

Special article

# The relationship between job stress, burnout and clinical depression

A. Iacovides, K.N. Fountoulakis\*, St. Kaprinis, G. Kaprinis

*3rd Department of Psychiatry, Aristotle University of Thessaloniki, General Hospital AHEPA, Thessaloniki, Greece*

Received 28 August 2000; accepted 21 February 2002

---

## Abstract

The definition and phenomenological features of ‘burnout’ and its eventual relationship with depression and other clinical conditions are reviewed. Work is an indispensable way to make a decent and meaningful way of living, but can also be a source of stress for a variety of reasons. Feelings of inadequate control over one’s work, frustrated hopes and expectations and the feeling of losing of life’s meaning, seem to be independent causes of burnout, a term that describes a condition of professional exhaustion. It is not synonymous with ‘job stress’, ‘fatigue’, ‘alienation’ or ‘depression’. Burnout is more common than generally believed and may affect every aspect of the individual’s functioning, have a deleterious effect on interpersonal and family relationships and lead to a negative attitude towards life in general. Empirical research suggests that burnout and depression are separate entities, although they may share several ‘qualitative’ characteristics, especially in the more severe forms of burnout, and in vulnerable individuals, low levels of satisfaction derived from their everyday work. These final issues need further clarification and should be the focus of future clinical research.

© 2002 Published by Elsevier B.V.

*Keywords:* Burnout; Stress; Depression

---

## 1. Introduction

In recent years, the term ‘burnout’ has been used to denote a condition of emotional and mental exhaustion at work, and a phenomenon that significantly impacts modern culture, particularly in Western societies and in Japan. Work is not just a way to make a decent living, but is also considered a

vital element of the social status of the person, and a source of meaning in one’s life, especially for those individuals who have rejected a religious answer to their existential quest. Although money is important, it is neither a cure nor a preventive factor for burnout, except when it is considered the only measure of success. An important feature of work as part of modern society, concerning work, is the very high level of commitment. Many people, usually high level professionals, identify with their work and organisation to the point of personalising every success or failure. In this concept, failure may be experienced as a traumatic event, a loss of meaning

---

\*Corresponding author. 53 Chrysostomou Smyrnis Street, 55132 Aretsou, Thessaloniki, Greece. Tel.: + 30-30-435-702; fax: + 30-30-266-570.

*E-mail address:* [kfount@med.auth.gr](mailto:kfount@med.auth.gr) (K.N. Fountoulakis).

in the individual's life, that leads to a depressive-like condition.

From very early historical times, language has linked work with burden, anxiety, pain, effort, slavery and punishment. In Ancient Greek, the word for work is 'agos' (άγος), which is synonymous with burden. The Greek word for anxiety (anchos, άγχος) comes from 'agos'. Another Ancient Greek word for work was 'ponos' (πόνος) the Modern Greek word for pain. The English word 'pain', on the other hand, comes from the Greek word πουνή (poeni) which means punishment or sentence. The Modern Greek word for work is 'doulia' (δουλειά) which comes from 'doulia' (δουλεία), the Ancient and Modern word for slavery. However, there is another word 'ergasia' (εργασία) derived from 'ergo' (έργο), the word for 'product through effort-full work'. All of these antecedents for with the Old Testament's notion that work was the punishment God gave man for disobeying Him. Modern attitudes towards work are largely attributed to Martin Luther and the Reformation that considered work as holy, and a way to worship God. In contemporary times, work is considered one of the highest values of society. On the other hand, unemployment may produce severe distress and even depression, even though many other variables (e.g., age, gender, etc.) may complicate the picture (Bromberger and Matthews, 1994). Claussen et al. (1993), reported that the prevalence of depression, anxiety, and somatic illness may be from four to 10 times higher in unemployed than employed people and is related with less chance of obtaining a job. This paper will attempt to clarify the phenomenological features of burnout vis-à-vis other terms used to describe it (i.e., job stress) and well established clinical conditions as depression.

## 2. Job stress

It is clear that work is not only a source of satisfaction and socio-economic status, but also of stress. In sharp contrast with stress coming from one's personal life or environment, coping with job stress is difficult, because usually there are not many things to do in order to modify the job environment. This is analogous to the concept of internal versus

external control suggested to be a critical factor in the development of coping (Pearlin and Schooler, 1978; Rotter, 1966). In fact, no specific major stressful events are necessary to produce job stress. The accumulation of minor everyday events (hassles) could well produce considerable stress (Chamberlain and Zika, 1990). Job stress alone does not cause burnout. Generally, professionals may function at high levels if their work provides them with positive feedback. However, those facing a highly stressful work environment, like the nursing staff in Intensive Care Units, may manifest higher levels of anxiety, anger, behaviour disorders and depressive symptomatology.

According to Erickson et al. (1972), both under- and over-promotion, status incongruence, and lack of job security are important predictors of job stress. Some studies associate job stress with physical (Karasek et al., 1981) as well as mental health (Braun and Hollander, 1988; Landbergis, 1988), while others do not (Carayon, 1993). While the impact of overtime and quantitative job overload on mental health seems moderate, job control, skill use and worksite support, as well as qualitative job demands, had greater effects on psychological distress and drinking problems according to both cross-sectional and prospective studies. These job stressors also manifested a strong association with psychiatric disorders, including major depression, even with a prospective study design. Long working hours have been associated with a higher risk of myocardial infarction, diabetes mellitus and hypertension. There is evidence that the job demands control model, as well as the use of new technology at work, may be associated with psychosomatic disorder like higher levels of blood pressure and serum lipids (Braun and Hollander, 1988; Landbergis, 1988).

Inadequate control over one's work, frustrated hopes and expectations and the feeling of losing the meaning of life, seem to be independent causes of burnout. These factors are highly determined by the individual's personality and original attitude towards work and the position work has in the individual's life. Furthermore, the type of work may determine the nature of individual stressors and impact. Working in the human services may be stressful because of the difficulty to balance between concern and detachment. Working in a bureaucratic organisation

is also stressful because the employee may feel that he/she is just a small part of a giant machinery, and is therefore unable to influence anything. Role conflict (being a homemaker and a professional) may make women more susceptible to develop stress and subsequent burnout. In organisations that require the expression of positive emotions, individuals with negative affectivity may experience conflict between expressed, positive emotions and felt, negative emotions. Yet, empirical studies showed that negative affectivity moderated the emotional dissonance–job satisfaction relationship, and confounded the emotional dissonance–emotional exhaustion relationship (Abraham, 1999). Job stress may have a significant impact on mental health, with all the job stress parameters accounting for 41% of the variation in the general health.

