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CHAPTER FIVE

Burnout Among Oncology Care Providers: Radiation Assistants, Physicians and Nurses

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5.1 INTRODUCTION

Oncology can be an exciting and challenging specialty for those who work in it. Care providers generally give many important reasons for choosing to be involved in the direct care of cancer patients, e.g. a compassion for patients who face a life threat, a desire to be closely involved in the treatment of chronically ill patients, and the challenges presented by the complex tasks of diagnosis and clinical care. In a qualitative study by Haberman *et al.* (1994), an oncology nurse described the essence of her practice as follows: 'We (i.e. *the patient and herself; the authors*) walk down the same road, but we wear different shoes.' And in a study by Petee *et al.* (1989) among staff members of a comprehensive cancer centre in the USA, the ideal described by the largest number of clinicians was to be 'a friend within a professional relationship'. However, in their daily routines, oncology care providers are also faced with a host of psychosocial problems that may drain their excitement and damage their commitment to ideals that initially drew them to the specialty (Flint Sparks, 1989). Eventually, this may lead to burnout, a form of chronic job stress that is characterised by emotional exhaustion, depersonalisation and reduced personal accomplishment (Maslach, 1982; Schaufeli and Enzmann, 1998). In the best light, burnout can be seen not as a condemnation of the professional activity *per se* but rather a reflection of the total quantity of the emotional stresses of practice, which dominate the majority of professional time in the practice of oncology (Whippen and Canellos, 1991). However, left untreated, burnout might reduce a person's ability to use the excellent capabilities that may have taken years of training to develop (Flint Sparks, 1989), and eventually might result in the care provider leaving the profession.

In this chapter, we would like to give a systematic overview of work-related factors which are associated with work stress in general, and burnout in particular, among oncology care providers. Next, the results of a national, questionnaire-based survey among Dutch oncology care providers with respect to (de)motivating

aspects of their working situation and their levels of burnout and psychiatric morbidity will be presented and discussed. The last part of this chapter will address interventions to combat work stress and burnout in these professions, including a brief description of team based burnout prevention training for oncology care providers, developed in continuation of our national survey.

5.2 WORK STRESSORS IN ONCOLOGY

In this paragraph, an overview of the main sources of work stress for oncology care providers is presented. In total, six categories of work stressors are distinguished and will be discussed in more detail below.

5.2.1 Patient-related/Emotional Stressors

The diagnosis of cancer is a major stressful life event that affects an increasing number of people in the industrialised countries. The initial period after diagnosis may be regarded as a life crisis, as cancer patients are confronted with a life-threatening disease, its treatment, and severe physical side effects. Patients may also experience feelings of uncertainty, a diminished self-image, and changes in social relationships (Moos and Schaefer, 1984). Not surprisingly, about a quarter of cancer patients experience depressive symptoms during this period (McDaniel *et al.*, 1995). These, and many other patient reactions to cancer (e.g. regressive behaviour, numbness and inappropriate denial, panic and grief, a need to propitiate and bargain, disappointment and anger) are difficult to handle with professional demeanour. The required steadfastness of personal behaviour demands much of oncology care providers' strength and maturity. On the one hand, 'difficult' patients may make staff become angry and unempathic, or depersonalised (Maslach, 1982). Yet, the illness still endows the patient with pathos, and caregivers may feel guilty about their hostile feelings. On the other hand, some patients may become 'special' to a caregiver – usually because of personal experiences – and these patients may arouse over-involvement (Lederberg, 1998). Cancer patients' need for psychological security may be extreme. Patients and their families often develop highly dependent relationships with oncology care providers and place great trust and faith in them. Though the intimacy and closeness of these interpersonal relationships can evoke feelings of accomplishment and unique importance (Meyer, 1992), their intensity may also put a heavy emotional burden on care providers. Patients' verbalisations of their fears may be quite helpful for themselves, but will be stressful for care providers who feel that they should somehow reassure the patient (Vachon *et al.*, 1978). Moreover, continuously having to satisfy the emotional needs of cancer patients and their families may become emotionally exhausting in the long run. In fact, in caring for cancer patients, the question is how to remain remote enough to think, function and prevent burnout, yet close enough to relate (Himmelsbach, 1978).

Despite the fact that some malignancies are now curable even in advanced stages, a large proportion of cancer patients still have a poor prognosis, as their illness remains unpredictable in its course and its response to treatment. Foreseeable declines, patients' struggles to come to grips, and family desperation may create a climate of dull pain, suppressed sadness and regret, if not outright guilt, on oncology wards. Intense and repeated exposures to mutilation and suffering may not only lead to pain and sadness among oncology care providers, but also to fear and revulsion, and this makes it impossible for them to maintain a simplistic belief in 'terrestrial justice' (Lederberg, 1998). In these situations, they also have to acknowledge the limits of modern medicine. They may feel incompetent, 'helpless helpers', when confronted with an irresistibly advancing disease and ultimately death (Hürny, 1988). Frequent exposure to death may lead to a loss of their sense of invulnerability and a painful awareness of personal mortality. Even seasoned staff will react with tension and the need to escape, when deaths are too frequent, unexpected, or difficult (Lederberg, 1998). Moreover, the lack of time to grieve after each patient also increases the stress of repeated and successive deaths (Adams *et al.*, 1991; Cooper and Mitchell, 1990; Gray-Toft and Anderson, 1987; Vachon, 1987).

5.2.2 Environmental/Physical Stressors

In addition to these stressors that are more or less inherent in the nature of patient responses to cancer, Lederberg (1998) discusses some other stressors that impinge on oncology care providers and are inherent to the nature of treatment. Oncology staff are required to apply toxic treatments, i.e. radiation and chemotherapy, which can also provoke feelings of anxiety among them. They often have to 'make their patients sick' for an expected benefit later on. The management of these and other ever-present side effects is a constant reminder to patient and staff of the cytotoxic nature of cancer treatment. Even transient side-effects, such as nausea and hair loss, can be distressing for staff because they are so difficult for some patients to tolerate. Less obvious long-term effects such as infertility are very significant for caregivers in their childbearing years. Treatment procedures that carry a significant risk of mortality, like bone marrow transplantation, have an ever-present emotional tension. Surgery remains a crucial and often successful form of treatment, but when it is disfiguring or extremely radical, it may also be experienced as fundamentally damaging (Lederberg, 1998).

