What effect does treating cancer patients have on radiation therapy students’ identity development?

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Abstract The aim of this research was to determine what effect treating cancer patients has on the ability of radiation therapy students to develop their own identity. It is important that radiation therapists have a sense of self so they can enter fully into relationships with patients and other health professionals, and develop sound coping mechanisms to face the challenges of the clinical environment. This research was conducted utilising a qualitative case study approach, with a class of 30 Year Two young adult radiation therapy students. Twenty-one of the 30 students completed an open-ended questionnaire. The research findings show that this cohort of radiation therapy students is developing a new set of values, beliefs and goals, partially as a result of their interactions with cancer patients. Four main themes were identified: concern for family and friends, emotional aspects of treating cancer patients, the feeling of a sense of pride in their profession and a development of a greater awareness of themselves as individuals. Using the criteria of identity developed by James Marcia, some students expressed a strong sense of who they are as an individual with a sense of identity. However, for others, the clinical experience has caused them to actively struggle for a sense of who they are as a person as they searched for ways to cope. This research suggests that strategies such as counselling, supervision or mentorship could be useful for radiation therapy students so they can explore their feelings and be able to implement appropriate coping mechanisms.

Keywords: cancer, coping mechanisms, identity development, radiation oncology, radiation therapy, students

Introduction

The aim of this research was to determine if working with cancer patients had an effect on the identity of a New Zealand Year Two radiation therapy student cohort at the University of Otago. Being a radiation therapist involves treating and planning the radiation therapy treatment, predominantly for cancer patients, on a daily basis. When they are studying at the university, the students learn about the types of cancer, how and why they are treated and the implications a cancer diagnosis can have on patients and their families. This research explores what might be the effect of this work on a young person’s values, beliefs and sense of self in the world.

The concept of identity has been studied for more than half a century. The concept of an adult identity is knowing who we are as a person; it is to understand why we have beliefs, values and goals and to understand why we make certain decisions in our lives, and think the way we do. Components of identity include a sense of personal continuity and being unique. In addition to carving out a personal identity based on the need for uniqueness, people also acquire a social identity based on their membership in various groups, for example, familial, ethnic, and occupational groups. These group identities, in addition to satisfying the need for affiliation, help people define themselves in the eyes of others and themselves.

Erik Erikson and James Marcia’s theories have been used in many identity studies of young people and although their frameworks have been deconstructed and critiqued by several authors, no other framework appeared to fit the radiation therapy student experience. There has been plenty of research on the cancer patient and their families but little on the people and students that treat the patients. Because Erikson and Marcia’s work are still used as comparison tools in studies of young people and due to the developmental stage of the students, James Marcia’s work in particular, became an integral part of this research.

According to Erikson, identity development, while beginning in childhood, gains prominence during adolescence. Faced with physical growth, sexual maturation and impending career choices, adolescents must accomplish the task of integrating their prior experiences and characteristics into a stable identity. Erikson coined the phrase “identity crisis” to describe the temporary instability and confusion adolescents experience as they struggle with alternatives and choices. Erikson states that successful resolution of this “identity crisis” depends on one’s progress through previous developmental stages, centering on fundamental issues of trust, autonomy, and initiative. Parents describe their teenage children as going through phases. Much of this phase behaviour is experimenting with personalities and developing an identity.

Marcia elaborated on Erikson’s proposal by suggesting that this “identity crisis” stage does not consist of either identity resolution or identity confusion as Erikson claimed, but relates to the process by which an individual explores and commits to an individual character. This can depend on a variety of life domains that range from occupation to gender roles. One’s identity can then be classified as an identity status. This concept has become the most popular paradigm used in investigations of the identity formation process described by Erikson. In Marcia’s approach, Erikson’s fifth psychosocial task of identity versus role confusion is conceptualised not as a continuum, but rather as four
distinctive styles or modes of approaching identity-defining decisions. Marcia’s construct (Figure 1) is based on the independent dimensions of exploration and commitment. Exploration represents the search for a revised and refined sense of self, for example, exploring alternative beliefs, values and goals, whereas commitment represents the choice to pursue a specific set of goals, values, and beliefs.