Physicians are reported to experience high levels of stress, less job satisfaction, and poorer mental health (Hsy and Marshall, 1987; Sutherland and Cooper, 1992). They also experience more stress. If autonomy is removed, the high demands on doctors' time, the heavy workload and responsibility for others may become intolerable burdens. A study of the level of burnout, depression, life and job satisfaction of Canadian emergency physicians showed that increased age, being a department head, and increased weeks of holiday per year were positively related to job satisfaction, while involvement in medical education, increased clinical hours worked per year, and region of residence were negatively related to satisfaction. Time away from clinical practice was also important to job satisfaction and emotional well being (Lloyd et al., 1994).

Police force organisational stressors, mediated by job satisfaction and organisational goal orientation, may increase psychological distress more than inherent police work stressors. Also, the indirect effect of organisational and inherent stressors appeared to nullify the distress-reducing potential of increased job satisfaction (Violanti and Aron, 1993).

### 3. Methodological issues

The study of occupational stress is hindered by methodological issues. Most important but complex aspects of studies in this area are job and organisa-

tional satisfaction, organisational security and commitment, resilience, worriedness, physical symptoms and exhaustion, pressure from workload, relationships, career development, managerial and personal responsibilities, home demands, daily hassles, drive, impatience, control, decision-making latitude, and the coping strategies of problem focusing, life-work balance, and social support (Williams and Cooper, 1998). Similarly, the temporal characteristics of stressors seem to be of prime importance. The level of job strain (frequency of ongoing stressors) is reported to be more closely related to psychological distress and low morale than episodic stressors (Schonfeld, 1990). Qualitative characteristics of stressors also may relate to depressive symptoms (Fujigaki et al., 1994; Fletcher et al., 1991; Heim, 1991; Green et al., 1990; Shankar and Famuyiwa, 1991; Garrison and Eaton, 1992; Quine, 1999; Skipper et al., 1990) and alcohol abuse which is not mediated by depressive symptoms (Kawakami et al., 1993). Depressive symptomatology and alcohol abuse is suggested to be two distinct results of job stress and not sequential components of the stress process.

It is also important to point out that the levels of job stress and depression were found to be similar across different western countries (Whitley et al., 1991; Whitley et al., 1994). Limited data from Eastern Europe suggest that sociocultural variables may play an important role (Kristenson et al., 1998).

In spite of these data, there is much dispute on the specific role of stressor characteristics. The European Community Directive on Working Time, which should have been implemented in member states of the European Community by November 1996, contains several requirements related to working hours, including the right of employees to refuse to work more than 48 h a week. There was much opposition about this rule as its critics argued that there is no convincing evidence on specific effects. It is obvious, however, that research to date has been restricted to a limited range of health outcomes—namely, mental health and cardiovascular disorders. Other potential effects, which are normally associated with stress such as gastrointestinal or musculoskeletal disorders, and problems associated with dysfunction of the immune system, have received little attention. Also, there have been few systematic investigations of

performance effects, and little consideration of the role of occupational exposure limits throughout the working day. Existing data relate largely to situations where working hours exceed 50 a week, and there is a lack of information on number of working hours below this level. A range of modifying factors are likely to influence the level and nature of health and performance outcomes (Spurgeon et al., 1997). There are no data concerning the character of work (e.g., hard labour versus light office work). On the contrary, gender seems to play a significant role. The total workload for women appears to be greater and more diffusely distributed than those of men, may adversely affect health and undermine marital happiness (Gjerdingen et al., 2000). This puts forward question concerning the relationship between the person's well-being and work. But this question does not seem to have a clear answer (Briner, 2000).

Another issue is unemployment and job insecurity. Both insecure unemployment and re-employment seems to result in increases in minor psychiatric morbidity and consultations with a general practitioner, which are also due to the increased minor psychiatric morbidity. The above cannot be explained by changes in financial strain, or psychosocial factors. Most studies suggest that re-employed people have better mental health than unemployed people. However, long term unemployment eliminates this difference. The problem with such comparisons is that differences may be due to the selective re-employment of those with better mental health (Ferrie et al., 1995; Ferrie et al., 1998; Bartley and Owen, 1996; Iversen and Sabroe, 1988; Dew et al., 1992; Mattiasson et al., 1990; Yuen and Balaraman, 1989; Carr-Hill et al., 1996).

## 4. Burnout

### 4.1. Phenomenology and course

The term 'burnout' was introduced by Freudenberger (1974) to describe a picture of exhaustion of mental care professionals at the work place. He defined it as "to fail, wear out, or become exhausted by making excessive demands on energy, strength or resources". The subject becomes rigid, stubborn and

inflexible, blocking progress and constructive change, because change demands more adaptational efforts. He/she becomes the 'house cynic', and looks, acts and seems depressed. Freudenberger suggested that those most prone to develop burnout are the dedicated and the committed who feel a pressure from within to work and help and from the outside to give. He described the 'dedicated worker', who takes on too much work, the 'overcommitted worker' whose life outside the job is unsatisfactory and the 'authoritarian worker' who feels that no one else can do the job as efficiently as he/she can (Freudenberger, 1975). Therapeutically, he proposed that it is not a good idea to shift into meditation or yoga, which he believes cause a mental dropping, underactivation and mental fatigue. Introspection is not what the burnt out person requires; he/she requires physical exhaustion, not further mental strain and fatigue.

Other authors describe burnout as the "progressive loss of idealism, energy and purpose, experienced by people in the helping professions as a result of their work" (Sturgess and Poulsen, 1983). Cherniss describes burnout as a 'disease of overcommitment' (Rogers and Dodson, 1988). Brezniak and Ben Ya'ir (1989) stated that burnout is due to the imbalance between resources, values, expectations, and environmental demands. Maslach (1976, 1982) gave perhaps the most comprehensive definition for this term, incorporating the physical as well as the mental exhaustion observed in every professional whose work needs continuous contact with other people. Maslach suggested that the syndrome does not emerge suddenly, but it is the product of a long time of stressful working. According to Maslach and Jackson (1986), there are three main dimensions that can describe the burnout syndrome: emotional exhaustion, depersonalisation and personal achievements. In the development of burnout, emotional exhaustion emerges first. This means that the professional feels tired from work, and has no mental strength to invest in work. It is followed by an attempt to defend him/herself by isolation of affect (depersonalisation dimension), the development of impersonal relationships with his clients or patients in an attempt to avoid stress. This mechanism is generally ineffective and may lead to the final phase of burnout, which is the decrease in work func-

tioning levels (decrease of personal achievements dimension).