5.2.3 Mental/Cognitive Stressors

Third, oncology care providers are confronted with a variety of complicated treatment regimens and a rapidly growing amount of knowledge in their subspecialty that is not easy to assimilate (Hürny, 1988). 'High tech' oncology settings demand a high level of intellectual acuity for rapid decision making based

on a thorough understanding of complex techniques. The technical demands of medical oncology and radiation therapy may be so great that the care provider misses out on the more enjoyable aspects of patient care (Herrera, 1986). In addition, decision making has become more complicated, as treatment modalities have multiplied and patients have become more active participants.

5.2.4 Social/Interpersonal Stressors

As treatment moves through successive phases, the shift from curative to palliative intent may be very difficult to negotiate. It engenders many negative reactions in patients and families, which are often diverted onto staff (Lederberg, 1998). Physicians, in particular, may be repeatedly confronted with a conflict between the curative goals on which most of their training is based and the palliative goals of much cancer care (Delvaux *et al.*, 1988). A descriptive survey conducted in the USA has indeed suggested that American oncologists experience high levels of burnout that are particularly related to this conflict (Whippen and Canellos, 1991). For nurses, some authors have shown that their level of stress is higher when they are asked to meet simultaneously acute and palliative clinical care objectives (Benoliel, 1969; Bene and Foxal, 1991). In addition, both professions have to deal with complex ethical issues of clinical research, where benefits for the individual patient may not be directly evident (Hürny, 1988). The need to maintain a balance between human concern and scientific objectivity can be a constant struggle (Flint Sparks, 1996).

5.2.5 Discipline-specific Stressors

So, in general, working in oncology can be considered stressful and may give rise to ambivalent feelings among care providers. Unfortunately, in the formal training of oncology care providers, no solid basis of psychosocial knowledge and skills is given to facilitate coping with the more or less specialty-specific issues that were just discussed. There is still a lack of education in interviewing skills, needs and coping mechanisms of patients with a chronic, potentially fatal disease, care of the terminally ill, and the impact of terminal illness on the caregiver-patient relationship (Hürny, 1988). Lack of staff know-how on communication issues often leads to patient and family dissatisfaction, which in turn may give rise to tension, anxiety and avoidance among staff members as well as low self-esteem and decreased job satisfaction (Ford *et al.*, 1994; Ramirez *et al.*, 1995; Ullrich and Fitzgerald, 1990). Also, these type of stressors may eventually lead to dysfunctional staff responses like anxiety, depression, burnout, and psychiatric problems (Lederberg, 1998).

Especially in this field of medicine, the (interdisciplinary) team can be an important (re)source of physical and emotional support. Moreover, it allows for the flexibility needed to work in such an emotionally charged field (Hürny, 1988).

However, it can also be a source of stress, as each discipline, or each individual may focus on its own facet of care with little sympathy for the other's viewpoint. This can be exacerbated in research settings where ethical and philosophical conflicts between research and clinical care commitments can readily occur, even in objectively well-managed cases. Whether acknowledged or not, these conflicts may intensify other sources of division. Some of these differences are discipline-based. As doctors have the most detailed information about the natural history of the disease, and its likely course and prognosis in a given patient, it is most natural for them to assume an intellectual approach. However, some nurses do not identify with this approach and view themselves more as 'nurturers'. There is definitely no incompatibility between the two stances, but the primary identification with one or the other dictates a set of emotional responses and sources of professional satisfaction. Failure to acknowledge the existence of these two stances, or valuing one at the expense of the other, may create tensions on units or within a team (Lederberg, 1998). As a result of these differences in approach, the different disciplines in oncology can be more or less characterised by their own specific 'stress-profiles', depending on their role in the process of care giving. We will return to this issue in more detail in the next section.

5.2.6 General Stressors

In addition to the above, literature shows that care providers in oncology not only experience many stressors unique to their specialty, e.g. the frequent confrontation with death and dying, but are also exposed to work stressors that are more common to other health care workers, e.g. high workload and lack of autonomy (Hürny, 1988; Schaufeli, 1999).

5.3 JOB STRAIN AND STRESSORS IN ONCOLOGY

5.3.1 Strain

Though this overview of potential sources of stress in oncology may lead to the impression that oncology care providers experience more severe job strain than professionals in other medical specialties, the few empirical studies in which stress and burnout levels of care providers in oncology and non-oncology settings are compared yield contradictory results. Some empirical studies found a lower level of job strain or burnout among nurses working in oncology as compared to those working in other medical specialties. For instance, in a study by Yasko (1983), oncology clinical nurse specialists' mean scores on the Staff Burnout Scale for Health Professionals turned out to be significantly lower than those of nurses of eight other medical specialties. Jenkins and Osthega (1986), who replicated Yasko's study among oncology nurses, found similar results.

On the other hand, there are also a few empirical studies that found higher levels on aspects of burnout among oncology care providers than among care providers in other disciplines. In a study among a representative sample of all

active physicians in Finland (Olkinuora *et al.*, 1990), oncology was listed among the 'high burnout specialties'. Catalan *et al.* (1996), who compared levels of burnout, assessed by the Maslach Burnout Inventory (MBI), and levels of psychiatric morbidity, assessed by the General Health Questionnaire (GHQ-28) (Goldberg, 1978) found no differences between staff working with AIDS and those working with cancer patients with respect to emotional exhaustion and depersonalisation scores. However, AIDS staff reported both lower intensity and frequency of personal accomplishment than oncology staff. A possible explanation for the finding of reduced personal accomplishment in AIDS staff may be the fact that AIDS care workers deal with patients whose prognosis is generally regarded as more gloomy and for whom therapeutic options are more limited than for cancer patients. With respect to overall GHQ-morbidity, similar proportions scored above the cut-off for caseness in each group: AIDS 40 per cent and oncology 44 per cent. Also, Lopez-Castillo *et al.* (1999) found no significant differences in psychiatric morbidity, assessed by the GHQ-28, between oncology, internal medicine and AIDS care providers, but overall levels of psychiatric morbidity were high: 38 per cent of the total sample reported levels of psychological distress at or above the caseness level. With respect to burnout, again assessed by the MBI, levels of emotional exhaustion were highest in oncology, and were significantly higher in both oncology and general internal medicine than in the other two groups.

