

Chapter 2

Burnout Syndrome in an International Setting

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2.1 Introduction

Burnout is a global concern and work-related stress has the potential to negatively affect the individual's psychological and physical health, as well as an organization's effectiveness. Therefore, it is recognized worldwide as a major challenge to workers' health and the functioning of their organizations. In the last decade, several epidemiological studies have found a high prevalence of the professional stress syndrome of burnout in western and developing countries (Maslach et al. 2001). Burnout is usually assessed in an occupational setting and most occupational groups, white-collar (civil servants), blue-collar (manual workers) and the "helping" professions (health care workers, caregivers, and teachers) may be affected (Felton 1998; Valente et al. 2011). Nevertheless, burnout syndrome occurs mainly among professionals whose work involves constant demands and intense interactions with people who have physical and emotional needs.

The term "burnout" was first used by Herbert Freudenberger (1974) in the mid-1970s and since then several theoretical models have been developed. Burnout syndrome is associated with daily chronic stress rather than with occasional events, and has been described as an inability to cope with emotional stress at work (Felton 1998). Individual and organizational factors are involved in burnout, and there is an exchange between these two parts. An individual's characteristics, such as personality, values, goals, age, gender, level of education, and family situation may interact with

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Table 2.1 Some risk factors for burnout syndrome

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|---|
| Negative job characteristics |
| Workload: overwork and heavy workload, boredom |
| Work conflicts |
| Diminished resources |
| Lack of input or feedback |
| Job insecurity |
| Effort–reward imbalance |
| Length of training and delayed gratification |
| Occupational factors |
| Step hierarchy |
| Understaffing |
| High demands for employees |
| Number of years in current profession and total number of years |
| Organizational factors |
| Continuing rapid organizational changes |
| Demographic variables |
| Younger adults |
| Unmarried people/women caring for children |
| Personality traits |
| Low hardiness |
| Poor self-esteem |
| Job attitudes |
| Unrealistically high expectations |
| Financial issues (salary) |

environmental and work risk factors and either exacerbate or act as a buffer against their effects (Cassitto et al. 2003). A list of some risk factors associated with burnout syndrome is shown in Table 2.1.

Organic complaints (headaches, insomnia and other sleep disorders, eating problems, tiredness, irritability), emotional instability, and rigidity in social relationships are some nonspecific symptoms associated with burnout syndrome (Embriaco et al. 2007). Burnout syndrome has also been associated with poor health, including hypertension, alcoholism, and myocardial infarction (Shanafelt et al. 2006; Väänänen et al. 2008; Alves et al. 2009).

2.2 Burnout Models

Several models have been proposed to explain the burnout process. Unsatisfactory work may lead to long-term feelings of emotional exhaustion, depersonalization, and cynicism (negative, dehumanized, and insensitive attitudes toward people who are the recipients of one's services), lack of involvement at work and low level of personal accomplishment. This burnout construct was identified by Maslach et al. (2001), who developed the Maslach Burnout Inventory (MBI).

Golembiewski et al. (1986) proposed that burnout might progress from depersonalization through lack of personal accomplishment to emotional exhaustion. This model was based on a phase approach, dichotomizing the MBI subscales, and using the mean as a cut-off score. The phase model of burnout distinguishes high versus low scores of the domains, and permits generation of eight possible combinations of the domains (depersonalization, personal accomplishment, and emotional exhaustion), which are called phases.

Maslach et al. postulated that burnout might occur when there is a disconnection between the organization and the individual with regard to what they called the main areas of work life: values, fairness, community, reward, control, and workload (Maslach et al. 2001). Lee and Ashforth (1993) proposed that burnout progresses from emotional exhaustion to depersonalization, and from emotional exhaustion to lack of personal accomplishment.

Emotional exhaustion is considered to be the most important dimension of burnout syndrome (Roelofs et al. 2005), and in close relationship with other types of mental illness, such as depression and anxiety disorders. Emotional exhaustion refers to feelings of being emotionally overextended and drained by others. Nevertheless, burnout syndrome is usually considered an individual experience that is specific to the work context.

Stressful interpersonal relationships at work may also be secondary to a lack of reciprocity that may affect worker relationships with both the institution and team members (Schaufeli 2003). Social relationships and job performance may be seriously affected.

Generally speaking, burnout syndrome may result from people giving too much of their time without adequate time to recover emotionally or physically (Felton 1998).

