinical personnel ($n = 2$) and final year undergraduate RT students ($n = 4$).

Data analysis

All data were coded and entered into SPSS 21.0 for analysis. Any missing data were given the value 99. A variety of descriptive and statistical analyses were carried out. Categorical data were analysed using the χ^2 tests with a p value ≤ 0.05 , deemed statistically significant. Mean and standard deviation descriptive statistics were used to analyse ranked and closed data. Qualitative data from open questions were analysed thematically and integrated into the discussion.

RESULTS

Demographic information

In total, 711 online surveys were made available to IIRRT members and 53 responses were received, resulting in a response rate of 7.45%. In total, 42% of respondents' were RT's, 75% worked in the public sector and most were female (92%) (Table 1).

CPD participation

The most popular activities for respondents who participate in CPD were conferences [81% ($n = 38$)] and lectures [77% ($n = 36$)] with 17% ($n = 8$) of participants taking part in case studies.

Table 1. Demographic information for Irish Institute of Radiography and Radiation Therapy survey

Questions	Answer options	Number of responses (%)
Age (<i>n</i> = 53)	20–29 years	15 (28)
	30–39 years	22 (42)
	40–49 years	10 (18)
	50–59 years	4 (8)
	60+ years	2 (4)
Gender (<i>n</i> = 52)	Male	4 (8)
	Female	48 (92)
Profession (<i>n</i> = 53)	Radiation Therapist	22 (42)
	Diagnostic Radiographer	31 (59)
Professional grade (<i>n</i> = 52)	Radiation Therapist/Diagnostic Radiographer	24 (45)
	Clinical Specialist Radiation Therapist/Diagnostic Radiographer	17 (32)
	Service Manager	5 (10)
	Academic/Lecturer	5 (10)
	Other	1 (2)
Place of employment (<i>n</i> = 53)	Public	40 (75)
	Private	7 (13)
	N/A	6 (11)
Years of experience (<i>n</i> = 53)	1–5 years	13 (25)
	6–10 years	12 (23)
	11–20 years	16 (30)
	21–30 years	8 (15)
	31–40 years	4 (8)
	41+ years	0 (0)

Motivational factors

This research showed that personal development was the most motivating factor with encouragement from management being the least motivating (Figure 1).

Limiting factors

Cost and staff shortages were considered the greatest barriers for participating in CPD and reflective practice was the least limiting factor (Figure 2).

Communication

In total, 84% (*n* = 42) of participants received notification of CPD events/activities externally. Those who do not participate in CPD [75% (*n* = 3)] would prefer to receive notification internally from managers or colleagues. In total, 60% (*n* = 40) of respondents would prefer to receive information about different CPD events/

activities 1–3 months before the event. Due to the small sample size no statistical significance can be reported.

Cost

In total, 54% (*n* = 26) of participants self-fund CPD activities. In total, 37% (*n* = 19) of respondents would like to have activities partly funded by their employers. If an activity was partly funded or sponsored, 92% (*n* = 49) of respondents would attend. In total, 58% (*n* = 30) of respondents are willing to spend €50–100/year on CPD activities.

Time

Most participants carry out CPD during a mixture of their work hours and their own time [54% (*n* = 26)]. In total, 46% (*n* = 22) perform activities during their own time and ~48% (*n* = 11) of these respondents are eligible to claim 'time in lieu' for

