

Original Article

Radiographers relationship with head and neck cancer patients

Helen Egestad

Department of Health and Care Sciences, Faculty of Health Sciences, University of Tromsø, Tromsø, Norway

(Received 23rd February 2012; revised 21st May 2012; accepted 17th June 2012)

Abstract

Introduction: Head and neck cancer patients face many demanding events, such as radiation therapy, which can cause anxiety and uncertainty. Studies report that relevant information decreases emotional distress and inadequate communication can lead to increased fear and anxiety. There is a lack of research that describes what radiographers do when they meet the patients. The aim is to explain what radiographers' do that may lead to less anxiety and uncertainty for head and neck cancer patients.

Method: This study was conducted via qualitative interviews and took on a phenomenological, hermeneutic approach. Eleven head and neck cancer patients were interviewed 1-month post radiation therapy.

Results: Successful meetings are characterised by the radiographer smiling, being pleasant, referring to the patient by their name, informing the patient thoroughly, asking open questions and answering questions.

Conclusion: Head and neck cancer patients feel vulnerable and need the radiographer to create a safe atmosphere when they undergo treatment. Then radiographers reduce uncertainty, provide emotional support, reduce loneliness, provide information and create alliances.

Keywords: communication; head and neck cancer; patient care; radiation therapy; role definition

INTRODUCTION

Radiographers are a part of the multidisciplinary care team who work with patients who have been diagnosed with cancer. The radiographers' role is both a technical expert and support person in patient care.^{1–3} Technical expertise and accuracy are of the utmost importance, it is essential that radiographers deliver the prescribed radiation dose to the correct volume because of

potential damage that can occur to critical organs.⁴ At the same time, radiographers have an ethical responsibility to provide adequate patient care and ensure that patients are adequately informed about their radiation treatment.^{5,6}

In Norway, registered radiographers with 1-year postgraduate-specific oncology and a radiotherapy education plan, coordinate, plan and deliver radiation therapy to cancer patients. In the radiotherapy department, head and neck cancer does not account for a large proportion of patients on radiotherapy units. However, each

Correspondence to: Helen Egestad, Department of Health and Care Sciences, Faculty of Health Sciences, University of Tromsø, N-9037 Tromsø, Norway. Tel: 004777660637. E-mail: helen.egestad@uit.no

head and neck cancer patient treatment is complex and resource consuming compared with most other types of radiotherapy treatments. Treatment has also been found to have a greater impact on the patients' health compared with other groups of cancer patients receiving radiotherapy.⁷ Cancer patients are in a vulnerable situation when they enter the radiation therapy department² and therapy can induce further fears that include concerns of accuracy and side effects.^{8–10} Common side effects of radiotherapy are dysphagia, oral mucositis, xerostomia, fungal or bacterial infections, oral pain, oral blisters or bleedings.¹¹ The treatment causes side effects that often have a great impact on the patients.¹² Head and neck cancer affects the most visible area of the body, and has a profound impact on the most fundamental activities of daily life, such as speech, breathing, eating and drinking.^{13,14}

Many studies have identified the emotional and physical distress associated with radiotherapy.^{15–17} Cancer patients undergoing radiation therapy to head and neck are anxious and experience emotional stress.^{8,18} Anxiety, depression, uncertainty and hopelessness are the most frequently reported psychological problems.¹⁹ Aarstads²⁰ focused on head and neck cancer patients' physical symptoms and concluded that the treatment is very demanding for the patients. Head and neck cancer patients need support and care during radiation treatment.

In more recent years, studies have recognised the benefits of improving the communication between radiographers and cancer patients. Communication is central to interaction between radiographers and patients, and communication can assist radiographers to meet patients' needs in treatment situation. Radiographers are in an ideal position, while engaged in daily delivery of treatment, to assist patients not only in their need for physical comfort but also in their emotional comfort.^{2,21} Rose and Yates¹² concluded that if the radiographer monitor the process so that daily treatment is as short as possible, and carefully inform the patients of all treatment procedures, patients' vulnerability can be reduced. Studies report that relevant information in radiotherapy decreases emotional

distress and anxiety.²² Halkett and Kristjanson² described how breast cancer patients empathise the emotional support from radiographers during radiation treatment. Patients who are well informed are less anxious and emotionally distressed when they are receiving radiation therapy.^{18,23}