The term 'burnout' is not synonymous with 'job stress', 'fatigue', 'alienation' or 'depression' although the popularity of the term during the last few years led to some confusion. Burnout seems to be caused by disproportionately high efforts (time, emotional involvement, empathy) and poor satisfaction (negative outcome) in addition to stressful working conditions (high demands). It affects mainly nurses, physicians, social workers, teachers and other similar professions. Most of the models of burnout try to explain its development through the interaction between personality and environment (Cox, 1978; Harrison, 1978; Cooper and Rout, 1989; O'Brien and Page, 1994). Some researchers point to the importance of the stressful conditions at work and to problems concerning the relationships between peers (Constable and Russel, 1986; Duxbury et al., 1984). Pines (1986) assigns more relevance to the work environment, while personality characteristics and motivation play a role in burnout onset and severity. However, he also stresses that the most committed workers tend to burnout most severely, and that in his opinion, the cause of burnout is existential and rests in the human need to ascribe meaning to life. When work does not make this possible, burnout is inevitable (Pines and Aronson, 1989). If this is true, then burnout tends to afflict people who enter into highly idealistic profession, thus representing the failure of work as a solution to existential dilemmas. Other researchers point to the importance of the attitude of the individual towards the specific work; the dreams, ambitions and the beliefs the person has about the social status of his/her work, are also important in combination with personality, and especially the existence of 'hardiness' traits (Kobasa et al., 1982; Lazarus and Folkman, 1984). However, it is obvious that the interaction between variables is complex. Hard work may lead to burnout but, on the contrary, achieving through work, being estimated by others, and value-rich work, all correlate negatively with job stress (Knoop, 1994). An important feature is that persons with burnout, usually hide their problem because they feel guilt and shame about their behaviour, attitudes and mental state.

Burnout has a large socio-economic impact. It is reported that a large number of professionals retire

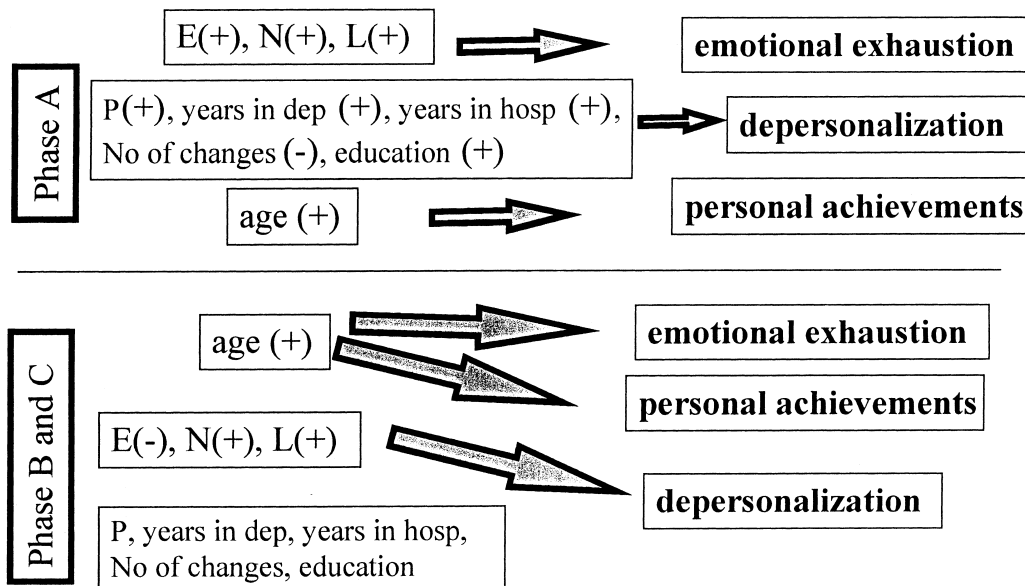
prematurely due to burnout (Claxton et al., 1998; Cooper and Rout, 1989; Molassiotis and Haberman, 1996; Woodward et al., 1999; Little et al., 1990). Many more frequently use the health care services. Days lost from work and reduction of productivity are significant. Long-term effects of burnout on the mental and physical health of professionals, although not well studied, are considered to be significant. The deterioration of services provided by the burned-out staff, results in a cynical attitude towards work (the 'dead wood' situation), and this is most important and dangerous concerning health care staff.

There are reports on the role of work-related psychological distress as a probable cause of dropout among emotional support volunteers (buddies) who work with people living with AIDS—more than 24% of buddies may suffer from burnout. This has also significant cost implications for voluntary organisations in terms of training and recruitment. Higher rates were reported for physicians and nursing staff. Half of them may be emotionally exhausted, and 80% may report feelings of low personal accomplishment. Signs of clinical anxiety are present in more than 10% of staff, and overt depression may occur in 0.8% of nurses and 3.8% of doctors, especially in highly emotionally and professionally demanding departments. Staff members find it impossible to isolate themselves from the patients; almost two-thirds of nurses attend patients' funerals from time to time. Position and training may make a difference, since most doctors (85%) do not attend these funerals (Molassiotis et al., 1995).

#### 4.2. *Clinical research*

Our group published a series of studies concerning a model of burnout development and its possible relationship with depression (Figs. 1 and 2). These studies suggest that burnout is a complex and non-linear phenomenon (Iacovides et al., 1997). For example, Extroversion is positively related to emotional exhaustion during the early stages of burnout development in younger subjects, and at every stage concerning older subjects, but is negatively related to depersonalisation (emotional isolation) at latter stages in younger subjects. So, the model suggested by our group takes into consideration the personality traits of the individual and predicts the course and

The signs in parentheses indicate whether the specific variable concerning personality or sociodemographic and occupational characteristics (left side of the figure) contributes by enhancing the development of burnout or by protecting from it



Adopted after permission from Iacovides A., Fountoulakis K., Moysidou Ch., Terodakionou Ch.: Burnout in Nursing Staff: A Clinical Syndrome Rather Than a Psychological Reaction? *Gen Hosp Psychiatry*. 1997;19(6):419-429

Fig. 1. Burnout development in subjects under 36 years of age.

unique characteristics of burnout for this particular person. A general view of the model is shown in Figs. 1 and 2. The reader is advised to see elsewhere for more details (Iacovides et al., 1997).

