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# Work-related suicide

# An analysis of US government reports and recommendations for human resources

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#### **Abstract**

**Purpose** – For the past 50 years, the research literature has shown that employment can contribute to an individual's personal development. Yet, it has also shown that it can become a life-threatening stressor. Reported occupational suicides increased by 22.2 percent between 1995 and 2010, becoming a leading cause of death in the USA. The purpose of this paper is to present the results of six US government reports on employee suicides between 1995 and 2012.

**Design/methodology/approach** – Through an interpretive case study approach (Yin, 2003), this study undertook a document analysis of key US government reports examining occupational suicides. Specifically, an analysis of three US Bureau of Labor Statistics reports was undertaken along with other documents, identifying key themes and facts.

**Findings** – The analysis of the US government reports reveals a dim legal recognition of employee suicide as an occupational accident. The paper presents the characteristics of suicides as an occupational accident as well as the profile of a typical US occupational suicide victim. Finally, the paper discusses the main causes of employee suicide.

**Practical implications** – Organizations have a "duty of care" to their employees, both physical and psychological. Human resource (HR) professionals ought to create preventive policies to minimize work-related suicides and have clear crisis management systems in place, should an employee commit suicide or threaten to do so.

Originality/value – Occupational distress is not typically apparent or obvious and is not the subject of many studies in the field of HRs. Yet, because of its rampant increase in today's organizations, its direct connection with employee suicide and its impact on organizational revenues, psychological distress in the workplace merits closer attention. This paper is unique as it provides insights for HR professionals based on the analysis of US government reports on work-related suicides.

**Keywords** Human resource management, Individual psychology, Occupational stress, Occupational suicide, Self-inflicted injuries

Paper type Research paper

# Introduction and purpose of the research

The organizational behavior and management literature has traditionally shown that employment can be both beneficial and a source of personal development and growth for individuals (Maslow, 1943). To many, the workplace provides a place of belonging. Yet, in this age of rapid economic change, it can be a life-threatening stressor. The number of suicides and suicide attempts by employees keeps increasing in large organizations, in particular those publicly traded on the stock market (Bureau of Labor Statistics (BLS), 2012a). In fact, suicide is one of the leading causes of death in the USA with annual rates that are greater than homicide (Bureau of Labor Statistics (BLS), 2012b; Goldsmith *et al.*, 2002). In 2009, suicide was the tenth leading cause of death in the USA, the second leading cause of death for the 25-34 age group, and the fourth leading cause of death for the 35-44 and 45-54 age groups (Center for Disease Control, 2009). Suicide attempts are much higher in numbers. In 2010, in the 15-24 age group, there were 100-200 attempts for every completed suicide. Among adults 65 years and older, there were four attempts



Employee Relations Vol. 36 No. 2, 2014 pp. 148-164 © Emerald Group Publishing Limited 0142-5455 DOI 10.1108/ER-01-2013-0009 for every completed suicide (Center for Disease Control, 2010). Over 376,300 people were treated in emergency departments for self-inflicted injuries and over 163,480 were hospitalized due to self-inflicted injury (Center for Disease Control, 2010).

Also in 2010, workplace violence – including assaults and suicides – accounted for a staggering 18 percent of all work-related fatal occupational injuries (BLS, 2012b) showed a record high self-inflicted injuries with 270 deaths (BLS, 2012b), an increase of 22.2 percent compared to 1995. Because those figured are based on reports from employers, the actual number of work-related deaths may be greater. Suicide is estimated to be 50-60 percent higher than the official rate due to the stigma issues of recording it as such (Kinder and Cooper, 2009). The number of suicide attempts also tends to be greater and often goes undeclared. It is estimated that, worldwide, between 500,000 and 1.2 million people commit suicide each year (United Nations, 1996). Although some professions are renown for being affected by work suicide – such as the police (Violanti et al., 2009), this phenomenon affects various industries and all levels of the organization, from unskilled workers to executives (BLS, 2012b). Yet, the scientific and research literature on employee suicide has been scarce, possibly reflecting the stigma attached to it. Most of the literature on depression and suicide are found in behavioral science journals. A Google Scholar search under the terms "employee suicide" and "human resources" (HRs) generated a book about measuring the economic value of employee performance published in 2000 (Fitz-Enz, 2000) and an article about job loss and cause-specific mortality based on a study in Sweden in 1988. This paper was published in *The Journal of Human Resources* in 2009 (Eliason and Storrie, 2009). The other results were remotely related to the topic or were published in social or behavioral sciences journals such as *Death Studies* (Kinder and Cooper, 2009). This paper seeks to partially fill that gap by exploring the causes of employee suicide in the USA from 1995 till 2010. It also examines the legal recognition of employee suicide as an occupational accident and proposes solutions human resource development (HRD) professionals can use in their research or practice. By bringing the sensitive topic of employee suicide in organizations to the forefront and by starting a dialogue within the field of HRD, it is hoped that employees' lethal, self-inflicted injuries can be prevented.

# Significance of the problem

The effect of depression on functioning has received substantial attention. Depression can seriously impact a person's ability to perform routine activities at work. It negatively affects organizations through lost productivity, employee absenteeism, and low morale (Druss et al., 2000; Kessler et al., 2001). US companies lose an estimated \$30-\$44 billion per year because of employee depression (Elinson et al., 2004; Stewart et al., 2003). In total, 20 percent of employees will experience a mental health problem in their lifetime (Nicholl, 2008). Mental illness affects productivity and the ability of an organization to meet its goals (Nicholl, 2008). Managers face issues that are directly impacted by the mental health of their employees. These situations are becoming more common because of the additional workplace stress caused by a struggling economy, increased used of complex technology, legal compliance issues, and greater expectations to deliver excellence (Miami-Dade County, 2010). Managers are expected to have the skills necessary to maintain employee productivity and to support employees so that the organization can retain valuable staff and their skills. Failure to manage these problems can be costly. According to Mercer, a global HR consulting firm, 35 million workdays are lost to mental illness each year and mental health and addiction account for approximately 60 percent of all disability claims (Nicholl, 2008). In the 2008 Mercer survey, 80 percent of over 350 HR professionals indicated that mental health issues are more important in their workplace than they were three to five years before that.

