
Special Issue

Building Healthy Workplaces: What We Know So Far

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When asked to define the capabilities of a healthy person, Sigmund Freud responded "To work and to love." Although many of his theses have not held up to empirical enquiry, Freud's identification of an intimate connection between work and mental health is consistent with a vast body of scientific literature. Certainly, the historical record identifies paid employment as a central aspect of human experience throughout the development of civilization (see for example, Applebaum, 1984, 1992; Pahl, 1989). Moreover, the absence of paid employment has been linked to deleterious consequences for individuals and society since at least the beginning of the Industrial Revolution (Burnett, 1994; Feather, 1990; Jahoda, 1980).

In the latter half of this century, Kornhauser's (1965) inquiries into the mental health of factory workers, and the seminal report *Work in America* (1973) focused attention on issues related to work stress and their implications for individual and organizational health. In 1990, the National Institute for Occupational Safety and Health (NIOSH) in the United States declared occupational stress to be one of the 10 leading causes of workplace death (Sauter, Murphy, & Hurrell, 1990), and it is now common to speak of occupational stress as an epidemic (Quick, Quick, Nelson, & Hurrell, 1997). Developing healthy work and workplaces has become an important topic for organizations and researchers alike. Several initiatives toward developing healthy workplaces have been undertaken by the American Psychological Association (e.g., which offers state, provincial, and international Psychologically Healthy Workplace Awards) and the National Quality Institute (NQI; e.g., which offers a national award program, and which organizes the Nationally Healthy Workplace Week). Similarly, the Canadian Institute of Health Research currently is preparing a research strategy on workplace mental health. Therefore, the intent of this

Special Issue is to highlight the contributions that psychological research has made, and will continue to make, to strategies surrounding healthy workplaces.

By way of introduction to this Special Issue of the *Canadian Journal of Behavioural Science*, we hope to achieve three interrelated goals. First, we define what we mean by a "healthy workplace," and we delineate the ways in which work is associated with mental health. We argue that work is both a causal factor in mental and physical ill-health as well as a potential health resource that both may protect us and assist in our recovery from psychological ill-health.

Second, we review the individual, organizational, and societal costs of unhealthy work and workplaces, and, consequently, of poor mental and physical health. Our argument is simply that we are incurring horrific economic and social costs when we have unhealthy workplaces. Finally, we provide a framework in terms of a healthy workplace model to help summarize this literature, and to present the articles in this Special Issue. Throughout this introduction, we emphasize that these goals are highly compatible with organizations' traditional focus on enhancing productivity and profitability. Put simply, what is good for Canadian workers is good for Canadian industry.

Defining "Health Workplaces"

According to the American Psychological Association's definition of a psychologically healthy workplace, organizations can become healthy by incorporating health promotion activities, offering employee assistance programs, having flexible benefits and working conditions, treating employees fairly, and offering programs for employee development, health and safety, and the prevention of work stress (American Psychological Association, 1999).

Similarly, the NQI in Canada defines a healthy

workplace in terms of “holistic workplace health,” which includes physical, social, personal, and developmental organizational support “to improve overall employee quality of life both within and outside the workplace” (Health Canada, 2004). The NQI defines healthy outcomes in terms of achieving both healthy organizational outcomes (such as improved customer service and improved employee performance) and healthy individual outcomes (such as satisfaction and healthy lifestyles), and in terms of a safe work environment (Health Canada, 2004).

A lot of the focus of unhealthy workplaces has been on the impact of job stress on workers. According to most stress models, potential stressors are the objective elements in the environment that may create stress (Hurrell, Nelson, & Simmons, 1998). These stressors may be defined as long term and occurring daily (i.e., “chronic” stressors; Carayon, 1995), or they may be more extreme, and of short duration with specific onset (i.e., acute stressors; Barling, 1990). Perceived stress is defined as an individual’s own perception and experience of these job stressors. That is, individuals may perceive the stressors as being positive, benign, or negative (i.e., “stressful”). Finally, strain is defined as the potential psychological, physical, and behavioural outcomes of negative perceived stress (Barling, 1990; Lazarus & Folkman, 1984). According to these definitions, not all “stressors” affect all individuals in a similar manner, and strain is not inevitable. Individual resources and coping styles may moderate the relationship between stressors and stress, and between stress and strain, either alleviating or exacerbating the negative outcomes.

In this introduction of the Special Issue, we will take the perspective that healthy workplaces are a result not only of the absence of “job stressors,” but are also a result of a presence of organizational resources to help employees handle job and life stressors. Moreover, we first focus on two different processes through which work may affect both psychological and physical health.