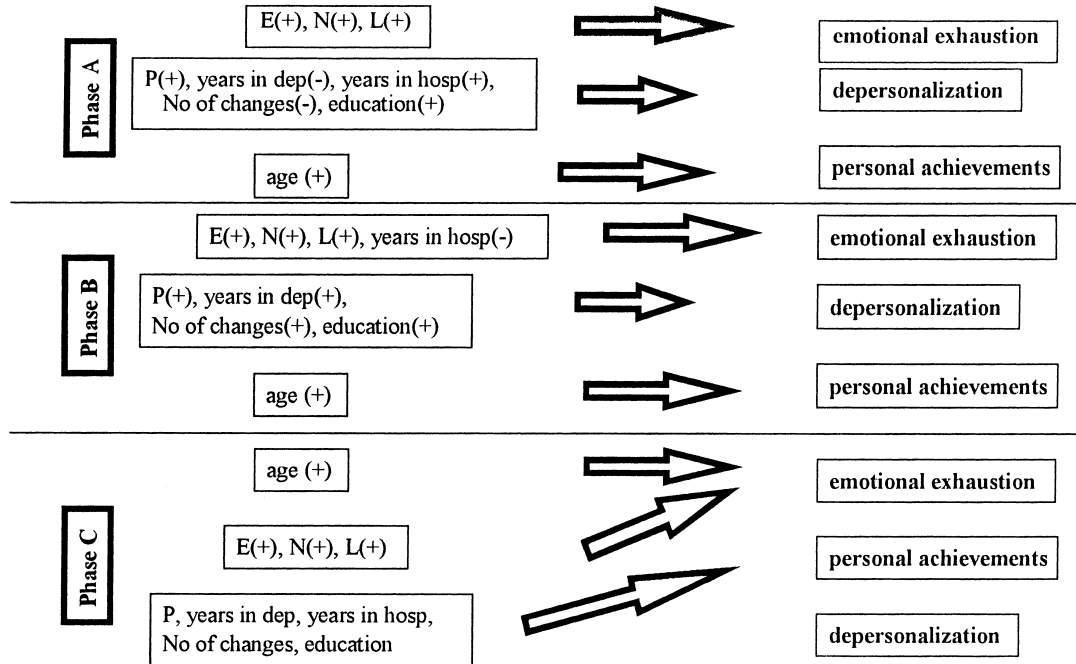
In short, in these figures, phases are defined according to Maslach and Jackson. It is obvious that Phase A in younger subjects (Fig. 1) is almost identical with phases A and B of older subjects (Fig. 2). This means that the Maslach Burnout Inventory score is not a sufficient indicator of burnout. There is also a matter of quality. It seems that 'true' burnout is experienced by younger subjects in phases B and C and by older subjects only during phase C (which is not that different from phases A and B for those subjects). There are also differences in quality between the two age groups. In fact it implies that in younger subjects, emotional exhaustion is a function of age, while anxious trait, overreacting and obsessive traits (+ N and - E) lead to emotional isolation ('depersonalization'). On the contrary, in older subjects, emotional exhaustion also depends on anxious traits and overreactivity, but also these obsessive

traits may protect from it (+ N and + E). Thus, if one tries to summarize the model, will come to the conclusion that neuroticism (N) and extroversion (E) are positively related with low levels of emotional exhaustion (when no burnout is obvious) and continue to contribute to its development during true burnout in older subjects, but not in younger subjects. In these cases, they exert opposite influence on emotional exhaustion.

Several subjects with low personal achievements in the absence of burnout were identified. This was suggested to represent a vulnerability trait towards burnout development.

The N dimension (Neuroticism) refers to the general emotional instability of the subjects, their emotional overreactivity, and tendency to maladjust and develop symptoms when exposed to a stressful environment (Eysenck, 1959). Persons with high scores in this dimension are anxious and get easily depressed. They tend to suffer from insomnia and psychosomatic disorders. The E dimension (Extroversion) refers to the tendency to socialize easily,

The signs in parentheses indicate whether the specific variable concerning personality or sociodemographic and occupational characteristics (left side of the figure) contributes by enhancing the development of burnout or by protecting from it



Adopted after permission from Iacovides A., Fountoulakis K., Moysidou Ch., Ierodiakonou Ch.: Burnout in Nursing Staff: A Clinical Syndrome Rather Than a Psychological Reaction? *Gen Hosp Psychiatry*, 1997;19(6):419-429

Fig. 2. Burnout development in subjects over 35 years of age.

to be impulsive and to seek risk and danger. Low scores in this dimension are characteristic of a person who is peaceful, has insight, prefers books rather than people, tends to plan and does not act impulsively, avoids risk and danger, prefers a safe and organised way of life, has self control, is reliable, and gives weight to moral values. High scores, on the contrary, reflect optimism, self enjoyment, and early loss of temper. This person is aggressive, and has a 'hard' character, a 'revolutionary' temperament (Eysenck, 1965).

The L scale (Lie) measures the tendency of the subject to feign; however, there are some data denoting that this scale may measure a dimension of 'immature social skills' (Eysenck and Eysenck, 1970; Michaelis and Eysenck, 1971). The larger the tendency to feign, the larger the correlation between N and L. The P dimension (Psychoticism) refers to a vulnerability of the subject to manifest psychotic

symptomatology, yet only a minority of subjects with a high score in this dimension will actually manifest true psychosis (Eysenck and Eysenck, 1975). Most of these subjects tend to live a solitary life, are impersonal, hostile and aggressive, even towards their loved ones. They like odd, eccentric matters and do not consider danger (Eysenck and Eysenck, 1972). According to DSM-IV these subjects could be labelled as cluster A or B personality disorder. Indirectly, the P dimension is negatively correlated with the depersonalisation dimension, since it correlates negatively with the L scale.

The P dimension, education, attitudes and beliefs seem to play a minor role in the development of burnout. Therefore our model suggests that personality characteristics may play a major role in burnout development, sometimes greater than socio-demographic factors. This has been suggested by other authors as well (Papadatou et al., 1994). The

relation of burnout with N and E is strong. N and E are also strongly related with depression, although it is unclear whether the predisposed individuals to depression development, or change as a consequence of depression (Den Boer and Ad Sitsen, 1994). The studies of our group were done on a non-patient sample, so it is very difficult to interpret what this relation means.

Several authors reported a relations between the personality trait of neuroticism and depression, but this still remains somewhat uncertain (Berlanga et al., 1999; Roy, 1999; Ulusahin and Ulug, 1997). A combination of high scores on neuroticism and low scores on extroversion is reported in chronic fatigue syndrome and it has been suggested that constitutes a reaction to chronic illness (Buckley et al., 1999). This same combination is observed concerning the relationship of these variables to emotional isolation ('depersonalization') during burnout in younger subjects (Fig. 1).

