Jailed resources: Conservation of resources theory as applied to burnout among prison guards

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Summary
This study evaluates a salutogenic perspective of the burnout process. Building upon Hobfoll’s (1989) Conservation of Resources theory, it proposes a simultaneous test of three hypothesized resources-based models. These competing models test the structure of burnout in relation to depleted resources (e.g., lack of skill utilization, of participation, of co-worker support, and of professional worth) and negative correlates (e.g., absenteeism and depression). SEM results provide equally good support for two resource-based models, although each of them proceeds from different approaches (Leiter vs. Golembiewski). Of all burnout components, personal accomplishment is found to be least related to resources depletion, while emotional exhaustion is the most related to absenteeism and depression. Results are analyzed in light of existing literature and of the specific nature of the sample, a large population of French correctional officers \( n = 707 \). Implications for burnout theory and human resource management are discussed. Copyright © 2006 John Wiley & Sons, Ltd.

Introduction

For the most part, research on burnout has been grounded in the Person-Environment (PE) fit theory, which assumes a curvilinear relationship between the level of psychological strain and a ratio demand/ability experienced by the individual (Edwards, 1996). At the individual level, the Job-Demand model has been well documented to account for a disruption of psychological equilibrium (Van Der Doef & Maes, 1999). At the interpersonal level, burnout has also been tested as an unfair transaction between the individual and the working environment, an inequitable cost-reward evaluation of one’s professional investment (Bakker et al., 2000; Truchot & Deregard, 2001).

Notwithstanding the value of a PE theoretical framework, it has been observed that it implicitly validates a common pathogenic perspective of burnout whereby individuals are viewed as victims of a destructive interplay between demands and capabilities (McGrath, 1976). This approach has...
progressively raised a number of concerns. First, as with other medical issues, critics have stressed enduring conceptual and methodological difficulties for defining such notions as disease and psychological health (Kirk & Kutchins, 1992; Roberts, 1986; Wakefield, 1992). Second, a pathogenic standpoint may prove a liability to managerial action as it often leads to purely reactive organizational initiatives of limited scope and adequacy (Briner & Reynolds, 1999; Matteson & Ivancevich, 1988).

To make up for limitations of the pathogenic perspective, health-oriented, or salutogenic, orientations have thus been developed. On the basis of health defined as ‘everything that can possibly be regarded by someone, or in some culture, as desirable’ (Antonovsky, 1979, p. 68), a ‘how not to get sick’ approach was developed that focuses on health factors instead of demands or constraints (Levi, 1990; Seligman & Csikszentmihalyi, 2000). This alternative line of research has evidenced a number of individual regulative processes, including the sense of coherence (Antonovsky, 1979), hardness (Kobasa, 1979), and resilience (Rutter, 1985). These are all expected to buffer the adverse impact of demands and to explain the source of personal health.

As a potential contribution to on-going health-oriented research, the aim of this study is to test a genuine salutogenic perspective of burnout that relates individual experience to practical organizational issues. As such, this research seeks to contrast three competing resources-based models of burnout in relation to selected negative corollaries. These models draw from the works of Hobfoll (1989), Leiter (1993), and Golembiewski, Munzenrider, and Stevenson, (1986). The use of structural equation modeling is also expected to clarify a nomological network of the burnout structure (Maslach, 1982), a much-debated issue in organizational health psychology.

Theory and Hypotheses

Burnout as resource depletion

There still exist relatively few satisfactory integrated frameworks that take health factors as key explanatory components of the burnout process. For example, theoretical and empirical shortcomings have failed to provide unequivocal support for the Vitamin model (Warr, 1994, 2002), a non-linear hypothesis between job feature improvements and corresponding mental health betterment (DeJonge & Schaufeli, 1999; Jeurissen & Nycicke, 2001). To date, the conservation of resource (COR) theory (Hobfoll, 1989; Hobfoll & Freedy, 1993) stands as one of the dominant approaches to burnout modeling within a salutogenic perspective (Halbesleben & Buckley, 2004). COR’s etiology of burnout is rooted in a biophysical perspective that confers to an effectance-type motivation (White, 1959) the role of prime mover for human evolution. Consistent with more recent developments in neurology (Damasio, 2003), it considers that the dynamics of individual motivation are not fueled by the search for psychological equilibrium but rather by an active mandate for creative achievement. Such a perspective has two major implications. First, coherent with a salutogenic approach, it agrees that ‘any analysis of a stress situation must begin with what the individual brings to the situation, and not the demand characteristics of the situation alone’ (Appley & Trumbull, 1986, p. 311). In so doing, the COR perspective proposes an extension of proximal theories of stress focused on the appraisal moment (Lazarus & Folkman, 1984), in order to embed psychological health within the transactional processes of social contexts (Hobfoll, 2001). Second, it links burnout to developmental failures of a shriveled (sick) organism looking for survival by means of resource preservation (Goldstein, 1939/1934). Burnout becomes the outcome of a net loss, or fear of loss, of valued resources, the illustration of a

To the extent that COR theory conditions burnout to a resource depletion process, it differs from another dominant burnout model, the Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Schaufeli & Bakker, 2004). Indeed, the JD-R emphasizes a positive relationship between burnout and job demands while linking positively resources to engagement, a positive state of fulfillment characterized by vigor, dedication, and absorption (Schaufeli, Salanova, Gonzales-Roma, & Bakker, 2002).

