

# EPEEC-O

Education in Palliative and End-of-life Care - Oncology

## **Participant's Handbook**

Module 15

## **Cancer Doctors and Burnout**

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## Abstract

Working as an oncologist has many rewards. It can also be challenging and stressful. Stressors from work with patients, organizational demands, and managed care can lead to symptoms of stress and burnout that can be manifested both at work and in the home environment. Lifestyle management techniques, changes in managerial issues, and educational interventions may limit the occurrence of burnout.

## Key words

Burnout, work engagement, stress, lifestyle management, organizational antecedents, exhaustion, depersonalization, cynicism, frustration, impaired job performance, disinterest in practice, depression, job engagement

## Objectives

After working with this module, oncologists and other members of the cancer care team will be able to:

- Define burnout.
- Recognize associated signs, symptoms and risk factors.
- Describe a model for organizational antecedents.
- Contrast burnout and depression.
- Identify techniques to decrease burnout.

## Clinical case on trigger tape

J.F. is a 37-year-old medical oncologist in a large teaching hospital. He found himself increasingly frustrated with the political problems that were emerging within the institution and, in addition, found it increasingly difficult to continue with the amount of research, clinical work, and administrative responsibilities that he was obliged to carry. His burnout began to develop over an extended period.

“I found myself feeling really burned out. I was working 10-12 hours a day, and no matter how hard I worked, I had the feeling that I was never going to get on top of it. At the end of a 12-hour day, I’d carry home a briefcase which weighed about 30 pounds and would then arrive home at about 10:00 pm and find myself just too exhausted to begin the work that I’d brought home.”

## Introduction

Burnout, a psychological syndrome, is *a response to chronic interpersonal stressors on the job*.<sup>1</sup> The concept of burnout was first developed in the 1970s.<sup>2</sup>

The three key dimensions of this response are:

1. **Individual:** Overwhelming exhaustion; feelings of being overextended and depleted of one's emotional and physical resources.
2. **Interpersonal:** Cynicism (or depersonalization) and detachment from the job. Cynicism refers to a negative, callous, or excessively detached response to various aspects of the job.
3. **Self evaluation:** Sense of ineffectiveness and lack of accomplishment. Ineffectiveness refers to feelings of incompetence and a lack of achievement and productivity at work.

Pines suggests, "The root cause of burnout lies in people's need to believe that their life is meaningful, and that the things they do—and consequently they themselves—are important and significant."<sup>3</sup> Most of the physicians who are treated for burnout do not come in saying they are burned out.<sup>4</sup> Most commonly, they say, "There's something wrong with me. I don't care anymore. Terrible things happen in front of me, and I feel nothing."

## Prevalence

**Oncologists:** In a large study of stress in oncologists, 56% of oncologist subscribers to the *Journal of Clinical Oncology* reported experiencing burnout in their professional lives.<sup>5</sup> Burnout was measured using an author-constructed questionnaire, as opposed to the Maslach Burnout Inventory, which is usually used to measure burnout.<sup>6</sup>

When asked to define the specific nature of their burnout, 56% mentioned frustration or a sense of failure, 34% depression, 20% disinterest in practice, and 18% boredom. Almost 50% felt that burnout was inherent to the practice of oncology. Institution or university-based oncologists on salary reported a lower incidence of burnout (47%) than those in private adult oncology practice (63%).

**Head and neck surgeons:** Another study of 395 head and neck surgeons, also using an author-constructed questionnaire, noted that 34% of respondents reported feeling burned out,<sup>7</sup> 27% indicated frustration with disease, whereas 67% indicated frustration with government and 58% indicated frustration with the economics of medical practice.