It is very difficult to have an accurate estimation of the proportions of staff members that manifest burnout. Given the proposed model and not simply the Maslach Burnout Inventory score, 50.65% of subjects under 36 (phases B and C) and 17.25% of those above 35 (phase C) suffer from true burnout which is generally homogeneous in quality and correlates with the Neuroticism dimension of the EPQ. Subjects without burnout that may be more vulnerable to developing it accounted for 9.15% of the group under 36 years, and 7.7% of the group

over 35 years without burnout (Table 1). This possibly constitutes a vulnerability trait, since these subjects, although not manifesting burnout, receive low gratification from work. The finding of lower burnout in older subjects coincides with reports from other research groups (Stevens and O'Neil, 1983); however, it is unclear whether it reflects a maturation process related to age, or a natural selection phenomenon and an occupational 'survival of the fittest'.

## 5. The relationship between depression, burnout and personality

### 5.1. Theoretical considerations

The nature of any given occupation acts as a screening tool, and attracts only people with specific personality features. Personality determines the way the person interprets events, and conceives the interaction between self and the environment (Cooper and Baglioni, 1988). At one extreme, some individuals interpret events as being substantially due to 'chance', with their actions being largely irrelevant to either the occurrence or outcome (external locus of control). At the other end of the continuum are persons who believe that events are substantially 'under their control', and that they have influence over what happens (internal locus of control). Reinforcement, reward and gratification are important. However, the interpretation the individual applies to the events (locus of control) determines whether he/she will perceive an event as a gratification or not (Rotter, 1966).

Empirical evidence suggests that the more the person believes he/she has control over events, the less stress he/she experiences. This is characteristic of the Type A personality or behaviour pattern, characterised by competition, speed and high energy. This same personality, however, is reported to correlate highly with burnout. It is expressed fully only in situations such as stressful work that demands and even encourages it. A related personality characteristic is Kobasa's concept of 'hardiness'. This concept includes the involvement of the professional (in contrast to alienation), control (in contrast to helplessness), and love of challenge (in contrast to indifference). Thus, 'hard' people may deal with

Table 1  
Frequencies and proportions of subjects in the three phases by age as well as subjects suffering from burnout by age and trait by age

	Age < 36		Age > 35	
	N	%	N	%
<i>Phase:</i>				
A	153	49.35	26	44.82
B	109	35.17	22	37.93
C	48	15.48	10	17.25
<i>Burnout:</i>				
Present	157	50.65	10	17.25
Absent	153	49.35	48	82.75
<i>Trait (vulnerability):</i>				
Present	14	9.15	2	7.70
Absent	139	90.85	24	92.30



stressors in a more effective way, but the obsession with competition itself is a stress that some people never overcome. The short moment of feeling success is not enough for the highly devoted 'workaholic' professional who remains with a bitter feeling of emptiness deep inside. This might be more pronounced in the human services field because it demands emotional investment and certain altruistically oriented personality characteristics to reach satisfaction from work is problematic and therefore frustration is common.

Burnout may afflict every aspect of the individual's life, may have a deleterious effect in interpersonal and family relationships, and may lead to a general negative attitude towards life. In this sense, burnout could be expected to share common features with depression.

### 5.2. Empirical data

The above considerations about job stress, burnout and clinical depression stem mainly from the large tradition of social and psychological psychiatry. However, empirical verification is essential, although this is often very difficult due to the vagueness of the definitions. Thus, many proposals on etiopathogenesis of burnout and its relationship with depression are not verifiable.

Medical staff members have been the focus of extensive research. It is reported that up to 30% of internists may suffer from clinical depression (Valko and Clayton, 1975), half of residents take leave of absence because of emotional problems, almost 10% drop out of medicine, 2% complete and 3% attempt suicide (Smith et al., 1986). Absenteeism from work is easily measured and thus it is an accessible focus of research (Rees, 1990; Chevalier et al., 1987; Johnson et al., 1992).

A study of suicidal feelings, attempted suicide, and aspects of work environment and well-being in Swedish psychiatric nursing personnel suggested that negative work environment may be associated with burnout and depression, which in turn is related to suicidality. No direct link was demonstrated between suicidality and work environment. Thus, it is possible that negative work environment may simply increase suicidal feelings (Samuelsson et al., 1997).

On the contrary, the stronger the support system, the smaller the tendency towards depression. Individuals in higher employment levels may feel less supported and may be more severely depressed than those at lower levels of employment; this could partially be due to the age-related increase of daily hassles (Nadaoka et al., 1997).

Most of the studies on the relationship between depression and burnout conclude that they are separate nosological entities (Dell'Erba et al., 1994), and that there is a moderate correlation between them with shared variances around 20% (Bellani et al., 1996; McKnight and Glass, 1995; Glass et al., 1993), attributable to their co-development. A definitive temporal sequence among measures of burnout and depressive affect was not obtained, but, theoretically, depression should follow burnout, and not vice-versa. There are, however studies suggesting that high levels of psychological demands, low levels of decision latitude, low levels of social support at work, and stress due to unsuitable jobs are significant predictors of subsequent depression, and this is not due to confounding variables (Niedhammer et al., 1998; Kawakami et al., 1990). On the other hand no significant correlations between scores on affective scales and job characteristics have been detected. This could probably reflect the ad hoc coping strategies adopted by professionals, who have already demonstrated appropriate personality characteristics by completing a long training programme, with no realistic alternative late career opportunities (Heyworth et al., 1993). It is also evident that many, especially doctors, are likely to deny depression or to have it masked by alcohol or drug dependence, or both (a'Brook, 1990).

Another study of ours (Iacovides et al., 1999) suggested that most of the subjects that suffer from the burnout syndrome do not manifest depressive symptomatology. However, it also suggested that younger subjects with burnout have higher percentage of 'mild' depression than 'absent' depression. This points to a relationship between the two syndromes, especially at a younger age, although the small degree of overlap points to distinctions rather than similarities. Subjects with more severe burnout, manifested a closer relationship between their depressive-like symptomatology and attitude towards, and conduct in work. This raises the possibility that the

vulnerability trait mentioned above may not be limited to emotions, thoughts and attitudes towards work but, on the contrary, represents a more pervasive disposition similar to those proposed for depression.

The same study (Iacovides et al., 1999) suggested that a person could suffer from major depression and at the same time not suffer from burnout. This is not contradictory, since highly committed professionals are expected to function even in the presence of mild to moderate depressive symptomatology. Naturally, depression, a pervasive disorder that influences all aspects of life, causes problems with work as well. However, the two syndromes could co-exist and produce a qualitatively different symptomatology compared to either syndrome alone. In this case, to apply both diagnoses may be pertinent in certain cases such as cases of dysfunction at work in excess to the degree of the depressive symptomatology, onset of the dysfunction before the onset of major depression, or the existence of a negative attitude towards the specific profession that could not be explained as a manifestation of depression.

