Burnout: An Overview of 25 Years of Research and Theorizing

Wilmar B. Schaufeli

Utrecht University, The Netherlands and

Bram P. Buunk

University of Gromingen, The Netherlands

19.1 THE SHORT HISTORY OF AN ANCIENT PHENOMENON

Burnout is a metaphor that is commonly used to describe a state or process of mental exhaustion, similar to the smothering of a fire or the extinguishing of a candle. The dictionary defines "to burn out" as "to fail, wear out, or become exhausted by making excessive demands on energy, strength, or resources". As such, the experience of burnout is likely to be universal and of all times. Probably the earliest written example in which "to burn out" is related to exhaustion comes from Shakespeare, who wrote in 1599 in *The Passionate Pilgrim*: "She burnt with loue, as straw with fire flameth. She burnt out loue, as soon as straw out burneth" (cited in Enzmann & Kleiber, 1989, p. 18). More recently, but long before the "discovery" of burnout in professional settings, individuals who suffer from it have been portrayed in great detail. For instance, Graham Greene's 1960 novel *A Burnt-Out Case* tells the sad story of the world famous architect Querry, a gloomy, spiritually tormented, cynical and disillusioned character. The most illustrious example of burnout *avant-la-lettre* is the case-study of a psychiatric nurse, Miss Jones, published by Schwartz & Will (1953).

19.1.1 The "Discovery" of Burnout

Although the term "staff burnout" was first mentioned by Bradley (1969) in an article about probation officers who ran a community-based treatment programme for juvenile delinquents, Herbert Freudenberger (1974) is generally considered to be the founding father of the burnout syndrome. His influential paper on "staff burn-out" set the stage for the

introduction of the concept. As an unpaid psychiatrist Freudenberger was employed in a New York Free Clinic for drug addicts that was mainly staffed by young, idealistically motivated volunteers. Freudenberger observed that many of them experienced a gradual energy depletion and loss of motivation and commitment, which was accompanied by a wide array of mental and physical symptoms. To label this particular state of exhaustion that usually occurred about one year after the volunteers started working in the clinic, Freudenberger chose a word that was being used casually to refer to the effects of chronic drug abuse: burnout.

At about the same time, Christina Maslach (1976), a social psychological researcher, became interested in the way people in the human services cope with emotional arousal on the job. She noticed that the term "burnout" was colloquially used by Californian poverty lawyers to describe the process of gradual exhaustion, cynicism and loss of commitment in their colleagues. Maslach and her co-workers decided to adopt this term as it was easily recognized by the interviewees in their study among human services professionals.

In a way, the almost simultaneous "discovery" of burnout by the clinician Freudenberger and by the researcher Maslach marks the beginning of two different traditions that approach burnout from a practical and from a scientific point of view, respectively. The former focuses primarily on assessment, prevention and treatment, whereas the latter is mainly concerned with research and theory. Both traditions have developed relatively independent from each other; initially in the so-called pioneering phase the clinical approach prevailed, while in the empirical phase the accent shifted towards a more scientific approach.

19.1.2 The Pioneering Phase

After the introduction of the concept by Freudenberger (1974) and by Maslach and her colleagues (Maslach, 1976, 1982a, b; Pines & Maslach, 1978), burnout soon became a very popular topic. Apparently, the appropriate name had been given to something that was "in the air". The first publications on professional burnout appeared primarily in journals, magazines and periodicals for a variety of professionals such as teachers, social workers, nurses, correctional officers and police officers. The mass media eagerly picked up the burnout concept, and public interest in this topic grew enormously, making burnout a buzz word in the late 1970s and early 1980s. At the same time, a tremendous proliferation of workshops, training materials and interventions took place.

Initially, mainly practitioners and the general public were interested in burnout and the conceptual development was influenced by pragmatic rather than by scholarly concerns (Maslach & Schaufeli, 1993). This resulted in a blurred, all-encompassing meaning of burnout. Many authors stretched the concept of burnout to encompass far more than it did originally, so that in the end it ran the risk of hardly meaning anything at all. Furthermore, the early burnout literature was descriptive and not empirical, and relied heavily on unsystematic observations. An early review indicated that only 5 of the 48 articles included empirical data that went beyond an occasional anecdote or personal case history (Perlman & Hartman, 1982). These narrative papers mainly emphasized the importance of individual factors, such as over-commitment, idealism and perfectionism.

The image of burnout as a popular term used by journalists and practitioners hampered the serious scientific study of this phenomenon. This is illustrated by the rejection of the psychometric article that introduced the Maslach Burnout Inventory (MBI), which later was to become the most widely used and best validated instrument to assess burnout. The journal editor returned the manuscript with a short note that it had not even been read "because we do not publish 'pop' psychology" (Maslach & Jackson, 1984, p. 139).

19.1.3 The Empirical Phase

Despite the fact that professional burnout was initially not viewed as a serious scientific topic, empirical research on this phenomenon started to flourish from the beginning of the 1980s. Between 1975 and 1980, the yearly number of publications on burnout increased steadily from 5 to over 200 and since 1980 the average publication rate remained stable at about 200 per year, with an additional increase of 300 at the end of the 1980s (Schaufeli & Enzmann, 1998, p. 69–71). By the turn of the century more than 6000 publications on burnout had appeared. A major impulse came from the introduction of short and easy to administer self-report questionnaires to assess burnout—particularly the MBI, which was first published in the early 1980s (Maslach & Jackson, 1981). Academic interest was also stimulated by scholarly books that offered comprehensive social psychological (Maslach, 1982a; Pines & Aronson, 1981) and organizational (Cherniss, 1980a, b; Golembiewski et al., 1986) perspectives on burnout.

In the so-called empirical phase, which started in the mid-1980s, seven trends may be observed. First, the MBI was almost universally used, which highly structured the field. In fact, this instrument is used in over 90% of the empirical publications on burnout (Schaufeli & Enzmann, 1998, pp. 71-7). Second, burnout started to draw attention in countries outside the USA, beginning with English-speaking countries such as the UK and Canada, but soon followed by countries from the European continent (e.g. Germany, France, Sweden, Finland, Norway, Spain, Poland, Italy and The Netherlands) and from Asia (e.g. Israel, Jordan, China, Taiwan and Japan). It is illustrative that Golembiewski et al. (1996) in the subtitle of their book Global Burnout use the phrase "a worldwide pandemic". Third, initially most research focused on people-oriented, human services occupations. According to Schaufeli & Enzmann (1998, pp. 72), 34% of the research papers on burnout that appeared before 1996 included health professionals and 27%, 7%, 4% and 3% pertained to teaching and education, social work, administration and management, and law enforcement, respectively (25% included other or unspecific samples). However, since the publication of the MBI-General Survey (MBI-GS; Schaufeli et al., 1996a), which allows burnout to be studied independently from its specific job context, the number of studies carried out outside the traditional realm of the human services has increased. Fourth, research in the empirical phase tended to focus more on job and organizational factors than on individual factors. Fifth, the methodological rigor of burnout research has improved over the years, for instance, by using longitudinal instead of cross-sectional designs in order to study the development of burnout over time. Sixth, traditionally most burnout research was rather atheoretical, but a growing number of comprehensive conceptual approaches have proposed to link burnout to mainstream psychological theories. And last but not least, in recent years the concept of burnout is being supplemented and enlarged by the positive antithesis of job engagement so that currently the full spectrum of workers' well-being is studied, running from negative (burnout) to positive (engagement) states (Maslach et al., 2001).

19.2 DEFINITIONS OF BURNOUT

In most early writings, burnout was "defined" by merely summing up the symptoms (e.g. Freudenberger, 1974). Such "laundry lists" are problematic because they are inevitably selective and because they tend to ignore the dynamic aspect of the syndrome. These drawbacks are avoided by either selecting the most characteristic core symptoms of burnout, as is done in state definitions, or by describing the process of burnout, as is done in process definitions. Of course, both types of definitions are not mutually exclusive. Even more so, in a certain sense, they are complementary, because state definitions describe the end-state of the burnout process.

19.2.1 State Definitions of Burnout

Probably the most often cited definition of burnout comes from Maslach & Jackson (1986, p. 1): "Burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind". Its popularity is due to the fact that the most widely used self-report questionnaire, the MBI, includes the three dimensions that are mentioned in this definition. Emotional exhaustion refers to the depletion or draining of emotional resources caused by interpersonal demands. Depersonalization points to the development of negative, callous and cynical attitudes toward the recipients of one's services. The term depersonalization may cause some confusion since it is used in a completely different sense in psychiatry, namely to denote a person's extreme alienation from the self and the world. However, in Maslach & Jackson's definition, depersonalization refers to an impersonal and dehumanized perception of recipients, rather than to an impersonal view of the self. Finally, lack of personal accomplishment is the tendency to evaluate one's work with recipients negatively. Burnedout professionals believe that their objectives are not achieved, which is accompanied by feelings of insufficiency and poor professional self-esteem. Initially, Maslach & Jackson (1981, 1986) claimed that burnout exclusively occurs among professionals who deal directly with recipients (e.g. students, pupils, clients, patients or delinquents). Hence, in their view burnout is restricted to the helping professions. But in the third edition of the MBI test manual (Maslach et al., 1996), the concept of burnout is broadened and defined as a crisis in one's relationship with work in general and not necessarily as a crisis in one's relationship with people at work. As a consequence, the three original burnout dimensions are redefined. Exhaustion now refers to fatigue irrespective of its cause. Cynicism reflects an indifferent or distant attitude towards work instead of other people. Lastly, lack of professional efficacy encompasses both social and non-social aspects of occupational accomplishment.

Pines & Aronson (1988) present a somewhat broader definition of burnout. They include physical symptoms as well, and do not restrict burnout to the helping professions as Maslach and her colleagues initially did. They describe burnout as "a state of physical, emotional, and mental exhaustion caused by long-term involvement in situations that are emotionally demanding" (p. 9). Physical exhaustion is characterized by low energy, chronic fatigue, weakness, and a wide variety of physical and psychosomatic complaints. Emotional exhaustion involves feelings of helplessness, hopelessness and entrapment. Finally, mental exhaustion refers to the development of negative attitudes towards one's self, work and life itself. Since excessive emotional demands are not restricted to the human services,

burnout may, according to Pines (1993, 1996), also occur in occupational settings such as managerial jobs, as well as in such diverse settings as love and marriage, and even political activism.

Finally, a less well known but more precise definition of burnout has been proposed by Brill (1984, p. 15): "Burnout is an exceptionally mediated, job-related, dysphoric and dysfunctional state in an individual without major psychopathology, who has (1) functioned for a time at adequate performance and affective levels in the same job situation and who (2) will not recover to previous levels without outside help or environmental rearrangement". Accordingly, distress from lay-offs or economic hardship is not interpreted as burnout, since it is not exceptionally mediated. Moreover, burnout can occur in every type of job but not outside the occupational context. In addition, incompetent individuals are excluded as well as those who suffer from mental illness. Finally, individuals who either experience a temporary decrement in their performance or who are able to recover on their own are not considered burnt-out.

To summarize, although state definitions of burnout differ in scope, precision and dimensionality of the syndrome, they seem to share five common elements: (i) dysphoric symptoms, and most notably emotional exhaustion, are predominant; (ii) the accent is on mental and behavioural symptoms, although atypical physical symptoms are sometimes mentioned as well; (iii) burnout is generally considered to be work-related; (iv) symptoms are observed in "normal" individuals; and (v) decreased effectiveness and poor work performance occur because of negative attitudes and behaviours.

19.2.2 Burnout as a Dynamic Process

More than a decade ago, Cherniss (1980a, p. 5) was among the first to propose a straightforward description of the burnout process: "Burnout refers to a process in which the professionals' attitudes and behaviour change in negative ways in response to job strain". More specifically: "The first stage involves an imbalance between resources and demands (stress). The second stage is the immediate, short-term emotional tension, fatigue, and exhaustion (strain). The third stage consists of a number of changes in attitude and behaviour, such as a tendency to treat clients in a detached and mechanical fashion, or a cynical preoccupation with gratification of one's own needs (defensive coping)" (Cherniss, 1980b, p. 17). Thus, Cherniss considered excessive job demands as the root cause of burnout, fostered by a defensive coping strategy characterized by avoidance and withdrawal.

Other process definitions have emphasized the gradual development of burnout. For instance, Edelwich & Brodsky (1980) described burnout in the helping professions as a process of increasing disillusionment, i.e. the "progressive loss of idealism, energy, and purpose experienced by people in the helping professions as a result of conditions in their work" (1980, p. 14).

According to Etzion (1987), burnout is a slowly developing process that starts without warning and evolves almost unrecognized up to a particular point. Suddenly and unexpectedly, one feels exhausted and one is not able to relate this devastating experience to any particular stressful event. Etzion (1987, pp. 16–17) suggested that "continuous, barely recognizable, and for the most part denied, misfits between personal and environmental characteristics are the source of a slow and hidden process of psychological erosion. Unlike other stressful phenomena, the mini-stressors of misfit do not cause alarm and are rarely

subject to any coping efforts. Thus the process of erosion can go on for a long time without being detected".

Hallsten (1993) presented a more complex framework for the process of burning-out. He defined burnout "as a form of depression that results from the process of burning out, which is a necessary cause of burnout" (p. 99). Accordingly, not the outcome (i.e. a particular depressive state) is considered to be specific for burnout but its aetiology: the process of burning-out that develops in several phases. Hallsten (1993, p. 99) assumed that the process of burning-out occurs "when the enactment of an active, self-definitorial role is threatened or disrupted with no alternative role at hand".

To conclude, most process definitions of burnout maintain that burnout starts out with stress that results from the discrepancy between on the one hand the individual's expectations and ideals, and on the other hand the harsh reality of everyday occupational life. This stress may be consciously observed by the individual or it may remain unnoticed for a long time. Gradually, the individual starts to feel emotionally strained, and begins to change his or her attitudes towards the job and the people he or she works with, finally resulting in burnout. The way in which the individual copes with stress is in most process definitions considered crucial for the development of burnout.

19.2.3 A Synthetic Definition of Burnout

An overarching definition of burnout that includes both state as well as process characteristics of burnout was proposed by Schaufeli & Enzmann (1988, p. 36): "Burnout is a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterized by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work. This psychological condition develops gradually but may remain unnoticed for a long time for the individual involved. It results from a misfit between intentions and reality at the job. Often burnout is self-perpetuating because of inadequate coping strategies that are associated with the syndrome". This synthetic definition of burnout specifies its general symptomatology, its preconditions, as well as the domain in which it occurs. More specifically, one core indicator (exhaustion) and four accompanying, general symptoms are identified: (i) distress (affective, cognitive, physical and behavioural symptoms); (ii) a sense of reduced effectiveness; (iii) decreased motivation; and (iv) dysfunctional attitudes and behaviours at work. Furthermore, frustrated intentions and inadequate coping strategies play a role as preconditions in the development of burnout, and the burnout process is considered to be self-perpetuating despite the fact that it may not be recognized initially. Finally, the domain is specified: symptoms are work-related and burnout occurs in "normal" individuals who do not suffer from psychopathology.

19.3 OLD WINE IN NEW BOTTLES?

Job burnout has been equated with a myriad of terms. Most of them are plagued by the same sort of definitional ambiguity: tedium, stress, job dissatisfaction, depression, alienation, low morale, anxiety, strain, tension, feeling "worn-out", "nerves", boredom, chronic fatigue, poor mental health, personal crisis, professional melancholia, and vital exhaustion (cf. Maslach & Schaufeli, 1993). Accordingly, the distinctiveness of burnout from other

related and more familiar psychological constructs is an important issue. In particular, questions have been raised about the extent to which burnout can be distinguished from job stress, depression and chronic fatigue.

