



Are Burnout Levels Increasing? The Experience of Israeli Primary Care Physicians

Talma Kushnir PhD^{1,2}, Carol Levhar MD^{3,4} and Avner Herman Cohen MD^{3,4}

¹National Institute of Occupational and Environmental Health, Ra'anana, Israel

²Sociology of Health, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer Sheva, Israel

³Clalit Health Services, Israel

⁴Family Medicine, Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel

Key words: burnout, stress, family physicians, pediatricians, clinic directors

Abstract

Background: Burnout is a professional occupational disease that puts both physicians and patients at risk. Triggered by the increase in burnout levels among physicians, the European Forum of Medical Associations and the World Health Organization issued a statement in February 2003 expressing serious concerns about the situation, urging all national medical associations to increase awareness of the problem, monitor it and study its causes in order to develop preventive strategies.

Objectives: To compare burnout levels in two separate samples of primary care physicians measured in the mid-1990s, with burnout levels in a similar but small and independent sample, assessed in 2001; and to outline the theoretical bases of burnout.

Methods: Altogether, 508 primary care physicians employed by Clalit Health Services responded anonymously to a self-report questionnaire. The samples were not representative and included family physicians, pediatricians and clinic directors.

Results: Burnout levels were significantly higher in the 2001 sample than in the mid-1990s samples, especially among clinic directors.

Conclusions: Despite methodologic limitations of the study, the findings suggest that burnout levels may be increasing among primary care physicians in Israel. This may be due to substantial increases in workload and role conflicts following implementation of the Health Insurance Law and Patients' Rights Act. Because these findings are consistent with the trend in Europe, this situation cannot be ignored and systematic studies of burnout among all medical specialties should be carried out to uncover current sources of the syndrome and to devise measures of prevention and treatment.

IMAJ 2004;6:451-455

Burnout is a professional occupational disease [1]. It reflects work-related distress that risks impairing the quality of care delivered by physicians. Doctors are susceptible to burnout [2], especially family physicians [3]. Family medicine is considered to be intrinsically more stressful than other medical specialties [4]. Surveys of family physicians' mental health tend to show high rates of emotional distress manifested in depression, anxiety and stress [5].

In February 2003 the European Forum of Medical Associations and the World Health Organization issued a statement on the

burnout syndrome among physicians [6]. The statement expresses EFMA's serious concern about the increase in burnout levels, encourages all national medical associations to increase awareness of the problem and recommends that the situation be monitored. It also calls for international research into the personal, social and structural causes of this syndrome in order to further develop strategies for the identification and prevention at the individual and organizational levels. This statement was based on findings and considerations presented by several researchers (such as the authors of the present paper) and practicing physicians.

At the National Institute of Occupational and Environmental Health we have been involved in studies of physician burnout for a decade. The aim of the present paper is to report the findings of a study comparing burnout levels in three independent samples of primary care physicians: family physicians in 1994 [7], pediatricians in 1997, and family physicians and pediatricians in 2001.

Subjects and Methods

Three separate physician samples from Clalit Health Services were involved in the present analysis. In all of them the physicians received (either directly or from the head of the community clinic or child healthcare center) a questionnaire and an addressed and stamped envelope for returning to the researchers. Respondents could reply anonymously. The 1994 sample included 225 family physicians, members of the Israel Association of Family Physicians, as described previously [7]; the 1997 sample included 200 pediatricians, and the 2001 sample comprised 228 physicians who were not included in the previous two anonymous groups.

The study questionnaire

- *Sociodemographic details:* These included gender, age, marital status, medical specialty (family physician, pediatrician, or other), and managerial status (director of clinic vs. regular physicians).
- *Burnout:* The burnout construct involves various aspects of energetic exhaustion [8]. The scale assesses the following

EFMA = European Forum of Medical Associations

components: emotional and physical burnout, tension, listlessness and cognitive weariness, as described below. The validity and reliability of this set of scales was described elsewhere [9]. In the present study, the reliability coefficient for the combined burnout scale (Cronbach's alpha) was 0.93.