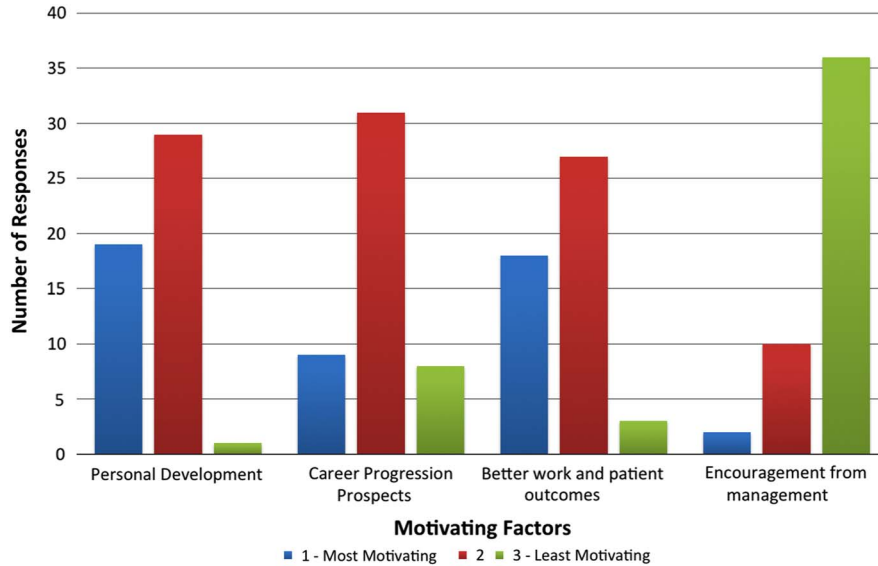


Figure 1. Ranking of the factors that motivate respondents to participate in Continuing Professional Development events/activities.

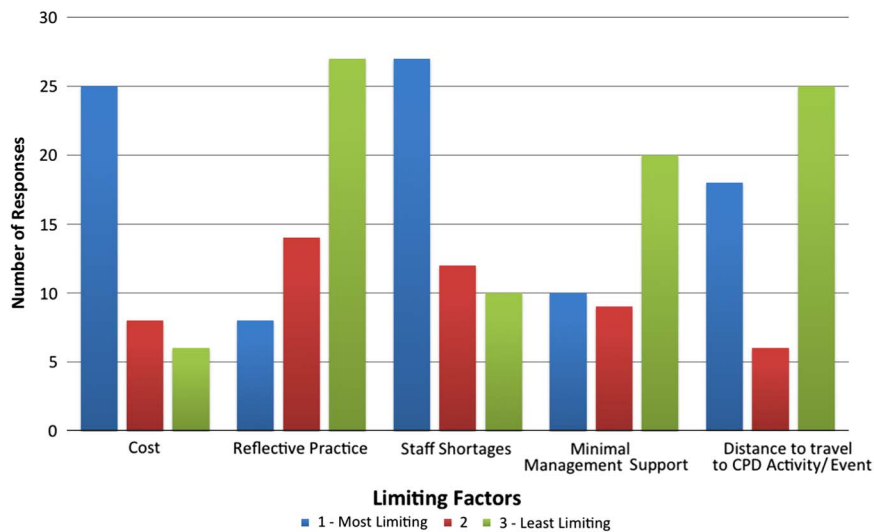


Figure 2. Ranking of the factors that limited the respondents' participation in Continuing Professional Development (CPD) events/activities.

their participation. In total, 50% ($n = 25$) are given some time during the working day to participate in CPD with ~6 hours given every month to participants ($SD = 4.5$).

Types of activities

Conferences and day-to-day experiences are the most preferred types of activity with writing

reports, research and performance reviews as the least preferred option (Figure 3).

Reflective practice

Of the four alternatives given to record and reflect on CPD, personal folders were the most popular [53% ($n = 27$)], whereas 22% ($n = 11$) do not record their CPD activities. Two-thirds [67% ($n = 34$)] of the respondents felt that