COR theory acknowledges four types of resources each corresponding to four kinds of personal investments (Hobfoll, 1989; Hobfoll, Lilly, & Jackson, 1992): valued objects (e.g., housing, clothing, tangible benefits), stress-mediating conditions (job security, seniority, social support), stress aiding personal characteristics (traits, skills), and resource generating energy (time, money, knowledge, and competence). More recently, Hobfoll (1998) has proposed to reorganize this category-based taxonomy in order to conceptualize a more theory-led framework that distinguishes internal resources (possessed by the self) from external resources (not possessed by the self).

In order to validate empirically a resource-based framework of burnout, various integrated models have been proposed that all investigate the links between resource depletion, burnout, and negative correlates. The aim of this research is thus to competitively test on a same occupational sample the validity of three main alternative models available in the literature, including those of Hobfoll and Shirom (1993), Leiter (1993), and Golembiewski et al. (1986). Consistent with variables used in these referent models, the negative burnout correlates examined in this study are representative of both personal and organizational dysfunctions, including depression and absenteeism. The simultaneous study of alternative models is a task rarely performed, with proponents of competing approaches typically furthering their own research path. As demonstrated by Lee and Ashforth (1993a), pitting competing models against each other proves valuable not only to better understand the role of resources in the development of burnout process but also to guide the preventive action of salutogenic organizational practices.

**Resources-based models of burnout**

Directly building upon the precepts of COR theory, Hobfoll and Shirom (1993) have theorized a resources-based model of the burnout process. Hobfoll and Shirom’s solution equates burnout to a state of resource depletion. In their model, however, the relationship between burnout and resource depletion is mediated by coping strategies which, depending on their positive/avoidance orientation, would buffer or amplify the impact of resource depletion. Recent empirical findings supported the hypothesis of a positive link between resource levels and the use of coping strategies (Ito & Brotheridge, 2003). Based on this theorizing, we propose a validation of the Hobfoll and Shirom burnout approach (Model 1) using absenteeism as an example of negative/organizationally disruptive coping, and depression as a negative correlate of burnout (Figure 1).

An emotion-focus coping strategy (Carver, Scheier, & Weintraub, 1989), absenteeism has been considered a type of organizational escape strategy related to emotional disorder (Leiter, 1991; Koeske, Kirk, & Koeske, 1993). Yet, while COR-based research highlights positive links between emotional exhaustion, declining performance and turnover (Wright & Bonett, 1997; Wright & Cropanzano, 1998), no study has directly investigated the role of absence behavior as an outcome of resource depletion, as a protective behavior against the threat of potential resource losses.
Concerning depression, the helplessness element of the theory (Abramson, Metalsky, & Alloy, 1989) has allowed an integration to burnout theorizing. Yet, research has stressed the lack of isomorphism between burnout and depression (Glass & McKnight, 1996). It has also confirmed that although distinct, both constructs are nevertheless related (Bakker, Schaufeli, Demerouti, Janssen, Van der Hulst, & Brouwer, 2000; Iacovides, Fountoulakis, Moysidou, & Ierodiakonou, 1999). Specifically, the various burnout dimensions were found to relate differentially with depression, as emotional exhaustion accounted for a larger shared variance than depersonalization and reduced personal accomplishment (Firth, McIntee, McKeown, & Britton, 1986; Glass, McKnight, & Valdimarsdottir, 1993; Leiter & Durup, 1994). Empirical findings have supported the explanatory relevance of COR theory and underscored the positive relation between emotional exhaustion (burnout), psychological distress (Benight et al., 1999; Grandey & Cropanzano, 1999), and depression (Bakker et al., 2000; Freedy & Hobfoll, 1994).

In light of these theoretical and empirical elements, the following hypotheses are therefore put to test:

**Hypothesis 1**: Resource depletion will be positively related to absenteeism.

**Hypothesis 2**: Absenteeism will be positively related to all components of burnout, for example, emotional exhaustion, depersonalization, and reduced personal accomplishment.

**Hypothesis 3**: Emotional exhaustion will relate positively to depression.

Building upon Maslach’s (1982) perspective, Leiter (1993) has proposed a developmental model of burnout that offers an alternative to Hobfoll and Shirom’s approach. First, Leiter supports the view of differentiated links between resources and burnout components. Specifically, he showed that lack of resources (e.g., social support, autonomy, participation, and skill building) was mostly related to depersonalization and (reduced) personal accomplishment while emotional exhaustion developed in relation to excessive demands (work overload and interpersonal conflict) (Leiter, 1990, 1991). Second, emphasizing burnout as a multidimensional construct, Leiter gives emotional exhaustion a central role in conditioning the development of both depersonalization and (reduced) personal accomplishment. Finally, Leiter’s model is consistent with a generally accepted view that considers absenteeism and depression as directly related to burnout (Cordes & Dougherty, 1993; Leiter & Durup, 1994; Maslach, 1998).

Consequently, we propose to test the validity of an alternative approach (Model 2) to Hobfoll and Shirom’s based on the following hypotheses (Figure 2):
**Hypothesis 4**: Resource depletion is expected to relate positively to depersonalization, emotional exhaustion, and personal accomplishment; however, this relationship will be stronger for emotional exhaustion than for depersonalization and for personal accomplishment.

**Hypothesis 5**: Emotional exhaustion is expected to relate positively to depersonalization and to reduced personal accomplishment.