- *Emotional and physical burnout*: This was assessed by eight items measuring physical fatigue and emotional exhaustion. Each item was scored on a 7-point scale, ranging from 1 ("almost never") to 7 ("almost always"). Examples of sample items include: "I feel physically exhausted," "I feel fed-up."
- *Tension and listlessness*: These two subscales assess correlates of the burnout syndrome. They comprise four items each. The response scale was the same as for burnout. Sample items for tension: "I feel restless"; sample item for listlessness: "I feel sleepy."
- *Cognitive weariness*: This was measured by six items with the same response scale as for the above measures. Sample items: "My head is not clear," "I feel I am disorganized lately."

The burnout score used in the study is the sum total of the points in all subscales divided by the number of items in the total scale (n=22).

- *Depersonalization*: This is one of the three dimensions of the burnout syndrome [10], denoting detachment and hostile responses to patients/clients. This measure included five items taken from the Maslach Burnout Inventory [10]. The response scale had 6 points ranging from 1 ("not at all") to 6 ("very much"). Sample item: "I feel I treat some of my patients as if they are objects without a personality of their own." Reliability coefficient was 0.78.

Statistical analysis

All statistical analyses were performed with the SAS software [11]. To evaluate the main and interaction effects of year of assessment of burnout, gender, medical specialty, and managerial status, two separate three-way analyses of variance (ANOVA) were performed. The first involved year of assessment, gender and medical specialty (and all the interaction terms). The second included year of assessment, gender and managerial status (and interaction terms). Three chi-square analyses were computed in order to assess differences in the distribution of family physicians, pediatricians and clinic directors in the 1990s and 2001, among three burnout categories: normal, high, and very high.

Results

The study sample included 508 responding physicians: 183 family physicians in 1994 (81.3% response rate) [7], 126 pediatricians in 1997 (63% response rate), and 199 physicians in 2001 (87.3% response rate), as follows: 89 family physicians, 31 pediatricians, and 29 clinic directors who were either family physicians or pediatricians and are therefore considered a separate category. Fifty physicians with other medical specialties were excluded from the present analysis. Thus, the 149 physicians in the third sample

Table 1. Characteristics of the total sample

	Family physicians		Pediatricians	
	1994 (n=183)	2001 (n=89)	1997 (n=126)	2001 (n=31)
Gender (female)	32.8%	48.3%	50.8%	54.8%
Age (SD)	43.12 (6.87)	41.1 (8.80)	45.8 (12.47)	47.0 (4.36)
Clinic directors	51.4%	—*	20.7%	—*

* 13.3% of the total 2001 sample

Table 2. Mean levels of burnout and depersonalization among family physicians and pediatricians in the 1990s and 2001

	Family physicians		Pediatricians	
	1994	2001	1997	2001
Burnout				
Men	2.70 (.81)	3.60 (1.44)	2.72 (.93)	3.42 (1.25)
Women	3.02 (.95)	3.84 (1.12)	2.57 (.74)	3.04 (1.43)
Total	2.80 (.87)	3.72 (1.29)	2.64 (.84)	3.21 (1.34)
Depersonalization				
Men	1.88 (.74)	2.74 (1.40)	1.68 (.64)	2.13 (1.12)
Women	2.07 (1.05)	2.66 (1.30)	1.67 (.75)	1.84 (.74)
Total	1.94 (.86)	2.70 (1.35)	1.67 (.70)	1.97 (.93)

SD values are given in parentheses

included in the present analysis comprised 74.9% of the respondents in the 2001 sample. The characteristics of the final study sample are presented in Table 1.

Table 2 shows the average levels of burnout and depersonalization in the two periods, the mid-1990s and 2001, among family physicians and pediatricians (standard deviations in parentheses).

Three-way analyses of variance were performed on the burnout and depersonalization data separately, with three independent variables: year of assessment (1994–97 vs. 2001), gender, and medical specialty (family physician/pediatrician); and the interaction terms. Since the results of the burnout and depersonalization scores were very similar, only the burnout findings are reported.