However, most recent empirical studies show no significant differences between oncology and non-oncology professionals with respect to the total level of job-strain, burnout or psychiatric morbidity. In a study by Van Servellen and Leake (1993), the MBI was administered to a sample of nurses from 18 units in seven different hospitals, including special care units managing people with AIDS, cancer, medical intensive care, and general medical diseases. This study showed no significant differences in burnout scores across nurse samples representing variations in patient diagnosis and delivery method. Papadatou *et al.* (1994) compared the scores of nurses working in public oncology hospitals on the MBI to those of nurses working in general hospitals and also found no significant differences between these two groups. Also, Tyler and Ellison (1994) found similar total amounts of stress, assessed by different subscales of the Nursing Stress Scale and the Nursing Stress Index, and psychiatric morbidity, assessed by the original GHQ, for nurses in four different high dependency areas: theatres, the liver unit, haematology/oncology, and elective surgery.

So, the results of studies in which the level of strain that accompanies the care of cancer patients is compared to the level of strain accompanying other medical specialties are inconclusive. However, literature is quite consistent in claiming that oncology differs from other medical specialties with respect to the nature of work-related stressors.

5.3.2 Stressors

Herschbach (1992) compared the sources of work-related stress experienced by physicians and nurses working with cancer patients to those experienced by care

providers working with patients in cardiac, intensive care or surgical units. The oncology group turned out to suffer more from feelings of emotional involvement and self-doubt, whereas they suffered less from stress connected with institutional factors than did the comparison groups. In the study by Tyler and Ellison (1994), also some specific differences between departments in sources of stress were found. The workload was most stressful for nurses in theatres. In the haematology/oncology unit the major problem was the close nurse-patient relationship resulting from long-term one-to-one nursing. Oncology nurses in the study of Papadatou *et al.*, (1994) reported significantly less stress due to lack of personnel and increased workload than nurses in general hospitals, but more stress because of the lack of support by senior co-workers. Oncology nurses also seemed to have more difficulties in finding a balance between their professional and family life than general nurses. Catalan *et al.* (1996) reported that similar proportions of care providers in AIDS care and oncology found it difficult to work with people who were dying, with people with a life-threatening illness, to be involved with people with deteriorating health, to work with young patients, and to deal with patients with psychological problems. However, oncology workers differed from AIDS staff in the frequency with which they endorsed three specific situations concerning difficulties: they experienced less lack of time and less lack of resources for their work, but more difficulties in working with the patient's family. Finally, in the study of Lopez-Castillo *et al.* (1999) the number of stressful interpersonal circumstances (e.g. deteriorating health of patients, working with patients' partners, working with young patients) was significantly higher in oncology as compared to internal medicine and AIDS care. So, in general stressors for oncology care providers appear to be more strongly related to the social and interpersonal aspects of the job, including relationships with patients and co-workers in the team, and less strongly to institutional working conditions as compared to care providers in other specialties.

Besides the above comparative studies, some studies have focused on samples made up of oncology care providers exclusively. From the results of these studies, it again becomes quite clear that, besides the 'general' stressors pertaining to interpersonal relationships at work, there are some particular problems for physicians and nurses, which relate to differences in their professional roles.

For physicians, a major discomfort is the inability to help patients, or to provide optimal care. Their stress may partly be related to a lack of confidence when faced with their limited ability to alter the course of the illness (Ullrich and Fitzgerald, 1990). As there is an increasing tendency for medical oncologists to serve the role of a primary or general physician to cancer patients, more time is devoted to symptomatic or palliative care rather than active therapy. According to Whippen and Canellos (1991), who conducted a qualitative survey among a random sample of 1000 American oncologists, training programmes in medical oncology have not been well oriented to the physician's role in the palliative care of advanced cancer, and this may contribute to the incidence of burnout in actual practice. If the oncologist's perception of his or her role is primarily directed to the remission of disease without an appreciation of his/her positive contributions to the palliative care

of cancer patients, then the stress of this type of practice would appear to be unavoidable. Results of a national questionnaire based survey among 476 cancer clinicians by Ramirez *et al.* (1995) also showed that – in addition to feeling overloaded and not having adequate resources – burnout was especially related to high levels of patient-related stress (e.g. dealing with patients' suffering, dealing with treatment toxicity and errors) and low levels of patient-related satisfaction (e.g. satisfaction from dealing well with patients and relatives, and from your professional status). Moreover, those clinicians who felt insufficiently trained in communication and management skills had significantly higher levels of distress, in terms of burnout (MBI) and psychiatric morbidity (GHQ-12) than those who felt sufficiently trained.

Nurses, on the other hand, are the principal link between the patient and his/her family, and doctors, who are often absent when nurses need most of their expertise and their support in various clinical situations (Hinds *et al.*, 1990). Therefore, it is not surprising that nurses are most concerned about ethical issues, e.g. patients are adequately informed (Peteet *et al.*, 1989). Moreover, their identification with the suffering of the patient and their over-commitment may lead to undue tiredness, which closely resembles the emotional exhaustion dimension of the burnout syndrome (Ulrich and Fitzgerald, 1990).

To conclude, though it is not yet clear whether the level of job strain in oncology is actually higher than in other medical specialties, there is quite strong (empirical) evidence for a difference between oncology and other fields of medicine with respect to its main causes. Whereas oncology care providers are mainly confronted with social/interpersonal stressors, care providers in other medical specialties mostly have to deal with more 'general' stressors related to their working conditions (e.g. high workload). Within oncology, different 'stress-profiles' for physicians and nurses can be distinguished, that are mainly discipline-based and can be reduced to the basic distinction between curing (physicians) and caring (nurses).

5.4 THE DUTCH NATIONAL SURVEY ON WORK AND WELL BEING OF ONCOLOGY CARE PROVIDERS

Though a review of the most recent literature gives a good impression of the main sources of work stress in oncology, most empirical studies on this subject have used small 'convenience' samples of oncology care providers (sometimes combined with care providers of other medical specialties). The only two exceptions are the studies by Whippen and Canellos (1991) and by Ramirez *et al.* (1995), but their samples consisted of physicians only.