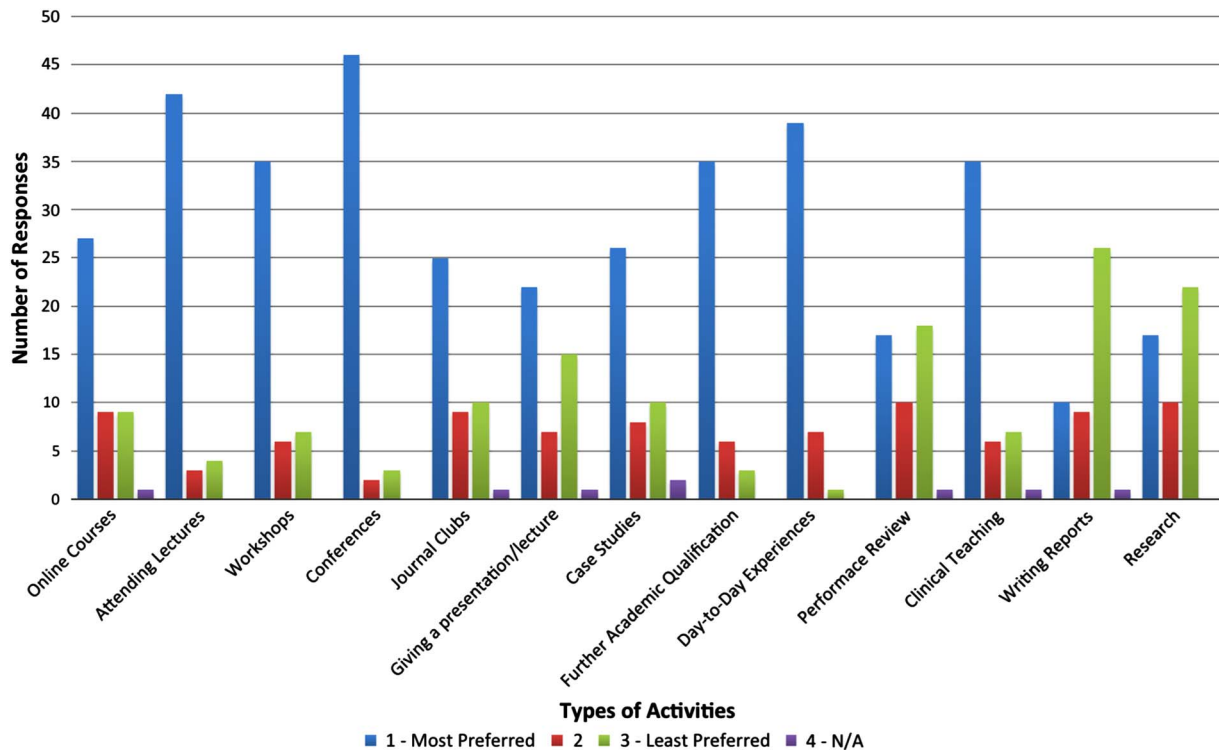


Figure 3. Rating of the types of activities/events preferred by respondents.

RP was an appropriate method of critically evaluating what was learned from CPD with 68% ($n = 34$) understanding the purpose and benefits of this practice. Results showed a largely positive attitude towards RP as they felt it improved their clinical confidence, helps identify professional strengths and encouraged self-directed and deep learning (Table 2).

Regulatory Body Registration

Respondents learned about Regulatory Body Registration internally from their managers or within their department. A total of 15% ($n = 7$) had received no information. Respondents' knowledge of Regulatory Body Registration varied. In total, 10% ($n = 5$) of respondents answered all the questions correctly. The mean score was 7.8 out of a possible 10 ($s = 2.4$). In total, 63% ($n = 30$) thought that the process of Regulatory Body Registration needed to be more effectively communicated and 83% ($n = 39$) believed that more information was required. The views and attitudes of respondents to Regulatory Body Registration were varied (Table 3).

DISCUSSION

The results of this study show that there are many factors that affect RTs and DIs participation in CPD that are similar to those in published works in this research field. All respondents of the survey recognised the importance of CPD, not only for themselves as professionals but for patients and employers. Career progression prospects and management support were positive factors associated with CPD. The factors ranked as barriers to CPD concur with the literature but time and relevance of activities were also listed, as barriers in this study population.

Motivational factors

Consistent with the literature, personal development was the main motivating factor for CPD participation. The importance of intrinsic motivation has been identified by many healthcare professions.^{8,9,11,12} The development of a positive attitude towards CPD for RTs and DIs, personal and professional areas of interest should be identified in order to generate an overall positive attitude.

