In 2013 the Canadian Mental Health Association estimated a staggering $51 billion economic cost per year associated with mental illness. Of this cost $6 billion per year is directly related to psychological issues in the workplaces of Canada and affects approximately 30% of work-related disability claimants. Indeed, over many decades several models have been proposed to address psychological issues in the workplace and the topic of workplaces psychological health has garnered a robust body of evidence. Despite this, safeguarding psychological health in the workplace remains a growing concern and the financial burden attributable to workplace psychological hazards increases. This paper will briefly review the established evidence that clearly demonstrates the link between certain work situations and deleterious health outcomes for workers. Additionally, several models that have been proposed to ameliorate psychological hazards will be reviewed. In particular, we will review the model of a ‘healthy workplace’ – a concept which Jaffe (1995) defined in terms of the physical, social, and psychological working environment. This concept focuses on the development of a healthy workplace that values and respects the individual. Nevertheless, and despite advancements in workplace protections, the exposure of workers to occupational hazards persists and occupational hazards continue to pose significant risk to the health of the worker.

Keywords: Healthy workplaces; psychological health; psychological hazards
A Healthy Workplace Values & Respects its Workforce

In 2013 the Canadian Mental Health Association estimated a staggering $51 billion economic cost per year associated with mental illness. Of this cost $6 billion per year is directly related to psychological issues in the workplaces of Canada and affects approximately 30% of work-related disability claimants. Nevertheless, and despite advancements in workplace protections, the exposure of workers to occupational hazards persists and occupational hazards continue to pose significant risk to the health of the worker. Therefore, in this paper, I will explore (a) the historical shift in the nature of work relevant to current occupational hazards; (b) the established evidence that relates this shift in the nature of work to deleterious health outcomes for the worker; (c) past models and targeted approaches developed to contain the escalating issue of occupational hazards; (d) the emerging concept of a healthy workplace proffered to ameliorate deleterious health outcomes for the worker. Nevertheless, there are shortcomings and barriers that impede the development of a healthy workplace which I will consider. For clarity I will begin with some definitions of the principle concepts under discussion – primarily: occupational hazards, psychosocial hazards and healthy workplaces are provided first.

Definitions.

An occupational hazard is any source of danger from the work or work environment that poses the risk of psychological or physical harm to the worker.

A psychosocial hazard refers to any hazard that affects the psychological health of the worker by overwhelming individual coping mechanisms and impacting the worker’s ability to work in a healthy and safe manner. Accordingly, the International Labour Organization (1986) proposed the definition of psychosocial hazards include interactions with job content, work organization and management, and other environmental and organizational conditions that prove to have a hazardous influence over employees' health. A simpler definition of psychosocial hazards might be those aspects of the design and management of work, and its social and organizational contexts that have the potential for causing psychological or physical harm to an individual (Cox & Griffiths, 2005).

A healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of all workers (World Health Organization, 2010). More specifically, Jaffe (1995) defined a healthy workplace in terms of the physical, social, and psychological working environment within which the employee is (a) provided with safe working conditions; (b) is treated with respect; and (c) is allowed personal growth, participation, and involvement in the design and implementation of jobs that collectively achieve mutual organizational and individual goals.

In other words, a healthy workplace values and respects its workers by actively mitigating potential organizational risk factors attributable to or associated with negative psychological or physical effects on the worker. The implication or ‘spirit’ of a healthy workplace is that an organization is actively mitigating the environment rather than simply addressing the worker’s psychological or physical reaction to those risk factors. Examples of organizational risk factors in the physical environment
would include but are not limited to unsafe machinery, noise, height, vibration, electrical, radiation, chemical, biological elements, etc. Examples of organizational risk factors in the psychosocial environment would include but are not limited to the stress/strain process from work organizational factors (such as work scheduling, job design, management style, machine-paced work, hours of work), workplace violence, harassment, bullying, incivility, discrimination etc., that overwhelm the individual’s coping mechanisms and impact the worker’s ability to work in a healthy and safe manner.