In the Netherlands, the incidence of work stress or burnout among oncology care providers had never been quantitatively assessed. As there were some signs 'from the field' indicating that Dutch oncology care providers might also be at risk for burnout, in 1996 a research project called 'Burnout in cancer care' was started at the Department of Social and Organizational Psychology of Utrecht University

financed by a grant from the Dutch Cancer Society. The aims of the first part of this project were to:

- (1) assess the prevalence of burnout among Dutch oncology care providers, and
- (2) identify (de)motivating aspects of their working situation ('stressors' and 'satisfiers') and the relationship of these aspects with burnout.

The distinction between 'stressors' and 'satisfiers' can be traced to the general distinction between two dimensions that can be distinguished in any kind of job, i.e. job demands and job resources. Jones and Fletcher (1996, p. 34) define demands as '... the degree to which the environment contains stimuli that peremptorily require attention and response. Demands are the "things that have to be done"'. Clearly, in every job something has to be done. More specifically, we refer to job demands as those physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (i.e. cognitive or emotional) effort and are therefore associated with certain physiological and/or psychological costs. Job demands are not necessarily negative, according to the Job Demands Control model (Karasek and Theorell, 1990). The model assumes that so-called active jobs, characterised by a combination of high demands and high control, foster growth, learning and development at the job. However, job demands may turn into job stressors when meeting those demands requires extremely high effort and is associated with very high costs that elicit negative responses such as anger, anxiety, or burnout. Job demands may be either quantitative (i.e. workload, high work-pace, meeting tight deadlines) or qualitative (i.e. emotional demands such as confrontation with suffering patients or complaining customers; physical demands such as noise, heat, and crowding; mental demands, such as attention, vigilance, and concentration).

Job resources, on the other hand, refer to those physical, psychological, social, or organisational aspects of the job that either/or: (1) reduce job demands and the associated physiological and psychological costs; (2) are functional in achieving work goals; and (3) stimulate personal growth, learning and development. Hence, not only resources are necessary to deal with job demands and in order 'to get things done', but they also are important in their own right because they foster employee's growth, learning and development. Job resources may be located at the level of the task (e.g. feedback, variety, significance, identity, autonomy – cf. Hackman and Oldham's, 1976, classical task characteristics), the organisation of work (e.g. role clarity, participation in decision making, safe environment), interpersonal and social relations (e.g. supervisor and co-worker support, opportunity for interpersonal contact), and the organisation at large (e.g. pay, career opportunities, job security, supervisory coaching, supportive organisational climate, valued social position).

5.4.1 Procedure and Participants

In the Netherlands, almost all oncology care providers are affiliated with one or more professional associations. In January 1997, a random sample of members of

five Dutch associations of oncology care providers was asked to fill out an extensive questionnaire on their work and well being. Questionnaires were sent to the home addresses of 1585 care providers: 750 nurses, 432 physicians, and 403 radiation assistants (i.e. care providers who carry out radiation treatments). An explanatory letter from the researchers and a statement of support from the respective professional association were also enclosed. In order to guarantee anonymity, the completed questionnaire could be returned in a pre-stamped envelope. Three weeks after the initial mailing, a reminder was sent out.

5.4.2 Instruments

The scales that were used to assess *(de)motivating aspects of the working situation* have been constructed by the first author. Based on a review of the literature on work stress and burnout in oncology and in-depth pilot interviews with 20 randomly selected oncology care providers about (de)motivating aspects of their working situation, 68 items about sources of stress ('stressors') and 30 items about sources of satisfaction ('satisfiers') were formulated. Each item assesses how prevalent a particular 'stressor' or 'satisfier' is in a respondent's working situation, and is scored on a five-point scale ranging from (1) 'not at all' to (5) 'extremely often'. By means of principal components analysis, items were clustered into 18 different scales. With the exception of 'unfair salary' (as compared to one's effort), all scales had acceptable internal consistencies (Cronbach's α ; see Table 5.1).

Burnout was assessed by the three subscales of the Dutch version (UBOS; Schaufeli and Van Dierendonck, 2000) of the Maslach Burnout Inventory (MBI; Maslach and Jackson, 1986). In this chapter, we will restrict ourselves to the emotional exhaustion and depersonalisation dimensions of burnout, as they are generally considered as the 'core of burnout' whereas personal accomplishment reflects a personality characteristic like self-efficacy rather than a genuine burnout component (e.g. Cordes and Dougherty, 1993; Demerouti *et al.*, 2001; Shirom, 1989). Scores on these subscales range from (0) 'never' to (6) 'every day'. In the UBOS, one item of the original MBI has been eliminated because of insufficient factorial validity (Byrne, 1993; Schaufeli and Van Dierendonck, 1993). Recently, Schaufeli and Van Dierendonck (1993; 2000) demonstrated that the reliability and construct validity of the Dutch version are comparable to the original American version.

5.4.3 Results

Response Rate and Demographic Characteristics of the Sample

A total of 816 oncology care providers returned the questionnaire (response rate 52 per cent): 410 nurses (response rate 55 per cent), 179 physicians (response rate 42 per cent) and 227 radiation assistants (response rate 56 per cent). Age ranged from 21 to 63 years: the mean age was 38.5 years ($SD = 8.9$). Eighty-Six per cent of the

Table 5.1 Descriptive statistics for the key study variables ($N = 816$ oncology care providers)

Scale	<i>N</i> items	Cron- bach's alpha	<i>M</i>	<i>SD</i>	Correlations EE	DP
Stressors						
Negative aspects of relation with patients (e.g. distrustful patients, uncooperative patients)	12	.92	2.54	.84	.15**	.22**
Negative aspects of relation with colleagues (e.g. conflicts, lack of appreciation)	11	.90	2.57	.86	.29**	.20**
Time pressure	10	.84	2.71	.82	.39**	.25**
Organisational problems (e.g. bureaucracy, unclear policy)	10	.84	2.43	.90	.37**	.15**
Confrontation with death and dying	6	.81	2.27	1.08	.13**	.10**
Negative aspects of oncology (e.g. side-effects of treatment, limited curative possibilities)	4	.84	2.88	.83	.11**	.11**
Emotional demands (e.g. identification with patients)	4	.80	2.53	.83	.16**	.12**
Shift work	2	.85	1.31	1.38	.05	.13**
Scientific demands (e.g. publications, clinical trials)	3	.74	1.28	1.13	.13**	.18**
Physical demands	1		2.22	1.26	.20**	.05
Unfair salary	2	.50	2.45	1.90	.15**	.07*
Satisfiers						
Lack of autonomy	6	.86	3.35	1.13	-.30**	-.20**
Positive aspects of relation with patient (e.g. openness, appreciation)	10	.89	3.71	.73	-.09**	.00
Positive aspects of relation with colleagues (e.g. cooperativeness)	5	.79	3.88	.63	-.02	-.03
Positive aspects of oncology (e.g. fast developments, multidisciplinary)	4	.77	3.56	.76	-.04	-.10**
Contribution to scientific knowledge	3	.70	2.44	1.13	.00	.03
Skill (task) variety	2	.68	3.65	.96	-.05	-.02
Developmental/career prospects	5	.71	3.47	.79	-.07*	-.03

