

Chapter 3

BURNOUT IN MILITARY PERSONNEL

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INTRODUCTION

In 1947, Sobel¹ described soldiers who were “burnt out” and “worn out.” These were highly dedicated, previously very efficient soldiers who, after prolonged, continuous exposure to combat, became reluctant to accept responsibility for others, began to show difficulty in making decisions, and came to prefer routine, simple tasks over more challenging ones. They had difficulty making new friends and instead tended to be viewed as “callous, cold task masters, and slave drivers.”^{1(p316)} They exhibited symptoms of mild depression and a loss of self-confidence, as manifested in a tendency to make self-deprecatory remarks. Their ability to carry out their duties deteriorated to the point that they became unfit for combat and a handicap to their units. In spite of these changes, their motivation to carry out the mission remained steadfast. Because they were often noncommissioned officers (NCOs), the term *old sergeant syndrome* was coined. In many respects, old sergeant syndrome is similar to the phenomenon of *burnout* as the term has since evolved in the civilian literature.

Despite Sobel’s early use of the term *burnt out*, Freudenberger² is generally credited with writing the first published paper on burnout. He described a constellation of symptoms occurring among highly dedicated civilians working in the free clinic movement. He noted that a number of physical and behavioral symptoms typically appeared in individuals after they had worked at the same institution for about 1 year. Like soldiers suffering from old sergeant syndrome, burned-out clinic workers appear depressed and emotionally exhausted. They become anxious and irritable. They become cynical and suspicious of the people with whom they work. Their thinking becomes rigid and inflexible. They resist change, however warranted, viewing anything new as a further drain on their already overwhelmed coping resources. They experience physical symptoms such as fatigue, headaches, gastrointestinal disturbances, and sleeplessness. Burned-out people spend an increasing amount of time at work but accomplish less and less. They spend time just “hanging around” at work as if they have nowhere else to go. They may in fact have few social activities outside of the workplace because routinely working overtime may have negatively affected their relationships with people outside of work.

Since Freudenberger’s² description of burnout, numerous accounts have appeared describing a similar syndrome among individuals in a variety of occupations, including nurses,^{3,4} physicians,⁵ emergency medical technicians,⁶ mental health workers,⁷ social service workers,^{8,9} police officers,¹⁰ teachers,¹¹ and employees of a commercial manufacturing firm.¹²

Despite the initial use of the term *burnt out* to describe a military population, only a few studies^{3,13,14} have examined burnout in military personnel. Nonetheless, military duty is fraught with stressful experiences that are conducive to the development of burnout. In fact, stress may be an integral part of military training:

Basic training is designed to place the trainee under various forms of stress, both physical and psychological. While some trainees are in better physical condition than others, mechanisms exist so that almost all experience stress. The stronger trainees may be required to carry an extra 25 pounds of machine gun or radio on a speed march. Trainees doing calisthenics are not allowed to look at one another so that they can locate a group norm; therefore, each trainee may be required to do his own personal maximum of pushups. There are other forms of physical stress—hunger, thirst (in field training), and sleep deprivation. . . .

Psychological stress has a number of sources. Fear of failure and the companion fear of being recycled (repeating part of basic training in another company) are among the most severe types of psychological stress, especially for marginal soldiers. Psychological stress is also generated intentionally by arbitrary and sometimes conflicting demands. One drill sergeant said in an interview that he would see to it that his platoon, which had been doing very well, “won’t be able to do anything right tomorrow.”^{15(p15)}

Stress can produce beneficial as well as detrimental consequences:

Stress can in some cases have an energizing effect, causing those who are prepared and able to do so to rise to the occasion of a stressful situation by rendering an exceptional performance. The probability of such a productive response is enhanced by training and experience, and indeed much of a military unit’s preparatory efforts are

devoted to developing the capacity to perform well under stress.

....

We must also recognize that there is another kind of stress, one which decreases the effectiveness of leaders and units. . . . Such stress is not the result of a deliberate effort to use it for productive purposes, but rather derives accidentally or collaterally from policies and practices that are otherwise motivated. It serves no useful purpose, but instead undermines individual and unit effectiveness. More importantly, it results from institutional approaches that leaders as practicing managers have some capacity to change. . . . We are talking here of some middle ground between stress which is deliberately created for positive reasons, on the one hand, and stress which is in the nature of things and cannot be avoided on the other.^{16(pp176-177)}

While psychiatric reactions to combat stress have long been recognized as a significant source of lost troop strength, reactions to chronic occupational stress in the peacetime military have received relatively little attention. However, chronic occupational stress in the military poses a threat to military performance in noncombat as well as combat situations and jeopardizes attainment of the peacetime mission of preparing military personnel for combat.

This chapter examines the problem of burnout in the military. The symptoms of burnout are emotional, cognitive, behavioral, and somatic. Burnout may impair combat readiness and decrease resistance to combat stress breakdown through its effects on group cohesion, morale, job performance, and physical and psychological health.

DEFINITION AND DESCRIPTION

While definitions of burnout vary, the commonly accepted view is that burnout is a means of coping with a difficult work situation.¹⁷ One definition is that burnout is a “commonly employed set of maladaptive coping reactions to high and continuing levels of perceived job stress and personal frustration.”^{18(p7)} An alternative definition^{8,19} is that burnout is the experience of occupational tedium or physical, emotional, and mental exhaustion. Most commonly, burnout is defined as a syndrome of emotional exhaustion, depersonalization, and a lack of a sense of personal accomplishment that occurs in response to chronic exposure to occupational stressors.²⁰

Individuals who are burned out feel psychologically drained or emotionally exhausted. They feel that their coping resources are being severely taxed by their work, and they feel incapable of dealing with any additional stress. They feel “at the end of their rope.” Often they suffer from “professional depression,” that is, they feel sad or unhappy about their work and have little enthusiasm or energy for their work.²¹ In addition, they feel that they have little emotional energy left for involvement with other people. Human service professionals who are burned out are less involved in the problems of their patients or clients and may even view friends and family members as a further drain on their limited coping resources.¹⁹

Another sign of burnout is decreased interpersonal sensitivity, also referred to as depersonalization. Burned-out individuals often

develop negative, callous, dehumanizing attitudes toward patients or coworkers.^{8,20} This suggests that burnout poses a threat to unit cohesion, which is vital to effective military performance²² and to prevention of psychiatric breakdown in combat.²³

People experiencing depersonalization become distrustful of the people with whom they work. They tend to view patients or clients as deserving of their own problems. They distance themselves from people at work in a variety of ways. They may come to treat other people not as individuals but rather as members of some category—for example, as members of a particular rank group or type of unit. Human service providers who are burned out may react to patients or clients in a strictly intellectual manner. They may view patients or clients only in terms of their problems; the familiar example is when a healthcare provider refers to a patient not by name but as “the gall bladder in Room 41.”

Medical personnel who are burned out limit their interactions with patients. For example, physicians who are high in emotional exhaustion report that they cope by doing work that does not involve interacting with people, such as paperwork.²⁰ Nurses who are burned out spend less time with patients.²⁴

Burned-out medical personnel may also reduce their emotional involvement with patients by delivering mechanical medical care. Glass²⁵ observed this happening in psychiatrists who served in combat theaters during World War II. As Glass suggests, burnout can have deleterious effects on the quality of medical care provided:

The psychiatrist himself is likely to become weary and emotionally exhausted in combat. . . . Under these conditions the psychiatrist may at times lose his diagnostic sense and emotional balance. All patients then begin to look alike to him, and he may identify himself with his patients and see them as all equally deserving of evacuation; or seeing them all as volitionally motivated, he may adopt a harsh policy, assume a severe and caustic manner, and return to duty soldiers who are completely unfit for combat.^{25(pp61-62)}

In addition to emotional exhaustion and depersonalization, people experiencing burnout believe that they are not accomplishing anything worthwhile at work. They feel that their accomplishments are falling far below the expectations held by themselves and others. In fact, their perceptions that their productivity has decreased are likely to be accurate. Burned-out workers take more frequent work breaks and are absent more often than their colleagues.²⁶

Another symptom associated with burnout is a desire to avoid decisions, problems, or changes at work. This avoidance is especially likely in individuals who are dissatisfied with their accomplishments at work.²⁷ This finding suggests that burnout, by stifling initiative and impairing performance, jeopardizes attainment of the military mission.