A healthy workplace, therefore, values its workforce as an appreciating human potential and integrates the health and safety needs of its workforce with the business needs of all stakeholders - the organization, the customers, the stockholders and the community (Jaffe, 1995). The study of healthy organizations recognizes the importance of the physical, social and psychological aspects of work that influence short-term and long-term health outcomes (Barling & Griffiths, 2002). A healthy workplace recognizes that for most people, engaging in meaningful work is a defining characteristic of their life. In addition to the utilitarian function of work, occupational status plays an important role in an individual’s sense of identity, self-esteem and psychological well-being (Jahoda, 1982; Lau & Shani, 1992; Steers & Porter, 1975).

Nevertheless, the successful development of a healthy workplace remains elusive. Despite the continuous aggregation of knowledge with respect to understanding conditions of work, the human and organizational cost of psychological and physical harm in the workplace is pervasive. Indeed, a recent study (Crowley, Tope, Joyce, & Hodson, 2010) suggests the continuing problems in the workplace may arise from the fundamental principles used to organize work. These authors concluded that the continued implementation of the principles of scientific management (Taylor, 1911) has resulted in a general deterioration in the conditions of work for both manual and professional workers.

(a) Historical shifts in the nature of work relevant to current occupational hazards

The turn of the 20th century saw the factory system displace the individual craftsman. The factory system also heralded in standardization, maximum efficiency, and mass production as advocated by Taylor’s Principles of Scientific Management (1911). In particular, Taylor’s system advocated for task segmentation where the division of work between manager and worker was prominent. The role of the worker was to follow instruction under close supervision. The role of the manager was to plan, instruct and supervise. Jobs were deskillled and paced through time and motion studies. Taylor’s rationale for pacing was to eliminate systematic ‘soldiering’ (deliberate underworking) which he firmly believed was a universal sentiment among workers – ‘and this constitutes the greatest evil with which the working-people of both England and America are now afflicted’ (Taylor, 1911, p.14). Indeed, Taylor is credited for his emphasis on training and development of workers. However, in the context of scientific management the orientation of training was to ensure the worker completed his specified task ‘at his fastest pace and with the maximum of efficiency’ (Taylor, 1911, p.12). Agyris (1957) countered that the formal principles of bureaucratic organizations inhibit the use and development of complex abilities for
many workers through task specialization that also removes psychological challenge. Agyris (1957) concluded that employees work in an environment where: (1) they are provided minimal control over their work-a-day world, (2) they are expected to be passive, dependent, and subordinate, (3) they are induced to perfect and value the frequent use of a few superficial abilities, and (4) they are expected to produce under conditions leading to psychological failure. These characteristics…are much more congruent with the needs of infants in our culture. In effect, therefore, formal organizations are willing to pay high wages and provide adequate seniority if mature adults will, for eight hours a day, behave in a less mature manner (p.18).

Indeed, it is a reasonable assumption that Taylor’s system was to fundamentally determine a prescription for the quantity, quality, and pay for work in terms of what should be done in a day rather than what can be done in a day. Furthermore, critics of Taylor (e.g. Nelson, 1977) view the development of scientific management as a means of forcing the working poor to work harder. Maybe even a fulfilment of Marx’s prescient writings ‘In handicraft and manufacture, the workman makes use of a tool; in the factory the machine makes use of him. There the movements of the instruments of labour proceed from him; here it is the movement of the machine that he must follow’ (Marx, 1887, p285).

Notwithstanding, opposing this view, Nyland, Bruce and Burns (2014) argue that the negative view of Taylorism is underserved. These authors view Taylor’s system as progressive and an organized effort by managers and trade unions at codetermination – labour management collaboration for increased production. However, the cooperation of trade unions with Taylor’s system brought benefits to the unions in terms of recognition (during a relatively pro-union government stance during WWI era) while simultaneously facilitating union influence over the humanization of methods of efficiency (Hillman, cited in Trombley, 1954. p.92).