* $p < .05$, ** $p < .01$.

respondents were women. The overwhelmingly female response can be explained by the fact that 73 per cent of the questionnaires was distributed among nurses and radiation assistants, i.e. professional groups in which the majority of employees are women. On average, the participants had 10.1 years ($SD = 6.4$) of working experience in oncology.

Further analyses showed that there are some significant differences in demographics between the three professional groups. First, there is a significant difference in mean age of the three groups ($F = 89.30$; $p < .001$), with physicians having the highest mean age (44.9 years) and radiation assistants the lowest (34.2 years). Second, the number of years of working experience in oncology of physicians (13.5 years; $SD = 7.4$) was significantly higher ($F = 34.91$; $p < .001$) than that of nurses and radiation assistants (9.1 and 9.4 years, respectively). Third, most of the physicians who participated in this study were male (77 per cent), whereas the majority of the nurses (88 per cent) and radiation assistants (68 per cent) were female.

Stressors and Satisfiers

In Table 5.1, mean item scores and standard deviations of the different 'stressors' and 'satisfiers' for the total sample of 816 oncology care providers are presented. This table shows that, relatively speaking, oncology care providers in our sample feel most stressed by negative aspects of oncology (e.g. negative side-effects of treatment, limited curative possibilities), and by having to work under time pressure, whereas they are most satisfied with positive aspects of the relationship with colleagues (e.g. cooperativeness) and positive aspects of the relationship with patients (e.g. openness of relationship with patients and their families, patients' and families' appreciation of your efforts).

By means of one way ANOVAs we tested whether there are significant differences between the three subgroups of oncology care providers with respect to their perception of (de)motivating aspects of the working situation. The differences in (sub)group means were tested by a Scheffe' test with a significance level of .05.

With respect to the 'stressors', it was found that radiation assistants score significantly lower than the other two groups on having to work under time pressure ($F = 40.12$, $p < .001$), confrontation with death and dying ($F = 162.26$, $p < .001$), and negative aspects of oncology ($F = 7.61$, $p < .001$). Nurses score significantly higher than the other two groups on organisational problems such as bureaucracy and unclear policy ($F = 7.86$, $p < .001$), and on unfair salary ($F = 11.17$, $p < .001$). Physicians score significantly lower than the other two groups on physical demands ($F = 28.06$, $p < .001$), and also significantly lower than nurses on emotional demands such as having to deal with patients' suffering and identification with patients ($F = 4.05$, $p < .01$). Finally, there are significant differences between all three groups in shift work (lowest: radiation assistants; highest: physicians; $F = 94.13$, $p < .001$), and in scientific demands such as having to perform clinical trials and having to write scientific publications (lowest: radiation assistants; highest: physicians; $F = 163.75$, $p < .001$).

With respect to the 'satisfiers', it was found that radiation assistant's score significantly lower than the other two groups on positive aspects of the relationship with patients ($F = 11.48$, $p < .001$), and positive aspects of oncology such as rapid developments in knowledge and the opportunities for multidisciplinary collaboration ($F = 16.07$, $p < .001$). Physicians score significantly higher than the other two groups on 'being able to contribute to scientific knowledge' ($F = 70.53$, $p < .001$). Finally, there is a significant difference between the three professional groups in the perception of developmental and career prospects (lowest: radiation assistants; highest: nurses; $F = 34.99$, $p < .001$) and in autonomy (lowest: radiation assistants; highest: physicians, $F = 14.99$, $p < .001$).

These results again support the idea, already put forward in our literature review, that the different disciplines within the field of oncology can be characterised by different 'stress-profiles', that are primarily related to (differences in) their role in the caring process.

Burnout

Table 5.2 shows mean scores on the two burnout dimensions for (a) the total group of 816 Dutch oncology care providers, (b) the subgroup of 410 nurses, (c) the subgroup of 179 physicians, (d) the subgroup of 227 radiation assistants, and (e) the Dutch health care normative sample (Schaufeli and Van Dierendonck, 2000), consisting of almost 4,000 health care providers from different occupational groups.

Table 5.2 Mean scores on emotional exhaustion and depersonalisation for the total sample of oncology care providers (OCP), radiation assistants, physicians, nurses and the Dutch normative sample

Group	Total sample OCP ($N = 816$)	Radiation assistants ($N = 227$)	Physicians ($N = 179$)	Nurses ($N = 410$)	Dutch normative sample ($N = 3892$)
Emotional Exhaustion	20.7	19.9	20.0	21.4	15.5
Deperson- alisation	9.7	9.3	10.5	9.4	7.4

From Table 5.2, it becomes clear that Dutch oncology care providers are, on average, more burned out than Dutch health care providers in general, as they score significantly higher on the two core components of the burnout-syndrome than the Dutch normative sample (emotional exhaustion, $t = -18.84$, $p < .001$; depersonalisation, $t = -16.42$, $p < .001$).

Comparison of the mean burnout scores of the three different subgroups of oncology care providers by means of one-way ANOVAs, reveals some significant differences. Nurses' emotional exhaustion scores are significantly higher than those of physicians and radiation assistants ($F = 4.60$, $p < .01$), whereas

physicians' depersonalisation scores are significantly higher than those of the other two groups ($F = 5.20, p < .01$).