Work and Health: Exploring the Links

There are at least two ways in which work may be linked to mental health. First, based on the job stress model, there is a vast body of scientific literature linking work features (i.e., potential stressors) to psychological, physical, and behavioural consequences, as well as to organizational consequences. Generically, known as the study of psycho-social stressors (e.g., Kelloway, Francis, & Montgomery, 2005) in the workplace, this research documents the deleterious consequences of work stress. Second,

work may be a resource that individuals can draw upon to buffer the effects of nonwork stressors. In this sense, work may be a health resource for individuals.

Work as a Cause of Ill Health

Models of how individual well-being is affected by workplace conditions have focused on establishing relationships between job characteristics/stressors and either mental (e.g., Kelloway & Barling, 1991) or physiological (e.g., Barling & Kelloway, 1996) health. Theorists and researchers have proposed a variety of mechanisms as to how these associations occur. Models vary in their “breadth” (i.e., the number of organizational conditions considered) as well as in the functional relationships specified between stressors and outcomes. Unfortunately, these competing theories rarely are compared directly and often are evaluated based on data that do not allow an appropriate test of the theoretical assumptions.

In outlining a national prevention strategy for stress-related disorders, Sauter et al. (1990) reviewed the work-stress literature and identified the most common sources of work stress. They propose that six categories of stressors need to be considered: 1) workload and work pace; 2) role stressors (such as conflict, ambiguity, and inter-role conflict); 3) career concerns; 4) work scheduling; 5) interpersonal relationships; and 6) job content and control.

1) Workload and work pace. The experience of being overworked is not new, but, some employees and researchers would suggest that it is increasing within particular sectors (Cartwright & Cooper, 1997). The strains associated with being overworked have been found to be uniformly negative across behavioural, psychological, and physiological outcome domains (e.g., Jex & Beehr, 1991). Measures of role overload are empirically linked to assessments of both general, context-free mental health (e.g., Day & Jreige, 2002; Day & Livingstone, 2001; Kelloway & Barling, 1991) and work-specific attitudes and mental health (e.g., Day & Jreige, 2002; Posig & Kickul, 2003). Related to issues of work load and pace, there has been concern expressed about the absolute number of hours required of some employees – particularly trainees and interns who may be required to work excessively long hours during the course of their training (e.g., Bartle & Rodolfa, 1999).

Issues of workload and work pace become increasingly important in an environment in which hours of work are increasing. The average work year for working couples has increased by nearly 700 hours in

the past two decades, and up to 30% of the workforce reports being exhausted by the end of the work day (NIOSH, 2002).

2) *Role stressors (conflict, ambiguity, and inter-role conflict)*. Role stressors emerge from the impact of the environment on an individual's ability to fulfill role expectations (Beehr & Glazer, 2005). Thus, role conflict exists whenever individuals face incompatible demands from two or more sources. Role ambiguity reflects the uncertainty employees experience about what is expected of them in their jobs; the opposite of role ambiguity would be role clarity. Inter-role conflict exists when employees face incompatible demands from two or more roles. The most common form of inter-role conflict is work-family conflict where the demands of work conflict with the roles of parent or spouse (Bellavia & Frone, 2005).

A vast amount of research (for a review, see Beehr & Glazer, 2005) documents the impact of role stressors. For example, Kelloway and Barling (1991) found that the experience of role stressors at work predicted mental health in the work place. Similarly, chronic work stressors (i.e., ambiguity) were associated with increased strain symptoms, even after controlling for acute job stressors (Day & Livingstone, 2001).

3) *Career concerns*. Career-related factors such as job insecurity, fear of job obsolescence, under and over promotion and, more generally, concerns about career development have been identified as stressful (Probst, 2005). For example, in their study of South African miners, Barling and Kelloway (1996) found that job insecurity was associated with both negative affective reactions and raised blood pressure. The importance of job insecurity as a stressor in the workplace is highlighted by observations that the temporary or contingent labour force is rapidly increasing and that job tenure has declined for many workers (NIOSH, 2002).

The development of the effort-reward imbalance model (Siegrist, 1996) has focused research attention on the role of organizational rewards as a psychosocial stressor. This model suggests that strain results when rewards are not consistent with efforts in work environments. In this view, efforts are described as the strivings of the individual to meet the demands and obligations of the job. Rewards are conceptualized as encompassing financial rewards, esteem rewards, and career rewards, including job security (Siegrist, 1996). Similar to its intellectual forebearer, equity theory (Adams, 1965), the effort-reward imbalance theory is based on the notion that individuals attempt to maintain a state of equilibrium and cannot

maintain an imbalance between effort and rewards over an extended period of time. Siegrist, however, also involves an individual variable (i.e., over-commitment) to explain potential discrepancies. That is, individuals who are overcommitted to their work may maintain a high effort in a low-reward environment. Eventually, however, this condition will result in ill-health (Siegrist, 1996). Initial results using cardio-vascular risk as the outcome generally support the model propositions (Peter & Siegrist, 1999). The relative recency of the effort-reward imbalance theory has resulted in a lack of formal evaluation of the theory, although these initial results seem promising.