19.3.1 Burnout and Job Stress

Occupational stress occurs when job demands do not match the person's adaptive resources. Stress is a generic term that refers to the temporary adaptation process that is accompanied by mental and physical symptoms. In contrast, burnout can be considered as a final stage in a breakdown in adaptation that results from the long-term imbalance of demands and resources, thus from prolonged job stress (Brill, 1984). A related conceptual distinction between burnout and stress is that the former includes the development of negative attitudes and behaviours towards recipients, the job and the organization, whereas job stress is not necessarily accompanied by such attitudes and behaviours (Maslach, 1993). This assertion was empirically supported by Schaufeli & Van Dierendonck (1993), who showed the discriminant validity of burnout, as measured with the MBI (particularly depersonalization and reduced personal accomplishment), and generic mental and physical symptoms of job stress. Roughly speaking, emotional exhaustion shares about 30% of the variance with these two stress responses, whereas for depersonalization and reduced personal accomplishment the shared variance is only 14% and 10%, respectively. Finally, it has been claimed that anybody can experience stress, while burnout can only be experienced by those who entered their careers enthusiastically with high goals and expectations. For example, Pines (1993) has argued that specifically individuals who expect to derive a sense of significance from their work are susceptible to burnout (see Section 19.6.1). Those without such expectations would experience job stress instead of burnout. Accordingly, burnout is a specific type of job stress that is characterized by its chronic and multifaceted nature. Moreover, it includes the development of negative attitudes, and it occurs among initially highly motivated individuals.

19.3.2 Burnout and Depression

According to Freudenberger (1983), burnout tends, at least initially, to be job-related and situation-specific rather than pervasive. Instead, a "real" depression generalizes across situations and other spheres of life. In a similar vein, according to Warr (1987), depression concerns context-free affective well-being, whereas burnout concerns job-related affective well-being. This was recently illustrated in a study among teachers that showed that a work-related stressor (i.e. lack of reciprocity in the relationship with students) predicted burnout (and not depression), whereas a similar non-work stressor (i.e. lack of reciprocity in the relationship with one's partner) predicted depression (and not burnout) (Bakker et al., 2000a). Nevertheless, although burnout and depression are different phenomena, they also overlap to a certain extent. Empirical research on the discriminant validity of both concepts shows that particularly the emotional exhaustion component of burnout is substantively related to depression. Based on 12 studies, Schaufeli & Enzmann (1998, p. 86) calculated that both concepts share on average 26% of their variance. The relationships with other burnout components such as depersonalization and personal accomplishment are much weaker, sharing 13% and 9% of their variance, respectively. It may be noted that the fact that depression is differently related to different components of burnout underlines

the validity of a multidimensional model of burnout. After an extensive qualitative review, Glass & McKnight (1996, p. 33) concluded: "Burnout and depressive symptomatology are not simply two terms for the same dysphoric state. They do, indeed, share appreciable variance, especially when the emotional exhaustion component is involved, but the results do not indicate complete isomorphism. We conclude, therefore, that burnout and depressive symptomatology are not redundant concepts". It is unlikely that the relatively strong association between emotional exhaustion and depressive symptomatology is due to overlap in item content of the scales used because factor-analytic studies show that burnout and depression factors emerge as different factors when the items of the burnout and depression instruments are pooled (Bakker et al., 2000a; Leiter & Durup, 1994; McKnight, 1993). Furthermore, some research suggests that burnout may under certain conditions develop into depression rather than the other way around (Glass et al., 1993), and that burnout will result in depression in particular when it becomes accompanied by feelings of inferiority (Brenninkmeyer et al., 2001).

19.3.3 Burnout and Chronic Fatigue

The most prominent symptom of the chronic fatigue syndrome (CFS) is persistent unexplained fatigue, whereas other symptoms commonly reported include mild fever or chills, sore throats, painful lymph nodes, unexplained generalized muscle weakness, muscle discomfort, prolonged generalized fatigue after levels of exercise, generalized headaches, joint pain, neuropsychiatric complains and sleep disturbances (Jason et al., 1995). Unlike burnout, CFS is pervasive, it can affect virtually all major bodily systems: neurological, immunological, hormonal, gastrointestinal and musculoskeletal problems have been reported (Jason et al., 1995). Burnout symptoms are primarily psychological, although accompanying physical symptoms are not uncommon. Contrarily, CFS primarily includes physical symptoms, although accompanying psychological symptoms are observed as well. Therefore, some authors propose to use physical criteria (i.e. low-grade fever, nonexudative pharyngitis, tender cervical or axially lymph nodes) in addition to debilitating fatigue to diagnose CFS (Jenkins, 1991, p. 36). However, others maintain that there are no objective abnormal physical signs that can by used diagnostically (Royal Colleges of Physicians, Psychiatrists and General Practitioners, 1996). Although the debate about the proper diagnostic criteria continues, it is clear that physical symptoms are much more prominent in CFS than in burnout. Furthermore, burnout is job related, whereas the CFS is not restricted to a particular life sphere. Generally, burnt-out workers blame their jobs for the condition they are in, whereas for patients who suffer from CFS, the origin of their symptoms is unclear. In fact, severe unexplained fatigue and exhaustion is a hallmark of CFS. That is precisely what makes CFS such a bewildering experience. Finally, while exhaustion is a common denominator of CFS and burnout, the development of negative, dysfunctional attitudes and behaviours characterize the latter, but not the former. To date, no empirical studies exist on the relationship between burnout and CFS.

19.3.4 Conclusion

It seems that burnout is a separate phenomenon, and that researchers of burnout are not just putting "old wine in new bottles". Burnout is, more than depression, a multidimensional

phenomenon, but is at the same time, unlike depression, restricted to the job setting. Moreover, burnout is different from job stress in several ways: it refers more to a breakdown in adaptation as a result of prolonged job stress, it is characterized by a multidimensional symptomatology, particularly specific attitudes, and it seems partly the result of a high initial level of motivation. Finally, unlike CFS, burnout is a multidimensional, work-related, and primarily mental syndrome, whereas CFS is generic and predominantly characterized by unexplained fatigue and additional physical symptoms.

19.4 MEASUREMENT AND PREVALENCE OF BURNOUT

Many different instruments to assess professional burnout have been proposed (for a review see Schaufeli & Enzmann, 1998, pp. 43–54). Most of these instruments are self-report measures, particularly designed to assess the level of burnout in the human services professions. Although all measures focus in one way or another on the individual's depletion of emotional resources as the core meaning of burnout, less agreement exists about the number and the nature of the other burnout dimensions involved.

19.4.1 Maslach Burnout Inventory

Despite the variety of burnout measures, two instruments are used most frequently. The most popular instrument is the MBI (Maslach et al., 1996), of which three versions exist: the Human Services Survey (HSS), the Educators Survey (ES) and the General Survey (GS). The HSS and the ES are virtually identical except that "recipients" is replaced by "students". Both contain three scales: emotional exhaustion, depersonalization and (reduced) personal accomplishment. The MBI-GS is more generic and includes exhaustion, cynicism and (reduced) professional efficacy. The psychometric quality of the MBI is encouraging: the three scales are internally consistent and the three-factor structure has been confirmed in various studies (Schaufeli & Enzmann, 1998, pp. 51-3). The core symptom of burnout emotional exhaustion—is the most robust scale of the MBI that is strongly related to other burnout measures (convergent validity). Paradoxically, as noted before, it is also the least specific scale, that cannot easily be distinguished from related concepts such as depression (discriminant validity). Similar positive psychometric results have been obtained with the French (Dion & Tessier, 1994), German (Büssing & Perrar, 1992; Enzmann & Kleiber, 1989), Dutch (Schaufeli & Van Dierendonck, 1993, 2000) and Swedish (Söderfeldt et al., 1996) versions of the MBI. Moreover, the cross-national validity of the MBI-HSS has been demonstrated across German, French and Dutch samples (Enzmann et al., 1994) and of the MBI-GS across Finnish, Swedish and Dutch samples (Schutte et al., 2000).

19.4.2 Burnout Measure

The second most widely employed burnout questionnaire is the Burnout Measure (BM) (Pines & Aronson, 1988), originally denoted the Tedium Measure (Pines et al., 1981) The BM is used in about 5% of all studies on burnout (Schaufeli & Enzmann, 1998 pp. 71–2). Although the authors of the BM define burnout as a three-dimensional construct that comprises physical, emotional and mental exhaustion, they conceive their instrument as

BURNOUT

a one-dimensional questionnaire for which a single composite burnout score is computed. The BM is a reliable and reasonably valid research instrument that indicates the individual's level of exhaustion, which is not necessarily job-related. Its factorial validity is not beyond question, though. Instead of one dimension that reflects various aspects of exhaustion, there appear to be two strongly related dimensions, exhaustion and demoralization (Enzmann et al., 1998). In addition, a third dimension—loss of motive—is likely to be an artefact, since it is substantially affected by inconsistent answering patterns of the respondents. Not surprisingly, associations between the BM and the MBI are rather strong, particularly as far as emotional exhaustion and depersonalization are concerned—shared variance between 25% and 50% (Schaufeli & Enzmann, 1998, p. 50).

19.4.3 Stability and Change

Burnout scores are rather stable across time. Schaufeli & Enzmann (1998, pp. 96–8) analysed 15 longitudinal studies with the MBI and found that for emotional exhaustion between 24% and 67% of the variance of the second measurement is explained by the first measurement. Regarding the other burnout dimensions, stability values are similarly high: 12%-61% of variance for depersonalization, and 20%-62% for personal accomplishment. For a construct that is meant to assess a state that is influenced by current situational characteristics, these values are rather high. Remarkably, the length of the time interval seems to be unrelated to the stability of burnout: correlations across a six-month interval are similar to those across a two-year period or even a five-year interval. Hence, burnout seems to be a chronic rather than a transient condition. Despite these high stability coefficients significant changes of mean burnout scores over time may be observed. This might seem contradictory at first glance, but it should be noted that stability is based on correlations across time, which are statistically speaking independent from changes in mean values.

19.4.4 Levels of Burnout

Except for the Netherlands, there are no clinically valid cut-off points available for the MBI (or the BM) that allow differentiation between levels of burnout. The MBI test manual only presents numerical cut-off points based on arbitrary statistical norms. The test authors divided the normative sample into three equally sized groups of 33.3%, assuming that the top, intermediate and bottom thirds of the samples would experience "high", "average", and "low" levels of burnout, respectively (Maslach et al., 1996, p. 5). Although theycorrectly—warn that this classification should not be used for diagnostic purposes, there is a strong temptation to do so, especially for practitioners. Clearly, this is an inappropriate approach, not only because the cut-off points are based on arbitrary statistical norms, but also because they are computed from a composite convenience sample that is not representative for US human services professions. Schaufeli & Van Dierendonck (1995) showed that as expected—levels of burnout are significantly higher in a patient sample that received psychotherapeutic treatment for burnout compared to working samples. Moreover, levels of emotional exhaustion, depersonalization and (reduced) personal accomplishment were significantly higher in the American normative MBI sample than in the Dutch normative sample. Accordingly, extreme caution is required when cut-off points are used to classify

subjects according to their level of burnout: only nation-specific and clinically validated cut-off points should be employed.

19.4.5 The Prevalence of Severe Burnout

Recently, Schaufeli et al. (2001) used a Dutch sample of burned-out employees who were psychotherapeutically treated in an outpatient clinic in order to develop clinically validated cut-off points for the three MBI scales. It appeared that this group, suffering from severe "clinical" burnout, exhibited levels of exhaustion, depersonalization and reduced personal accomplishment that correspond with the 95th, 75th and 75th percentiles, respectively, of the normal distribution of the Dutch normative sample. Based on these clinically validated cut-off points, it was estimated that 4% of the Dutch working population (about 250 000 persons) suffer from clinical burnout. That is, they have MBI burnout levels that are comparable to those who receive psychotherapeutic treatment for burnout (Bakker et al., 2000c). The prevalence of clinical burnout was particularly high among occupational physicians (11%), psychiatrists (9%), teachers (9%), general practitioners (8%) and social workers (7%). Relatively low levels of burnout were found among police officers (1%), hospice workers (2%), staff working with the mentally retarded (2%) and correctional officers (3%). Probably, the low level of burnout in law enforcement is caused by a selection effect because police officers and correctional officers are screened psychologically: those who score high on neuroticism are excluded and drop out. As we shall see later (in Section 19.5.1), neuroticism is positively correlated with burnout.

19.4.6 Occupation-Specific Burnout Profiles

It seems that occupation-specific burnout profiles exist. Schaufeli & Enzmann (1998, pp. 60-6) analysed 73 US studies that were conducted in various occupational fields. They found that, in the US, levels of emotional exhaustion were clearly highest among teachers. Intermediate levels were found in the social services and in medicine, whereas workers in mental health and post-secondary education experienced the lowest levels of emotional exhaustion. For depersonalization, the picture is slightly different. Social workers and teachers report the highest levels, whereas levels in post-secondary education and in mental health professions are lowest. Two professions exhibit particularly high levels of depersonalization: physicians and police officers. Perhaps, this reflects their occupational socialization, which is characterized by emphasis on objectiveness and distance, as in the prototypical "John Wayne syndrome" in police officers-playing the tough guy who is not moved or touched by anything he gets involved in during his duty. An alternative explanation would be that these are typically male-dominated professions with relatively few females. It is known that, as a rule, males experience more depersonalization than females (see Section 19.5.1). Finally, reduced personal accomplishment is especially found in the social services, and among nurses, police officers, and probation and correction officers. Not surprisingly, the most highly trained professionals (i.e. physicians and psychologists) experience the strongest sense of accomplishment in their jobs.

In addition, Schaufeli & Enzmann (1998, pp. 63-5) analysed 27 Dutch studies and it appeared that, compared to the US, profiles of law enforcement (police officers and prison

officers), medicine, and teaching are strikingly similar in the Netherlands. The authors conclude therefore: "it seems that despite absolute differences in levels of burnout between countries, similarities in burnout-profiles are larger than differences" (p. 65).

19.4.7 Conclusion

Burnout can be reliably and reasonably validly measured, particularly with the MBI. Burnout scores tend to be relatively stable across time, even after longer periods. If clinically validated cut-off points are available, the MBI can be used as an individual assessment tool. A relatively small proportion of the working population, roughly ranging from 1% to 10%, suffers from severe burnout symptoms that are comparable to the symptom levels of those who receive psychotherapeutic treatment. Occupation-specific patterns of burnout that are similar across countries seem to exist.

19.5 CORRELATES, CAUSES, SYMPTOMS AND CONSEQUENCES OF BURNOUT

In the past decades, many different factors have been found to be related to burnout in one way or another. Below, the empirical evidence for these associations is discussed briefly. It should be noted that most studies are cross-sectional in nature, so that no causal inferences can be made. Hence, we prefer to talk about possible causes and consequences. Furthermore, various variables have been studied that are neither causes nor consequences, such as demographic characteristics and personality traits. We start our review of empirical evidence with these so-called correlates, followed by a discussion of the possible causes, manifestations and possible consequences. For reasons of clarity, not all references are included. Sometimes, only the most recent or methodologically most rigorous studies are mentioned (for more detailed reviews see Burke & Richardsen, 1996; Cordes & Dougherty, 1993; Kahill, 1988; Lee & Ashforth, 1996; Maslach et al., 2001; Schaufeli & Enzmann, 1998; Shirom, 1989).