Few studies were found which investigate living with head and neck cancer during radiotherapy from patients' perspective. Gamle²⁴ performed a qualitative study where head and neck and lung cancer were interviewed. The study reflected a high degree of satisfaction with care, but that there were some problems regarding insufficient information about the side effects of treatment. The findings showed that communication where health professionals express understanding can assist patients in coping with the challenge of having head and neck or lung cancer. Björklund et al.²⁵ performed a quality study where eight head and neck cancer patients were interviewed. The patients experienced insufficient support from health services. Head and neck cancer patients' needs for support and information in the treatment period are not precisely known.

It is important to gain more knowledge about patients' experiences when they undergo radiation treatment. Through research of patient 'experiences from an insider's perspective has rarely been done, it seems fair to assume that increased knowledge of this could result in a new understanding of what could facilitate patients' experiences when they are undergoing radiation treatment'.

A phenomenological hermeneutic approach may contribute to a better understanding on patients' needs when they are receiving radiotherapy, by providing deeper insight into the experience from the patients' perspective. This approach is well suited for gaining a deeper understanding of experiences in healthcare.²⁶

Aim

To explain the patients' experience of their care and support throughout the radiotherapy pathway, with a view to improving patient-centered services.

Research question

The research question was:

How many radiographers take care of cancer patients when they undergo head and neck radiation treatment?

METHOD

Study design

The research question directed the researcher to design a study that explored the lived experience of going through radiation treatment. Because the phenomenological research approach exists for this expressed purpose,²⁷ it was the design chosen for this study. The present study was conducted using in-depth interviews using a phenomenological hermeneutic approach.²⁶ The interviews are based on an interview guide and are constructed in interaction between an interviewee and an interviewer. The focus of each interview was on the patient's needs. The interviews were tape-recorded and later, fully transcribed. The approach sought to understand what the patients wanted the professionals to do when they were receiving radiation treatment, from the individual's own perspective, by describing and exploring their reality. The focus is on the understandable meaning of these experiences, rather than the expression of something 'factual' that need explanation.²⁶ The method is based on text interpretation presented by Ricoeur.²⁸

The data for this study were collected as part of a wider project using both quantitative and qualitative approaches. The main purpose of the project is to focus on head and neck cancers quality of life while they undergo radiation treatment. This article concentrates on the findings revealed by the in-depth interviews only.

Ethics

The study was approved by the Regional Committee for Medical Research Ethics (P REK NORD 200900504-3KST017/400), and the Norwegian Social Science Data Services (21831).

Participants

Patients were recruited through the radiotherapy department at the University Hospital in the

north of Norway. All patients with head and neck cancer, referred to the oncology centre for radiotherapy were approached. Patients were eligible for the study if they had been diagnosed with head and neck cancer and were going to receive radiotherapy. Patients were ineligible if they had metastasis or if they were unable to speak and understand Norwegian. The participants received a letter that broadly explained the purpose and the methods of the study and the level of commitment required to participate in the project. A radiographer who was responsible for collecting data from patients in the study, met patients again during first week of treatment to seek consent and administer the questionnaire. In the letter it was written that the patient could be asked to participate in an in-depth interview after treatment. Every third patient who participated in the study was asked about the interview. Twelve cancer patients were invited to participate in the in-depth interview, but one person declined because the patient was too ill to talk for 2 hours.

Interview procedure

The interviews took place in patients' home about 1 month post radiation therapy. The interview consisted of open questions about the treatment, and their thoughts and feelings when they received radiotherapy. Every interview began with: please tell me about your experiences of the treatment. The follow-up questions related to the patients narratives and focused on their relationship with radiographers. The purpose was to obtain knowledge of how the patients experienced the field in which the study took place. The main questions were chosen from literature review about communication between health workers and cancer patients (Table 1). Each interaction lasted around two and a half hours and the interviews lasted for around one and a half hours, recorded with a tape recorder. Each person was encouraged to tell the 'cancer story' of their experiences. The interviews were transcribed shortly after. The interviews were terminated when no essentially new data arose. Actually, the researcher never knows in the beginning of a study how many informants needed before saturation occurs, which means that the sample size is determined by

Table 1. Guide used for the in-depth interviews

Questions: Please tell me about your experiences of the treatment. Please tell me your 'cancer story'. How was the contact with the staff? What did you talk about? Can you tell me something the radiographer said or did that make you feel better? Was there anything you feel the radiographer could have done differently? What was important to you?