The most common traumas that influence employees are death affecting the workforce and layoffs (Attridge and VandePol, 2010). Layoffs affect employee confidence including job security, diminished advancement opportunities, heavier workloads, higher stress, and feelings of being undervalued. Easing anxiety among remaining workers can be challenging. Fatalities can have a strong mental impact of coworkers (Feeling Blue Suicide Prevention Council, 2009). A workplace suicide may affect hundreds of people and the effects may reverberate through an organization for years. Workplace suicides also raise the likelihood of suicide clusters. Workplace suicides affect both managers and coworkers. Managers may feel they should have been in better touch with their subordinates or may feel responsible for creating job stressors. Coworkers may feel that they contributed to the suicide in some way or blame themselves for not preventing it. They may feel angry, rejected, or even betrayed by their coworker's fatal or near fatal act. Some employees who return following the death of a coworker may be sad, distracted, occasional tearful, and slow to return to productivity. This can affect employee morale and individual performance and overall productivity (Attridge and VandePol, 2010). Workplace suicide can have a commensurable economic impact (WorkingMinds, 2013). One in 14 employees will suffer from depression at some point in their career. This equals to over 200 million lost workdays, and \$44 billion annually in absenteeism, lost productivity, and direct treatment costs (ValueOptions, 2013). According to the Institute of Medicine, the economic cost of suicide involves four areas: first, it affects medical expenses of emergency intervention and non-emergency treatment for suicidality. These medical costs are not borne by the healthcare industry alone, but by all of society through higher health care costs that are ultimately passed on to workers and taxpayers.

Second, organizations experience a loss and/or reduced productivity of workers suffering from suicidality. Specifically, suicide attempts in the USA represent about \$3.8 billion annually in medical costs and \$13 billion in lost earnings (Research America, 2013).

Third, death by suicide often occurs during the height of an employee's productivity. The greatest numbers of suicides occurring before retirement, the average work-loss cost per case can be as high as \$1,160,655 and the average medical cost per case was \$3,646 (Research America, 2013). In 1998 alone, the value of lost productivity was calculated to be \$11.8 billion. Finally, the lost productivity of the workers grieving a colleague's suicide should not be undermined. Oftentimes, the feeling of loss adversely impacts employee motivation and morale.

Occupational suicide is typically preceded by occupational distress, which is not always apparent or obvious and is not the subject of many studies in the field of HRD. Yet, because of its rampant increase in todays' organizations, its direct connection with employee suicide and its impact on organizational revenues, psychological distress in the workplace merits closer attention.

#### Literature review

Suggested reasons for high-occupational suicide rates include economic pressure, social isolation, a hazardous work environment, and a lack of emergency medical and mental health care (Wilhelm *et al.*, 2004). Behind the curtain of world economy globalization, the occupational environment is delivering increasing stress, such as job insecurity, increasing workload, and the burden of lifelong learning. Depression is known to be a

precursor of suicide. Some have posited that employee suicide is an outcome of increased globalization and subsequent competitiveness (Delga, 2010). Globalization and organizational restructuring continue to have an effect on employee stress level, depression, and is even at the origin of muscular pain. Some epidemiological studies show a positive correlation between chronic stress, depression, and suicide (Cassano and Fava, 2002). Recent reports on suicide of employees in companies such as Telsta in Australia, Renault, Peugeot, Thales, and France Telecom in France, and FoxConn in China note that the psychological distress of employees is often linked to high expectations and demands for increased performance.

In the past 20 years, a large proportion of employees became involved in service- and knowledge-based industries requiring heavy technological preparedness and creating mental stress. When the pace of change exceeds the capacity of workers to cope, negative stress reactions can occur. These include psychosomatic reactions (e.g. depression. insomnia) as well as vocational consequences (e.g. job dissatisfaction, decreased organizational commitment, reduced job performance, and absenteeism) (Collins et al., 2005; Woo and Postolache, 2008). Mood disorders are known to cause the largest disease burden in general population and loss of work productivity in working population (Greenberg et al., 2003). At least 5 percent of workers are affected by mood disorders. Using the National Comorbidity Survey Replication, Kessler et al. (2006) reported that 1.1 percent of the workers met criteria for bipolar disorder (I or II) and 6.4 percent for major depressive disorder (MDD). A study of 24,000 working Canadians also reported that 4.6 percent met criteria for major depressive episode (MDE) in the past year (Blackmore et al., 2007). The Office of Applied Studies (OAS) of Substance Abuse and Mental Health Services Administration (SAMHSA) also reported that an annual average of 7 percent (10.1 percent for female vs 4.7 percent for male) of full-time adult workers experienced a MDE in the past year (Substance Abuse and Mental Health Services Administration (SAMHSA), 2007). Some researchers suggest that increasing work stress can be associated with the increasing prevalence of depressive disorder and suicide (Mausner-Dorsch and Eaton, 2000; Melchior et al., 2007; Stack, 2001).

#### Methods

Through an interpretive case study approach (Yin, 2003), this study undertook a document analysis of key US government reports examining occupational suicides. Specifically, an analysis of three US Bureau of Labor Statistics reports was undertaken along with other documents, identifying key themes and facts. The documents were selected on the basis that the agencies involved are some of the few reporting on occupational suicides. The six federal/governmental reports are: a US Bureau of Labor Statistics 1995-2001, 2009-2010 report, 1997-2002, and 2003-2010 reports, a 2007 SAMHSA, and a 2012 Occupational Safety and Health Administration (OSHA) report containing 2010 data.

Gillham (2000, p. 1) defines a case study as the investigation to answer-specific research questions, which seek a range of different evidences from the case settings. The case study approach is especially useful in situations where contextual conditions of the event being studied are critical, which is the case in our study. Ritchie and Lewis (2003) see the primary defining features of the case study as being "multiplicity of perspectives which are rooted in a specific context." The case may also be a program, an event, or an activity bounded in time and place. According to McMillan James and Schumacher (2001), the case study examines a bonded system or a case over time in detail, employing multiple sources of data found in the setting.

All the collected evidences are collated to arrive at the best possible responses to the research question. As a result the researcher may gain a sharpened understanding of why the instance happened as it did, and that what might become important to look at more extensively in future research.

Unlike many other forms of research, the case approach does not utilize any particular methods of data collection or data analysis (Merriam, 1998, p. 28); therefore a combination of data sources was selected in the study in anticipation for providing a more complete picture. This approach makes use of multiple methods of data collection such as document reviews and archival records (Yin, 2003).

Case studies do not claim to be representative, but the emphasis is on what can be learned from a single case (Tellis, 1997). Case studies have value in advancing fundamental knowledge in the relevant knowledge domains. The underlying philosophy of a case study is "not to prove that to improve" (Stufflebeam *et al.*, 2000, p. 283). In this paper, we seek to improve the understanding of self-inflicted injury and suicide at the workplace.