Burnout is also associated with a greater tendency to report somatic complaints,²⁸ health problems,^{19,29} and difficulty sleeping.¹⁹ Chronic occupational stress has been associated with increased risk of developing cardiovascular disease.^{30,31} Stress alters immune functioning, increasing susceptibility to infections,^{32,33} and influences cancer progression.³⁴

Chronic occupational stress may also increase health-impairing behaviors. Burnout is associated with increased use of drugs to cope with work-related stress,^{19,35} including the use of prescription drugs to calm down.²⁴ In drug addicts trying to overcome their habit, stress makes relapse more likely. Individuals often consume more nicotine and alcohol when under stress, and their eating habits may change.³⁶

The pervasive nature of burnout is suggested by the dissatisfaction individuals suffering from burnout report with their careers, their lives, and their marriages.⁵ Because burnout is associated with a greater desire to change jobs^{8,20,35,37} and with actual job turnover,^{21,37} burnout may hinder the retention of trained military personnel.

Recruitment and retention of nurses are tremendous problems for the military, which currently

faces a shortage of both registered nurses and licensed practical nurses.³⁸ Nurses who are burned out are more likely to change jobs than their colleagues who are not burned out, suggesting that alleviating burnout may facilitate retention of military nursing personnel.²¹

While burnout is associated with decreased job satisfaction, the correlations are not so high as to suggest that burnout is synonymous with job dissatisfaction.^{26,37,38,39,40,41} Individuals suffering from burnout may be satisfied with their job but dissatisfied with their work performance.

Organizational consequences of burnout include decreased productivity, increased healthcare costs, increased absenteeism,²¹ increased tardiness,¹⁹ and unauthorized extension of work breaks.⁴² Burnout may impair not only the quantity but also the quality of the "product" rendered by the organization. In human service organizations, staff burnout may lead to deterioration of the quality of services rendered to clients, even though the organization's statistical reports may remain stable or even improve.⁴³ While this obviously has implications for human service providers in the military, its implications for other types of military personnel are less obvious. In combat troops, for example, burnout may be prevalent when, despite a unit's improvement on objective indicators, its mission readiness is deteriorating.

In fact, burnout may be a useful description of "the shift in emphasis from *being good* to *looking good*"^{44(p28)} that followed the initial success of the Unit Manning System (COHORT [cohesion, operational readiness, and training]) experiment. The purpose of the COHORT program was to develop highly cohesive, high-performance units through personnel stabilization and special training efforts. The demanding training pace was coupled with expectations that the units would perform flawlessly under high-visibility conditions. Eventually, the intense pressure led to impaired performance; decreased cohesion; reduced motivation; and authoritarian, centralized leadership, symptoms that arguably could be attributed to burnout.

Burnout vs Other Military Stress Reactions

This book discusses various psychiatric syndromes that occur in response to military occupational stressors. These syndromes are distinguishable according to the chronic or acute nature of the stressor, the chronic or acute nature of the response, and the intensity of the stressor. For example, com-

bat stress reaction (also still called “battle fatigue”) may occur as a reaction to acute or chronic combat stress. Acute combat stress reaction is a readily reversible condition accompanied by heightened physiological arousal.⁴⁵ In contrast, chronic combat stress reaction is recalcitrant to treatment and is accompanied by physiological hypoarousal. Post-traumatic stress disorder (PTSD) is a chronic reaction to an acute stressor, which may be combat or another traumatic event. Individuals experiencing PTSD show signs of heightened physiological arousal.

Burnout is similar to chronic combat stress reaction in that it is a state of hypoarousal that occurs as a result of chronic exposure to stressors.⁴⁵ The signs and symptoms of the two syndromes are similar. Manifestations of chronic combat reaction include depression, paranoia, decreased tolerance for frustration, excessive complaining, withdrawal from social interaction, sleep disturbances, weight loss, and abuse of alcohol and drugs. The differences between burnout and chronic combat stress reaction may be more quantitative than qualitative, the two conditions differing in intensity of the stressor (combat versus more mundane peacetime occupational stressors) and intensity of the response.

The Process of Burning Out

Many theories have been offered to explain how burnout develops. One theory⁴⁶ is that burnout begins when an individual who is extremely committed to an unsatisfying job increases the number of hours worked in order to attain high expectations held by others or, more likely, by the individual. As the number of hours worked increases, exposure to workplace stressors increases, draining the person’s “finite store of ‘adaptation energy.’”^{46(p43)} Consequently, the person’s efficiency decreases. The person’s response to feeling unproductive is to work more, which further increases exposure to workplace stressors and depletes the person’s energy level. This self-perpetuating cycle is likely to result in burnout unless the individual takes time away from normal work duties to recover.

This theory is consistent with Selye’s⁴⁷ description of the stress response, which he called the General Adaptation Syndrome. According to Selye, initial exposure to a stressor is associated with increased resistance as the person tries to overcome the threat associated with the stressor. Prolonged exposure to the stressor eventually leads to the

depletion of adaptive resources, to the breakdown of resistance, and finally to a state of exhaustion.

The progressive erosion of coping resources is apparent in the following description of soldiers suffering from old sergeant syndrome:

With self-esteem as the mainstay of their personalities, they were able to resist the terrific onslaught of the combat environment. During their early combat careers they proved themselves able to “take it,” but once a break in efficiency occurred, self-confidence became progressively weakened. Yet responsibility was not slackened but often was increased. Forced to carry the same or a heavier load in the face of death and destruction, a cycle between increased responsibility and hesitancy to accept it was set up. This conflict was productive of a progressive and insidious type of anxiety.^{1(p320)}

The development of a decreased sense of personal accomplishment has been explained from the perspective of attribution theory.^{20,48} This viewpoint suggests that when helping professionals note that they have become less responsive to the needs of the people they are supposed to help they blame themselves and view themselves as inadequate. Because exposure to workplace stressors has been relatively constant, it is difficult for individuals to identify a situational cause for their increasingly negative attitudes toward others.

When burnout develops, it is usually not because exposure to workplace stressors has suddenly increased, but rather because an individual’s ability to cope with chronic occupational stressors has eroded over time. The result is a dispositional attribution to self or to the people with whom one works. A dispositional attribution to self is especially likely for individuals who do not discuss personal feelings with colleagues and therefore feel that their experiences are unique. Sharing a sense of depersonalization with colleagues would help individuals identify the situational causes of their own behavior.

When a dispositional attribution to the people with whom one works is made to explain workers’ decreased sense of personal accomplishment, helping professionals may develop negative, dehumanizing views toward clients or patients. When helping professionals sense that their efforts are not producing positive changes in recipients’ lives, they may blame recipients for their own problems. This attitude is consistent with the “just world hypothesis,” the tendency to blame victims for their own misfortune. Viewing recipients as too lazy, stupid,

bad, or weak to change their own life circumstances allows providers to avoid feeling ineffective.⁴⁸

A lack of feelings of personal accomplishment can produce depersonalization not only in those who provide health and social services to military personnel and family members, but also in leaders who are frustrated with the progress of the soldiers they are expected to lead. Trying to fulfill the peacetime training mission can be frustrating for leaders when competing missions and lack of facilities, equipment, or other resources make it difficult to produce the desired change in trainees.