19.5.1 Correlates of Burnout

Demographic Characteristics

Most studies do not systematically investigate demographic differences in burnout. Nevertheless, burnout seems to occur most frequently—at least in the USA—among young employees aged under 30, who have relatively little work experience (e.g. Maslach et al., 1996). However, this finding must be interpreted with some caution because of selective dropout. It is quite likely that employees who burnt-out have left their jobs, so that the remaining group of older and more experienced employees—the survivors—is relatively healthy. This so-called "healthy worker effect" has often been observed in studies on job stress (Karasek & Theorell, 1990). Quite remarkably, in European countries such as the Netherlands burnout is more prevalent in older age groups (Schaufeli & Van Dierendonck, 2000). Probably, European employees are more reluctant to change jobs because cultural values and social security systems restrict labour market mobility more than in the US.

Generally speaking, compared to Europe, burnout levels in North America are somewhat higher. For instance, after controlling for age, gender, work experience, number of working hours and type of school, Canadian teachers report significantly higher levels of exhaustion and depersonalization than their Dutch colleagues (Van Horn et al., 1997). One can only speculate about the explanation of this generally observed difference. Perhaps working conditions are poorer in North America or North American respondents are less reluctant to give unfavourable answers.

Initially, it was claimed that women report higher burnout levels then men (e.g. Etzion & Pines, 1986). However, as Greenglass (1991) has pointed out, gender is often confounded with occupational role and hierarchical position. For instance, compared to men, women occupy supervisory roles less often in organizations and therefore have less access to jobrelated rewards such as high income, social status and autonomy. When these confounding variables are taken into account, no significant gender differences in burnout are observed, except for depersonalization. It is consistently found that males report higher depersonalization scores than females, a finding that is in line with other gender differences such as higher prevalence of aggression among males and higher interest in the nurturing role among females (Ogus et al., 1990).

Burnout is associated with higher levels of education (e.g. Maslach et al., 1986). This is quite remarkable since most stress-related problems seem more prevalent among workers with low status and poor education (Fletcher, 1988). Finally, most studies show that singles have an increased risk of burning-out compared to those who are living with a partner (e.g. Maslach & Jackson, 1985). It is claimed that social support from the partner might alleviate stress.

Personality Characteristics

Most personality characteristics associated with burnout are known from the general stress literature (see Chapter 5). It is estimated that burnout and hardiness (i.e. involvement in daily activities, a sense of control over events, and openness to change) share about 10%-25% of their variance, whereby the highest correlations are found with emotional exhaustion (Schaufeli & Enzmann, 1998, p. 78).

Compared to internals, externals are more emotionally exhausted, depersonalized, and experience reduced feelings of personal accomplishment. That is, a review of eleven studies showed that external locus of control explains about 10% of the variance of emotional exhaustion and about 5% of depersonalization and reduced personal accomplishment (Glass & McKnight, 1996).

A review of twelve studies revealed that those who are burned-out cope with stressful events in a rather passive, defensive way, whereas active and confronting coping is associated with less burnout (Schaufeli & Enzmann, 1998, p. 78). Both confronting coping and avoiding coping share an equal amount of about 5%–10% of the variance of emotional exhaustion and depersonalization. With respect to personal accomplishment, confronting coping explains about 15% of the variance, whereas the relationship with avoidant coping is clearly weaker (less than 5%).

In their meta-analysis of 26 samples, Pfennig & Hüsch (1994) found significant negative correlations of all three burnout dimensions with self-esteem, and self-appraisal of competence and personal worth. The explained average variance ranged from 14% (emotional exhaustion) to 10% (depersonalization) and 9% (reduced personal accomplishment). The

only longitudinal study that investigated the causal relationship of burnout and self-esteem found no conclusive evidence about their causal order (Rosse et al., 1991).

In a similar vein, Pfennig & Hüsch (1994) summarized twelve studies on burnout and anxiety, showing that this trait correlates most highly with emotional exhaustion (shared variance 23%), followed by depersonalization (17%) and reduced personal accomplishment (12%).

The "Big Five" personality factors show a particular pattern of relationships with burnout which is illustrated by the study of Deary et al. (1996). Their study was re-analysed by Schaufeli & Enzmann (1998, p. 80) in order to evaluate the relative contribution of all five factors to the variance shared with burnout. It appeared that emotional exhaustion is positively related with neuroticism and openness (shared variance 33%). Depersonalization is positively related with neuroticism and negatively related with agreeableness (shared variance 20%). Lastly, lack of personal accomplishment is positively related with neuroticism, extraversion and openness, and negatively related with conscientiousness (shared variance 25%). Piedmont (1993) predicted burnout seven months later, controlling for situational factors: neuroticism and agreeableness at time 1 explained 42% of emotional exhaustion at time 2.

A small set of personality characteristics that pertain to the relationship with recipients seems to be typical of burnout. For instance, Garden (1989) found that burnout is associated with the Jungian "helping type", which is over-represented in the human services and is characterized by a need for affiliation, a capacity for warmth, and a desire for harmony (see Section 19.6.1). Furthermore, positive associations with burnout have been found with empathy (Williams, 1989) and with poor communal orientation; that is, with a low desire to give and receive benefits in response to the needs of others (Van Yperen et al., 1992; see also Section 19.6.2).

Already in the earliest theoretical accounts, high or unrealistic expectations had been made responsible for the development of burnout. However, Schaufeli & Enzmann (1998, pp. 80–1) analysed twenty studies and found inconclusive results. Ten studies reported a positive correlation of expectations with burnout, but in seven studies the correlation was not significant. Furthermore, in the remaining three studies a negative correlation was reported that contradicted the idealism \rightarrow burnout hypothesis. Interestingly, the only longitudinal study showed that optimistic and idealistically motivated social workers reported lower levels of burnout at the one-year follow-up compared to their less optimistic and idealistic fellows (Kirk & Koeske, 1995). Thus, rather than leading to burnout, high expectations may function as a buffer against burnout.

19.5.2 Possible Causes of Burnout

Quantitative Job Demands

A meta-analysis by Lee & Ashforth (1996) showed that experienced workload and time pressure share on average 42% (six studies) and 25% (five studies) of variance with emotional exhaustion, respectively. Relationships are much weaker with both of the other MBI dimensions. The high correlations with workload must be qualified, however, because this stressor is often operationalized in terms of experienced strain so that considerable overlap in item content exists, especially with emotional exhaustion. Other, more objective, job demands such as number of hours worked per week, amount of direct client contact,

caseload, and the severity of clients' problems, are only studied occasionally. Generally, correlations with burnout are lower but nevertheless in the expected directions: employees experience more burnout when they work more hours per week, interact frequently with recipients, have high caseloads, and have to deal with severe client problems.

Role Problems

Role conflict and role ambiguity are moderately to highly correlated with burnout. Role conflicts occur when conflicting demands at the job have to be met. For instance, correctional officers are expected to facilitate the delinquent's rehabilitation—educational role—as well as guard them—disciplinary role (Schaufeli & Peeters, 2000). Role ambiguity occurs, for instance, when no adequate information is available to do the job well. For example, nurses may be deprived of essential medical information that should be provided by physicians. Whereas role conflict results in conflicting goals and behaviours, role ambiguity precludes the development of goals that direct work behaviour. According to a meta-analytic study of Pfennig & Hüsch (1994), role conflict (49 studies) shares 24% of variance with emotional exhaustion, 13% with depersonalization, and only 2% with personal accomplishment; the percentages for role ambiguity (38 studies) are 14%, 8% and 10%, respectively.

Lack of Social Support

Clear evidence exists for a positive relationship between lack of social support and burnout. Especially, lack of social support from *supervisors* is related with burnout. On the average, lack of support from supervisors explains 14% of the variance of emotional exhaustion, 6% of depersonalization, and 2% of personal accomplishment (13 studies; Lee & Ashforth. 1996). These results, however, could not be replicated in longitudinal studies on social support and burnout (e.g. Dignam, 1986). For lack of social support from co-workers the amounts of variance are 5%, 5% and 2%, respectively (14 studies; Lee & Ashforth, 1996). Independently of a direct effect on burnout, social support might buffer the effects of stressors in such a way that employees who receive more support are better able to cope with their job demands. However, to date, the results of studies on the existence of such a buffer effect of social support are equivocal (e.g. Himle et al., 1991). Small but significant longitudinal effects were found for peer-cohesion, which was related to a decrease in burnout across 1 year (Wade et al., 1986).

Lack of Self-Regulatory Activity

A particular set of job resources fosters self-regulatory activity, which is instrumental in achieving one's work goals. Examples are participation in decision making, autonomy and feedback, which all seem to be negatively associated with burnout. For instance, a meta-analysis of six studies revealed that participation in decision making shares 10% of the variance of emotional exhaustion, 3% of depersonalization and 9% of reduced personal accomposition, whereas the percentages for autonomy (11 studies) are 2%, 2%, and less than 1% respectively (Lee & Ashforth, 1996).

Moreover, lack of feedback is positively related to all three burnout dimensions. Although there are only a few studies available, their results are quite consistent. A meta-analysis of six studies showed that lack of feedback explains 18% of the variance of emotional exhaustion, 12% of depersonalization and 9% of reduced personal accomplishment (Pfennig & Hüsch, 1994).

Client-Related Demands

The above-mentioned job characteristics relate not only to burnout, but also to a variety of other health-related outcomes (Warr, 1987). It was claimed from the very beginning man burnout is specifically associated to client-related stressors (see Section 19.1.1). Schaufeli & Enzmann (1998, p. 84) compared the results of 16 studies and found that, overall, and contrary to expectations, common job-related stressors such as workload, time pressure and role conflicts correlate higher with burnout than client-related stressors. Examples of such stressors are interaction with difficult clients, problems in interacting with clients, frequency of contact with chronically or terminally ill patients, or confrontation with death and dying. The authors conclude: "Hence, it seems that on empirical grounds the assertion that burnout is particularly related to emotionally charged interactions with clients has to be refuted" (p. 84). It may be that those who are frequently confronted with "difficult" patients develop adaptive mechanisms that prevent negative long-term effects such as burnout.

19.5.3 Symptoms and Possible Consequences of Burnout

Some confusion exists about the difference between the symptoms and the consequences of professional burnout. For example, is reduced personal accomplishment a symptom or a consequence of burnout? This type of confusion was particularly obvious in the pioneer phase, when clinical observations prevailed. In the empirical phase, when standardized instruments were used to assess burnout, this distinction was implicitly made since the assumed symptoms of burnout constituted the instrument. Hence, distinction between symptoms and consequences remains rather arbitrary since it depends on the conceptualization and operationalization of burnout. Therefore we prefer to speak about manifestations of burnout that cover both symptoms as well as consequences.

More than 100 symptoms and possible consequences have been associated with burnout, ranging from anxiety to lack of zeal (Schaufeli & Enzmann, 1998, pp. 21–4). Although the number and the variety of these phenomena look rather impressive at first glance, it should be noted that many symptoms come from uncontrolled clinical observations or from interview studies with an impressionistic or unspecified analysis of the data.

Manifestations of burnout are grouped for convenience into five major categories: affective, cognitive, physical, behavioural and motivational. Typically, manifestations not only appear at the individual level, but also at the interpersonal and organizational level.

Affective Manifestations

Usually, a gloomy, tearful and depressed mood is observed among those who suffer from burnout. Although moods may change quickly, generally spirits are low, and a sad and dim

mood prevails. The person's emotional resources are exhausted because too much energy has been used for too long a time. Earlier in this chapter (see Section 19.3.2.) we argued that burnout and depression are different yet overlapping constructs. The second type of affective symptom relates to aggression and anxiety (Kahill, 1988). The burnt-out person's frustration tolerance is diminished, he or she is irritable, oversensitive, and behaves in a hostile and suspicious manner, not only towards recipients, but also towards colleagues and superiors (Maslach, 1982b; Freudenberger, 1980).

Cognitive Manifestations

First and foremost, burnt-out individuals feel helpless, hopeless and powerless. Sometimes, there is even the fear of "going crazy" because one feels out of control. Work has lost its meaning and after being unsuccessful in influencing one's work situation, the person now feels "trapped" (Kahill, 1988). A sense of failure is experienced as well as a feeling of insufficiency, impotence and poor job-related self-esteem (Rossse et al., 1991). Moreover, particular cognitive skills such as memory and attention might be impaired and thinking becomes more rigid, schematic and detached.

One of the most characteristic symptoms of burnout at the interpersonal level is the decreased involvement with recipients. This negative attitude is particularly striking since initially the relationship with recipients has been characterized by involvement, empathy, concern and understanding (Pines & Kafry, 1978). Cognitively, this is reflected by a cynical and dehumanizing perception of recipients characterized by negativism, pessimism, lessened empathy and stereotyping. By derogating, stereotyping and blaming recipients, a psychological distance is created which protects or enhances the self (Maslach, 1982a).

On the organizational level, burnt-out employees neither feel appreciated by their supervisors nor by their colleagues. They lose their concern for the organization and become hypercritical—distrusting management, peers and supervisors. Recently, Schaufeli & Enzmann (1998, pp. 89–91) re-analysed the findings of Lee & Ashforth's (1996) meta-analysis, adding 15 more studies on the relationships of burnout with job satisfaction, organizational commitment and intention to leave. They found that job satisfaction correlates comparatively highly with all three burnout dimensions but most highly with depersonalization (shared variance: 27%), followed by emotional exhaustion and reduced personal accomplishment (20% and 16% shared variance, respectively). Although less strongly than job satisfaction, organizational commitment consistently correlates negatively with emotional exhaustion and depersonalization (shared variance 16%). The relationship with reduced personal accomplishment is clearly weaker (shared variance 5%). Similar results are found with respect to the intention to quit, which shares 20% of variance with emotional exhaustion, 12% with depersonalization, and 6% with reduced personal accomplishment.

Physical Manifestations

A few studies are available that show a consistent positive correlation between psychosomatic complaints and burnout, most clearly with emotional exhaustion. Based on these studies chaufeli & Enzmann (1998, p. 87) estimate that both constructs share between 20% and 46% of their variance. The relationships with depersonalization (between 6%)

and 21%) and personal accomplishment (between 3% and 18%) are much weaker. Unfortunately, virtually no study employed an adequate longitudinal design. An exception is Wolpin (1986), who showed that, after one year, burnt-out teachers report significantly more somatic complaints than teachers who were not considered burnt-out.

It is noteworthy that those complaints that may more easily be verified by objective diagnoses correlate less strongly with burnout. Unfortunately, only one study exists that investigated more or less objectively diagnosed health indicators in relation to burnout. Hendrix et al. (1991) observed a small but significant relationship between emotional exhaustion and the frequency of self-reported cold or flu episodes (1% of explained variance). Finally, results concerning physiological health indicators are inconclusive. For instance, Melamed et al. (1999) found higher cholesterol levels—a risk factor for cardiovascular disease—in burnt-out employees, whereas Pruessner et al. (1999) found lower levels and Hendrix et al. (1991) failed to observe any relationship between burnout and cholesterol levels. Based on the observation that levels of cortisol—also known as the stress hormone—are usually elevated in depression, one could expect this to be the case in burnout as well since this is a related kind of affective syndrome (see Section 19.3.2). Indeed, Melamed et al. (1999) observed higher levels of cortisol in burnt-out employees compared to non-burnt-out employees. However, Pruessner et al. (1999) observed lower cortisol levels.

As far as self-reported frequency of various illnesses is concerned, Corrigan et al. (1995) reported a shared variance with emotional exhaustion plus depersonalization of 10%. A similar relationship between emotional exhaustion and a self-report measure of the frequency of serious illness (12% of shared variance) was found by Bhagat et al. (1995); depersonalization was only marginally related (2%) and reduced personal accomplishment was unrelated to serious illness. Finally, Landsbergis (1988) found a significant positive relationship between self-reported symptoms of coronary heart disease and emotional exhaustion (3% shared variance) and depersonalization (4%). The relationship with reduced personal accomplishment was not significant (2%). Thus, convincing empirical support for the often claimed relationship of burnout with (objectively diagnosed) health problems is still lacking, although significant correlations with self-report measures were found.

