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# STRESS AND BURNOUT AMONG PRISON PERSONNEL

## Sources, Outcomes, and Intervention Strategies

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This study identifies the typical stressors affecting individuals working in the prison system in Israel and assesses the outcomes resulting from these stressors. A representative sample of Israel Prison Service employees ( $N = 496$ ) participate in the study. Participants complete questionnaires designed to assess the stressors in their work and their levels of stress and burnout, and 11% of them are interviewed in-depth. Results show that prison employees experience high levels of stress and burnout in their work. In addition, significant differences in stress reactions are found among different sectors (security, administration, and treatment) and among employees differing in rank and seniority. The most stressful factors were working extra shifts without compensation, low salary, and heavy workload. Recommendations are offered focusing on ways to prevent and reduce stress and burnout among prison personnel.

**Keywords:** stress; burnout; stress management; prison employees; Israel

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Prison employees in general and those employed as correctional officers (COs) in particular are exposed to unique and powerful stressors (e.g., Cheek & Miller, 1982; Huckabee, 1992; Lasky, Gordon, & Srebalus, 1986; Marston, 1993). Therefore, the study of this population could enhance our understanding of the origins of stress and burnout, the variety and intensity of stress reactions, and the ways of coping with them.

The literature on stress and burnout among COs (for reviews, see Huckabee, 1992; Philliber, 1987; Schaufeli & Peeters, 2000) has focused on three main issues: (a) the causes of stress and burnout; (b) the emotional, behavioral, and physiological reactions to these stressors; and (c) the treatment or prevention of stress and burnout. Below are the main findings of studies that have focused on these three issues.

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## STRESS FACTORS IN COs' WORK

A common strategy employed in law enforcement literature is to divide the stressors into four main categories: (a) those related to the nature of the worker's role (task-related stressors), (b) those related to the organizational framework (organizational stressors), (c) those originating outside the organization (external stressors), and (d) those referring to personal issues (personal stressors) (Bartol & Bartol, 2004). In our review of the literature, we adopted this classification to present the stressors that are typical of COs' work as documented in studies done in various countries.

### TASK-RELATED STRESSORS

The most frequently mentioned task-related stressors in the work of COs include: (a) physical danger, (b) work load, (c) role problems, (d) problematic inmate behavior, and (e) highly responsible job.

*Physical danger.* A number of studies have demonstrated that the fear of inmate violence constitutes a powerful stressor for COs (e.g., Finn, 1998; Kauffman, 1988; Martinez, 1997). For instance, 75% of all COs in Israel reported that inmate violence is the most stressful aspect of their work (Shamir & Drory, 1982). Studies have also shown that the intensity of this stressor has grown in recent years because of the rising number of violent prison inmates (Schaufeli & Peeters, 2000) and to the decline in inmates' fear of punishment (Martinez, 1997).

*Workload.* Some studies have shown that high workload is a substantial stress factor for COs (Dignam, Barrera, & West, 1986; Dollard & Winefeld, 1998; Kommer, 1990). For example, in a study conducted in Holland, 65% to 75% of all COs reported feeling stress from being overworked (Kommer, 1990). Another study, examining COs in the United States, indicated that burnout levels rose along with workload levels (Dignam et al, 1986).

*Role problems.* Two role problems have been identified among COs: role conflict and role ambiguity (Schaufeli & Peeters, 2000). Role conflict occurs when the CO is required to cope with perceived conflicting demands, such as guarding versus rehabilitating inmates. A number of studies have found a direct link between this role conflict and the appearance of stress responses (Grossi & Berg, 1991; Lindquist & Whitehead, 1986). Role ambiguity exists when COs lack the necessary information to perform their job properly. This form of ambiguity, which often results from weak leadership, has been found to promote both stress and burnout (e.g., Cheek & Miller, 1983; Rosefield, 1981).

*Problematic inmate behavior.* Many COs find the ceaseless demands, manipulative behavior (Cornelius, 1994), and lack of discipline among inmates to be highly stressful (Peeters, Schaufeli, & Buunk, 1995). The problematic relationship with inmates was studied by Whitehead (1989), who found that the more time spent by COs with inmates, the more burnout symptoms they report. Contact with inmates has become even more difficult in recent years because of the rise in the number of mentally ill individuals or drug abusers who are imprisoned (Harding & Zimmermann, 1989).

*Highly responsible job.* The CO's job requires a high level of responsibility, which might also cause high levels of stress (Lasky et al., 1986). COs are responsible for ensuring that inmates

do not escape from prison, do not attack COs or other inmates, and do not attempt to commit suicide. The relatively high occurrence of these events explains why COs are in a state of high alertness and under continuous stress.

### ORGANIZATIONAL STRESSORS

The most frequently mentioned organizational stressors in the work of COs include (a) problematic relationship with superiors, (b) inadequate pay, (c) workforce shortage, (d) shift work, and (e) difficult physical conditions.

*Problematic relationship with superiors.* Many COs complain about the attitude of their superiors. In the United States, 42% of COs claimed that inmates got better treatment from supervisors than they did (Toch & Klofas, 1982). Canadian COs have complained about questionable managerial methods (Hughes & Zamble, 1993). In Israel, a relationship was found between lack of superiors' support and high COs' burnout (Drory & Shamir, 1988).

*Inadequate pay.* An additional stressor reported by COs is low pay (Brodsky, 1982; Cheek & Miller, 1982). A study of Israeli COs found a direct relationship between dissatisfaction with one's salary and burnout levels (Shamir & Drory, 1982).

*Workforce shortage.* Insufficient budgets, high employee turnover, and high absenteeism often result in a substantial shortage of workforce in the correctional system (Brodsky, 1982; Finn, 1998; Harris, 1983; Tompson, 1994). This adds to the pressure put on the staff to work overtime and to forego taking time off. Shortage of staff also curtails the COs' ability to cope effectively with violent inmates and thus adds to their worries.

*Shift work.* Shift work, common to many prisons, interferes with COs' family lives, and the resultant fatigue and stress curtail their ability to function properly (Cornelius, 1994; Kauffman, 1988). Finn (1998) gives an example of the problematic nature of this stressor, by quoting a CO who works shifts: "One day I pulled over to the side of the road because I couldn't remember whether I was going to work or going home" (p. 66). It should therefore come as no surprise that shift work contributes greatly to CO burnout (Schaufeli & Peeters, 2000).

*Difficult physical conditions.* The physical conditions under which the COs are expected to work are often quite difficult. COs frequently complain about crowding in the prison (Ostfeld, Kasl, D'Arti, & Fitzgerald, 1987), about stale air (Verhagen, 1986), and about stench and filth (Jacobs & Crotty, 1983).

