Journal of Radiotherapy in Practice

Journal of Radiotherapy in Practice 2004
4, 13–24

Original Article

Occupational stresses and coping mechanisms of therapy radiographers – a qualitative approach

H. C. French

Radiotherapy Department, Norfolk & Norwich University Hospital, Norwich, UK

Abstract

It is believed that health care workers are particularly susceptible to developing stress-related illness because of the nature of their work.[1] The purpose of this research was to identify occupational stresses that may or may not be unique to therapy radiographers, identify the coping mechanisms that are used to combat work-related stress and gain insight into the lived experiences of this group of therapy radiographers. A phenomenological (qualitative) approach was used to identify the radiographers' perception of occupational stresses and coping mechanisms. Data collection was through in-depth interviews that were transcribed and analysed using Colaizzi[2] methodology. The results identified stresses within the following categories: personal performance, patient contact, working environment, communication, management, professional behaviour and departmental working. These results support the stresses identified through other research studies on health care workers. Coping mechanisms identified include Social Support, Confrontive Coping, Escape-Avoidance, Self-Controlling, Distancing and Positive Reappraisal. The most frequently used coping mechanisms were social support, confrontive coping and escape-avoidance. This research has also identified a new stress; the stress associated with the 'potential to make errors' i.e. the acute awareness of the damaging effects of high energy X-rays if a mistake is made.

This research has attempted to provide insight into the working world of the therapy radiographer and to discover the meaning and information specific to their 'lived experience'. It is hoped that this research provides the reader with a deeper understanding of the nature and meaning of the experience.

Keywords

Occupational stresses; coping mechanisms; therapy radiographer

INTRODUCTION

There is much media attention on the National Health Service (NHS) today, whether it is to inform of changes, new breakthroughs in treatment or to report a tragic mistake. The rapid pace of change, professional development and the nature of the work within health care give rise to a belief that these workers are particularly susceptible to developing stress-related illness.[1] It is in such an environment that therapy radiographers work. The purpose of this research was to identify occupational stresses and coping mechanisms, that may or may not be unique, to therapy radiographers and gain insight into their lived experiences.

Correspondence to: H. C. French, Superintendent 2, Colney Centre, Level 1 East Block, Colney Lane, Norwich. NR4 7UY. Tel: 01603 646741; E-mail: helen.french@nnuh.nhs.uk

Requests for reprint should be sent to the author at the address above
Research undertaken in a radiotherapy department of a large district hospital within East Anglia.

STRESS

Stress, as defined by Churchill:[3]

"Physical, chemical or psychological factor or combination of factors that poses a threat to the homeostasis or well-being of an organism and that produces a defensive response as for example, physical or emotional trauma, or infection."

Stress maybe defined by an individual as over- or under-stimulation, that may actually or potentially lead to ill health.[4] Insufficient stress results in inaction, too much results in poor performance. Obtain the right balance, and high results are achieved. However, stress is an individual experience and what is acceptable to one individual maybe unacceptable to another. The actual or potential development of ill-health is a consequence of the stress process where individuals find themselves unable to deal adequately with the demands i.e. stresses made upon them.[5] The most common definition of stress adopted by psychologists has been that stress is a stimulus.[6] Events that impinge on an individual can be classed as stress stimuli, or as termed by the American Hans Selye, 'stressors'.[7,8] The words, stress stimuli and 'stressor' are used interchangeably in the published literature on psychology and stress. American authors' literature contain the term 'stressors' that are comparable with the term 'stresses' as used in British literature. When events are perceived as outside our potential capacity, we react by becoming negatively stressed. These stresses or stress stimuli are not applied to the daily hassles of life, the little things that irritate for a short time, but to chronic exposure, those stresses that persist for a long time. Unwanted, unmanaged stressful situations are damaging, turning stress into distress. This distress can manifest itself in cognitive, emotional, behavioural and physiological ways.[9] Behavioural changes that accompany exposure to stress might also have direct and indirect consequences on health such as smoking, excessive drinking and drug-taking. Worrying thoughts can make us feel physically anxious; racing heart, muscle tension etc, which then leads us to worrying more. An anxiety circle is soon established, as described in Figure 1.

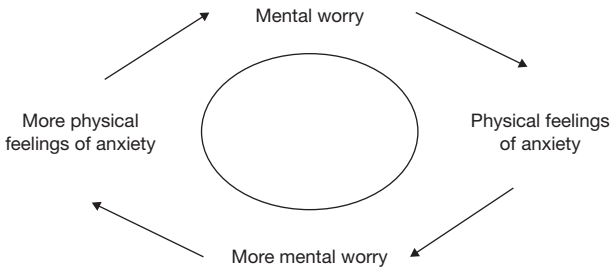

Figure 1. Cognitive & Physical Anxiety Circle.[10]

However, before stress can be dealt with, stress needs to be recognised. Physical signs of stress include headaches, trembling, sweating, nausea, muscle tension, shaky legs, tiredness, aches and pains, and changes in sleep and appetite patterns. Emotional symptoms include worry, panic, moodiness, lacking confidence, unable to concentrate and social withdrawal.[11]

COPING

When stresses are present, an individual will use whatever stress-coping strategy they have developed in order to modify the effects of stress.

