

## Original Article

# Radiation therapists' perspectives of the role of reflection in clinical practice

Angela Cashell

*Radiation Medicine Program, Princess Margaret Hospital, Toronto, Ontario, Canada*

## Abstract

A recurring theme from the literature is that the definition of reflection is nebulous and/or complex. Many authors have suggested that more research needs to be conducted to better understand an individual's perception of reflection and reflective practice, and how these concepts affect their clinical practice as well as their personal growth and development. This paper offers the findings of a qualitative study of radiation therapists in Canada. The aim of the study was to explore radiation therapist's understanding of the concept of reflection, and to understand how they incorporated it into their daily practice. Secondary objectives were to examine some of the perceived barriers to its use, and the possible challenges of implementing reflective writing. Two focus groups were initially conducted, and a follow-up questionnaire was developed using the themes generated from the focus groups. The questionnaire was distributed to radiation therapists at two large cancer centres in Toronto, Canada. Most participants indicated that it is an integral part of their practice and professional lives, and that they use a variety of different methods for engaging in reflection. It is not without its barriers, but many of these can be overcome by providing time, coaching and a supportive work environment. Respondents were divided as to whether they would benefit from being taught reflection; however, small group teaching would be the favoured method. Further study is suggested to determine whether there are any improvements to patient care and in particular patient outcomes.

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## Keywords

Reflection; reflective practice; radiation therapists

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## INTRODUCTION

Reflection, what is it? A variety of definitions for reflection have been suggested in the literature, such as the one by Reid<sup>1</sup> in which the author states "Reflection is a process of reviewing an experience of practice in order to describe, analyse, evaluate and so inform learning about practice." Taylor<sup>2</sup> suggested,

"Reflection is the process of critically analyzing practice to uncover underlying influences, motivations and knowledge". Both of these definitions imply that it is more than just thinking about one's practice and actions; it is a process that ultimately results in learning and personal development.

Schon,<sup>3</sup> who is often considered one of the seminal authors on reflection, distinguished between two types of reflection. The first is reflection-on-action, or the process of looking

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Correspondence to: Angela Cashell, Room 2B 619, Princess Margaret Hospital, 610 University Avenue, Toronto, Ontario M5G 2M9, Canada. E-mail: Angela.Cashell@rmp.uhn.on.ca

back at what happened and analysing the event to determine what led to one's actions. Reflection-in-action is defined by Schon as the real-time process of thinking about practice as it occurs and the subsequent modification of future actions. Schon suggested that problems in professional practice are often convoluted, with no clear or definitive solutions. He suggested that theory cannot always be applied wholesale, and that practitioner's previous experiences are frequently employed in real-life practice.

Reflection can be as simple as thinking about events or situations. Reflective practice, on the other hand, can draw out learning in a dynamic process that may involve writing, detailed discussion with colleagues and further reading. This has been recognised as an essential practice component of many healthcare professions.<sup>4,5</sup>

The growing body of literature on reflection and reflective practice is overwhelming, as can be verified by anyone who has attempted to run a literature search of the terms using any of the electronic database systems. A persistent theme from the literature is that the definition is nebulous and/or complex.<sup>6,7</sup> Many authors have suggested that more research needs to be conducted to better understand an individual's perception of reflection and reflective practice, and how these concepts affect their clinical practice as well as their personal growth and development.<sup>8,9</sup>

What is also clear from the literature is the lack of rigorous empirical investigation into the perceived benefits, as well as the barriers to its use. In addition, many have debated its efficacy in clinical practice.<sup>8,10,11</sup>

There are advocates who suggest that reflection does not simply occur spontaneously, it depends on active strategies such as reflective writing in diaries or portfolios.<sup>12,13</sup> Clinical supervision with or without the use of a structured model, can also be employed to support reflection.<sup>14</sup> However, as it may be challenging, in terms of having a suitable control group, to measure the clinical outcomes of an intervention such as reflection, no large-scale studies have been conducted to date.