This process occurred following the Vietnam conflict when the Army was plagued with indiscipline, drug abuse, and racial incidents.⁴⁹ In response to these problems, NCOs developed an authoritarian leadership style. They emphasized strict discipline, believing that yelling at soldiers and remaining aloof from them was the best way to motivate them. Socializing with subordinates was viewed as unprofessional, as fraternization. The lesson that caring for the troops produces better soldiers was

forgotten. While the appropriateness of the term *burnout* to describe this process is debatable, the process seems parallel to that described in healthcare workers.

Some writers⁵⁰ have argued that organizations as well as individuals can burn out, implying that burnout is contagious among members of a work group. This contention makes intuitive sense. When a work environment is stressful, burnout is likely to be common. When employees become burned out, they become more difficult to get along with and less productive. This situation increases the emotional strain as well as the workload of the other employees, thus increasing the likelihood that they too will burn out.

Some investigators have argued that there are stages of burnout. For example, one model¹² postulates eight phases of burnout, with depersonalization and a lack of a sense of personal accomplishment occurring in the early stages, and emotional exhaustion developing in the later stages. Evidence for such a stage model is weak at best.

OCCUPATIONAL FACTORS ASSOCIATED WITH BURNOUT

Researchers have tried to determine why burnout is more likely in some work environments than in others. Occupational characteristics examined in relation to burnout include overload, role ambiguity, role conflict, lack of control, lack of positive feedback, and stressful interpersonal duties.

Overload

The common-sense notion of burnout is that it is caused by the stress of working too hard for too long. There is evidence to support this belief. For example, studies of teachers^{51,52} show that those who have larger numbers of students have higher levels of burnout in general and of emotional exhaustion in particular. The comments of a staff officer involved in the Unit Manning System echo reports of a relationship between overload and emotional exhaustion: "Doesn't anyone have the guts to set priorities? Everything is number one priority, and we're just using up the troops."^{44(p28)} The effects of overload extend beyond emotional exhaustion. In a study⁸ of social service providers, caseload was positively correlated with occupational tedium, with the development of negative attitudes toward clients, and with the desire to change jobs. It was negatively correlated with lik-

ing the job, liking the agency, and being satisfied with the job.

A study¹⁴ of Army personnel assigned to rapid deployment force units found that the relationship between hours worked and burnout was different for junior enlisted personnel and NCOs. Among junior enlisted personnel, the more hours worked per day, the greater the emotional exhaustion. Among NCOs, those who reported working a greater number of hours per day also reported *more* of a sense of personal accomplishment. Nevertheless, NCOs who indicated that their time off was insufficient to allow them to take care of personal business reported greater emotional exhaustion.

The difference in relationship between hours worked and burnout for NCOs and junior enlisted personnel can be easily explained. NCOs spend a lot of time on tasks that they perceive as meaningful but trainees perceive as meaningless. Because it is difficult to measure the performance of soldiers serving in the combat arms in peacetime, military leaders often view the number of hours spent training for combat as an indicator of the effectiveness of training. By definition, 8 hours of training is viewed as better than 4 hours, and 12 hours is even better. Long hours in the field may produce burnout if those hours are viewed as unnecessary and mean-

ingless by trainees. NCOs have more control than junior enlisted personnel over how they spend their work time and, therefore, are less likely to spend long hours on tasks they perceive as meaningless.

When superiors do not properly manage subordinates' time, working long hours can be especially frustrating for subordinates:

One day we hung around the motor pool til 1630 doing nothing, then suddenly we got word that we had to prepare twelve vehicles to be turned in for scrapping, and they had to be ready by 0730 the next day. So we work all night on trucks that are to be junked. Is this the mission?^{44(p21)}

This kind of inadequate planning can weaken morale, reduce confidence in leaders, and produce burnout. Leaders' expectations that subordinates work unnecessarily long hours can ultimately be counterproductive.

Maslach suggests that longer work hours promote greater burnout only to the extent that those hours involve "continuous direct contact with patients or clients,"^{48(p37)} especially with patients or clients who are in some way difficult to deal with. It may not be the amount of time spent in direct contact with clients per se, but dissatisfaction with the nature of that contact that best predicts burnout.⁸

A widely accepted assertion of military leaders is that they spend 90% of their time dealing with 10% of their soldiers. In other words, they spend a grossly disproportionate amount of time with the worst soldiers—that is, those who have gone absent without leave (AWOL), bounced checks, or have other disciplinary problems. Because soldiers who are doing well are less likely to come to the attention of NCOs, spending time with "problem" soldiers contributes to a lack of a sense of personal accomplishment among NCOs. Most NCOs do not mind spending long hours working but do mind spending them needlessly. For example, NCOs see helping soldiers with their personal finances as a distraction from mission-related work.

Overload involving responsibility for the well-being of other people is especially likely to result in stress and adverse health effects (eg, among air traffic controllers).⁵³ This finding suggests that in addition to direct contact with patients or clients, responsibility for those patients or clients may independently contribute to burnout. Consistent with this finding is Sobel's⁵⁴ observation that the soldiers who were most prone to develop old sergeant syndrome were those who had before breakdown a

great deal of responsibility for other soldiers. For NCOs and officers, who are legally charged with looking after the welfare of the troops in their command, responsibility for subordinates may contribute to burnout.

The relationship between burnout and workload is complex. Long hours coupled with perceptions that the time is not well spent are likely to lead to burnout. Overload can contribute to burnout, but it is only one of a number of factors implicated in burnout.

Role Ambiguity

Role ambiguity occurs when a person is uncertain about role expectations in a job.¹¹ The person is confused about the responsibilities and rights associated with the job, about how best to perform the job, and about the criteria used to evaluate job performance. Role ambiguity is positively correlated with depersonalization, emotional exhaustion, and lack of a sense of personal accomplishment.¹¹ Role ambiguity is also associated with job dissatisfaction, physical symptoms of stress, job turnover, and impaired job performance.²⁷ Burnout is lessened when organizational rules and policies are clearly communicated and workers know what to expect from their jobs.⁷

In the military, "other duties as assigned" is part of every service member's job description; this may produce role ambiguity. The mission is often defined on an ad hoc basis and redefined daily: Painting the barracks may be defined as the mission one day, and conducting field training exercises may be the mission the next. Inconsistent application of the criteria used in making retention and promotion decisions may also promote role ambiguity.

Role Conflict

Role conflict occurs when a person cannot reconcile the inconsistency between two or more sets of expected role behaviors. Role conflict increases the likelihood of burnout.^{11,55} In a study of enterostomal therapists, role conflict was cited as the most common cause of burnout.⁵⁶

Military leaders are charged with fulfilling the mission and looking after the welfare of the troops. These responsibilities may conflict; an example is when impossible or stupid missions are called for by superiors even though they may demoralize, frustrate, or simply waste the time of subordinates.

Role conflict may be especially high in so-called “boundary positions,”^{53(p62)} that is, positions that involve interacting with people both inside and outside an organization or work group. This assertion is supported by findings of higher role conflict in middle managers than in blue-collar employees.⁵⁷ Military personnel occupying boundary positions include company-level and platoon-level senior NCOs as well as lieutenants in charge of a platoon. Individuals in the military with more than one professional identity—for example, military officers who are also nurses—also occupy boundary positions and may be especially likely to experience role conflict.

Military medical personnel may experience conflict between their roles as healthcare providers acting on behalf of individual patients and their roles as military personnel serving the military mission. The duty of the military physician is to maximize combat strength. In the civilian community, those who are most severely injured or most seriously ill are generally treated first. In a combat situation, individuals who are most salvageable may be at highest priority for treatment; the worst injured may be treated last. Effective treatment as well as ineffective treatment may pose a threat to the patient’s life because treatment may lead to return of the successfully treated service member to combat.