"Coping strategies refer to the ability to draw on the emotional, physical and social resources that allow one to avoid the adverse impact of stress".[12]

Whatever strategy is utilised, the effectiveness and appropriateness can be seen only by the short- and long-term results. No strategy should be considered better or worse than another, and coping behaviour includes both failures and successes, thus:

"The concept of coping is defined by the behaviours subsumed under it, not by the success of those behaviours".[7]

Each individual experiencing stress needs to increase their own adaptive ability (coping) and develop coping mechanisms to reduce or eliminate the stresses. Coping mechanisms that are successful result in the restoration of balance. Coping strategies can be directed at managing or altering the problem causing stress or at regulating the emotional response caused by the stress. Emotion-focused forms of coping to reduce stress can be avoidance, distancing, changing the meaning of the situation and denial. These forms of

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press

coping are used to maintain hope and optimism, to deny the facts, to refuse to acknowledge the worst or to act as if what happened did not matter. Problem-focused coping strategies are directed at defining the problem, producing alternative solutions, choosing and acting.

Within the work environment, the effects of stressed individuals can be seen in high absenteeism, poor job performance, reduced efficiency and effectiveness, low staff morale and high staff turnover.[13] Health care workers reported more frequent use of a number of stress-coping strategies, social support, task strategies, use of home and time management and involvement, and reported significantly lower mental ill-health scores, suggesting that health workers employ greater use of strategies to reduce their higher levels of pressure than non-health care workers. Milne and Watkins[14] studied the effects of shift rotation on nurses' stress, coping and strain, and found that nurses increased the use of coping strategies thereby reducing the strain of rotating shifts. Innes[15] concluded that radiographers involved in postgraduate continuing professional development (CPD) whilst working full-time, experienced considerable stress. Various coping strategies were initiated to deal with the stresses; time management, reappraisal, a need to step back, social support and avoidance, though not all were initially successful in reducing or removing the stress.

Card and Fielding[16] surveyed the problems experienced by therapy radiographers in dealing with cancer patients. These problems arose from situations within the job, where a degree of anxiety or stress was associated. Their results identified ten problems, which were grouped into 3 categories:

1. Communication with the patient.
2. Pre-existing attitudes and beliefs.
3. Communication with other professionals and departments.

However, research carried out by Casselden[17] revealed only half of the situations identified by Card and Fielding[16] perceived by radiographers as problems. These were:

1. Uncertainty as to what patients had already been told about their condition.
2. Incorrect information received by patients from a variety of sources.
3. Having sufficient time to establish rapport with patients and develop their confidence in staff.
4. Ignorance about radiotherapy amongst other health care professionals.
5. Therapy radiographers' difficulties in being informed of changes in the patients' other treatment(s).

The main problem for therapy radiographers was 'communication with patients and other staff' but the most stressful situations were clearly derived from 'communication with patients'. This is supported by the results of research carried out by Murray and Stanton[18] which showed that 64% of radiographers found it stressful dealing with angry patients. Polworth[19] identified stressful aspects of the role of American diagnostic radiographers. Apart from aspects of their working conditions such as 'unbearable warm temperatures …', the stressful situations related to 'lack of co-operation', 'responsibility without authority', 'relationships' and 'domestic, marital, personal life upsets'. This led to the manifestation of mental and physical symptoms such as emotional instability, severe fatigue, gastrointestinal disturbance, anxiety, pain in the neck or lower back, irritability and/or depression. She found that the majority of mental and physical symptoms cleared with time, indicative of health adaptation.

Sechrist and Frazer[20] also identified stresses in American diagnostic radiographers that support the previous work by Polworth[19] regarding stress caused by unco-operative, demanding and non-supportive radiologists. They also identified stresses associated with lack of staff, lack of respect, performing unnecessary tasks and abusive patients. Eslick and Raj[21], looking at stresses in radiographers found that high workload came second in a list of ranked stresses. However, this is in conflict with one aspect of their research findings that looked at whether private or public practice affected stress in radiographers. They revealed that 'patients' cause the most stress for radiographers though the research does not state what aspects of dealing with patients were found to cause stress. It could be patient's behaviour such as aggressive or abusive patients or it could be communication difficulties. This was supported by the findings of Card and Fielding[16],

Casselden[17] and Murray and Stanton.[18] In addition, Rutter and Lovegrove[22] looking at stress and job satisfaction in mammography radiographers revealed communication problems, especially not knowing what to tell the patient, as the leading problems. Communication problems are not just isolated to radiographers; Vachon[23] reviewed published research literature on the most common stresses for nurses in oncology and palliative care settings. Her work revealed the three main sources of occupational stress were: patients/families (communication problems, identification with, coping/personality problems); occupational role (overload, ambiguity, conflict, lack of control); and work environment (team communication, inadequate resources, inter-professional communication problems, unrealistic expectations of organisation).