**Hypothesis 6**: Depersonalization is expected to relate positively to reduced personal accomplishment.

**Hypothesis 7**: Emotional exhaustion is expected to relate positively to absenteeism and to depression.

Leiter’s model, however, has been challenged with regard to the structure of the burnout construct. Golembiewski and his colleagues (Golembiewski et al., 1986; Golembiewski, 1989) view burnout as a virulent process that develops through eight successive phases. From a no burnout stage (Phase I), burnout starts with high depersonalization, low emotional exhaustion and (reduced) personal accomplishment (Phase II). Then, it evolves to high depersonalization and high (reduced) personal accomplishment (Phase IV), to finally reach a climax of high depersonalization, high (reduced) personal accomplishment, and high emotional exhaustion (Phase VIII). Because depersonalization is considered the least virulent contributor to burnout, it is therefore expected to fuel both (reduced) personal accomplishment (as in Leiter’s model), and emotional exhaustion.

Based on such theorizing we propose to test a third model (Model 3) that modifies Leiter’s approach (Model 2) as to the role and dynamics of burnout components (Figure 3). Hypotheses of Model 3 are the following:

**Hypothesis 8**: Resource depletion is expected to relate positively to depersonalization, emotional exhaustion, and personal accomplishment; however, this relationship will be stronger for depersonalization than for emotional exhaustion and for personal accomplishment.

**Hypothesis 9**: Depersonalization will be positively related to emotional exhaustion and to reduced personal accomplishment.

**Hypothesis 10**: Reduced personal accomplishment will be positively related to emotional exhaustion.
Experiencing burnout: The case for prison guards

In addition to theoretical considerations, burnout research has also been concerned with issues of occupational and cross-cultural validation. Originally focused on human service professions, burnout studies have extended to other types of occupations where help is a not a prime focus, and no sparking ‘fire’ (Pines, 1993: 41) or ‘belief in magic’ (Edelwich & Brodsky, 1980: 58) is expected to fuel the mission (Cooper, Dewe, & O’Driscoll, 2001). Moreover, research on the burnout construct has well extended beyond its original US/English speaking basis to trigger worldwide interest on applicability and comparability across cultures (Maslach, Schaufeli, & Leiter, 2001). The purpose of this research is therefore to contribute to such developments in examining burnout modeling and process among French prison guards.

Despite observed convergence in the experience of prison work across many different countries (Schaufeli & Peeters, 2000), organizational behavior research on burnout has been surprisingly scant. Hence, from 1969 to 1998, the number of published empirical studies investigating the role and effects of burnout among prison officers would amount to a mere 16 worldwide, with none in France (Kleiber & Enzmann, 1990; Schaufeli & Peeters, 2000). All of them were conducted following a pathogenic perspective. As such, main findings underlined the dysfunctional impact of role problems and poor social support fueled by embryonic competence management, including ineffective knowledge-sharing, skill learning or performance appraisal practices. No studies were found relating professional burnout to either depression or absenteeism among prison guards.

Summary and purpose

The goal of this study is to frame the investigation of professional burnout within the context of frustrated professional resources. Unlike most previous work, this research concentrates on the sole relationship between resources and burnout, in isolation from the role of job demands. Making use of the conceptual framework provided by the Conservation of resources theory, three competing resources-based models are hypothesized that also relate burnout to selected dysfunctional correlates, including depression and absenteeism. These theoretical propositions are to be tested among French correctional officers.
Organizational Context

This research answered a call from the French Ministry of Justice via its Directorate of Penitentiary Affairs. The central administration was especially interested in assessing the nature and dynamics of such dysfunctional organizational phenomena as burnout, depression, and absenteeism among its employees.

Time Frame
This study covered a 5-year period, from initial approach of the Directorate for Penal Affairs to production of an official Report to the Ministry of Justice.

Organizational Factors
The prisons under study are part of the French correctional system that comprises three types of structures classified according to the seriousness of sentences. The sample is representative of a first-level jail type (118 of them nationwide). These are devoted to the shortest term-sentences, that is, theoretically less than 5 years. Yet, due to a marked increase of pronounced jail-terms, this first-level institution suffers from overcrowding and consequent manpower shortage. A report of the European Commission has recently blamed the current state of French prisons for poor health, security, and working conditions.

All French prisons are state-owned as part of the Department of Justice.
Unions are many but represent a small percentage of the workforce. Prison guards often use them for purely individual purposes (housing, job mobility, promotion).
Overall, the system is bureaucratic, strictly pyramidal, and culturally very individualistic.

Worker-Job Factors
All prison officers have public status. As such, they benefit from job security, lifetime employment. They are all trained in one single National Penal Academy. From the standpoint of job practice, it should be noted that French prison guards are unarmed, except when on duty in watchtowers, and have no dogs. Like other law enforcement and social security professions (police, custom officers, fire-fighters, . . . ) prison guards have no right to strike and are forbidden from public expression outside of a union framework.

Careers are managed by administratively centralized rules and regulations. For instance, job geographic mobility is very much constrained by seniority. On the part of prison guards, this is an obsessive issue as most have typically been sent by the Administration to start their career in the Paris area. Consequently, after a very few years, a majority will try to move back to where their relatives, and at times spouses, still live and work.

Such a system has a differential impact on demographics. As in a domino effect, many younger prison guards in the Paris area often wait for colleagues to retire in order to replace them in the much-coveted closer-to-home prison.

Recently, and for cost-saving reasons, there has been a trend toward subcontracting non-guarding activities like laundry and food catering to the private sector. Such a system has been criticized by the guards for relegating them to the sole role of door-keepers.