Role conflict is also likely when an employee is expected to do more than is possible given the constraints of time and resources. The army’s philosophy of “do more with less” may promote burnout. Lack of administrative support, as manifested in insufficient funds or equipment to accomplish all of several competing organizational goals, may produce role conflict. A senior officer commented on the chronicity of this problem:

Throughout my service the demands on the army and organizations in it have often been out of proportion to the people and resources available. The army seldom adjusted goals that had been established prior to reductions in force and budget cuts. Too many “can do” commanders at brigade level and above tried to do them all. . . . The troops and the army as an organization paid the price.^{58(p39)}

Sometimes an organization makes incompatible demands, producing role conflict. An emphasis on short-term results may compromise the longer term interests of the organization. For example, during the Unit Manning System experiment, pressure for quick results produced an emphasis on looking good that occurred at the expense of being good.⁴⁴

The short-sighted “zero defects” approach creates an atmosphere in which a leader will ask a unit member who is particularly adept at a particular task to always perform that task for the unit. As a result, other unit members will not learn how to perform the task, thereby decreasing the unit’s preparedness for combat.

Another source of role conflict is an incompatibility between demands and abilities, as occurs when an individual is assigned a task but lacks the adequate training to perform that task.⁵⁶ Individuals whose education and training did not provide them with the necessary skills and knowledge to perform the tasks expected of them may be especially prone to burnout.⁴³ A study²⁰ of public contact employees revealed that employees who felt that their job training had been inadequate scored higher on all burnout measures.

Role conflict may also stem from an incompatibility between work and home responsibilities. Civilian healthcare workers complain that the demanding nature of their work interferes with their family responsibilities.⁵⁹ For military medical personnel, changes of assignment and temporary duty create additional friction between work and family responsibilities. This friction may explain why burnout is reportedly higher among military nurses than among civilian nurses,³ even among those who work at the same hospital. Whether resulting from competing work demands or from conflicting work and home responsibilities, role conflict has been associated with increased burnout.⁴¹

Lack of Job Control

Being unable to control or predict events can be stressful.⁶⁰ The military organization exerts greater control over its personnel than most civilian organizations, for example, by restricting where they live and what they wear. Furthermore, soldiers complain that being unable to predict the length of the duty day wreaks havoc on their personal lives.⁴⁴ This lack of control has pervasive effects on soldiers and their families, as indicated by the wife of an active duty member:

I’ve just given up planning anything! Meals, movies, vacations. To hell with it! We plan it, and get it all set up, and they send him off. I don’t trust his commander. He just wants to look good, and he’ll volunteer Jack for anything that comes along.^{44(p38)}

Military personnel may also view the decisions of a promotion or retention board as uncontrollable

and unpredictable. In the U.S. Army, these decisions are made by a group of individuals unknown to the person being evaluated. The priorities of the individuals making the decisions are to some extent unknown and may conflict with those of the service member's raters.

Healthcare professionals, especially physicians, have a great deal of job autonomy; however, they have limited control over the outcomes of their work. Sometimes patients misunderstand the treatment regimen or do not comply with it for other reasons. Sometimes patients simply cannot be helped given the constraints of current medical knowledge.

Exposure to uncontrollable or unpredictable stressors or both can lead to increased stress, impaired job performance, and increased insensitivity toward other people. These effects may persist even after exposure to the uncontrollable or unpredictable situation has ended.^{60,61}

Individuals who perceive that they have control over various aspects of their work report less burnout.^{62,63} When employees are allowed to work independently and have input into decision making, burnout is less likely.^{7,56} Junior enlisted personnel tend to have little autonomy in their jobs, and this lack may explain why they are more likely than officers or NCOs to develop burnout.¹⁴

Responsibility without appropriate decision-making input may be especially stressful. This predicament is illustrated by the comments of a squad leader who stated: "I'm responsible for training my squad, but I have no input to the training schedule. I know what my men need to practice, but I get no training time."^{44(p26)} Decisions are made at higher levels in organizations with high burnout levels,³⁷ suggesting that micromanagement contributes to burnout:

A number of company commanders said that their bosses constrained their autonomy, punished independence, and compromised their credibility. . . . One platoon leader complained that after positioning a machine gun in a defensive maneuver he was required to change its location three times after successive visits from the company, battalion, and brigade commanders. The lieutenant, noting that the weapon ended up in about the same position where he had first placed it, lamented, "You'd think after two years they'd realize I know where to put the damned thing."^{44(pp26-27)}

Despite the generally positive effects of having control, a caveat about control must be presented here: The effects of control over a stressful situation

depend on the individual and the context.^{64,65} Having control is not always beneficial. For example, a person who is given control over a task but does not have the requisite training is likely to experience stress. Thus, giving subordinates as much control as possible over their work will minimize burnout only to the extent that this control is appropriate given their level of training and experience.

Lack of Positive Feedback

If an employee does not receive sufficient information about the effectiveness of his work, burnout is more likely.^{8,26} In human service occupations, feedback about the success of one's work comes from clients or patients as well as from supervisors and colleagues. For example, medical personnel often do not receive adequate feedback about the effectiveness of their work. If a patient does not return for a follow-up visit, the provider usually does not know whether the patient has improved to the point of no longer needing treatment, has sought treatment elsewhere, or has dropped out of the healthcare system in frustration. When medical personnel do receive feedback it is more likely to be bad than good; it has been said that the successes go away and the failures keep coming back.²⁰ Providers get a distortedly negative view of their own effectiveness because the patients for whom treatment has failed are more likely to return than those who have been successfully treated.

Stressful Interpersonal Duties

Medical personnel engage in emotionally taxing interactions with people who are sick, in pain, anxious about their health and their future, and possibly dying. In the military, this is especially true because medical personnel in wartime treat patients whose wounds were inflicted by weapons systems whose destructiveness and lethality are unmatched in the civilian community. Added to this burden is the difficult job of informing patients and their loved ones about a grim prognosis or about a diagnosis with tremendous emotional impact such as breast cancer or acquired immunodeficiency syndrome.

Superimposed on the difficulty of interacting with people who are suffering is the unpleasant nature of some of the treatments provided by medical personnel. Patients who are asymptomatic on arrival at the dentist's office often leave in considerable pain as a result of dental procedures. As a result, dentists find that patients are often fearful or

hostile toward them. Similarly, nurses who work in burn units inflict agonizing pain on their patients through the dressing changes and debridement necessary to treat burn wounds. Because the nursing profession is oriented to relieving suffering, it can be extremely stressful for nurses when a patient's response to treatment is not the gratitude nurses expect but rather hostility and uncooperativeness.⁶⁶

Medical personnel report that having a great deal of responsibility for the well-being of their patients is stressful.⁵⁹ When a patient dies or fails to improve, healthcare providers sometimes blame themselves. In a study⁵⁶ of enterostomal therapists, respondents identified working with clients whose prognosis was poor as a stressor that contributed to burnout. Another study⁶⁷ reported that physicians' ratings of the stressfulness of various patient scenarios varied according to the degree of threat to the patient's life and the extent to which the best course of action was unclear. Patient scenarios involving both threat to the patient's life and decision-making uncertainty were rated as more stressful than those involving only one or the other factor. Events re-

quiring fast action on the part of the physician were rated as highly stressful. In combat or in a peacetime emergency situation, any or all of these factors may be operating.

In addition to medical personnel, people in other military occupational groups may regularly experience emotionally draining interpersonal interactions. Supervisors often must help subordinates deal with both personal and work-related problems that interfere with employees' job performance, and this may increase their susceptibility to burnout.^{68,69} Social workers, family assistance workers, rescue workers, and military police also perform difficult interpersonal duties and may therefore be especially susceptible to burnout.

The types of jobs that are likely to promote burnout are those that require continuous, direct contact with other people in emotionally taxing situations; those that require long hours of work performing tasks of questionable utility; those that are unclear as to workers' rights, duties, and responsibilities; and those that do not give workers adequate control over their work.