Denzin and Lincoln (2000) assert that case studies can be generalized, and that "looking at multiple actors in multiple settings enhances generalizability" (p. 193). Similarly, Yin (2003) argues that case studies are used for analytical generalizations, where the researcher's aim is to generalize a particular set of results to some broader theoretical propositions.

# Research questions

Instead of seeking answers to questions such as "how much" or "how many," case study design is useful for answering "how" and "why" questions (Benbasat *et al.*, 1987; Yin, 2003). In this study, we aim to uncover the main causes of US workers' occupational suicide between 1992 and 2012 and to provide a profile of a typical victim.

### Data analysis

The process of data analysis begins with the categorization and organization of data in search of patterns, critical themes in meanings that emerge from the data. A process sometimes referred to as "open coding" (Corbin and Strauss, 1990) is commonly employed whereby the researcher identifies and tentatively names the conceptual categories into which the phenomena observed would be grouped. The goal is to create descriptive, multi-dimensional categories that provide a preliminary framework for analysis. In this study, data from the US government reports were analyzed, compared, categorized, and subsequently interpreted to draw conclusions. A descriptive statistical method was used to analyze the quantitative data from the reports.

#### **Findings**

The six US government reports were analyzed using the method discussed above.

Table I shows the number of self-inflicted injuries in the USA from 1995 through 2010. The US Bureau of Labor Statistics 2003-2010 report shows that the highest number of recorded self-inflicted injuries was in 2010, with a total count of 270 suicides (compared to 221 in 1995, an increase of 22.2 percent).

During the 1997 through 2002 timeframe, a total of 1,730 self-inflicted deaths were reported. Those deaths represent 31 percent of all deaths at the workplace during that period. During the 2003-2010 timeframe, a total of 1,804 self-inflicted deaths were reported. Those deaths represent 38.4 percent of all deaths at the workplace during that period.

Year	No. of occupational suicides	Source of information	Work-related suicide
1995	221	BLS (2012a)	
1996	204	BLS (2012a)	
1997	216	BLS (2012a)	
1998	221	BLS (2012a)	
1999	218	BLS (2012a)	153
2000	221	BLS (2012a)	
2001	230	BLS (2012a)	
2002	199	BLS (2012a)	
2003	218	BLS (2012b)	
2004	206	BLS (2012b)	
2005	180	BLS (2012b)	
2006	208	BLS (2012b)	
2007	196	BLS (2012b)	Table I.
2008	263	BLS (2012b)	Number of
2009	263	BLS (2012a)	occupational suicides
2010	270	BLS (2012a)	in the USA

Legal recognition of employee suicide as an occupational accident

Not all suicides known to have been committed for work-related reasons are classified as work injuries (OSHA, 2012). Per OSHA (2012), self-inflicted injuries occurring at the workplace are not reported. According to OSHA regulations standards, the determination of work relatedness is as follows: an injury or illness is not considered work related if it "is solely the result of personal grooming, self-medication for a non-work-related condition, or is intentionally self-inflicted." This exception allows the employer to exclude from the log cases related to personal hygiene, self-administered medications, and intentional self-inflicted injuries, such as attempted suicide. In other words, employers are not required to report self-inflicted injuries to OSHA, leading to believe that work-related suicides or attempted suicides may be greater in number than we think.

Fear about company image and fear of a lawsuit by family members. Organizations are reluctant to admit that their employees may have committed suicide as a result of their job or the work environment. First, admitting the existence of a malaise within the organization could affect the company's public image, especially when there is a possible link between the death and work stress issues (Kinder and Cooper, 2009). Second, because of a pre-existing mental health condition, because there is a possibility that the victim's family will sue the victim's organization, or because organizations often contend that the employee had "personal issues" such as a divorce (Delga, 2010, p. 24). Yet, research shows the inter-connectedness between someone's personal and organizational life (Dejours and Bègue, 2009). Occupational stress has shown to have direct effects on an individual's private life (family conflict, divorce, death of a loved one, etc.)

Characteristics of a suicide when defined as an occupational accident

Presumption of a suicide as a work-related accident. When committed while at work, a suicide is more likely to be considered a consequence of someone's work environment. This is often the case when a suicide shortly follows an employee's performance evaluation, a disciplinary action, or a termination (Jurisprudence Sociale, 1988; Miami-Dade County, 2010). Regardless whether a suicide is following a disciplinary action, a layoff, a termination, demotion, harassment, a conflict, or another work-related event, it is rarely classified as a work injury (Jurisprudence Sociale, 1988; OSHA, 2012).

Profile of a US occupational suicide victim

The analysis of the US government reports reveals that the typical employee who commits suicide is a non-Hispanic male between the age of 45 and 54 who uses machinery or vehicles or hold a management position (see Table II).

Specifically, most of the suicides recorded by the US Bureau of Labor Statistics (BLS, 2012b) in 2010 were from employees in "management occupations" (41 deaths out of 270), followed by "transportation occupations" (30 cases), "sales occupations" (29 cases), "maintenance and repairs occupations" (23 cases), and "production occupations" (19 cases).

Out of 270 victims in 2010, 222 employees worked in the "private sector." In total, 200 of all deaths were from employees being on a "wage or salary," the remaining 70 being "self-employed." In all, 254 out of the 270 were men. The great majority of the victims (82 cases) were between 45 and 54 years old, followed by the 35-44 age bracket (59 cases) and 55-64 years old (54 cases). In the BLS 1995-2002 report, however, the majority of the victims were between the age of 35 and 44, followed by the 45-54 age group, and the 25-34 age group. It seems that through the years, the victims are older.

In total, 207 victims were "white, non-Hispanic," followed by "Hispanic or Latino" (27 cases) and Asian (17 cases) and black, non-Hispanic (17 cases).

The breakdown of the suicide victims by race remains proportionately stable in the BLS 1995-2002 and the BLS 2003-2010 reports. Other than the age groups of the victims, the types of descriptors remain similar throughout the years.

#### Causes of employee suicide

Psychological distress at work is caused by a variety of factors, including a person's tolerance for stress (a factor often cited by organizations to undermine the importance of organizational factors restructuring), the demand for flexibility, the fear of demotion or termination, the repetitive nature of some work functions, downsizing, the widening gap between work quality and down spiraling working conditions, the lack of employee recognition, the scarcity of promotion, and the possible lack of psychosocial support from superiors or colleagues (Hardy *et al.*, 2003; Tennant, 2001). Additionally, the increasing emphasis on the financial results, the "bottom line" and "meeting numbers" contribute to the alienation of some employees. The "do what you've got to do to meet the numbers" can lead to a win or lose attitude and even unethical behaviors and burnout (Kahn, 2009). Furthermore, corporate governance aims at pleasing a company's stockholders more than ensuring the well-being of employees. This is especially the case in mergers and acquisitions (Callahan *et al.*, 2002).