Another salient career concern is the issue of worker safety. There is evidence that increased job stressors (e.g., work overload) can result in impaired safety (Barlow & Iverson 2005; Barling et al., 2002). Conversely, there is also evidence that experiencing safety infractions can lead to increased stress. Barling, Kelloway, and Iverson (2003) analyzed data from the Australian Work and Industrial Relations Survey and showed that the experience of safety events (i.e., injuries) was associated with a diminished sense of control, more negative job attitudes, and greater intent to leave the organization. Therefore, organizational activities focused on accident prevention (e.g., Kelloway, Stinson, & MacLean, 2004) may play a double role in improving health: enhancing physical health through reducing accidents, and enhancing psychological health through improving job attitudes and job experiences.

4) *Work scheduling*. Working rotating shifts or permanent night work results in a disruption of physiological circadian rhythms, as well as disrupted social activities, and they have been identified as a work-related stressor. For example, employees reported that working nights or overtime negatively affects their mental- and physical-health outcomes (Ettner & Grzywacz, 2001). Similarly, irregular work schedules tend to be associated with increased conflict between work and parent roles and between work and spouse roles (Day & Chamberlain, in press). There is a great deal of literature on how to schedule shifts so as to minimize these effects (e.g., Tucker, MacDonald, Folkard, & Smith, 1998). The effects of work schedules are sufficiently well established to provide the basis for labour law in the European Union, which regulates the scheduling of shifts and rest days (Totterdell, Spelten, Smith, Barton, & Folkard., 1995; see also International Labor Office, 1988, 1990). On a more macro scale, researchers have examined the scheduling of vacation time on well-being (Westman & Eden, 1997).

5) *Interpersonal relationships*. Poor interpersonal relations in the workplace are consistently identified as a source of stress (Sauter et al., 1990). Recent research has focused on interpersonal relationships as stressors in the workplace, in terms of: 1) a lack of coworker and supervisory support; and 2) the presence of violence and aggression. First, there is a well-established body of literature that indicates having well established sources of social support (i.e., receiving support from coworkers and supervisors) is associated with positive individual outcomes (see for example, Gottlieb, 1981; Wang & Patten, 2001). Moreover, social support may reduce the negative effects of other workplace stressors (House, 1981) by acting as a buffer. Meta-analytic evidence offers support for both the main effect and buffering effect of social support (e.g., Viswesvaran, Sanchez, & Fisher, 1999).

A number of recent investigations have focused on the role of organizational leaders (for a review see Kelloway, Sivanathan, Francis, & Barling, 2005). The notion that poor quality leadership has negative effects is not new (Day & Hamblin, 1964), and the research that has been conducted on the link between leadership and mental health has invariably focused on the potentially negative effects of poor quality leadership. Poor leadership also has been associated with increased levels of employee stress (Offerman & Hellman, 1996).

In addition to the impact of poor leadership and a lack of support at work, a number of studies have addressed the impact of aggression, violence, and harassment in the workplace (e.g., Barling, Rogers, & Kelloway, 2001; Dekker, Barling, Fullagar, & Kelloway, 1997; LeBlanc & Kelloway, 2002; Rogers & Kelloway, 1997; Schat & Kelloway, 2000, 2003a, b). Although incidents of physical violence are comparatively rare, they have dramatic effect on individual well-being. Moreover, aggression in the workplace is much more prevalent than violence (LeBlanc & Kelloway, 2002) and is associated with impaired psychological and physical well-being.

Ashforth (1997) found that when abusive supervisors used noncontingent punishment, employees felt a sense of helplessness and alienation from work. Richman, Flaherty, Rospenda, and Chistensen (1992) found heightened levels of psychological distress among medical residents who reported to abusive supervisors. More generally, employees who perceive their supervisors to be abusive tend to experience low levels of job satisfaction, life satisfaction, and affective commitment, and increased levels of work-family conflict, psychological distress (Tepper, 2000), psychosomatic symptoms, anxiety, and depression

(Hoel, Rayner, & Cooper, 1999). This aggression may trigger other aggressive episodes. For example, teenagers' experience of abusive supervision tends to be related to their own aggression directed toward their supervisors (Dupre, Inness, Connelly, Barling, & Hopton, 2003).