External Environment
Over the past few years, the legal environment of the French prison system has evolved dramatically. New legislative texts were issued, including the abolishment of the death penalty.
(guillotine) in 1981, and increased legal rights for inmates, that is, the possibility to appeal sanctions for misdemeanor.

National social environment is characterized by an unemployment rate of about 10% of the labor force. Job security is thus a very sought after value. Consequently there is a great demand for civil service occupations since they provide lifetime employment status (about one-fourth of French occupations). Turnover of civil servants is marginal.

Method

Sample and procedure

The study concerned a total of 1240 rank and file prison guards working in six different correctional facilities. Prisons were representative of the French penal system, both by their type (structures for men, women, and young adults, that is, men up to 20-years of age) and by their geographical location (three prisons of each type situated around Paris, and three others in the rest of the country). In total, 707 three-questionnaire bundles were completed and returned, a response rate of 57 percent. Mean age was 33.5 years ($SD = 7.2$) ranging from 22 to 57 (35 years for total population). Average tenure within the profession was 8 years (10 years for total population). Standard deviation coefficient ($SD = 5.7$) reflected a wide range of 31.5 years for tenure, with 15 per cent of guards in the job for 2 years or less and 20 per cent for 10 years or more. Respondents were unevenly distributed with 87 per cent of men and 13 per cent of women. Such rates are representative of the total prison staff population that received the questionnaires. According to local administrative records, the actual percentage of women guards is about 15 per cent (female prison officers only work in structures for women detainees that are much smaller than men’s). Educational level of the sample mirrored overall national education policies toward a better educated workforce: 75 per cent of the prison guards had graduated from high school, 22.5 per cent had college education, while 2.5 per cent had not gone further than elementary school.

An original and complex data collecting procedure was designed to ensure the maximum return of a lengthy general survey in a professional environment characterized by strict privacy and security procedures, and a general climate of bureaucratic distrust. Hence, the data collecting stage relied on a tight collaboration with local permanent medical teams in charge of the personnel. Usually composed of a doctor and a couple of registered nurses, penal medical teams benefit from good and longstanding trusting relations with correctional officers.

Practically, a set of three different questionnaires was designed for each prison guard: a self-report attitude survey, a medical questionnaire, and an administrative inquiry. Serving as a dispatching center, the medical team first distributed the anonymous self-report attitude survey to each employee. Second, they progressively collected all possible surveys, directly handed-in by the guards themselves during on-site medical checks. During such checks, doctors and nurses would directly administer the medical questionnaire dealing with issues covered by medical secrecy. Finally, the personnel office of each prison returned to the medical department the third questionnaire, an administrative inquiry containing elements of individual professional records. On this questionnaire, the name of the guards was written with a pencil so that the medical team could match it to the two other surveys they were already holding. Once reunited, the three questionnaires were put together into one bundle, all personal references being erased. Boxes of therefore
anonymous bundles were then picked-up for analysis. Due to occupation-specific administrative complexities and delays, the overall time frame of the data-collecting phase was approximately 1 year.

**Measures**

**Resource variables**

As noted before, prison-specific studies are few and the general pathogenic perspective adopted focuses mainly on the nature and role of stressors. The peculiarities of prison work and the expectations concerning practical applications of the study begged for a preliminary grounded investigation of those specific resources valued among correctional officers. This point is of particular importance since, as previously emphasized (Thoits, 1994), it is the nature of resources that is eventually instrumental for the management function.

Therefore, 6 months before the general survey, several dozens of on-site semi-structured interviews were conducted among prison guards to develop task-genuine resources scales. This inductive approach follows previous data collection procedures partially used in other prison studies (Kalimo, 1980; Shamir & Drory, 1982). Not choosing already available resources scales also conforms to methodological recommendations when conceptual and compelling measurement issues are at stakes (Schmitt & Klimoski, 1991). In our case, the need was for highly relevant job items to secure high credibility among the sample and a subsequently meaningful return rate of surveys. Content analysis of interviews resulted in the creation of a 38-item original scale. In a preliminary validation stage, this questionnaire was administered to 145 prison guards. Principal component analysis yielded four distinct factors, each corresponding to various types of resources, for example, skill utilization, professional worth, co-worker support, and participation. All of these resources correspond, in their nature, to those already listed in existing literature. First, they relate to resource categories presented by the conservation of resources evaluation (COR-E) (Hobfoll et al., 1992), that is, three ‘work condition resources’ (skill utilization, co-worker support, and participation) and one ‘personal resource’ (professional worth). Second, they identify with resources (vs. demands) cited in previous taxonomies (Janssen, Schaufeli, & Houkes, 1999; Lee & Ashforth, 1996).

**Lack of skill utilization**

In prison, skill utilization corresponds to the prison guards’ belief of knowing more than the mere door opening and closing routine. Lengthy contacts with inmates make them feel like repositories of valuable information from which constructive penal policies could benefit. In a context of strict top-down security management, however, perception of skill utilization is tightly associated to hierarchical recognition. A four-item reversed scale measured perception of skill utilization ($\alpha = 0.86$). Example of items includes ‘My skills are recognized and utilized’ (reverse-score), ‘Hierarchy has a clear idea of who I am’ (reverse-score). The response scale ranged from 1, ‘absolutely disagree/Never’ to 5 ‘Fully agree/Always’.