Prior research has identified for nursing staff, diagnostic radiographers and health care workers the many stresses in the workplace and the various coping mechanisms that can be used to cope with these stresses. However, there is a lack of published research findings of stress and coping for therapy radiographers. The aim of this research was to identify occupational stresses and coping mechanisms of therapy radiographers in order to gain insight. The phenomenological qualitative approach was used in order to discover the meaning and the information, specific to the 'lived' experience of the therapy radiographer. However, this qualitative approach did not seek to quantify how much of a problem stress was, for the sample group.

METHODOLOGY

Phenomenology is derived from the disciplines of psychology and philosophy, the founders of this school of thought being Edmund Husserl and Martin Heidegger.[24] It aims to discover the meaning and information, specific to the lived experience of the therapy radiographer, thereby bringing us in more direct contact with that world.[25]

Data analysis using the phenomenological method is a reflective process. It involves thorough reading and sensitive presence with the entire transcription of the participant's description. Shifts throughout the text are identified, resulting in division of the text into segments. In the researchers' own words, the significant phrases in the segments are identified and arranged. Then each significant phrase is dissected to express the central meaning of the segment. These central meanings of all segments for each participant are further interpreted focussing on the real meaning within the context of stress and coping. Finally, the real meanings in all the participants' descriptions of the lived experience are understood and comprehensively described.[24]

Ethical approval was granted by the local ethics and research and development committees following which, data were collected using semi-structured open interview questions. Verbal and written information regarding the purpose of the research and the need to tape-record the interview was given to each participant at least a week prior to the interview. Agreement to be interviewed and permission to tape the interview for transcription was obtained in writing. The in-depth interviews took place in a comfortable, private, quiet room within the participant's work place at a time convenient to themselves. The interview lasted up to a maximum of one hour. Interpersonal skills were used to assist the subject in disclosing the lived experience through cues offered by the subject. All transcripts remained anonymous and confidential. Data were kept in a locked filing cabinet and word processing was on a password-protected personal computer.

Semi-Structured Open Interview Questions

1. I would like to hear your views on whether you have found any aspect or aspects of your job as a therapy radiographer stressful?

If the answer is Yes, go to questions 2–6. If the answer is No, go to questions 7–11.

2. If Yes, please describe the experience.
3. Try to describe the way it affected or influenced you, how did it make you feel?
4. Was there anything in particular you did whilst experiencing it (coping mechanism)? What?
5. How did that make you feel?
6. Is there anything you wish to add?
7. If No, please tell me if any aspect of the job makes an impression on you or influences you in any way.
8. Try to describe the way it affected you, how did it make you feel?
9. Was there anything in particular you did whilst experiencing it (coping mechanism)? What?
10. How did that make you feel?
11. Is there anything you wish to add?

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press

The interview focussed on the above shown topic areas but allowed opportunity for self-expression.

Sample

Within East Anglia, there are more than seventy employed therapy radiographers working for the NHS within several large district general hospitals and teaching hospitals. A purposive sample of senior female therapy radiographers working within one particular NHS Trust within East Anglia was selected, as this group was readily accessible to the researcher. A sample of 8 was selected from the first 8 to volunteer. The sample of therapy radiographers was small and limited to those at a senior grade. Traditionally, phenomenological research methods use small sample sizes because of the large amount of data produced from each interview. The sample also excludes the experience of superintendent therapy radiographers and junior grade therapy radiographers. All interviewees were female and therefore the sample is only representative of female therapy radiographers. However, the results are phenomenologically informative by identifying stresses within the workplace for this professional group of female senior therapy radiographers.

Bias

It needs to be acknowledged that there may have been a degree of personal and professional bias within the study due to the researcher being a therapy radiographer. In addition the study only applies to senior female therapy radiographers. The desire to explore the stresses and coping mechanisms of the therapy radiographer came from a full knowledge of the work environment and the professional role of the therapy radiographer. Care was taken not to assume or anticipate the information provided by the interviewees, but to consciously set this to one side. Twice the interviewees validated the data. The original transcripts were referred to during the stages of data analysis to ensure the results stayed true to the experience of the radiographers.