Behavioural Manifestations

At the individual level, behavioural symptoms are mainly caused by the person's increased level of arousal. Landsbergis (1988) observed no significant relationship between smoking behaviour and burnout. In a study of police officers, Burke (1994) found no relationship between coffee consumption, smoking, alcohol use, consumption of medication or drug use and any of the burnout dimensions. One study found slightly more substance use (composite measure of alcohol, cigarettes, drugs) among women who scored higher on depersonalization (Nowack & Pentkowski, 1994). In a similar vein, Ogus et al. (1990) reported a small but significant correlation between depersonalization and the use of pain medication among male teachers (explained variance 3%). Hence, it seems that—if at all—substance use is weakly related to depersonalization, probably because this burnout dimension is linked with psychological withdrawal and palliative coping behaviour.

At the organizational level, the most important manifestations of burnout are absenteeism, job turnover and impaired performance. Based on the available studies Schaufeli &

Enzmann (1998, p. 91) estimated that in general the relationship of absenteeism with emotional exhaustion is most consistent (2% explained variance on the average), followed by depersonalization (1%). In contrast, only very few studies have found that reduced personal accomplishment is related to absenteeism, with an average explained variance of less than 1%. Thus, despite the popular assumption that burnout causes absenteeism, its effect is rather small and can best be confirmed with respect to emotional exhaustion. In a similar vein, the relationship between actual turnover and burnout (exhaustion and depersonalization) is rather weak, with effects in terms of shared variance ranging between 1% and 5% (Schaufeli & Enzmann, 1998, p. 91). No effects were found with respect to reduced personal accomplishment. The fact that the relationship between turnover intentions and burnout (see above) is much stronger than with actual turnover, suggests that a large percentage of burnt-out professionals stay in their jobs involuntarily.

It is important to distinguish between self-ratings of performance and objective measures or ratings by others such as co-workers or supervisors. Based on six studies Schaufeli & Enzmann (1998, pp. 91–2) conclude that self-rated performance correlates weakly with burnout: on the average 5% of variance is shared with emotional exhaustion, 4% with depersonalization, and 6% with reduced personal accomplishment. With respect to otherrated or objectively assessed performance, results are inconsistent and disappointing. Three studies found no significant or even positive correlations with burnout, whereas four studies found the expected significant negative correlations, at least with some burnout dimensions. However, on the average the explained variance is less than 1%, irrespective of the dimension of burnout.

Motivational Manifestations

Typically, the burnt-out professional's intrinsic motivation has vanished: zeal, enthusiasm, interest and idealism are lost (Maslach, 1976). Contrarily, disillusionment, disappointment and resignation set in, and physical as well as mental withdrawal from others is observed (Maslach & Pines, 1977). At the interpersonal level this deeply rooted motivational crisis is expressed by a loss of genuine interest in recipients, indifference and discouragement (Pines & Maslach, 1978). One of the most obvious characteristics of burnout is the decreased involvement with recipients. This is illustrated by the so-called "John Wayne syndrome" that is observed among police-officers (see Section 19.4.6) The employee's present poor and/or inappropriate motivation stands in sharp contrast to his or her initial idealism and drive. Initially, it was argued that burnt-out individuals might take home their work problems. Because of this negative transfer, these problems were thought to come to dominate family life and might increase interpersonal conflicts with spouse and children (Jackson & Maslach, 1982). However, after reviewing the studies involved, Schaufeli & Enzmann (1998, p. 89) conclude: "Taken together, there is no conclusive evidence on negative spillover of burnout to private life".

19.5.4 Conclusions

Results from impirical research on the correlates and manifestations of burnout are rather difficult to interpret because the field is rather scattered and the research findings often

contradict each other. Most probably, this is due to sampling bias, the use of poorly validated measures, inadequate research designs, and, last but not least, the complexity of the relationships involved. Nevertheless, five general conclusions can be drawn:

- 1. Comparing the relative importance of correlates of burnout, it seems that anxiety, neuroticism and lack of hardiness are the most prominent personality characteristics. At the same time, workload, time pressure and role conflict seem to be the most important possible causes, while depression, psychosomatic complaints and job dissatisfaction are the most important concomitants or consequences. Quantitative demands such as time pressure and workload are clearly more strongly related with burnout than qualitative demands such as problems in interacting with clients or the confrontation with death and dying. This contradicts the popular assertion that interaction with clients and the confrontation with their emotional needs is at the heart of burnout.
- 2. As far as the three dimensions of the MBI are concerned, emotional exhaustion is most strongly related to various correlates of burnout. This applies especially to work-related stressors (e.g. workload, role conflict) neuroticism, depression and psychosomatic symptoms. Generally, correlations with depersonalization are weaker. On balance, personal accomplishment is least strongly related to potential correlates. Exceptions are the "Big Five" factors of personality, confronting coping behaviour and subjective performance. These results confirm the validity of personal accomplishment as a burnout dimension that reflects professional self-efficacy (Cherniss, 1993; Maslach & Leiter, 1997).
- 3. The least strong or most inconsistent relationships of potential correlates of burnout were found with respect to high or unrealistic expectations, objective health problems, physiological markers, spillover to private life and objectively assessed performance.
- 4. Self-report measures correlate much more highly with burnout than data based on records, physiological measures, observations or assessments by others such as supervisors or co-workers. This may explain at least partly why organizational consequences that are mostly not based on self-reports are only weakly related with burnout.
- When controlling for the initial status of burnout, longitudinal studies do not usually replicate the findings of cross-sectional studies as far as the effects of job demands on burnout are concerned.

19.6 THEORETICAL APPROACHES

Initially, most theorizing was rather speculative and eclectic, borrowing concepts from various psychological theories. In the previous decade, more systematic theoretical approaches have been developed some of which are—at least partly—confirmed by empirical studies. Nevertheless, a comprehensive theoretical framework for burnout is still lacking. Probably, a single general and valid theory of burnout will always remain an illusion in view of the complexity of the phenomenon.

This section distinguishes three theoretical approaches to burnout. First, individual approaches emphasize the role of intra-personal processes. Second, interpersonal approaches particularly focus on the unbalanced relationships that exist between caregivers and recipients. Third, organizational approaches stress the relevance of the wider organizational context for understanding burnout. Of course, these three types of approaches are not mutually

exclusive; they mainly differ in the extent to which they stress the importance of a particular type of factor in the development of the burnout syndrome.

19.6.1 Individual Approaches

Without exception, the eight individual approaches below are speculative, since none of them is supported by robust empirical evidence. The first two approaches are mainly descriptive. The remaining individual approaches are attempts to analyse burnout from more general psychological perspectives that are either traditional (psychoanalysis, existential psychology and learning theory) or more recent (action theory and conservation of resources theory). In one way or another, all individual approaches emphasize the relevance of the discrepancy between expectations and reality.

Burnout as Failure to Retain One's Idealized Self-image

According to Freudenberger (1980), burnout ("the super-achiever sickness") develops when individuals firmly believe in their idealized images of themselves as charismatic, dynamic, inexhaustible and super-competent persons. As a result, they lose touch completely with their other more fallible "real" selves. In vigorously trying to hold up their idealized self-images, burnout candidates typically use the wrong strategies that further deplete their emotional resources. These "false cures" are summarized by Freudenberger in four Ds: Disengagement, Distancing Dulling and Deadness.

Burnout as Progressive Disillusionment

The basic tenet of Edelwich & Brodsky's (1980) approach is that the idealistic expectations of the "helpers" are frustrated. Although they recognize several other built-in sources of frustration in the human services (e.g. lack of criteria for measuring accomplishment, low pay, poor career prospects, inadequate institutional support, low social status), the crucial role of initial unrealistic expectations and noble aspirations is highlighted. According to Edelwich & Brodsky, four stages of progressive disillusionment characterize the burnout process: (i) enthusiasm; (ii) stagnation; (iii) frustration; and (iv) apathy.

Burnout as a Narcistic Disorder

According to Fischer (1983), individuals who have idealized their jobs and suffer subsequent disillusionment could either reduce their ideals or leave the situation. However, neither option is acceptable to the burnout candidate. Instead of giving up or reducing their ideals or looking for another job, they redouble their efforts in order to achieve their unrealistic objectives. They are motivated by the fear of having to give up their narcistic "illusion of grandiosity", the erroneous notion of being special and superior. The burnout candidate's basic sense of self-esteem is grounded in this narcistic illusion. Accordingly, when a choice has to be made between giving up the illusion of grandiosity or exhausting one's resources, the burnout candidate opts for the latter.

Burnout as an Imbalance between Conscious and Unconscious Functions

Based on the psychodynamic theory of Jung, Garden (1991) developed a model of burnout in which the distinction between two opposite personality types plays a central role: "feeling types", who are tender-minded and are characterized by concern and awareness for people, and "thinking types", who are hard-boiled, achievement-oriented and tend to neglect others. In fact, these two types represent psychic functions that are simultaneously present in each individual. One of these functions is usually preferred and the ego identifies with that preferred—and conscious—function, whereas the opposite function remains largely unconscious. People tend to choose jobs that are compatible with their personality type. For instance, in the human services the proportion of feeling types to thinking types is 4:1, whereas in occupations such as engineering, or in management this proportion is reversed: 1:4 (Garden, 1991). According to Jungian theory, feeling types are better in handling emotional demands, whereas thinking types cope better with mental demands. Garden (1989) observed that regardless of the type of job, emotional demands predict burnout in feeling types, while mental demands are predictive for burnout in thinking types. Thus, burnout is most strongly associated with the kind of demand each personality type is "naturally" adapted with. This observation that burnout is related to the fit between job and personality type and not to lack of fit, is explained by a particular psychodynamic self-regulatory process. According to Jungian theory, relying too much on one function (e.g. "feeling") creates an imbalance in the psyche that is counteracted by a likewise increase of its opposite (e.g. "thinking") in the unconscious opposite sphere. Thus, relying too much on one's feeling functions has the paradoxical effect of fuelling the unconscious thinking reservoir (and vice versa). But if the repressed function emerges, its negative effect will be all the more devastating. Accordingly, the dropping of conscious functions into the unconscious and the simultaneous emergence of actively repressed unconscious functions are considered the root causes of burnout since this is a highly energy consuming process that depletes the individual's mental resources.

Burnout as a Failed Quest for Existential Meaning

Drawing upon existential psychology, Pines developed a motivational approach to burnout in which the individual's basic need for meaning and significance plays a crucial role (Pines 1993, 1996; Pines & Aronson, 1988). The underlying assumption of the model is that only highly motivated individuals burnout: "In order to burn out, one has first to be 'on fire'. A person with no such initial motivation can experience stress, alienation, depression, an existential crisis, or fatigue, but not burnout" (Pines, 1993, p. 41). Essentially, according to Pines, burnout is the final result of a gradual process of disillusionment in the quest to derive a sense of existential significance from work. "Idealistic people work hard because they expect their work to make their lives matter in the larger scheme of things and give meaning to their existence" (Pines, 1996, p. 83). So, basically, employees burnout because their experiences do not match their intentions and expectations. In other words, the existential perspective on burnout illustrates that the employee's deeply rooted goals and expectations are instrumental in the development of burnout. In her more recent work, Pines (1996) extends the concept of burnout to other spheres of life such as marriage ("couple burnout").

Burnout as a Pattern of Wrong Expectations

From the perspective of learning theory, burnout results from wrong expectations with respect to: (i) reinforcements; (ii) outcomes; and (iii) efficacy (Meier, 1983). Reinforcement expectations are descriptions about whether certain work outcomes will meet one's goals. For instance, a teacher might prefer to work with motivated students who frequently ask questions. If these goals are too high, reinforcement expectations are not met and burnout might develop. Outcome expectations are defined as descriptions about which behaviours will lead to certain outcomes. For instance, a teacher may experience burnout because of experiences that create the expectation that a class of students "simply cannot learn the material", thus drowning any hope for positive reinforcement from that class. Finally, efficacy expectations refer to personal competence in executing the desired behaviour. For instance, teachers may burnout because they feel that they lack the personal competence necessary to teach adequately. Meier (1983) emphasizes that these three expectations strongly depend on social and personal factors. For instance, group norms and personal beliefs have a major impact on a person's expectations, and thus—indirectly—on the burnout process.

Burnout as Disturbed Action Process

Following German action theory, Burisch (1993) considers the action episode as the basic unit of analysis of his action model of burnout. The individual's latent motives and the situation at hand lie at the core of action episodes that are activated by some perceived situation. In order to reach the incentive, the actor engages in some action (i.e. goal-directed behaviour). When the necessary cognitive and behavioural steps are taken and the goal is attained, the motive becomes temporarily satiated. In that case, the action episode is considered satisfactorily completed. However, according to Burisch, action episodes may be disturbed in four different ways. Some obstacle may interfere with goal attainment, either calling for unexpected high investments (goal impediment) or blocking the goal altogether (motive thwarting). Alternatively, the goal may be obtained, but the rewards fail to meet expectations (insufficient reward). Finally, unexpected negative side effects may occur. Disturbed action episodes result in "first-order stress" that may develop into "second-order stress" when attempts to remedy the situation repeatedly fail. Coping with second-order stress and the concomitant loss of autonomy may be successful and lead to personal growth, enhanced competence, and so on. On the other hand, when coping fails a burnout process is triggered: motives (e.g. of being an effective helper) may inflate or extinguish, action planning may become inadequate, aspiration levels may shift downwards, feelings of selfefficacy may decrease, and demoralization may set in.

Burnout as Loss of Coping Resources

Conservation of resources (COR) theory is a basic motivational theory that postulates that stress occurs: (i) when resources are threatened; (ii) when resources are lost; or (iii) when individuals invent in resources without the expected pay-off (Hobfoll, 1989). Resources are defined rather braidly as valued objects (e.g. clothing, furniture), conditions (e.g. employment, successful marriage), personal characteristics (e.g. social skills, hardiness), and energies (e.g. stamina, knowledge). Since the basic tenet of COR theory is the utilization of resources

and burnout is characterized by resource depletion, the COR perspective seems quite relevant for understanding burnout. According to Hobfoll & Freedy (1993), burnout is more likely to occur when resources are lost than when resources are not gained. They call this the "primacy of loss" and the "secondary importance of gain", respectively. For instance, for teachers, negative interactions with pupils, parents and administrators—which imply losses on the interpersonal level-are more salient than the everyday gains they receive from their iob. When loss occurs, or when resources are threatened, people are motivated to use their coping skills in order to regain resources or to prevent losses. Viewed from this perspective, burnout—the depletion of emotional resources—can be considered the ultimate price that has to be paid for the individual's active attempts to regain resources or to prevent their loss.

THE HANDBOOK OF WORK AND HEALTH PSYCHOLOGY

Conclusion

Virtually all individual approaches emphasize that a strong conscious or unconscious motivation (to help)—including concomitant highly valued goals, expectations and aspirations is a necessary condition for the emergence of burnout. Furthermore, these approaches assume that often these individual psychological characteristics do not match the employee's experiences on the job, and that thus a mismatch between intentions and reality exists. As a result of this poor fit, job stress occurs that eventually may lead to burnout when inadequate coping strategies are adopted and/or when the appropriate individual or organizational coping resources are lacking. For most individual approaches empirical evidence is rather sparse.