**Lack of professional worth**

Professional worth relates to the intrinsic value of one’s activity. As a belief of personal worth, it relates to self-esteem (Locke, McClear, & Knight, 1996). A four-item reversed scale was designed ($\alpha = 0.71$) ranging from 1, ‘absolutely disagree/Never’ to 5 ‘Fully agree/Always’. Sample items are ‘To be a prison guard is a real job’ (reverse-score), ‘By the end of the day, I feel I have accomplished something’ (reverse-score).
Lack of co-worker support
Research has repeatedly highlighted the role of social support in burnout formation (Leiter & Maslach, 1988; Lee & Ashforth, 1996). In work settings such as prisons, interpersonal bonds are therefore expected to act as a powerful resource against danger and aggression while securing performance through team cohesion. A five-item reversed scale ranging from 1 ‘Absolutely disagree/Never’ to 5 ‘Fully agree/Always’ measured support ($\alpha = 0.71$). Examples of items are ‘I have good friends as colleagues’ (reverse-score), ‘There is solidarity between prison officers of the prison’ (reverse-score).

Lack of participation
Contrasting with a formal type of participation, our definition is that of a more informal social process (Heller, Pusic, Strauss, & Wilpert, 1998; Karasek & Theorell, 1990). It is expected to reflect both the power and the ability of the guard to influence the decision making process. Participation was measured using a three-item scale ranging from 1 ‘absolutely disagree/Never’ to 5 ‘Fully agree/Always’ ($\alpha = 0.64$). Sample items are ‘Whatever we say or do, the chief is always right,’ ‘A prison officer is here to keep his mouth shut, period’.

Burnout
Since the study took place in a French-speaking area, burnout was measured using the validated French version of the Maslach Burnout Inventory-Human Service Survey (MBI-HSS), a 22-item self-report questionnaire (Dion & Tessier, 1994; Maslach, Jackson, & Leiter, 1996). As confirmed by recent reviews (Cooper et al., 2001), the MBI-HSS is the most widely used instrument for measuring burnout. Its three subscales correspond to the three dimensions of burnout, for example, emotional exhaustion (9 items), depersonalization (5 items), and personal accomplishment, a reversed scale (8 items). Following the 1986 modification of the original MBI questionnaire (Maslach & Jackson, 1981), which dropped the intensity scale, only the frequency scale was administered. All MBI-HSS scales ranged from 1 ‘Never’ to 7 ‘Every day.’ For each subscale internal consistency was verified: emotional exhaustion ($\alpha = 0.88$), depersonalization ($\alpha = 0.63$), and (reduced) personal accomplishment ($\alpha = 0.76$).

Burnout correlates
Absenteism
Absenteism was evaluated on the basis of frequency. This approach is consistent with organizational withdrawal research that admits a progressive process of disengaging behaviors in relation to work dissatisfaction and psychological distress (Hardy, Woods, & Wall, 2003; Rosse, 1988). Individual data were made available by registered administrative records. For each correctional officer, the number of absences was computed over a 1-year period, starting retrospectively from the date on which the self-report attitude survey was completed and returned. Local medical teams were able to control for epidemics, for example, influenza, gastritis, and for specific long-term treatments due to disease or injuries.

Depression
To evaluate depression, we used the Center for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977). The instrument has been translated into French and validated by Fuhrer and Rouillon (1989). In the face of other possible questionnaires (Tennen, Hall, & Affleck, 1995) the 20 item self-report CES-D has proved its validity over a growing number of studies (Bakker et al., 2000; Haack, 1988; Revicki & Whitley, 1995; Thorson & Powell, 1999). Moreover, the CES-D scale has
been privileged by COR proponents investigating the link between burnout and depression (Freedy & Hobfoll, 1994; Monnier, Cameron, Hobfoll, & Gribble, 2002). Measurement used the original four-point scale ranging from never/less than one day a week to frequently/from 5 to 7 days a week (\( \alpha = 0.96 \)). Sample items are ‘I thought my life had been a failure,’ ‘I enjoyed life’ (reverse-score).

Concluding this method section, some additional explanations are necessary concerning issues of scales construction and reliability. First, as recommended by Pedhazur and Pedhazur Schmelkin (1991), all composite scales were formed on the basis of simple sums. Moreover, the additive procedure was deemed especially relevant concerning the three burnout scales as it allows a direct comparison with referent mean burnout scores (Maslach et al., 1996). Second, though acceptable, alpha coefficients appeared rather low for both lack of participation (\( \alpha = 0.64 \)) and depersonalization (\( \alpha = 0.63 \)). Concerning the lack of participation scale, low internal consistency may be attributable to the small number of items (Cortina, 1993). As for depersonalization, a relatively low alpha is occasionally found in the literature, spurring a variety of explanations (Schaufeli, Enzmann, & Girault, 1993a). For instance, Schaufeli and Peeters (1990) have shown that a standardization of all burnout scales length had a positive impact on internal reliability of depersonalization. Elsewhere, studies have suggested a possible conceptual heterogeneity of the scale (Garden, 1987), a matter however recently challenged (Densten, 2001). Finally, researchers have suggested that depersonalization may be experienced differently according to the type of interactions required in occupations (Evans & Fischer, 1993).