Data Analysis

The phenomenological research method used in this research is that of Colaizzi.[2,26] The data were transcribed and analysed using the sequential steps as follows:

1. All the descriptions, termed protocols, were thoroughly read in order to acquire a feeling for them.
2. From each protocol, significant statements were extracted. These were phrases and sentences which directly pertain to the investigated phenomenon i.e. stress and coping.
3. Meanings are formulated from each statement. These meanings illuminate hidden meanings in the text so that the formulated meanings are connected to the text.
4. Formulated meanings from each interview were organised into clusters of themes. By referring back to the original descriptions, these themes were validated and if there was anything contained in the original protocols not accounted for in the clusters of themes, these discrepancies were noted.
5. Results were integrated into a thorough, exhaustive description of the phenomenon under study.
6. The exhaustive description is then put together into an unequivocal statement of identification.
7. Finally the findings were returned to each subject to validate them by asking whether the descriptive results were true to the experience and whether any aspects had been omitted.

RESULTS

The results of the research interviews are integrated into a thorough description of the many dimensions to the job of a therapy radiographer that cause stress.

1. Personal performance within the job

The response of an individual radiographer to a particular situation or to their performance within the job is reflected upon and analysed. There is an inherent need to perform to the best of their ability and to their own standards; "If I don't feel that I've done a good job", "… unable to perform to own personal standards", "Letting the patients down", "things that I haven't coped well with".

If they perceive they have performed badly or are unable to perform to own high personal standards to deliver the quality of service they

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press

Table 1. *Clusters of themes including frequency of occurrence. Aspects of the job that cause stress*

Personal issues
Letting the patients down because of waiting lists.[2]
Own reaction to situations and whether performed well, reflection on the incident.
Own reaction to distressed patients and how to make the patient feel better.[2]
Feeling I haven't performed well.
Unable to perform to own personal standards because of working with others that are not working satisfactorily in the role and grade they have.
Lack of familiarity with treatment machine and techniques.
Loss of control.[7]
Delegated tasks not completed to own specifications.[2]
Dissatisfaction with the job because of the volume of work.

Patients
Mistakes/error/Dept of Health enquiry, potential damage to patients if mistakes are made.[5]
Patients not acting on advice given.
Confronting own mortality daily.
Forming emotional attachments with patients.
Aggressive/angry patients.[3]
Uncooperative patients.
Complaining patients.[2]
Lack of understanding.
Breaking bad news (machine breakdown).
Working environment.
Inadequate facilities for patients (lack of privacy for discussions/poor quality linen).[2]
Equipment breakdowns.[3]

Communication/Professional relationships
Poor interdepartmental communication/transport problems.
Poor interpersonal communication (messages not relayed, misinterpretation).
Uncooperative staff.[3]
Poor interpersonal relationships (lack of respect, unequal distribution of tasks within the team, unwilling to listen to another's idea, working with under-performing staff).
Transference of stress from one person to another through inappropriate behaviour.[2]
Sensitivity between professional groups (vulnerable or threatened).
Poor management (perceived untruths/lack of decision making).
Lack of support and supervision from more senior staff on unit.

Interpersonal relationships
Feeling responsible for other professional's omissions and doing the extra work to resolve those omissions for the patient.
Other professionals (doctor) not dealing with the responsibility of difficult issues (collusion, breaking bad news).
Unnecessary work resulting from seemingly superficial decision making of other professionals.
Lack of support from colleagues.
Personality conflicts.[2]
Inability to question decisions due to fear of responses from colleagues.

Departmental working
Large volume of work (patients).[5]
Large volume of paperwork.
Extra responsibility without adequate support.
Unfamiliarity with equipment.
Working alone with a newly appointed colleague who is unfamiliar with equipment and techniques.
Unsure of departmental philosophy (disclosure of disease).
Inadequate staffing levels.
Unmanageable workload.

desire, then stress results. In particular, stress results from the loss of control aspects of the job (waiting lists, equipment failures, under-performing colleagues, unfamiliar equipment/techniques, high volume of work) "lot of paperwork", "… creating a lot of work as well which goes towards that stress", "stress when you can't perform or when you are involved with people who are out of their depth or not performing", "… because of the sheer volume …", "If I'm in charge things are going fine", "when I'm not in control, when I don't feel as in control as I'd like to be".

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press

Table 2. *Clusters of themes and frequency of symptoms of stress reported by Therapy Radiographers*

Emotional	Physical
Crying[3]	Disturbed sleep[4]
Sad/depressed	Eating more
Angry[2]	
Irritable	
Distressed	
Feeling guilty	
Self-blame	
Troubled thoughts[2]	

Table 3. *Clusters of themes and frequency of use of Coping Strategies*

Social support
Discuss the situation with others[4]
Report problems and people to a higher authority[2]

Confrontive
Say 'No'
Deal/confront the situation[3]
Verbally express anger
Physically express anger

Self-control
Seek information to gain understanding
Think it through & reassure oneself

Escape/avoidance
Alcohol
Comfort eat
Exercise (walking)
Take a holiday[2]
Distraction through home life, house work, television, academic study.