**Clinicians in the United Kingdom:** In the United Kingdom, the percentage of clinicians reporting high levels of exhaustion on the Maslach Burnout Inventory was similar to that of the normative sample (31% versus 33%).<sup>8,9</sup> 33 percent of both the cancer clinicians and the normative sample reported low personal accomplishment. Significantly fewer of the United Kingdom cancer clinicians reported high levels of depersonalization compared

to the U.S. sample (23% versus 33%). In general, North American samples report higher levels of burnout than do Europeans.<sup>1</sup>

**Cancer Care Ontario:** In a study by Cancer Care Ontario, the comparable figure for physician exhaustion was 53.3% (allied health professionals 37.1%, support staff 30.5%), and 48.8% of physicians reported low feelings of personal accomplishment (allied health professionals 54% and support staff 31.4%).<sup>10</sup> The feelings of depersonalization in the Canadian group were similar to the United Kingdom sample, with 22.1% of physicians (4.3% of allied health personnel and 5.5% of support staff) reporting feelings of depersonalization. These figures may be unique to Ontario, or may indicate an increase in stress in oncology due in part to ever-increasing workloads and limited resources.

**Memorial-Sloan Kettering:** A study of oncologists, housestaff, and oncology nurses from Memorial-Sloan Kettering Cancer Center reported that housestaff experienced the greatest burnout, emotional exhaustion, feeling of emotional distance from patients, and a poorer sense of personal accomplishment.<sup>11</sup> Nurses reported more physical symptoms than housestaff or oncologists; however, they were less emotionally distant from patients.

## Risk factors

A number of individual, cultural, and personality characteristics are associated with burnout.

### Individual risk factors:

Several individual characteristics are related to burnout. However, these associations are less than those for burnout and situational factors, suggesting that burnout is more of a social phenomenon than an individual one.<sup>1</sup>

**Age:** Those under 30 or 40 years of age have more burnout than those over 30 or 40. Age is confounded with work experience, so burnout may be more of a risk earlier in one's career.<sup>1</sup> However, in another study, age < 55 years was an independent risk factor for burnout.<sup>12</sup>

**Stage in work life:** Residents report greater levels of burnout than attending physicians.<sup>11,13</sup>

**Gender:** In the Physician Work Life study, women were 1.6 times more likely to report burnout than men.<sup>14</sup> The odds increased by 12-15% for each additional 5 hours worked per week over 40 hours. Female oncology housestaff and nurses have reported higher levels of emotional exhaustion and psychological distress than staff physicians of any gender or male housestaff. Of all the groups, female housestaff show the greatest sense of demoralization and the least sense of accomplishment within a highly stressed environment.<sup>11</sup>

In only one study were male oncologists at more risk of burnout than female oncologists.<sup>15</sup>

**Marital status:** For oncologists' of either gender, being single was an independent risk factor for burnout.<sup>12</sup>

## Cultural factors

**North Americans vs. Europeans:** Comparing physicians in the Netherlands with those in the United States, older physicians in the United States report a sense of greater control over their work environment compared with younger physicians.<sup>16</sup> In the United States, male physicians describe significantly more work control than female physicians. European workers generally tend to have lower average levels of exhaustion and cynicism, when compared with similar North American samples. Some aspects of burnout, particularly cynicism, may be more acceptable in the strongly individualized North American culture, or the greater achievement orientation of North American society may cause more stress.<sup>1</sup>

## Personality factors

**Compulsiveness:** The compulsive characteristics of physicians, 'when present in conjunction with other characteristics of overly controlled emotions and low need for relaxation and pleasure, makes the medical student, and later the physician, more vulnerable than others to depression, alcoholism, psychiatric disorders, and suicide.'<sup>17</sup> An oncologist said, "Lots of us who feel overloaded and overworked create it ourselves. We start dancing to a tune that you're called to play by yourself."<sup>18</sup>

**Psychological health:** People who were psychologically healthier in adolescence and early adulthood are more likely to enter, and remain, in interpersonally demanding jobs, ie, emotionally demanding 'helper' roles or jobs that deal with people in stressful situations, and they showed greater involvement and satisfaction with their work.<sup>19</sup>

**Developmental stability:** Physicians with the least stable childhoods and adolescent adjustment have been identified as being the most vulnerable to occupational hazards.<sup>20</sup>