### EXTERNAL STRESSORS

*Negative attitudes held by the community and the media.* The community and the media usually hold a negative image of COs, who are portrayed as either intellectually limited or as aggressive individuals who abuse inmates (Brodsky, 1982; Cheek & Miller, 1982). Studies have shown that the negative image of COs in the community is one of their main stressors (Stalgaitis, Meyers, & Krisak, 1982) and a possible cause of burnout (Shamir & Drory, 1982).

## PERSONAL STRESSORS

*Home-work conflict.* The work conditions for many COs (shift work, overtime, distance from home) often create an intense conflict between the requirements of supervisors and family obligations. Inability to solve this conflict often causes stress and irritability among COs (Cornelius, 1994; Kauffman, 1988).

## STRESS REACTIONS

COs' reactions to different stressors can be divided into three categories: (a) physiological, (b) psychological, and (c) behavioral (see also Keinan, 1989).

### PHYSIOLOGICAL REACTIONS

A number of studies have shown that COs respond to stressors with powerful physiological reactions. For instance, it was found that psychosomatic illnesses (e.g., cardiovascular diseases) are more common among COs than among members of several other occupations (Cheek & Miller, 1983). In another study on Swedish COs, the levels of cortisol (stress hormone) and blood pressure were higher compared to the control group, which included physicians, engineers, traffic controllers, and musicians (Harenstam, 1989).

### PSYCHOLOGICAL REACTIONS

Both emotional and cognitive reactions of prison employees may consist of a single symptom—such as anger, indifference, cynicism, or lack of job satisfaction—and a general syndrome, such as posttraumatic stress disorder (PTSD), that can include a number of symptoms (Philliber, 1987). An Australian study found that the psychological distress level of COs was significantly higher than that found in a national sample (Dollard & Winefield, 1994). Burnout among COs was also found to be high (Lindquist & Whitehead, 1986) and characterized by a sense of depersonalization and reduced personal accomplishment (Schaufeli, Van den Eijnde, & Brouwers, 1994). These latter findings support earlier studies showing that COs experience more cynicism, pessimism, alienation, skepticism, and occupational tedium than other occupational groups (Lombardo, 1981; Shamir & Drory, 1982; Toch & Klofas, 1982).

### BEHAVIORAL REACTIONS

Absenteeism and turnover are common behavioral responses to stress among COs (Cheek & Miller, 1983; Schaufeli & Peeters, 2000). In a survey conducted in Holland, COs were found to be absent from work approximately 2 months of every year, with at least a third of this period being a direct result of pressures at work (Verhagen, 1986). Work stress can lead to a decline in the performance quality of various tasks (Finn, 1998), aggressive behavior toward inmates and family members (Black, 1982), drug abuse (Woodruff, 1993), and even suicide attempts (Stack & Tsoudis, 1997).

## TREATMENT AND PREVENTION OF STRESS AND BURNOUT AMONG COs

Despite the existence of a wide range of studies that dealt with stress reactions among COs, very little has been written about intervention strategies for the prevention or the alleviation of these reactions. Furthermore, hardly any empirical research has been conducted to assess the effectiveness of stress management programs for COs. Nevertheless, several authors have suggested ways to reduce stress and burnout among COs, both on the individual and the organizational level (for an overview, see Schaufeli & Peeters, 2000).

On the individual level, relaxation training, cognitive structuring, and stress inoculation training were suggested as ways to train individuals to cope with stressors more effectively (Stalgaitis et al., 1982). Additional suggestions focused on improving the physical condition of the CO (Kiely & Hodgston, 1990), having superiors encourage the CO to seek social support (Lindquist & Whitehead, 1986), and providing guidance to COs who have experienced a traumatic event (Finn, 1998). Intervention on the organizational level is mostly based on changing the work environment of the COs. Suggestions in this regard include upgrading the applicant selection process (Dollard & Winefield, 1994; Holgate & Clegg, 1991), mentoring new COs by senior ones (Klofas & Toch, 1986), improving communication between supervisors and COs (Huckabee, 1992; Lindquist & Whitehead, 1986), and extending responsibilities beyond the traditional domain of custody (Hepburn, 1987; Hughes & Zamble, 1993).

### THE PRESENT STUDY

In the majority of the studies presented above, the conclusions were based solely on respondents' answers to self-report questionnaires, and the samples were often small and/or nonrepresentative (for a methodological discussion of these two issues, see Frese & Zapf, 1988). Furthermore, most often, only a single measure was used to examine the stress reactions (see also Patterson, 1992), and the participants were not systematically asked about their recommendations for ways to reduce or eliminate their work stress. Finally, the literature review points to the fact that the majority of studies have focused on examining the stress reactions of COs, with no comparable data collected regarding these reactions among other prison employees (e.g., correctional treatment specialists; CTS) or in similar organizations (e.g., the police).

In the present study, an attempt was made to overcome these shortcomings. The study included a relatively large sample ( $N = 496$ ), representative of all prison service employees. This allowed a comparison of stressors affecting COs, CTSs, and administrative staff and the differential reactions of individuals within these job categories. Such a comparison made it possible to examine the effect of role on stress and burnout, beyond the impact exerted by the organizational stressors common to all the employees. Moreover, as a study of Israeli police personnel (Pines & Keinan, 2003a) was conducted at about the same time as the current study, the levels of stress reactions of prison employees could be compared to those experienced by police officers. In addition, diverse measures were used to assess the various stress responses of participants (e.g., stress related symptoms, job satisfaction,

burnout levels, and more), and participants were asked for their recommendations and suggestions for reducing stress at work. Finally, some of the participants were personally interviewed, so as to achieve a broader scope of information than could be derived from questionnaires alone.

The ultimate goal of the present study was to map the typical stressors affecting individuals working in the prison system, assess the outcomes resulting from these stressors, and suggest ways to reduce stress and burnout.

## METHOD

### PARTICIPANTS

Four-hundred and ninety-six prison employees participated in the study, 85% of whom were men. Their mean age was 34.83 years ( $SD = 7.33$ ). The mean seniority in the Israel Prison Service (IPS) was 12.32 years ( $SD = 7.66$ ), and the mean seniority in their present position was 6.91 years ( $SD = 5.81$ ). Seventy-six percent of the entire sample were COs, 13% were CTS (most of them social workers), and the remaining 11% were administrative staff. Approximately 20% of all participants were commanding officers, whereas the remaining 80% were lower ranking employees.

### MEASURES

The measures used in this study were a questionnaire and an interview. These measures were either developed or selected based on a pilot study, which included interviews with 20 prison employees in various levels and positions (from the head of the IPS and its CEO all the way to some of the lowest level prison employees) as well as observations done in different types of prisons around the country.