Distancing
Use humour[2]

Positive reappraisal
Engage in a hobby (pottery)

2. Patient contact

Forming emotional attachments with patients who have a potentially life-threatening disease raises stressful issues that need addressing – ones own mortality and loss; "their disease and diagnosis … those things you acclimatise to", "Dealing with death and dying and having to look at your own mortality on a daily basis".

Being on the receiving end of behaviour (physical or verbal) from patients who are angry, aggressive, unco-operative and complaining, is stressful; "very aggressive patients", "… they (patients) don't complain very often but when they do complain …", "You're working very hard in the background for them and they are complaining about something relatively minor", "it's not your fault … you 'get it' you get all that backlash from those people (patients)".

Also the acute awareness of the potential damage that working with high energy X-rays can cause to the patient, results in stress; "a mistake or something, an error, calculation or whatever", "very aware of errors, I think that's a big stress … being involved in them when they are made", "what has that done to the patient's treatment".

3. Working environment

Stress results from working with old equipment that is frequently breaking down and in an environment, which is perceived by the radiographer as having inadequate facilities for patients (lack of quiet rooms for private discussions and having poor quality linen). "(old linen) slap dash … look after the little things", "machines breaking down …", "haven't got anywhere to talk to them (patients)".

4. Communication

Poor communication between departments and between professionals (messages not being relayed or messages being misinterpreted); "relying on other people to get back to you and they don't … you feel that you're bugging people and it gets nearer to deadlines and that", "… people misinterpreting what you are saying or just not doing what you say …".

5. Management

There is a perception that management is indecisive, departmental situations are slow to be resolved and the staff perceive they are being told what management think they want to hear, and not the truth; "people in management positions seem to tell you things that they think you want to hear … most people would rather be told the truth and for the truthful reason". Lack of supervision from senior staff working on the treatment units also causes stress; "running off and leaving you, sitting down all day while I'm … working my socks off".

6. Professional behaviour

Extra work or unnecessary work caused by the lack of decision making or information to the patient by other professional groups (collusion,

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press

breaking bad news, forgetting to book transport); "the therapy radiographer tends to take on responsibility for the doctors, nurses, anything that anyone forgets, the porters …".

Professional behaviour causes stress such as; lack of co-operation; "you can send a patient to be seen by a doctor or ask for a follow-up and they just won't write it in … stress that brings on us because of their omissions" lack of respect, resistance to another's idea, personality conflicts, inability to question decisions due to fear of responses from colleagues, lack of support, working with under-performing staff, transference of stress from one person to another through their inappropriate behaviour; "somebody storms in and throws a sheet down on the desk and storms out again".

7. Departmental working

Unmanageable workload due to the large volume of patients who are waiting for treatment due to having a waiting list; "stressful when you are running late". The volume of paperwork involved with each patient. Inadequate staffing levels due to staff shortages. Being unfamiliar with equipment and/or techniques. Working alone with newly appointed staff; "left with people who don't even know the techniques that well".

Symptoms of stress experienced by the therapy radiographer

The stress experienced by the radiographers is displayed in emotional and physical symptoms. The emotional symptoms declared include crying, sad, depressed, angry, irritable, distressed, self-blame, feeling guilty and having troubled thoughts. Physical symptoms described include eating more and having disturbed sleep.

Coping strategies used by therapy radiographers

Coping strategies are used to help an individual cope with the stressful encounters of life. The 'Ways of Coping Questionnaire' by Folkman and Lazarus[27] is a recognised tool that categorises the described coping strategies. The described thoughts and actions that therapy radiographers employ to cope with the stresses of the job fall within the descriptions of the recognised categories of Folkman and Lazarus. The action of Seeking Social Support describes efforts to seek informational support, tangible support and emotional support.[27] This is expressed within the study as:

"Talk about it to someone" (x4) and "Report problems and people to a higher authority" (x2). Confrontive Coping describes aggressive efforts to alter the situation and suggests some degree of hostility and risk-taking. Here, the resulting efforts from the radiographers are: "Say No", "Deal/confront the situation", "Verbally express anger" and "Stamp about". Self-Controlling describes efforts to regulate one's feelings and actions. This is in the form of "Seek information to gain understanding" and "Think it through and reassure ones self". Escape-Avoidance describes wishful thinking and behavioural efforts to escape or avoid the problem. The reported efforts are: "Distraction through television, house work, home life, academic work", "Take a holiday", "Popping out for a drink after work", "Exercise" and "Over eat". Distancing describes cognitive efforts to detach oneself and to minimize the significance of the situation. This is revealed in the expression "I need humour to balance that kind of response". Positive reappraisal describes efforts to create positive meaning by focusing on personal growth. It also has a religious dimension. This was described in the study as; "Engage in a hobby – pottery".