Descriptors	Comments	
Gender	Overwhelming majority of males	
Race	Overwhelmingly non-Hispanic white	
Age	Mostly between the age of 35 and 44 (between 1995-2002) and 45 and 54 (2003-2010). Also high risk for white males over 55	
Occupation	On wage or salary. Most are in managerial and professional specialty occupations in the service industry (technical, sales, administrative support) and police and detectives in the public service	
Nature of fatal	self-inflicted injury	
	Most resulted from gunshot wounds followed by asphyxiations, strangulations or suffocations (mostly by hanging)	

**Table II.**Profile of occupational suicide victims in the USA

All three BLS reports point out that most deaths are due to "hazardous conditions." Primary sources cited include "bullets and pellets" (113 of the 270 cases of suicide in 2010) followed by "parts and materials" (93 of the 270 cases in 2010), which include self-injuries with a "machine, tool or electric parts." The reports also note that the leading nature of the injury is "traumatic" (124 cases), followed by "open wounds" (122 cases, 166 of which were "gun wounds," and "asphyxiations or suffocations" (103 cases out of 270)).

The "part of the body" fatally injured was primarily the "head" (92 cases) followed by "body systems" (83 cases). Finally, the great majority of deaths occurred in a "public building" (in 114 cases out of 270), followed by "industrial place and premises" (67 cases).

# Proposed solutions and implications for HRs

The US reports examined highlight a number of areas where HR can play an important role in preventing occupational suicides. In this section, the implications for HR will be considered under the following headings: The effectiveness (or ineffectiveness) of employee assistance programs (EAPs), selection effects, informing, training, and assessing employee well-being, better access to support and treatment, and toward a new approach toward work, management, and globalization. The recent, extensive research literature on occupational stress and organizational behavior rarely touches upon employee suicide. Yet, globalization and the increased competitiveness in the global market have shown to affect employees' well-being in negative ways (Delga, 2010, p. 34; Lerman and Schmidt, 2010). Rarely do organizational leaders question how their approach to globalization impacts their employees.

Although most of the solutions highlighted in the next section have been implemented by many US and UK organizations, little evidence about their effectiveness is available. Consequently, they are presented as recommendations and should be carefully tailored to fit both cultural and organizational contexts.

# The (in)effectiveness of EAPs

EAPs have been offered by organizations since the 1990s in many western countries. They range from robust program models to more economical web based or phone options (Sharar and Lennox, 2009). EAP services are widely available to more than 90 percent of large-size companies in the USA and to the majority of all employers in the USA, Canada, and the UK (Csiernik, 2002; Society for Human Resources Management, 2009). While the number of EAPs available has increased, there is little to no data available on their effectiveness (Colantonio, 1989; Sharar and Lennox, 2009). The problem often lies in the lack of measurement. More often than not, effectiveness of such EAPs (or which ones are effective) is measured using end-user utilization rate, clients referrals, case studies, or even employee clicks through a web site to access information (Sharar and Lennox, 2009). One 2012 UK study of 28,000 EAP counseling interventions supports the success of EAPs in two areas: they offer fast interventions and they successfully match the client problems with appropriate counselors (Employee Assistance Professionals Association (EAPA), 2012). Few of those measurements have captured whether EAP vendors achieve results that are meaningful to employers. In other words, whether or not employees achieve positive outcomes or whether the employer realizes the benefits, such as increased employee productivity because he or she is no longer suffering from stress, depression, substance abuse, or coping with family conflict remains unclear (Sharar and Lennox, 2009). Also, HR has been moving away from a local HR manager role into a shared service role where support is more distant and sometimes purely transactional (via a call center with operators who provide guidance using prescribed scripts).

One caveat of EAPs is that they can overshadow the need to closely examine what might create employee distress, such as management practices. When a suicide or a self-inflicted injury is a clear result of poor working conditions, organizations ought to examine the methods they use to organize tasks. The following section offers suggestions for HR and HR professionals to consider alleviating some of the causes of workplace self-injuries and suicide.

# Selection effects

Pre-employment screenings have shown to be effective with military personnel, firefighters, and ambulance workers (Boxer *et al.*, 1995). Stack (2001) notes that elevated risks for suicide in occupations may be due to other correlates of suicides. For instance, people with suicidal personality traits may seek out occupations that have high suicide rates (Wilhelm *et al.*, 2004). Although it may not be possible to assess job applicants for suicidal personality traits, HR managers in some fields assess candidates' resilience through extensive questioning and potential scenarios.

#### Assessing employee well-being and training

Assessing employee well-being. As described in our section "Profile of a US occupational suicide victim," the typical employee who commits suicide is a non-Hispanic male between the age of 45 and 54 who uses machinery or vehicles or is in a management position. HR professionals should therefore be attentive to those segments of employees.

Also, female workers are said to have an increased risk of suicide where there are "statistically infrequent occupation-based role sets" (Stack, 2001) such as female engineers, chemists, soldiers, and medical doctors (Boxer et al., 1995), suggesting that a male-dominated workplace may place additional stress on female workers in these occupations (Boxer et al., 1995; Germain et al., 2012). HR professionals in those fields should pay much attention to employee stress. Also, because harassment and bullying are known to cause employee stress (Agervold and Gemzøe Mikkelsen, 2004), organizations should have robust policies in place. Issues linked to job performance HR and managers can focus on include lower than normal performance, poor time keeping, withdrawal from social contact, poor decision making, unusual displays of emotion, increased sickness and absences, lower than normal energy, and problems with management or/and coworkers. The majority of people who commit suicide give warning signs of their suicidal intentions in the weeks or months prior to their death (Avenue Consulting, 2009). Those signs include talking about isolation and loneliness, impulsivity or aggression, speaking about tidying-up affairs, and sometimes giving sign of an exit plan (Feeling Blue Suicide Prevention Council, 2009).

Employee training. A study by Cross et al. (2007) shows that a one-hour community gatekeeper training for suicide prevention to non-clinical staff, such as administrative and support staff, resulted in positive outcomes. The training increased the participants' knowledge about suicide warning signs and how to intervene with a colleague they were concerned about. They also felt more efficacious with intervening with someone they believe may be at risk for suicide. HR professionals could offer a similar gatekeeper training to employees in fields where occupational suicide is high. The American Foundation for Suicide Prevention (www.ofsp.org) offers free educational resources that could be used by HR and HRD practitioners. More evidence-based data are needed to provide HR professionals with solid and structured

training materials they can use in their organizations. For instance, company reports on how employee suicide prevention training interventions were successfully implemented could serve as basis for other HR departments.