Table 2. Attitudes towards reflective practice in Irish Institute of Radiography and Radiation Therapy survey

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total (n)	Mean	SD
Increases my learning from an experience	1 (2%)	4 (8%)	10 (20%)	18 (37%)	16 (33%)	49	3.92	0.98
Is an inadequate method to resolve clinical problems	8 (17%)	11 (23%)	13 (27%)	14 (29%)	2 (4%)	48	2.80	1.17
Improves my clinical confidence	3 (6%)	4 (8%)	13 (27%)	22 (45%)	7 (14%)	49	3.55	1.02
Is time consuming	1 (2%)	8 (16%)	5 (10%)	21 (43%)	14 (29%)	49	3.78	1.07
Encourages self-directed learning	1 (2%)	8 (16%)	6 (12%)	25 (51%)	9 (18%)	49	3.73	1.02
Is confusing as to which situations to reflect upon	3 (6%)	14 (29%)	13 (27%)	13 (27%)	6 (12%)	49	3.10	1.19
Promotes deep learning	6 (13%)	12 (25%)	5 (10%)	19 (40%)	6 (13%)	48	3.27	1.29
Is uncomfortable as I have to evaluate my own work practice	4 (8%)	12 (25%)	14 (29%)	16 (33%)	3 (6%)	49	2.94	1.05
Helps identify professional strengths	2 (4%)	6 (13%)	9 (19%)	24 (50%)	7 (15%)	48	3.61	0.98
Will help me acquire new knowledge and skills	3 (6%)	8 (17%)	7 (15%)	22 (46%)	8 (17%)	48	3.41	1.19
Is not appropriate method for critically evaluating CPD events/activities as I have a limited understanding of reflective practice	12 (25%)	16 (33%)	7 (14%)	11 (23%)	3 (6%)	49	2.59	1.24
Will further my understanding of my own beliefs, attitudes and values	3 (6%)	6 (12%)	14 (29%)	20 (41%)	6 (12%)	49	3.47	1.10
Is challenging as I have to evaluate my own work practice	2 (4%)	11 (22%)	8 (16%)	22 (45%)	6 (12%)	49	3.40	1.09

Abbreviations: CPD, Continuing Professional Development. Bolded text indicates most common response.

Table 3. Respondents views and attitudes towards regulatory body registration

Regulatory Body Registration is essential to ensure state regulation of anyone using the title of radiographer or radiation therapist has met certain standards before they can practice

Quite expensive and the benefits haven't been communicated properly to us yet

Although I understand the aim up Regulatory Body Registration is to maintain a high standard within the profession of Radiography, I am unsure as to why there is a substantial fee attached to it

Amazing that we have to incur the costs of this body

My general concern is the initial proposed yearly fee has discouraged colleagues to have a positive attitude towards registration. This needs to be addressed, and the benefits of registration need to be disseminated to each department in the country; so that it doesn't just seem to be yet another bill that has to be paid. People don't have the money to be forking out for this on a yearly basis and so I think it would be in the best interest to ensure the payment is reduced as much as possible, and that everyone is informed as to what the money is going towards. In my department lack of CPD is not an issue, so the benefits of ensuring that all staff are adequately trained does not seem as much of an issue

Hopefully it will contribute to improved standards of care and more attention to detail than is currently the practice. Accountability is becoming very necessary

Time frame involved seems to change. Still unsure when it will happen

Seems it's going to be too expensive. I agree it's good to have someone keeping an eye on qualifications, but IIRRT have to validate qualifications before people can work here anyway. Going to be paying Regulatory Body Registration and not getting any free CPD activities, paying for membership and insurance to IIRRT, going to make it very costly to go to work. Regulatory Body Registration should include insurance and at least one CPD activity a year

Financially, I think it wrong that we have to join three different institutions, SIPTU IIRRT and now this CORU

Seems very expensive, considering that we have to pay for it ourselves, and then pay separately for IIRRT and Insurance

The cost of Regulatory Body Registration should be low and tax deductible. It should be to uphold our title but not as a money making thing

Excellent. Can't wait for FTP to start so Radiographers have to improve their professional standards

Very expensive with little or no impact on day to day work/respect/responsibilities

Abbreviations: CPD, Continuing Professional Development; IIRRT, Irish Institute of Radiography and Radiation Therapy.