The most frequently used strategies to deal with the symptoms of stress in the sample group are a combination of 'social support', 'escape avoidance' and 'confrontive coping'.

DISCUSSION

The results of this phenomenological approach support the findings of similar research into the stress associated with the role of the health care professional.[15–23,29] However, this research has revealed a new stressful aspect of the role, which is particular to a therapy radiographer. This is the stress caused by an acute awareness of the potential damage to a patient resulting from errors in treatment. The following statements from the transcribed interviews support this:

'… I think there are a lot of stresses there because you don't … want to do anybody further damage and you are dealing with, you know, a

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press

highly dangerous substance aren't you … very aware of errors, I think that's a big stress.' 'Department of Health enquiry.' 'You know you do your best, but then occasionally a mistake is made.' 'Most stressful thing that has happened … treated someone wrong.' Another factor, which is corroborated by this study, is that this group of therapy radiographers found patient behaviour stressful (angry, aggressive, unco-operative). Sechrist and Frazer[20] also identified 'aggressive patients' as the sixth-ranked, most significant stresses for diagnostic radiographers in America. Eslick and Raj[21], looked at whether private or public practice affected stress in radiographers and revealed that patients cause the most stress for radiographers. Unfortunately, they do not state what particular aspects of dealing with patients cause stress; it may be aggressive or abusive patient behaviour. Many hospitals now provide training for 'managing difficult people' that includes angry, aggressive and abusive patients. Through this training the radiographers would develop the required skills to deal with this stressful behaviour.

The stresses encountered in the role of a therapy radiographer led to the experience of physiological and/or psychological responses, such as crying, anger, troubled thoughts and distress. Acknowledging and talking about the identified stresses that exist within the job reduces their impact and enables targeted interventions to be introduced. However, it is also important that each individual is trained to recognise stresses and trained to develop the skills to cope with them. Stress Management Training (SMT) through the use of coping mechanisms, serves to reduce the threat of what is perceived as stressful.[4] Relaxation, physical fitness and exercise, talking/writing about feelings, seeking social support and counselling are examples of ways to manage stress.[9] The theory of stress management is simple; first identify problems, goals and priorities and then learn to come to terms with difficulties and circumstances.[28] People respond to stress in different ways. They adapt successfully, adapt temporarily or do not adapt at all. Temporary adaptation is effective for short-term stresses, for example, giving yourself a treat, going shopping or going out for the evening. Each individual needs to be trained to recognise these stresses and to develop skills to cope with them. The phrase commonly stated, prevention is better than cure, can be applied to the concept of SMT, where staff learn how to prevent and better cope with stress.

SMT programmes generally contain core themes: education, training in some method of relaxation, self-evaluation and goal setting and related skills training such as assertion skills, time management and problem solving. Other teaching sessions may include topics such as coping styles, common interpersonal problems and time management with action planning being an integral part. Anxiety management is a self-help approach where each person learns a new range of skills to help them cope with difficult situations as they arise.[11] SMT could be introduced as a session within the hospital induction programmes for new employees and/or be a core session as part of the annual mandatory training for each employee. From an organisational perspective, this may reduce loss of finances resulting from absenteeism, employee turnover, low job satisfaction and low levels of employee commitment to the organisation. However, disappointingly[8], SMT programmes have had little impact on organisational levels of stress though there is evidence that these interventions have impacted on individuals. In addition, SMT could be introduced into the University syllabus where therapy radiographers, and indeed where any health professionals are trained enabling the learning of practical interventions to reduce stress. Research has found that younger employees who burned out more often were the most prone to experiencing emotional exhaustion.[29,32] If stress management strategies are taught early on in their training and career, it may be helpful in managing stress throughout their careers.

The coping strategies used by the radiographers in this study fall into the categories of coping strategies as defined by Folkman and Lazarus.[27] The most frequently used coping strategies are social support; talking about it, escape avoidance; distraction techniques with home life, television, socialising and confrontive coping such as actively saying 'no'. Social support can be used in two ways. Informality, in that support is found in two-way discussions, empathy, caring relationships within the work or home environment, as used by this group of radiographers or through formal professional advice such as counselling. Escape

avoidance, such as having a holiday, family/home life and exercise were also used to reduce stress levels. These two strategies, social support and escape avoidance, outlined by the radiographers in this study, support the findings of Innes[15] who looked at the stress and coping of postgraduate radiography students. Social support from fellow students and colleagues and avoiding a particularly stressful aspect of postgraduate study resulted in reduced anxiety levels for the group of radiographers under study. Other health care workers also use social support as a coping strategy. Vachon[30] identified social support as vital to coping for palliative care nurses. McNeely[31] looked at stress and coping strategies in nurses from palliative, psychiatric and general nursing areas and found that again 'social support' and 'avoidance' were two of the most frequently used coping strategies. Rees and Cooper[13] also found social support and non-working time/home life – escape avoidance, the most frequently used coping strategies by health care workers within a large UK health authority.