THE INFLUENCE OF INTRAPERSONAL AND SOCIAL FACTORS

Individual Characteristics

This chapter views burnout as a subcategory of occupational stress.⁷⁰ The transactional model of stress proposes that, for a stress response to occur, an individual must appraise a stimulus or event as harmful, threatening, or challenging.⁷¹ This model suggests that individual differences in the appraisal of events explain why some people burn out while others in the same situation do not. Some people thrive under workplace conditions that others find extremely aversive. The concept of Person-Environment Fit⁷² highlights the importance of matching the individual worker's preferences regarding job characteristics with the demands of the job itself; this perspective suggests that burnout is more likely when there is a misfit between the individual worker and the work environment.⁷⁰

Few studies have examined personality traits as they pertain to burnout; however, one study⁵ investigated this issue in physicians. Physicians who had low self-esteem, low self-confidence, proneness to dysphoria and obsessive worry, social anxiety, passivity, or withdrawal from others when assessed just before entering medical school had higher levels of burnout when reassessed an average of 25

years later. Physicians who had indicated greater adherence to religious and moral rules and who had expressed interest in poetry, dramatics, and science were less likely to burn out.

The manner in which a person expresses anger may be related to the type of burnout response that develops. In a study²⁷ of nurses, those who tended to direct anger toward other people were more likely to report depersonalization, while those who tended to direct anger toward themselves were more likely to experience a burnout response that included an avoidance of decisions or problems.

Military service members who have problems at home or in other aspects of their personal life may be at increased risk for developing burnout.^{43,70} Burnout is more likely among individuals who are unhappily married than among those who are happily married.⁵ Military assistance programs designed to help troubled families may augment the service member's resources for dealing with stress at work.

Morale

Morale is "the enthusiasm and persistence with which a member of a group engages in the prescribed activities of that group."^{73(p454)} The military

concept of morale is similar to the concept of organizational commitment in the civilian literature. Individuals who are committed to a particular organization are willing to invest a great deal of time, effort, and emotional energy for the organization's benefit. They have a strong desire to continue their association with the organization and believe in the organization's values and goals.

Several writers^{2,17} claim that the most dedicated and committed workers are at greatest risk for burnout. Others⁴⁶ invoke a "workaholic personality type" to describe those who are most likely to burn out. Sobel¹ noted that the soldiers who suffered from old sergeant syndrome were those who, in the past, handled responsibility well, were excellent leaders, and related well to other people. In fact, many of them had received citations, awards, and medals for their outstanding performance.⁵⁴ These observations suggest that military personnel who strongly believe in the military and are willing to work hard to further its goals—those who, in the absence of burnout, would be most valuable to the military—are most vulnerable to burnout.

Commitment may be viewed as the extent to which a person has stakes in a given situation.⁷¹ A worker is more likely to appraise a situation as harmful, threatening, or challenging when the situation involves something that is personally significant. Workers who have put little time, effort, or emotional energy into their work would be less likely to appraise work-related events as stressful and less likely to burn out. Sobel describes the case of a 29-year-old first sergeant of excellent capabilities who was evacuated for exhaustion:

Subsequently it was discovered that he had carelessly left his company records strewn about a command post and that they had been picked up by a British patrol. This sergeant had been extremely careful with secret information and papers. Despite the diminution in efficiency, as shown by this case, there was no loss of motivation, and these men continued, sometimes desperately, in a job they had become incapable of handling. This led to severe conflict and guilt feelings with the result that their anxiety increased progressively to the point where evacuation became imperative. Guilt over letting their buddies down was a constant feature and was directly proportionate to the state of morale in the unit, as is the incidence of the entire syndrome.^{1(p317)}

Despite claims that the most committed workers are at greatest risk for burnout, the dominant view of commitment as a risk factor for burnout is incomplete. In fact, commitment can help mitigate burn-

out. Research suggests that commitment enhances the ability to cope with a stressful work environment⁷⁴ and moderates the adverse effects of occupational stress on job performance.⁵⁷ Commitment to army values may protect personnel of all ranks from the development of burnout.¹⁴ Taken together, the results suggest that there may be some optimal level of commitment, and deviations in either direction from the optimum increase an individual's susceptibility to burnout.

Causal relationships between burnout, on the one hand, and morale and commitment, on the other, are unclear. The most likely scenario is that morale and commitment influence susceptibility to burnout^{2,17,74} and that burnout in turn has negative effects on morale and commitment.^{75,76} Conditions that foster low morale are likely to encourage the development of burnout. While commitment and morale are important, they may not be sufficient to prevent burnout in an nonsupportive work environment. In the long run, commitment to a job that does not provide adequate support and rewards for hard work is likely to be harmful to the worker although initially a committed worker can maintain superior performance and high morale despite an indifferent or frustrating work environment.

Cohesion

"Loosely defined, cohesion represents feelings of belonging, of solidarity with a specifiable set of others who constitute a 'we' as opposed to 'them.'"^{77(p6)} Cohesive units provide better social support to their members than noncohesive units. The social support provided by coworkers can take the form of instrumental, informational, or emotional aid. Coworkers can provide information that directly aids in the performance of job duties—for example, by providing instructions regarding how to perform a particular task. Coworkers can help reduce overload by directly assisting with job duties. They can provide information that reduces role ambiguity and can provide feedback regarding one's job performance. In addition, coworkers can provide emotional support for a colleague suffering from occupational stress, either directly or by increasing awareness of the situational causes of a stressful job situation.

Research^{69,78,79} supports an association between social support and increased resistance to burnout. Burnout is inversely related to the perceived friendliness and support of coworkers,⁷ to satisfaction with coworkers,³⁵ and to having coworkers with

whom one feels comfortable discussing difficult clients and sharing work responsibilities.⁸ Receiving feedback and support from colleagues and supervisors is negatively related to burnout.⁸ Supervisor support may be particularly important in minimizing burnout.^{52,69} Perceived impatience or defensiveness of supervisors predicts extended absence from work.²¹ A study¹⁴ of U.S. Army personnel assigned to rapid deployment force units found that measures of cohesion were more important than objective stressors or characteristics of the individual in predicting burnout.

Sobel^{1,54} described the loss of group cohesion in soldiers suffering from old sergeant syndrome. These soldiers had been either original members of their divisions or had been with their divisions for an extended period. These soldiers were survivors in that they were among the few remaining long-term members of their unit. They had close bonds with the few remaining unit old-timers and spent a great deal of time with them relating battle experiences. These discussions made them feel less vulnerable by reminding them that they had survived so many battles. However, as attrition of the long-term unit veterans occurred, these soldiers failed to form strong bonds to new soldiers. This failure contributed to the erosion of self-confidence, to weakened defenses against anxiety, and to other manifestations of a severe battle reaction. Sobel noted that "loyalty to the group" was the final defense against anxiety that was weakened before breakdown.

Leadership Qualities

Caring leadership that relies on competence rather than rank for its power to motivate troops can prevent burnout. Authoritarian leadership, that is, the use of rules and pressure to keep workers under control, is associated with greater likelihood of burnout.⁷ Leaders who rigidly control the work environment and do not seem to care about their subordinates create an atmosphere of poor morale and disappointing productivity, as illustrated by the following anecdote:

One athletically gifted private, capable of earning maximum points on the army physical readiness test, said that he had purposely achieved only barely passing scores on the test to reduce the chances that his company would receive a physical training gold streamer: "The captain doesn't deserve a gold

streamer. He does nothing for us; he just uses us." Fellow COHORT soldiers applauded this act of subtle insubordination because they, too, felt the commander did not merit receiving the award.^{44(p51)}

The captain probably was low in consideration and high in structure. Leaders who are high in consideration emphasize the well-being of group members and create an atmosphere of trust, respect, and two-way communication. Those who are high in structure emphasize organizing group activities to achieve organizational goals. These two leadership qualities were examined in a study⁴⁰ that assessed the relationship between the leadership style of the head nurse and burnout among staff nurses. The higher the head nurse was in consideration, the lower the staff nurse burnout. Head nurse structure by itself did not relate to burnout, although it did interact with consideration. Specifically, staff nurse burnout was highest if the head nurse was low in consideration *and* high in structure. If the head nurse was high in consideration, the amount of structure had little influence on burnout scores. The combination of low consideration and low structure also produced relatively low burnout scores.