Relationship between (De)motivating Aspects of the Working Situation and Burnout

Inspection of Table 5.1 makes clear that, relatively speaking, having to work under time pressure and organisational problems show the highest correlations with feelings of emotional exhaustion, whereas having to work under time pressure also shows the highest correlation with depersonalisation.

To find out which of the (de)motivating aspects of the working situation had the strongest relationships with burnout, hierarchical multiple regression analyses were performed for each burnout dimension separately. In the first step of these analyses, we controlled for potential confounding effects of 'gender', 'age' and 'years of working experience in oncology'. In the second step, the 12 'stressors' and 6 'satisfiers' were entered into the equation.

In Table 5.3, the results of the multiple regression analyses for emotional exhaustion are presented for each of the three groups of oncology care providers.¹

Table 5.3 Hierarchical multiple regression analyses of the stressors and satisfiers on emotional exhaustion

Professional group	Radiation assistants (<i>N</i> = 227)		Physicians (<i>N</i> = 179)		Nurses (<i>N</i> = 410)	
	<i>B</i>	<i>R</i> ²	<i>B</i>	<i>R</i> ²	<i>B</i>	<i>R</i> ²
	Change		Change		Change	
1. Age		.02		.05	.15**	.04
Gender					-.12*	
2. Stressors:						
Lack of autonomy	.18*	.29	.35		.27	
Negative aspects of relation with colleagues				.17**		
Time pressure	.24**		.29**		.28*	
Emotional demands	.19*		.24**		.14*	
Scientific demands			.20*			
Physical demands	.21**					
Unfair salary	.15*					
Satisfiers:						
Positive aspects of relation with patient	-.21**				-.18**	
<i>F</i>		4.11 [#]		4.72 [#]		7.52 [#]
<i>R</i> ² Total		.31		.40		.31

* $p < .05$, ** $p < .01$, [#] $p < .001$.

Inspection of Table 5.3 makes clear that, after controlling for potential confounding effects of gender, age and years of working experience in oncology, having to work under time pressure shows the strongest relationship with feelings of emotional exhaustion for all three groups: the more they have to work under time pressure, the stronger oncology care providers' feelings of emotional exhaustion. Also, for all three groups a positive relationship between emotional demands and this burnout-dimension is found. Whereas for both radiation assistants and nurses an increase in positive aspects in the relationship with patients' is associated with a decrease in emotional exhaustion, only for nurses is an increase in negative aspects in the relationship with colleagues (e.g. conflicts, lack of mutual respect and appreciation) related to an increase in feelings of emotional exhaustion. For physicians, an increase in scientific demands is related to an increase in emotional exhaustion. Finally, for radiation assistants the 'stressors' lack of autonomy, unfair salary, and physical demands are also positively related to feelings of emotional exhaustion.

In Table 5.4, the significant results of the multiple regression analyses for depersonalisation are presented for each of the three groups of oncology care providers.

Table 5.4 Hierarchical multiple regression analyses of the stressors and satisfiers on depersonalisation

Professional group	Radiation assistants (<i>N</i> = 227)		Physicians (<i>N</i> = 179)		Nurses (<i>N</i> = 410)	
	<i>B</i>	<i>R</i> ²	<i>B</i>	<i>R</i> ²	<i>B</i>	<i>R</i> ²
	Change		Change		Change	
1. Gender		.02	-.17*	.02	-.25**	.05
2. Stressors:						
Lack of autonomy		.16		.22	.19**	.15
Time pressure	.22*				.19**	
Emotional demands			.21*			
Satisfiers:						
Positive aspects of oncology					-.14*	
<i>F</i>		1.96*		2.23**		4.05*
<i>R</i> ² Total		.18		.24		.20

* $p < .05$, ** $p < .01$, [#] $p < .001$.

Table 5.4 shows that the relationships between this burnout-dimension and the 'stressors' and 'satisfiers' are less strong than for emotional exhaustion. Whereas the percentages of explained variance range from 31 per cent to 40 per cent for emotional exhaustion, they are between 18 per cent and 24 per cent for depersonalisation. For both nurses and radiation assistants, again, an increase in having to work under time pressure is related to an increase in depersonalisation. Moreover, for nurses a significant positive relationship between lack of autonomy and this burnout-dimension is found. Quite interestingly, for nurses an increase in positive aspects of oncology

¹ For reasons of economy, only significant regression coefficients are presented in Tables 5.3 and 5.4.

is related to a decrease in depersonalisation towards patients. Finally, for physicians, an increase in emotional demands is related to an increase in depersonalisation.

So, whereas there are two stressors that are significantly related to burnout in all three professional groups, i.e. time pressure and emotional demands, there are also some more 'discipline-specific' relationships between certain stressors and (aspects of) burnout.

5.4.4 Conclusions

Level of Burnout

From this study on (de)motivating aspects of the working situation of Dutch oncology care providers and the relationship of these 'stressors' and 'satisfiers' with burnout, we can draw the following conclusions.

First, mean levels of burnout (i.e. emotional exhaustion and depersonalisation) in our sample are quite unfavorable in comparison to Dutch norm scores for health care providers.

Moreover, we found significant differences in mean burnout-scores between the three subgroups of oncology care providers. Nurses' emotional exhaustion scores are significantly higher than those of physicians and radiation assistants. This might be explained by the fact that, relatively speaking, of all three professional groups nurses spend the most time with patients, and, as a consequence, are exposed more frequently to high (emotional) demands than physicians and radiation assistants. The results of the oneway ANOVAs indeed show that nurses' exposure to emotional demands is significantly higher than that of physicians. Especially, once a patient is acknowledged to be terminally ill, the 'burden of care' shifts to the nurse (Bram and Katz, 1989). Physicians score significantly higher on depersonalisation than the other two professional groups. As already indicated by Whippin and Canellos (1991) and Lederberg (1998), due to the focus of their professional training, physicians might be more 'cure-oriented', i.e. oriented to the medical-technical aspects of patient-care, compared to nurses and radiation assistants. Their professional attitude might therefore be more 'distant' than that of nurses and radiation assistants, who are perhaps more 'care-oriented', i.e. oriented to the (psychosocial) aspects of patient care. Moreover, physicians might feel personally responsible when their (medical) treatment fails. A possible way to deal with the accompanying feelings of guilt and frustration might be to adopt a more distant attitude towards patients, i.e. treating them in a depersonalised way. Indeed, it is consistently found that levels of depersonalisation are particularly high in physicians as compared to other health care professionals (Schaufeli, 1999). This explanation is also supported by the fact that only for physicians an increase in emotional demands in the relationship with patients (e.g. dealing with patients' suffering) is related to an increase in depersonalisation (see Table 5.4). Other possible explanations include that

physicians are more highly educated, have higher status and are male, all possible moderators of burnout level.