These four identity statuses are not stages, but rather processes that adolescents go through. Marcia postulated that adolescents would occupy one or more of these statuses concurrently, at least temporarily. People do not progress from one step to the next in a fixed sequence, nor must everyone go through each and every state. Each state is determined by two factors, the first being the adolescent committing to an identity, and the second being the individual searching for an identity. Research subsequent to Marcia’s reconceptualisation of Erikson’s theory, however, provides evidence that identity development continues beyond adolescence into young, middle adulthood and even late adulthood.

Jordyn and Byrd examined the relationship between New Zealand university students’ level of identity development, their living arrangements, the degree of life difficulties experienced, and the manner in which they coped with their difficulties. They used an objective measure of ego identity status designed to assess, via questionnaire, each of the four identity statuses described by Marcia. They found that those students who did not live at home with their parents faced a larger number of challenges, but also used more direct, problem-focused strategies, and were more likely to have established a sense of self, compared with those living at home.

Jordyn and Byrd also highlighted difficulties experienced by university students (specifically young adults) in various domains of their lives. These included academic alienation (or dissatisfaction with the university), romantic problems (for example, dispute with partner or indecision about relationships), social mistreatment (social isolation or rejection), time pressure (or time management difficulties), problems with friends and developmental challenges (for example, indecision about career choice, discontent with physical appearance, or dissatisfaction with academic abilities). Generally, these young people were not only dealing with trying to find themselves and develop an identity, but also with making decisions that would influence the evolution of their adult lives.

The issues and challenges mentioned above are also relevant to New Zealand radiation therapy students. Being a radiation therapist in New Zealand involves treating and planning the radiation therapy treatment for cancer patients. Radiation therapy students who are of young adult age (17–30 years) study cancer, at a time of their lives when they are exploring and developing adult identities. A key occupational role of radiation therapists is to empathise and communicate sensitively with patients and fellow health professionals in multidisciplinary teams. It is important therefore that the radiation therapist is comfortable with themselves as a person, and are able to identify with their values and beliefs.

Although identity development has been analysed in the literature in depth, the relationship between identity development and being a young adult radiation therapist treating cancer patients has not been explored. The aim of this research was to determine what effect treating cancer patients has on the student’s ability to develop their own identity, so that potential problem areas of clinical practice can be identified to help students have a better clinical experience and become successful health practitioners.

**Context of the study**

The Bachelor of Health Sciences (Medical Radiation Therapy) is a national three-year, full time programme, which is delivered by the University of Otago, Wellington. Radiation therapists in New Zealand are employed by District Health Boards in Departments of Radiation Oncology, which are attached to public hospitals in Auckland, Hamilton, Palmerston North, Wellington, Christchurch and Dunedin. Each of the six departments sponsors students – depending on the availability of clinical placements. Student cohorts are generally made up of young adults, aged between 18 and 30 years. Approximately 15% of the students are male.

Two delineations were used to define the scope of this research. First, for the purposes of this research a young adult was defined as a person aged between 17 and 30 years of age. Second, this research relates to a cohort class of 30 enrolled Year Two radiation therapy students in 2004 at the University of Otago.

During the first year of the programme, students spend three weeks observing clinical practice in a sponsoring department; the rest of the year is spent at the university learning theoretical aspects of radiation therapy. Most students move from their home town to Wellington to study. In the second and third years, half the academic year is spent learning theoretical aspects at the university with the balance in the sponsoring department where clinical skills are learned, developed and assessed.

**Method**

A qualitative case study approach was chosen as the methodology for the research. The responses collected were to be anecdotal and subjective, and the approach to analysis was interpretive. The use of a cohort group lends itself to small-scale case study research, but the results cannot necessarily be generalised to the wider population. The study was limited to the 2004 cohort class of 30 Year Two
radiation therapy students enrolled at the University of Otago. This sample was chosen on pragmatic grounds because the Year Two students were on campus and they had completed one year of academic theory and six months in the hospital. All students in the cohort fell into the defined age group for young adulthood (17–30 years of age). The Year One students were excluded because they had limited practical experience and the Year Three students were on their clinical placements and were studying for final clinical examinations.

Being appropriate for smaller scale research, the method for collecting the data was an open-ended computer based questionnaire. An open design provided space where students could, in privacy, reflect on and record their experiences during their clinical training. The original working questionnaire asked students to identify their gender and ethnicity followed by five open-ended questions addressing the objectives of the research. As a result of pilot testing, questions were redeveloped to be more descriptive as well as adding two further open ended questions (see questionnaire below).