2.3 Burnout in an International Setting

2.3.1 Measurement Tools

The Maslach Burnout Inventory has been used to compare the prevalence and severity of burnout syndrome among countries. Mean scores of MBI dimensions from several international studies are summarized in Table 2.2. Nevertheless, the MBI cut-off points should be interpreted with caution because these values tend to vary country by country owing to social and cultural factors (Schaufeli and Van Dierendonck 1995). Validity of survey instruments developed for western countries is especially problematic when they are applied to non-western and underdeveloped countries (Thorsen et al. 2011).

2.3.2 Burnout in Developing Countries

Quality of work may be determined by the level of development of a given country. Because of globalization, people in developing countries have to deal with

Table 2.2 Reported mean scores of the Maslach Burnout Inventory dimensions in several international studies

| Author, year | Country | Sample | | Emotional exhaustion | | Personal accomplishment |
|-------------------------|---------|--------|----------|----------------------|------|-------------------------|
| | | size | Setting | Depersonalization | | |
| Sann, 2003 | Germany | 297 | Teachers | 18.5 | 4.2 | 32.5 |
| Pascual, 2003 | Spain | 198 | Teachers | 21.2 | 3.6 | 31.9 |
| Thorsen, 2011 | Malawi | 101 | Hospital | 23.1 | 6.2 | 37.8 |
| Ndetei, 2008 | Kenya | 285 | Hospital | 17.2 | 7.3 | 29.3 |
| Moreira, 2009 | Brazil | 151 | Hospital | 17 | 1.8 | 36.6 |
| Benevides-Pereira, 2007 | Brazil | 87 | Carers | 19.1 | 4.2 | 39.6 |
| Vercambre, 2009 | France | 2,558 | Teachers | 18.1 | 3.3 | 31.2 |
| Halayem-Dhouib, 2010 | Tunisia | 106 | Hospital | 26.2 | 10.2 | 32.9 |

increased levels of work-related stress. In these countries, workers may not be familiar with burnout and job-stress prevention strategies (Houtman et al. 2007). Population growth, the migration from rural to urban areas where the offer of labor is higher, work deregulation, less job security and decreased workers' rights, under-employment, and the acceptance of substandard jobs are common (Houtman et al. 2007).

Many workers perform activities that they perceive as demanding, constraining and otherwise stressful. Burnout and work stress in developing countries can be aggravated by several factors outside the work environment. These include gender inequalities, poor paths of participation, a lack of occupational health services coverage, poor nutrition and hygiene, inadequate transportation systems, illiteracy, and general poverty (Houtman et al. 2007).

In addition, burnout syndrome may be particularly common among teachers and health workers. Specific health care-related occupations at risk of professional burnout syndrome are shown in Table 2.3. Dealing with patients, their relatives and members of staff may be an important source of stress at work. In the following section, burnout epidemiological studies will be reviewed according to geographical region and professional background.

2.3.3 Europe and the United States

In western countries, several studies have shown that occupational burnout may predict work disability in initially healthy employees. In Finland, a recent study showed that the hazard ratio for a new disability pension was 3.8 with severe burnout, and that exhaustion dimension predicted work disability due to mental disorders (Ahola et al. 2009). Healthcare professionals and educators are particularly affected (Hyman et al. 2011), and several studies suggest that the risk of burnout and job dissatisfaction has increased in the modern healthcare workforce (Gabbe et al. 2002; Johns and Ossoff 2005).

Table 2.3 Specific health care-related occupations at risk of professional burnout syndrome

| |
|--|
| Physicians |
| Oncologists |
| Surgeons |
| Anesthesiologists |
| AIDS unit physicians |
| Intensive care unit physicians |
| Neonatal intensive care units |
| Academic medicine chairs |
| Rehabilitation practitioners |
| Emergency service personnel |
| Dentists |
| Nurses |
| Social workers |
| Mental health workers |
| Psychologists |
| Occupational therapists |
| Speech language therapists |
| Medicine residents and medicine students |

Several European studies have evaluated burnout syndrome in nurses and physicians. It has been estimated that burnout rates among physicians might range from 2.4 to 72% (Roth et al. 2011). Burnout syndrome has also been associated in Europe with decreased well-being, absenteeism, and decreased quality of care among nursing staff (Lu et al. 2005).