## Better access to support and treatment

In our western culture, individuals with physical disorders generally receive sympathy and concern. However, when a person is diagnosed with a mental illness (especially one with psychotic features), many people respond with discomfort, disdain, or even fear (Miami-Dade County, 2010). These reactions are often painfully obvious in the workplace. Employers frequently wonder if the employee with mental illness can perform the job and worry about legal issues. Supervisors often fear they might say the wrong thing, and, as a consequence, often say nothing at all. Coworkers usually do not know how to respond. The resulting awkwardness and tension makes it difficult for an already fragile employee (Marroquin, 2009). Such social stigma and low awareness still decrease workers access to treatment. Mental health professionals, in conjunction with HR professionals, should devise a creative system to make the quality care being offered more accessible to employees, especially in countries such as the USA where medical coverage is not mandated by law or in countries where mental health problems are not culturally well accepted.

Additionally, HR professionals should ensure that the work environment, with its chemical (e.g. chemosensory factors, pollutants), physical (e.g. lighting, noise, temperature, outdoor views, and activities), biological (e.g. chronobiological factors, allergens, infectious agents), psychological (e.g. demand control, effort-reward balance), social (e.g. cohesiveness, support), and organizational (e.g. leadership styles) component meets minimal standards (Woo and Postolache, 2008), enforcing local and national policies when they exist.

Workplace counseling. For ambulance workers, emotional support from supervisors and management has shown to prevent psychiatric morbidity (Alexander and Klein, 2001). An early detection of distress may be helpful in preventing suicides and suicide attempts. Some professions are also more prone to drug or alcohol abuse, such as bartenders, innkeepers, entertainers, physicians, salespeople, military, and navy personnel. HR developers in those fields should have ongoing drug tests, alcohol/drugeducation programs, and emphasize the availability of assistance programs. HR managers should pay close attention to and investigate repeat cases of absenteeism to detect possible mental health issues. Whenever possible, HR departments should promote the availability of a "live" person within their department, even if it is for a few hours each week and/or the existence of EAPs where workplace counseling may not be well accepted due to cultural norms. Counselors should aim at increasing the employee's health and well-being while being workplace focussed to fit the needs of the organizations (EAPA, 2012, p. 28). Also, employees need to know what they can do should they suspect a colleague threatens to commit suicide. This is particularly important in industries where occupational suicide rates are high, such as in the military, medical, and the transportation industry. Organizations that demonstrate care for their workplace community by developing wellness programs improve employee morale and retention while keeping costs down (Dacko and Montgomery, n.d.).

Toward a new approach toward work, management, and globalization Reviewing long hours and little control over work. For organizations with a global workforce, it also is important to understand that incidents of suicide vary among different countries and cultures around the world. According to the World Health Organization (2006), suicide rates worldwide have risen 60 percent over the past 50 years. The size of the population, age and sex distribution, sociocultural ethos, extent of socio-technological development, availability of methods for suicide, and intervention efforts account for differences in suicide rates among countries (ValueOptions, 2013). Nonetheless, employee suicides are a global phenomenon. Japan is notorious for having high work expectations, long work hours, and little vacation time. Japan's suicide rate is among the highest in the industrialized world, and data released this week showed that the number of people taking their own lives in 2006 topped 30.000 for a ninth straight year (The New York Times, 2007). Within a two-year timeframe (2007-2009), 32 employees of nationalized France Telecom committed suicide, Between 2006 and 2007, three technicians working at the automaker Renault also committed suicide (Delga, 2010, p. 19; Jolly and Saltmarsh, 2009), Also in 2007, two employees at the Australian communications company Telstra took their own life. One line repairman became depressed after the company insisted that he had a global positioning system placed in his repair van so his movements could be tracked. The other, a call center worker, left Telstra in distress and took her life less than four weeks later (Cubby, 2007). In Telstra call centers, workers are tracked for how much they sell to each customer, how long each call takes, and even how many strokes they make on their computer keyboards. "Unproductive time," such as toilet breaks are also logged. This constant monitoring can alienate employees and cause stress.

The media and the research community attribute those suicides to high demands, the poorly planned organizational changes, and the change in organizational culture (Delga, 2010, p. 19). Senior employees, who, for decades, had participated in the expansion of phone landlines and in the subsequent growth of France Telecom were suddenly required to promote cell phone usage and to focus on sales. For many employees of France Telecom, this switch from a service-oriented job with no financial demands to a sales-based position prompted much emotional and psychological distress in employees (Delga, 2010, p. 19). Such management methods and practices (management by stress or by objective), along with spreading the weight of corporate governance contradict many of the philosophical values associated with work such as personal development and growth and the sense of social purpose and meaning. Corporate governance, with its focus on stakeholders' expectations, put little emphasis on employees' needs and the management of HRs (Delga, 2010, p. 20). Industrial growth without concurrent social growth is often perceived as moot. Corporate governance rarely prioritizes employee well-being (Delga, 2008). The recent incidents in Chinese factories, such as FoxConn, are other examples of such dissonance or disconnect between corporate gain and employees' mental health (The New York Times, 2012).

HR professionals should ensure that organizational change efforts and planned restructuring consider the possible effects on employees' mental health. They could also serve as watchdogs for employees' well-being and working conditions. Typical interventions include employee stress assessments and climate surveys. As shown in the example of Telsta, Renault, and France Telecom, it is possible that employees' loss of life could have been prevented if the organizations had been more in tune with the affects of drastic change on the employees' welfare.

Reactions, hypocrisy, and a new approach toward work. Oftentimes, organizations are reactive to occupational accidents: it is only after an injury or a suicide that they realize it was foreseeable and could have been prevented. Examples include employees' exposure to asbestos, excessive noises in the construction industry, exposure to toxic

chemicals in the meatpacking industry (OSHA.gov, 2012), and so on. Also, programs put into place by an organization after an employee suicide or an attempted suicide can be perceived as hypocritical (Delga, 2010, p. 34). Surveys, employee debriefing, psychological support groups, help hotlines, and free relaxation workshops can prevent extensive and effective investigative work to occur (Delga, 2010, p. 34). Employee stress studies and organizational climate assessments can be ineffective and do not always identify the issues that may be organization specific. Those after-the-fact programs can also be seen as a mediatic necessity as organizations want to manage their image and be perceived as socially responsible.

HR professionals should help organizations be preventive rather than reactive regarding employee suicides. They should serve as advocates to employees by helping executives question work processes (rather than typically labeling employees who attempted or committed suicide as "ill").