All 30 Year Two students were invited to participate in the final questionnaire. This was carried out when the researcher had no more teaching responsibilities with the cohort of students. The questionnaire utilised an anonymous participation/collection method.

Ethical consent for the study was granted by Victoria University of Wellington (for the researcher) and University of Otago, Wellington (for access to the participants) in March 2004.

The responses to each question were thematically coded. This was to allow for a content analysis and to examine the interrelationships within the data and collate the responses. The coding was carried out by studying the transcripts to develop a close familiarity with the responses. Each question was then analysed separately and during this phase all the concepts, themes and ideas were collated. A number or label was assigned to each category and this was then recorded in the transcript.

Results

Twenty-one out of 30 students responded (response rate of 70%) with 18 of the 21 (86%) being female. Seven students identified as Pakeha, 10 as European and four as New Zealand European.

Four main themes identified by the researcher were: concern for family and friends, emotional aspects of treating cancer patients, the feeling of a sense of pride in what they do and the development of a greater awareness of themselves as a person.

Concern for family and friends

Fifteen students expressed compassion, worry and a realisation that their loved ones, and to a lesser extent they too, will one day die:

“I worry much more about the health of my parents, siblings and extended family and friends. Often when mum or dad have complained of some type of pain – my initial reaction is ‘oh my goodness it’s cancer’.” (Student 20)

The students expressed an appreciation of values such as respect for others and appreciating life:

“I also now realise the value of treating people like individuals and what a difference listening to people and smiling at them can make for them.” (Student 6)

These quotes suggest that these students are developing the ability to make decisions about what is really important to them in life, like their friends and family, a trait of someone who could be in an achieved identity status.

Emotional aspects of treating cancer patients

Sixteen students indicated they were concerned about the emotional aspects of treating cancer patients, for example, treating palliative patients, people their own age, and coping with distressed and upset patients.

Six of the sixteen students said it was distressing for them initially to even treat patients with cancer:

“When I first started it was very overwhelming as I’d never really had anything to do with sick people and I felt as though I was expected to understand what they were going through. I was quite scared and anxious.” (Student 4)

Fourteen of the 16 students found it difficult to treat patients with palliative needs, and/or people their own age:

“One of the hardest situations that I have dealt with was when we started treating a guy that was the same age as me with a few days variation in birth date and he had a very poor prognosis. Throughout his treatment he had many struggles and with having chemo and RT he was vomiting all the time and we had to beam off when we could see he was going to vomit, and this was very distressing.” (Student 2)

Five of the 16 students indicated that they tried to deal with these emotional pressures themselves getting support from the team they work with:

“I feel I can get support from other members of the team to help me deal with anything I am finding difficult, including issues

The Complete Questionnaire

1. What gender are you? Female or Male.
2. What is your ethnic background? For example, Pakeha, Maori, Samoan, European, Chinese, Japanese or state other.
3. What initially attracted you to the radiation therapy programme?
4. Describe how you felt when you first started treating cancer patients? Please be as descriptive as possible.
5. Do you think treating cancer patients has changed your view on life? If so give examples how it has changed how you think/feel/behave. Please be as descriptive as possible.
6. Give examples from your clinical experience that might have had an influence on your view on life. Describe how they have affected you or not affected you. Please be as descriptive as possible.
7. Give examples from your life outside work where treating cancer patients might have had an influence on your personal life. Please be as descriptive as possible.
8. Have you had any personal experiences of cancer?
9. Are there any further issues that arise for you personally regarding treating cancer patients that you would like to comment on?
with patients as I have been in situations where there has been a difficult patient or a patient who is in a lot of pain the team often talks about it after treating the patient and helps each other through any issues that may have come up.” (Student 11)

Or trying to cope personally:

“One thing I sometimes struggle with and am trying to work on, is how attached I get to some patients. This becomes an issue for me when these patients become very ill or their prognosis worsens, as I would sometimes get upset... I did not want to be that way around them. I am really trying to get this more under control, although I do think that more experience will help me deal with it.” (Student 10)

Seven students felt they would like to have assistance from outside the department, through professional supervision or counselling, in learning to cope with and process the emotions they are feeling:

“We have no clinical supervision in terms of compulsory counselling with people outside the department, although I think I would find this really useful.” (Student 17)

It appears that for these 16 students their clinical experience has been a trigger in terms of the crises that forces one to redefine oneself. Feelings of fear and being scared, surprise and shock (when the surprise is not necessarily a welcome one), and helplessness are very emotive feelings that most young people may not have to face when first entering a chosen career. Most people experience nervousness when starting a profession, but maybe not to the extent of the feelings expressed by the students in this cohort which may also be reflective of other health professionals. These feelings and wanting assistance indicate that the students are struggling to develop a sense of self. However, those that can identify that they need help are displaying adult identity traits.