Supervisors who are high in consideration may reduce burnout by appearing more approachable to subordinates who need to discuss their work-related problems. A study of civilian nurses³⁵ revealed that those who indicated a greater use of talking with the supervisor to cope with occupational stress had relatively low burnout levels. Similarly, nurses at a military medical facility were less likely to develop emotional exhaustion when faced with workplace stressors if their supervisor was supportive.⁸⁰ These results suggest that good communication between supervisors and subordinates may help subordinates cope with a stressful workplace, thus minimizing the likelihood of burnout in subordinates.

Individuals who are experiencing burnout report less satisfaction with their supervisors.³⁵ When workers perceive supervisors as nonsupportive or inept, burnout is more likely.⁵⁶ In military populations, confidence in senior leaders and perceptions that leaders care about the well-being of their subordinates are negatively associated with burnout.¹⁴ Therefore, it is important that leaders be viewed as competent and caring by the troops if burnout is to be kept to a minimum.

RECOGNITION AND REDUCTION OF BURNOUT

Recognizing Burnout in Self and Others

The best line of defense against burnout is to ensure that all military personnel know what burnout is and what its symptoms are. Although awareness of burnout is a prerequisite for its prevention and treatment, the potential pitfall of increased awareness is the development of “medical students syndrome,” whereby learning about burnout leads to a self-fulfilling prophecy.¹⁸

Individuals can accurately perceive the extent to which a coworker is experiencing burnout.¹⁹ Because military leaders are responsible for the job performance and well-being of subordinates, it is important that leaders be able to recognize burnout. In addition, unit members should be able to recognize burnout in their peers.

Several psychometric instruments have been devised for assessing burnout; the Maslach Burnout Inventory (MBI)⁸¹ is the most widely used. The MBI consists of 25 items that yield frequency scores for each of three subscales, specifically emotional exhaustion, depersonalization, and personal accomplishment. The reliability and validity of the MBI are well established.^{26,81} The three subscales tap relatively independent dimensions of burnout; therefore, subscale scores rather than total burnout scores are typically used.

Because the authors of the MBI view burnout as a phenomenon afflicting human service providers, validation efforts have focused almost exclusively on this occupational group. A modified version of the MBI was developed for use in a commercial setting and is appropriate for use with a wider range of populations than the original version.¹² Because ratings of the intensity and frequency of experienced burnout symptoms are moderately to highly correlated,^{7,26} the modified version of the MBI requires only that respondents rate the extent to which each item is descriptive of themselves. Factor analysis of responses to the modified MBI supports the validity of the three subscales—emotional exhaustion, depersonalization, and lack of a sense of personal accomplishment—for assessing a military population.¹⁴

Another questionnaire used to assess burnout is the Tedium Scale,¹⁹ which consists of 21 items designed to assess physical exhaustion (feeling tired and weak), emotional exhaustion (feeling depressed

or trapped), and mental exhaustion (feeling worthless and disillusioned). Unlike the MBI, the Tedium Scale yields a total burnout score. The reliability of the Tedium Scale is satisfactory.¹⁹ The Tedium Scale is easier to administer, score, and interpret than the MBI but provides less specific information about the manifestations of burnout.

Reducing Burnout

Burnout results from an interaction between a person whose coping abilities are wearing thin and an unpleasant work environment. This interaction suggests that efforts to minimize burnout should focus both on enhancing individuals' coping resources and on reducing workplace stressors.

An individual's resistance to stress is a product of many different factors, including the person's physical health, mental health, and social support. The adoption or maintenance of health-promoting behaviors, such as physical exercise, proper diet, adequate rest, and restraint from excessive consumption of alcohol and caffeine, should be encouraged. Because it can be extremely difficult to change habits when under stress, it is important that health-promoting behaviors become habitual before the person becomes burned out.

Because an individual's appraisal of a situation determines whether a stress response will occur,⁷¹ informing workers about the benefits they can expect from undertaking potentially stressful assignments may help reduce burnout. For example, it may be possible to emphasize the career or growth opportunities in an overseas assignment so that the service member does not dwell on the negative aspects, such as the inconvenience of a household move or the separation from family that occurs during an unaccompanied tour. Leaders should ensure that subordinates understand how the successful completion of a particularly stressful or challenging task will contribute to the military mission. This will enable individuals who adopt the ideology or philosophy of the military to put potentially stressful events into a meaningful context and thereby minimize potentially adverse effects.⁷⁴

Burnout can be minimized through realistic training in which soldiers are taught how to deal with workplace stressors. The importance of training is revealed by a study⁶⁷ that found that physicians

with more training rated a number of patient scenarios as less stressful than their colleagues with less training. Similarly, a study of nursing assistants found lower levels of burnout among those who received training for work with the cognitively impaired.⁷⁹ Military training exercises are designed to simulate combat conditions; however, soldiers may not be adequately prepared to deal with peacetime occupational stressors. Increased training in how to resolve conflicts with coworkers, superiors, and subordinates; how to make difficult decisions; and how to improve communication between superiors and subordinates might better prepare soldiers for military service in peacetime.

Military training not only fails to prepare military personnel for some of the stressors they will encounter in peacetime, it may actually hamper their ability to cope with some types of missions. For example, U.S. Army paratroopers deployed to multinational peacekeeping operations in the Sinai in 1981 reported boredom and monotony.⁸² The values inculcated through their training, that is, an emphasis on fighting to achieve military objectives, may have conflicted with the orientation needed to conduct peacekeeping operations.⁸² Training that encourages combat troops to view this type of operation as a meaningful and appropriate use of their efforts and skills would help prevent adverse psychological reactions.

Training and experience can mitigate the stressfulness of some events but other events are so inherently stressful that increased knowledge and experience cannot mitigate their impact. In the study of physicians previously mentioned,⁶⁷ training reduced the stressfulness of events previously designated as medium or low stress but did not reduce the stressfulness of events previously designated as high stress. A supportive work environment can mitigate the effects of highly stressful events.

Military leaders can do much to ameliorate burnout by establishing conditions that foster the development of morale and cohesion. (See Chapter 1, "Morale and Cohesion in Military Psychiatry.") Good communication between and among soldiers and leaders is crucial to preventing burnout. Military leaders can reduce role conflict and role ambiguity by developing clear job descriptions and involving subordinates in the development of meaningful and achievable personal and unit goals.¹¹ They can minimize burnout by ensuring that organizational goals and regulations are unambiguously communicated to subordinates. Improved communication

between leaders and subordinates can help ensure that sacrifices made for the sake of the mission are perceived as necessary and meaningful. Increased awareness of how peers are reacting to the work environment may help service members realize that their own reactions are a normal response to a stressful environment.

Mission requirements sometimes mandate increased work hours; however, military personnel should receive time off to recover when mission requirements abate. Extra duty should be kept to a minimum. These measures are likely to provide the added benefit of increasing subordinates' perceptions that leaders care about them. Individuals who have control over the amount of time they devote to their work should be taught that while working long hours is at times necessary to achieve military objectives, working harder and longer does not guarantee enhanced productivity. Military personnel must learn to pace themselves so that they can sustain an optimal level of functioning, reserving some energy for dealing with stressful situations should they arise.⁴⁵

In jobs that involve dealing with patients or clients, burnout can be alleviated by reducing the number of hours of stressful patient contact.⁵³ This reduction can be accomplished by interspersing patient contact with administrative tasks or other types of work, by encouraging attendance at professional meetings, and by encouraging participation in job-relevant courses.