Indeed, whether Taylor’s system was premised on labour docility or codetermination, his descriptions of the labourer leave much to be desired! Nevertheless, Taylor did underscore the relevance of worker selection to jobs which was further expounded by Munsterberg in Psychology and Industrial Efficiency (1913) and culminated in theories of person-environment-fit (Caplan, 1987). Notwithstanding the compatibility of the individual to the job environment Argyris (1957, p.13) firmly concluded that the principles of Taylorism establish a hierarchy of authority or a chain of command that makes the individual “dependent, passive, and subordinate to the leader”. Accordingly, through Taylor’s time and motion studies these principles of organization (which continue to influence our organizations today) lean towards the view of employees as simply instruments for fulfilling organizational goals. Over time scientific management has become associated with passivity, learned helplessness, and lack of participation of workers at work (Kenny & McIntyre, 2005). De-skilling and task specialization, for example, define jobs as narrowly as possible to improve efficiency but to the detriment of the worker, oftentimes resulting in low morale, high absenteeism, and safety problems – which in today’s terms are constituents of unhealthy workplaces (Argyris, 1957, 1990; Kenny & McIntyre, 2005; Lau & Shani, 1992; McGregor, 1960). In consequence research began to challenge these changes in the nature of work and their implications for individual and organizational health.
(b) The established evidence that relates these shifts in the nature of work to deleterious health outcomes for the worker

Early studies have systematically challenged the benefits of Taylor’s principles on the health and wellbeing of the worker. For example, the Trist and Bamforth (1951) studies of miners found a strong association between job de-skilling and depression. Similarly, the classic longitudinal Whitehall studies of civil servants (Marmot & Smith, 1991) found a strong association between lack of job control and heart disease (the lower the grade of employment, the higher the mortality rate). Furthermore, the physical demands of unremitting and repetitious work are long associated with musculoskeletal disorders involving strains and sprains (Rosenblum & Shankar, 2006). The recognized factors associated with musculoskeletal disorders are workload (or work demands) and autonomy (or work control), such that the greater the demand paired with low autonomy, the more strain it imposes on the worker (Sprigg, Stride, Smith, Wall & Holman, 2007).

Interestingly, these same factors are also strongly implicated as key work dimensions of psychological strain or stress. Indeed, the notion that occupational health can be influenced by work characteristics - such as skill variety, autonomy, and task significance - opened lines of investigation that advanced stress/strain related theories. These theories recognize stress as a significant occupational hazard that can impair employees’ physical health, psychological wellbeing and performance (e.g. Griffin & Clarke, 2011). For example, Karasek’s (1979) demand-control model looks at the interaction of adverse job characteristics (high demand and low control) on the physical and psychological health of workers. Similarly, Maslach and Leiter’s (1997) work examined the impact of chronic workplace stressors on such symptoms of burnout as exhaustion, cynicism, detachment from the job and inefficacy. Indeed, in the words of Levi (1990): work-related psychosocial stressors originate in social structures and processes, affect the human organism through psychological processes, and influence health through four types of closely interrelated mechanisms – emotional, cognitive, behavioural, and physiological. (p. 1142).

Thus, the implication from these investigations of the links between work and health is that alienating, repetitious and dehumanizing work environments are involved in the stress/strain process that contribute to deleterious health impacts, both psychological and physiological, on the worker. Indeed, the body of evidence reveals that the organization of work itself may foster job stress/strain; that psychosocial factors play a role in the etiology of emergent occupational safety and health problems; and most importantly that mitigating the organizational risk factors attributable to work stress/strain improves the health of workers (Guastello, 1993; Memish, Martin, Bartlett, Dawkins, & Sanderson, 2017; Sauter & Hurrell, 1999).

(c) past models and targeted approaches developed to contain the escalating issue of occupational hazards

The past models mentioned above (Karasek’s demand-control-support model; Maslach’s burnout model; Caplan’s person-environment-fit model) illustrate the breadth of frameworks developed to predict characteristics of the workplace that affect the health of workers. Additionally, Siegrist’s (1996) effort-reward imbalance
model explores the inter-relationship between job-related psychological effort and reward as predictors of strain.