6) *Job content and control*. As phrased by Sauter et al. (1990), "narrow, fragmented, invariant and short-cycle tasks that provide little stimulation, allow little use of skills or expression of creativity and have little intrinsic meaning for workers" (p. 1153) are considered as stressors in the NIOSH workplace stress model. There is now substantial evidence that job characteristics such as skill use, skill variety, and autonomy are associated with both increased motivation and positive mental health (Fried & Ferris, 1987; Hackman & Oldham, 1980; Kelloway & Barling, 1991; Parker & Wall, 1998), and a lack of stimulating work may be associated with increased strain symptoms (Day & Livingstone, 2001).

There is also substantial evidence that job control is an important predictor of physical health indices. For example, externally paced tasks (i.e., a lack of job control) tend to be associated with increased systolic blood pressure (Steptoe, Evans, & Fieldman, 1997), whereas personal control tends to be associated with decreased diastolic blood pressure and psychological arousal (Bohlin, Eliasson, Hjemdahl, Klein, & Frankenhaeuser, 1986). Similarly, after monitoring heart rate and blood pressure during periods of low and high control, Steptoe (2001) concluded that heart rate and diastolic blood pressure were significantly greater when individuals were experiencing low control.

Research has also indicated that job control is an important predictor of psychosocial health and work-related attitudes and behaviours. For example, *perceived* job control tends to be associated with *increased* job satisfaction, well-being, life satisfaction (Day & Jreige, 2002), and worker health (Dwyer & Ganster, 1991), and with *reduced* irritability, somatic complaints (Kushnir & Melamed, 1991), perceived stress (Day & Jreige, 2002), and tardiness (Dwyer & Ganster, 1991).

Karasek's (1979; Karasek & Theorell, 1990) demand-control-support model is perhaps the best known of all models relating job characteristics to well-being. In brief, the demand-control-support model is based on two hypotheses relating to the main effects and interactions of the constituent variables. That is, the model proposes that: (a) high demands, lack of control, and lack of social support predict strain outcomes; and (b) demands, control,

and support interact to predict strain (such that high control and high social support buffer the effects of demands on strain outcomes). Over 100 empirical studies (Barnett & Brennan, 1995) have been conducted on the demand-control-support model and research continues to proliferate. Research findings have tended to support the main effects of demand, control, and support on well-being and strain outcomes.

However, there has been limited support for the demand by control and support interactions (Pomaki & Mayes, 2002). The limited support for these interactions is particularly troublesome for the demand-control-support model because virtually every taxonomy of “work stressors” lists high demands, low control, and low support as unhealthy features of the work environment (e.g., Sauter et al., 1990; Kelloway & Barling, 1994a; Warr, 1987).

Moreover, Kushnir and Melamed (1991) criticized Karasek’s model, stating that the model fails to recognize the importance of employees’ individual differences in the strain process. In other words, Karasek’s model does not account for subjective measures (individual perceptions) of the stressor (job control). In response to this criticism, Day and Ziemer (2003) examined both actual and perceived control. They found that *actual* job control was associated with lower stress responses (self-report and physiological). Furthermore, after controlling for actual levels of control, *perceived* control still accounted for significant variance in perceived stress (Day & Ziemer, 2003). They concluded that both actual and perceived control are important variables for future study.

Work as a Health Resource

Although most empirical research has focused on the negative consequences of employment (i.e., stressors and stress), some research suggests that work might substantially enhance well-being (Luthans, 2002). Based on the principals of positive psychology, Luthans (2002) identified characteristics such as hope, self-efficacy, and optimism as qualities that can be influenced by the workplace and are essential to well-being.

This notion that work contributes positively to well-being is not a new one. Jahoda (1980) suggested that there were “latent” consequences of employment in addition to the manifest consequence of generating income. In her view, employment provided individuals with a time structure, sense of social position, sense of purpose, and social contact outside of the immediate family. Jahoda (1980) concluded that although these positive consequences of work may

be initially unintended, they are necessary for mental health. Certainly, the extensive literature on social support (e.g., House, 1981) suggests that work allows individuals to develop a network of contacts that can serve as a resource during times of increased stress.

Therefore, definitions of health (and specifically mental health) must go beyond the simple *absence* of disorders, and must include features such as competence, mastery, autonomy, independence, aspiration, and self-esteem. Parker, Turner, & Griffin (2003) concluded that elements of job design can be reliably associated with such outcomes. For example, increasing job autonomy tends to be associated with an increased sense of mastery (Parker & Sprigg, 1999). Similarly, in a recent study, Sirovanthan, Barling, Loughlin, and Kelloway (2003) showed that transformational leaders enhanced followers’ sense of self-efficacy, and this self-efficacy, in turn, resulted in improved mental health outcomes for employees.