*Stressors Questionnaire.* This questionnaire was developed on the basis of the literature review and pilot study. It included 38 items, each representing potential stressors (e.g., the possibility of being attacked by inmates, shift work, slow promotion, unfair attitude on the part of superiors). Each respondent was asked to rate the level of stress caused by each item on a scale ranging from 1 (*not stressful at all*) to 5 (*extremely stressful*). In addition, the respondents were asked to mark which items were irrelevant to their work.

An orthogonal rotated factor analysis was performed on the 38 items, with a restriction to four factors. This restriction to four factors was based on taxonomy of stressors commonly used in the law enforcement literature, which also includes four categories (see detailed description in the introduction). Table 1 presents the factor loading of each item on its factor.

The first factor—stressful contact with others (noninmates)—had the highest loadings with unfair treatment by superiors, confrontations with coworkers, and negative public image of COs. This factor had an eigenvalue of 11.54; it explained 14.5% of the variance, and its internal consistency coefficient (Cronbach's alpha) was found to be .90. The second factor—stressful contact with inmates—had the highest loadings with contact with drug abusers, contact with people who committed serious crimes, and conflict between guarding the inmates and their rehabilitation. This factor had an eigenvalue of 2.52, it explained



**TABLE 1: Factor Analysis on the 38 Items Included in the Stressors Questionnaire**

	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	<i>Factor 4</i>
<i>Work Stressors</i>	<i>Stressful Contact With Noninmates</i>	<i>Stressful Contact With Inmates</i>	<i>Organizational Stressors</i>	<i>Inconsiderate Practices</i>
Unfair treatment by superiors	.71			
Confrontations with coworkers	.69			
Negative public image of COs	.64			
Lack of superiors' interest in COs' personal problems	.62			
Ethnic tensions	.60			
Tensions caused by lack of privacy	.57			
Excessive supervision by superiors	.52			
Rigid and authoritative system	.49			
Work-family demands conflict	.48			
Unclear commands' instructions	.42			
Excessive use of punishment by superiors	.37			
Contact with drugs and drug users		.75		
Contact with hardened criminals		.71		
Conflict between guarding the inmates and their rehabilitation		.65		
Inability to help inmates		.62		
Inadequate preparation for dealing with problem inmates		.60		
The need to use force when the job requires		.58		
Feeling torn between superiors' and inmates' demands		.51		
Encountering attempts by inmates to tempt an inmate		.48		
Fear of family members being hurt by an inmate		.38		
The possibility of being physically hurt by an inmate		.37		
Shift work			.69	
Overload			.60	
High responsibility			.57	
Bureaucracy and paperwork			.54	
Slow promotion			.41	
Low and inadequate salary			.39	
Extra shift with no compensation				.73
Overtime				.70
Superiors' preferential attitudes toward the inmate versus CO.				.62
Lack of relevant information				.52

Note: CO = correctional officer.

13.3% of the variance, and its Cronbach's alpha was found to be .86. The third factor—organizational stressors—had the highest loadings with shift work, overload, and heavy responsibility. This factor had an eigenvalue of 1.89, it explained 11.3% of the variance, and its Cronbach's alpha was found to be .77. The fourth factor—inconsiderate practices by management—had the highest loadings with performing extra shifts without financial compensation, overtime, and superiors' preferential attitudes toward the inmate versus CO. This factor had an eigenvalue of 1.81, it explained 7.6% of the variance, and its Cronbach's alpha was found to be .69.



The four factors explained 46.7% of the variwance.

*Overall level of stress.* After rating the level of stress caused by the 38 potential stressors, respondents were asked to rate their overall level of job stress ranging from 1 (*very low*) to 9 (*very high*). The evaluation of overall stress in this fashion—using a single-item index following a detailed list of stressors—has been used in other studies (e.g., Cohen, Kessler, & Underwood Gordon, 1995; Keinan, 1994).

*The Burnout Measure Short Version (BMS).* The Burnout Measure (Pines & Aronson, 1988) is a frequently used measure of burnout (Enzmann, Schaufeli, Janssen, & Rozenman, 1998; Schaufeli & Enzmann, 1998). The BMS, the short version of the BM, includes 10 items that measure levels of physical, emotional, and mental exhaustion of the individual. Respondents are asked to rate the frequency with which they experience each of the items appearing in the questionnaire (e.g., being tired or helpless) on a scale ranging from 1 (*never*) to 7 (*always*). The BMS has been shown to be a reliable and valid research instrument, with internal consistency coefficients around .85 (Pines, 2005). The BMS was chosen for this study because of its brevity, its appropriateness for all IPS sectors, and the availability of existing data on the burnout levels of both general and border police (as well as the general population), which enabled comparisons to the IPS data.

*Stress related symptoms.* In this measure, respondents were asked to specify to what extent they suffer from 11 psychological and physical symptoms, such as headaches, hypertension, or anger outbursts. The level of suffering is rated on a scale ranging from 1 (*not at all*) to 5 (*very much*).

*Work satisfaction.* Two questions dealt with the level of satisfaction respondents receive from their work. In the first question, respondents were asked to rate their job satisfaction on a scale ranging from 1 (*not at all*) to 5 (*very much*). In the second question, they were asked to rate the frequency with which they have thoughts about leaving their work on a scale ranging from 1 (*very infrequently*) to 5 (*very often*).

*Suggestions for reducing job stress.* Respondents were asked to suggest, in an open question, the best ways for reducing their work-related stress.

*Biographical information.* In this questionnaire, respondents were asked to provide the following data: age, gender, years of education, marital status, country of birth, seniority in the IPS and in their current position, rank, unit, and sector (administration, security, or treatment).

*In-depth interview.* The interview included a series of open and closed questions relating to the following issues: reasons for deciding to join the IPS, the quality of training given to the staff regarding coping with stress and handling prison inmates, the most burnout-inducing factors at work, to what extent the interviewees felt that their work was meaningful and contributed to society, and the extent to which they received social support from different sources. The interviewees were also asked to describe the most difficult event they experienced during work and to specify the extent to which they have experienced various symptoms characteristic of PTSD as a result of this experience.

## PROCEDURE

The study was conducted at the IPS facilities between the years 2000 and 2001, during the second Palestinian "Intifada" (uprising). The sample was designed with the help of the IPS Human Resource team to be truly representative in terms of the gender, age, rank, and sector of participants as well as the type (e.g., security level) and region (north, center, south) of the prison. The sampling frame consisted of all IPS personnel. Specifically, we used stratified sampling with the following strata: (a) type of facility (prisons, headquarters), (b) sector (security, treatment, and administration), (c) region (north, center, and south), and (d) rank (commanding officer, rank and file). Random sampling was done from all strata with the exception of the security sector, where cluster sampling was used with shifts defining clusters. One shift was sampled at random in each facility.