The results indicate that the levels of burnout in the 2001 sample were substantially higher than in the 1990s sample ($F = 35.7$, $df = 7/434$, $P < 0.001$), higher among family physicians than pediatricians ($F = 8.48$, $P < 0.004$), but men and women did not differ at both times ($F = 0.01$). The significant Specialty X Gender interaction ($F = 5.05$, $P < 0.01$) suggests that on the whole, among family physicians women were more burned-out than men, but among pediatricians the reverse was true. The other interaction terms were not significant.

Similar analyses were performed on the same database, and this time managerial status replaced medical specialty. Thus, the predictors were year, gender and managerial status (clinic director vs. non-director), and the interaction terms. The findings of these analyses show that on the whole, burnout levels were significantly higher among clinic directors than among other physicians ($F = 3.8$, $df = 7/434$, $P < 0.05$), but the differences were significant only in 2001 ($F = 5.14$, $P < 0.02$). The findings regarding depersonalization were very similar and are therefore not specified.

Next, family physicians, pediatricians and clinic directors were categorized (separately) into three levels of burnout scores: normal, high and very high. The basis for these categories were the 1994

Table 3. Distribution of family physicians among the burnout categories

Burnout category	1994 (n=183)	2001 (n=89)
Normal	75.3	30.3
High	9.8	10.1
Very high	14.9	59.6
Total	100.0	100.0

$$\chi^2 = 58.8, P < 0.001$$

Table 4. Distribution of clinic directors among the burnout categories

Burnout category	1994-97 (n=115)	2001 (n=29)
Normal	76.5	24.1
High	9.6	3.5
Very high	13.9	72.4
Total	100.0	100.0

$$\chi^2 = 41.5, P < 0.001$$

data: normal = 1st–8th percentile of burnout scores, high = 9th percentile, very high = top 10% of burnout scores

Table 3 shows the proportions of family physicians, and Table 4 the clinic directors, in each of the above burnout categories. The results of the chi-square analyses were highly significant ($\chi^2 = 58.8$, $P < 0.001$ and 41.5 , $P < 0.001$, respectively).

While the majority of respondents in the mid 1990s were categorized as having normal levels of burnout, by 2001, 60% of family physicians, 39% of pediatricians and 72% of the directors could be considered as having very high levels of burnout.

Discussion

The theoretical bases of burnout

In the 1940s, burnout meant “the cessation of operation of a rocket or jet engine” [1]. Since the behavioral sciences “adopted” the term in the 1970s, human burnout signifies the depletion of physical and emotional energies and motivations. It may lead to dysfunctional behavior and to a host of negative emotional and health consequences.

There is much confusion about the specificity of the term “burnout.” It has been equated with depression, dissatisfaction, tension, fatigue, vital exhaustion, stress, and various other negative psychological constructs. Yet, on the conceptual level there is a consensus that burnout is an *emotional reaction that follows prolonged, unsuccessful attempts at coping with stress* at work. All existing theoretical models regard the feeling of being depleted of one’s emotional resources (feeling like an empty battery) as the basic component of the syndrome. There is also agreement that burnout can occur to any employee, not only to individuals whose job entails service to people (e.g., teachers, social workers, physicians). However, the implications of burnout experienced by healthcare workers are more serious because it may compromise the health and well-being of patients/clients as well as their own.

Theoretical frameworks

There is added controversy over the core dimensions of burnout and their assessment. Three different conceptual approaches are outlined below.