CONCLUSION

The purpose of this research was:

1. To identify occupational stresses that may or may not be unique to therapy radiographers.
2. To identify the coping mechanisms employed by the radiographers.
3. To gain insight into the lived experience of this group of therapy radiographers.

This research has identified the stresses of the role to be within the following categories:

Personal performance	Lack of control, own high standards not achieved.
Patient contact	Emotional attachments, angry, aggressive, unco-operative, complaining patients, acute awareness of X-ray damage potential.
Working environment	Old equipment, equipment breakdown, inadequate facilities for patients.
Communication	Inter-professional, interdepartmental.
Management	Indecision, slow issue resolution, untruth.
Professional behaviour	Unco-operative, lack of respect, resistance, lack of support and supervision, personality conflict, inability to question due to fear of responses, under-performing staff.
Departmental working	High workload, paperwork, staff shortages, unfamiliar equipment/techniques.

The job stresses described by therapy radiographers are not isolated to this particular group but are also identified by other health care workers.[19–22,29,32]

To manage the identified stresses of the job the radiographers use a range of coping mechanisms the most commonly used are "Talk about it to someone" (x4) "Report problems and people to a higher authority" (x2), "Say No", "Deal/confront the situation", "Verbally express anger" and "Stamp about", "Seek information to gain understanding" and "Think it through and reassure ones self". These coping mechanisms that were identified are not isolated to this one professional group but are also used by other health care professionals[15,30,31].

In addition, the results of this research have revealed a new stress. This is the stress caused by an acute awareness of the potential damage to a patient resulting from errors in treatment if a mistake is made. Therapy radiographers use radiotherapy (high energy X-rays) to treat patients with malignant and non-malignant diseases. Once a dose of radiation has been given, it cannot be removed nor can an antidote be given to counteract its effect. Consequently, the treatment process is subject to multiple checking systems and equipment fail-safe mechanisms throughout every aspect of the process. Despite this, mistakes do happen occasionally, and as revealed by the results of this research, the stress associated with making a mistake remains.

RECOMMENDATIONS

This research has highlighted the stresses and coping mechanisms of therapy radiographers and it is hoped that a greater understanding of these will assist in preserving the health of these professionals. If stress management strategies are taught early on in their training and career, it may be helpful in managing stress throughout their careers.

From the results of the study, the following recommendations for radiotherapy departments can be made.

1. Provide opportunities within staff meetings for groups of different levels of seniority to contribute ideas and to discuss work frustrations.

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press

Foster a non-threatening environment in which to question current practice. Look at ways to provide individual radiographers with greater autonomy and control in organising workload, work patterns, prioritising tasks and eliminating unnecessary work.

2. Provide regular opportunities for formal and informal social support and team building through both work, and non-work events. This can help to build relationships to aid communication and behaviour.
3. Provide training for 'managing difficult people' to include the management of angry, aggressive and abusive patients. This session can be part of the induction module and become a mandatory session.
4. Culture is slow to change and does so only in response to new management policies and core values where decisions and actions can be seen to reflect commitment. Regular, open communication from management is vital for the employee to understand a situation. Staff should be kept fully appraised of discussions pertaining to situations that are of concern to them, even if decisions have not yet been made. There also needs to be a positive move away from the historic blame culture, which has been the perception within the NHS for many years. There must be a determined shift of emphasis to a culture of learning from mistakes, providing support when things go wrong and one that emphasises risk reduction.

This research has attempted to provide insight into the working world of the therapy radiographer and to discover meaning and information specific to their 'lived experience'.

AREAS FOR FURTHER RESEARCH

It is suggested that future studies are required to expand the scope of this research to include all genders and grades of seniority of therapy radiographers throughout the whole of the British Isles. In addition, future studies could investigate the reasons as to why therapy radiographers experience stress associated with the potential to make errors. Is it related to a particular working environment? Is this due to the culture that pervades the particular department, i.e. blame culture or is it due to a fear of litigation and is this identified stress present in all radiotherapy departments within the UK?

Acknowledgements

I would like to thank my tutor, Mrs Angela Duxbury, Principal Lecturer, Radiotherapy Oncology, School of Health and Social Care at Sheffield Hallam University and Mrs Fiona Durban, Radiotherapy Services Co-ordinator, Norfolk and Norwich University Hospital NHS Trust for their support and encouragement.