**Personality characteristics:** The personality characteristic of hardiness, consisting of commitment, control, and challenge, is associated with improved coping in house officers.<sup>17,21,22</sup> Hardiness is associated with less demoralization and a greater sense of accomplishment. Housestaff and nurses have less of a sense of accomplishment than oncologists.<sup>11</sup>

## Level of social support and spirituality/religion

Female physicians with young children are 40% less likely to burnout when they have the support of colleagues, spouses, or significant others for balancing work and home issues.<sup>14</sup>

In an evaluation of burnout among nurses, fellows, and oncologists those who reported being 'quite a bit' to 'extremely' religious had less diminished empathy or depersonalization and less emotional exhaustion on the Maslach Burnout scale, compared to those who were not as religious.<sup>11</sup>

## Work life

**Long hours:** Burnout is strongly associated with long work hours and work-home interference in both the United States and the Netherlands.<sup>16</sup>

**Volume of work:** Too great a volume of work, with inadequate staff to do the job properly, leads to pressure to make deadlines, conflicting demands on time, and disruption of home life due to extended work hours.<sup>10</sup>

The combination of being overloaded, interference with one's home life, dealing with suffering, and low levels of satisfaction with work from not having adequate resources to perform one's role leads to burnout.<sup>8</sup>

**Subspecialty:** Radiation oncologists report that work-related stress is increased by treatment toxicity and errors, while medical oncologists report more stress from organizational responsibilities/conflicts.<sup>8</sup>

**Patient population:** Dealing with chronically ill, incurable, or dying patients, with a potential lack of hope, may create burnout.<sup>15</sup> New research has focused explicitly on emotion-work variables, eg, requirement to display or suppress emotions on the job, requirements to be emotionally empathic, and has found these emotional factors account for additional variance in burnout scores over and above job stressors.<sup>1,23</sup>

## Models of burnout

Recent research has focused on the degree of match or mismatch between the person and six domains of the job environment.<sup>1</sup> The greater the gap or mismatch between the person and the environment, the greater the likelihood of burnout. The greater the match or fit, the greater the likelihood of engagement with work. Mismatches arise when the process of establishing a psychological contract leaves critical issues unresolved, or when the working relationship changes to something that the person finds unacceptable. Mismatches lead to burnout.

Six areas of work life come together in a framework that encompasses the major organizational antecedents of burnout. These include:

1. Workload
2. Community
3. Control
4. Fairness

5. Reward

6. Values

Burnout arises from chronic mismatches between people's expectations or needs and their work settings in some or all of these areas. Preliminary evidence suggests that the area of values may play a central mediating role for the other areas. Alternatively, people may vary in the extent to which each of the six areas is important to them. Some people may place a higher weight on rewards than on values, or people may be prepared to tolerate a mismatch regarding workload if they receive praise, good pay, and have good relationships with colleagues.

## **Job engagement and burnout**

Some studies have looked at sources of satisfaction among oncologists. These include: dealing well with patients and relatives, having professional status and esteem, deriving intellectual satisfaction, and having adequate resources to perform one's role.<sup>8, 24</sup>

Job engagement is conceptualized as being the opposite of burnout. It involves energy, involvement, and efficacy. Engagement involves the individual's relationship with work. It involves a sustainable workload, feelings of choice and control, appropriate recognition and reward, a supportive work community, fairness and justice, and meaningful and valued work. Engagement is also characterized by high levels of activation and pleasure.<sup>1</sup> Engagement is a persistent, positive-affective-motivational state of fulfillment in employees that is characterized by vigor, dedication, and absorption.<sup>1</sup>

## **Burnout and depression**

Burnout is a problem that is specific to the work context, in contrast to depression, which tends to pervade every domain of a person's life. However, individuals who are more depression-prone (as indicated by higher scores of neuroticism) are more vulnerable to burnout.<sup>1</sup>

Burnout and depression can be differentiated.<sup>25</sup> A reduced sense of superiority and a perceived loss of status are more characteristic of depressed individuals than for individuals who are burnt-out. It seems that burnt-out individuals are still 'in the battle' for obtaining status and consider themselves as potential winners, while depressed individuals have 'given up.'<sup>25</sup>

## **Coping with job stress**

A number of lifestyle management techniques may help to decrease one's vulnerability to burnout.<sup>26</sup> In the study comparing physicians in the Netherlands and the United States, there was a substantial benefit of physician work control on minimizing stress and increasing satisfaction in both countries, and there were remarkable benefits of home support on stress reduction in the United States.<sup>16</sup> For both countries, work control was



correlated with job stress and satisfaction, whereas work-home interference was associated with work hours, children, stress, dissatisfaction, and burnout.