**Results**

*Descriptive findings*

Descriptive statistics and correlations are presented in Table 1. First of all, the mean scores of both emotional exhaustion (26.82) and depersonalization (13.62) should be noted as they equal the highest

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>1. Lack of co-worker support</td>
<td>10.59</td>
<td>3.18</td>
<td>0.71</td>
<td></td>
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<td></td>
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<tr>
<td>2. Lack of participation</td>
<td>8.12</td>
<td>2.99</td>
<td>0.64</td>
<td>0.24**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>3. Lack of skill utilization</td>
<td>9.66</td>
<td>3.71</td>
<td>0.86</td>
<td>0.36**</td>
<td>0.42**</td>
<td></td>
<td></td>
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<tr>
<td>4. Lack of professional worth</td>
<td>9.47</td>
<td>3.51</td>
<td>0.71</td>
<td>0.36**</td>
<td>0.36**</td>
<td>0.43**</td>
<td></td>
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<tr>
<td>5. Depersonalization</td>
<td>13.68</td>
<td>6.29</td>
<td>0.63</td>
<td>0.23**</td>
<td>0.21**</td>
<td>0.29**</td>
<td>0.31**</td>
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<td>6. Reduced personal accomplishment</td>
<td>11.11</td>
<td>9.37</td>
<td>0.76</td>
<td>0.27**</td>
<td>0.24**</td>
<td>0.32**</td>
<td>0.48**</td>
<td>0.20**</td>
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<tr>
<td>7. Emotional exhaustion</td>
<td>26.82</td>
<td>11.72</td>
<td>0.88</td>
<td>0.27**</td>
<td>0.30**</td>
<td>0.36**</td>
<td>0.46**</td>
<td>0.48**</td>
<td>0.18**</td>
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<tr>
<td>8. Absenteeism*</td>
<td>2.43</td>
<td>2.75</td>
<td>—</td>
<td>0.43</td>
<td>0.13**</td>
<td>0.28**</td>
<td>0.17**</td>
<td>0.12**</td>
<td>−0.03</td>
<td>0.19**</td>
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<td>9. Depression</td>
<td>17.76</td>
<td>12.71</td>
<td>0.96</td>
<td>0.02</td>
<td>0.14**</td>
<td>0.11**</td>
<td>0.12**</td>
<td>0.12**</td>
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<td>0.20**</td>
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</table>

*\(p < 0.01\).

*the frequency range of absenteeism is 0/27 days.

The formula to recode the means of personal accomplishment (PA), the original scale of the MBI-HSS, to reduced personal accomplishment (rPA) is: rPA = PA − 48 (Schaufeli & Enzmann, 1998: 62). In the present study, PA score was 36.89.
absolute scores set by Maslach et al. (1996), that is, at >27 for emotional exhaustion and >13 depersonalization. Important for a human service occupation, these means also exceed scores observed in equivalent probation/correction officer samples (Schaufeli & Enzmann, 1998: 62). Intercorrelations between resource variables are significant ($p < 0.01$) and range from moderate (0.24) to strong (0.43). A similar pattern is observed among burnout facets with the strongest correlation between emotional exhaustion and depersonalization (0.48, $p < 0.01$). In line with previous research, correlation coefficients also show emotional exhaustion as the core burnout component most positively related to depression (0.20, $p < 0.01$) and absenteeism (0.19, $p < 0.01$).

Concerning the wide range of the frequency-based measure of absenteeism (0/27), it should be noted that 22 per cent of the prison guards reported no absences at all while 1 per cent reported a number of absences equal or superior to 10 days a year.

**Model testing**

**Estimation methods**

To test the various hypotheses formulated about the relationships between resource variables, burnout, and negative correlates, path analyses were conducted using a structural equation approach (Bentler, 1986). As recently recalled by MacCallum and Austin (2000), structural equation modeling should not be construed to establish causal links. It allows the testing of specified a priori models and the validity of relationships among variables set within theoretical structures. Structural equation analyses were conducted using the SEPATH computer program (Steiger, 1995, 1999). The maximum likelihood method was followed to examine the correlation matrices of the items. Various indices yielded by SEPATH to evaluate the quality of the fitted models were used. For the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI) and the comparative fit index (CFI), values of 0.90 or higher indicate a close fit between the model and the data. Bentler (1995) has suggested that the root mean square residual (RMSR) value should be as close to 0 as possible, and Browne and Cudeck (1993) that a root mean square error of approximation (RMSEA) value of less than 0.08 represents acceptable errors of approximation in the population. Concerning the parsimony indices, the value of the normed chi-square ($\chi^2/df$) should be inferior to 5 (Jöreskog, 1969), while the parsimonious-fit normed index (PNFI) should reveal the strongest comparative value between models (James, Mulaik, & Brett, 1982). Missing values were handled using the listwise procedure. Consequently, the size of the original sample was reduced from 707 to 502 prison officers.

**Statistical analyses**

The SEM method used in this research follows a two-step approach (James et al., 1982; Anderson & Gerbing, 1988). Specifically, it is recommended to first estimate a measurement model, usually on the basis of a confirmatory factor analysis, before testing any structural model. Resource variables were therefore allowed to load on a single resource depletion latent variable, the Resource Depletion Measurement model. This is an important first step since the measurement model is not only expected to model the intercorrelations between resource depletion factors but also to model the relationship between the resource depletion process and work outcomes, for example, burnout and corollaries. Results in Table 2 evidence an excellent fit (AGFI = 0.98; CFI = 0.95) as satisfactory coefficients related the latent construct to all resource variables (lack of professional worth = 0.75; lack of co-worker support = 0.64; lack of skill utilization = 0.74; lack of participation = 0.64).