19.6.2 Interpersonal Approaches

The next two interpersonal approaches highlight the importance of emotional demands in relationships with recipients, and the dynamics of social relationships in the workplace, respectively. Traditionally, emotionally demanding interpersonal relationships of professional caregivers with recipients have been considered to be the root cause of burnout. However, it is important to broaden the social context and to include relationships with others at the workplace as well, such as superiors and co-workers. Both interpersonal approaches are described in somewhat more detail because they have received—at least partly—empirical support.

Burnout as a Phased Reaction to Emotional Demands

According to Maslach (1982a, 1993), the burnout syndrome is initiated by emotionally demanding relationships between caregivers and their recipients. Particularly in the human services these relationships are stressful by their very nature because professionals are confronted with people's needs, problems and suffering. This puts a heavy psychological burden on them which may drain their emotional resources, eventually leading to emotional exhaustion, the first phase in the burnout process. In order to cope with the emotional stresses, professionals generally develop an attitude of "detached concern"; they learn to distance themselves from recipients in order to help them better. Unfortunately, this survival

strategy, which in fact is a professional skill, does not adequately develop in every professional. Some of them overreact and develop an impersonal, negative, callous and cynical attitude, in which initial concern has given way to complete detachment. This so-called depersonalization constitutes the second phase of the burnout process. It is considered to be a defensive coping strategy to deal with feelings of emotional exhaustion. This strategy further deteriorates the relationships with recipients since instead of reducing emotional strain, depersonalization increases exhaustion. At that point, when the professional is continuously unsuccessful in achieving his or her professional goals, because relationships with recipients are impoverished, feelings of reduced personal accomplishment may develop. This third and final phase completes the downward spiral: diminished accomplishment further increases emotional exhaustion, and, consequently, depersonalization.

The results of three earlier cross-sectional studies partly agree with this sequential model of burnout (Leiter, 1988; Leiter & Maslach, 1988; Leiter & Meechan, 1986). More particularly, the expected positive associations between emotionally demanding relationships with recipients and emotional exhaustion, and between emotional exhaustion and depersonalization have been confirmed. Byrne (1994), who employed causal modelling techniques to test the sequential model of burnout on cross-sectional data, confirmed the model in three independent teacher samples. However, recent work of Leiter (1990, 1991, 1993) supports a mixed sequential and parallel model of burnout. His "developmental model" defines emotional exhaustion as a reaction to occupational stressors, of which work overload and interpersonal conflict are among the most prominent. In Leiter's model, depersonalization is a function of emotional exhaustion, as outlined above. This means that emotional exhaustion mediates most of the impact of environmental conditions on depersonalization. In contrast to the original phased reaction model of Maslach (1982a), Leiter's developmental model does not depict personal accomplishment as a function of depersonalization. Rather, personal accomplishment is positively influenced by the presence of resources such as social support, opportunities for skill enhancement, and participative decision making. Accordingly, two processes seem important: (i) a sequential process in which interpersonal work demands play a major role, leading to depersonalization through exhaustion; and (ii) a parallel process that is dominated by lack of resources, leading to diminished personal accomplishment. A longitudinal study across eight months confirmed the first process, as well as the somewhat independent role of personal accomplishment (Lee & Ashforth, 1993). Moreover, it appeared among physicians that depersonalization-across a five-year period-deteriorates the relationship with patients and thus increases emotional demands, which in their turn lead to emotional exhaustion (Bakker et al., 2000b). Finally, in their meta-analysis, Lee & Ashforth (1996) found that emotional exhaustion is particularly related to interpersonal job demands, whereas poor personal accomplishment is related to lack of resources and depersonalization appears to be related to both job demands and lack of resources. Essentially, these findings agree with both processes that are assumed in Leiter's model.

Burnout as a Result of Social Comparison and Social **Exchange Processes**

Basing themselves on social comparison theory (Schachter, 1959) and equity theory (Walster et al., 1978), the central thesis of Buunk & Schaufeli (1993) is that burnout develops primarily in the social context of a work organization. In order to understand burnout, attention has to be paid to the way in which individuals evaluate their psychological outcomes of, and investments in, the relationships with the recipients, the way in which individuals compare their own responses and feelings with those of others at work, and the way in which they are influenced by the burnout symptoms in their colleagues. Within this general social-psychological framework, three different approaches can be distinguished.

Burnout as a Lack of Reciprocity

By definition, the relationship between caregiver and recipient is complementary, which is semantically illustrated by the terms caregiver and recipient; the former gives, the latter receives. However, according to equity theory, people pursue reciprocity in interpersonal relationships: what they invest and gain from a relationship should be proportional to the investments and gains of the other party in the relationship. Clearly, this is not the case in the human services: the caregiver-recipient relationship is unbalanced in terms of costs and benefits or investments and outcomes. Hence, it is likely that over time a lack of reciprocity develops, whereby caregivers feel that they continuously put much more into relationships with their recipients than they receive back in return. As Buunk & Schaufeli (1999) have pointed out, reciprocity plays a central role in human life, and establishing reciprocal social relationships is essential for the individual's health and well-being. They argue that the strong universal preference for reciprocal interpersonal relationships is deeply rooted because it may have fostered survival and reproductive success in our evolutionary past. Lack of reciprocity—in their evolutionary view—not only leads to negative emotions, but it also motivates attempts to restore reciprocity. This lack of reciprocity, whereby caregivers continuously put much more into relationships with their recipients than they receive back in return, may eventually deplete the professional's emotional resources. It can be inferred from equity theory that this lack of reciprocity and the resulting emotional exhaustion can be dealt with—among others ways—by lowering the recipients' outcomes—that is, by responding to them in a depersonalized way.

Indeed, significant correlations have been found between lack of reciprocity and burnout (particularly exhaustion and depersonalization) in several occupational groups such as nurses, general practitioners, hospital doctors, police officers, teachers, staff working with the mentally handicapped, and correctional officers (for a review see Buunk & Schaufeli, 1999; Schaufeli & Enzmann, 1998, pp. 120–1). Although most studies are cross-sectional, there is some longitudinal evidence for a curvilinear relationship between lack of reciprocity and emotional exhaustion: feeling more deprived as well as feeling more advantaged results in higher exhaustion levels (Van Dierendonck et al., 2001). Furthermore, the relationship between lack of reciprocity and burnout seems to be moderated by personality factors. For instance, Van Yperen et al. (1992) found that nurses who felt they invested highly in the relationships with patients showed elevated levels of burnout only when they were low in communal orientation, a personality characteristic that refers to a general responsiveness to the needs of others. This finding was replicated by Van Yperen (1996).

According to equity theory, similar social exchange processes that are observed in interpersonal relationships govern the relationship of the employee with his or her organization. Therefore, Schaufeli et al. (1996b) have proposed a dual-level social exchange model assuming that in addition to an unbalanced relationship at the interpersonal level, burnout is also caused by lack of reciprocity at the organizational level. They argue that in addition to the usually observed cognitive and behavioural withdrawal reactions (job dissatisfaction,

reduced organizational commitment, turnover and absenteeism), lack of reciprocity at the organizational level may also lead to burnout. The dual-level model was tested successfully in samples consisting of student nurses, teachers, therapists from a forensic psychiatric clinic, staff working with the mentally disabled, and police officers (for a review see Buunk & Schaufeli, 1999; Schaufeli & Enzmann, 1998, p. 122). That is, it was confirmed that burnout is related to perceptions of inequity at the interpersonal as well as at the organizational level.

In sum, it seems that lack of reciprocity is a key concept for understanding burnout. Instead of simply working too long, too hard with too difficult recipients—as is assumed in most traditional models of burnout—it appears that the *balance* between investments and outcomes is crucial for the development of burnout. It looks like this mechanism is working in similar ways at the interpersonal level of caregiver and recipients and at the organizational level of employee and organization.

Burnout as Related to Social Comparison

In addition to emphasizing the importance of social exchange processes, Buunk & Schaufeli (1993) argued on the basis of social comparison theory that human services professionals, who—by the nature of their work—are faced with high emotional demands, tend to compare their own emotional reactions to those of their co-workers. Individuals under stress, particularly when they are uncertain about their own responses, will seek out others for reasons of self-evaluation in order to assess the appropriateness of their own reactions (Buunk, 1994; Schachter, 1959). Buunk & Schaufeli (1993) found—as predicted—that nurses who felt uncertain at work showed an increased desire to affiliate with others, but at the same time their actual affiliation decreased. They explain the latter tendency towards social isolation, which is typical of burnout, by pointing to the fear of embarrassment: talking about one's doubts and uncertainties may be felt as admitting inferiority.

According to social comparison theory, a crucial feature of social comparison is its direction. Individuals may compare themselves with others who are better off (upward comparison) or with others who are worse off (downward comparison). In general, it is assumed that particularly engaging in upward comparisons and interpreting such comparisons in a non-defensive way serve an adaptive function by fostering effective performance and by promoting subjective well-being (e.g. Aspinwall, 1997; Collins, 1996). Vice versa, interpreting upward comparisons in a negative, defensive way will be accompanied by poor well-being and will hinder effective functioning. Indeed, a number of studies have shown that engaging in comparison with others who are better off, and particularly deriving positive feelings from such comparisons, is associated with less emotional exhaustion (Buunk et al., 1994, 2001a, b). In addition, compared to those low in burnout, those high in burnout have been found to respond with higher levels of negative affect to upward comparisons, and to derive more positive affect from downward comparisons (Buunk et al., 2001b). This last finding is in line with Wills' (1991) downward comparison theory. This theory states that individuals faced with lower well-being, such as those experiencing work stress, may temporarily feel better by deriving positive feelings from comparisons with others who are still worse off. However, recent research suggests that under certain conditions, individuals high in burnout may view the situation of others worse off as a potential future for themselves, and thus feel bad when they are confronted with such others (Buunk et al., 2001a). Thus, in general these findings suggest that individuals who use more competent co-workers as

BURNOUT

411

positive role models, who provide information on how to deal effectively with problems at work, may have a lower risk of developing burnout than those who identify with others who are doing worse. Furthermore, those who experience burnout may, as a form of emotional coping, derive positive feelings from the idea that others are still worse off.

Burnout as an Emotional Contagion

The contagious nature of burnout has been observed in case studies (Schwartz & Will, 1953) as well as in field surveys (Golembiewski et al., 1986, pp. 159–64; see also Section 19.6.3). That is, burnout tends to concentrate in particular task groups, wards or departments, whereas at the same time it is virtually not observed in comparable other groups. Of course, this concentration of burnout in particular groups may also be explained by higher workloads in these groups, which would contradict a symptom contagion explanation. However, this alternative hypothesis was rejected in a study that included almost eighty European intensive care units (Bakker et al., submitted). It appeared that—after controlling for job autonomy, subjective workload and objectively assessed workload (i.e. complexity of nursing tasks)—nurses' levels of experienced burnout remained higher in some units compared to others. Moreover, nurses from these units observed more burnout complaints among their colleagues then their fellows did in the other units. These intriguing results support the contagion hypothesis of burnout.

Buunk & Schaufeli (1993) have suggested that colleagues may act as models whose symptoms are imitated through a process of emotional contagion. That is, individuals under stress may perceive symptoms of burnout in their colleagues and automatically take on these symptoms. Emotional contagion is defined as "The tendency to automatically mimic and synchronize facial expressions, vocalizations, and movements with those of another person, and consequently, to converge emotionally" (Hatfield et al., 1994, p. 5). The emphasis in this definition is clearly on non-conscious emotional contagion. There is, however, an alternative way in which people may "catch" emotions from others. Contagion may also occur through a conscious cognitive process by "tuning in" to the emotions of others. This will be the case when an individual tries to imagine how he or she would feel in the position of another, and, as a consequence, experiences the same feelings. The professional attitude of human services workers that is characterized by empathic concern is likely to foster such a process of consciously tuning in to the emotions of others.

Few studies suggest that emotional contagion may play a role in the development of burnout. Westman & Etzion (1995) studied about 100 couples of male military officers and their wives and found that burnout transferred from husbands to wives and vice versa. In a similar vein, Miller et al., (1995) found among professionals who work with homeless people that emotional contagion was directly as well as indirectly—through communicative responsiveness—related to burnout. Recently, two studies with general practitioners (Bakker et al., 2001) and teachers (Bakker & Schaufeli, 2000) showed that those who perceived burnout complaints among their colleagues reported higher levels of emotional exhaustion and subsequent negative attitudes (depersonalization and reduced personal accomplishment) than those who did not perceive such complaints. In addition, in both studies individual susceptibility to emotional contagion was positively related to burnout, particularly in combination with the perception of burnout symptoms in their colleagues. That is, doctors and teachers who perceived burnout complaints among colleagues and who were susceptible to emotional contagion reported the highest exhaustion scores.

Conclusion

In a way, both interpersonal approaches are complementary. The first approach assumes that burnout results from emotionally charged relationships between caregivers and recipients. Furthermore, a dynamic process is stipulated in which depersonalization is considered to be a dysfunctional attempt to deal with feelings of emotional exhaustion. However, it remains unclear why the relationship between caregiver and recipient is so demanding. This is where the second approach links in by emphasizing that this relationship is often characterized by a lack of reciprocity from the perspective of the caregiver. And it is this lack of reciprocity, not only in interpersonal relationships but also in the relationship with the organization, that lies at the core of the burnout syndrome. In addition, social psychological processes, such as social comparison and emotional contagion, seem to play a role in perpetuating burnout in work groups.

19.6.3 Organizational Approaches

Organizational approaches to burnout interpret the syndrome in terms of undesired organizational behaviour, which not only affects the individual but the organization as well. Three approaches are described that differ in scope and in the degree to which they are supported by empirical evidence. The first approach focuses on burnout among young professionals. The second approach describes a phase model of progressive burnout that has been successfully tested in various organizational settings and countries. The final approach considers burnout as the result of a mismatch between person and job.

Burnout as Reality Shock

Cherniss (1980a, 1995) proposed a model of early career burnout that was based on interviews with human service professionals at the beginning of their careers. The basic tenet of his model is that particular work-setting characteristics interact with person characteristics to produce particular stressors. Whether burnout develops or not depends on the way professionals cope with these stressors. Active problem solving is superior to defensive strategies such as avoiding. Accordingly, burnout is a process that develops over time and represents one way of adapting to particular sources of organizational stress.

Cherniss distinguishes between eight negative work-setting characteristics:

- 1. the absence of an orientation or introduction programme for novices;
- 2. high workload;
- 3. understimulation;
- 4. limited scope of client contact;
- 5. low level of autonomy;
- 6. discrepancy between institutional goals with personal values;
- inadequate leadership and supervisory practices;
- 8. social isolation.

In addition, two kinds of personal characteristics are mentioned: resources outside of work and career orientation. The latter includes "social activists" (who want to change the world),

"careerists" (who want to make money), "artisans" (who are intrinsically motivated), and "self-investors" (for whom the job is a necessary evil). According to Cherniss, the major sources of stress that are brought about by the interaction of work setting and person are:

- 1. uncertainty and doubts about one's competence;
- 2. problems with recipients;
- 3. bureaucratic infringement on one's autonomy;
- 4. lack of challenge and fulfillment;
- 5. lack of collegiality.

In the process of adapting to these stressors, which are rather typical for the human services, Cherniss observed in young professionals negative changes in attitudes and outlook that are indicative of burnout: reduced aspirations and responsibility, loss of idealism, increased cynicism and pessimism, increased emotional detachment, withdrawal from work and growing concern with the self.

Cross-sectional studies among police officers (Burke et al., 1984) and teachers (Burke & Greenglass, 1989) support the validity of the model. As expected, path-analysis showed two significant indirect paths from work-setting characteristics and personal characteristics to burnout, both mediated through experienced sources of stress. In addition, significant direct paths were found from work-setting and personal characteristics to burnout. Furthermore, Burke & Greenglass (1988) showed that teachers who described themselves as "social activists" had the highest burnout scores. This is compatible with the view of burnout as a process of progressive disillusionment.