Each facility was informed of the number and type of respondents required for the study. At an appointed time (usually during a shift change), these people were invited to a communal hall and told about the study. They were told the study (a) was being conducted by researchers from Tel-Aviv University, (b) dealt with stress and burnout, and (c) was aimed at bringing their stressors to the attention of the authorities. Furthermore, it was emphasized that the privacy of participants would be protected and that the data would be used for research purposes only. Following this explanation, no one refused to participate.

The questionnaires were administered in groups of 20 participants. After the questionnaires were completed, two members of each group were randomly selected by means of a table of random numbers to participate in the interview. Only three COs refused to participate. Psychology students from Tel-Aviv University, who were trained for this purpose, administered the questionnaires and conducted the interviews.

## RESULTS

### RATING THE SOURCES OF STRESS AND FACTOR ANALYSIS

The four stressors found to be most stress inducing were as follows: performing extra shifts without financial compensation ( $M = 4.69$ ,  $SD = 0.83$ ); low salary, which does not provide for one's needs ( $M = 4.13$ ,  $SD = 1.09$ ); high work load ( $M = 4.09$ ,  $SD = 1.13$ ); and slow promotion ( $M = 4.00$ ,  $SD = 1.02$ ). The four items rated at the bottom of the stressors list were as follows: encountering drug abusers ( $M = 2.57$ ,  $SD = 1.42$ ), ethnic tensions ( $M = 2.50$ ,  $SD = 1.26$ ), being close to people who committed serious crimes ( $M = 2.43$ ,  $SD = 1.38$ ), and encountering attempts by inmates to tempt them ( $M = 2.16$ ,  $SD = 1.35$ ).

In addition, the four factors that emerged from factor analysis of the Stressors Questionnaire were found to be significantly correlated with stress reactions. They were more highly correlated with the general level of work stress, the level of burnout, and the intensity of physical and emotional symptoms and less correlated with job satisfaction (see Table 2).

### SOURCES OF STRESS IN VARIOUS SECTORS

For each of the four factors, identified by a factor analysis of the Stressors Questionnaire, we calculated an average score of the items composing the factor. One way ANOVAs

**TABLE 2: Correlations of Stress Reactions With the Four Factors of the Stressors Questionnaire**

	Factor 1	Factor 2	Factor 3	Factor 4
Stress level	.42**	.40**	.54**	.35**
Burnout	.51**	.44**	.49**	.39**
Symptoms	.43**	.38**	.44**	.32**
Satisfaction	-.15**	-.12**	-.19**	-.18**

\*\* $p < .01$ **TABLE 3: Differences in Mean Scores of Stressors Among the Three Sectors**

Stressors	Treatment		Security		Administration		F
	M	SD	M	SD	M	SD	
Possibility to be physically hurt by an inmate	2.92	1.29	3.57	1.38	2.68	1.44	10.77***
Low salary that does not enable an "honest living"	3.64	1.24	4.26	0.99	3.46	1.36	14.57***
Fear from harm to one's family by an inmate	2.82	1.51	3.26	1.46	2.64	1.58	4.38*
High workload (many tasks that need to be performed simultaneously)	3.82	1.14	4.23	1.02	3.39	1.42	13.58***
Negative public image	2.88	1.20	3.57	1.29	2.95	1.41	8.96***
Encountering attempts by inmates to tempt	1.76	0.97	2.33	1.42	1.66	1.23	6.43**
Difficulty to coordinate between work demands and family needs	3.38	1.11	3.33	1.35	2.68	1.23	4.57*
Lack of interest by superiors regarding personal needs	3.20	1.15	3.73	1.24	3.02	1.49	8.82***
Being torn between the requests of inmates and the requests of one's superiors	2.58	1.07	2.89	1.33	2.24	1.22	4.12*
Working extra shifts	3.55	1.34	4.15	1.25	3.68	1.59	4.10*
Encountering drugs/drug addicts	2.09	1.15	2.70	1.47	1.74	1.09	9.28***
High job responsibility	3.50	1.21	3.07	1.34	2.57	1.39	5.77**

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

revealed that each of these scores differentiated significantly among the three sectors (security, treatment, and administration),  $F(2,400) = 4.90$ ,  $p < .01$ , for the first factor,  $F(2,399) = 9.51$ ,  $p < .001$ , for the second,  $F(2,400) = 8.03$ ,  $p < .001$ , for the third, and  $F(2,398) = 23.75$ ,  $p < .001$ , for the fourth. However, more detailed information about the differences among the three sectors may be found in the average ratings of the specific stressors.

Table 3 presents the means and standard deviations of the stressors rated by participants from the three sectors as well as the results of the  $F$  tests, which examined the differences between the means of these sectors. The table only presents stressors for which significant results were found.

Post hoc analyses (Tucky HSD) showed that COs rated the following items as more stress inducing than did administrative staff and correctional treatment staff: the possibility of being physically hurt by an inmate, low salary that does not cover one's needs, high work load, negative public image, withstanding inmate's temptation attempts, lack of interest from superiors regarding one's personal problems, working overtime, and encountering drug abusers. The fear that one's family members will be hurt by an inmate, the difficulty of balancing family needs and work requirements, and being torn between the requirements of the job and the demands of inmates were all perceived as more stress inducing by COs than by administrative staff. Regarding this last group of items, no significant differences

were found between COs and CTSs. Finally, CTSs perceived the responsibility factor as more stress inducing than did administrative staff, but no significant differences were found in this factor between CTS and COs.

#### TRAUMATIC EVENTS

Thirty-eight percent of the interviewees ( $n = 21$ ) reported having experienced extremely difficult events during their work (90% of them were COs). In some cases, COs themselves were attacked or exposed to a physical threat (e.g., "I was assaulted by Palestinian inmates and they wounded me"). In other cases, the respondents witnessed other COs being attacked (e.g., "I saw a friend being attacked by prisoners"). But in most cases, the COs witnessed inmates being attacked by other inmates (e.g., "I rescued an inmate who was being stabbed to death by other inmates").

#### THE INTENSITY OF STRESS REACTIONS

Following are the level or intensity of the various stress responses:

*Overall stress level.* The overall stress level among prison service employees was found to be quite high ( $M = 6.01$ ,  $SD = 2.19$ ). An examination of the distribution of ratings showed that 44% ( $n = 220$ ) of all respondents reported a high or very high stress level.