Stressors and Satisfiers

According to the oncology care providers in our sample, negative aspects of oncology, such as limited curative possibilities and negative side effects of treatment, and having to work under time pressure are the most prevalent 'stressors'. Both 'stressors' were also reported as being important in the survey among cancer clinicians in UK by Ramirez *et al.* (1995). Positive aspects of the relationship with patients as well as positive aspects of the relationship with colleagues were rated as the most prevalent 'satisfiers'. These findings are again in line with those of Ramirez *et al.* (1995) and underline the importance of good interpersonal relationships at work.

As was already indicated several times in the previous paragraphs, the results of the one way ANOVAs show specific profiles of 'stressors' that correspond quite well to hospital practice and the positions in the 'oncology care system' held by the corresponding professionals. Relatively speaking, nurses have the highest scores on organisational problems, unfair salary, and emotional demands. Physicians have the highest scores on scientific demands and shift work, and the lowest scores on physical demands, emotional demands and lack of autonomy. Finally, radiation assistants have the highest scores on lack of autonomy, and the lowest scores on having to work under time pressure, shift work, confrontation with death and dying, negative aspects of oncology, and scientific demands.

Correlates of Burnout

With respect to the relationship between the 'stressors' and 'satisfiers', and burnout, our results show that having to work under time pressure is the most important risk factor – which is in line with the bulk of research on burnout (Schaufeli and Enzmann, 1998) – immediately followed by emotional demands in the relationship with patients. Moreover, reducing time pressure would also enhance the quality of patient care, as for both radiation assistants and nurses, having to work under time pressure is positively related to depersonalisation. For nurses, feelings of emotional exhaustion are strengthened by negative aspects in the relationship with colleagues, whereas for both nurses and radiation assistants feelings of emotional exhaustion are lessened by positive aspects in the relationship with patients. However, of all three professional groups, radiation assistants have the lowest score on this 'satisfier'! This might be explained by the fact that their contacts with patients are of a relatively short duration (only during radiation sessions, when they walk in and out of the radiation room), and they have to work on schedule. As a result, there is (too) little time for rewarding contacts with patients. Also, during the pilot interviews, radiation assistants were complaining

about the lack of (positive) feedback on the results of their work they receive from physicians (who are doing the periodical check-ups of patients).

Practical Implications

As the results of our national survey show that the level of burnout among oncology care providers is relatively high compared to that of other groups of health care workers, there is a strong need to develop, implement and evaluate stress management interventions for these professional groups. This issue will be addressed in more detail in the next section. But first, some practical points of action to reduce feelings of work stress and burnout will be derived from the results of our survey.

First, our findings stress the importance of good collaborative practice between the different disciplines in oncology. Ramirez *et al.* (1995) suggest the value of communication skills training to enhance the satisfaction (and at the same time reduce the stress) of dealing with patients and collaborating as colleagues. If necessary, this could be supplemented with management skills training to reduce feelings of time pressure or overload, which also emerged from our results as a major stressor. Another way to reduce the stress of being overloaded, which can be derived from a leading theoretical model on work stress, is to increase care providers' level of job autonomy (Karasek, 1979). Empirical studies among different occupational groups have demonstrated that a high level of job autonomy helps workers to cope with a high workload (Karasek and Theorell, 1990).

Second, the specific differences in 'stress-profiles' between different professional groups that were found in our study should be taken into account when designing and implementing stress management interventions for oncology care providers. Ideally, care providers should be made aware of the different stances of different professional groups within the interdisciplinary team, as this awareness might be conducive to their collaboration.

For nurses, a negative relationship between the positive aspects of oncology and depersonalisation is found. So, an increase in motivating aspects such as multidisciplinary collaboration, and new developments in the treatment of cancer positively affect nurses' quality of patient care. By letting nurses participate in the design and carrying out of multidisciplinary scientific research projects, e.g. clinical trials, these aspects could be increased.

On the other hand, for physicians a significant, positive relationship between scientific demands and both burnout-dimensions is found. Due to the high caseload of many physicians, tasks such as reading and writing scientific articles and designing clinical trials often have to be carried out in their free time (e.g. at night at home, or during the weekends). As a result, they are unable to recover from their work, fatigue accumulates, and eventually may result in feelings of burnout. If possible, it is therefore advisable to reduce physicians' tasks in direct patient-care, e.g. by increasing the number of staff-members, so that they can devote more time to scientific tasks during regular working hours. Having more time to perform the

latter type of tasks might also be a powerful antidote to the stress associated with high emotional demands in the relationship with patients.

Finally, in order to reduce feelings of exhaustion among radiation assistants, physical demands that are probably related to lifting and repositioning patients during radiation sessions should be reduced, e.g. by introducing special lifting devices. Moreover, increasing their level of job autonomy can also reduce their exhaustion levels. This seems especially important, as radiation assistants have significantly lower autonomy-scores than the other two groups of oncology care providers. Finally, if possible, their salary should be raised in order to make them feel that financial rewards are in proportion to their work-related efforts. The idea is consistent with the central hypothesis of the Effort-Reward Imbalance model (see also Siegrist, 1996).

5.5 INTERVENTIONS

Research over the past two decades has shown that burnout is not only related to negative outcomes for the individual worker, but also for the organisation, including absenteeism, turnover rates, and lowered productivity (for recent reviews, see Cordes and Dougherty, 1993; Schaufeli and Enzmann, 1998). So, both from the individual and from the organisational point of view, efforts to combat this form of chronic job stress can be considered important. The results of our national survey yielded some practical insights into ways to reduce the (high) levels of work stress and burnout among oncology care providers by changing aspects of job design and/or the organisation of work. However, as our review of the literature as well as the results of the national survey showed that the quality of the (working) relationships with colleagues is of great importance for the well being of care providers in this field, the second part of our research project 'Burnout in cancer care' was focused on this aspect of the working situation. More specifically, in this part of our project, we tried to gain a detailed insight into collaborative practice between oncology care providers and into ways of improving it. The idea behind this was that a well-functioning and supportive work group could be a powerful antidote to the high levels of stress oncology care providers have to deal with in their daily working life.