Probes: When that happened, how did you feel? Could you give some more examples? What happened? Please tell me more. How do you feel? What did you think about the interview? Would you like to add something?

the data generated. The collection of data was carried out during 2010 and the spring of 2011. Five interviews were conducted spring 2010, four in autumn 2010 and two in March 2011.

Data analysis

The analysis of the interview transcriptions was based on a phenomenological hermeneutical interpretation, developed by Lindseth and Nordberg²⁶ and inspired by Ricoeur's philosophy.²⁸ The analysis consisted of three phases: naive reading, structural analyses and comprehensive understanding. This process is not a strict stepwise procedure, but requires movement back and forth between the phases in a dialectic process, moving from understanding to explanation and from explanation to comprehension.²⁷ The researcher seeks to understand a text from what it says, to what it talks about.²⁶ In a phenomenological study the essence is to understand the meaning itself.²⁷ The experience must be understood in a human context and related to the person, to the person's life and life situation.²⁹ This method has thematic structural analysis, a way of seeking to identify and formulate themes. A theme is a thread of meaning, presented as condensed descriptions and formulates them in a way that discloses meaning.²⁶ Data analysis commenced after the first interview and was ongoing throughout the study. Each text was read carefully so that the researcher could get an overall impression of the text.²⁶ The overall impression was vulnerable. The main theme was to be treated as a unique person. The sub-themes were about the patients' needs and their wishes. All themes was summarised and reflected on in relation to the research question. Meaningful information from

all the interviews was compared and considered to identify patterns, similarities and variations in the data.²⁶ The themes emerged through a process of asking questions about the text and constantly moving between meaningful units and the entire text.

RESULTS AND DISCUSSION

Eleven patients agreed; seven men and four women. The men varied from 35 to 75 years old and the women from 43 to 55 years. The patients' diagnoses were tonsil, larynx, nasopharynx, tongue, floor of mouth and lymphoma. All cancer patients felt anxious and vulnerable. They were anxious for the future and whether the treatment would make them well. Having radiation therapy was associated with much uncertainty. As the weeks of treatment passed, the patients were more and more fatigued by the side effects. The patients pass on stories of an intensive treatment period with many strenuous side effects. In this suffering situation, they said that it was very important to be greeted with understanding. In the last 2 or 3 weeks, the side effects were intolerable; the patients had severe problems with eating, some had to be tube-fed, they were in a great deal of pain, had mucus and had difficulty in speaking. In addition, the patients felt very sick. During this time, the patients needed the radiographers to treat them with compassion.

I first came into the waiting room. They said it was straight in, off with the shirt, up on the bench and on with the mask. The radiographer asked to set up the apparatus in advance and then worked with the tuning till everything was right and they were happy. Then they said, 'Now we are done, now we can start up, is it okay?' Usually I didn't answer, I just lay perfectly still. Then they went out and started up. I lay there and heard the humming of the machine; I closed my eyes. I could not bear to look at anything. It doesn't take that long, a quarter of an hour, 10 minutes. I do not know how long I lay there, waiting only for them to take the mask off. Then they came in and said that I was done. They took off the mask, nice and gently, only once did I experience getting a rift

Table 2. *Statements to be treated with courtesy*

Patients want the radiation therapist to be:	Example
Being friendly	'I said to the radiographer team: I'll see you five minutes a day and you do something for me that makes me worse in the short term, but nonetheless it's just fun to come here, you are so gentle and pleasant' (patient 1)
Being considerate	'The only thing I thought was silly was that I previously have had breast cancer and had to remove one breast. When they made the mask, I had to remove my bra, and then I had to lie in the same position every time I had radiation therapy. So I had to take off my bra every time. And lying there without a breast was uncomfortable even if they placed a cloth over me. For me, it would be more comfortable not having to lie naked on the table' (patient 4)
Cheerful, smiling	'Their good mood was their most important feature' (patient 1) 'The staff was very nice, very pleasant and always cheerful and encouraging. Great people, it was nice to be there' (patient 5)
Greetings, using first name	'They called me with my first name and were cheerful and pleasant, everyone was really nice' (patient 9)

on my skin, but it was just once out of 30–40 times so there was nothing to complain about. And they were nice people, who asked how I was, if it went well, if I felt dizzy (patient 3)

Three main categories emerged during data analysis: politeness, emotional support and communication.