The majority of the literature focuses on the use of reflection in education<sup>15,16</sup> rather than clinical practice in health care. The healthcare literature is also predominantly from the field of nursing,<sup>17-19</sup> with contributions from occupational therapy and physiotherapy.<sup>20-22</sup> There is a paucity of data on reflection's use in the field of radiation therapy, although a number of articles have been published more recently.<sup>13,23</sup> It has been suggested that reflection is valuable in tackling issues where traditional theory is outdated or inadequate, and Hall and Davis<sup>24</sup> specifically reported on the gap within radiation therapy practice that is created when new practice and problems do not fit into the historic theoretical models, or into customs that have evolved over the years.

Despite the lack of empirical evidence, professional bodies in nursing, medicine and radiation therapy have embraced the use of reflection as part of their annual requirements for licensure, and now require members to include entries on reflection in their profile or portfolio submissions. Recent graduates of training programs in radiation therapy may be somewhat more familiar with the process of reflection and reflective writing through journaling, as it has become an integral part of many undergraduate curricula in Canada and in Europe. However, for the experienced practitioner, reflection may be an entirely new concept. Regardless of this challenge, the ability to validate the wealth of information and clinical expertise acquired over the years, by incorporating written reflective pieces in their portfolios, may be a key to demonstrating their professional growth and expertise.

In Ontario, Canada, the College of Medical Radiation Technologists of Ontario requires each member to undertake an annual self-analysis, to develop an action plan and to complete a continuous learning portfolio.<sup>25</sup> Portfolios can promote critical thinking, self-assessment and individual accountability, and reflection is a key element of most portfolios.<sup>26</sup> Portfolios are also a convenient mechanism for evaluating competencies that may otherwise be difficult to assess. At the author's workplace, a Professional Practice Model is currently being

developed, which will require staff to provide evidence of their level of competency through the submission of a portfolio incorporating written reflective pieces. However, as a starting point, it was important to determine what radiation therapists understood by the term reflection and how they incorporated this into their current daily practice. This information would then guide future interventions with regards to supporting reflection and reflective writing.

## AIMS AND OBJECTIVES

The aim of the study was to explore radiation therapist's understanding of the concept of reflection, and to understand how it was incorporated into their daily practice. Secondary objectives were to examine some of the perceived barriers to its use, and the possible challenges of implementing reflective writing.

## STUDY DESIGN AND METHODS

As this study aimed to explore the thoughts and perceptions of radiation therapists rather than to establish causality, a mixed methodology using a combination of qualitative and quantitative approaches was used. It was felt that using the two methods would not only strengthen the design, but also provide a wider range of opinions. As well, triangulation is considered to be a validation of qualitative research,<sup>27</sup> so with this in mind, a thorough review of the literature was completed in this topic area to attempt to substantiate an overall interpretation.<sup>28</sup> The research proposal underwent a full Research Ethics Board review.

### Focus groups

Two 1-hour focus groups were conducted by the author, consisting of eight participants in each group. Each group was homogenous, but were purposefully sampled to ensure gender representation (male and female), a variety of years of experience and education (diploma, BSc, MSc). The sampling strategy was purposive in order to gather a range of different perspectives. A focus group guide was used, which included a number of predetermined questions to guide the discussion amongst the

group, while allowing opportunity for thoughts and topic areas to emerge. The sessions were audio taped and notes were taken by the researcher. The audiotapes were transcribed and confidentiality was maintained by using unique identifiers for each of the participants in the transcripts. Analysis of the focus group data involved reviewing, classifying and interpreting responses from the focus group transcripts using a thematic analysis. Key themes and topics that emerged formed the base for the development of the questionnaire.

### Questionnaire

There appeared to be no validated instrument available to use, therefore a questionnaire was developed using the themes that emerged from the focus group data. The questionnaire was initially piloted for clarity, face and content validity to a small group of colleagues before general distribution. The survey consisted of 11 questions, and employed mainly closed-ended questions with yes/no responses, or a 5-point Likert scale. However, some open-ended responses were encouraged where appropriate.<sup>29</sup>

The survey was distributed via Survey Monkey<sup>®</sup> (an on-line survey system) to all radiation therapists working at two large cancer centres in Toronto. The selected target group, consisting of 299 potential participants, received an electronic cover letter explaining the survey and obtaining their consent for participation.