## Assessment

To prevent or address burnout early, monitor yourself for signs and symptoms of burnout (see Table 1).

**Table 1: Signs and symptoms of burnout**

Boredom
Decreased quality of care
Depression
Fatigue
Frustration
Gastrointestinal disturbances
Headaches
Insomnia
Staff turnover
Low morale
Physical/emotional exhaustion
Weight loss
Impaired job performance (decreased empathy, increased absenteeism)
Deterioration in the physician-patient relationship
Less satisfaction, desire to reduce time seeing patients, more likely to order tests or procedures, interested in early retirement
An inability to leave work (working longer and longer hours), absenteeism, lower job satisfaction, or a decreased sense of personal accomplishment

## Management

Prevention and early detection are the best approaches to minimize the risk of serious consequences from burnout. A variety of lifestyle management techniques will help physicians maintain balance in their lives and decrease the risk of burnout.

**Table 2: Lifestyle management techniques**

Monitoring for and early recognition of symptoms
Maintenance of good nutrition
Spiritual life; meditation; spending time in nature
Effective grieving of losses
Decreased overtime work
Exercise: aerobics, yoga, qi gong, tai chi
Energy work: Reiki, healing touch, therapeutic touch
Maintaining a sense of humor
Seeking consultation if symptoms are severe
Discussing work-related stresses with others who share the same problems. Visiting counterparts in other institutions; looking for new solutions to problems

Changes in management strategies combined with educational interventions may further reduce burnout.

Meier, Back and Morrison recently proposed an approach to physician awareness that involves identifying and working with emotions that may affect patient care. This involves looking at physician, situational, and patient risk factors that can lead to physician feelings and thus influence patient care.<sup>27</sup> The steps include:

1. Identify the factors that predispose to emotions that might affect patient care.
2. Monitor for signs (behavioral) and symptoms (feelings) of emotions.
3. Name and accept the emotion.
4. Identify possible sources of the emotion.
5. Respond constructively to the emotion.
6. Step back from the situation to gain perspective.
7. Identify behaviors resulting from the feeling.
8. Consider implications and consequences of behaviors.
9. Think through alternative outcomes for patients according to different behaviors.
10. Consult a trusted professional colleague.

More research needs to be done on organizational changes to decrease burnout. Hierarchical organizations with overemphasis on standardization and efficiencies, combined with increasing expectations of perfection (by patients, corporations, and the college) may promote burnout and reduce the quality of professional practice.<sup>28</sup> The underlying theme in burnout and work engagement is that group and management

processes have to promote more open futures in which employees are better able to deploy their gifts in meaningful ways and to grow as human beings. It may be essential to measure moral climate, assess the culture of each workplace, and evaluate spiritual concerns of staff. The latter might include clarification and strengthening of meaning and purpose conducive to both personal vitality and agility of the organization.

Interventions that combine changes in managerial practice with educational interventions, based on the six areas of work life, may decrease burnout.<sup>1</sup> People may be able to tolerate greater workload if they value the work and feel they are doing something important, or if they feel well-rewarded for their efforts. Interventions could target values and rewards. A recent study, by Fallowfield et al, showed improvement in the communication skills of oncologists that the authors hypothesize leads to personally and professionally more rewarding consultations, which can have a significant impact on clinical care and patients' and physicians' well-being.<sup>29</sup>

## Summary

Burnout is prevalent among oncologists. Women are more often affected than men. Age is an independent predictor of burnout, with a higher prevalence in people at earlier stages of their career. To prevent—or address—burnout, monitor yourself for the signs and symptoms of burnout. The lifestyle management techniques will help to maintain balance in life and decrease the risk of burnout. Changes in management strategies combined with educational interventions may further reduce burnout.