These efforts continue to inform thinking in the organizational context. For example, McGregor (1960) emphasized managerial behavior by challenging a commonly accepted conceptualization of the Tayloristic working man as constantly ‘soldering’ and in need of supervision (McGregor’s Theory X). In The Human Side of Enterprise, he proposed Theory Y as an alternative, indeed, a juxtaposition of current thinking on healthy workplaces:

- Active participation by all involved
- A transcending concern with individual dignity, worth, and growth
- Reexamination and resolution of the conflict between individual needs and organizational goals, through effective interpersonal relationships between superiors and subordinates
- A concept of influence that relies not on coercion, compromise, evasion or avoidance, pseudo support, or bargaining, but on openness, confrontation, and “working through” differences
- A belief that human growth is self-generated and furthered by an environment of trust, feedback, and authentic human relationships. (p. v)

In terms of targeted approaches advanced to contain occupational injury an example of the application of strategies to identify and then reduce the harmful aspects of working conditions is provided in the review of the ‘health circles’ literature conducted by Aust and Ducki (2004). Health circles, which have much in common with the participatory action research concept, were developed in German organizations to optimize organizational level prevention strategies to improve working conditions. Based primarily on the principles of the demand-control-support model of the stressor/strain relationship proposed by Karasek (1979) and Siegrist’s (1996) effort-reward-imbalance model, the health circles “aim to reduce potentially harmful working conditions like the combination of low control and high demands or the imbalance between high efforts and low reward” (Aust & Ducki, 2004, p.259). The intent of the health circles is to provide a preliminary fact finding phase, a forum for problem analysis followed by a discussion arena between varying hierarchical levels within the organization to implement emergent recommendations from the process. As a strategy these health circles reflect the growing recognition that aspects of work organization have adverse consequences on employee health and well-being but, more importantly, facilitate employee participation in the process of workplace improvement.

Although the applied nature of these approaches may not always meet the rigor of scientific enquiry, the findings do suggest that health circles are one of the strategies that lead to organizational improvements in working conditions, including psychosocial strain, and result in increased job satisfaction and reduced absenteeism (Aust & Ducki, 2004). What is noteworthy of these participative strategies is the implication that the workplace is a collaborative process and not a top-down prescription.

In a similar vein, Semmer (2002) presented a synthesis of the various aspects of work organization typically targeted to improve the health and wellbeing of workers. Such
interventions typically focus on changes to any or all of, ergonomic, job content, role and interpersonal demands. Overall, interventions targeted at these aspects of work organization result in positive measures of improvement. For example, participative interventions aimed to improve working conditions – work scheduling, communication, conflict resolution, and structural changes - among inner-city bus drivers showed improvements in levels of perceived job strain as well as reports of subjective health and well-being at three month and five year intervals post implementation (Kompier, Aust, van den Berg & Siegrist, 2000). In similar studies that focused on clarifying roles or career and promotion paths the findings indicated a positive increase in perceptions of control, supervisory support and work pressure while simultaneously, reducing turn-over (Golembiswski, Hilles, & Daly, 1987).

Another point equally consistent throughout the literature is that implementing strategies to contain occupational hazards must consider the context of each unique occupational setting and the needs and challenges of both employer and employee (Quick, 1999). No single strategy should be adopted at the expense of another (i.e. strategies focused at the individual level may neglect organizational issues and vice versa) but each should be viewed as collectively contributing to a healthy workplace (Semmer, 2002). Whether the strategy is to target the physical environment (e.g. ergonomics) or the psychosocial environment (e.g. interpersonal demands or supervisory support) - are oft-times overlapping, integrative, interactive and interdependent. For example, Kelloway and Day (2005a; 2005b) suggested that the prevalent focus of many organizations is on health promotion. These authors argue that while there is merit in promoting health in the workplace, targeting individuals is only a partial solution to some organizational level issues (such as poor safety record) without systemic, concomitant effort to improve organizational, group, and individual level well-being.

(d) the emerging concept of a healthy workplace proffered as ameliorating deleterious health outcomes for the worker.

With the growing acceptance that psychosocial factors play a role in the etiology of emergent occupational safety and health problems there is a burgeoning interest in the concept of a healthy workplace (Sauter & Hurrell, 1999) – particularly when the domain of occupational health was expanded beyond physical hazards in the workplace to include psychological hazards as well.