Demographic data were also collected in the questionnaire to attempt to determine whether there were any differences in response in terms of age, gender or previous educational preparation.

Descriptive statistics were used to analyse the survey results of the structured items. The open-ended responses were also documented and classified.

### Informed consent

Written informed consent was achieved from the focus group participants, and by responding to a mandatory question in the survey. Confidentiality and anonymity was assured to those who agreed to participate in the research.

## FOCUS GROUP FINDINGS

In both focus groups a number of key themes and associated concepts emerged, which are described below. Individual's responses have been included.

### Reflection as catharsis

Participants in the two focus groups indicated that they use reflection as a coping mechanism, or as a means of de-stressing after a particularly negative day at work. The importance of sharing thoughts with colleagues was emphasised as a release mechanism, which would then allow the participants to move on either with the task at hand or within their personal lives. Some of the comments included were:

"Its therapeutic, because it just gets you to say I was mad".

"Tell someone about it or write it down, so it doesn't haunt you. Where you are processing, you are coping"

### Reflection to solve problems

The use of reflection to help change practice came across as a recurring theme, and it was suggested that this could be done on a personal level or professional level within the team.

"Thinking why didn't I do that or why didn't I think of that; I should change what I am doing".

At the personal level, many of the comments focused on an individual's practice, as well as their career goals. At the professional level, they focused on team interactions, decision-making and future improvements or changes to practice.

"Looking back on what just happened and what could be improved in the future".

### Reflection for goal setting

Participants discussed their personal goals as being drivers for reflection.

"I think reflection has a lot to do with your personal goals and your personal

values, how you're measuring up to your own standards; am I the best that I can be, if not, what do I need to change".

"You're looking back at your goals, what you wanted to achieve and did you actually meet them".

### Factors influencing reflection

Both groups identified a number of factors that would influence reflection. Gender differences and their impact on reflection were discussed in detail, but all participants agreed that the use of reflection was more related to individual personality rather than gender.

"I would probably say there aren't as many gender differences as there are personality differences. I certainly know of some men that are more reflective than some of the women, so I would say its personality".

"I think gender might play a role, not in how frequently you reflect, but how you reflect. Maybe women might be more verbal, whereas men might be more quiet thinkers, and not discussing it. It might be more internal for men, whereas women might want to discuss it more".

Fear of sharing your thoughts or being perceived as weak, was seen as a barrier to reflection. It was also suggested that culture and religion might play a part in the way a person reflects, or whether it is an accepted norm within their culture to share their thoughts and feelings with others.

"It might be viewed as a weakness if you're someone new and you're questioning something or thinking about it."

A person's level of experience was mentioned as an enabler to reflection, however, interestingly, within the focus groups, there was no discussion about the time needed to engage in reflection as being a barrier.

"As you gain experience, you have the confidence to know you didn't do anything wrong".

However, some participants commented that it was just a waste of their time and they could not see the benefits of doing it.

“I couldn't think of anything more useless”.

### Approaches to reflection

A number of different approaches to reflecting, such as individual, one to one, group discussions and journaling were identified. Participants in the focus groups demonstrated awareness of reflective writing, discussed various levels of experience using it, and also shared opinions about its usefulness. Some identified key times where reflective writing may be more helpful.

“After 2 years or so, when you look back, its like, oh that's how I was feeling at the time, and right now I feel differently. There is also this level of satisfaction. Like you have matured out of this thinking”.

“I think it's too much like work. I couldn't be bothered”.

“I think you have to avoid the trap of thinking that writing it down is a necessary step to it, which I think was the trap we

might have been led into in school, because there was never any guidance given into how to transfer it into your everyday practice”.