Cherniss (1989, 1995) re-interviewed the same professionals ten years after he developed his model in order to explore the relationship between the degree of burnout experienced during the first year of the career and career adaptation during the next decade. His results show that those who were more burnt-out early in their careers were less likely to change careers and were more flexible in their approach to work. So, the follow-up study suggests that early career burnout does not lead to any significant negative long-term consequences.

Burnout as a Virulent Process

Essentially, the approach of Golembiewski and his colleagues is rather straightforward (Golembiewski & Munzenrider, 1988; Golembiewski et al., 1996). They consider burnout as a virulent process that develops progressively through eight phases. It is claimed that the burnout process might be set in motion by various different job stressors (e.g. work overload, lack of autonomy, conflicts with co-workers or supervisors). Moreover, it is assumed that burnout leads to poor physical health, reduced productivity and poor work performance. Golembiewski agrees with the three-dimensionality of the burnout syndrome as proposed by Maslach (1982a), but does not agree with her sequential model. Instead, he distinguishes eight progressive phases of burnout. Depersonalization is considered the least important contributor to burnout, followed by lack of personal accomplishment and emotional exhaustion. Dichotomizing the distribution of MBI scale scores at the median as high and low generates eight phases of burnout (Table 19.1). It is important to note that, although the virulence of burnout increases from phase I to phase VIII, individuals do not necessarily need

Table 19.1 Progressive phases of burnout

	1	11	Ш	IV	V	VI	VII	VIII
DEP PA(r) EE	Low Low Low	High Low Low	High	High	Low	Low		High High High

DEP = MBI-depersonalization; PA(r) = MBI-personal accomplishment (reduced); EE = MBI-emotional exhaustion.

Source: Golembiewski & Munzenrider, R.F. (1988, p. 28). Reprinted by permission of Greenwood Publishing Group Inc., Westport, CT.

to follow the successive stages. Since no theoretical rationale is presented, Golembiewski's approach remains purely descriptive.

The categorization into eight phases boils down to reducing all possible (80 000!) combinations of MBI scores on an eight-point scale. When depersonalization, reduced personal accomplishment and emotional exhaustion are assigned weights of 1, 2 and 4, respectively, and these weights are added for every phase, an eight-point rating scale emerges ranging from 0 (phase I) to 7 (phase VIII) (Burisch, 1989, p. 20). Accordingly, the phase model is heavily biased towards emotional exhaustion (Leiter, 1993).

Research based on the phase model in organizations followed three lines. Most studies have attempted to validate the notion of progressive phases of burnout. Overall, these attempts have been quite successful. Individuals in more advanced phases almost always report more negative work experiences (e.g. greater stress, less autonomy, more conflicts and role problems, less support) and more negative outcomes (e.g. job dissatisfaction, psychosomatic symptoms, higher turnover intentions, less job involvement, decreased productivity). For extensive reviews see Golembiewski & Munzenrider (1988) and Golembiewski et al. (1996). In addition, most of these results have been replicated in cross-national studies.

A second stream of research indicates that the incidence of burnout in various phases differs across organizations (see Golembiewski et al., 1996). For instance, the range of respondents in phase VIII varies from 6% to 29%. Moreover, burnout tends to cluster in particular work groups: 83% of the employees in the most advanced phase are employed in work groups where more than 50% of their colleagues are assigned to an advanced phase as well. As we have seen (in Section 19.6.2), this might be explained by a process of symptom contagion. Finally, phase assignments are fairly stable across time: 40% are assigned to the same phase one year later, whereas 55% move only one phase up or down. Individuals moving to a lower burnout phase reported corresponding improvements in antecedents (i.e. work-setting characteristics) and consequences (greater job satisfaction and fewer psychosomatic symptoms) (Burke & Greenglass, 1991).

Burnout as Mismatch between Person and Job

Recently, Maslach & Leiter (1997) argued that burnout results from a situation of chronic imbalance in which the job demands more than the employee can give and provides less than he or she needs. This mismatch between person and job is independent of the specific content of the job. It may occur in the human services as well as outside this occupational

field. Emotional overload resulting from working with recipients, which was considered the root cause of burnout in their previous model (Leiter, 1993; Maslach, 1993; see also Section 19.6.2), is now regarded as a particular aspect of the person–job mismatch. Instead of a single root cause for burnout (i.e. emotional overload), six types of person–job mismatches are considered to be potential sources of burnout:

- 1. work overload (i.e. having to do too much in too little time with too few resources);
- 2. lack of control (i.e. having no opportunities to make choices and decisions, using one's abilities to think and solve problems);
- lack of rewards (i.e. inadequate monetary rewards as well as internal rewards such as recognition appreciation);
- 4. lack of community (i.e. a loose and non-supportive social fabric, social isolation and chronic and unresolved problems);
- 5. lack of fairness (i.e. employees are treated inequitably, and respect and self-worth are not confirmed);
- 6. value conflict (i.e. the requirements of the job do not agree with personal principles).

Maslach & Leiter (1997) argue that these six person-job mismatches are pervasive in modern organizational life. They illustrate these mismatches with case materials and use their approach to put burnout research in perspective.

Conclusion

Despite large differences, the three approaches agree that similar organizational factors (e.g. qualitative and quantitative job demands, lack of autonomy or control, lack of rewards, incongruent institutional goals or values, and lack of social support or community) are important correlates of burnout. Moreover, they point to the fact that burnout not only has negative effects for the individual but that it is also detrimental to the organization in terms of lowered productivity and efficiency, and poor quality of service.

19.7 INTERVENTIONS

From the moment burnout was introduced in the early 1970s, there has been a vivid interest in interventions. There is an extensive, albeit kaleidoscopic and rather scattered, literature on burnout interventions that suggests that virtually every approach from the occupational stress area can be used to prevent or reduce burnout. Essentially, two general approaches can be distinguished: individual interventions and workplace interventions. Although almost every author on the subject acknowledges that a combination of both approaches would be most effective, the vast majority of burnout interventions have been conducted on the individual level. However, a strictly individual approach to burnout creates the danger that a "blame the victim" situation is created.

This concluding section first briefly reviews individual and workplace interventions that have been applied to burnout (for a more extensive review see Schaufeli & Enzmann, 1998, pp. 144–83). Next, the results of empirical studies on the effectiveness of stress management and burnout interventions are discussed.

19.7.1 Individual and Workplace Interventions

Individual approaches to prevent or reduce burnout include cognitive-behavioural techniques such as stress inoculation training, rational emotive therapy, cognitive restructuring and behavioural rehearsal (Edelwich & Brodsky, 1980). A cognitively oriented approach is relevant because burnout often involves "wrong" cognitions such as unrealistic expectations and false hopes. In addition, relaxation techniques and didactic stress management are often used to reduce burnout (e.g. Jaffe & Scott, 1989). The latter involves the presentation of practical information about burnout and includes techniques such as self-monitoring. Time management, balancing work and private life, physical training, dieting and increasing one's social skills-particularly assertiveness-have been recommended to combat burnout (Maslach, 1982b). In order to counteract the reality shock that is experienced by many professionals at the start of their careers, preparatory training programmes may provide them with more realistic images of their profession, instead of fostering wrong expectations (Cherniss, 1995). Mutual aid groups are advocated for self-help (Spicuzza & De Voe, 1982). Preferably these groups should be initiated by the professionals themselves, rather than by their management (Cherniss & Dantzig, 1986). Specialized counselling and psychotherapy programmes have been developed for burnt-out patients that are not only directed towards symptom reduction but also towards work resumption and rehabilitation (Schaufeli & Enzmann, 1998, pp. 160-64).

Many of the aforementioned techniques to reduce burnout are combined in so-called burnout workshops that rest on two pillars: increasing the participants' awareness of their work-related problems and augmenting their coping resources by cognitive and behavioural skills training and by establishing support networks. More specifically, workshops may include self-assessment, didactic stress management, relaxation, cognitive and behavioural techniques, time management, peer support, and the promotion of a healthy lifestyle and a more realistic image of the job. In other words, the burnout workshop combines many rather general strategies for one specific purpose: preventing and combating burnout.

Only occasionally, workplace interventions are explicitly carried out in order to reduce stress or burnout. Generally, other purposes are targeted such as increased productivity and efficiency, cost-effectiveness, smooth communication or organizational flexibility. Nevertheless, there is an increasing awareness that preventing stress at the workplace is important because of the high direct and indirect costs that are associated with it (European Commission, 1999). As far as burnout is concerned, workplace interventions are even less specifically described than individual approaches.

Work redesign (i.e. job enlargement, job rotation and job enrichment) is mentioned as a major tool to decrease quantitative and qualitative workload (Pines & Maslach, 1980). Another way to reduce qualitative workload is to follow additional training courses (e.g. "How to deal with violent clients"). Since many burnout candidates feel "locked in" to their careers, career development programmes and career counselling would be other organizational approaches to prevent burnout. Especially in order to avoid early career burnout, Cherniss (1980a) proposed an introductory mentorship system. Bi-directional communication between management and employees, adequate procedures for conflict management and participative decision making have also been proposed as antidotes to burnout (Cherniss, 1980a). Moreover, social support from colleagues and superiors should be institutionalized in the form of regular consultations and meetings (Pines & Maslach, 1980). In addition, "time-outs" and sabbatical leaves have been suggested in order to enhance the recuperation

from the daily stresses of the job (Pines & Kafry, 1982). Finally, Golembiewski et al. (1987) describe an organizational development (OD) approach to burnout that strengthened the workers' social network for participatory change through problem confrontation, group consolidation around problems, and building consensus for change. According to Karasek & Theorell (1990, pp. 239–41), this approach essentially reduces job demands and increases worker control.

19.7.2 The Effectiveness of Interventions

Recently, Van der Klink et al. (2001) performed a meta-analysis of 48 (quasi-) experimental studies on the effectiveness of interventions for work-related stress. They distinguish four intervention types, three of which are individual-focused, that are also often used to combat burnout: (i) cognitive-behavioural (18 studies), (ii) relaxation (17 studies) (iii) multimodal (8 studies)—a combination of (i) and (ii). Workplace-focused intervention programmes (5 studies) constitute the fourth type of intervention. It appeared that all individual-focused programmes had significant effects but that cognitive-behavioural interventions and mutimodal programmes are more effective than relaxation training. In terms of effect size, the impact of cognitive-behavioural and mutimodal programmes is "medium", whereas the impact of relaxation is "small". In contrast, workplace interventions showed no significant effects.

In addition to studies evaluating the effectiveness of general stress management interventions, there have also been a number of studies examining the effects of specific antiburnout programmes. While most of these studies exclusively involve individually oriented programs, Pines & Maslach (1980) describe a successful workplace intervention to reduce burnout by redesigning the jobs of professionals who worked at a day-care centre for children. Unfortunately, they do not present quantitative data. In contrast, Golembiewski et al. (1987) were able to show a positive effect on burnout and turnover rates of their organizational development programme that was conducted in the human services department of a pharmaceuticals company. Unfortunately, the effect on burnout was not retained after the firm went through a process of reorganization. The introduction of a system of planned nursing care in a Swedish psychogeriatric clinic, in which each patient was assigned a particular nurse who was responsible for all nursing tasks, led to a reduction of burnout at the one-year follow up compared to the traditional ward system where one patient was nursed by many different nurses (Berg et al., 1994). Unfortunately, two Dutch studies on similar job redesign projects among psychiatric nurses failed to confirm these positive results (Melchior et al., 1996, 1997). To conclude, it seems that in general, the results of workplace intervention programmes to reduce burnout are somewhat disappointing.

The effectiveness of individual approaches to combat burnout has been established somewhat more firmly that that of organizational approaches. For instance, Freedy & Hobfoll (1994) used stress inoculation training among nurses to enhance their social support and individual mastery resources. Participants experienced significant enhancements in social support and mastery compared to the no-intervention control group. Particularly, nurses with low initial levels on both resources showed significant reductions in emotional exhaustion and depression. Similar positive results were obtained by West et al. (1984), who used didactic stress management, training in coping skills (i.e. relaxation, assertiveness, cognitive restructuring and time management), and exposure via role-playing. A four-month follow-up

showed that burnout (i.e. emotional exhaustion and reduced personal accomplishment) decreased significantly, as did anxiety and systolic blood pressure. More detailed analysis revealed that coping skills were the main ingredient of the programme. In another controlled study, Higgins (1986) showed that learning palliative coping skills (i.e. progressive relaxation and systematic desensitization) was equally effective as cognitive and behavioural skills training (i.e. time management, assertiveness training and rational emotive therapy) in reducing levels of emotional exhaustion. However, Corcoran & Bryce (1983) showed that a behaviourally oriented "Human Resource Development Program" was slightly superior to a more cognitively oriented "Microcounseling Training Program" in reducing levels of emotional exhaustion.

Pines & Aronson (1983) evaluated a one-day burnout workshop for employees of two social services that combined several individual approaches: e.g. relaxation techniques, cognitive stress management, time management, social skills training, didactical stress management and attitude change. The participants' level of exhaustion decreased slightly but not significantly. However, compared to the control group that did not participate in the workshop, satisfaction with co-workers went up significantly in the experimental group. Schaufeli (1995) evaluated a somewhat similar burnout workshop for community nurses but found that only the symptom levels (i.e. emotional exhaustion, psychological strain and somatic complaints) of the participating nurses decreased significantly. However, no significant changes were observed in levels of the attitudinal component of burnout (depersonalization and reduced personal accomplishment). In addition, it was observed that nurses who were rather resistant to stress benefited most from the workshop. Van Dierendonck et al. (1998) evaluated a three-day burnout workshop for staff working in direct care with mentally disabled people. The workshop was strongly cognitive-behaviourally oriented and included such aspects as cognitive restructuring, didactic stress management and relaxation. In addition, a strong accent was put on career development. Participants analysed their strengths and weaknesses and drew up a plan of action for the time ahead. After six months and one year, follow-up meetings were organized in order to evaluate this plan. The study included two non-treated control groups, one from the same organization (the internal control group) and one from another similar organization (the external control group). Results showed that emotional exhaustion dropped significantly for the experimental group compared to both control groups at each follow-up, but no effects were observed for depersonalization and personal accomplishment. Finally, registered absenteeism significantly decreased in the experimental group, whereas it increased in the internal control group. In another study, the effects of mutual aid groups were evaluated by two studies that consistently showed that levels of burnout did not decrease (Brown, 1984; Larson, 1986). However, participants were satisfied about the programme and about the group experience, and had become more content with their co-workers and superiors.

Conclusion

It seems that individual stress management interventions work. However, it is rather difficult to draw general conclusions about the effectiveness of specific individual burnout intervention programmes because the evaluation studies use different samples, procedures, time frames, measurement instruments and training methods. In addition, some studies suffer from methodological inadequacies such as the lack of control groups and small

numbers of participants. Nevertheless, one major conclusion emerges: the core symptom of burnout—exhaustion—can be reduced by training professionals to use particular coping skills, most notably relaxation techniques and cognitive restructuring. On the other hand, personal accomplishment, and particularly depersonalization seem rather resistant to change. The fact that depersonalization and reduced personal accomplishment do not change is not very surprising because most techniques that are employed in burnout workshops focus on reducing arousal and not on changing attitudes (depersonalization) or on enhancing specific professional skills or resources (personal accomplishment). Besides, most burnout models assume that depersonalization results from exhaustion. Providing social support—as in staff-support groups—does not seem to have a positive impact on burnout, although these programmes are evaluated positively and satisfaction with colleagues seems to increase.