Pride in their work
Seven students implied that, despite the emotional challenges, they enjoyed their work and that they have a sense of pride in what they achieve. They particularly liked their work and receiving praise from the patients:

“...I felt so sad at times, but other patients made me so happy, they made me feel liberated in a sense, they were so optimistic and proud of what a good thing we chose for a career.” (Student 7)

“Felt privileged to be able to be in a position to influence their cancer experience in a positive way.” (Student 1)

In expressing a belief in what they do for a career and knowing what they do has a positive impact on patients indicates that these students could be forming a sense of self. They are exploring what they are doing and potentially developing an achieved identity status.

Greater awareness of themselves
Nine students indicated that they had a greater awareness of themselves as a person due to their involvement with the cancer patient. In relation to James Marcia’s\textsuperscript{12,14,19} status of achieved identity, it appears as if these students are moving towards this status as they have redefined their values (for example, family and friends), they believe in the value of what they are doing for a career (for example, expressions of pride and a knowing that they are doing good), and they have a greater sense of self:

“Treating cancer patients has definitely changed the way I want my life to turn out and how I appreciate special people in my life. I now have this incredible sense of what I want to do and accomplish in my time, before I started this degree I didn’t really think about it much. I have learned to appreciate and cherish family and friends so much more than I did before I started treating cancer. They are now just so important to me and it has made me realise that these people can bring such wisdom, knowledge and inspiration into your life.” (Student 7)

However, these radiation therapy students struggle with the emotional impact of treating patients with cancer. This has the potential to keep the students in a state of moratorium (struggling to find themselves), or even diffusion (not concerned about who they are), if they do not get the chance to explore their feelings. If this is not resolved the students may not be able to define their values, beliefs and goals, nor develop an occupational identity and hence a sense of self\textsuperscript{12,14,19}.

“Regardless of what anyone thinks our job is highly emotional – I don’t think it’s possible to be a good RT and remain distant and aloof from your patients and their experiences. I think that there needs to be an environment created for RTs (not just students) within the workplace where they can take time to unwind and reflect on their experiences at work and how they have been affected by them, so that this baggage can be left at work. I think if we were given time to process this more we’d have more emotional resources to treat patients better and be more caring.” (Student 5)

Discussion
This study suggests that treating people with cancer causes radiation therapy students to re-evaluate their values, which in turn influences their identity development. The literature on identity development describes the tasks of young people who are maturing as bonding with friends, falling in love, or forming together in cliques excluding others on the basis of real or imagined differences.\textsuperscript{1,2,9} This allows the young person to explore and develop coping mechanisms. Radiation therapy students in this study expressed concern that their parents might die of cancer. They are developing a set of values, such as: the importance of family and friends, beliefs about what they do as a radiation therapist, and setting some goals for themselves. These students are deciding not to take things for granted and to make the most of every opportunity. Conversely, for other students, the challenges of working in the clinical environment may have made it more difficult to explore these new values and make sense of their feelings. These students appear to be unsure of who they are, and what is important to them, and are therefore potentially in the temporary state of moratorium (actively struggling for a sense of identity). There is a risk that if something is not done to support students in this state, they could retreat to a state of diffusion (unable to commit to an identity), where they will not be able to commit to their profession, values, or other people.

Sixteen students in this study described a sense of isolation and a lack of structured assistance in learning to cope with the emotional issues of treating cancer patients, such as, treating palliative patients, people their own age, and coping with distressed and upset patients. They noted that they felt overwhelmed, and expressed feelings of surprise, shock and fear when they first started working clinically. However, they went on to say that these initial feelings soon subsided when they learnt to cope with the job but they had to find coping mechanisms themselves to deal with the initial discomfort. Despite having developed these coping mechanisms, the students commented that the emotional side of the work was still difficult and they would like support and help that is offered to other health professionals such as counsellors, hospice nurses and doctors. The fact that students can identify their discomfort and are suggesting they need support indicates they are functioning at an adult developmental level. According
to Marcia, these students are showing a high level of maturity in recognising their stress and in seeking support to deal with it. However, it is possible that if support is not given they may never achieve an adult identity which may result in them leaving the profession.