“I think if it's very stressful, like if you had a patient die; that would be the only time you might write it down”.

“More key incidents. Not every day”.

### QUESTIONNAIRE FINDINGS

A total of 123 responses were collected via SurveyMonkey<sup>®</sup>, which equates to a 41% response rate of those surveyed. A 56% of respondents had >11 years of experience in radiation therapy, and 83% were female (Figure 1).

#### Frequency of reflection

When asked regarding the frequency of reflection, 33% of respondents indicated that they reflect every day and 42% indicated that they reflect a few times a week. The remaining 25% indicated they reflect less frequently, either once a month or once a year. Women tended to reflect more frequently than men, but respondents of both genders

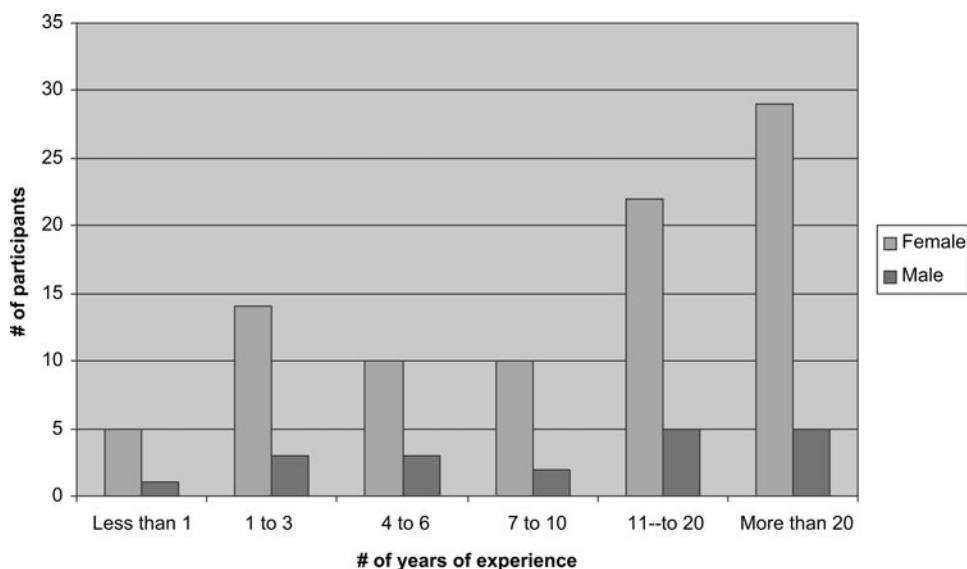


Figure 1. Study participants years of experience.

with >7 years experience tended to reflect more often (Figure 2).

### Why do they reflect?

When asked why they reflect the most common response was to de-stress after a negative incident or difficult day. The second most common reason was to solve a particular clinical problem, or to make sense of a clinical situation. Respondents did indicate that they used reflection to learn from something that went well, but this was not highly ranked. Only 9% indicated that they use it for career planning.

### How do they reflect?

When asked how they prefer to reflect, the majority of respondents indicated that they preferred to do this on their own by thinking things through, and the second most popular response was in an informal group setting. A variety of group settings were suggested, such as committee meetings, team meetings, service day retreats as well as coffee, lunch or pub meetings. The formal group setting, such as a facilitated session, was strongly opposed.

### Is it useful?

Over 75% of respondents indicated that when they did reflect they found it useful often or

very often, with a stronger response seen in respondents with a greater number of years of experience (Figure 3).

### So what are the barriers?

There were many barriers to reflection identified such as time, lack of skills and privacy issues. Time to engage in reflection was the most dominant response, and this was more dominant in those with greater years of experience. Fear of sharing one's thoughts was the second most common barrier identified, and this was more common in those with less years of experience.

A 46% of respondents had been asked to participate in reflective writing in their undergraduate or graduate training; however, only 36% of this group indicated that they had been provided with training to do so.