Lack of management support was considered the least motivating factor to CPD participation. Studies have shown that management support is important for effective CPD participation but managers have to find a balance between hospital policies, service needs and staff development.^{9,10}

Management and professionals need to work together to ensure that the maximum benefit of CPD is visible in the department and the individuals work practice. A performance appraisal is a method by which the job performance of an employee is evaluated.¹³ It is an integral part of career development. The addition of a CPD element into performance reviews might encourage more RTs and DIs to participate in CPD.

Limiting factors

Cost and staff shortages appeared to be the most limiting factors for CPD participation. This finding echoes previous work in the United Kingdom and New Zealand where Henwood et al.^{8,9} also showed that staff shortages are a major cause of stress for radiographers. These findings are similar to other studies which identified a number of barriers to conducting CPD across healthcare professions including staff shortages, cost, time and professional relevance of the activity.^{10–12,14–18} Departments should consider the limitations RTs and DIs have identified that affect participation in CPD. This will be a challenge for employers as they will have to provide the appropriate resources and opportunities to participate, despite the budgetary pressures.

Cost

Even though most respondents of this study are willing to spend some money (€50–100/year) on CPD activities, cost was ranked as a factor that hinders participation.

Evidence over the years has shown that the cost of undertaking CPD activities is a significant barrier in healthcare.^{10–12,16,19} CPD activities must allow for economic and effective use of resources. Having CPD sponsored or costs subsidised could encourage more professionals to participate in CPD. A review on CPD costs, suggest that there is an inadequate amount of research to determine the most cost-effective mode of CPD.²⁰ In Ireland, it is essential that the cost effectiveness of the available activities are investigated at an organisational or departmental level to ensure value for money is achieved.

Time

Similar to observations in other HCP's such as pharmacists and dieticians,^{12,16} time was a common inhibiting factor for respondents.

The current literature is mixed regarding professionals preferences as to when they perform their CPD. This current study showed that respondents wish to participate in CPD during the work day. This is in line with Henwood's study who also found that that participants preferred CPD during the working day.⁸ However, some research showed many respondents preferring CPD to be conducted outside working hours.⁹ If possible, employers could offer some 'time in lieu' for HCPs if they participate in CPD events that may benefit and impact on their departments directly.

Professional relevance

Another theme observed in this study was the importance of professional relevance of the CPD activities. Evidence has shown that the professionals' perceived relevance of the CPD topic is important. This should be considered by organisers when planning CPD activities/events, perhaps by conducting brief surveys with staff before arranging CPD activities. This will help to identify relevant topics. Relevance of activity has also been highlighted as an essential factor for dentists, physiotherapists and other HCPs.^{10,11,15,21,22}

Delivery mode of CPD activities/events

Respondents showed a preference for conferences as a CPD activity. Report writing, research and performance reviews are less popular types of activities resulting in low levels of engagement. If these activities are to continue as CPD options, another challenge for the professional body will be to encourage professionals to engage in these activities. This will facilitate RTs and DIs to contribute to the further development of the profession and could yield long-term benefits for the individual as well as the profession.

Professionals will engage in CPD events that they are more comfortable with. However, the literature has shown that HCPs have a poor awareness of what constitutes a CPD activity.⁸

CPD is more than attending courses and undertaking postgraduate study, it also occurs on the job through day-to-day experiences, journal clubs and workshops.^{10,15,19,22,23} Professional and regulatory bodies need to invest in educating HCP's about CPD and encourage professionals to broaden their range of activities. This will reveal variety of ways to participate in CPD events and may lead to an increase in CPD participation.