19.8 FINAL REMARKS

More than 25 years after its introduction, burnout developed into a prospering research area in work and health psychology. The concept—which was initially recognized as a social problem—has successfully penetrated from practice into the realm of academic psychology—and from there back to practice again. Some major achievements have been made in the past quarter of a century. Most importantly, a consensual agreement has developed on an operational definition of burnout, which is exemplified by the almost universal use of the MBI. In addition, this chapter has shown that much progress has been made on the empirical as well as on the conceptual level. However, much work remains to be done. There is still a great need for research that is theory-driven, longitudinal and includes other than self-report measures. Moreover, valid tools for individual assessment have to be developed as well as specific—organization-based—interventions.

The overview presented in this chapter is based for a large part on North American studies that were carried out among human services professionals, although the growing number of studies from other countries and outside the human services was also considered. In the years ahead researchers have to take up the challenge to further expand burnout research outside North America as well as beyond the human services in order to investigate whether or not the findings summarized in this chapter generalize to different countries and occupational fields. A final challenge originates from the recent expansion of the burnout construct into the direction of its positive pole, job engagement—an energetic state in which one is dedicated to excellent performance (Maslach et al., 2001). Do the findings from this chapter also apply to engagement, except—of course—that the direction of the relationships is reversed, or does engagement has its own specific causes, correlates and consequences? How does one move from burnout to engagement, and from engagement to burnout? These and other new questions are on the research agenda for the years to come.

REFERENCES

Aspinwall, L.G. (1997) Future-oriented aspects of social comparison. In B.P. Buunk & F.X. Gibbons (eds) *Health, Coping, and Well-Being: Perspectives from Social Comparison Theory.* Mahwah, NJ: Lawrence Erlbaum, pp. 125-66.

Bakker, A.B. & Schaufeli, W.B. (2000) Burnout contagion processes among teachers. Journal of Applied Social Psychology, 30, 2289–308.

- Bakker, A.B., Schaufeli, W.B., Demerouti, E., Janssen, P.M.P., Van der Hulst, R. & Brouwer, J. (2000a) Using equity theory to examine the difference between burnout and depression. Anxiety, Stress and Coping, 13, 247-68.
- Bakker, A., Schaufeli, W.B., Sixma, H.J., Bosveld, W. & Van Dierendonck, D. (2000b) Patient demands, lack of reciprocity, and burnout: a five-year longitudinal study among general practitioners. Journal of Organizational Behaviour, 21, 425-41.
- Bakker, A., Schaufeli, W.B. & Van Dierendonck, D. (2000c) Burnout: prevalentie, risicogroepen en risicofactoren [Burnout: prevalence, risk groups and risk factors]. In I.L.D. Houtman, W.B. Schaufeli & T. Taris (eds). Psychische vermoeidheid en werk: Cijfers, trends en analyses. Alphen a/d Rijn: Samsom, pp. 65-82.
- Bakker, A.B., Schaufeli, W.B., Sixma, H. & Bosveld, W. (2001) Burnout contagion among general practitioners. *Journal of Social and Clinical Psychology*, 20, 82-98.
- Bakker, A.B., Le Blanc, P.M. & Schaufeli, W.B. (submitted) Burnout contagion among nurses who work at intensive care units: a European study.
- Berg, A., Welander-Hansson, U. & Hallberg, I. R. (1994) Nurses' creativity, tedium and burnout during 1 year of clinical supervision and implementation of individually planned nursing care: comparisons between a ward for severely demented patients and a similar control ward. *Journal of Advance Nursing*, 20, 742-9.
- Bhagat, R.S., Allie, S.M. & Ford, D.L. (1995) Coping with stressful life events: an empirical analysis. In R. Crandall & P.L. Perrewe (eds) *Occupational Stress: A Handbook*. Philadelphia, PA: Taylor & Francis, pp. 93–112.
- Bradley, H.B. (1969) Community-based treatment for young adult offenders. *Crime and Delinquency*, 15, 359–70.
- Brenninkmeijer, V., Van Yperen, N.W. & Buunk, B.P. (2001) Burnout and depression are not identical twins: is superiority a distinguishing feature? *Personality and Individual Differences*, 30, 873-80.
- Brill, P.L. (1984) The need for an operational definition of burnout. Family and Community Health, 6, 12-24.
- Brown, L. (1984) Mutual help staff groups to manage work stress. Social Work with Groups, 7, 55–66. Burisch, M. (1989) Das Burnout-Syndrom: Theorie der inneren Erschöpfung [The Burnout Syndrome: Theory of Internal Exhaustion]. Berlin: Springer-Verlag.
- Burisch, M. (1993) In search of theory: some ruminations on the nature and etiology of burnout. In W.B. Schaufeli, C. Maslach & T. Marek (eds) *Professional Burnout: Recent Developments in Theory and Research*. Washington, DC; Taylor & Francis, pp. 75-94.
- Burke, R.J. (1994) Stressful events, work-family conflict, coping, psychological burnout, and well-being among police officers. *Psychological Reports*, 75, 787–800.
- Burke, R.J. & Greenglass, E.R. (1988) Career orientations and psychological burnout in teachers. Psychological Reports, 63, 107-16.
- Burke, R.J. & Greenglass, E.R. (1989) Psychological burnout among men and women in teaching: an examination of the Cherniss model. *Human Relations*, **42**, 261-73.
- Burke, R.J. & Greenglass, E.R. (1991) A longitudinal study of progressive phases of psychological burnout. *Journal of Health and Human Resources Administration*, 13, 390-408.
- Burke, R.J. & Richardsen, A.M. (1996) Stress, burnout, and health. In C.L. Cooper (ed.) *Handbook of Stress, Medicine, and Health*. New York: CRC Press, pp. 101-17.
- Burke, R.J., Shearer, J. & Deszca, E (1984) Correlates of burnout phases among police officers. Group and Organizational Studies, 9, 451-66.
- Büssink, A. & Perrar, K.M. (1992) Die Messung von Burnout. Untersuchung einer deutschen Fassung des Maslach Burnout Inventory (MBI-D) [The measurement of burnout: an investigation with the German version of the Maslach Burnout Inventory]. Diagnostica, 38, 328-53.
- Buunk, B.P. (1994). Social comparison processes under stress: towards an integration of classic and recent perspectives. In W. Stroebe & M. Hewstone (eds) European Review of Social Psychology, vol. 5. Chichester: John Wiley & Sons, pp. 211-41.
- Buunk, B.P. & Schaufeli, W.B. (1999) Reciprocity in interpersonal relationships: an evolutionary perspective on its importance for health and well-being. In W. Stroebe & M. Hewstone (eds) European Review of Social Psychology, vol. 10. Chichester: John Wiley & Sons, pp. 260-91.

- Buunk, A.P & Schaufeli, W.B. (1993) Burnout: a perspective from social comparison theory. In W.B. Schaufeli, C. Maslach & T. Marek (eds) *Professional Burnout: Recent Developments in Theory and Research*. Washington, DC: Taylor & Francis, pp. 53-73.
- Buunk, A.P., Schaufeli, W.B. & Ybema, J.F. (1994) Burnout, uncertainty and the desire for social comparison among nurses. *Journal of Applied Social Psychology*, 24, 1701-18.
- Buunk, B.P., Ybema, J.F., Gibbons, F.X. & Ipenburg, M.L. (2001a) The affective consequences of social comparison as related to professional burnout and social comparison orientation. *European Journal of Social Psychology*, 31, 1-15.
- Buunk, B.P., Ybema, J.F., Van der. Zee, K., Schaufeli, W.B. & Gibbons, F.X. (2001b) Affect generated by social comparisons among nurses high and low in burnout. *Journal of Applied Social Psychology*. 31, 1500–20.
- Byrne, B.M. (1994) Burnout: testing for validity, replication and invariance of causal structure across elementary, intermediate, and secondary teachers. *American Educational Research Journal*, **31**, 645–73.
- Cherniss, C. (1980a) Staff Burnout: Job Stress in the Human Services. Beverly Hills, CA: Sage.
- Cherniss, C. (1980b) Professional Burnout in Human Service Organizations. New York: Praeger.
- Cherniss, C. (1989) Career stability in public service professionals: a longitudinal investigation based on biographical interviews. *American Journal of Community Psychology*, 17, 399–422.
- Cherniss, C. (1993) Role of professional self-efficacy in the etiology and amelioration of burnout. In W.B. Schaufeli, C. Maslach & T. Marek (eds) *Professional Burnout: Recent Developments in Theory and Research*. Washington, DC: Taylor & Francis, pp. 135-49.
- Cherniss, C. (1995) Beyond Burnout: Helping Teachers, Nurses, Therapists and Lawyers Recover from Stress and Disillusionment. New York: Routledge.
- Cherniss, C. & Dantzig, S.A. (1986) Preventing and managing job related stress. In R.R. Kilberg, P.E. Nathan and R.W. Thoreson (eds) *Professionals in Distress: Issues, Syndromes, and Solutions*. Washington, DC: American Psychological Association, pp. 255-73.
- Collins, R. L. (1996) For better or worse: the impact of upward social comparison on self-evaluations. Psychological Bulletin, 119, 51-69.
- Corcoran, K.J. & Bryce, A.K. (1983) Intervention in the experience of burnout: effects of skill development. *Journal of Social Service Research*, 7, 71-9.
- Cordes, C.L. & Dougherty, T.W. (1993) A review and an integration of research on job burnout. Academy of Management Review, 18, 621-56.
- Corrigan, P.W., Holmes, E.P. & Luchins, D. (1995) Burnout and collegial support in state psychiatric hospital staff. *Journal of Clinical Psychology*, 51, 703-10.
- Deary, I.J., Blenkin, H., Agius, R.M., Endler, N.S., Zealley, H. & Wood, R. (1996) Models of jobrelated stress and personal achievement among consultant doctors. *British Journal of Psychology*, 87, 3–29.
- Dignam, J.T. (1986) Social support, job stress, burnout and health among correctional officers: a longitudinal analysis. *Dissertation Abstracts International*, 47, 4646-B (order no. DA8704509).
- Dion, G. & Tessier, R. (1994) Validation de la traduction de l'Inventaire d'épuisement professionnel de Maslach et Jackson [Validation of the translation of the burnout inventory of Maslach and Jackson]. Canadian Journal of Behavioral Science, 26, 210-27.
- Edelwich, J. & Brodsky, A. (1980) Burn-out: Stages of Disillusionment in the Helping Professions. New York: Human Services Press.
- Enzmann, D. & Kleiber, D. (1989) Helfer-Leiden: Stress und Burnout in psychosozialen Berufen [Helper Ordeals: Stress and Burnout in the Human Services]. Heidelberg: Asanger Verlag.
- Enzmann, D., Schaufeli, W.B. & Girault, N. (1994) The validity of the Maslach Burnout Inventory in three national samples. In L. Bennett, D. Miller & M. Ross (eds) *Health Workers and AIDS:* Research, Interventions and Current Issues. London: Harwood, pp. 131-50.
- Enzmann, D., Schaufeli, W.B., Janssen, P. & Rozeman, A. (1998) Dimensionality and validity of the Burnout Measure. *Journal of Occupational and Organisational Psychology*, 71, 331-51.
- Etzion, D. (1987) Burnout: The hidden agenda of human distress, IIBR series in Organizational Behavior and Human Resources, working paper no. 930/87), The Israel Institute of Business Research, Faculty of Management, Tel Aviv University, Israel.
- Etzion, D. & Pines, A. (1986) Sex and culture in burnout and coping among human service professionals: a social psychological perspective. *Journal of Cross-Cultural Psychology*, 17, 191–209.

- European Commission (1999) Guidance on Work Related Stress. Spice of Life or Kiss of Death. Luxembourg: Office for Official Publications of the European Communities.
- Fischer, H.J. (1983) A psychoanalytic view on burnout. In B.A. Farber (ed.) Stress and Burnout in the Human Service Professions. New York: Pergamon Press, pp. 40-6.
- Fletcher, B. (1988) The epidemiology of occupational stress. In C.L. Cooper & R. Payne (eds) Causes, Coping and Consequences of Stress at Work. Chichester: John Wiley & Sons, pp. 3-52.
- Freedy, J.R. & Hobfoll, S.E. (1994) Stress inoculation for reduction of burnout: a conservation of resources approach. *Anxiety, Stress and Coping*, 6, 311-25.
- Freudenberger, H.J. (1974) Staff burnout. Journal of Social Issues, 30, 159-65.
- Freudenberger, H.J. (1980) Burnout: The Cost of High Achievement. New York: Anchor Press.
- Freudenberger, H.J. (1983) Burnout: Contemporary Issues, Trends, and Concerns. In B.A. Farber (ed.) Stress and Burnout in the Human Service Professions. New York: Pergamon Press, pp. 23-8.
- Garden, A.M. (1989) The effect of psychological type on research findings. *Journal of Occupational Psychology*, 62, 223-34.
- Garden, A.M. (1991) The purpose of burnout: a Jungian interpretation. Journal of Social Behavior and Personality, 6, 73-93.
- Glass, D. C. & McKnight, J. D. (1996) Perceived control, depressive symptomatology, and professional burnout: a review of the evidence. *Psychology and Health*, 11, 23–48.
- Glass, D.C., McKnight, J.D. & Valdimarsdottir, H. (1993) Depression, burnout and perceptions of control in hospital nurses. *Journal of Consulting and Clinical Psychology*, **61**, 147–55.
- Golembiewski, R.T. & Munzenrider, R. (1984) Active and passive reactions to psychological burnout: toward greater specificity in a phase model. *Journal of Health and Human Resources Administration*, 7, 264-8.
- Golembiewski, R.T. & Munzenrider, R.F. (1988) Phases of Burnout: Developments in Concepts and Applications. New York: Preager.
- Golembiewski, R.T., Munzenrider, R. & Carter, D. (1983) Phases of progressive burnout and their work site covariates: critical issues in OD research and practice. *Journal of Applied Behavioral Science*, 19, 461-81.
- Golembiewski, R.T., Munzenrider, R.F. & Stevenson, J.G. (1986) Stress in Organizations. New York: Praeger.
- Golembiewski, R.T., Hilles, R. & Rick, D. (1987) Some effects of multiple OD interventions on burnout and work site features. *Journal of Applied Behavioral Science*, 23, 295-313.
- Golembiewski, R.T., Boudreau, R.A., Munzenrider, R.F. & Luo, H. (1996) Global Burnout: A Worldwide Pandemic Explored by the Phase Model. Greenwich, CT: JAI Press.
- Greenglass, E. (1991) Burnout and gender: theoretical and organizational implications. Canadian Psychology, 32, 562-74.
- Hallsten, L. (1993) Burning out: a framework. In W.B. Schaufeli, C. Maslach & T. Marek (eds) Professional Burnout: Recent Developments in Theory and Research. Washington, DC: Taylor & Francis, pp. 95-112.
- Hatfield, E., Cacioppo, J.T. & Rapson, R.L. (1994) Emotional Contagion. New York: Cambridge University Press.
- Hendrix, W.H., Steel, R.P., Leap, T.L. & Summers, T.P. (1991) Development of a stress-related health promotion model: antecedents and organizational effectiveness outcomes. *Journal of Social Behavior and Personality*, 6, 141-62.
- Higgins, N.C. (1986) Occupational stress and working women: the effectiveness of two stress reduction programs. *Journal of Vocational Behavior*, **29**, 66–78.
- Himle, D.P., Jayaratne, S.D. & Thyness, P.A. (1991) Buffering effects of four social support types on burnout among social workers. Social Work Research and Abstracts, 27, 22-7.
- Hobfoll, S.E. (1989) Conservation of resources. A new attempt at conceptualising stress. American Psychologist, 44, 513-24.
- Hobfoll, S.E. & Freedy, J. (1993) Conservation of resources: a general stress theory applied to burnout.
 In W.B. Schaufeli, C. Maslach & T. Marek (eds) Professional Burnout: Recent Developments in Theory and Research. Washington, DC: Taylor & Francis, pp. 115-29.
- Jackson, S.E. & Maslach, C. (1982) After-effects of job related stress: families as victims. Journal of Occupational Behavior, 3, 63-77.