When asked whether they would benefit from receiving training in reflective writing, the group was split, with 49% of respondents indicating they would benefit and 51% indicating they would not benefit. No difference was seen in either gender. However, the most popular method of achieving this was suggested as small group sessions (51%) and workshops (30%).

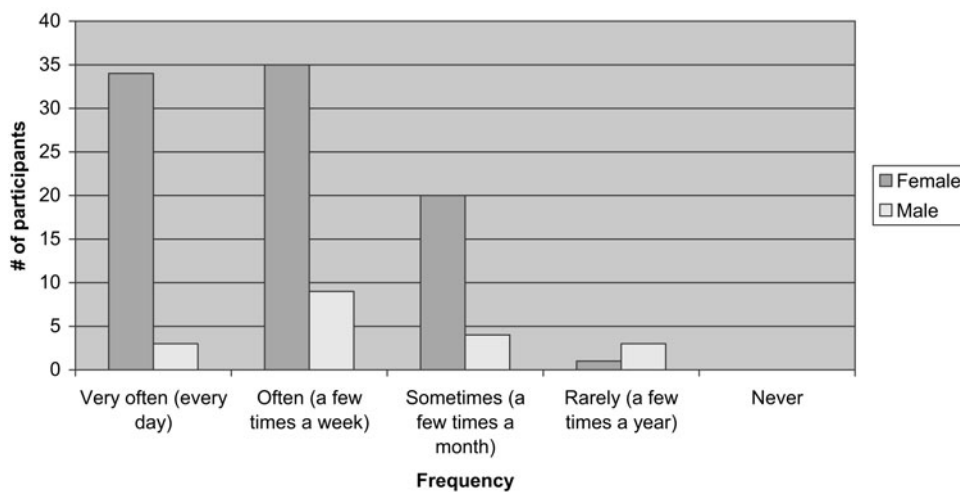


Figure 2. Frequency of reflection.

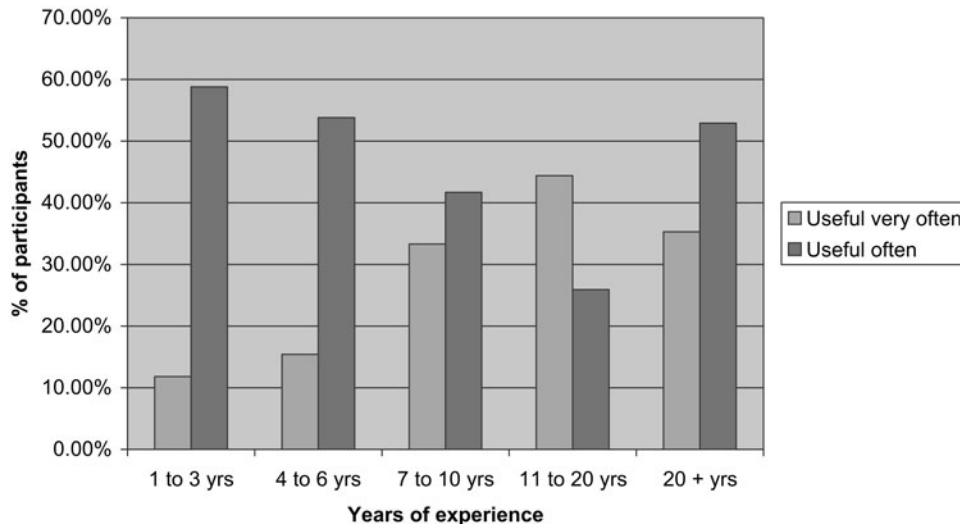


Figure 3. Usefulness of reflection.

When asked for general thoughts on reflection, many interesting comments were obtained, such as:

“I think we all practice reflection in some form or another and are not aware we are doing so.”

“The use of reflection is wonderful, but if we could teach ourselves to be present in the moment and focused, then we would not need to be reflective of things that go wrong, we would be able to avert a problem situation”

“I think for those that do it, it comes naturally with their personality, and we reflect on matters outside the workplace also. I am not sure if you can teach someone how to do that, but you can make them aware”

“Understanding how to do things right and learn from mistakes is good enough. Reflection is mostly a waste of time in finding things to write about or talk about.”