This idea was supported by the results of a literature review on stress management in oncology, which showed that the most frequently employed means to assist oncology care providers in coping with work-related stressors is a so-called staff support group. A staff support group consists of regular meetings in which care providers have the opportunity to share personal, work-related experiences and feelings with colleagues in a supportive, nonjudgmental environment (Ryerson and Marks, 1982).

The availability of social support at work is very crucial in the adaptation of the care provider to the care of cancer patients. Empathic concern and active care by one's co-workers can greatly reduce the effects of the accompanying stress and help prevent burnout (Flint Sparks, 1989). Moreover, as early as 1978, Maslach

suggested that a person should frequently analyse his or her personal feelings related to work. She found that burnout-rates are lower in health care workers who actively express, analyse, and share their personal feelings with their colleagues. In addition, support groups can defuse tension and aid in problem solving, as new perspectives and solutions to perceived and real problems can ensue from such peer interaction. Also, sharing responsibility for the quality of the working environment and for the mutual support of staff is important in maintaining staff morale (Cull, 1991). Finally, Kash and Holland (1989) found that increasing sensitivity, support and communication for staff members also increased the patient's positive perception of care.

In cooperation with two experienced team counsellors, a burnout prevention training for oncology care providers that combines the just described advantages of a support group with those of a participatory action research approach (Murphy and Hurrell, 1987) was developed and implemented on nine oncology wards (see for more details: De Geus *et al.*, 2000). A *team-based* stress management approach was chosen, which means that complete, 'functional' teams, with members from different professional groups who work together on a daily basis, participated in the training programme. In total, 29 oncology wards participated in this part of our research project.

Before the training programme started (T1), an extensive questionnaire survey was conducted among all staff members of the participating wards. The questionnaire assessed oncology care providers' perceptions of the most important (potential) work 'stressors' that were identified previously by means of our national survey, as well as their perceptions of social and working relationships within their team. Next, 9 training wards were randomly selected from the total number of wards participating in this study; the other 20 wards functioned as a comparison group. Participants were care providers (physicians, nurses, and radiotherapy assistants) working in direct care with cancer patients. At the training wards, staff were offered the opportunity to participate in the burnout intervention programme. Directly after the end of the training programme (T2) as well as six months later (T3), staff of the training and the comparison wards again filled out the questionnaire. The total number of respondents at the different measurements were 774 (T1), 466 (T2) and 391 (T3), respectively.

To familiarise themselves with the training wards, the team counsellors held extensive intakes with the management (e.g. head nurses, physicians, co-ordinators, and team leaders) of each of the wards where the training programme was to be implemented. During these conversations, the protocol of the training was clarified, and potential intervention effects ('gains') were discussed. The counsellors also inquired after the ward management's reasons for participation in the training programme, their main objectives, and their 'criteria' for successfulness of the intervention. Moreover, they also gathered information on the structure and policies of the larger organisation. Finally, the ward management's perception of the working situation, including the main sources of job stress was discussed. By means of these intakes, the team counsellors tried to increase the ward

management's motivation for the implementation of organisational change processes.

Next, a 'kick-off' meeting for the entire staff of each of these wards was organised. During this meeting, the team counsellors presented the protocol of the training programme, whereas the researchers once more explained the intervention study design. Staff were encouraged to ask questions about the intervention protocol and/or the study design. By means of these meetings, we tried to increase staff's commitment to participate and to promote positive anticipatory attitudes towards the training programme.

The information that was gathered during the intakes and the kick-off meetings was written down in a so-called 'take off'-document, which was the first in a series of reports about the progress and results of the programme. These reports formed a sort of 'log-book', to keep all participants informed during the periods in between the programme sessions.

The training programme itself consisted of six monthly sessions of three hours each, which were supervised by the two team-counsellors. The starting points for action were the results of the T1 measurement on care providers' perceptions of 'stressors' and relationships with their colleagues. During the first training session, these results were fed back to the staff members. This was done to help them to structure their subjective feelings by providing them with relevant topics for discussion and for their plans to reduce work stress. However, participants were only informed about the ward's scores on the above-mentioned (perceptions of) aspects of the working situation, because these formed the starting point for later actions; info about the teams' burnout levels was presented to the team counsellors and the participants after the last questionnaire measurement (T3). This was done because we wanted to avoid the potential effects of 'labelling' (low versus high-risk profile).

During the following sessions, small problem-solving teams were formed that collectively designed, implemented, evaluated, and re-formulated plans of action to cope with the most important stressors in their working situation. In addition, the team counsellors trained them in some more general communication and cooperation skills (how to give and receive feedback, social support etc.) that might be lacking. So, the participants were their own 'agents of change', whereas the team counsellors acted as their 'coaches'. They gave feedback on the plans of action that were formulated by the different teams, and assisted and advised them in the process of implementing these plans.

With respect to the effect of the training programme on care providers' burnout levels, it was found that staff of the comparison wards showed an increase in levels of both emotional exhaustion and depersonalisation during the 1-year study period, whereas staff of the training wards showed a stabilisation in their levels of both burnout components. So, sharing responsibility for the quality of the working environment and mutual support of co-workers turned out to be an effective means to – at least – prevent feelings of work stress from increasing. Because of the relatively short duration of the training programme, it may have been unrealistic to expect an actual decrease in burnout-levels. This may perhaps require a longer,

more intensive period of active intervention. However, we feel that the first results with respects to the effects of this programme are quite promising.

5.6 EPILOGUE

Though this chapter has focused on sources of work stress in oncology, we would also like to emphasise all the positive experiences which keep caregivers working in this specialty and will relish for many years. As Lederberg (1998) states, many of them thrive on emotional excitement and intensity, many love the intellectual challenge especially in the context of interacting with people in a helpful way. They gain satisfaction from being part of a valued social enterprise, from playing a positive role in profound human experiences, and from having survived a form of existential initiation. Moreover, caregivers derive sustenance from being surrounded by people who share these commitments and experiences with them, even if it is unexpressed much of the time.

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