*Burnout level.* The mean burnout level among prison service employees was also found to be reasonably high ( $M = 3.80$ ,  $SD = 1.42$ ). For a comparison, the national burnout mean in Israel is 2.80 ( $SD = 1.44$ ; Pines, 2005). The items rated at the top of the burnout symptoms list were fatigue ( $M = 5.46$ ,  $SD = 1.41$ ), disappointment with people ( $M = 4.66$ ,  $SD = 1.33$ ), and sleep problems ( $M = 4.08$ ,  $SD = 2.24$ ).

*Stress-related symptoms.* An examination of participants' stress reactions revealed that the three most frequently reported symptoms among prison employees were overirritability ( $M = 3.21$ ,  $SD = 1.40$ ), anger outbursts ( $M = 3.03$ ,  $SD = 1.36$ ), and headaches ( $M = 2.93$ ,  $SD = 1.26$ ).

*Work satisfaction.* The level of work satisfaction was found to be relatively high ( $M = 3.52$ ,  $SD = 1.10$ ), with 52% ( $n = 257$ ) of the respondents stating that they are either satisfied or very satisfied with their work and only 18% ( $n = 89$ ) reporting a low or very low level of satisfaction. A similar pattern of response was given to the question about the frequency of thoughts about leaving the IPS. Whereas 32% ( $n = 158$ ) reported thinking of leaving the IPS very infrequently, only 10% ( $n = 49$ ) reported thinking of it very often.

*Posttraumatic reactions.* After describing the most difficult event they have encountered during their work, the interviewees were asked to rate on a 5-point scale the extent to which they experienced posttraumatic reactions. The most frequent reactions experienced by interviewees were intense response to things that bring to mind the event (40% of all respondents experience this very often), reliving the event (38% of all respondents experience this very often), and alertness and jumpiness (36% experience this very often).

**TABLE 4: Differences in Stress Responses Among the Three Sectors**

<i>Stress Reactions</i>	<i>Sector</i>	<i>M</i>	<i>SD</i>	<i>F</i>
Overall stress level	Administration	5.09	2.23	3.54*
	Security	6.01	2.24	
	Treatment	6.10	2.01	
Burnout level	Administration	2.82	1.02	15.89***
	Security	3.95	1.47	
	Treatment	3.35	1.09	
Stress-related symptoms	Administration	1.99	0.74	12.87***
	Security	2.61	1.00	
	Treatment	2.11	0.80	
Work satisfaction	Administration	3.96	0.93	3.84*
	Security	3.49	1.12	
	Treatment	3.56	0.84	

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

#### STRESS AND BURNOUT AMONG POLICE OFFICERS AND PRISON PERSONNEL

A study that assessed the stress level among 1,010 Israeli police officers during the same period in which the present study was conducted, using identical measures of stress reactions and similar recruitment procedure (Pines & Keinan, 2003a), enables us to compare the two organizations. This comparison shows that the mean stress level among IPS employees ( $M = 6.01$ ,  $SD = 2.19$ ) was significantly higher than that among police officers ( $M = 5.65$ ,  $SD = 1.85$ ),  $t(1457) = 3.09$ ,  $p < .01$ . Furthermore, the mean burnout level among IPS employees ( $M = 3.80$ ,  $SD = 1.42$ ) was significantly higher than the mean burnout level among the police officers ( $M = 3.05$ ,  $SD = 1.09$ ),  $t(1,492) = 11.10$ ,  $p < .001$ .

#### STRESS EFFECTS ACCORDING TO BACKGROUND AND ROLE VARIABLES

Following are results showing differences in stress reactions depending on variations in background and role variables.

*Rank.* It was found, on a number of measures, that the stress levels of commanding officers are lower compared to those of rank and file. Specifically, the mean overall stress level of commanding officers ( $M = 5.42$ ,  $SD = 2.26$ ) was lower than that of lower ranking employees ( $M = 6.02$ ,  $SD = 2.20$ ),  $t(384) = 1.90$ ,  $p = .05$ . Furthermore, the mean burnout level of commanding officers ( $M = 3.22$ ,  $SD = 1.18$ ) was found to be lower than that of lower ranking employees ( $M = 3.82$ ,  $SD = 1.43$ ),  $t(403) = 3.06$ ,  $p < .01$ . Finally, the frequency of stress-related symptoms among commanding officers ( $M = 2.12$ ,  $SD = 0.92$ ) was also found to be lower than that of rank and file ( $M = 2.52$ ,  $SD = 0.97$ ),  $t(403) = 2.99$ ,  $p < .01$ .

*Sector.* Table 4 presents the means and standard deviations of the stress ratings among the three sectors as well as the results of  $F$  tests that examined the differences between the sectors.

Post hoc analyses (Tucky HSD) showed that COs were more stressed and less satisfied with their jobs compared to administrative staff ( $p < .05$ ), but no significant difference was found between COs and CTs in these parameters. It was also found that COs experience

more burnout and report more stress-related symptoms when compared to CTSs ( $p < .05$ ) and to administrative staff ( $p = .05$ ).

*Seniority.* An examination of the correlation between the number of years on the job and the overall level of stress showed that the more years the prison employees stayed on the job, the more stress they experienced ( $r = .15, p < .01$ ). They also experienced more burnout with age ( $r = .12, p < .05$ ) and suffered from more physical and mental symptoms ( $r = .12, p < .05$ ). No significant correlations were found between the number of years in the IPS and the occurrence of any specific stress response.

*Gender.* It was found that the overall stress level of men ( $M = 6.10, SD = 2.20$ ) was higher than that of women ( $M = 5.35, SD = 2.02$ ),  $t(442) = 2.57, p < .05$ .

*Education.* An examination of the correlation between the level of education and stress responses showed that the higher the education of prison employees, the less burnout they experienced ( $r = -.14, p < .01$ ) and the less they suffered from stress-related symptoms ( $r = -.19, p < .01$ ). Correlations between years of education and other stress measures were not significant.

#### INTERCORRELATIONS AMONG STRESS REACTIONS

The intercorrelations among the various stress reactions were all statistically significant, ranging from .27 (the correlation between stress level and work satisfaction) to .76 (the correlation between stress-related symptoms and burnout). The correlation between stress level and burnout was found to be .57. The correlations between the satisfaction variable and the rest of the stress responses were lower than the correlations obtained among the rest of the stress responses (burnout, stress level, and symptoms).