Reflective practice

Interestingly respondents have a largely positive attitude towards RP, with most respondents stating that this practice is appropriate for critically evaluating what they have learned from their engagement of CPD activities. Similarly, when asked to rank what hinders participation, RP was not considered a major limiting factor. This finding is surprising as the literature identifies RP as a barrier for HCPs, with <20% of UK nurses identifying RP as a method to improve their practice.^{10,11} However, due to the limited research into the role of RP for RT's and DI's it is difficult to draw comparisons.

In clinical practice, there is an increasing emphasis on RP^{9,16} as HCPs are required to have an understanding of their areas of strength and be confident in their ability to think reflectively and improve their actions and patient care. If reflection is to be successful in clinical practice then professionals need to be motivated and recognise the importance of it for both personal and professional development. Reflection is a process that will allow for greater understanding of situations and produce future actions.¹¹ Perhaps the fact that RP is included in current undergraduate education programmes goes some way towards explaining the positive attitude found in this sample.

Regulatory Body Registration

The profession of Radiography in Ireland is undergoing great changes at the moment, namely the introduction of Regulatory Body Registration through CORU. Mandatory registration has been introduced in many professions throughout the world, for example, Health and

Care Professional Council in the United Kingdom.²⁴ Statutory bodies, such as CORU, need to ensure the professional competency and the maintenance of high-quality patient care.^{2,6,22} To guarantee this high standard and promote public safety, mandatory CPD will be introduced for RTs and DIs.

RTs and DIs who responded to the survey have a general understanding of what the process of Regulatory Body Registration involves but most think that more communication is required. The attitudes towards registration are mixed:

'I can't wait for Fitness to Practice to start so Radiographers have to improve their professional standards'.

'Very expensive with little or no impact on day to day work/respect/responsibilities'.

'Although I understand the aim of Regulatory Body Registration is to maintain a high standard within the profession of Radiography, I am unsure as to why there is a substantial fee attached to it'.

Limitations

The initial recruitment that was considered when designing this study was not feasible, therefore new methods were developed that yielded a poor response rate. This low response rate may mean that this is not a representative sample.

Due to the low response rates (7.45%), the study conclusions must be interpreted with caution and it is difficult to compare the findings with other studies of HCPs with higher response rates.

Future work

Future work in the field of CPD and Regulatory Body Registration is required, but first, it would be interesting to repeat this study in all RT's and DI's practising in Ireland, as those who are members of the professional body may have different attitudes to non-members. Second, this study should be replicated after the 'grandparent' period of Regulatory Body Registration to investigate whether the factors affecting CPD participation for RTs and DIs change when CPD becomes mandatory.

CONCLUSION

This research explored the factors affecting CPD participation and issues for clinical RTs and DIs. A lack of time, staff shortages and funding for CPD were the greatest barriers to participation, concurring with findings of the recent literature. Creating solutions to the established issues will encourage and enable RTs, DIs and departments to adopt and promote a culture of learning which will lead to effective implementation of CPD.

Professional bodies will be regulating CPD to ensure competence of their members to practice.^{2,6} More countries, such as Ireland, are moving towards implementing mandatory CPD as a condition of registration. Effective communication from regulatory bodies about the process of Regulatory Body Registration is essential so that HCP's decisions about CPD are positive. This will ensure HCP's are intrinsically motivated to participate in CPD rather than merely engaging with CPD. HCPs should focus on the positive aspects CPD, rather than viewing it merely as a requirement to be fulfilled.

Radiation Therapy and Diagnostic Radiography are growing professions. CPD is an important element of this growth. As professionals we need to acknowledge the importance of CPD and foster a culture of ongoing learning and commitment, as it plays an essential role in ensuring the delivery of high-quality patient care.⁸

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Conflicts of Interest

None.

Ethical Standards

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national guidelines on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008, and has been approved by the institutional committees (Trinity Health Sciences Ethics Committees).

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