Five students said that they try to cope with these emotional issues by talking to team members, others indicated that they think they will “get used to it” over time. The majority of radiation therapy students in New Zealand have to live away from home for at least part of their study. Living away from home may be a unique phenomenon for New Zealand radiation therapy students and may not be as common in other parts of the world. However, this “getting on” and “coping” attitude may be influenced, in part, by the fact that they do live away from home. According to Jordyn and Byrd, individuals living away from the parental home are more likely to establish an adult identity than as those living at home. Developing coping skills shows these students are actively finding ways to gain support in a stressful environment. This suggests that these students are in a state of moratorium, which for some will lead to an achieved identity status. For others, they could remain in moratorium indefinitely, or even retreat to a foreclosed (struggling to find and identity) or diffused status level, especially if the coping mechanisms they put in place become inefficient over time.

Fourteen students specifically indicated they had difficulty coping with treating palliative patients. Although radiation therapists do not actually give palliative care in end-of-life stage, the students realised that a lot of their patients were not going to survive longer than five years. The literature on health professionals who do give palliative care indicates that the feelings of concern, anxiety, and nervousness expressed by the radiation therapy students are not unique. Research shows that nursing students experience the same feelings when nursing palliative patients and a lack of undergraduate nursing education for end-of-life care was identified noting that nurses do not immediately go into palliative care. Consequently, some nursing education providers have implemented mentoring programmes. The case study presented here suggests that the students are not fully prepared for their clinical experience when they finish the first year of the programme. This suggests that perhaps more education on treating palliative patients for radiation therapy students would be of benefit in year one.

Nine students said they felt as though they have had to develop greater maturity to face their role as a student radiation therapist. These comments are significant because they indicate that students have redefined their values as a result of their professional experience and are moving onwards to an adult identity. They indicated that treating cancer patients has given them a greater awareness of the value of life. They have created goals for themselves, deciding not to take life for granted, and not to worry about trivial things. However, they did not give tangible examples in response to the questions asking what was now important to them or how their behaviour has changed because of their involvement with cancer patients. Several studies of people coping with the death or loss of a friend or relative, or trauma, suggest that post-traumatic growth is common. For example, an individual may feel empowered by the death of a close friend or family member and develop a new understanding of life and themselves. This indicates that this empowerment could put people, including radiation therapy students, into Marcia’s achieved identity status. Davis and Mc Kearney also studied how people grow from trauma or loss and they concluded that after a loss or a traumatic experience, people can report that their life is more meaningful, or that they have gained something from the experience.

Further research could explore whether radiation therapy students report that their lives are more meaningful due to their career choice.

Despite the stressors identified, the data indicate that the students gained pleasure from their work, had a sense of pride in what they do, and certainly enjoyed their chosen profession. In fact, some of the problems in the clinical environment gave them a greater sense of self-awareness, contributing to the pride in their work and a belief that what they do has a positive impact on the lives of others. The data suggest that students are developing a sense of who they are, and can justify why they are making decisions about their lives, potentially developing an “achieved” identity status.

Limitations

Due to the small cohort of this study, ethical considerations with regard to anonymity precluded the use of semi-structured interviews and the ability to correlate the level of maturity (ages) to the transcripts.

Conclusion

The results of this study suggest that treating cancer patients has impacted on the identity development of this cohort of radiation therapy students. Not all students were able to respond fully to the questions on developing personal identity and were trying to build-up coping mechanisms to manage the emotional aspects of their clinical experience.

The data suggest that the majority of students in this study found that their clinical experience influenced how they viewed life, and impacted on their identity development as a young adult.

Academic and clinical providers are challenged to consider the issues highlighted by this research, and develop ways to support students in the clinical environment to cope with the emotional pressures of being a radiation therapist. As highlighted in this study, strategies used by other health professionals include counselling, professional supervision, and/or a mentoring programme for the students, so they can explore their feelings and be better able to learn from their experiences in the clinical setting. Such strategies would better equip them with the ability to explore who they are. Further research is needed to evaluate implementation of some of these strategies.

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Declaration

The author was a lecturer at the University of Otago, Wellington when the students were on campus. When the students were invit-
ed to participate in the study she had no teaching responsibilities with that cohort for the rest of that year.

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