- Jaffe, D.T. & Scott, C.D. (1989) Self-Renewal: A Workbook for Achieving High Performance and Health in a High-Stress Environment. New York: Simon & Schuster.
- Jason, L.A., Wagner, L., Taylor, R., Ropacki, M.T., Shlaes, J., Ferrari, J.R., Slavich, S.P. & Stenzel, C. (1995) Chronic fatigue symdrome: a new challenge for health care professionals. Journal of Community Psychology, 23, 143-64.
- Jenkins, R. (1991) Introduction. In R. Jenkins and J. Mowbray (eds) Post-Viral Fatigue Syndrome: Myalgic Encephalomyelitis and Chronic Fatigue Syndrome. Chichester: John Wiley & Sons, pp. 3-39.
- Kahill, S. (1988) Symptoms of professional burnout: a review of the empirical evidence. Canadian Psychology, 29, 284-97.
- Karasek, R. & Theorell, T. (1990) Healthy Work: Stress, Productivity and the Reconstruction of Working Life. New York: Basic Books.
- Kirk, S.A. & Koeske, G.F. (1995) The fate of optimism: a longitudinal study of case managers' hopefulness and subsequent morale. Research on Social Work Practice, 5, 47-61.
- Landsbergis, P.A. (1988) Occupational stress among health care workers: a test of the job demandscontrol model. Journal of Organizational Behavior, 9, 217-39.
- Larson, D.G. (1986) Developing effective hospice staff support groups: pilot test of an innovative training program. The Hospice Journal, 2, 41-55.
- Lee, R.T. & Ashforth, B.E. (1993) A longitudinal study of burnout among supervisors and managers: comparisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) models. Organizational Behavior and Human Decision Processes, 54, 369-98.
- Lee, R.T. & Ashforth, B.E. (1996) A meta-analytic examination of the correlates of the three dimensions of job burnout. Journal of Applied Psychology, 81, 123-33.
- Leiter, M.P. (1988) Burnout as a function of communication patterns: a study of multidisciplinairy mental health team. Group and Organization Studies, 13, 111-28.
- Leiter, M.P. (1990) The impact of family resources, control coping and skill utilization on the development of burnout: a longitudinal study. Human Relations, 43, 1067-83.
- Leiter, M.P. (1991) Coping patterns as predictors of burnout: the function of control and escapist coping patterns. Journal of Organizational Behavior, 12, 123-44.
- Leiter, M.P. (1993) Burnout as developmental process: consideration of models. In W.B. Schaufeli, C. Maslach and T. Marek (eds) Professional Burnout: Recent Developments in Theory and Research. Washington, DC: Taylor & Francis, pp. 237-50.
- Leiter, M.P. & Durup, J. (1994) The discriminant validity of burnout and depression: a confirmatory factor analytic study. Anxiety, Stress and Coping, 7, 357-73.
- Leiter, M.P. & Meechan, K.A. (1986) Role structure and burnout in the field of human services. Journal of Applied Social Science, 22, 47-52.
- Leiter, M.P. & Maslach, C. (1988) The impact of interpersonal environment on burnout and organizational commitment. Journal of Organizational Behavior, 9, 297-308.
- Maslach, C. (1976) Burn-out. Human Behavior, 5, 16-22.
- Maslach, C. (1982a) Burnout: a social psychological analysis. In J.W. Jones (ed.) The Burnout Syndrome: Current Research, Theory, Interventions. Park Ridge, IL: London House, pp. 30-53.
- Maslach, C. (1982b) Burnout: The Cost of Caring. Englewood Cliffs, NJ: Prentice Hall.
- Maslach, C. (1993) Burnout: a multidimensional perspective. In W.B. Schaufeli, C. Maslach & T. Marek (eds) Professional Burnout: Recent Developments in Theory and Research. Washington, DC: Taylor & Francis, pp. 19-32.
- Maslach, C. & Jackson, S.E. (1981) The measurement of experienced burnout. Journal of Occupational Behavior, 2, 99-113.
- Maslach, C. & Jackson, S. E. (1984) Burnout in organizational settings. In S. Oskamp (ed.) Applied Social Psychology Annual, vol. 5. Beverly Hills, CA: Sage, pp. 133-53.
- Maslach, C. & Jackson, S. E. (1985) The role of sex and family variables in burnout. Sex Roles, 12, 837-51.
- Maslach, C. & Jackson, S.E. (1986) MBI: Maslach Burnout Inventory; Manual Research Edition. Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C. & Leiter, M. P. (1997) The Truth About Burnout: How Organizations Cause Personal Stress and What to Do About It. San Francisco, CA: Jossey-Bass.
- Maslach, C. & Pines, A. (1977) The burn-out syndrome in the day care setting. Child Care Quarterly, **6**, 100-13.

- Maslach, C. & Schaufeli, W.B. (1993) Historical and conceptual development of burnout. In W.E Schaufeli, C. Maslach & T. Marek (eds) Professional Burnout: Recent Developments in Theor and Research. Washington, DC: Taylor & Francis, pp. 1-16.
- Maslach, C., Jackson, S. E. & Leiter, M. (1996) Maslach Burnout Inventory. Manual, 3rd edn. Pale Alto, CA: Consulting Psychologists Press.
- Maslach, C., Schaufeli, W.B. & Leiter, M.P. (2001) Burnout. Annual Review of Psychology, 52 397-422.
- McKnight, J.D. (1993) Perceived job control, burnout and depression in hospital nurses: longitudina and cross-sectional studies. Dissertation Abstracts International, 54(12), 6499B.
- McKnight, J.D. & Glass, D.C. (1995) Perceptions of control, burnout, and depressive symp tomatology: a replication and extension. Journal of Consulting and Clinical Psychology, 63 490-4.
- Melamed, S., Ugarten, U., Shirom, A., Kahana, L., Lerman, Y. & Froom, P. (1999) Chronic burnout somatic arousal and elevated salivary coritsol levels. Journal of Psychosomatic Research, 46 591-8.
- Melchior, M.E.W., Philipsen, H., Abu-Saad, H.H., Halfens, R., Van den Berg, A.A. & Gassman, P. (1996) The effectiveness of primary nursing on burnout among psychiatric nurses in long-stay settings. Journal of Advanced Nursing, 24, 694-702.
- Melchior, M.E.W., Van den Berg, A.A., Halfens, R., Abu-Saad, H.H., Philipsen, H. & Gassman, P. (1997) Burnout and the work-environment of nurses in psychiatric long-stay care settings. Social Psychiatry and Psychiatric Epidemiology, 32, 158-64.
- Meier, S.T. (1983) Toward a theory of burnout. Human Relations, 36, 899-910.
- Miller, K.I., Birkholt, M., Scott, C. & Stage, C. (1995). Empathy and burnout in human service work: an extension of a communication model. Communication Research, 22, 123-47.
- Nowack, K.M. & Pentkowski, A.M. (1994) Lifestyle habits, substance use and prediction of job burnout in professional working women. Work and Stress, 8, 19-35.
- Ogus, E.D., Greenglass, E.R. & Burke, R.J. (1990) Gender-role differences, work stress and depersonalization. Journal of Social Behavior and Personality, 5, 387-98.
- Perlman, B. & Hartman, A.E. (1982) Burnout: summary and future research. Human Relations, 35, 283-305.
- Pfennig, B. & Hüsch, M. (1994) Determinanten und Korrelate des Burnout-Syndroms: Eine metaanalytische Betrachtung [Determinants and correlates of the burnout syndrome: a meta-analytic approach], unpublished thesis, Freie Universität Berlin, Psychologisches Institut.
- Piedmont, R.L. (1993) A longitudinal analysis of burnout in the health care setting: the role of personal dispositions. Journal of Personality Assessment, 61, 457-73.
- Pines, A. (1993) Burnout: an existential perspective. In W.B. Schaufeli, C. Maslach & T. Marek (eds) Professional Burnout: Recent Developments in Theory and Research. Washington, DC: Taylor & Francis, pp. 33-51.
- Pines, A.M. (1996) Couple Burnout: Causes and Cures. New York: Routledge.
- Pines, A. & Aronson, E. (1981) Burnout: From Tedium to Personal Growth. New York: Free Press.
- Pines, A. & Aronson, E. (1983) Combating burnout. Children and Youth Services Review, 5, 263-75. Pines, A. & Aronson, E. (1988) Career Burnout: Causes and Cures. New York: Free Press.
- Pines, A. & Kafry, D. (1978) Occupational tedium in the social services. Social Work, 23, 499-507.
- Pines, A. & Kafry, D. (1982) Coping with burnout. In J.W. Jones (ed.) The Burnout Syndrome: Current Research, Theory, Interventions. Park Ridge, IL: London House, pp. 139-50.
- Pines, A. & Maslach, C. (1978) Characteristics of staff burn-out in mental health settings. Hospital and Community Psychiatry, 29, 233-7.
- Pines, A. & Maslach, C. (1980) Combating staff burnout in a day care setting: a case study. Child Quarterly, 9, 5-16.
- Pines, A.M., Aronson, E. & Kafry, D. (1981) Burnout: From Tedium to Personal Growth. New York: Free Press.
- Pruessner, J., Hellhammer, D.H. & Kirschbaum, C. (1999) Burnout, perceived stress and salivary cortisol upon awakening. Psychosomatic Medicine, 61, 197-204.
- Rosse, J.G., Boss, R.W., Johnson, A.E. & Crown, D. F. (1991) Conceptualizing the role of self-esteem in the burnout process. Group and Organization Studies, 16, 428-51.
- Rountree, B.H. (1984) Psychological burnout in task groups. Journal of Health and Human Resources Administration, 7, 235-48.

- Royal Colleges of Physicians, Psychiatrists and General Practitioners (1996) Chronic Fatigue Syndrome. London: Royal Colleges of Physicians, Psychiatrists and General Practitioners.
- Schachter, S. (1959) The Psychology of Affiliation. Palo Alto, CA: Stanford University Press.
- Schaufeli. W.B. (1995) The evaluation of a burnout workshop for community nurses. Journal of Health and Human Services Administration, 18, 11-31.
- Schaufeli, W.B. & Enzmann, D. (1998) The Burnout Companion to Study and Research: A Critical Analysis. London: Taylor & Francis.
- Schaufeli, W.B. & Peeters, M.C.W. (2000) Job stress and burnout among correctional officers: a literature review. International Journal of Stress Management, 7, 19-48.
- Schaufeli, W.B. & Van Dierendonck, D. (1993) The construct validity of two burnout measures. Journal of Organizational Behavior, 14, 631-47.
- Schaufeli, W.B. & Van Dierendonck, D. (1995) A cautionary note about the cross-national and clinical validity of cut-off points for the Maslach Burnout Inventory. Psychological Reports, 76, 1083-90.
- Schaufeli, W.B. & Van Dierendonck, D. (2000) Handleiding van de Utrechtse Burnout Schaal (UBOS) [Test manual Utrecht Burnout Scale-UBOS]. Lisse: Swets & Zeitlinger.
- Schaufeli, W.B., Leiter, M.P., Maslach, C. & Jackson, S.E. (1996a) The MBI-General Survey. In C. Maslach, S.E. Jackson & M. Leiter (eds) Maslach Burnout Inventory, 3rd edn. Palo Alto, CA: Consulting Psychologists Press, pp. 19-26.
- Schaufeli, W.B., Van Dierendonck, D. & Van Gorp, K. (1996b) Burnout and reciprocity: towards a dual-level social exchange model. Work and Stress, 3, 225-37.
- Schaufeli, W.B., Bakker, A., Hoogduin, C.A.L., Schaap, C. & Kladler, A. (2001) On the clinical validity of the Maslach Burnout Inventory and the Burnout Measure. Psychology and Health. 16, 565-82.
- Schutte, N., Toppinnen, S., Kalimo, R. & Schaufeli, W.B. (2000) The factorial validity of the Maslach Burnout Inventory—General Survey (MBI-GS) across nations and occupations. Journal of Occupational and Organizational Psychology, 73, 53-66.
- Schwartz, M.S. & Will, G.T. (1953) Low morale and mutual withdrawal on a hospital ward. Psychiatry, 16, 337-53.
- Shirom, A. (1989) Burnout in work organizations. In C.L. Cooper & I. Robertson (eds) International Review of Industrial and Organizational Psychology. New York: John Wiley & Sons, pp. 25-48.
- Söderfeldt, M., Söderfeldt, B., Warg, L.E. & Ohlson, C.-G. (1996) The factor structure of the Maslach Burnout Inventory in two Swedish human service organization. Scandinavian Journal of Psychology, 37, 437-43.
- Spicuzza, F.J. & De Voe, M.W. (1982) Burnout in the helping professions: mutual aid groups as self help. The Personnel and Guidance Journal, 61, 95-9.
- Van der Klink, J.J.L., Blonk, R.W.B., Schene, A.H. & Van Dijk, F.J.H. (2001) The benefits of interventions for work related stress. American Journal of Public Health, 91, 270-6.
- Van Dierendonck, D., Schaufeli, W.B. & Buunk, B.P. (1998) The evaluation of an individual burnout intervention program: the role of inequity and social support. Journal of Applied Psychology, 83, 392-407.
- Van Dierendonck, D., Schaufeli, W.B. & Buunk, A.P. (2001) Burnout and inequity among human services providers: a longitudinal study. Journal of Occupational Health Psychology, 6, 43-52.
- Van Horn, J.E., Schaufeli, W.B., Greenglass, E.R. & Burke, R.J. (1997) A Canadian-Dutch comparison of teachers' burnout. Psychological Reports, 81, 371-82.
- Van Yperen, N.W. (1996) Communal orientation and the burnout syndrome among nurses: a replication and extension. Journal of Applied Social Psychology, 26, 338-54.
- Van Yperen, N.W., Buunk, A.P. and Schaufeli, W.B. (1992) Imbalance, communal orientation and the burnout syndrome among nurses. Journal of Applied Social Psychology, 22, 173-89.
- Wade, D.C., Cooley, E. and Savicki, V. (1986) A longitudinal study of burnout. Children and Youth Services Review, 8, 161-73.
- Walster, E., Walster, G.W. & Berscheid, E. (1978) Equity: Theory and Research. Boston, MA: Allyn & Bacon.
- Warr, P.B. (1987) Work, Unemployment and Mental Health. Oxford: Clarendon Press.
- West, D.J., Horan, J.J. & Games, P.A. (1984) Component analysis of occupational stress inoculation applied to registered nurses in an acute care hospital setting. Journal of Consulting Psychology, 31, 209-18.

- Westman, M. & Etzion, D. (1995). Crossover of stress, strain and resources from one spouse to another. Journal of Organizational Behavior, 16, 169-81.
- Williams, C.A. (1989) Empathy and burnout in male and female helping professionals. Research in Nursing and Health, 12, 169-78.
- Wills, T.A. (1991). Similarity and self-esteem in social comparison. In J. Suls & T.A. Wills (eds) Social Comparison. Contemporary Theory and Research. Hillsdale, NJ: Lawrence Erlbaum, pp. 51-78.
- Wolpin, J. (1986) Psychological burnout among Canadian teachers: A longitudinal study, PhD thesis, York University, Toronto.