I would also like to thank all the therapy radiographers who participated in this research without whom this research would not have been possible and thanks also go to Dr Jane Beety and Karen Lord.

References

1. Firth-Cozens J, Payne R. Stress in Health Professionals, psychological and organisational causes and interventions (1st edn). Chichester: Wiley, 1987.
2. Colaizzi P. Psychological research as the phenomenologist views it. In: Valle R, King M (eds). Existential phenomenological alternative for psychology. New York: Oxford University Press, 1978.
3. Churchill Medical Dictionary Illustrated. London: Churchill Livingstone, 1989, p. 1797.
4. Howells-Johnson J. Manifestation and management of stress in health care workers. British Journal Theatre Nursing 1998; 8(3): 19–30.
5. Payne R. Stress at work: A conceptual framework. In: Firth-Cozens J, Payne R (eds). Stress in health professionals. Chichester: Wiley, 1999.
6. Selye H. The Stress of life. New York: McGraw Hill, 1976.
7. Lazarus RS, Folkman S. Stress, Appraisal and Coping Springer Publishing Company, 1984, p. 385.
8. Firth-Cozens J, Payne R. Stress in Health Professionals, psychological and organisational causes and interventions (2nd edn). Chichester: Wiley, 1999.
9. Sutherland VJ, Cooper CL. Understanding Stress. A Psychological Perspective for Health Professionals. London: Chapman & Hall, 1990.
10. Powell T. The Mental Health Handbook. Oxford: Speechmark Publishing Ltd, 2000.
11. Dynes R. Anxiety Management. Oxford: Speechmark Publishing Ltd, 2001.
12. Patrick PKS. Health care worker burnout, what it is, what to do about it. Blue Cross Association, USA. 1981, p. 46.
13. Rees D, Cooper C. Occupational stress in health service workers in the UK. Stress Medicine 1992; 8: 79–90.

14. Milne D, Watkins F. An evaluation of the effects of shift rotation on nurses' stress, coping and strain. International Journal Nursing Studies 1986; 23(2): 139–146.
15. Innes J. A qualitative insight into the experiences of postgraduate radiography students: Causes of stress and methods of coping. Radiography 1998; 4: 89–100.
16. Card IR, Fielding RG. Caring for the cancer sufferer: A survey of therapy radiographers' problems. Radiography 1986; 52(602): 57–59.
17. Casselden PA. The personality of radiographers: Empathy dimensions and management of occupational problems and stress. Radiography 1988; 54(614): 77–82.
18. Murray N, Stanton M. Communication and Counselling Oncology patients – are Diagnostic Radiographers adequately supported in this role? Radiography 1998; 4: 173–182.
19. Polworth E. Occupational stress and the radiographer. Radiography 1985; 51(600): 334–342.
20. Sechrist SR, Frazer GH. Identification of stressors in Radiologic Technology. Radiologic Technology 1992; 64(2): 97–103.
21. Eslick GD, Raj V. Occupational stress amongst radiographers: Does working in private or public practice make a difference? Radiography 2002; 8(1): 47–53.
22. Rutter DR, Lovegrove MJ. Stress and Job Satisfaction in Mammography Radiographers. Work & Stress 1995; 9(4): 544–547.
23. Vachon MLS. Caring for the Caregiver in Oncology and Palliative Care. Seminars in Oncology Nursing 1998; 14: 152–157.
24. Husserl E, Heidegger M. In: Morse JM (ed.). Critical Issues in Qualitative Research Methods. UK: Sage Publications, 1994.
25. Van Manen M. Practising phenomenological writing. Phenomenology Pedagogy 1984; 2(1): 36–69.
26. Hycner RH. Some guidelines for the phenomenological analysis of interview data. Human Studies, 1985; 8: 279–303.
27. Folkman S, Lazarus RS. 'Ways of coping questionnaire' sampler set manual, test booklet, scoring key. California: Consulting Psychologists Press, 1988.
28. Grainger C. Stress Survival Guide. London: BMJ Publishing Group, 1994.
29. Akroyd D, Adams RD. The cost of caring: A national study of burnout in radiation therapists. Radiation Therapist 2000; 9(2): 123–130.
30. Vachon MLS. Staff Stress in Hospice/Palliative Care: A Review. Palliative Medicine 1995; 9: 92–122.
31. McNeely S. Stress and coping in nurses from palliative. psychiatric and general nursing areas. Health Manpower Management, 1996; 22(3): 10–12.
32. Chen S, McMurray A. "Burnout" in intensive care nurses. Journal Nursing Research 2001; 9(5): 152–164.

https://doi.org/10.1017/S1460396904000044 Published online by Cambridge University Press