It is evident from these two perspectives about the link between work and health that they are inextricably linked. Therefore, we now will examine the individual and organizational costs associated with unhealthy workplaces, and more specifically, with poor organizational and individual health.

The Health and Productivity Costs of Getting it Wrong

Estimates of the “costs” of stress typically focus on the economic costs of medical care, disability provisions, absence, and lost productivity. Such estimates are seriously biased and dramatically underestimate the effects and costs of workplace stress because work stress is pervasive and influences physical, mental, and organizational health through a myriad of pathways. Empirical research is just now beginning to trace these pathways.

The outcomes of job stress and unhealthy work are typically organized into four overlapping and inter-related categories; psychological, physical, behavioural, and organizational (e.g. Kelloway et al., 2005). Before reviewing each type of outcome, it is important to note that these categories are not discrete: For example, depression (a psychological outcome) is linked to coronary heart disease (a physical outcome; Booth-Kewley & Friedman, 1987), may have implications for behaviours such as smoking and alcohol consumption (behavioural outcomes; e.g., Repetto, Caldwell, & Zimmerman, 2005), and is experienced in the organization as increased absenteeism and loss of productivity (organizational outcomes, see for example, Jex, 1998). This example illustrates the difficulty of isolating the “costs” of stress that may emerge in any one, or combination, of these categories.

Psychological Strain

Psychological strain reactions typically include either a disturbance in affect (e.g., mood) or a disturbance in cognition (e.g., concentration). The former have received the most empirical research attention in relation to work stress. Paralleling research that has been conducted in other countries (e.g., Parker et al., 2003; Warr, 1987), Canadian research dealing with work and mental health has mainly focused on affective reactions such as depression, anxiety, burnout, and impaired mood (e.g., Baba, Jamal, & Tourigny, 1998). The extent of these reactions ranges from the domain of mental-health problems, (e.g., Harvey, Kelloway, & Duncan-Leiper, 2003; Kelloway & Barling, 1991) to more severe mental disorders, such as clinical depression (e.g., Karasek, 1979). In their re-examination of data from the National Population Health Survey, Wang and Patten (2001) found support for the association between work stressors and major depressive disorders in Canadian workers. Specifically, individuals with low decision authority, low skill use, high job insecurity, high demands, high job insecurity, and low social support were more likely to experience major depression (Wang & Patten, 2001). Consistent with Warr's (1987) distinction between context-specific mental health (i.e., job-related outcomes) and context-free mental health (i.e., general well-being), Kelloway and Barling (1991) found that job characteristics and role stressors had their primary impact on measures of job-related well-being (i.e., job satisfaction and burnout), and through these context-specific measures were associated with more general measures of mental health (see also Kelloway & Barling, 1994b).

Typical cognitive disturbances include difficulty in making decisions (often on trivial matters), difficulty in concentrating and staying with one task, forgetfulness (e.g., not being able to remember people's names even though you know them quite well), and other small mistakes (Broadbent, Cooper, FitzGerald, & Parkes, 1982). These small errors are generally not very important, but can be devastating for an individual under considerable strain or in occupations where the quality of the work or safety of the employee hinges on attention to detail. Such errors have been associated with safety in the workplace (e.g., Duffy & McGoldrick, 1990). Cognitive disturbances have been associated with a variety of work-related stressors, including harassment in the workplace (Barling et al., 2001).

Physical Strain

Like psychological outcomes, physical strain measures have ranged from relatively minor psychoso-

matic symptoms, such as sleep disturbances, upper respiratory infections, and digestive problems (e.g., Schat & Kelloway, 2000, 2003a, b) to life-threatening conditions, such as elevated blood pressure (Barling & Kelloway, 1996), hypertension (Schwartz, Pickering, & Landsbergis, 1996), and coronary heart disease (Karasek & Theorell, 1990; Krantz, Contrada, Hill, & Friedler, 1988). Fibrinogen levels are higher among women who reported higher levels of work stress and lower levels of social support in the workplace than for women with low stress and high support (Davis, Matthews, Meilahn, & Kiss, 1995).

There is consistent evidence associating negative job conditions with cardiovascular disease. Theorell and Karasek (1996) found evidence for the stress – CHD link in 16 of the 22 studies they reviewed. Importantly, prospective evidence from the Whitehall studies suggested that individuals in “low control” occupations were 1.5 to 1.8 times as likely to experience new heart disease at a five-year follow-up (Bosma, Stansfeld, & Marmot, 1998). There is some evidence that this effect may be exacerbated for individuals who evidence Type A or hostile behaviour patterns (Dwyer & Fox, 2000; Schaubroeck, Ganster, & Kemmerer, 1994).