In a Scottish psychiatric nurse study, approximately 42% of the respondents exhibited a high level of emotional exhaustion (Kilfedder et al. 2001). In France, approximately one third of 2,497 staff nurses and half of 878 intensivists physicians reported high levels of burnout. Depersonalization was detected in around 37% of intensivists. In nurses, severe burnout was associated with younger age, organizational factors, conflict with patients, relationships with head nurses and physicians, and caring for a dying patient (Poncet et al. 2007). Comparison of nurses with physicians or other health care workers showed that nurses consistently reported higher levels of burnout. Burnout was associated with lower effectiveness at work, decreased job satisfaction and a reduced commitment to the job or organization. Another French study showed that more than 50% of nurses and intensivists wished to leave their jobs (Embriaco et al. 2007).

In Europe, other epidemiological studies have focused on background variables for burnout in teachers. Risk factors include gender, age, marital status, and grade level taught (Pomaki and Anagnostopoulou 2003; Pisanti et al. 2003). Organizational factors, such as role conflicts, role ambiguity, imbalance of effort and reward, as well as perception of job stressors, have been found to be important in teacher burnout syndrome (Pascual et al. 2003; Sann 2003). An epidemiological postal

survey among more than 20,000 French education workers showed that female teachers were more susceptible to high levels of emotional exhaustion and reduced personal accomplishment, whereas male teachers were more susceptible to high levels of depersonalization (Vercambre et al. 2009). Difficulties experienced with pupils were also associated with burnout syndrome (Hastings and Bham 2003; Vercambre et al. 2009).

Students can also be involved in burnout syndrome. Both burnout and training dissatisfaction are common among Greek medical residents. Systemic interventions have been proposed within the Greek health system, aimed at reducing resident impairment due to burnout and at improving their educational and professional perspectives (Msaouel et al. 2010). In the United States, an epidemiological study reported that nearly half of medical students at major schools were burned out and that negative personal life events affected their burnout rate (Dyrbye et al. 2008). Another cross-sectional study with US internal medicine residents reported high levels of emotional exhaustion and depersonalization in approximately 50%. Symptoms of burnout were less common among international medical graduates than among US medical graduates, and were associated with higher levels of educational debt (West et al. 2011).

2.3.4 African Developing Countries

In African countries, burnout studies are scarce and most have only been developed in the last decade. The debilitation of health systems due to the human resources crisis has provoked a heavy and complex workload in health carers and teachers and substantial workforce burnout. High rates of burnout among maternal health staff at a referral hospital in Malawi have been reported (Thorsen et al. 2011). In this study, nearly three quarters of workers (72%) reported emotional exhaustion, over one third (43%) reported depersonalization, while almost three quarters (74%) experienced reduced personal accomplishment. Maternal health staff experienced more burnout than their colleagues working in other medical settings. Another Malawian study found that one third of their respondents were burned out because of high levels of emotional exhaustion (McAuliffe et al. 2009).

Other studies performed in Nigeria among health professionals (Olley 2003; Onylezugbo and Nawfor 2010), in a Ghanaian hospital (Fiadzo et al. 1997), and in a Kenyan psychiatric hospital (Ndetei et al. 2008) have described similar findings. In Kenya, high levels of depersonalization were observed in 47.8% of psychiatric staff, and high levels of emotional exhaustion and personal accomplishment in 38 and 37.3% respectively (Ndetei et al. 2008). Another cross-sectional study performed in a public hospital in South Africa found that physicians had high levels of occupational stress compared with the average working population. The main sources of stress were understaffing, lack of resources, lack of control, difficult work schedules, inadequate security and poor career advancement and salaries. In addition, senior doctors showed lower job satisfaction (Thomas and Valli 2006).

Taking care of severe and chronic untreatable diseases can also increase the risk of burnout among health care workers in Africa. More than three quarters of nurses caring for AIDS patients in the Limpopo province, South Africa, experienced disorders ranging from mild mood disturbances to severe depression (Davhana-Maselesele and Igumbor 2008). Sadness, dissatisfaction, fatigue, and low levels of energy were observed, and frustration was associated with their inability to help the terminally ill AIDS patients.

Some African studies have found that family-to-work conflicts, an increased number of demands from family/home/children, and fulfilling the parental role may make it difficult to perform work roles satisfactorily (Thorsen et al. 2011). Non-work-related factors, such as the number of their own children, have been associated with burnout syndrome in African countries (Ndetei et al. 2008; Thorsen et al. 2011).