## Key take-home points

1. Key dimensions of burnout are exhaustion, cynicism, and a sense of personal ineffectiveness.
2. Burnout often presents as feeling like you 'don't care anymore.'
3. Burnout is more related to the situation than the individual.
4. Burnout is more prevalent in women than men and in those in earlier stages in their career.
5. Long work hours and work-home interference are strongly associated with burnout.
6. Burnout arises from chronic mismatches between people and their work settings.
7. Job engagement (energy, involvement, efficacy) is conceptualized as the opposite of burnout.
8. Burnout, in contrast with depression, is specific to the work context.
9. Lifestyle management techniques (exercise, meditation, humor, etc.) may decrease vulnerability to burnout.

10. Burnout may be prevented by changes in management combined with educational interventions and improved communication.

## Pearls

1. Burnout is common; expect it and prevent it for yourself.
2. The working conditions, not the patients, are the most common source of burnout.

## Pitfall

1. Don't just try to 'suck it up;' it doesn't work.

## References

- <sup>1</sup> Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Ann Rev Psychol.* 2001;52:397-422. [PMID: 11148311](#). [Full Text](#)

Burnout is a prolonged response to chronic emotional and interpersonal stressors on the job and is defined by the three dimensions of exhaustion, cynicism, and inefficacy. Engagement is the positive antithesis of burnout. The social focus of burnout, the solid research basis concerning the syndrome, and its specific ties to the work domain make a distinct and valuable contribution to people's health and well-being.

- <sup>2</sup> Freudenberg HJ. Staff burnout. *J Soc Issues.* 1974;30:159-165.
- <sup>3</sup> Pines AM. Burnout: an existential perspective. In: Schaufeli W, Maslach C, Marek T, eds. *Professional Burnout: Recent Developments in Theory and Research.* Washington, DC: Taylor and Francis; 1993: ISBN: 1560322624.
- <sup>4</sup> Remen RN. *Kitchen Table Wisdom.* New York, NY: Riverhead Books; 1997. Available at [http://www.penguinputnam.com/nf/Book/BookDisplay/0,,0\\_1573226106,00.html](http://www.penguinputnam.com/nf/Book/BookDisplay/0,,0_1573226106,00.html). Accessed November 5, 2004. ISBN: 1573226106.
- <sup>5</sup> Whippen DA, Canellos GP. Burnout syndrome in the practice of oncology. *J Clin Oncol.* 1991;9:1916-1921. [PMID: 1919641](#).

60% of 1,000 randomly selected physician subscribers to the *Journal of Clinical Oncology* responded to a mailed survey. 56% of respondents reported experiencing burnout in their professional life. No significance was found between the incidence of burnout and specialty within oncology, year medical training ended, or practice location. Institution- or university-based oncologists reported a significantly lower incidence of burnout (47%) versus all other types of practice (66% for oncology plus internal medicine, 63% for private adult oncology only, 39% for pediatric oncologists, and 64% for others;  $P = .0003$ ). Frustration or a sense of failure was the most frequently chosen (56%) description of burnout. Insufficient personal and/or vacation time was the most frequent reason (57%) chosen to explain the existence of burnout. To alleviate burnout, the majority (69%) of respondents indicated the need for more vacation or personal time. Administering palliative or terminal care, reimbursement issues, and a heavy work load were identified as contributing factors to burnout.

- <sup>6</sup> Maslach C, Jackson SE, Leiter MP. *The Maslach Burnout Inventory [Manual]*, 3<sup>rd</sup> ed. Palo Alto, CA: Consulting Psychologists Press; 1996. Available at <http://www.cpp.com/detail/detailitem.asp?ic=3452>. Accessed November 5, 2004.

- <sup>7</sup> Johnson JT, Wagner RL, Reuger RM, Goepfert H. Professional burnout among head and neck surgeons: results of a survey. *Head Neck*. 1993;15(6):557-560. [PMID: 8253565](#).