In order to test the various hypotheses, this measurement was then used as a full component of SEPATH (Steiger, 1995) structural models. Following Bentler and Bonett (1980), all models were matched to a null model. The null model specifies each variable as a separate factor independent of one another.
As shown in Table 2, the poor fit of Model 1 ($\chi^2$/df = 21.08; AGFI = 0.73; CFI = 0.59) does not support a solution where absenteeism acts as a mediator between resource depletion and burnout. Consequently, Hypotheses 1, 2, and 3 must be rejected. Models 2 and 3, however, show equally good fit indices ($\chi^2$/df = 3.99; GFI = 0.97; AGFI = 0.94, for Model 2, 0.95 for Model 3; RMSR = 0.04; RMSEA = 0.07; CFI = 0.95; PNFI = 0.62). In addition, all hypotheses are supported for both models.

In Model 2 (Figure 4), significant path coefficients verified all hypothesized relationships linking positively emotional exhaustion to depersonalization and to reduced personal accomplishment (Hypothesis 5), depersonalization to reduced personal accomplishment (Hypothesis 6), emotional exhaustion to absenteeism and to depression (Hypothesis 7).

Consistent with the theory that makes emotional exhaustion the core of burnout, results showed that resource depletion is positively and more strongly related to emotional exhaustion than on depersonalization and (reduced) personal accomplishment (Hypothesis 4). Similar to Model 2, all hypothesized linkages postulated in Model 3 (Figure 5) are supported. Results verify significant positive paths from depersonalization to emotional exhaustion and to reduced personal accomplishment (Hypothesis 9), and from reduced personal accomplishment to emotional exhaustion (Hypothesis 10). Concerning this last result, the magnitude of the coefficient (0.07, $p < 0.05$) makes such a verification quite uncertain. Finally, consistent with Golembiewski’s theory of progressive virulence, resource depletion shows a stronger positive relationship with depersonalization than with emotional exhaustion and reduced personal accomplishment (Hypothesis 10).

**Discussion**

Overviews on the topic of professional burnout (Schaufeli & Enzmann, 1998) have underlined a need for more theory-driven research to supersede the ‘blind empiricism’ (Schaufeli, Enzmann, & Girault, 1993b: 256) of early work. Accordingly, the aim of the present study was two-fold. First, following recent observations (Maslach et al., 2001), it sought to contribute to an emancipation from interactive approaches that consecrate a somehow mechanical view of adjusting two independent entities, for example, the person and the environment, along a bipolar match/mismatch continuum. A second goal was to test a theoretical proposal whereby organizational health could be mainly viewed from the standpoint of strengths/resources, and not only from a more classical resource versus demand perspective.
Resource Depletion (reduced) Personal Accomplishment

Depersonalization

Emotional exhaustion

Depression

Absenteeism (frequency)

Lack of co-worker support

Lack of participation

Lack of skill utilization

Lack of professional worth

Figure 4. Standardized parameter estimates of Model 2

* p < .05; ** p < .01; *** p < .001

Figure 5. Standardized parameter estimates of Model 3

* p < .05; ** p < .01; *** p < .001
Consequently, this study tested the viability of a resources-based approach of professional burnout. In contrast to pathogenic views that underscore the role of overtaxing demands, it explored the importance of resources depletion in explaining the burnout process. Conservation of resources (COR) theory (Hobfoll, 1988, 1989) provided the theoretical framework of the research for it conditions burnout to an ability to retain and develop personally valued resources, a departure from traditional perspectives that downplay the role of individual perceptions. Three competing research models were tested to evaluate the relationships between resources, burnout, and negative correlates (e.g., absenteeism and depression). A large sample of prison guards provided the database for the study.

Resource depletion and the burnout process

Empirical support for two hypothesized path models gave support to a resource-based approach of burnout. One (Model 2) relied on Leiters’ (1993) approach, the other (Model 3) on Golembiewski’s (1986). Both of them provided equally sound goodness-of-fit properties, and highlighted the importance of a significant positive relationship between resources depletion and burnout. Consistent with Hobfoll’s (1989) theory, results evidenced the role of depleted valued resources, for example, co-worker support, skill utilization, participation (all work condition resources), and professional worth (a personal resource), on emotional exhaustion and depersonalization syndromes. The significant and positive link between emotional exhaustion and resource depletion seems to challenge current JD-R research, which tends to downplay the antecedent role of job resources on burnout in favor of job demands (Demerouti et al., 2001; Schaufeli & Bakker, 2004). From a COR standpoint, however, the JD-R approach may simply underestimate the cumulated impact of both job (work) resources and engagement attitudes which, following Hobfoll’s theory, could be equated to ‘personal resources.’

Although a COR-based study, the present research rejected a model designed by Hobfoll & Shirom (Model 1) that included absence frequency as a mediating coping stage between resource depletion and burnout. Instead, the other models (Figures 4 and 5) supported this type of absenteeism, like depression, as an outcome of emotional exhaustion. For one thing, this result confirms the central role of emotional exhaustion in explaining negative burnout outcomes (Wright, 1998). Yet, interestingly, this result also suggests that the depletion of valued resource alone would not suffice to fuel behavioral withdrawal, as employees would stay on the job till experiencing symptoms of emotional exhaustion. Contextual reasons may be proposed to account for this finding. Prison personnel are fully aware of the disruptive consequences of repeated absenteeism on both security and co-worker tedium. Hence repeated absenteeism may therefore be considered a last resort coping strategy when one just ‘can’t take it anymore.’