2.3.5 *South America*

In South America, most studies on burnout syndrome are from Brazil. The prevalence of burnout syndrome among community-based health agents in the city of Sao Paulo, Brazil, has been estimated to be 24%, whereas the prevalence of mental disorders was 43% (da Silva and Menezes 2008). Moderate or high levels of emotional exhaustion, depersonalization, and reduced personal accomplishment were observed in 71, 35, and 47.5% respectively. The proportion of interviewees that stated that they regularly used antidepressants was 17%.

Another Brazilian study (de Moreira et al. 2009) performed in 151 nurses from Tubaráo hospital in Santa Catarina showed that 35.7% of the interviewees displayed burnout. Hospital wards or areas with the highest proportion of nursing staff with burnout were the grouped hospital sectors (42.6%), the intensive care unit (25.9%), and the neonatal intensive care unit (18.5%). The prevalence of professional burnout syndrome among intensive care physicians from Salvador de Bahia, Brazil, has been estimated to be 7.4%, and was associated with work overload and low income for the hours worked (Tironi et al. 2009). Other studies have also evaluated the impact of burnout syndrome on Brazilian health care providers to people living with HIV: 26.4% of carers had high scores on emotional exhaustion and 17% presented elevated levels of depersonalization (Benevides-Pereira and Das Neves Alves 2007).

A burnout study in elementary school teachers in the city of João Pessoa (north-east Brazil) showed that 33.6% of teachers had high levels of emotional exhaustion, 8.3% a high level of depersonalization, and 43.4% a low level of professional achievement (Batista et al. 2010). A Columbian study performed in teachers from two universities in Popayán (Correa-Correa et al. 2010) showed that 9.1% had high depersonalization. In Argentina a cross-sectional study of 106 cardiology residents and a comparison group of 104 age- and gender-matched non-medical professionals showed high levels of emotional exhaustion and depersonalization in the majority of respondents (Waldman et al. 2009).

2.3.6 Asia

In the last few years, several Asian and Chinese studies have focused on burnout syndrome. The relationships among job stress, burnout, depression, and health in 300 university teachers at Beijing University have recently been assessed (Zhong et al. 2009). The authors found that burnout was a mediator among job stress, the occurrence and exacerbation of depression, and poor physical health.

Several studies from Singapore have reported that Singaporean nurses experience high levels of stress related to work, and emergency and surgical nurses appear to perceive higher levels of stress than ward- and clinic-based nurses (Lim et al. 2010). The most stressful situations for Singaporean nurses were patient-related difficulties and conflicts with colleagues. Organizational issues, such as lack of participation in planning and difficulty in making changes also contributed to work stress experienced by nurses. These professionals also felt vulnerable to stress arising from the interface of work and family commitments (Lim et al. 2010).

In Mongolia, a recent study detected an increasing level of stress among medical doctors. Excessive workload has degraded physicians' attitudes toward work and it is a significant source of developing burnout, job stress and job dissatisfaction (Bagaajav et al. 2011). Female Mongolian doctors had higher burnout scores than male doctors, and female nurses were more over-committed than female doctors, perhaps because nurses were more responsible for patients' day-to-day care than doctors.

Studies performed in Muslim countries are also scarce. In Turkey, problems with childcare were significantly associated with emotional exhaustion among Turkish nurses (Demir et al. 2003). Iranian nurses also reported perceived work dissatisfaction and health threats, and disequilibrium between family and work demands (Lagerström et al. 2010). Burnout syndrome was highly prevalent among nurses and medical residents from a Tunisian hospital. High scores in emotional tiredness correlated with depression and with personal difficulties (Halayem-Dhouib et al. 2010).

In Saudi Arabia, the prevalence of burnout syndrome among multinational nurses may be high. Frequency of depersonalization was 42% and was graded as high, whereas 45% had high emotional exhaustion and 71.5% had a sense of low personal accomplishment. Married nurses were prone to emotional exhaustion (Al-Turki et al. 2010). The nurses in the patients' wards and clinics were more emotionally exhausted with higher depersonalization, and non-Saudi nurses were significantly more prone to emotional exhaustion than Saudi nurses. Working away from their home countries was an additional risk factor in expatriate nurses.