More generally, exposure to job stressors, including environmental stressors, is associated with both increased risk of infectious disease (e.g., Cohen & Williamson, 1991; Schaubroeck, Jones, & Xie, 2001) and suppressed immune functioning (O'Leary, 1990). Work stressors have been associated with musculoskeletal complaints (e.g., trapezius myalgia, Lundberg et al., 1999; see also Carayon, Smith, & Haims, 1999), asthma, ulcers, and the risk of stroke (Quick et al., 1997). Given these findings, it is not surprising to note that the empirical evidence supports an association between job stressors and health-care utilization/health-care costs (e.g., Ganster, Fox, & Dwyer, 2001; Manning, Jackson, & Fusilier, 1996).

Behavioural Strain

Behavioural strain reactions can take a variety of forms. Individuals under increased stress may develop nervous habits (e.g., nail-biting) or nervous tics, they may avoid certain situations, or they may reduce personal involvement in activities, either because of a lack of interest or as a means of reducing the demands on their time. There is also some evidence that suggests that individuals may increase their smoking (e.g., Conway, Vickers, Ward, & Rahe, 1981; Parrott, 1995) or consumption of alcohol and other drugs (Jones & Boye, 1992) under periods of increased stress. Job stress tends to be associated with higher levels of alcohol consumption and alcohol-

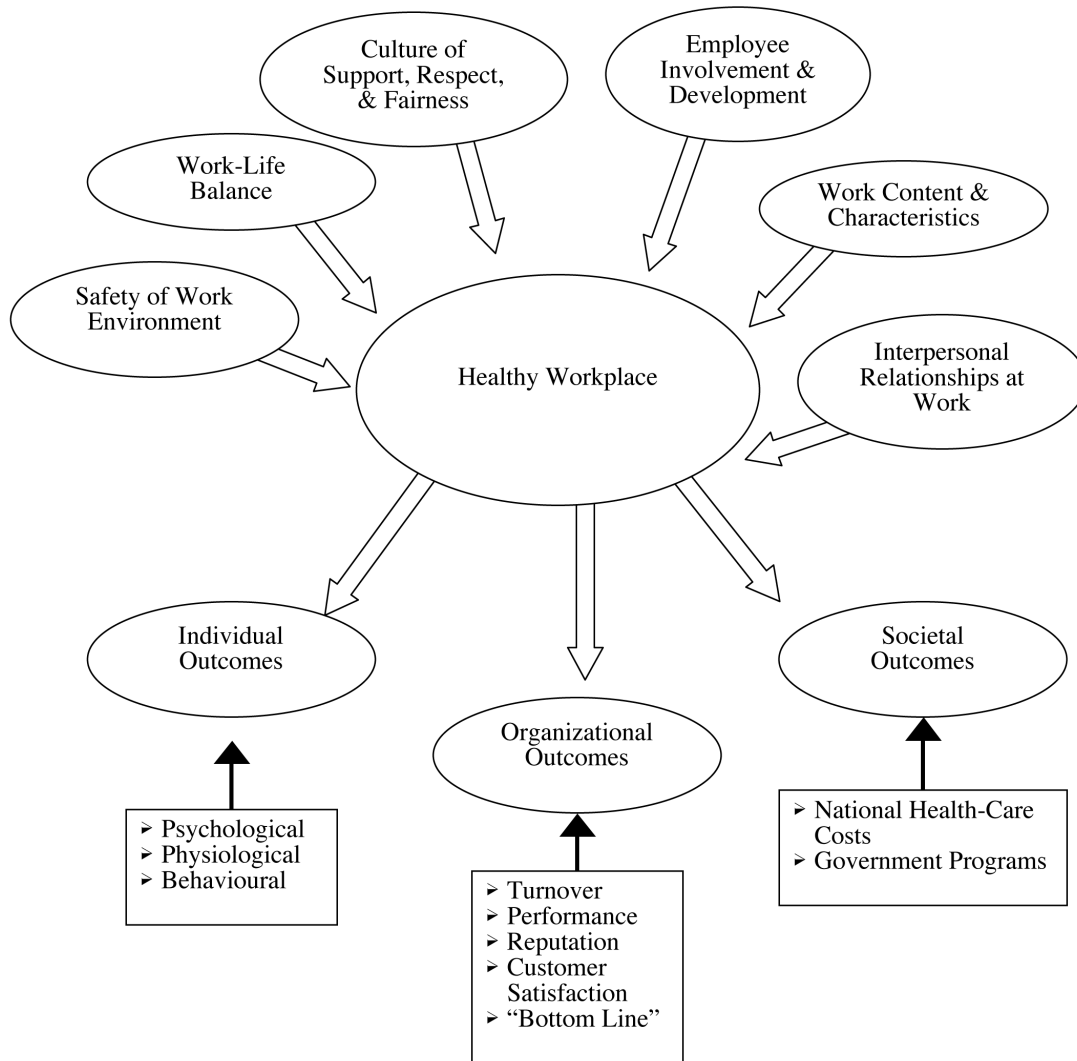


Figure 1. Antecedents and outcomes of healthy workplaces.