Business schools curricula (including HRs degree programs) often focus on business strategy, ROI, and the financial underpinning of organizations and not much on human factors and how executive and management decisions can affect employees at all levels of the organization. Universities and colleges compete against each other, define students as consumers (Germain and Scandura, 2005) to whom they sell a product (a degree), and are managed like businesses (Delga, 2010, p. 22). They strive to rank highly on national and international scales that measure the quality of the education received and the salary of their graduates. Those rankings are used for marketing purposes. Curricula include courses on globalization and finance but they rarely touch upon the impact of the race for profit on workers. Management professors (including OB and HR) should put greater emphasis on employee welfare in their courses.

More challenging is the idea of redefining work as a contractual exchange of human labor for a salary and questioning the core purpose of work. Labor unions, organizational leaders, and the government ought to rethink our so-called "social policies," ones that should be better suited to today's workers' needs. Those policies could positively impact the statistics on occupational suffering, self-injuries, and suicide. Yet, the role and strength of labor unions vary greatly across nations.

#### Directions for future research

Future research on work-related suicides should focus on several areas. First, most studies on occupational stress are cross-sectional studies that do not allow for definition of causality. There is a need for more national and global longitudinal studies of stress as a predictor of occupational suicide. Second, further outcome data are needed to evaluate the benefit of managing mood disorders in the workplace, and to foster awareness of positive implications for employees, employers, their families, and the society at large (Woo and Postolache, 2008). Third, as reported in this paper, workplace suicide victims tend to be males, white non-Hispanic, and between the age of 45 and 54. Future research should examine the relationships between class, gender, race, and occupational suicide. Researchers should also investigate the discrepancy between the recognition of stress and burnout as a precursor of work injury since suicides or attempted suicides as a consequence of employee stress are rarely reported, documented, investigated, and recognized. Finally, the solutions proposed in this paper are contingent on national and occupational contexts. Future research should further reflect on these contingencies and explore solutions that may be relevant on a global scale. This information could be of value to multinational corporations.

#### Conclusion

As David Smith, chair of the UK. Employee Assistance Professionals Association, asserted, "Organizations with an EAP in place are offering their people the very best opportunity to receive psychological help, should they ever need it and are taking proactive steps to protect both their people and their bottom line" (EAPA, 2012).

In addition to developing policies or creating organizational assessments, HR professionals should identify existing means in the organization to prevent occupational suicides and self-inflicted injuries such as safety committees. In addition to informing employees of the existence of psychosocial support groups, HR managers should seek employee feedback about their well-being and working conditions. They should also help executive management rethink some of their management practices, those that are known to be detrimental to employees' physical and psychological well-being.

Although HR professionals have little to no authority over the legal recognition of employee suicides by OSHA as occupational accidents, they could collaborate with labor unions that strive to have those officially reported. Such recognition would help develop government-funded and supported initiatives and programs similar to the Glass Ceiling Commission or the Equal Employment Opportunity Commission. Since occupational stress and burnout is a strong predictor of all-cause mortality among industrial employees (Borritz *et al.*, 2006), a program targeted at reducing employee stress could positively impact today's US and global workforce. The challenge for HR researchers and practitioners remains the contingent nature of some of the recommendations, due to the varied cultural and organizational contexts and their embedded idiosyncrasies.

Organizations have a "duty of care" to their employees, both physical and psychological. In fact, in the UK, the Health and Safety at Work Act of 1974 gives employers statutory duties of care (Health and Safety Executive, 2012). It is important that they create preventive policies to minimize work-related suicides and have clear crisis management systems in place, should an employee commit suicide or threaten to do so.

#### References

- Agervold, M. and Gemzøe Mikkelsen, E. (2004), "Relationships between bullying, psychosocial work environment, and individual stress reactions", *Work & Stress: An International Journal of Work, Health & Organizations*, Vol. 18 No. 4, pp. 336-351.
- Alexander, D.A. and Klein, S. (2001), "Ambulance personnel and critical incidents: impact of accidents and emergency work on mental health and emotional well-being", *British Journal of Psychiatry*, Vol. 178, pp. 76-81.
- Attridge, M. and VandePol, B. (2010), "The business case for workplace critical incident response: a literature review and some employer examples", *Journal of Workplace Behavioral Health*, Vol. 25 No. 3, pp. 132-145.
- Avenue Consulting (2009), Workplace Suicide, Human Solutions, Wrexham.
- Benbasat, I., Goldstein, D.K. and Mead, M. (1987), "The case research strategy in studies of information systems", *Management Information Systems Quarterly*, Vol. 11 No. 3, pp. 369-388.
- Blackmore, E.R., Stansfeld, S.A., Weller, I., Munce, S., Zagorski, B.M. and Stewart, D.E (2007), "Major depressive episodes and work stress: results from a national population survey", *American Journal of Public Health*, Vol. 97 No. 11, pp. 2088-2093.
- Borritz, M., Rugulies, R., Christensen, K.B., Villadsen, E. and Kristensen, T.S. (2006), "Burnout as a predictor of self-reported sickness absence among human service workers: prospective findings from three year follow up of the PUMA study", *Occupational and Environmental Medicine*, Vol. 63 No. 2, pp. 98-106.