2.3.7 Australia and New Zealand

In the Australasian region, most burnout studies were performed in Australia and New Zealand. Junior doctors and residents are a subgroup of the medical profession that may be at greater risk of poorer health and burnout. The Australian Medical Association performed a health survey with 914 Australian and New

Zealand junior doctors. Approximately, 71% had low job satisfaction, 69% had burnout symptoms, and 54% compassion fatigue. In addition, half of them reported that their workload had been excessive (Markwell and Wainer 2009).

In New Zealand, high levels of burnout among medical consultants in public hospitals have been reported. One in five consultants was assessed as having high overall burnout and one third had a sense of low personal accomplishment and high emotional exhaustion. Longer time in the same job increased the risk of a sense of low personal accomplishment (Surgenor et al. 2009). Another study among New Zealand psychiatrists found that two thirds of participants had moderate to extremely high levels of emotional exhaustion, with a similar proportion describing a sense of low personal accomplishment (Kumar et al. 2007).

2.4 Mental Illness and Burnout Syndrome

Exposure to stressful life events has been associated with the subsequent onset of depressive disorders and the risk may increase with the severity and contextual importance of the event. Chronic stress factors related to the work environment and lasting several months or years may cause even more severe disease (Tennant 2002). Perception of adverse psychosocial factors in the workplace is related to an elevated risk of subsequent major depressive disorder (Bonde 2008). Work-related stress can have an effect on employee satisfaction, work productivity, mental and physical health, and increased rates of absenteeism, and can affect family roles and function (Tennant 2001).

Burnout syndrome may be a precursor or correlate of chronic depression (Iacovides et al. 1999) and an alternative form of manifesting emotional distress. Nevertheless, whereas major depressive disorder pervades most aspects of a patient's life, burnout syndrome has been considered to be a specific work-related syndrome that occurs more commonly in people who work with human recipients of services. The term "burnout" is not a recognized disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM) classification, although it is recognized in the 10th revision of the International Classification of Diseases (ICD-10) as "problems related to life-management difficulty" and described under Z.73.0 as "burnout—state of total exhaustion" (WHO 1992).

2.4.1 Epidemiology

Prevalence of depressive disorders is variable and may affect between 3% and one third of workers in cross-sectional studies. Follow-up studies based upon clinical DSM criteria have also studied employees from urban and general populations. Table 2.4 summarizes work-depression prevalence data according to country and nationality. The conclusion of these studies is that high job strain is associated with

Table 2.4 Follow-up studies on psychosocial factors and prevalence of work depressive disorders

| Author | Year | Country | Setting | Sample, <i>n</i> | Prevalence | Diagnosis |
|----------|------|-------------|----------------|------------------|-------------------------|--------------------------------|
| Griffin | 2002 | UK | Public service | 7,270 | 25–33% | GHQ-28 |
| O'Campo | 2004 | USA | Population | 659 | 28.5% | DSM-III |
| Wang | 2005 | Canada | Population | 6,663 | 3% | Interview |
| Wieclaw | 2006 | Denmark | Population | 173,826 | 1/1,000 person years | ICD-10 |
| Shields | 2006 | Canada | Population | 6,125 | 6% | DSM-III-R |
| Clays | 2007 | Belgium | Companies | 2,821 | 11.8% | CESDS |
| Plaisier | 2007 | Netherlands | Population | 2,646 | 6.2% | DSM-III-R |
| Virtanen | 2007 | Finland | Population | 3,366 | 6–12% | Antidepressant prescription |

CESDS Center for Epidemiological Studies Depression Scale, *GHQ* General Health Questionnaire, *DSM* Diagnostic and Statistical Manual of Mental Disorders criteria, *ICD* International Classification of Diseases

a greater prevalence of depressive syndrome, major depression episodes, and dysphoria (Mausner-Dorsch and Eaton 2000).

The variability in work-depression prevalence arises from methodological flaws that may limit comparisons among different epidemiological studies. The observed differences in study design and setting (population employees versus health workers, white collar workers versus blue collar workers), evaluation methods (face-to-face interview versus questionnaires and self-reports), and diagnostic criteria (DSM-IV criteria versus self-reported depressive symptom scales) may explain the variability of data among burnout studies. In addition, it has been suggested that the association between job strain and the occurrence of depression may suffer from reporting bias if studies rely only on individual self-reports (Kolstad et al. 2011).