#### TRAINING FOR COPING WITH STRESS

To assess the extent to which prison personnel have been properly trained to cope with stressors characteristic of their job, they were asked during interviews whether they received sufficient instruction on how to cope with the inmate population and to deal with stress. The interviewees were asked to rate their responses on a scale ranging from 1 (*not at all*) to 5 (*definitely*). An analysis of their answers shows that the training that focused on handling the inmate population was much more adequate than the training that focused on coping with stress. Seventy-seven percent of the respondents rated the guidance that focused on handling inmates as sufficient, whereas only 28% rated the training for coping with stress as sufficient.

#### COPING WITH STRESS: SUMMARY OF RESPONDENTS' SUGGESTIONS

Of the 496 total participants, 314 (63%) answered the question regarding possible ways of reducing their work-related stress. Their suggestions were grouped into the following 11 themes: (a) improving the attitude of superiors, (b) salary increase, (c) reducing workload, (d) improving the public image, (e) increasing social cohesion, (f) eliminating extra shifts, (g) improving the promotion process, (h) improving physical fitness, (i) placing prison

personnel close to their homes, (j) increasing social support, and (k) providing stress management programs.

## DISCUSSION

The findings of this study show that prison employees experience substantial psychological stress during their work. The stress reactions reported by the research participants indicate that the overall stress level of IPS employees, their burnout level, degree of suffering from psychological and physical symptoms, and the extent of their posttraumatic reactions to stressful events at work are high. However, results regarding their work satisfaction do not correspond with those obtained regarding the other stress indicators. A substantial number of respondents appear satisfied with their work and do not intend to leave it. This incongruence could be explained by the possibility that although work satisfaction is to some extent related to the level of stress experienced by the individual, there still may be cases in which employees may experience stress and yet be satisfied with their work.

The high stress levels experienced by prison employees are also revealed in a comparison with a similar organization—the police. Even though the police is perceived as an organization in which employees experience high levels of stress (e.g., Brown & Campbell, 1994; Toch, 2002), the levels of stress and burnout among IPS employees were found to be higher than those of police officers.

There are two main explanations for these differences: one has to do with the workforce of the two organizations (e.g., lower average education of IPS employees and lower percentage of high-ranking employees in the IPS as compared to the Israeli police). The other has to do with the nature of the work of COs as compared to that of police officers (e.g., higher overload, a greater chance of being injured on duty, slower advancement, and a more negative public image).

An overview of the findings shows that there are considerable differences in stress responses both when examining job variables (e.g., sector or seniority) and when examining biographical variables (e.g., gender or years of education). An examination of the overall stress level in the various sectors shows that those who deal with security and overseeing the prison inmates are more stressed than administrative staff. Security personnel also experience higher burnout levels and report more physical and psychological symptoms compared to treatment personnel. These findings correspond with results of other studies pointing to the high stress levels experienced by COs (e.g., Dollard & Winefield, 1994; Harenstam, 1989).

It seems that the high stress level experienced by COs compared to CTSs and administrative staff stems from their different role characteristics. Compared to CTSs and administrative staff, the COs spend more time with the inmates and are more exposed to their aggression and violence, as well as to their demands and manipulative behavior. They are more overworked, work more shifts, and are required to constantly be “on guard,” all causing substantial stress.

Regarding rank, it was found that high-ranking employees (commanding officers) suffer from substantially less stress and less burnout as compared to the low-ranking ones. Two reasons may explain this finding. First, contrary to low-ranking employees, high rankers undergo a strict selection process. It is therefore possible to assume that they are less anxious and more able to cope effectively with stress compared to rank and file. Second, the nature of the



commanding officers' job is essentially different than that of the lower ranking employees, who spend more time in direct and continuous contact with prison inmates, are more exposed to violence and aggression, work under difficult physical conditions, and perceive themselves as having less control over their situation. All these are stress-inducing factors.

An assessment of the relationships between seniority and the level of stress and burnout reveals an interesting finding: Although correlations between the number of years on the job and the stress ratings are significant, no significant correlation was found between the number of years in the organization and the different stress responses. It is possible that this finding results from the fact that people go through a number of jobs during the course of their time in the organization. In some jobs, they are satisfied and only moderately stressed, whereas in others, they are not satisfied and are highly stressed. This could explain the present finding of a significant correlation between stress level and the number of years on a particular job and an absence of correlation with the total number of years in the organization.

The current study has shown that education is significantly correlated to burnout and to the level of stress-related symptoms. Similarly, Morgan, Van-Haveren, and Pearson (2002), who examined the stress levels of COs using the Maslach Burnout Inventory, also found that the more educated officers reported increased levels of personal accomplishment. It should be noted that in spite of the significant correlations between years of education and stress reactions, there remains a possibility that these findings were confounded with the working sector, because the levels of education of the administrative and treatment sectors were higher than that of the security sector.

Finally, regarding gender, men reported experiencing higher stress levels than women. This finding is different from most of the findings reported in other countries, where no significant differences were found in stress reactions between men and women COs (e.g., Hurst & Hurst, 1997). The unique finding in the present research may be related to the fact that men in the IPS are required to perform more stressful and difficult tasks compared to women. For example, in Israel security prisons, which expose their employees to highly stressful conditions, all the COs are men, and indeed, the levels of stress and burnout experienced by the COs in these prisons are especially high.

Regarding the stressors reported by the respondents, it is important to note two main issues. First, the factors inducing the highest levels of stress are those that are not necessarily unique to working with prison inmates. The stressors rated at the top of the list, such as overload, low pay, or conflict with superiors, appear as stressors in almost every survey or research study dealing with stress at work. It seems that these powerful stressors are cross-cultural, cross-occupational, and cross-organizational. This finding is especially noteworthy given the fact that the study was conducted during the second Palestinian Intifada (uprising), a period of unusually high stress for prison personnel, especially those who have direct contact with prisoners identified as Palestinian terrorists.

Second, the factors that include a threat to one's psychological integrity (e.g., conflict with superiors or slow promotion) are more stressful than those that include a threat to one's physical integrity (e.g., the possibility of being physically attacked by prisoners or the fear of harm to one's family). It is possible that the COs adopt a defensive attitude of "it won't happen to me" regarding physical dangers. It is interesting to note that this latter pattern of results was also found in a study conducted on the Israeli general police force (Pines & Keinan, 2003a) and on the border police (Pines & Keinan, 2003b).

Factor analysis performed on the items of the Stressors Questionnaire revealed four factors with a reasonably high internal consistency that together explained a considerable portion of the variance. It should be noted that the correlations of stress factors with the job satisfaction variable were lower than those with the other stress reactions. The latter outcome is consistent with the findings of relatively weak relationships between the job satisfaction variable and the other stress reactions.