- Boxer, P.A., Burnett, C. and Swanson, N. (1995), "Suicide and occupation: a review of the literature", *Journal of Occupational and Environmental Medicine*, Vol. 37 No. 4, pp. 442-452.
- Bureau of Labor Statistics (BLS) (2012a), "How widespread is violence in the workplace?", available at: www.bls.gov/iif/oshfaq1.htm (accessed January 17, 2013).
- Bureau of Labor Statistics (BLS) (2012b), "Fatal occupational injuries; self-inflicted injury", personal communication with Shane Stephens, BLS employee, September 4.
- Callahan, E.S., Dworkin, T.M., Fort, T.L. and Schipani, C.A. (2002), "Integrating trends in whistle blowing and corporate governance: promoting organizational effectiveness, societal responsibility, and employee empowerment", *American Business Law Journal*, Vol. 40 No. 1, pp. 177-215.
- Cassano, P. and Fava, M. (2002), "Depression and public health: an overview", *Journal of Psychosomatic Research*, Vol. 53 No. 4, pp. 849-857.
- Center for Disease Control (2009), "Ten leading causes of death by age group, United States, 2009", available at: www.cdc.gov/Injury/wisqars/pdf/10LCD-Age-Grp-US-2009-a.pdf (accessed January 17, 2013).
- Center for Disease Control (2010), "Suicide. Facts at a glance", available at: www.cdc.gov/ViolencePrevention/pdf/Suicide DataSheet-a.pdf (accessed January 17, 2013).
- Colantonio, A. (1989), "Assessing the effects of employee assistance programs: a review of assistance program evaluations", *Yale Journal of Biology and Medicine*, Vol. 62 No. 1, pp. 13-22.
- Collins, JJ., Baase, C.M., Sharda, C.E., Ozminkowski, R.J., Nicholson, S., Billotti, G.M., Turpin, R.S., Olson, M. and Berger, M.L. (2005), "The assessment of chronic health conditions on work performance, absence, and total economic impact for employers", *Journal of Occupational and Environmental Medicine*, Vol. 47 No. 6, pp. 547-557.
- Corbin, J.M. and Strauss, A. (1990), "Grounded theory research: procedures, canons, and evaluative criteria", *Qualitative Sociology*, Vol. 13 No. 1, pp. 3-21.
- Cross, W., Matthieu, M.M., Cerel, J. and Knox, K. (2007), "Proximate outcomes of gatekeeper training for suicide prevention in the workplace", Suicide and Life-Threatening Behavior, Vol. 37 No. 6, pp. 659-670.
- Csiernik, R. (2002), "An overview of employee and family assistance programming in Canada", *Employee Assistance Quarterly*, Vol. 18 No. 1, pp. 17-34.
- Cubby, B. (2007), "Telstra stress linked to suicides", *The Sydney Morning Herald*, available at: www.smh.com.au/news/national/telstra-stress-linked-to-suicides/2007/06/18/1182019036283.html (accessed January 17, 2013).
- Dacko, P.R. and Montgomery, T. (n.d.), "Corporate wellness", available at: www.hrmreport.com/pastissue/article.asp?art = 271121&issue = 216 (accessed April 10, 2013).
- Dejours, C. and Bègue, F. (2009), Suicide et Travail: Que Faire?, PUF, Paris.
- Delga, J. (2008), "Incoherence et illegallité en matière de corporate governance et d'administrateur independent", *La Revue du Financier*, Juillet-Aout, p. 22.
- Delga, J. (2010), "Souffrance au travail et suicide", in Delga, J. (Ed.), Souffrance au Travail dans les Grandes Enterprises, Editions Eska, Paris, pp. 15-35.
- Denzin, N.K. and Lincoln, Y.S. (2000), "The discipline and practice of qualitative research", Denzin, N.K. and Lincoln, Y.S. (Eds), *Handbook of Qualitative Research. Vol. 2*, Sage, Thousand Oaks, CA, pp. 1-28.
- Druss, B.G., Rosenheck, R.A. and Sledge, W.H. (2000), "Health and disability costs of depressive illness in a major US corporation", *American Journal of Psychiatry*, Vol. 157, pp. 1274-1278 doi:10.1176/appi.ajp.157.8.1274.
- Eliason, M. and Storrie, D. (2009), "Does job loss shorten life?", *Journal of Human Resources*, Vol. 44 No. 2, pp. 277-302.

- Elinson, L., Houck, P., Marcus, S.C. and Pincus, H.A. (2004), "Depression and the ability to work", *Psychiatric Services*, Vol. 55 pp. 29-34, doi:10.1176/appi.ps.55.1.29.
- Employee Assistance Professionals Association (EAPA) (2012), "UK EAPA guidelines document", available at: www.eapa.org (accessed April 10, 2013).
- Feeling Blue Suicide Prevention Council (2009), After a Suicide, Delaware Valley, Philadelphia, PA.
- Fitz-Enz, J. (2000), The ROI of Human Capital: Measuring the Economic Value of Employee Performance, Amacom Books, New York, NY.
- Germain, M.L. and Scandura, T.A. (2005), "Grade inflation and students individual differences as systematic bias in faculty evaluations", *Journal of Instructional Psychology*, Vol. 32 No. 1, pp. 58-67.
- Germain, M.L., Herzog, M.R. and Hamilton, P.R. (2012), "Women employed in male-dominated industries: lessons learned form female aircraft pilots, pilots-in-training, and mixed-gender flight instructors", *Human Resource Development International*, Vol. 15 No. 4, pp. 435-453.
- Gillham, B. (2000), Case Study Research Methods, Continuum, New York, NY.
- Goldsmith, S.K., Pellmar, T.C., Kleinman, A.M. and Bunney, W.E. (Eds), (2002), *Reducing Suicides:* A National Imperative, National Academies Press, Washington, DC.
- Greenberg, P.E., Kessler, R.C., Birnbaum, H.G., Leong, S.A., Lowe, S.W., Berglund, P.A. and Corey-Lisle, P.K. (2003), "The economic burden of depression in the United States: how did it change between 1990 and 2000?", *Journal of Clinical Psychiatry*, Vol. 64 No. 12, pp. 1465-1475.
- Hardy, G.E., Woods, D. and Wall, T.D. (2003), "The impact of psychological distress on absence from work", *Journal of Applied Psychology*, Vol. 88 No. 2, pp. 306-314.
- Health and Safety Executive (2012), "Health and safety at work etc Act 1974", available at: www.hse.gov.uk/legislation/hswa.htm (accessed April 8, 2013).
- Jolly, D. and Saltmarsh, M. (2009), "Suicides in France put focus on workplace", available at: www.nytimes.com/2009/09/30/business/global/30employ.html?pagewanted = all (accessed January 17, 2013).
- Jurisprudence Sociale (1988), "Cassassion Sociale, 20 avril 1988, numero 86-15. 690", available at: www.editions-tissot.fr/droit-travail/jurisprudence-sociale cassation.aspx?jsID = 1205& occID = 251 (accessed January 17, 2013).
- Kahn, A. (2009), "Quand les patrons vantaient les bienfaits de la gestion par le stress", *Le Monde*, October 22, p. 14.
- Kessler, R.C., Akiskal, H.S., Ames, M., Birnbaum, H., Greenberg, P., Hirschfeld, R.M., Jin, R., Merikangas, K.R., Simon, G.E. and Wang, P.S. (2006), "Prevalence and effects of mood disorders on work performance in a nationally representative sample of US workers", American Journal of Psychiatry, Vol. 163 No. 9, pp. 1561-1568.
- Kessler, R.C., Greenberg, P.E., Mickelson, K.D., Meneades, L.M. and Wang, P.S. (2001), "The effects of chronic medical conditions on work loss and work cutback", *Journal of Occupational and Environmental Medicine*, Vol. 43 No. 3, pp. 218-225.
- Kinder, A. and Cooper, C.L. (2009), "The cost of suicide and sudden death with an organization", *Death Studies*, Vol. 33 No. 5, pp. 411-419.
- Lerman, R.I. and Schmidt, S.R. (2010), "An overview of economic, social, and demographics trends affecting the US labor market. US Department of Labor", available at: www.dol.gov/oasam/programs/history/herman/reports/futurework/conference/trends/trendsVI.htm (accessed January 17, 2013).
- McMillan James, H. and Schumacher, S. (2001), Research in Education: A Conceptual Approach, Addison Wesley Longman Inc, New York, NY.