2.4.2 Gender, Mental Health, and Burnout

Gender is a critical determinant of mental health and prominent gender differences may occur in the rates of depression and anxiety disorders. In fact unipolar depression, predicted to be the second leading cause of global disability burden by 2020, is twice as common in women. Gender-specific risk factors for mental disorders that disproportionately affect women include gender-based violence, socioeconomic disadvantage, low income and income inequality, and low or subordinate social status (WHO 2002).

The Women Physician's Health Study reported a depression prevalence rate among female physicians of 19.5% (Frank and Dingle 1999). In Sweden, a cross-sectional study from the Monitoring of Trends and Determinants in Cardiovascular Disease (MONICA) Study reported that in women, poor socioeconomic position was associated with burnout. Unfavorable working conditions and life situational factors may explain the high level of burnout in Swedish women compared with men (Norlund et al. 2010).

Gender disparities are even higher in developing countries where women have had only recent involvement in the workforce. In these regions, women may be particularly affected by a poor balance at the home–work interface, with consequences when poverty, unemployment, and poor living conditions converge. Several causes of burnout and work stress that may be more frequent in and specific to women include:

1. The double role that they have to play at home and work.
2. The gender roles of society and the influence of social expectations.
3. The risk of sexual harassment at work and domestic violence.
4. Gender-based discrimination is reflected in lower wages and higher job requirements (WHO 2002).

2.4.3 *Models and Risk Factors*

Karasek's job demand–control–social support model (Karasek 1979) has been used to analyze the dimensions and risk factors involved in burnout-associated mental illness. According to this model, job strain is defined as a combination of high job demands and low decision latitude or control over workload. This model predicts that workers with high-strain jobs, characterized by high demands in combination with little control and little social support in the workplace, are at high risk of disease (Clays et al. 2007). The risk of having a depressive disorder is higher among employees holding perceived high-demand jobs (Bonde 2008). This means decision authority, one of the components of decision latitude, may have a stronger association with depression than other dimensions of the demand–control model (Mausner-Dorsch and Eaton 2000). Therefore, decision authority incorporates an individual's ability to make decisions about his or her job and to influence the work group or company policy or both.

As noted previously, most studies have reported that the association between job strain and depression is stronger for women (Mausner-Dorsch and Eaton 2000). Nevertheless, other studies have found no noticeable differences between men and women (Bonde 2008). In the MONICA study a multiple regression analysis showed that almost half of the gender difference could be explained by work-related and life-situational factors (Norlund et al. 2010).

Several factors may influence the risk of suffering work depression and include effort–reward imbalance, organizational injustice, organizational workload (long hours of work may have an adverse effect on mental health), and workaholism; the appearance of specific stressful events in the workplace (interpersonal conflicts, sexual harassment, bullying by supervisors); personality traits (neuroticism, negative affectivity); and social support at work and outside (Tennant 2001; Kivimaki et al. 2003; Godin et al. 2005; Ylipaavalniemi et al. 2005; Fischer and Boer 2011).

Interpersonal conflicts in the workplace may be greater stressors than the relationships with clients (Pick and Leiter 1991), and bullying carries an elevated risk of provoking depression with an estimated odds ratio of 2.3 (Kivimaki et al. 2003). Nevertheless, for community workers, both the relationship with the team and the community are aspects related to burnout syndrome. In addition, the effect of

combined stressors of different origins (work and outside work) may be additional predictors of depression in married professionals.

Occupational groups may differ in the nature of their work environments. In a blue-collar environment, noise can be a relatively frequent stressor (Melamed et al. 2004). Nevertheless, the social environment, such as conflict in relationships or poor social support, usually predicts depressive disorders or burnout in most occupational groups (Tennant 2001). In Japan, blue-collar work, lack of control over work, unsuitable work and poor workplace relations may predict depressive symptoms (Kawakami et al. 2004).

2.5 Health and Financial Costs of Burnout

2.5.1 *Physical, Mental and Behavioral Costs*

Excessive work stress and burnout have serious health effects. Burnout may affect physiological and psychological health, cognition, and behavior. As a result, sick leave and work disability due to mental health (depression, anxiety), or physical (cardiovascular: high blood pressure, angina complaints) problems may occur (Ahola et al. 2009). Musculoskeletal disorders (back pain) and a stressful work environment are also important causes of work sick leave, and low decision latitude has been related to a high level of sick leave (Detaille et al. 2009).