Resource depletion and the burnout structure

Aside from general support for a resources-based approach, results provide additional information on the way resource depletion affects the internal structure of burnout. First, as already mentioned, SEM results supported two hypothesized structural models (Table 2). This unexpected situation is all the more interesting as both models proceed from rival approaches (Leiter vs Golembiewski). Results do not rule out either of the two options, that is, 1/resource depletion is more related to emotional exhaustion and depersonalization is a form of emotional exhaustion coping (Model 2), 2/resource depletion affects more depersonalization than emotional exhaustion (Model 3). Moreover, difference in significant β values between dimensions of the within-structure of burnout is not large enough to allow any realistic discriminate inferences. From a mathematical perspective, this phenomenon confirms the
critical importance of checking for equivalent models in a covariance structure analysis (MacCallum, Wegener, Uchino, & Fabrigar, 1993). From a theoretical perspective, the structural debate remains open, as confirmed by recent longitudinal studies which give support to either Leiter’s sequence (Toppinen-Tanner, Kalimo, & Mutanen, 2002), or Golembiewski’s approach (Golembiewski, 1999).

Second, neither in Model 2 nor in Model 3 does resource depletion have a noticeable influence on feelings of personal accomplishment. Results thus confirm personal accomplishment as a complex self-evaluation process better accounted for through the mediation of depersonalization, a coping strategy, and self-efficacy (Friesen & Sarros, 1989; Maslach & Leiter, 1997). The special setting in which the present study took place may have influenced this result in several ways. As shown by Lee and Ashforth (1993b), working in a hierarchical and normed work environment can reduce the impact of negative cognitive influences. Concretely, the highly bureaucratic, impersonal, and performance insensitive environment that regulates prison work may have prevented individuals from expecting too much from a job they have learnt to hold as intrinsically non-gratifying and useless for personal accomplishment. This point appears consistent with previous findings asserting that personal accomplishment can mostly develop independently from other burnout dimensions (Lee & Ashforth, 1993a, 1996; Leiter, 1993).

Limitations and research orientations

A first limitation of the present research is its cross-sectional design. A longitudinal approach would have helped validate the feedback linkages expected to fuel the spiral of loss, or gain, at the heart of COR burnout theory (Hobfoll & Freedy, 1993). Yet, due to the practical difficulties already mentioned concerning the conduct of the study, the feasibility of a repeated experiment would have been highly unlikely. On a more general plane, the nature of occupations under study may well be a methodological issue for future attempts in longitudinal research.

Second, the present paper failed to evaluate the role of coping strategies on burnout formation, as the choice of absence frequency did not prove adequate. A number of directions can be suggested to further research on this issue. To start with, absence frequency could be defined and evaluated differently to include more discrete symptoms of behavioral withdrawals such as tardiness, and frequency/length of the breaks. It could also be relevant to control absence frequency with measures of absence length, as their interaction may help explain individual vulnerability to burnout. Finally, it could just be that the choice of absenteeism as a coping strategy is not correct. A pain-avoidance theoretical framework of absenteeism (Rhodes & Steers, 1990) may not be relevant concerning burnout as other types of coping processes were found to fit Hobfoll & Shirom’s approach, including self-efficacy (Benight et al., 1999; Lee & Ashforth, 1990), positive orientation and hard work (Ito & Brotheridge, 2003).

Third, being anonymous, data did not allow more detailed analysis about the nature of the sample. For example, there are husband and wife couples who happen to work in the same penal facility. The influence of such personal situations may not be trite and may have a moderating influence on the relation between resource depletion and burnout. Specifically, due to shared common job experiences, spouses may be in a better position to generate mutual support for improved work conditions. The nationality of the sample may also provide additional material for further investigation. For example, as public servants, all French correctional officers work 35 hours a week, get 5 week-paid vacations, have eight legal holidays and benefit from full-benefit retirement at age 55 (a special legal proviso shared by duly registered dangerous occupations). Such a situation would thus appear to challenge the view that more vacation time relates negatively to burnout occurrence (Westman & Eden, 1997).
Practical implications

This research underscores the relevance of a resources-oriented human resource strategy. For the most part, and consistent with a disease-model of scientific enquiry, burnout management is geared toward reducing weaknesses and damages caused by a number of taxing demands (Quick & Quick, 1984; Kompier, 1996). Yet, from a resources-based standpoint, it is implicitly assumed that organizational humps and bumps are a commonly shared experience of professional life. Therefore, a focus limited to demand-reducing strategies, a pathogenic perspective, is bound to be both frustrating and expensive for the organization (Briner & Reynolds, 1999). To acknowledge the importance of resources at both individual and organizational levels means freeing management from purely reactive/curative policies and allows for more proactive/prophylactic strategies. In relation to prison work, our findings point toward some innovative actions in human resource management. Due to the type of work conditions inherent to the trade, the recruitment process should be especially careful not to precipitate the inevitable erosion of personal resources. Contrary to the older generation of prison officers, nowadays French applicants are much younger, have no former professional experience, and choose such a state-occupation for job security, often after failing to enter the police force. In other terms, young entrants underestimate their ability to preserve such resources as mental and physical stamina (personal characteristics) or family activity (social support). In the same vein, due to the increasing academic background of prison officers, the penal administration faces the consequences of rising failed expectations (diminishing energy-type resources). Examples of preventive actions in other law-enforcement occupations like police work (Kop, Euwena, & Schaufeli, 1999) have therefore developed occupation-specific selection criteria over traditional generic nation-wide entry examinations.

Increased on-the-job training coupled with a redesign of career development may also prevent the fear of losing one’s competence by facilitating resource gain perspectives. Concretely, this could mean professional opportunities for inmate counseling, organizational management tasks, or even collaborating with social workers outside of the prison. Consistent with COR theory, such implications are expected to prevent the spiral of loss and strengthen individual self-esteem while providing a sense of professional worth.

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