POLITENESS

Many stories were about radiographers being friendly (Table 2). The patients preferred that the radiographer met them with kindness and good humour. Three patients highlighted that radiographers' good mood was most important to make them being less anxious. Eight patients emphasised the importance that radiographers were 'smiling' and 'nice and gentle' (Table 2). When the radiographer met them with a smile, and greeted and directed their attention towards them, it put them at ease. The patients' uncertainty decreased slightly. Five patients said that they appreciated that the radiographer used their first name when talking to them (Table 2). When they used their first name, the patients felt that they were seen as a unique person. To be treated as a unique person with kindness were very important for patients throughout the treatment period. All the patients felt confident that they received correct treatment, but they felt unsafe in the treatment situation. The data show that cancer patients undergoing radiation

therapy to the head and neck area are anxious, consistent with other studies.^{2,18,30,31}

For the patients' insecurity in the treatment situation to be reduced, it is important that the radiographer is friendly and attentive. The finding matches Charmaz's³⁰ discovery which says that health-care personnel can affect the patients' self-esteem by meeting the patient with kind words and with a smile. The data show that when the radiographer is in a good mood and treats patients in a friendly and courteous way, the patient anxiety is reduced.

There were a few cases where the radiographer were planning and administrating treatment without taking the individual patient's needs into account. One of them (Table 2), show the patient's sense of modesty. The patient who had to undress the upper body felt 'double naked' in the treatment situations. The patient was undressed and felt 'naked'. Radiographers who treat many patients can easily forget how it feels to the individual patient to be undressed. The patient statement shows that the radiographer should try not to expose the patient more than necessary to avoid causing the patient more discomfort in the treatment situation.

EMOTIONAL SUPPORT

The patients demonstrate that they feel sensitive, revealing a strong need to be met with understanding. The patients spoke of many situations

Table 3. Statements showing patients' needs for understanding and compassionate

Patients want the radiation therapist to:	Example
Showing empathy	'The radiographers were wonderful, they put on my mask, put on the lights, ran out, ran in, they were awesome, they knew how it was for me. To lie there was absolutely terrible' (patient 9)
Showing consideration	'They took care and made sure that the mask would fit' (patient 5) 'The radiographers were both caring and very helpful, I was taken care of in a very good way' (patient 3)
Taking time	'I remember the first time I was on radiation because I got a crying spell. When I sat down in the waiting room I was terribly scared; I started crying and I had a hard time, I was all alone. It was good that they (the radiographers) took the time and sat down with me and talked. I got the time I needed' (patient 8)

where the radiographer indicated that they understood how they felt (Table 3). Nine patients said that the radiographer were caring and thought that the radiographers provided good treatment (Table 3). Then the radiographers knew, both through words and actions, that they wanted the best for their patients. The patients experienced the radiographers as very caring when they were concerned about how the treatment situation was for the patients (Table 3). Three patients said that the radiographer asked if the mask was well fitted, and if they were well on the treatment table (Table 3). They also asked about how the side effects were developing, and they followed up the visible side effects such as soreness of the skin.

The patients were generally satisfied with the care and support from the radiographers in accordance with Gamble's study.²⁴ Their statements show that many radiographers exercise care while providing treatment (Table 3). The cancer patients experience a feeling of being taken care of when the radiographer informs, understands and provides care in accordance with Holland and Rowland's study.³¹

Five patients talked about the unpleasant experience at the beginning of treatment when they were strapped into the mask and left alone in the treatment room while the radiation was going on. They express that it was very important how they were greeted by the radiographers in this precarious situation. One of the patients felt alone and scared the first time on radiation (Table 3). When the radiographer showed understanding and compassion, it was easier

for the patient. Martin and Hodgson³² propose that the radiographer on the first day of a patient's radiation treatment have to provide information in a caring way to alleviate any anxiety or fears the patient might be experiencing.