## LIMITATIONS OF THE STUDY

The limitation of this study is that it represents a group of radiation therapists in two large cancer

centres in Ontario. The size, characteristics, culture and demographics of this population are therefore unique. The opinions of the participants may have limited applicability to other groups, and radiation therapists in another centre may respond differently. In qualitative research, the goal is never generalisability, but often transferability is used to judge the extent to which the results can apply to other contexts.<sup>30</sup>

As a proponent of reflection and reflective practice, and due to the nature of the strategic direction of the author's current workplace, the author is strongly aware of the personal bias that may exist in this topic area.

## DISCUSSION

The focus group findings provided a rich source of data from this professional group, and reinforced some recurring themes from the literature. This was further supported by the questionnaire data.

### Reasons for using reflection

The radiation therapists in this study indicated many reasons for using reflection in their practice. In the focus groups, the discussion centred upon learning from a particular event in their

practice, and how they used it for their own growth and development. The use of reflection to change their practice was particularly important in situations where the protocol did not fit the scenario or the patient situation did not fall into a standard paradigm. Radiation therapists are guided heavily by protocols and policies in order to ensure accurate treatment and safe practice. However, practitioners frequently come across cases that do not fit into previously defined parameters or categories. Participants in the study discussed informal methods of reflecting on these situations and learning from them, and some identified opportunities to improve practice through research endeavours or the revision or development of new policies. The link between evidence-based practice and reflection has been discussed in the literature,<sup>31,32</sup> as well as its use in radiation therapy practice.<sup>7,8</sup> However, a lack of engagement in frequent informal reflection may reduce the opportunity to explore, investigate and collect evidence to improve practice. Whilst obviously hard to measure, the positive impact on patient care is palpable from this study, as participants in the focus group frequently referred to improvements in practice as motivators for their reflection. White indicated that reflection is often associated with negative incident analysis, and its use should be encouraged to highlight best practice rather than for staff to engage in a “witch-hunt”.<sup>7</sup> Respondents in this study did not focus only on negative incident analysis, but looked at all challenging situations as an opportunity to change practice or to learn from it. However, some did refer to situations such as a patient’s death, where they felt there was particular value in more personal reflection.

### Time to reflect

Time to reflect has been cited in the literature as a major obstacle to the use of reflection, particularly written reflection.<sup>12,17,19,22,32,33</sup> Although this was highlighted as a significant barrier in the questionnaire data, it was not discussed at any length in either focus group. However, as one participant in this study indicated, it is important not to feel that every event needs to be reflected upon. Time to reflect is something that the individual needs to plan

out, but also something that the organisation should support and build into their culture. This is supported by a comment from Clarke who said “it is important that there is “space” in the activities of the organisation for individuals to reflect”.<sup>34</sup> This is analogous with the literature in terms of the commitment of time needed to engage in continuing professional development.<sup>35</sup>

### Personal characteristics

Interesting discussion occurred on the issue of gender in the use of reflection. Many felt that reflection was not related to gender, but more concerned with personality and the individual’s willingness to share thoughts and feelings. Clarke<sup>34</sup> postulated that the gendered nature of nursing is likely to make it a more reflective profession, as their life strategy tends to be characterised by openness, willingness to share and a readiness to accept new ideas. These characteristics were identified by participants in the focus groups in this study, and have also been discussed in other studies.<sup>36</sup> Although the balance has shifted drastically over the last 10 years, radiation therapists are still predominantly female. In this questionnaire, 82.6% were female.