related problems particularly for individuals who endorse escapist reasons for drinking (Grunberg, Moore, Greenberg, & Anderson-Conolly, 1999). Increased job stress may also impair other positive health-related behaviours, which, in turn, may exacerbate the negative effects of stress. For example, individuals in high-stress jobs report engaging in less exercise than do individuals in low-stress jobs (e.g., Payne, Jones, & Harris, 2002). Eating disorders, family problems, and violence have also all been identified as examples of behavioural strain, and they are directly linked to the experience of job stress (Quick et al., 1997).

Organizational Strain

Some of the most common organizational out-

comes of stress include increased absenteeism, decreased performance, increased rate of accidents, and an increased likelihood of looking for alternative employment (Cartwright & Cooper, 1997; Quick et al., 1997). Attempts to quantify the effects of strain typically focus on these direct outcomes and other observable costs associated with stress.

Most of the empirical job stress research attention has been focused on organizational absence. Psychological distress and depression are directly linked to increased absence from work (Hardy, Woods, & Wall, 2003). Similarly, workers are twice as likely to be absent from work on a day following alcohol use than when they have not used alcohol (McFarlin & Fals-Stewart, 2002). In a study of Canadian employees, both social- and physical-relat-

ed work stressors were related to increased absence (Health Canada, 1999). This relationship is consistent with a large literature identifying absence as an important organizational outcome of various work stressors (e.g., Barling, MacEwen, Kelloway, & Higginbottom, 1994; Jex, 1998).

Job stress has also been linked to worker safety. Poor leadership and increased role overload are associated with a greater incidence of safety events and injuries (Barling, Loughlin, & Kelloway, 2002). Research with transit operators has suggested that workers under high time pressure may be four times as likely to have an accident (Griener, Krause, Fisher, & Ragland, 1998). Parker, Axtell, and Turner (2001) reported that job characteristics were predictive of safer working in their 18-month longitudinal study. Similarly, Frone (1998) provided evidence for the link between job stressors and injuries in his sample of young workers. Hemmingway and Smith (1991) found that role stressors and, in particular, role ambiguity, were associated with increased number of accidents.

There is also evidence that job stress is associated with decrements in job performance and increased likelihood of turnover (Jex, 1998). Wright and Cropanzano (1998) found that burnout was associated with decreased job performance and increased turnover in a sample of social workers. Cropanzano, Rupp, and Byrne (2003) reported similar findings in two recent field studies.

Organizational costs of job stress are less observable, but equally important, and may include increased interpersonal conflict, impaired communication, and flawed decision-making (Quick et al., 1997). For example, experiencing harassment in the workplace (i.e., a job stressor) is linked to impaired interpersonal job performance (e.g., Barling et al., 2001). Similarly, other studies have reported that the exposure to organizational stressors is associated with the neglect of job duties and responsibilities (Schat & Kelloway, 2000). Employee stress is also associated with poor client outcomes, such as patient dissatisfaction (Garman, Corrigan, & Morris, 2002), perhaps because of the relationship between stress and impaired job performance.

Finally, a recent meta-analysis (Harter, Schmidt, & Hayes, 2002) provided convincing evidence that employee attitudes (i.e., job satisfaction) and employee engagement (as measured by the Gallup 12) were linked to business unit outcomes such as customer loyalty, firm profitability, productivity, turnover, and safety. Moreover, the magnitude of these effects was sufficient to suggest that enhancing engagement and improving employee satisfaction would have a sub-

stantial effect on these firm level outcomes. The Harter et al. (2002) study provides one of the most compelling pieces of empirical evidence that enhancing employee outcomes (e.g., satisfaction, well-being) translates into business success.

Healthy Workplace Model

Based on the research we have reviewed, we present a basic model of the antecedents and consequences of healthy workplaces (see Figure 1). It is important to note that this model is not meant to be inclusive of all aspects of a healthy workplace; it is merely meant to be used as an effective tool to help us organize and review the literature, and to put the following articles in this special issue in context.