Five of the patients suffered from claustrophobia. Four forced themselves without mentioning it to the radiographer, whereas only one spoke of the feeling of claustrophobia. When the radiographer came up with encouraging words or reassured them, the patients' insecurity were reduced. Holland and Rowland³¹ describe good communication between health professionals and cancer patients, including when they talk face to face in a quiet environment, and when the staff is honest and understanding.

For all patients, planning of treatment was associated with great uncertainty and anxiety. In this stressful situation, the patients felt very vulnerable. 'To get time' was a term several patients used (Table 3). They knew that there were many patients who were about to have treatment, but nonetheless, 'the staff took time out of their schedule' to show them understanding.

Nine of the patients lived far away from the hospital. In the treatment period the radiographers were the only health personnel that the patients met daily. The patients expressed that they felt lonely and had a need for contact. This study indicate, in accordance with others, that support is particularly important for patients in the period when they are outpatients.^{13,14,33}

Table 4. Statements showing patients' needs for information

Patients want the radiation therapist to:	Example
Give information	'I said to the radiographer: 'you have to tell me what will happen, because if I do not know, then I will feel uncomfortable'. I relax more when they give information' (patient 4) 'I did not get any information. I missed it. I did not know where the radiation field was, they (the radiographers) said it was on the throat, but not that it was on the collarbone. So I didn't put any lotion there, and I got very sore' (patient 2) 'It was machine stop twice, but the radiographers said it was a fuse that was gone so I felt safe' (patient 6)
Talk to them	'The radiographer who brought me from the waiting room, went with me down the long corridor to the treatment machine. The radiographer said, 'How are you ... (name)?' or : 'Nice weather today.' The radiographer talked about different things. All radiographers talked to me. They knew I wanted a conversation, I said to them: I am afraid, I'm anxious, I do not like this' (patient 9) 'I was in the waiting room, and then they fetched me and brought me in and they used my first name and we chatted a bit. They were very nice' (patient 5) 'I had not talked to the radiographers; they have no time for it. I wanted them to tell me how it would be from start to finish, but they didn't' (patient 6)
Answer questions	'I received a good response' (patient 1) 'I asked them why I was burned; they said I had to talk to the doctors. I said I was sick, ate little and it was painful to swallow. They said I had to mention it to the doctor' (patient 6)

RECEIVE INFORMATION

At start of treatment, patients were very uncertain about how exactly the treatment would be administered. Need for information was great. Good information meant that they felt safe and had a good level of contact with the radiographer. Most of the patients wanted most information so that they were prepared, only one of the patients wanted no information. This corresponds in part with Skalla's study³⁴ which states that some cancer patients undergoing radiation therapy will avoid information about the side effects.

After a few treatments, half of the patients' anxiety was reduced, and the treatment became routine. But for the other patients it was still stressful to carry out the treatment. In this phase, the side effects began to be troublesome. Cancer patients needed information about side effects and to get answers to their queries (Table 4).

Patients were informed in various ways and received differing amounts of information (Table 4) in accordance with Long's study.⁸ Eight patients were satisfied with the information they received from the radiographers, which agrees with the findings of Hammick et al.³⁵ But not all patients received adequate information (Table 4). Two patients said they got some information, but wanted more insight

into what would be done, the same result is shown in Gamle.²⁴ When the patients do not have any knowledge of what will happen, or when they do not get answers to their questions, feelings of insecurity and loneliness were increased. Some stories were about the radiographer meeting the patient halfway (Table 4). Halkett et al.³⁶ found that at the second and third time points more than half of the patients' reported unmet needs concerning information. Two cancer patients in this study said that the radiographers did not inform them or talk to them, but only concentrated on technical aspects. This is in accordance with McCabe's study³⁷ in which the patients believe that nurses are more concerned with performing tasks than conversing with them. Extensive information means that patients understand what will happen and then feel more safe.^{14,34,38} Rose and Yates¹¹ found that when the radiographer informed the patients about all treatment procedures, patients' feelings of vulnerability are reduced, which is consistent with this study. Effective communication is necessary to establish the individual needs of the patient, to provide relevant information and to enable appropriate supportive care for the patient. Information provides knowledge, builds alliance and reduces uncertainty. The findings show that good information can remove uncertainty and reduce anxiety both before and during treatment.