395 members of the American Society of Head and Neck Surgery and the Society of Head and Neck Surgeons responded to a survey. Their mean age was 48 years. 34% reported burn out. The stress of extending working hours, dealing with severely ill patients, and the increased need to deal with government and economic issues were cited as reasons.

- <sup>8</sup> Ramirez AJ, Graham J, Richards MA, et al. Burnout and psychiatric disorder among cancer clinicians. *Br J Cancer*. 1995;71(6):1263-1269. [PMID: 7540037](#).

The prevalence and causes of 'burnout' and psychiatric disorder among senior oncologists and palliative care specialists were measured in a national (UK) questionnaire-based survey using the Maslach Burnout Inventory. 83% of 476 oncologists returned their questionnaires. The study group had equivalent levels of emotional exhaustion and low personal accomplishment to those found in American doctors and nurses, but lower levels of depersonalisation. Clinicians who felt insufficiently trained in communication and management skills had significantly higher levels.

- <sup>9</sup> Maslach C, Jackson SE. Burnout in health professions: a social psychological analysis. In: Sanders GS, Suls J, eds. *Social Psychology of Health and Illness*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.; 1989: ISBN: 0805805540. Available at <https://www.erlbaum.com/shop/tek9.asp?pg=products&specific=0-8058-0554-0>. Accessed on November 5, 2004.

- <sup>10</sup> Grunfeld E, Whelan TJ, Zitzelsberger L, et al. Cancer care workers in Ontario: prevalence of burnout, job stress and job satisfaction. *CMAJ*. 2000;163(2):166-169. [PMID: 10934978](#). [Full text](#)

A questionnaire was mailed to all 1016 personnel of the major providers of medical oncology services in Ontario. The overall response rate was 70.9%, (681 of 961 eligible subjects). The prevalence of emotional exhaustion was significantly higher among the physicians (53.3%) than among the allied health professionals (37.1%) and the support staff (30.5%) ( $p < \text{or} = 0.003$ ); the same was true for feelings of depersonalization (22.1% v. 4.3% and 5.5% respectively) ( $p < \text{or} = 0.003$ ). Feelings of low personal accomplishment were significantly higher among physicians (48.4%) and allied health professionals (54.0%) than among support staff (31.4%) ( $p < \text{or} = 0.002$ ). About one-third in each group reported considering leaving for a job outside the cancer care system. Significantly more physicians (42.6%) than allied health professionals (7.6%) or support staff (4.5%) stated that they have considered leaving for a job outside the province.

- <sup>11</sup> Kash KM, Holland JC, Breitbart W, et al. Stress and burnout in oncology. *Oncology (Huntingt)*. 2000;14(11):1621-1633; discussion 1633-1634, 1636-1637. [PMID: 11125944](#).

A survey was conducted of 261 house staff, nurses, and medical oncologists in a cancer research hospital, and oncologists in outside clinical practices. House staff experienced the greatest burnout and report greater emotional exhaustion, a feeling of emotional distance from patients, and a poorer sense of personal accomplishment. Nurses reported more physical symptoms than house staff and oncologists. However, they were less emotionally distant from patients. Women reported a lower sense of accomplishment and greater distress. One unexpected finding was that the greater the perception of oneself as religious, the lower the level of burnout.

- <sup>12</sup> Ramirez AJ, Graham J, Richards MA, et al. Mental health of hospital consultants: the effect of stress and satisfaction at work. *Lancet*. 1996;347:724-728. [PMID: 8602002](#).

Burnout and psychiatric morbidity among gastroenterologists, surgeons, radiologists, and oncologists in the UK was estimated by means of a questionnaire-based survey. Of 1133 consultants, 78% returned

questionnaires. Radiologists reported the highest level of burnout in terms of low personal accomplishment. Job satisfaction significantly protected consultants' mental health against job stress. Three sources of stress were associated with burnout and psychiatric morbidity; feeling overloaded, and its effect on home life; feeling poorly managed and resourced; and dealing with patients' suffering. Burnout was also associated with low satisfaction in relationships with patients, relatives and staff; professional status/esteem; intellectual stimulation. In addition, being aged 55 years or less and being single were independent risk factors for burnout. Burnout was more prevalent among consultants who felt insufficiently trained in communication and management skills.