Professional distress can have serious mental illness manifestations, such as anxiety, depression, leading to divorce or broken relationships, alcoholism, substance abuse, and suicide (Borritz et al. 2006; Middaugh 2007; Ahola et al. 2008; Balch et al. 2009). Overwork, overburden, and working too hard can lead to counterproductive, unhealthy, or even self-destructive behavior.

Chronic work distress can have negative repercussions for employees, their families, and the recipients or their care. A large prospective study of 1,118 married physicians found that the accumulative incidence of divorce after 30 years of marriage was 29%, and the highest divorce rates were among psychiatrists (50% after 30 years) (Rollman et al. 1997). Male physicians' mortality from suicide ratio has been estimated to be nearly 1.5- to 3.8-fold higher than that of other professionals (Frank et al. 2000). Suicide rates for physicians are estimated to be six times higher than in the general population, their cardiovascular mortality is higher than average, and about 8–12% of physicians develop substance abuse disorders (Wallace et al. 2009).

The performance and quality of activities at work may be seriously affected. An increase in medical errors has been reported in burned-out medical residents (West et al. 2006). Significant depressive symptoms were found in approximately half of cardiology residents and exhibited higher levels of burnout, perceived stress, and depressive symptoms than a control group (Waldman et al. 2009).

Reported causes of stress among caregivers include financial hardship, oppressive workloads, inadequate training skills, lack of clarity about what the caregiver is expected to do and lack of referral mechanisms. The level of stress of caregivers has been seen as a risk factor that linked elder abuse to the care of an elderly relative, and caregiver

stress may be a contributing factor in some cases of abuse. Nevertheless, violence may be the result of the interplay of several factors, including stress, the relationship between the carer and the care recipient, the existence of disruptive behavior and aggression by the care recipient, and depression in the caregiver (Krug et al. 2002).

2.5.2 Financial Costs

Mental health problems and other stress-related disorders are recognized to be among the leading causes of early retirement from work, high absence rates, overall health impairment, and low organizational productivity. People at risk of burnout and work depression can contribute to worsening job performance, increased absenteeism and job turnover, decreased productivity, and can have a negative effect on co-workers (Tennant 2001).

Burnout can provoke elevated direct and indirect costs. Direct costs include vacancy costs, loss of productivity, recruitment and administration costs, and the training and start-up costs of new trainees. Indirect costs include instability of the workforce, reduced productivity, increased stress and burnout risk among the remaining employees, and decreased commitment to work.

Poor occupational health and reduced working capacity of workers may cause economic loss of up to 10–20% of the gross national product (GNP) of a country. Globally, occupational deaths, diseases, and illnesses may account for an estimated loss of 4% of the GNP (WHO 1995). Although the true financial cost of staff burnout is unknown, the association between burnout and work loss has been calculated in some studies. The Canadian Policy Research Network estimates that stress-related absences cost Canadian employers about \$3.5 billion each year (Williams and Normand 2003). In Australia, it has been estimated that 1.5 million workers suffer depression as a result of excessive job stress, costing business more than \$8,000 per person every year (McConnell 2010). In the Netherlands, the cost of long-term absence and disability due to work-related stress and burnout has been estimated to be 4 billion Euros a year, about 1.5% of the GNP. Nevertheless, data on financial costs in developing countries are scarce. In “countries in transition,” such as Russia, changes in “traditional hazards” (chemical, biological, and physical) have resulted in increased work-related stress and burnout costs (Kuzmina et al. 2001).

2.6 Awareness, Prevention, and Treatment of Burnout

2.6.1 Awareness, Self-confidence, Self-management, and Self-care

In industrialized countries, workers are becoming increasingly familiar with burnout (Cassitto et al. 2003), although stigma may persist in some situations such as caregiving (Werner et al. 2012). However, in many developing countries workers may lack

knowledge on this topic and are not aware of the importance of dealing with work-related stress and burnout symptoms (Cassitto et al. 2003; Houtman et al. 2007).

Burnout usually has more than one cause, and its symptoms should be dealt with on several levels, including individuals' self-confidence, self-management, and self-care. Self-confidence is considered an antecedent of burnout. Self-confidence is the belief or degree of certainty individuals possess about their ability to be successful in tasks. People who have lower levels of self-confidence will perceive more role stress because they exaggerate environmental difficulties, whereas workers who have a higher level of self-confidence will more frequently try to use active coping strategies (Bandura 1986).