- Christina Maslach’s conceptualization was one of the first models that initially focused on people-oriented professionals. She developed the MBI (Maslach Burnout Inventory) [10], one of the first scientifically validated burnout measurement instruments. The MBI has been most widely used in scientific studies. This model views burnout as a syndrome that consists of three dimensions: *Emotional exhaustion* – the feeling of being depleted of one’s emotional resources; *Depersonalization* – the negative detachment and even hostile response to other people and clients (recently relabeled “work cynicism”) [12]; *Reduced personal accomplishment* – feelings of decline in one’s professional competence and productivity (relabeled now as personal ineffectiveness and incompetence).
- Pines [13] developed an existential theory of burnout. It states that people have a basic need to believe that their lives and actions are meaningful and important. When highly motivated and idealistic professionals are prevented from feeling competent and successful and feel that what they do is insignificant, they undergo a *gradual process of disillusionment and loss of motivation*, which results in burnout. Burnout mostly follows long-term confrontations with negative work features that lead to subjective feelings of failure. For example, excessive workloads, lack of administrative support, and bureaucratic constraints (common among physicians) limit autonomy at work and force professionals to spend time and effort on things they consider secondary in importance. Physicians may experience stressful guilt feelings when they feel unable to provide adequate services to patients.
- Shirom et al. [8] also view burnout as an affective state characterized by feelings of being depleted of one’s physical, emotional and cognitive energies. Burnout follows a prolonged exposure to chronic stress when a person experiences a cycle of net resource loss over a period at work – a loss that cannot be replenished – of the physical, emotional or cognitive energy that he/she possesses. Shirom’s definition of burnout as a combination of physical, emotional and cognitive exhaustion does not overlap any other established behavioral science concepts (i.e., anxiety or depression), while clearly differentiating burnout from its antecedent conditions (stress) and from its possible consequences (e.g., depression, performance decrements) [8].

Negative health consequences of burnout

The literature is replete with findings on emotional, functional, social and organizational consequences of burnout. To mention just a few: low morale, work absenteeism, attrition (turnover), and reduced quality of healthcare. Yet the health consequences of burnout are relatively rarely researched.

In a pioneering series of studies by Appels and co-workers in The Netherlands [14], *vital exhaustion* (a construct that partly overlaps

MBI = Maslach Burnout Inventory

with burnout) was associated with sleep disturbances, cardiac symptoms (angina pectoris and unstable angina) and predicted future myocardial infarction in men and women, independent of the classical risk factors.

The following studies were carried out in Israel in the last 10 years. In a study among industrial employees [15], burnout levels persisted for at least 4 years after baseline measurement, and persisted even after retirement. This suggests that burnout may be a chronic condition. A study among blue-collar workers suggests that burnout is associated with increased somatic and physiological *hyper-arousal*: e.g., tension, restlessness, post-work irritability, sleep disturbances, complaints of waking up exhausted, and higher cortisol levels during the workday [16]. The results suggest that burned-out persons may have an *inability to unwind* after working hours, and their insomnia and non-refreshing sleep may explain their chronic fatigue. Another study, in a sample of high-tech employees, found that burnout was associated with *elevated risk factors for cardiovascular disease*: total cholesterol, low density lipoprotein, triglycerides, and uric acid, and marginally with ECG abnormality; blood pressure was not associated [17]. In a prospective study among healthy employees, emotional exhaustion was found to be predictive of cholesterol changes up to 3 years later in men, and among women it was correlated with cholesterol and triglycerides [18]. Burnout might be a risk factor for type 2 diabetes, as found recently in Israeli employees [15].

Burnout may also be associated with inflammatory conditions, as reflected in the close association between burnout and leukocyte adhesiveness/aggregation, a marker of inflammation [19]. In terms of possible reduced immunocompetence, we found that prior to the first Gulf War, burnout was associated with upper respiratory infections [9].

The findings presented above suggest that chronic burnout may impair physical health. Several pathways have been suggested, such as adoption of negative health habits, increased biochemical and hematologic risk factors for cardiovascular disease, diabetes, sleep disturbances, exacerbation of the inflammation process, and impairment of the immune system [20].

Discussion

The findings in the present study tend to support anecdotal evidence of increasing levels of occupational burnout and attrition among family physicians and clinic directors. While the majority of our respondents in the mid-1990s were categorized as having normal levels of burnout, by 2001 the majority of the physicians studied were considered as having a very high level of burnout.

The danger is that when physicians become victims of job distress, many of them may start doubting their choice of career and even decide to leave the profession or retire early. This incurs huge losses of national and personal resources and poses a risk to the quality of care as well as to the physician's well-being.

Although the findings presented here are not based on representative samples of primary physicians, and the number of respondents is rather small (especially the 2001 group), they echo the anecdotal evidence and therefore warrant further systematic research, as advocated by the EFMA/WHO statement [4].