Patients with head and neck cancer who are treated with radiotherapy need information that is meaningful for them as individuals.¹³ For cancer patients, it will be meaningful both to know what will happen, where the radiation fields are and what might be the consequences of the treatment. One patient in this study was not informed about where the fields were (Table 4), and this led to unnecessary side effects. The result is consistent with Halkett et al.³⁶ findings, they found that one of five patients with breast cancer did not know how much of the breast was included in the treatment.

It was important for all patients that the radiographer responded when they asked questions. Most of them were satisfied with the answers (Table 4).³⁵ But some radiographers did not give answer. One of the patients asked about side effects, but was told to contact the doctor (Table 4). The statement may indicate that the radiographer could not answer the question or that the radiographer did not know what the role entailed. Halkett et al.⁶ found that radiographers were confused about what role they should play in terms of providing patients support and care.

Some radiographers use the time while they are walking with the patient into the treatment room, to talk. Others are silent. Silence can be interpreted as rejection by the patients. Not being seen or talked to can make the patient feel insignificant in the radiographers' world. The patients' statements show that they want attention. In the radiographer's business, there can be a risk that attention is not directed towards the patient. Data in this study may indicate that some radiographers minimise the verbal communication. This is consistent with Boot's findings³⁹ that while necessary information is given, the patient's personal needs are not taken into account. When the radiographer is only concerned with the setting of the apparatus, the patient can easily feel lonely and abandoned in the treatment situation. When the radiographer does not speak to the patient, it may indicate that the radiographer is trying to meet the patients' needs for security and contact, but regarded it as secondary in relation to implementing the treatment quickly.

Patients pointed out that they were calmer when radiographers chatted with them. Patients had many different stories about radiographers reducing their anxiety by talking with them. In the patients' stories, many referred to situations where the patients felt like an important part in a relationship, while some spoke of loneliness and rejection (Table 4). The meetings were described as 'good' when the radiographer talked, asked questions and remembered what they talked about earlier. Then, the radiographer created a 'we' feeling and the patients felt safeguarded. This study, consistent with other studies, highlights the importance of radiographers' communication in creating a relationship with the patients during radiation treatment to meet patients' needs.^{2,33} The majority of the patients expressed importance of being a part of a relationship. Active listening and empathy are important elements in the relationship building process. The radiographer can assist cancer patients' treatment compliance and coping strategies. Data show that radiographers create alliances with patients when using patient's first name, by asking how they feel and chatting with the patient.

The patients' experience is related to how the radiographer shows empathy in every single patient encounter. Cancer patients are individuals and may have different resources to successfully complete the intensive radiation therapy. Information provided by radiographers must be based on the individual patient. To do this, the radiographer must talk to the patient, asks questions, listen and interpret the patient's reactions. Yilder⁴⁰ claims that situation awareness is important in the radiography practice. The same can apply to the radiotherapy. When information is based on the unique patient and takes into account the patient's condition and the impending radiation treatment, the purpose of the information is achieved in accordance with Wilson's information model.⁴¹ Then, the patients' ability to understand what is happening and feel calmer in the treatment situation is achieved.

To create a good and safe atmosphere, a requirement will be that the radiographer talks with the patient. Respectful and human behaviour

can lead to an atmosphere of understanding and increased self-esteem for the cancer patients who are undergoing radiation therapy.²⁴ The radiographers have both a professional duty and a duty to show empathy and must show the patients respect and dignity.⁴²

Limitations

The patients in this study were recruited only from one radiation department in Norway. After 11 interviews no new themes showed up, the researcher closed collection in accordance with the method.²⁶

CONCLUSION

This study indicates that head and neck cancer patients feel vulnerable and need that the radiographer creates a safe and good atmosphere when they undergo treatment. It means to reduce uncertainty, provide emotional support, reduce loneliness, provide information and creates alliances. Successful meetings are characterised by the radiographer smiling, being pleasant, referring to the patient by their name, informing the patient thoroughly, asking open questions and answering questions.