Some authors suggest that learned helplessness theory may be suitable for the explanation of the development of depression. Similar mechanisms may be triggered during burnout development, since a core issue is the lack of control on work environment. However, the critical issue that may discriminate burnout from depression is that in burnout, helplessness is confined to work environment, while in depression it is spread and covers most aspects of the patient's life. In this sense, the burned-out professional possesses (in contrast to the depressed patient) routes for escape. But if generalization occurs, then this helplessness may spread and burnout may progress to real depression. When, why and in which individuals this happens is open to research.

Another issue that is worth mentioning is that both depression and burnout, though distinct as syndromes, are strongly related with neuroticism (N) and extraversion (E).

The overall results support both the distinction between the two disorders as well as the existence of common features. The more severe the burnout, the qualitatively closer it is to depression, while remaining nevertheless as an independent syndrome.

## 6. Conclusion

Burnout is a problem more common in modern times than generally believed. It has a large impact on both individual and society. Empirical research suggests that burnout and depression are separate entities, even though they may share several common characteristics. Especially in the more severe forms of burnout, and in individuals that have a vulnerability trait to develop burnout (because they receive low satisfaction from work, even in the absence of burnout), it seems that depressive and burnout symptomatology share similar 'qualitative' characteristics. This final issue needs further clarification and should be the focus of future research.

Burnout is difficult to prevent. It is necessary to emphasize team work and to provide with positive psychological feedback which is necessary for the working person in order to feel satisfied from work. Many times it is necessary to change positions and duties frequently, so as to keep the person interested in work. However, this shift should not be too frequent and it should respect the qualification of the person (i.e., it is wrong to de facto downgrade someone just to change his position). Also the early recognition of depression development and of comorbidity are essential because they lead to early full treatment.

## Acknowledgements

The authors wish to thank the editor and the referees for their valuable help in the final formation of the manuscript.

## References

- a'Brook, M., 1990. Psychosis and depression. *Practitioner* 234, 992–993.
- Abraham, R., 1999. Negative affectivity: moderator or confound in emotional dissonance-outcome relationships? *J. Psychol.* 133 (1), 61–72.
- Bartley, M., Owen, C., 1996. Relation between socioeconomic status, employment, and health during economic change, 1973–93. *Br. Med. J.* 313, 445–449.
- Bellani, M.L., Furlani, F., Gneccchi, M., Pezzotta, P., Trotti, E.M.,

- Bellotti, G.G., 1996. Burnout and related factors among HIV/AIDS health care workers. *AIDS Care* 8 (2), 207–221.
- Berlanga, C., Heinze, G., Torres, M., Apiquian, R., Caballero, A., 1999. Personality and clinical predictors of recurrence of depression. *Psychiatr. Serv.* 50 (3), 376–380.
- Braun, S., Hollander, R.B., 1988. Work and depression in the Federal Republic of Germany. *Women Health* 14, 3–26.
- Brezniak, N., Ben Ya'ir, S., 1989. Patient burnout behavior of young adults undergoing orthodontic treatment. *Stress Med.* 5, 183–187.
- Briner, R.B., 2000. Relationships between work environments, psychological environments and psychological well-being. *Occup. Med. (London)* 50 (5), 299–303.
- Bromberger, J.T., Matthews, K.A., 1994. Employment status and depressive symptoms in middle-aged women: a longitudinal investigation. *Am. J. Public Health* 84 (2), 202–206.
- Buckley, L., MacHale, S.M., Cavanagh, J.T., Sharpe, M., Deary, I.J., Lawrie, S.M., 1999. Personality dimensions in chronic fatigue syndrome and depression. *J. Psychosom. Res.* 46 (4), 395–400.
- Carayon, P., 1993. A longitudinal test of Karasek's Job Strain Model among office workers. *Work Stress* 7, 299–314.
- Carr-Hill, R.A., Rice, N., Roland, M., 1996. Socioeconomic determinants of rates of consultation in general practice based on fourth national morbidity survey of general practices. *Br. Med. J.* 312, 1008–1012.
- Chamberlain, K., Zika, S., 1990. The minor events approach to stress: support for the use of daily hassles. *Br. J. Psychol.* 81, 469–481.
- Chevalier, A., Luce, D., Blanc, C., Goldberg, M., 1987. Sickness absence at the French National Electric and Gas Company. *Br. J. Ind. Med.* 44, 101–110.
- Claussen, B., Bjorndal, A., Hjort, P.F., 1993. Health and re-employment in a two year follow up of long term unemployed. *J. Epidemiol. Community Health* 47 (1), 14–18.
- Claxton, R.P., Catalán, J., Burgess, A.P., 1998. Psychological distress and burnout among buddies: demographic, situational and motivational factors. *AIDS Care* 10 (2), 175–190.
- Constable, C.J., Russel, D.W., 1986. The effects of social support and the work environment upon burnout among nurses. *J. Hum. Stress.* 22–26.
- Cooper, C.L., Baglioni, A.J., 1988. A structural model approach toward the development of a theory of the link between stress and mental health. *Br. J. Med. Psychol.* 61, 87–102.
- Cooper, C.L., Rout, U., 1989. Mental health, job satisfaction and job stress among general practitioners. *Br. Med. J.* 298, 366–370.
- Cox, T., 1978. In: *Stress*. Macmillan, London.
- Dell'Erba, G., Venturi, P., Rizzo, F., Porcù, S., Pancheri, P., 1994. Burnout and health status in Italian air traffic controllers. *Aviat. Space Environ. Med* 65 (4), 315–322.
- Den Boer, A.J., Ad Sitsen, J.M., 1994. In: *Handbook of Depression and Anxiety—A Biological Approach*. Marcel Dekker, New York, pp. 634–636.
- Dew, M.A., Bromet, E.J., Penkower, L., 1992. Mental health effects of job loss in women. *Psychol. Med.* 22, 751–764.
- Duxbury, M., Armstrong, G., Drew, D., Henly, S., 1984. Head nurse leadership style with staff nurse burnout and job satisfaction in neonatal intensive care units. *Nursing Res.* 33, 97–101.
- Erickson, J.M., Pugh, W.M., Gunderson, K.E., 1972. Status congruency as a predictor of job satisfaction and life stress. *J. Appl. Psychol.* 56, 523–525.
- Eysenck, H.J., Eysenck, S.B., 1970. A factor analytic study of the lie scale of the junior Eysenck personality inventory. *Personality* 1, 3–10.
- Eysenck, H.J., Eysenck, S.B., 1975. In: *Manual of the EPQ*. Hodder and Stoughton Educational, London.
- Eysenck, H.J., Eysenck, S.B., 1972. The Questionnaire Measurement of Psychoticism. *Psychol. Med.* 1, 50–55.
- Eysenck, H.J., 1965. In: *Fact and Fiction in Psychology*. Penguin Books, Harmondsworth, Middlesex, UK.
- Eysenck, H.J., 1959. In: *The Maudsley Personality Inventory*. University of London Press, London.
- Ferrie, J., Shipley, M., Marmot, M.G., Stansfeld, S., Davey Smith, G., 1998. An uncertain future. The health effects of threats to employment security in white-collar men and women. *Am. J. Public Health* 88, 1030–1036.
- Ferrie, J., Shipley, M.J., Marmot, M.G., Stansfeld, S., Davey Smith, G., 1995. Health effects of anticipation of job change and non-employment: longitudinal data from the Whitehall II study. *Br. Med. J.* 311, 1264–1269.
- Fletcher, B.C., Jones, F., McGregor-Cheers, J., 1991. The stressors and strains of health visiting: demands, supports, constraints and psychological health. *J. Adv. Nurs.* 16 (9), 1078–1089.
- Freudenberger, H.J., 1974. Staff burnout. *J. Soc. Issues* 30, 159–165.
- Freudenberger, H.J., 1975. The Staff Burnout Syndrome in alternative institutions. *Psychother. Theory Res. Pract.* 12, 73–82.
- Fujigaki, Y., Asakura, T., Haratani, T., 1994. Work stress and depressive symptoms among Japanese information systems managers. *Ind. Health* 32 (4), 231–238.
- Garrison, R., Eaton, W.W., 1992. Secretaries, depression and absenteeism. *Women Health* 18 (4), 53–76.
- Gjerdingen, D., McGovern, P., Bekker, M., Lundberg, U., Willemssen, T., 2000. Women's work roles and their impact on health, well-being, and career: comparisons between the United States, Sweden, and The Netherlands. *Women Health* 31 (4), 1–20.
- Glass, D.C., McKnight, J.D., Valdimarsdottir, H., 1993. Depression, burnout, and perceptions of control in hospital nurses. *J. Consult. Clin. Psychol.* 61 (1), 147–155.
- Green, A., Duthie, H.L., Young, H.L., Peters, T.J., 1990. Stress in surgeons. *Br. J. Surg.* 77 (10), 1154–1158.
- Harrison, R.V., 1978. Person-environment fit and job stress. In: Cooper, C.L., Payne, R. (Eds.), *Stress at Work*. Wiley, Chichester.
- Heim, E., 1991. Job stressors and coping in health professions. *Psychother. Psychosom.* 55 (2-4), 90–99.
- Heyworth, J., Whitley, T.W., Allison, Jr. E.J., Revicki, D.A., 1993. Correlates of work-related stress among consultants and senior registrars in accident and emergency medicine. *Arch. Emerg. Med.* 10 (4), 271–278.