A central tenet thus far is that a healthy workplace values its workforce as an appreciating human potential and integrates the health and safety needs of its workforce with the business needs of all stakeholders - the organization, the customers, the stockholders and the community (Jaffe, 1995). The study of healthy organizations recognizes the importance of the physical, social and psychological aspects of work that influence short-term and long-term health outcomes (Barling & Griffiths, 2002). A healthy workplace recognizes that for most people, engaging in meaningful work is a defining characteristic of their life. In addition to the utilitarian function of work, occupational status plays an important role in an individual’s sense of identity, self-esteem and psychological well-being (Jahoda, 1982; Lau & Shani, 1992; Steers & Porter, 1975). Thus, a healthy workplace regards people’s skills, attitudes, energy, and commitment as vital resources capable of acting as a driving force in the achievement of organizational goals. By contrast, workplaces which
permit heavy-handed, fear-driven management styles as described by Williams and Geller (2000) result in low employee morale, high turnover, apathy, low job satisfaction and cynicism. Consequently, a healthy workplace necessitates the examination of how work is organized, in what context work is performed and the consequences – short- and long-term, physical and psychological - of requiring humans to perform work in that manner.

Consequently, to ameliorate deleterious health outcomes in the workplace a preventive model should target interventions at three levels – primary, secondary and tertiary (Cooper, 1998). Primary prevention targets the organizational system with the aim of modifying organizational stressors to reduce distress. Modifiable stressors that place individuals at risk of distress include, for example, the organization of work (i.e. work design, workplace support, task discretion, role clarity, etc.), and policies (i.e. organizational as well as Human Resource policies, practices, and procedures, including career development, flex-time, benefits package, etc.). By modifying the intensity, frequency and/or duration of the stress experience (e.g. interventions for air traffic controllers, Nelson & Simmons, 2005) the anticipated benefit is to promote work engagement rather than work distress. The emphasis on primary intervention draws on an organization’s commitment to worker psychological and physical well-being.

Secondary prevention targets groups or individuals within the organization. This level of intervention is aimed at detecting and managing the experience of stress, for example, to what may be necessary and inevitable organizational demands. Secondary prevention, while targeting the way in which individuals or groups perceive and respond to stress through health promotion programs and skills training etc., should be undertaken in conjunction with primary intervention ensuring adequate and appropriate resources and workplace support (Cooper, 1998; Cooper, Dewe & O'Driscoll, 2001).

Tertiary prevention concerns the treatment, rehabilitation, work maintenance or return-to-work of individuals who have acquired a work disability. An example of a common intervention at the tertiary level is the provision of employee assistance programs. The inclusion at the tertiary level of a comprehensive disability management program further facilitates the rehabilitation, work maintenance or timely return-to-work of injured or ill individuals. This tertiary level recognizes that a healthy workplace not only promotes the health of the worker but also protects and maintains the health of worker health. (In this instance, protection refers to intervention in the work environment to reduce worker exposures to occupational stress, illness and injury while promotion refers to health promotion intervention to equip workers with knowledge and resources to resist the hazards of occupational stress, illness and injury in the workplace.) It further facilitates and accommodates individuals who require rehabilitative interventions as a consequence of acquired workplace limitations.

Nevertheless, as more organizations are turning to health promotion and workplace wellness programs to address the ever-growing responsibility for worker health, Quick (1992) cautioned that this strategy may not necessarily develop healthy working environments. To embrace the spirit of a healthy workplace, the extant research underscores the importance of also understanding the prevailing culture and
climate surrounding workplace health when considering interventions. Peterson’s (1997) observations, for example, indicate that issues such as workplace culture influence the effectiveness of intervention programs. Similarly, Cooper (1998), corroborating the importance of an organization’s culture, advised that policy and procedures can adapt easily to new situations but culture and climates tend to take longer. Work and organizational climate are strong internal variables that influence the success and endurance of intervention programs. Similarly, research also demonstrates that organizational policies are not singularly sufficient in predicting successful reintegration of injured workers unless mediated through a facilitative workplace environment (McHugh, 2016). Additionally, the World Health Organization recognizes that the development of a healthy workplace necessitates a comprehensive way of thinking and acting that requires the examination of how work is organized. And from McGregor (1960) we get the word ‘authentic’; central to achieving the full potential of a healthy workplace is authenticity.