- Marroquin, P. (2009), "Survivor syndrome: why fortunate survivors have their own post-layoff challenges", available at: www.hirediversity.com/news/2009/6/29/survivor\_syndrome\_while\_fortunate\_remaining\_employees.htm (accessed January 17, 2013).
- Maslow, A. (1943), "A theory of human motivation", Psychological Review, Vol. 50, pp. 370-396.
- Mausner-Dorsch, H. and Eaton, W.W. (2000), "Psychosocial work environment and depression: epidemiologic assessment of the demand-control model", *American Journal of Public Health*, Vol. 90 No. 11, pp. 1765-1770.
- Melchior, M., Caspi, A., Milne, B.J., Danese, A., Poulton, R. and Moffitt, T.E. (2007), "Work stress precipitates depression and anxiety in young, working women and men", *Psychological Medicine*, Vol. 37 No. 8, pp. 1119-1129.
- Merriam, S.B. (1998), Qualitative Research and Case Study Applications in Education, 2nd ed., Jossey-Bass, San Francisco, CA.
- Miami-Dade County (2010), Providing Employee Support in the Workplace: A Guide to Managing Mental Health Issues. Vol. 2, Human Resources Department, Miami-Dade, FL.
- (*The*) New York Times (2007), "Japan: guidelines to reduce suicide rates", available at: http://query.nytimes.com/gst/fullpage.html?res = 9C0CEEDD163FF93AA35755C0A9619C8B63 (accessed January 17, 2013).
- (*The*) New York Times (2012), "Riot at foxconn factory underscores rift in China", available at: www.nytimes.com/2012/09/25/business/global/foxconn-riot-underscores-labor-rift-in-china.html (accessed January 17, 2013).
- Nicholl, A. (2008), *Time for Action: Managing Mental Health in the Workplace*, Mercer LLC, Cambridge, MA.
- OSHA (2012), "Are there situations where an injury or illness occurs in the work environment and is not considered work-related?", available at: www.osha.gov/pls/oshaweb/owadisp. show\_document?p\_table = STANDARDS&p\_id = 9636 (accessed January 17, 2013).
- OSHA.gov (2012), "Safety and health guide for the meatpacking industry", available at: www.osha.gov/Publications/OSHA3108/osha3108.html (accessed January 17, 2013).
- Research America (2013), "Facts about suicide", available at: www.researchamerica.org/uploads/factsheet21suicide.pdf (accessed April 10, 2013).
- Ritchie, J. and Lewis, J. (Eds), (2003), Qualitative Research Practice: A Guide for Social Science Students and Researchers, Sage Publications Limited, London.
- Sharar, D. and Lennox, R. (2009), "A new measure of EAP success. A workplace outcomes-based survey model provides validation", available at: www.shrm.org/hrdisciplines/benefits/articles/pages/eapmetrics.aspx (accessed January 17, 2013).
- Society for Human Resources Management (2009), 2009 Employee Benefits, Society for Human Resources Management, Washington, DC, available at: www.shrm.org
- Stack, S. (2001), "Occupation and suicide", Social Science Quarterly, Vol. 82 No. 2, pp. 384-396.
- Stewart, W.F., Ricci, J.A., Chee, E., Hahn, S.R. and Morganstein, D. (2003), "Cost of lost productive work time among US workers with depression", *The Journal of the American Medical Association*, Vol. 289 No. 23, pp. 3135-3144.
- Stufflebeam, D.L., Madaus, G.F. and Kellaghan, T. (2000), Evaluation Models: Viewpoints on Educational and Human Services Evaluation, 2nd ed., Kluwer Academic Press, Boston, MA.
- Substance Abuse and Mental Health Services Administration (SAMHSA) (2007), "Office of applied studies. The NSDUH report: depression among adults employed full-time, by occupational category", available at: www.oas.samhsa.gov/2k7/depression/occupation.htm (accessed January 17, 2013).

- Tellis, W. (1997), "Application of a case study methodology", *The Qualitative Report*, Vol. 3 No. 3, pp. 1-17.
- Tennant, C. (2001), "Work-related stress and depressive disorder", *Journal of Psychosomatic Research*, Vol. 51 No. 5, pp. 697-704.
- United Nations (1996), Prevention of Suicide: Guidelines for the Formulation and Implementation of National Strategies, United Nations, New York, NY.
- ValueOptions (2013), "The costs of suicide", available at: www.valueoptions.com/suicide\_prev/html%20pages/Costs.htm (accessed April 10, 2013).
- Violanti, J.M., Fekedulegn, D., Charles, L.E., Andrew, M.E., Hartley, T.A., Mnatsakanova, A. and Burchfiel, C.M. (2009), "Suicide in police work: exploring potential contributing influences", American Journal of Criminal Justice, Vol. 34 Nos 1-2, pp. 41-53.
- Wilhelm, K., Kovess, V., Rios-Seidel, C. and Finch, A. (2004), "Work and mental health", *Social Psychiatry & Psychiatric Epidemiology*, Vol. 39 No. 11, pp. 866-873.
- Woo, J.M. and Postolache, T.T. (2008), "The impact of work environment on mood disorders and suicide: evidence and implications", *International Journal of Disability and Human Development*, Vol. 7 No. 2, pp. 185-200.
- WorkingMinds (2013), "The double bottom line impact", available at: http://workingminds.org/bottomline.html (accessed April 11, 2013).
- World Health Organization (2006), "Preventing suicide: a resource for work", available at: http://whqlibdoc.who.int/publications/2006/9241594381\_eng.pdf (accessed April 10, 2013).
- Yin, R.K. (2003), Case Study Research: Design and Methods. Vol. 5, 3rd ed., Sage, Thousand Oaks, CA.

#### Further reading

- Bureau of Labor Statistics (2011), "National census of fatal occupational injuries in 2010", available at: www.bls.gov/iif/oshcfoi1.htm (accessed January 17, 2013).
- World Trade Organization (2006), "Preventing suicide: a resource for work", available at: http://whqlibdoc.who.int/publications/2006/9241594381 eng.pdf (accessed April 10, 2013).

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