Self-management means the interventions, training, and skills by which people with burnout can effectively take care of themselves and learn how to do so. Self-care strategies to maintain personal physical and mental health should also be promoted, and include all health decisions individuals make for themselves and their families to get and stay physically and mentally fit. Personal competence skills (communicability, being able to work in a team, tolerance, flexibility, service orientation) should also be taught.

Educational programs on burnout, the risk factors, and risk groups are necessary. Raising awareness of burnout is important and workers as employees should understand the causes, consequences, and costs of burnout, as well as solutions to the problem. Family and community support is also important, mainly in developing countries, and should be included in the management and addressing of the work-home interface (Cassitto et al. 2003).

2.6.2 Prevention

Preventive approaches include both modification in the work environment and also improvement in the individual's ability to cope with stress. The levels of prevention can be divided into primary preventive measures (avoidance/removal of burnout factors), secondary measures (early recognition/intervention), and tertiary measures (coping with the consequences, rehabilitation and relapse prophylaxis). Primary prevention measures include ergonomics, work and environmental design modifications, and organizational and management development. Secondary prevention to reduce work stress and burnout include worker education and training. Tertiary prevention measures should reduce the impact of stress and burnout by means of a more sensitive and responsive management system and enhanced occupational health provision (Leka et al. 2004).

The best way to prevent burnout is probably to reduce stress. There is no single strategy to prevent burnout, and flexibility, transparency, and dialogue are needed between individuals and organization. Organizations should recruit staff carefully and create adequate conditions of work. Interpersonal relationships should be fostered, and a time to share between employer and employees created. A safe work environment should be ensured and achievable targets set (UNAIDS 2008).

Burnout prevention strategies include organizational changes and education for the individual. Several factors may be successful in preventive actions and include acknowledgement and treatment of a work-related problem, the involvement of the workers in the intervention, and the use of a clear structure of tasks and responsibilities (Houtman et al. 2007). The improvement of worker's individual abilities, skills, and coping capacity may be favored through education and training in time management, stress management, and dealing with aggressive clients.

Some specific actions to prevent burnout are also important. Redistribution of high workload, prioritization of tasks, instauration of work breaks, assessment of physical risks at the workplace, and a clear description of tasks and demands may help to avoid work stress. The arrangement of regular meetings in order to discuss work problems with managers, and the performance of social activities with managers and colleagues can prevent the lack of social support at work. The use of flexible working times and provision of child care facilities and worker transportation, when needed, may help to facilitate the work-home interface (Leka et al. 2004; Burton 2008).

Low emotional support predicts increased sick leave and poorer self-assessed work ability in a generally middle-aged working population (Karlsson et al. 2010). Thus, it can be assumed that a high level of emotional support at work could modify the amount of sick leave taken. Reduction in stress levels from person-directed, person-work interface, and organizational interventions may reduce occupational stress in health care workers (Ruotsalainen et al. 2008). Interventions aimed at preventing burnout syndrome through the improvement of interpersonal relationship management in mental health workers have shown positive effects and a reduction in the level of depersonalization (Scarnera et al. 2009).

Once a severe burnout has become manifest, psychotherapeutic interventions are recommended, including, where applicable, antidepressants or other psychotropic medications. However, as no controlled studies have been published so far, how effective these interventions are must remain an open question (Kaschka et al. 2011).

2.7 Conclusions

Burnout can affect almost anybody, employees in various occupations and caregiving relations, and may be the result of a complex interaction of the workplace and social and individual factors. Burnout and work-related stress have negative consequences for the health, safety, and well-being of workers, and the productivity and cost-effectiveness of the industries and services they work for. The increasing globalization and transfer of unhealthy work practices easily turn this into a huge challenge.

A combination of organizational and individual approach strategies is necessary to prevent burnout. Longitudinal intervention studies are needed to elucidate the efficacy of preventive measures to prevent burnout syndrome and work-related

stress. There is a limited amount of information on the relationship between cultural and social characteristics and burnout syndrome/work depression in developing countries (Bonde 2008). Cross-cultural and comparative studies are needed, and prevention strategies should take into account the individual and social diversity that seems to exist around burnout syndrome.

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