**Short-comings and Future Direction**

Although the healthy workplace has been a topic of discussion and research since the early 1990s, stress associated claims and disability costs continue to escalate. As mentioned above, the Canadian Mental Health Association estimated a staggering $51 billion financial cost to the economy per year associated with mental illness. Similarly, the WSIB estimated direct costs to employers in terms of productivity losses and turnover at $6 billion per year and that psychological issues accounted for approximately 30 percent of short and long-term disability claims. On December 14, 2017, the passage of Bill 177 titled, *Stronger, Fairer Ontario Act (Budget Measures), 2017* which amends section 13 of the WSIA allows claims for Chronic Mental Stress (“CMS”). This is a major legislative amendment and is again highlighting the critical need to address the escalating claim costs and the deleterious influence of ‘unhealthy workplaces’ on the workers.

Fundamental to these decisions, I believe, is the notion of parity between the work-relatedness of psychological injury and the work-relatedness of physical injury. The stance that psychological injury claims for compensation need to meet a higher threshold than physical injury claims was rejected by the tribunal (*Plesner v. BC Hydro*); holding that it was a breach of section 15 of the Canadian Charter of Rights and Freedoms. Furthermore, Decision 2157/09 rejects the limitations that the injuring process for mental stress in the workplace be traumatic, sudden and unexpected, finding a distinction in the adjudication of physical injury and psychological injury that was substantively discriminatory. Thus by extension, these decisions are suggesting that:

1. **Physical injury and psychological injury be treated the same.** Therefore, for example, as an accident/incident investigation is conducted after a workplace event(s) results in physical injury to the worker so too should an accident/incident investigation be conducted after a workplace event(s) results in psychological injury to the worker.
2. **Physical injury and psychological injury in the workplace are attributable to occupational hazards.** This is suggesting that something within the workplace resulted in the injury. The machine that fell on the worker is part of the workplace environment and the outcome of the accident/incident investigation identifies the steps forward to secure the physical safety of the worker. These forward steps
typically entail changing/securing the environment, changing practices around that machine use, and changing policies to ensure safe use/maintenance of that machine thereafter. For psychological injury the workload, the burnout or the bullying, the depression are symptoms of a toxic workplace environment and the outcome of the accident/incident investigation should identify the steps forward to secure the psychological safety of the worker. These forward steps should entail changing/securing the environment, changing practices around workload, or harassment, or bullying or whatever stressor facilitated that environment to become toxic and changing policies to ensure the psychological safety of that environment thereafter.

3. *Occupational injury manifests as physical and/or psychological.* Therefore, as physical injury does not reflect a weakness of the individual, psychological injury does not reflect a weakness of the individual.

4. *It is the occupational hazard(s) that is associated with the injuring process.* Therefore, the occupational hazard is the property of the organization not of the individual.

Certainly, these WSAIT decisions highlight the ever-increasing responsibility of employers to ensure, not only physical health and safety, but also psychological health and safety to prevent harm in ‘negligent, reckless, or intentional ways.’ — to quote directly from the WSAIT decisions.

To address these responsibilities, the Canadian Standards Association released a National Standard for Canada: Psychological Health and Safety in the Workplace — Prevention, promotion, and guidance to staged implementation (2013). While the National Standards are currently voluntary for organizations, nevertheless, current research is suggesting that employers are not feeling the ‘spirit’ of the literature on healthy workplaces. Consider for example, some of the findings of Kalef, Rubin, Malachowski, and Kirsh (2016): employers perceived the Standard as another program paralleling an Employee Assistance Program (EAP) or the forums on nutrition; employers were unsure of solid leadership buy-in; employers perceived challenges to implementing the Standard in the face of competing workplace priorities; employers envisioned employees taking advantage of the program. Similarly, Page and colleagues (2013) found that employers’ first response to workplace mental health issues was to secure access to an EAP – thus circumventing the primary intervention strategy of modifying and minimizing workplace risk factors. Consequently, employers’ response to mental health would raise the issue of ‘authenticity’ and a whole other paper!
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