Practice implications

Radiographers need to be careful in the way that they manage patients both physically and emotionally. The radiographer must explain what is done, ask questions about the patient's experience and answer their questions. Through information and support, patients' experience of powerlessness, abandonment and despair can be reduced. By getting factual information, the patient will feel better safeguarded than if the patient does not receive any information. To build alliance and develop a relationship, the radiographer must follow the patient verbally, confirm the patient's statements and show understanding and respect. To improve patient-centered services all radiographers should treat the patients with courtesy and respect. This indicates to smile and address all the patients by name and to inform thoroughly. The radiographer must ask open questions, for example: 'how are you?', 'is there anything you are wondering about?'. In addition, the radiographer has to answer questions and show understanding.

In addition, the radiographer has to answer questions and show understanding.

Given the sparse research on the care of cancer patients undergoing radiation treatment, need for further research is substantial. It will be important to gain further knowledge about cancer patients' own experiences and assessments.

Acknowledgements

The author would like to express gratitude to the cancer patients who participated in this study, without them this article could not have been possible. The author also thank the staff in radiation therapy department who supported with this research.

References

1. Baume P A. Vision for radiotherapy: report for the radiation oncology inquiry. Australian Commonwealth Government (2002). <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-roi-inquiry-report.htm>.
2. Halkett G K B, Kristjanson L J. Patients' perspectives on the role of radiation therapists. *Patient Educ Couns* 2007; 69: 76–83.
3. Halkett G K B, Merchant S, Jiwa M et al. Effective communication and information provision in radiotherapy – the role of radiation therapists. *J Radiother Pract* 2010; 9 (1): 3–16.
4. Leaver D, Alfred L. Treatment delivery equipment. In: Washington C M, Leaver D (eds). *Principle and Practice of Radiation Therapy*, 2nd edition. St Louis: Mosby, 2004: 131–170.
5. Schafer C, Herbst M. Ethical aspects of patient information in radiation oncology. An introduction and a review of the literature. *Strahlentherapie und Onkologie* 2003; 179: 431–440.
6. Halkett G K B, Cox J, Anderson C, Heard R. Establishing research priorities for Australian radiation therapists: what patient care priorities need to be addressed? *Eur J Cancer Care* 2012; 21 (1): 31–40.
7. Feber T. *Head and Neck Oncology Nursing*. London: Whurr Publishers Ltd., 2000.
8. Long L E. Being informed undergoing radiation therapy. *Cancer Nurs* 2001; 24 (6): 463–468.
9. Halkett G K B, Kristjanson L J, Lobb E A. If we get too close to your bones they'll go brittle: women's initial fears about radiotherapy for early breast cancer. *Psychooncology* 2008; 17 (9): 877–884.
10. Hinds C, Moyer A. Support as experienced by patients with cancer during radiotherapy treatments. *J Adv Nurs* 1997; 26: 371–379.