- Hsy, K., Marshall, V., 1987. Prevalence of depression and distress in a large sample of Canadian residents, Interns and Fellows. *Am. J. Psychiatry* 144, 1561–1566.
- Iacovides, A., Fountoulakis, K., Moysidou, Ch., Ierodiakonou, Ch., 1997. Burnout in nursing staff: a clinical syndrome rather than a psychological reaction? *Gen. Hosp. Psychiatry* 19 (6), 419–429.
- Iacovides, A., Fountoulakis, K.N., Moysidou, Ch., Ierodiakonou, Ch., 1999. Burnout in nursing staff: is there a relationship between depression and burnout? *Int. J. Psychiatry Med.* 29, 421–433.
- Iversen, L., Sabroe, S., 1988. Psychological well-being among unemployed and employed people after a company closedown: a longitudinal study. *J. Soc. Issues* 44, 141–152.
- Johnson, J., Weissman, M.M., Klerman, G.L., 1992. Service utilization and social morbidity associated with depressive symptoms in the community. *J. Am. Med. Assoc.* 267, 1478–1483.
- Karasek, R., Baker, D., Marxer, F. et al., 1981. Job decision latitude, job demands and cardiovascular disease: a prospective study of Swedish men. *Am. J. Public Health* 71, 694–705.
- Kawakami, N., Araki, S., Haratani, T., Hemmi, T., 1993. Relations of work stress to alcohol use and drinking problems in male and female employees of a computer factory in Japan. *Environ. Res* 62 (2), 314–324.
- Kawakami, N., Araki, S., Kawashima, M., 1990. Effects of job stress on occurrence of major depression in Japanese industry: a case-control study nested in a cohort study. *J. Occup. Med.* 32 (8), 722–725.
- Knoop, R., 1994. Relieving stress through value-rich work. *J. Soc. Psychol.* 134 (6), 829–836.
- Kobasa, S.C., Maddi, S.R., Kahn, S., 1982. Hardiness and health: a prospective inquiry. *J. Personality Soc. Psychol.* 42, 168–177.
- Kristenson, M., Kucinskiene, Z., Bergdahl, B., Calkauskas, H., Urmonas, V., Orth-Gomér, K., 1998. Increased psychosocial strain in Lithuanian versus Swedish men: the LiVicordia study. *Psychosom. Med.* 60 (3), 277–282.
- Landbergis, P.A., 1988. Occupational stress among health care workers: a test of the Job Demands-Control Model. *J. Organ. Behav.* 9, 217–239.
- Lasarus, R.S., Folkman, S., 1984. In: *Stress, Appraisal and Coping*. Springer, New York.
- Little, L.F., Gaffney, I.C., Rosen, K.H., Bender, M.M., 1990. Corporate instability is related to airline pilots' stress symptoms. *Aviat. Space Environ. Med.* 61 (11), 977–982.
- Lloyd, S., Streiner, D., Shannon, S., 1994. Burnout, depression, life and job satisfaction among Canadian emergency physicians. *J. Emerg. Med.* 12 (4), 559–565.
- Maslach, C., Jackson, S.E., 1986. In: *Maslach Burnout Inventory (Manual)*, 2nd Edition. Consulting Psychologists Press, Palo Alto, CA.
- Maslach, C., 1982. In: *Burnout: The Cost of Caring*. Prentice Hall, Englewood Cliffs, NJ.
- Maslach, C., 1976. Burned-out. *Hum. Behav. Sept.*, 16–22.
- Mattiasson, I., Lindegärde, F., Nilsson, J.Å., Theorell, T., 1990. Threat of unemployment and cardiovascular risk factors: longitudinal study of quality of sleep and serum cholesterol concentrations in men threatened with redundancy. *Br. Med. J.* 301, 461–466.
- McKnight, J.D., Glass, D.C., 1995. Perceptions of control, burnout, and depressive symptomatology: a replication and extension. *J. Consult. Clin. Psychol.* 63 (3), 490–494.
- Michaelis, W., Eysenck, H.J., 1971. The determination of personality inventory factor patterns and intercorrelations by changes in real life motivation. *J. Genet. Psychol.* 118, 223–234.
- Molassiotis, A., Haberman, M., 1996. Evaluation of burnout and job satisfaction in marrow transplant nurses. *Cancer Nurs.* 19 (5), 360–367.
- Molassiotis, A., van den Akker, O.B., Boughton, B.J., 1995. Psychological stress in nursing and medical staff on bone marrow transplant units. *Bone Marrow Transplant* 15 (3), 449–454.
- Nadaoka, T., Kashiwakura, M., Oiji, A., Morioka, Y., Totsuka, S., 1997. Stress and psychiatric disorders in local government officials in Japan, in relation to their employment level. *Acta Psychiatr. Scand.* 96 (3), 176–183.
- Niedhammer, I., Goldberg, M., Leclerc, A., Bugel, I., David, S., 1998. Psychosocial factors at work and subsequent depressive symptoms in the Gazel cohort. *Scand. J. Work Environ. Health* 24 (3), 197–205.
- O'Brien, S., Page, S., 1994. Self efficacy, perfectionism and stress in Canadian nurses. *Can. J. Nurs. Res.* 26 (3), 49–61.
- Papadatou, D., Anagnostopoulos, F., Monos, D., 1994. Factors contributing to the development of burnout in oncology nursing. *Br. J. Med. Psychol.* 67, 187–199.
- Pearlin, L.I., Schooler, C., 1978. The structure of coping. *J. Health Soc. Behav.* 19, 2–21.
- Pines, A., Aronson, E., 1989. In: *Career Burnout: Causes and Cures*. The Free Press, A Division of Macmillan, New York, p. xii.
- Pines, A.M., 1986. Who is to blame for helper's burnout? Environmental impact. In: Scott, C.D., Hawk, K. (Eds.), *Heal Thyself: The Health of Health Care Professionals*. Brunner/Mazel, New York.
- Quine, L., 1999. Workplace bullying in NHS community trust: staff questionnaire survey. *Br. Med. J.* 23 (318), 228–232.
- Rees, D., 1990. Occupational stress in health service employees. *Health Service Manage. Res.* 3 (3), 163–172.
- Rogers, J.C., Dodson, S.C., 1988. Burnout in occupational therapists. *Am. J. Occup. Ther.* 42 (12), 787–792.
- Rotter, J.B., 1966. Generalized expectancies for internal versus external control of reinforcement. *Psychol. Monogr. Gen. Appl.* 80 (1), 1–28.
- Roy, A., 1999. CSF 5-HIAA correlates with neuroticism in depressed patients. *J. Affect. Disord.* 52 (1–3), 247–249.
- Samuelsson, M., Gustavsson, J.P., Petterson, I.L., Arnetz, B., Asberg, M., 1997. Suicidal feelings and work environment in psychiatric nursing personnel. *Soc. Psychiatry Psychiatr. Epidemiol.* 32 (7), 391–397.
- Schonfeld, I.S., 1990. Psychological distress in a sample of teachers. *J. Psychol.* 124 (3), 321–338.
- Shankar, J., Famuyiwa, O.O., 1991. Stress among factory workers