Based on existing definitions of healthy work and workplaces, we define healthy workplaces using a "holistic" approach. That is, we must include both psychosocial and physical factors as predictors of a healthy workplace. For example, as shown in Figure 1, the physical work environment, in terms of having a safe and ergonomically designed workspace, is an important contributor of a healthy workplace (i.e., "Safety of Work Environment"). The psychosocial environment, however, is as important as the physical work environment. Aspects such as organizational culture (i.e., "Culture of Support, Respect, and Fairness"), the extent of employee involvement and development, and the relationships formed at work (i.e., "Interpersonal relationships") are all key elements of a healthy workplace. The actual work being performed and the characteristics of that work (e.g., hours of work, job control; i.e., "Work Content & Characteristics") also are important characteristics of a healthy environment. Finally, as shown in the model, the work content itself and environment are important, but we also must include how the employees are able to balance these work factors in the context of their lives outside of work (i.e., "Work-Life Balance"). An underlying assumption of this model is its relationship with the job stress model. That is, these antecedents can be viewed both as potential direct "stressors" (e.g., poor work relationships), as well as moderators (e.g., social support may moderate the relationship between other stressors and strain).

In keeping with the "holistic" approach, we also include *consequences* of healthy workplaces, not only in terms of individual and organizational outcomes, but also in terms of societal outcomes. As we previously mentioned, individual outcomes such as psychological, physiological, and behavioural indicators of individual health, are all important healthy workplace criteria. Similar to the assumptions about the

antecedents of healthy workplaces, these individual consequences parallel the individual strain reactions in models of job stress. Organizational outcomes include employee-based outcomes (e.g., turnover, performance), as well as organizational reputation and customer satisfaction, which all impact on the organizational “bottom line.” Finally, societal outcomes may have an impact on government programs and national health-care costs.

In this Special Issue of CJBS, the authors have addressed the issue of healthy work and workplaces from a variety of perspectives, addressing many of the components of the healthy workplace model.

Francis and Barling examine perceived injustice as a form of workplace stress. They assess three aspects of justice: procedural, distributive, and interactional, which can map onto both the culture of fairness component of the healthy workplace model, as well as onto the interpersonal relationship component. They examine how injustice can predict individual strain outcomes, even after controlling for another workplace stressor, job insecurity.

Harlos and Axelrod contribute to our knowledge of healthy work environments in several ways. First, they develop a scale of workplace mistreatment, and identify three dimensions within this construct: verbal abuse, work obstruction, and emotional neglect. These constructs can be viewed as a component of interpersonal relationships in our model of healthy workplaces. Finally, Harlos and Axelrod not only demonstrate how mistreatment is related to important individual and organizational outcomes, but they show how another contributor of healthy workplaces, organizational (or “context”) support, can mediate interpersonal relationships and these outcomes.

Mullen examines the healthy workplace from the perspective of organizational safety. She looks at the environment in which employees are more willing to discuss safety issues (and potential safety violations) with coworkers and superiors. In addition to the safety component of the healthy workplace model, two other components are integral to her research: Mullen assesses how management openness (which is a component of interpersonal relationships) and organizational support and norms (which both function as aspects of an organizational culture of support) can predict willingness to discuss safety issues indirectly through employees’ perceived probability of success and perceived risk to image.

McElwain, Korabik, and Rosin examine the interplay of work and family, and study how men and women may experience this interface differently. Their research draws on various aspects of the

healthy workplace model: They test a model of work-family conflict, examining how both work demands (as a component of work characteristics) and family demands can create work-to-family conflict and family-to-work conflict (i.e., the work-life balance component), which may then decrease individual outcomes of work, family, and life satisfaction.

Finally, Struthers, Dupuis, and Eaton approach health workplaces from a unique perspective. They examine the effectiveness of two training programs to promote forgiveness in the workplace. They argue that forgiveness not only may facilitate prosocial relationships, but also may lead to increased individual well-being. Therefore, in the healthy workplace model, forgiveness can be viewed as a direct predictor of positive interpersonal relationships at work, which subsequently can positively impact psychological health.

The breadth of these five articles provides an interesting overview of the Healthy Workplace Model, emphasizing the importance of a holistic approach, including both individual and organizational factors, and both physical and psychosocial factors as contributors and consequences of healthy workplaces. They also introduce other components of the model that deserve future research.

Preparation of this manuscript was supported by research grants from the Social Science and Humanities Research Council of Canada and the Nova Scotia Health Research Fund. Correspondence may be addressed to E. Kevin Kelloway, Department of Management, Saint Mary’s University, Halifax, Nova Scotia, Canada B3H 3C3 (E-mail: Kevin.Kelloway@smu.ca).

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