Medical personnel whose work involves emotionally demanding interactions with patients may benefit from caregiver support groups¹¹ or from consultation with mental health professionals. In one hospital, a liaison psychiatrist helped the staff of a burn unit improve their work environment.⁸³ Using the Work Environment Scale,⁸⁴ the psychiatrist assessed staff members' perceptions of the work environment as well as their preferences for an ideal work environment. Through a series of biweekly meetings, the psychiatrist sought to reduce the discrepancy between the actual and preferred environments by discussing staff members' perceptions of the work environment and by helping them plan and implement changes in their workplace. The effectiveness of the intervention was demonstrated by reduced discrepancies between staff members' actual and preferred work environments.

Another way to minimize burnout in healthcare providers is to ensure that they receive feedback about the positive outcomes of their work. One

way to provide this feedback in high-stress healthcare occupations is for providers to invite former patients and their families to an informal social gathering.⁸⁵ At these “alumni parties,” care providers have an opportunity to see that patients formerly under their care have improved as a result of the care provided. This reinforces providers’ perceptions that the work they perform is meaningful and appreciated. Interacting with patients outside of the healthcare setting would provide the added benefit of countering the development of depersonalization.

Because the presence of negative conditions and the absence of positive conditions in the workplace are independent of each other,⁴ efforts to reduce burnout should not only try to reduce negative job-related experiences but also to enhance positive experiences. This approach suggests the importance of formally recognizing outstanding job performance both informally on a personal level and more formally through the use of awards and medals. Employees who perceive their work as higher in incentives and rewards are less likely to develop burnout.⁷⁹

SUMMARY AND CONCLUSION

Chronic occupational stress can lead to burnout. Symptoms of burnout include feeling emotionally exhausted, being less sensitive to people at work, and being disappointed with one’s accomplishments at work. Burnout in military personnel has received little attention; however, this chapter contends that burnout poses a threat to the military mission in peacetime *and* in wartime. Burnout may adversely affect the performance, commitment, retention, cohesion, morale, and physical health of military personnel. Military leaders can

do much to prevent or ameliorate burnout. By fostering the development of horizontal and vertical cohesion, by providing realistic training that prepares service members for the types of stressors they are likely to encounter in peacetime military service, by making sure that the sacrifices expected of subordinates are necessary and meaningful, and by increasing awareness of organizational goals and giving workers as much autonomy as practicable in achieving them, burnout can be minimized.

REFERENCES

1. Sobel R. The “old sergeant” syndrome. *Psychiatry*. 1947;10:315–321.
2. Freudenberger HJ. Staff burnout. *J Soc Issues*. 1974;30:159–165.
3. Bartz C, Maloney JP. Burnout among intensive care nurses. *Res Nurs Health*. 1986;9:147–153.
4. Pines AM, Kanner AD. Nurses’ burnout: Lack of positive conditions and presence of negative conditions as two independent sources of stress. *J Psychosoc Nurs Ment Health Serv*. 1982;20(8):30–35.
5. McCranie EW, Brandsma JM. Personality antecedents of burnout among middle-aged physicians. *Behav Med*. 1988;14(1):30–36.
6. Neale AV. Work stress in emergency medical technicians. *J Occup Med*. 1991;33(9):991–997.
7. Savicki V, Cooley A. The relationship of work environment and client contact to burnout in mental health professionals. *J Counsel Dev*. 1987;65(5):249–252.
8. Pines A, Kafry D. Occupational tedium in the social services. *Social Work*. 1978;23:499–507.
9. Matthews DB. A comparison of burnout in selected occupational fields. *Career Dev Q*. 1990;38:230–239.
10. Jackson SE, Maslach C. After-effects of job-related stress: Families as victims. *J Occup Behav*. 1982;3:63–77.

11. Schwab RL, Iwanicki EF. Perceived role conflict, role ambiguity, and teacher burnout. *Educa Admin Q.* 1982;18(1):60–74.
12. Golembiewski RT, Munzenrider R, Carter D. Phases of progressive burnout and their work site covariants: Critical issues in OD research and praxis. *J Appl Behav Sci.* 1983;19(4):461–481.
13. Shelley JJ, Wong M. Prevalence of burnout among military dentists. *Milit Med.* 1991;156:113–118.
14. Wilcox VL, Garrigan J, Manning FJ. Levels and predictors of burnout in Army personnel. 1992. Unpublished manuscript.
15. Faris JH. The impact of basic combat training: The role of the drill sergeant. In: Goldman NL, Segal, DR, eds. *The Social Psychology of Military Service.* Beverly Hills, Calif: Sage; 1976: 11–24.
16. Sorley L. The leader as practicing manager. In: Buck JH, Korb LJ, eds. *Military Leadership.* Beverly Hills, Calif: Sage; 1981: 167–193.
17. Kamis E. An epidemiological approach to staff burnout. In: Jones JW, ed. *The Burnout Syndrome—Current Research, Theory, Interventions.* Park Ridge, Ill: London House; 1982: 54–67.
18. Paine WS. The burnout syndrome in context. In: Jones JW, ed. *The Burnout Syndrome—Current Research, Theory, Interventions.* Park Ridge, Ill: London House; 1982: 1–29.
19. Pines AM, Aronson E, Kafry D. *Burnout: From Tedium to Personal Growth.* New York: The Free Press; 1981.
20. Maslach C, Jackson SE. Burnout in health professions: A social psychological analysis. In: Sanders GS, Suls J, eds. *Social Psychology of Health and Illness.* Hillsdale, NJ: Erlbaum; 1982: 227–254.
21. Firth H, Britton P. “Burnout,” absence and turnover among British nursing staff. *J Occup Psychol.* 1989;62:55–59.
22. Manning FJ, Ingraham LH. An investigation into the value of unit cohesion in peacetime. In: Belenky G, ed. *Contemporary Studies in Combat Psychiatry.* Westport, Conn: Greenwood; 1987: 47–67.
23. Steiner M, Neumann M. Traumatic neurosis and social support in the Yom Kippur War returnees. *Milit Med.* 1978;143:866–868.
24. Cronin-Stubbs D, Brophy EB. Burnout: Can social support save the psych nurse? *J Psychosoc Nurs Mental Health Serv.* 1985;23(7):8–13.
25. Glass AJ. Psychiatry at the division level. In: Hanson FR, ed. *Combat Psychiatry: Experiences in the North African and Mediterranean Theaters of Operation, American Ground Forces. World War II.* Washington, DC: GPO; 1949: 45–73.
26. Maslach C, Jackson SE. The measurement of experienced burnout. *J Occup Behav.* 1981;2:99–113.
27. Firth H, McKeown P, McIntee A, Britton P. Professional depression, “burnout” and personality in longstay nursing. *Int J Nurs Stud.* 1987;24(3):227–237.
28. Belcastro PA. Burnout and its relationship to teachers’ somatic complaints and illnesses. *Psychol Rep.* 1982;50:1045–1046.
29. Stout JK, Williams JM. Comparison of two measures of burnout. *Psychol Rep.* 1983;53:283–289.
30. Haynes SG, Feinleib M. Women, work and coronary heart disease: Prospective findings from the Framingham Heart Study. *Am J Public Health.* 1980;70(2):133–141.
31. Karasek R, Baker D, Marxer F, Ahlbom A, Theorell T. Job decision latitude, job demands, and cardiovascular disease: A prospective study of Swedish men. *Am J Public Health.* 1981;71(7):694–705.