- in a developing country. *J. Psychosom. Res.* 35 (2–3), 163–171.
- Skipper, Jr. J.K., Jung, F.D., Coffey, L.C., 1990. Nurses and shiftwork: effects on physical health and mental depression. *J. Adv. Nurs.* 15 (7), 835–842.
- Smith, J.W., Denny, W.F., Witzke, D.B., 1986. Emotional impairment in internal medicine house staff. *J. Am. Med. Assoc.* 255, 1155–1158.
- Spurgeon, A., Harrington, J.M., Cooper, C.L., 1997. Health and safety problems associated with long working hours: a review of the current position. *Occup. Environ. Med.* 54 (6), 367–375.
- Stevens, G.B., O'Neil, P., 1983. Expectations and burnout in the developmental disabilities field. *Am. J. Community Psychol.* 2, 615–626.
- Sturgess, J., Poulsen, A., 1983. The prevalence of burnout in occupational therapists. *Occup. Ther. Ment. Health* 3 (4), 47–60.
- Sutherland, V.J., Cooper, C.L., 1992. Job stress, satisfaction, and mental health among general practitioners before and after introduction of new contract. *Br. Med. J.* 13 (304 6841), 1545–1548.
- Ulusahin, A., Ulug, B., 1997. Clinical and personality correlates of outcome in depressive disorders in a Turkish sample. *J. Affect. Disord.* 42 (1), 1–8.
- Valko, R.J., Clayton, P.J., 1975. Depression in the Internship. *Dis. Nerv. Syst.* 36, 26–29.
- Violanti, J.M., Aron, F., 1993. Sources of police stressors, job attitudes, and psychological distress. *Psychol. Rep.* 72 (3 Pt 1), 899–904.
- Whitley, T.W., Allison, Jr. E.J., Gallery, M.E., Cockington, R.A., Gaudry, P., Heyworth, J., Revicki, D.A., 1994. Work-related stress and depression among practicing emergency physicians: an international study. *Ann. Emerg. Med.* 23 (5), 1068–1071.
- Whitley, T.W., Allison, Jr. E.J., Gallery, M.E., Heyworth, J., Cockington, R.A., Gaudry, P., Revicki, D.A., 1991. Work-related stress and depression among physicians pursuing post-graduate training in emergency medicine: an international study. *Ann. Emerg. Med.* 20 (9), 992–996.
- Williams, S., Cooper, C.L., 1998. Measuring occupational stress: development of the pressure management indicator. *J. Occup. Health Psychol.* 3 (4), 306–321.
- Woodward, C.A., Shannon, H.S., Cunningham, C., McIntosh, J., Lendrum, B., Rosenbloom, D., Brown, J., 1999. The impact of re-engineering and other cost reduction strategies on the staff of a large teaching hospital: a longitudinal study. *Med. Care* 37 (6), 556–569.
- Yuen, P., Balarajan, R., 1989. Unemployment and patterns of consultation with the general practitioner. *Br. Med. J.* 298, 1212–1214.