Some possible explanations for the changes

How can one explain the apparent increase in burnout levels from the first 1994 baseline study of burnout, until 2001? Perhaps a part of the explanation concerns two laws that were passed in the mid-1990s, which appear to have significant implications for the social and professional climate in which physicians and directors function nowadays. One is the National Health Insurance Law that went into effect in January 1995 and gave the state the responsibility to provide a standardized basket of medical services, including hospitalization, to *all* residents. The second is the Patient Rights Act, passed in 1996. Among other things, this Law increased patients' awareness of their rights and exposed physicians to malpractice suits, at both the criminal and civil levels, with no requirement of proof of criminal intent or negligence.

The first law gave equal status to all four health maintenance organizations and created competitive pressures among them. In order to keep members and attract new ones, physicians found themselves getting acquainted with marketing and public relations concepts. The patients became clients/customers and the physicians turned into service providers. Consistent with a worldwide trend, the status of the physician began to decline. Accordingly, the largest HMO, which was founded during the 1920s and was called the "General Sick Fund" (*Krankencasse*), is now called "General Health Services" (*clalit* is the Hebrew word for general).

Concurrently, severe financial difficulties continuously threaten the HMOs' survival, causing staff reductions and increased workloads, as well as tight monitoring of expenses. Physicians are required to "push" services on the one hand and reduce costs on the other, while providing quality care. On the whole, physicians are forced to function under increased stressful conditions.

A few words about stress sources among clinic directors. The eternal existential condition of Israeli HMOs is shortage of cash. A decentralization movement is an attempt to reduce deficits. Each clinic has become economically autonomous. On the psychological level, autonomy is recognized as an anti-stress resource as it enables one to make his/her own decisions. Yet, paradoxically, the outcome of this process, at least for some of the directors, means a loss of autonomy. Directors' decisions are monitored closely. They are instructed continuously to reduce costs and be accountable for any deviation from the budget. Additionally, because of the existing employment contracts, the directors also carry on their full-time physician jobs, creating a double burden and overload. Concurrent with the constant demand for saving and the increasing double burden of being both a director and a physician, they are also instructed to provide the best possible healthcare service. Such conditions are fertile grounds for the development of role conflicts, a well-known source of occupational stress, which might also explain the increases in burnout levels, especially among clinic directors. There are several sources of role conflict. One is when a person is asked to play two roles that conflict with each other (e.g., physician and manager). Another occurs when one role consists of two or more elements that contradict each other (reduce costs, increase case-load, and provide quality care).

HMO = health maintenance organization

Further systematic studies should be carried out among Israeli primary care physicians to test the validity of the above suggestions and uncover additional sources of physician burnout.

Acknowledgment. Professor Eli Kitai was involved in data collection and analysis in the 1994 sample. Talma Kushnir would like to acknowledge the assistance and support of the Israel Medical Association in enabling her to present the findings that formed the basis for this paper at the 2003 meeting of the European Forum of Medical Associations (EFMA) and WHO.