### Frequency of use

In this study, we did see differences in the frequency of reflection between the two genders and also an increase in the use of reflection with more years of experience. This was despite the fact that participants with less experience indicated they had been trained to use reflection. This echoes the work of nursing scholar Benner,<sup>37</sup> who has demonstrated that the ability to reflect on practice is the hallmark of an expert clinician, as opposed to years of experience. As one participant in this study put it “*as you gain experience, you have the confidence to know you didn’t do anything wrong*”. In a study of 4th year medical students, Boenink found that reflection increased with previous experience in the healthcare field, although this was not correlated with age or the scope of the previous experience.<sup>36</sup> In contrast, it was concluded that in a group of primary health care physicians, reflection decreased with experience.<sup>38</sup>



## Teaching reflection

In this study, ~50% of the participants had previously participated in reflective writing, and one participant in the focus group stated that she continues to use her undergraduate diary. Only 36% of this group indicated that they had been provided with any formal support or training to do reflective journaling, despite it being an integral part of the undergraduate and many graduate curricula. Some did indicate that models or case examples were provided, but no formal teaching accompanied this. Some authors go so far as to question whether reflection can be taught,<sup>19,36</sup> and respondents in the questionnaire were divided in their opinion about the benefits of being taught to write reflectively. Reflective journaling is now taught in the undergraduate radiation therapy program using the Objective, Reflective, Interpretive, and Decisional model of reflection.<sup>39</sup>

One large study involving medical students, which employed a control group, demonstrated that reflective thinking could be developed using small working groups.<sup>40</sup> If a strategy was to be put in place, study participants suggested that informal group sessions would be preferable to teach or develop their skills in reflection. However some participants in the focus groups indicated their preference for one-to-one mentoring rather than teaching, to encourage them to discuss feelings and events more openly, and this is supported in the literature.<sup>41</sup> Although many participants stressed that documentation of their reflections should be encouraged where necessary and not just for the sake of it.

It may not be sufficient to provide models to follow, and expect that detailed analyses of pivotal events will follow, or to simply provide workshops or small group sessions as was suggested by the participants. We may need to continually provide support until practitioners become more adept at writing about their challenges and achievements in their professional lives. Support for reflective writing and portfolio entries has been stressed in the literature as being vital for successful implementation.<sup>42–44</sup>

However, there were also some study participants who felt that reflection should not be enforced and should not be templated or formalised.

Boenink has suggested that three factors can influence a person's ability to reflect. First, the tendency to be reflective as a personality trait, which was confirmed in this study. The second factor was the varying level of skill or capability to perform reflection, which involves both intellectual and personal elements. This was also demonstrated in this study with regards to those who had received instruction and those who gained skill with their own experiences. Third, the context and circumstances of the reflection, such as the motivating factors or barriers to performing reflection highlighted in this study.<sup>36</sup>

## CONCLUSION

The aim of this study was to explore radiation therapists' understanding of reflection and to explore how they use it in their daily practice. Although the majority of respondents indicated that they use it as a coping strategy, after a negative incident or stressful day, they also indicated that they use it to solve clinical scenarios and to improve their practice. Most participants indicated that it is an integral part of their practice and professional lives, and that they use a variety of different methods for engaging in reflection. It is not without its barriers, but many of these can be overcome given time, coaching and a supportive work environment.

If we now require practitioners to document their clinical experiences in order to provide evidence of their expertise, knowledge and growth, we will need to look at a variety of ways to support them to do this. This support will need to be tailored to different individuals and cover both reflective writing as well as portfolio development. The challenge then lies in the assessment and validation of this evidence within the portfolio.

This study provides data about the range of cognitive reflection within the radiation therapy

community. Although this may not fully satisfy the first recommendation by Newnham,<sup>8</sup> it provides useful data about radiation therapists' reflective practice. The next step could be to investigate the current use of structured models in the clinical environment to explore the perceived benefits of using these models. If models are in place, a study could then investigate whether there are any improvements to patient care and, in particular, patient outcomes, or whether the use of reflection in practice merely serves to make the practitioner a more thoughtful and practical member of the team.

Although reflection may be an activity that is open to criticism, the process helps practitioners to be more self-aware and to examine their actions and the quality of the care they provide. Increased self-awareness will be crucial in the development of a portfolio and in future professional development planning for radiation therapists.

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