11. Duncan G G, Epstein J B, Tu D et al. Quality of life, mucositis, and xerostomia from radiotherapy for head and neck cancers: a report from the NCIC CTG HN2 randomized trial of an antimicrobial lozenge to prevent mucositis. *Head and Neck* 2005; 27 (5): 421–428.
12. Rose P, Yates P. Quality of life experienced by patients receiving radiation treatment for cancer of the head and neck. *Cancer Nurs* 2001; 24 (4): 255–263.
13. Larsson M, Hedelin B. Lived experiences of eating problems for patients with head and neck cancer during radiotherapy. *J Clin Nurs* 2003; 12 (4): 562–570.
14. Wells M. The hidden experience of radiotherapy to the head and neck: a qualitative study of patients after completion of treatment. *J Adv Nurs* 1998; 28 (4): 840–848.
15. Johnson J E, Lauver D R, Nail L M. Process of coping with radiation therapy. *J Consult Clin Psychol* 1989; 57 (3): 358–364.
16. Eardley A. Patients and radiotherapy. 1. Expectations of treatment. 2. Patients' experience of treatment. *Radiography* 1985; 51: 324–326.
17. Christman N J. Uncertainty and adjustment during radiotherapy. *Nurs Res* 1990; 39 (1): 17–20.
18. Poroch D. The effect of preparatory patient education on the anxiety and satisfaction of cancer patients receiving radiation therapy. *Cancer Nurs* 1995; 18 (3): 206–214.
19. Ledebøer Q C, van der Velden L A, de Boer M F, Feenstra L, Pruyne J F A. Physical and psychosocial correlates of head and neck cancer: an update of the literature and challenges for the future (1996–2003). *Clin Otolaryngol* 2005; 30 (4): 303–319.
20. Aarstad A K H. Psychosocial factors and health-related quality of life in former head and neck cancer patients. Dissertation for the degree of philosophiae doctor (PhD). Norway: University of Bergen, 2008.
21. Williams A M, Irurita V F. Emotional comfort: the patient's perspective of a therapeutic context. *Int J Nurs Stud* 2006; 43 (4): 405–415.
22. Knobf M T, Sun Y. A longitudinal study of symptoms and self-care activities in women treated with primary radiotherapy for breast cancer. *Cancer Nurs* 2005; 28: 210–218.
23. Rainy L. Effects of preparatory education for radiation oncology patients. *Cancer* 1985; 56 (5): 1056–1061.
24. Gamble K. Communication and information: the experience of radiotherapy patients. *Eur J Cancer Care (Engl)* 1998; 7: 153–161.
25. Björklund M, Sarvimäki A, Berg A. Living with head and neck cancer a profile of captivity. *J Nurs Healthc Chronic Illn* 2010; 2 (1): 22–31.
26. Lindseth A, Nordberg A. A phenomenological hermeneutical method for researching lived experience. *Scand J Caring Sci* 2004; 18: 145–153.
27. Anderson J M. The phenomenological perspective. In: Morse J M (ed). *Qualitative Nursing Research: A Contemporary Dialogue*. Newbury Park: SAGE, 1991: 25–38.
28. Ricoeur P. *Interpretation Theory: Discourse and the Surplus of meaning*. Fort Worth, TX: Texas Christian University Press, 1976.
29. Gadamer H G. *Truth and Method*, 2nd edition. London: Sheed & Ward, 1999.
30. Charamaz K. Loss of self: a fundamental form of suffering in the chronically ill. *Social Health Illn* 1983; 5: 169–194.
31. Holland J C, Rowland J H. *Handbook of Psychooncology: Psychological Care of the Patient with Cancer*. Oxford, New York: Oxford University Press, 1990.
32. Martin K-L, Hodgson D. The role of counselling and communication skills: how can they enhance a patients' first day experience? *J Radiother Pract* 2006; 5 (3): 157–164.
33. Wengström Y. *Nursing Interventions in Radiation Therapy. Studies on Women with Breast Cancer*. Stockholm: Karolinska Institutet, 1999.
34. Skalla K A, Bakitas M, Fustenberg C T, Ahles T, Henderson J V. Patients need for information about cancer therapy. *Oncol Nurs Forum* 2004; 31 (2): 313–319.
35. Hammick M, Tutt A, Tait D. Knowledge and perception regarding radiotherapy and radiation in patients receiving radiotherapy: a qualitative study. *Eur J Cancer Care* 1998; 7: 103–112.
36. Halkett G K B, Kristjanson L J, Lobb E et al. Information needs and preferences of women as they proceed through radiotherapy for breast cancer. *Patient Educ Couns* 2012; 86 (3): 396–404.
37. McCabe C. Nurse-patient communication: an exploration of patients' experiences. *J Clin Nurs* 2004; 13: 41–49.
38. Gaston C M, Mitchell G. Information giving and decision-making in patients with advanced cancer: a systematic review. *Soc Sci Med* 2005; 61 (10): 2252–2264.
39. Booth L. The radiographer-patient relationship: enhancing understanding using a transactional analysis approach. *Radiography* 2008; 14 (4): 323–331.
40. Yilder J. Towards an integrated model of expertise in medical imaging – Part 1: Overview and two dimensions of expert practice. *J Diagn Radiography and Imaging* 2005; 5: 133–145.
41. Wilson T D. Models in information behaviour research. *J Documentation* 1999; 55 (3): 249–270.
42. Society of Radiographers. Code of conduct and ethics 2008. London. <http://doc-lib.sor.org/node/114/pdf/?a=1>. Accessed online November 2008.