An overview of the literature on stress management, our practical experience in this field, and the important suggestions made by the participants in this study have led us to propose a number of recommendations that may help reduce the substantial levels of burnout and stress experienced by prison personnel in their work:

1. As the COs' job is highly difficult and stressful, we recommend developing a selection system that will assess the ability of applicants to cope with stressful situations that are typical of the job. We recommend assessing these abilities via an assessment center in which the applicants will be requested to perform during simulations behavioral tasks representing relevant elements in the prison officer's job.
2. We suggest creating specific training programs designed to reduce stress among prison officers. It is especially important that trainees perform simulations of typical stress situations that occur on the job, analyze stressful events that occurred in the past, and practice ways of coping with such situations (for dilemmas related to preparing individuals to perform stressful tasks and the possible solutions for these dilemmas, see Keinan & Friedland, 1996).
3. The perception that one's job is important and meaningful was found to alleviate burnout (Pines, in press). It is thus recommended that this perception be enhanced by organizing events designed to improve prison employees' motivation (e.g., talks by senior staff emphasizing the importance of the work) or to analyze successful events (e.g., workshops in which COs' actions that were successful in preventing violence in the prison are presented and analyzed).
4. The issue of inadequate pay appears in this and in other studies as a significant stressor (e.g., Rosefield, 1981; Shamir & Drory, 1982). It is therefore essential to make every effort to improve the compensation of prison employees. If this is not feasible, attempts should be made to raise pay in specific sectors, such as units dealing with highly stressful tasks or positions that suffer from a high turnover.
5. To reduce stress resulting from problems related to promotion, clear promotion criteria should be set to develop promotion paths and to ensure that the promotional process is transparent and fair.
6. To reduce stress resulting from the difficulty in balancing between family and work demands, we recommend improving the relationship between the prison authority and the families of employees. Families should be included in social events and given updated information regarding the nature of COs' work. Workshops for prison employees and their spouses could be held so as to assist in coping with this issue.
7. Organizational surveys should be conducted allowing employees to evaluate their superiors. This will enable the identification of superiors whose functioning is deficient vis-à-vis their subordinates and who require special instruction. To guarantee that respondents answer these questionnaires honestly and without fear of sanction by their superiors, the survey should be anonymous and conducted by an external body that will be responsible for collecting as well as analyzing the data.
8. Based on studies pointing to the positive influence of physical exercise on stress reduction, we suggest developing a program of physical training for all employees. The aim should be to construct a fitness room in each prison so as to improve physical fitness and reduce psychological stress.
9. We recommend opening a unit for stress management in the prison authority. It is suggested that such a unit, which will include stress management experts and other related professionals, will focus its activities on both the individual and the organizational levels.

10. The finding that a substantial number of prison employees express high job satisfaction, despite the considerable stress associated with their work, should be brought to public attention. Many potential candidates may be attracted to correctional work if this important information reaches them.

In conclusion, this study differs from many previous studies in that it included a representative sample of all prison employees and therefore enabled a comparison of stress and burnout levels in the different sectors. In addition, the fact that a parallel study was conducted on the police force at the same time, using identical methods and measures, allowed a comparison between stress levels experienced by employees of both organizations. Finally, the fact that this study used both qualitative and quantitative methods to assess the stress reactions of prison employees enabled a deeper understanding of their unique condition.

However, a number of shortcomings still exist in the research on stress and burnout of prison officers. There is especially little knowledge on the effectiveness of different approaches used to assist COs in preventing or reducing their work-induced stress. We suggest, therefore, that future research focus on a systematic evaluation of the recommendations presented above, so as to identify the most effective ones. In addition, it is important to examine the impact of stress and burnout on the actual job performance of COs.

## REFERENCES

- Bartol, C. R., & Bartol, A. M. (2004). *Psychology and law: Theory, research, and application*. Belmont, CA: Thomson/Wadsworth.
- Black, R. (1982). Stress and the correctional officer. *Police Stress*, 5, 10-16.
- Brodsky, C. M. (1982). Work stress in correctional institutions. *Journal of Prison and Jail Health*, 2, 74-102.
- Brown, J. M., & Campbell, E. A. (1994). *Stress and policing: Sources and strategies*. Chichester, UK: Wiley.
- Cheek, E. E., & Miller, M. (1982). *Prisons of life*. Washington, DC: American Federation of State County and Municipal Employees.
- Cheek, E. E., & Miller, M. (1983). The experience of stress for correctional officers: A double bind theory of correctional stress. *Journal of Criminal Justice*, 11, 105-130.
- Cohen, S., Kessler, R. C., & Underwood Gordon, L. (1995). *Measuring stress*. New York: Oxford University Press.
- Cornelius, G. F. (1994). *Stressed out: Strategies for living and working with stress in correction*. Laurel, MD: American Correctional Association.
- Dignam, J. T., Barrera, M., & West, S. G. (1986). Occupational stress, social support and burnout among correctional officers. *American Journal of Community Psychology*, 16, 701-724.
- Dollard, M. F., & Winefield, A. H. (1994). Organizational response to recommendations based on a study among correctional officers. *International Journal of Stress Management*, 1, 81-101.
- Dollard, M. F., & Winefield, A. H. (1998). A test of the demand-control/support model of work stress in correctional officers. *Journal of Occupational Health Psychology*, 3, 243-264.
- Drory, A., & Shamir, B. (1988). Effects of organizational and life variables on job satisfaction and burnout. *Group and Organization Studies*, 13, 441-455.
- Enzmann, D., Schaufeli, W. B., Janssen, P., & Rozenman, A. (1998). Dimensionality and validity of the burnout measure. *Journal of Occupational and Organizational Psychology*, 71, 331-351.
- Finn, P. (1998). Correctional officer stress: A cause for concern and additional help. *Federal Probation*, 62, 65-74.
- Frese, M., & Zapf, D. (1988). Methodological issues in the study of work stress: Objective versus subjective measurement of work stress and the question of longitudinal studies. In C. L. Cooper & R. Payne (Eds.), *Cause, coping and consequences of stress at work* (pp. 375-441). Chichester, UK: Wiley.
- Grossi, W., & Berg, B. (1991). Stress and job dissatisfaction among correctional officers: An unexpected finding. *International Journal of Offender Therapy and Comparative Criminology*, 35, 73-81.
- Harding, T. W., & Zimmermann, F. (1989). Psychiatric symptoms, cognitive stress and vulnerability factors: A study in a remand prison. *British Journal of Psychiatry*, 155, 36-43.
- Harenstam, A. (1989). *Prison personal-working conditions, stress and health: A study of 2000 prison employees in Sweden*. Unpublished PhD thesis, University of Stockholm, Sweden.