- <sup>13</sup> Shanafelt TD, Bradley KA, Wipf JE, Back AL. Burnout and self-reported patient care in an internal medicine residency program. *Ann Intern Med.* 2002;136(5):358-367. [PMID: 11874308](#). [Full Text](#)
- A mailed survey was sent to 115 internal medicine residents. Burnout was measured using the Maslach Burnout Inventory. 76% of responding residents met the criteria for burnout. Compared with non-burned-out residents, burned-out residents were significantly more likely to self-report providing at least one type of suboptimal patient care at least monthly (53% vs. 21%; P = 0.004).
- <sup>14</sup> McMurray JE, Linzer M, Konrad TR, et al. The work lives of women physicians: results from the physician work life study. The SGIM Career Satisfaction Study Group. *J Gen Intern Med.* 2000; 15:372-380. [PMID: 10886471](#). [Full Text](#)
- 5,704 physicians in primary and specialty nonsurgical care (N = 2,326 respondents; 32% female, adjusted response rate = 52%) were surveyed. Women had 1.6 times the odds of reporting burnout compared with men (P <.05), with the odds of burnout by women increasing by 12% to 15% for each additional 5 hours worked per week over 40 hours (P <.05). Lack of workplace control predicted burnout in women but not in men. For those women with young children, odds of burnout were 40% less when support of colleagues, spouse, or significant other for balancing work and home issues was present.
- <sup>15</sup> Olkinuora M, Asp S, Juntunen J, Kauttu K, Strid L, Aarimaa M. Stress symptoms, burnout and suicidal thoughts in Finnish physicians. *Soc Psychiatry Psychiatr Epidemiol.* 1990;25(2):81-86. [PMID: 2336581](#).
- Stress symptoms, burnout and suicidal thoughts in Finnish physicians were studied using a questionnaire. Altogether, 76% (of 3496) responded. Non-specialists had higher burnout scores than specialists for both sexes. Highest burnout scores in men and women occurred in those working in municipal health centres. Lowest scores occurred in those working in private practice, universities, research institutes, and public offices and organizations.
- <sup>16</sup> Linzer M, Visser MR, Oort FJ, Smets EM, McMurray JE, de Haes HC. Society of General Internal Medicine (SGIM) Career Satisfaction Study Group (CSSG). Predicting and preventing physician burnout: results from the United States and the Netherlands. *Am J Med.* 2001;111(2):170-175. [PMID: 11498074](#). [Full text](#)
- <sup>17</sup> Kash KM, Holland JC. Special problems of physicians and house staff in oncology. In: Holland JC, Rowland JH, eds. *Handbook of Psychooncology*. New York, NY: Oxford University Press; 1989:647-657. ISBN: 0195043081.
- <sup>18</sup> Vachon MLS. *Occupational Stress in the Care of the Critically Ill, Dying and Bereaved*. Washington, DC: Hemisphere Pub. Corp; 1987. ISBN: 0891163182.
- <sup>19</sup> Jenkins SR, Maslach C. Psychological health and involvement in interpersonally demanding occupations: a longitudinal perspective. *J Organiza Behav.* 1994;15:101-127.

- <sup>20</sup> Vaillant GE, Sobowale NC, McArthur C. Some psychologic vulnerabilities of physicians. *N Engl J Med.* 1972;287:372-375. [PMID: 5043521](#).

Only physicians with the least stable childhoods and adolescent adjustments appeared vulnerable to have relatively poor marriages, to use drugs and alcohol heavily, and to obtain psychotherapy.

- <sup>21</sup> Kobasa SC. Stressful life events, personality and health: an inquiry into hardiness. *J Pers Soc Psychol.* 1979;37(1):1-11. [PMID: 458548](#).