32. Jemmott JB, Locke SE. Psychosocial factors, immunologic mediation, and human susceptibility to infectious diseases: How much do we know? *Psychol Bull.* 1984;95(1):78–108.
33. Ader R, Felton D, Cohen N. *Psychoimmunology*. San Diego, Calif: Academic Press; 1991.
34. Sklar LS, Anisman H. Stress and cancer. *Psychol Bull.* 1981;89(3):369–406.
35. Albrecht TL. What job stress means for the staff nurse. *Nurs Admin Q.* 1982;7:1–11.
36. Grunberg NE, Baum A. Biological commonalities of stress and substance abuse. In: Shiffman S, Wills TA, eds. *Coping and Substance Use*. New York: Academic Press; 1985: 25–62.
37. Weinberg S, Edwards G, Garove WE. Burnout among employees of state residential facilities serving developmentally disabled persons. *Children Youth Serv Rev.* 1983;5:239–253.
38. Secretary's Commission on Nursing. Military nurses task force report on the military nursing shortage. In: *Support Studies and Background Information*. Vol 2. 1988; VI-A-1—VI-C-1.
39. Leiter MP. Burnout as a function of communication patterns. *Group Org Studies.* 1988;13(1):111–128.
40. Duxbury ML, Armstrong GD, Drew DJ, Henly SJ. Head nurse leadership style with staff nurse burnout and job satisfaction in neonatal intensive care units. *Nurs Res.* 1984;33(2):97–101.
41. Bacharach SB, Bamberger P, Conley S. Work-home conflict among nurses and engineers: Mediating the impact of role stress on burnout and satisfaction at work. *J Organ Behav.* 1991;12:39–53.
42. Jones JW. Dishonesty, burnout, and unauthorized work break extensions. *Personality Social Psychol Bull.* 1981;7(3):406–409.
43. Carroll JFX. Staff burnout as a form of ecological dysfunction. *Contemp Drug Problems.* 1979;(Summer):207–225.
44. Marlowe DH. *Unit Manning System Field Evaluation*. Washington, DC: US Department of the Army, Walter Reed Army Institute of Research; 1987. Technical Report No. 5.
45. Rahe RH. Acute versus chronic psychological reactions to combat. *Milit Med.* 1988;153(7):365–372.
46. Homer JB. Worker burnout: A dynamic model with implications for prevention and control. *System Dynamics Rev.* 1985;1(1):42–62.
47. Selye H. The General Adaptation Syndrome and the diseases of adaptation. *J Clin Endocrinol Metab.* 1946;6(2):117–230.
48. Maslach C. Burnout: A social psychological analysis. In: Jones JW, ed. *The Burnout Syndrome—Current Research, Theory, Interventions*. Park Ridge, Ill: London House; 1982: 30–53.
49. Ingraham L. *Fear and Loathing in the Motor Pool*. Washington, DC: Walter Reed Army Institute of Research; 1987. Report WRAIR NP-86–9.
50. Rountree BH. Psychological burnout in task groups: Examining the proposition that some task groups of workers have an affinity for burnout, while others do not. *J Health Human Resources Admin.* 1984;7:235–248.
51. DePaepe J, French R, Lavay B. Burnout symptoms experienced among special physical educators: A descriptive longitudinal study. *Adapted Physical Activity Q.* 1985;2:189–196.
52. Russell DW, Altmaier E, Van Velzen D. Job-related stress, social support, and burnout among classroom teachers. *J Appl Psychol.* 1987;72(2):269–274.

53. Kahn R. Job burnout: Prevention and remedies. *Public Welfare*. 1978;36(2):61–63.
54. Sobel R. Anxiety-depressive reactions after prolonged combat experience—the “old sergeant syndrome.” *Bull US Army Med Dept*. 1949;9(Suppl *Combat Psychiatry*):137–146.
55. Jackson SE, Schwab RL, Schuler RS. Toward an understanding of the burnout phenomenon. *J Appl Psychol*. 1986;71(4):630–640.
56. Cronin-Stubbs D. Professional burnout part two: A survey of enterostomal therapists. *J Enterostomal Therapy*. 1982;9(4):14–16.
57. Jamal M. Relationship of job stress to job performance: A study of managers and blue-collar workers. *Human Relations*. 1985;38(5):409–424.
58. Collins AS. *Common Sense Training: A Working Philosophy for Leaders*. San Rafael, Calif: Presidio; 1978.
59. Wolfgang AP. Job stress in the health professions: A study of physicians, nurses, and pharmacists. *Behav Med*. 1988;14(1):43–47.
60. Glass DC, Singer JE. *Urban Stress: Experiments on Noise and Social Stressors*. New York: Academic Press; 1972.
61. Cohen S. Aftereffects of stress on human performance and social behavior: A review of research and theory. *Psychol Bull*. 1980;88(1):82–108.
62. McDermott D. Professional burnout and its relation to job characteristics, satisfaction, and control. *J Human Stress*. 1984;10:79–85.
63. Arches J. Social structure, burnout, and job satisfaction. *Social Work*. 1991;36(3):202–206.
64. Averill JR. Personal control over aversive stimuli and its relationship to stress. *Psychol Bull*. 1973;80(4):286–303.
65. Thompson SC. Will it hurt less if I can control it? A complex answer to a simple question. *Psychol Bull*. 1981;90(1):89–101.
66. Quinby S, Bernstein NR. Identity problems and the adaptation of nurses to severely burned children. *Am J Psychiatry*. 1971;128(1):58–63.
67. Herrera H. Work stress perceived by physicians. Presented at the North Atlantic Treaty Organization (NATO) Advanced Study Institute on Environmental Stress, Life Crises, and Social Adaptation; 18 August 1978; Cambridge, England.
68. Jackson SE. Organizational practices for preventing burnout. In: Amarjit S, Schuler RS, eds. *Handbook of Organizational Stress Coping Strategies*. Cambridge, Mass: Ballinger; 1984: 89–111.
69. Ross RR, Altmaier EM, Russell DW. Job stress, social support, and burnout among counseling center staff. *J Counsel Psychol*. 1989;36(4):464–470.
70. MacNeill DH. The relationship of occupational stress to burnout. In: Jones JW, ed. *The Burnout Syndrome—Current Research, Theory, Interventions*. Park Ridge, Ill: London House; 1982: 68–88.
71. Lazarus RS, Folkman S. Coping and adaptation. In: Gentry WD, ed. *Handbook of Behavioral Medicine*. New York: Guilford; 1984: 282–325.
72. Loftquist LH, Dawis RV. *Adjustment of Work*. New York: Appleton-Century-Crofts; 1969.
73. Manning FJ. Morale, cohesion, esprit. In: Mangelsdorff AD, Gal R, eds. *Handbook of Military Psychology*. New York: Wiley; 1991: 453–470.

74. Cherniss C, Krantz DL. The ideological community as an antidote to burnout in the human services. In: Farber BA, ed. *Stress and Burnout in the Human Service Professions*. New York: Pergamon; 1983.
75. Miller KI, Ellis BH, Zook EG, Lyles JS. An integrated model of communication, stress, and burnout in the workplace. *Communication Res*. 1990;17(3):300–326.
76. Leiter MP, Maslach C. The impact of interpersonal environment on burnout and organizational commitment. *J Organ Behav*. 1988;9:297–308.
77. Ingraham LH, Manning FJ. Cohesion: Who needs it, what is it, and how do we get it to them? *Milit Rev*. 1981;61(6):2–12.
78. Koeske GF, Koeske RD. Work load and burnout: Can social support and perceived accomplishment help? *Social Work*. 1989;(May):243–248.
79. Chappel NL, Novack M. The role of support in alleviating stress among nursing assistants. *Gerontologist*. 1992;32(3):351–359.
80. Constable JF, Russell DW. The effect of social support and the work environment upon burnout among nurses. *J Human Stress*. 1986;12:20–26.
81. Maslach C, Jackson SE. *Maslach Burnout Inventory Manual*. Research edition. Palo Alto, Calif: Consulting Psychologists Press; 1981.
82. Segal DR, Harris JJ, Rothberg JM, Marlowe DH. Paratroopers as peacekeepers. *Armed Forces Society*. 1984;10(4):487–506.
83. Koran LM, Moos RH, Moos B, Zasslow M. Changing hospital work environments: An example of a burn unit. *Gen Hosp Psychiatry*. 1983;5:7–13.
84. Moos R. *Work Environment Scale Manual*. Palo Alto, Calif: Consulting Psychologists Press; 1981.
85. Sande D. Preventing burnout in intensive care nurseries. *Pediatr Nurs*. 1983;9:364–366, 394.