- Harris, G. (1983). *Stress in corrections*. Boulder, CO: National Institute of Corrections.
- Hepburn, J. R. (1987). The prison control structure and its effects on work attitudes: The perceptions and attitudes of prison guards. *Journal of Criminal Justice*, 15, 49-64.
- Holgate, A. M., & Clegg, I. J. (1991). The path to probation officer burnout: New dogs, old tricks. *Journal of Criminal Justice*, 19, 325-337.
- Huckabee, R. G. (1992). Stress in corrections: An overview of the issues. *Journal of Criminal Justice*, 20, 479-486.
- Hughes, G., & Zamble, E. (1993). A profile of Canadian correctional workers. *International Journal of Offender Therapy and Comparative Criminology*, 37, 99-113.
- Hurst, T. E., & Hurst, M. M. (1997). Gender differences in mediation of severe occupational stress among correctional officers. *American Journal of Criminal Justice*, 22, 212-237.
- Jacobs, J. B., & Crotty, N. (1983). The guard's world. In J. B. Jacobs (Ed.), *New perspectives on prison and imprisonment*. Ithaca, NY: Cornell University Press.
- Kauffman, K. (1988). *Prison officers and their world*. Cambridge, MA: Harvard University Press.
- Keinan, G. (1989). *Police work and stress*. Jerusalem, Israel: Ministry of Police, the Chief Scientist (Hebrew).
- Keinan, G. (1994). Effects of stress and tolerance of ambiguity on magical thinking. *Journal of Personality and Social Psychology*, 67, 48-58.
- Keinan, G., & Friedland, N. (1996). Training effective performance under stress: Queries, dilemmas and possible solutions. In J. Driskell & E. Salas (Eds.), *Stress and human performance* (pp. 257-277). Hillsdale, NJ: Lawrence Erlbaum.
- Kiely, J., & Hodgston, G. (1990). Stress in the prison service: The benefits of exercise programs. *Human Relations*, 43, 551-572.
- Klofas, J., & Toch, H. (1986). The guard subculture myth. *Journal of Research in Crime and Delinquency*, 19, 238-254.
- Kommer, M. M. (1990). *Working with people: A study on the working environment and the functioning of COs*. The Hague, the Netherlands: Ministry of Justice (Dutch).
- Lasky, G. L., Gordon, B. C., & Srebalus, D. J. (1986). Occupational stressors among federal correctional different security levels. *Criminal Justice and Behavior*, 13(3), 317-327.
- Lindquist, C. A., & Whitehead, J. T. (1986). Burnout, job stress and job satisfaction among southern correctional officers. *Journal of Offender Counseling Services and Rehabilitation*, 10, 5-26.
- Lombardo, I. X. (1981). Occupational stress in correction officers: Sources, coping, strategies and implications. In E. Zimmerman & D. Miller (Eds.), *Corrections at the crossroads*. Beverly Hills, CA: Sage.
- Marston, J. L. (1993). Stress and stressors: Inmate and staff perceptions. *American Jails*, 7, 21-30.
- Martinez, A. R. (1997). Correctional officer: The "other" prisoner. *The Keeper's Voice*, 18, 8-11.
- Morgan, R. D., Van-Haveren, R., & Pearson, C. A. (2002). Correctional officer burnout: Further analysis. *Criminal Justice and Behavior*, 29, 144-160.
- Ostfeld, A. M., Kasl, S. V., D'Arti, O. A., & Fitzgerald, E. F. (1987). *Stress, crowding and blood pressure in prison*. Hillsdale, NJ: Lawrence Erlbaum.
- Patterson, B. L. (1992). Job experiences and perceived job stress among police, correctional, and probation/parole officers. *Criminal Justice and Behavior*, 19, 260-285.
- Peeters, M. C. W., Schaufeli, W. B., & Buunk, B. P. (1995). The role of attributions in the cognitive appraisal of work related stressful events: An event recording approach. *Work and Stress*, 9, 463-474.
- Philliber, S. (1987). The brother keeper: A review of the literature on correctional officers. *Justice Quarterly*, 4, 9-37.
- Pines, A. M. (2005). The Burnout Measure Short Version (BMS). *International Journal of Stress Management*, 12, 78-88.
- Pines, A. M. (in press). Stress and burnout: A relational perspective. In O. Kyriakidou & M. Ozbilgin (Eds.), *Relational perspectives in organizational studies*. Cheltenham, UK: Edward Elgar.
- Pines, A. M., & Aronson, E. (1988). *Career burnout: Causes and cures*. New York: Free Press.
- Pines, A. M., & Keinan, G. (2003a). *Stress and burnout in the work of Israeli police officers*. Jerusalem, Israel: Ministry of Internal Security, the Chief Scientist.
- Pines, A. M., & Keinan, G. (2003b). *Stress and burnout in the work of border police*. Jerusalem, Israel: Ministry of Internal Security, the Chief Scientist.
- Rosefield, H. A., Jr. (1981). *Self identified stressors among correctional officers*. Unpublished PhD thesis, North Carolina State University, Raleigh.
- Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study & practice: A critical analysis*. London: Taylor & Francis.
- Schaufeli, W. B., & Peeters, M. C. W. (2000). Job stress and burnout among correctional officers: A literature review. *International Journal of Stress Management*, 7, 19-48.
- Schaufeli, W. B., Van den Eijnde, R. J., & Brouwers, H. M. G. (1994). Stress and burnout among COs. *Gedrag and Organisatie*, 7, 216-224.
- Shamir, B., & Drory, A. (1982). Occupational tedium among prison officers. *Criminal Justice and Behavior*, 9, 79-99.
- Stack, S. J., & Tsoudis, O. (1997). Suicide risk among correctional officers: A logistic regression analysis. *Archives of Suicide Research*, 3, 183-186.

- Stalgaitis, S. J., Meyers, A. W., & Krisak, J. (1982). A social learning theory model for reduction of correctional officers' stress. *Federal Probation, 46*, 33-41.
- Toch, H. (2002). *Stress and policing*. Washington, DC: American Psychological Association.
- Toch, H., & Klofas, J. (1982). Alienation and the desire for job enrichment among correctional officers. *Federal Probation, 46*, 35-44.
- Tompson, T. (1994). Holistic health comes to prison. *Federal Prison Journal, 3*, 55-59.
- Verhagen, J. (1986). Correctional officers' personality characteristics. *Balances, 9*, 3-5.
- Whitehead, L. (1989). *Burnout in probation and corrections*. New York: Praeger.
- Woodruff, L. (1993). Occupational stress for correctional personnel: Part One. *American Jails, 7*, 15-20.