Two groups of middle and upper level executives had comparably high degrees of stressful life events in the previous 3 years, as measured by the Holmes and Rahe Schedule of Recent Life Events. One group (n = 86) suffered high stress without falling ill, whereas the other (n = 75) reported becoming sick after their encounter with stressful life events. High stress/low illness executives show, by comparison with high stress/high illness executives, more hardiness, that is, have a stronger commitment to self, an attitude of vigorousness toward the environment, a sense of meaningfulness, and an internal locus of control.

- <sup>22</sup> Kobasa SC, Maddi SR, Kahn S. Hardiness and health: a prospective inquiry. *J Pers Soc Psychol.* 1981;42:168-177.

Utilizing a prospective design, this study tested the hypotheses that hardiness-commitment, control, and challenge-functions to decrease the effect of stressful life events in producing illness symptoms. Results support the hypothesis by showing main effects on illness for both stressful life events and hardiness and an interaction effect for these independent variables.

- <sup>23</sup> Zapf D, Seifert C, Schmutte B, Mertini H. Emotion work and job stressors and their effect on burnout. *Psychology & Health.* 2001;16:527-545.

Hierarchical multiple regression showed a unique contribution of emotion work variables in the prediction of burnout. The analysis of interaction effects of emotional dissonance and organizational and social stressors showed that for service professionals, the coincidence of these stressors led to exaggerated levels of emotional exhaustion and depersonalization.

- <sup>24</sup> Barni S, Mondin R, Nazzani R, Archili C. Oncostress: evaluation of burnout in Lombardy. *Tumori.* 1996;82(1):85-92. [PMID: 8623514](#).

Anxiety was found in 52.7% of oncologic doctors, radiotherapists, various specialists, nurses and radiotherapy technicians in Lombardy and depression in 16%, mainly in the professional nursing categories and in particular in women and the young were identified. Working in an oncologic environment induces burnout. However, it appears to be less significant in Italy than indicated in the literature.

- <sup>25</sup> Brenninkmeyer V, Van Yperen NW, Buunk BP. Burnout and depression are not identical twins: is decline of superiority a distinguishing feature? *Pers Individ Differ.* 2001;30:873-880.

We explored whether depressive symptomatology and the components of burnout are differentially related to feelings of superiority. Based on the clinical picture of depression, which seems to reflect a general sense of defeat, it was expected that individuals high in burnout and low in superiority would experience depressive symptoms. Results confirmed our expectation. Furthermore, depression was significantly related to superiority, whereas no link was observed between the core symptom of burnout (ie, emotional exhaustion) and superiority.

- <sup>26</sup> Vachon MLS. The stress of professional caregivers. In: Doyle D, Hanks G, Cherny N, Calman K (eds.). *Oxford Textbook of Palliative Medicine, 3<sup>rd</sup> Ed.* Oxford, UK: Oxford University Press; 2004:992-1004. ISBN: 019851985. Available at:

<http://www.oup.com/us/catalog/general/subject/Medicine/PalliativeMedicine/?view=usa&ci=019851098>  
5 Accessed November 5, 2004.

- <sup>27</sup> Meier DE, Back AL, Morrison RS. The inner life of physicians and the care of the seriously ill. *JAMA*. 2001;286(23):3007-3014. [PMID: 11743845](#). [Full Text](#)

This article describes a model for increasing physician self-awareness, which includes identifying and working with emotions that may affect patient care. This approach is based on the standard medical model of risk factors, signs and symptoms, differential diagnosis, and intervention. Although it is normal to have feelings arising from the care of patients, physicians should take an active role in identifying and controlling those emotions.

- <sup>28</sup> Jones G, Sagar S, Wong R. The effects of stress on oncology staff. *CMAJ*. 2000;163(7):807. [PMID: 11033706](#). [Full Text](#)

- <sup>29</sup> Fallowfield L, Jenkins V, Farewell V, et al. Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomized controlled trial. *Lancet*. 2002;359(9307):650-656. [PMID: 11879860](#).

The communication problems of senior doctors working in cancer medicine are not resolved by time and clinical experience. This paper presents the results of a randomized controlled trial and shows that a 3 day intensive training course significantly improves key communication skills.