References

1. Felton R. Burnout as a clinical entity: its importance in health care workers. *Occup Med* 1998;48:237-50.
2. Ramirez AJ, Graham J, Richards MA, Cull A, Gregory WM. Mental health of hospital consultants: the effects of stress and satisfaction at work. *Lancet* 1996;347:724-8.
3. Bakker AB, Schaufelli WB, Sixma HJ, Bosveld W, Van Dierendonck D. Patient demands, lack of reciprocity, and burnout: a five-year longitudinal study among general practitioners. *J Org Behav* 2000;21:425-41.
4. Swanson V, Power K, Simpson R. A comparison of stress and job satisfaction in male and female GPs and consultants. *Stress Med* 1996;12:17-26.
5. Chambers R, Campbell I. Anxiety and depression in general practitioners: associations with type of practice, fundholding, gender and other personal characteristics. *Fam Pract* 1996;13:170-3.
6. European Forum of Medical Associations and WHO. Statement on the burnout-syndrome among physicians. EFMA, Berlin: 7-9 February 2003.
7. Kitai E, Kushnir T, Herz M, Melamed S, Vigiser D, Granek M. Correlation of work structure and job satisfaction among Israeli family physicians. *IMAJ* 1999;1:236-40.
8. Shirom A. Job-related burnout: a review. In: Quick JC, Tetrick LE, eds. *Handbook of Occupational Health Psychology*. Washington, DC: American Psychological Association, 2002:245-65.
9. Kushnir T, Melamed S. The Gulf War and burnout. *Psychol Med* 1992;22:987-95.
10. Maslach C, Jackson SE. *The Maslach Burnout Inventory Manual*. 2nd edn. Palo Alto, CA: Consulting Psychologists Press, 1986.
11. SAS/STAT Software Release 8.2. Cary (NC): SAS Institute, 2001.
12. Maslach C, Schaufelli WB, Leiter MP. Job burnout. *Ann Rev Psychol* 2001;52:397-422.
13. Pines A. Burnout: an existential perspective. In: Schaufeli WB, Maslach, C, Marek T, eds. *Professional Burnout: Recent Developments in Theory and Research*. Washington, DC: Taylor & Francis, 1993:33-51.
14. Appels A, Falger PRJ, Schouten EGW. Vital exhaustion as a risk indicator for myocardial infarction in women. *J Psychosom Res* 1993;37:881-90.
15. Melamed S, Shirom A, Froom P. Burnout and risk of type 2 diabetes mellitus in Israeli workers. Paper presented at Work, Stress and Health: New challenges in a changing workplace. 5th Interdisciplinary Conference on Occupational Stress and Health. Toronto, Ontario, Canada, 20-22 March 2003.
16. Melamed S, Ugarten U, Shirom A, Kahana L, Lerman Y, Froom P. Chronic burnout, somatic arousal and elevated cortisol levels. *J Psychosom Res* 1999;46:591-8.
17. Melamed S, Kushnir T, Shirom A. Burnout and risk factors for cardiovascular diseases. *Behav Med* 1992;18:53-61.
18. Shirom A, Westman M, Shamai O, Carel RS. The effects of work overload and burnout on cholesterol and triglycerides levels: the moderating effects of emotional reactivity among male and female employees. *J Occup Health Psychol* 1997;2:275-88.
19. Lerman Y, Melamed S, Shragin Y, et al. The association between burnout at work and leukocyte adhesiveness/aggregation. *Psychosom Med* 1999;61:828-33.
20. Shirom A, Melamed S. Burnout and health: current knowledge and future directions. In: Antoniu A, Cooper C, eds. *New Perspectives in Occupational Health*. London: Wiley and Greek Universities Publishing House. In press.

Correspondence: Dr. T. Kushnir, Sociology of Health, Faculty of Health Sciences, Ben-Gurion University of the Negev, P.O. Box 653, Beer Sheva 84105, Israel.
Phone: (972-8) 647-7423
Fax: (972-8) 647-7635
email: talmak@bgu.ac.il

Not the power to remember, but its very opposite, the power to forget, is a necessary condition for our existence

Sholem Asch (1880-1957), Polish-born Yiddish novelist, who became a U.S. citizen in 1920. In his controversial later books (e.g., The Nazarene, and The Apostle) he expressed his belief in the essential unity of Judaism and Christianity

Capsule

Environmental sources of prion transmission

Whether transmission of the chronic wasting disease (CWD) prion among cervids requires direct interaction with infected animals has been unclear. Miller et al. report that CWD can be transmitted to susceptible animals indirectly, from environments contaminated by excreta or decomposed carcasses. Under experimental conditions, mule deer (*Odocoileus hemionus*) became infected in two of three paddocks containing naturally infected deer, in two of three paddocks where infected deer carcasses had

decomposed *in situ* approximately 1.8 years earlier, and in one of three paddocks where infected deer had last resided 2.2 years earlier. Indirect transmission and environmental persistence of infectious prions will complicate efforts to control CWD and perhaps other animal prion diseases.

Emerg Infect Dis 2004;10:1003

E. Israeli

