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**Mental Capital and Wellbeing:
Making the most of ourselves in the 21st century**

**State-of-Science Review: SR-C2
Links between Mental Wellbeing at Work and Productivity**

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Summary

With the increasing pressure on people in the workplace, the impact on sickness absence, premature labour turnover and the like are more prevalent in the both the public and private sector. Although research has shown that there is a link between workplace sources of stress and poor mental wellbeing, there is less, but increasing, evidence on the impact of poor wellbeing on productivity at work, that is, the costs of lack of mental wellbeing on performance. This review seeks to update the reader in the area of poor mental wellbeing and productivity at the national and organisational levels. The first section focuses on the costs of poor mental wellbeing at work in terms of macroeconomic costs for society. The second section explores the microeconomic costs for the organisations. These costs include absenteeism, presenteeism and other underestimated economic impacts such as turnover, employee assistance programmes and insurance.

1. Introduction

In the UK, work-related stress accounts annually for over a third of all new incidences of ill-health. Each case of stress-related ill-health leads to an average of 30.9 working days lost, and a total of 12.8 million working days were lost to stress, depression and anxiety in 2004-2005 (HSE, 2007). The HSE states that stress costs UK industry approximately £6.7 billion each year in lost revenue (European Agency for Safety and Health at Work, 2002). In Europe, a conservative estimate of the costs caused by work-related stress amounts to some 20 billion euros annually. In Canada, it has been estimated that work-related stress cost Can\$4.5 billion annually (Stephens and Joubert, 2001). In USA, stress accounts for the largest proportion of health insurance costs (\$6.2 billion and 7.9% of health costs) according to a survey (Anderson et al., 2000) conducted in six large US companies. Another study (Eliashof and Streltzer, 1992) estimates that stress-related illness costs the United States US\$66 billion a year: roughly 2% of the gross national product.

2. Categories of costs

Analysis of the literature reveals two major categories of costs with regard to poor mental wellbeing at work. The first category deals with macroeconomic costs at a national level or for a given economic sector. These costs are usually expressed as a percentage of the gross domestic product (GDP), as health care costs or even, for example, as costs to UK industry.

Microeconomic costs, the second category, identify the amount of money spent by businesses (salary, insurance costs, lost productivity, etc.). There are usually two sub-categories used at this level: the cost of absenteeism and the cost of presenteeism. We will now look more closely at these two categories of costs in regard to mental wellbeing at work. The stress literature covers consequences of all types of stress (depression and other related mental-illnesses), but is sometimes more specifically focused on the impact of these consequences in the workplace.

3. Macroeconomic costs

In their literature review of the costs of workplace violence and stress, Hoel et al. (2001) indicate that all estimates of the costs of stress that exist to date could be somewhat inaccurate. One of the reasons noted by these authors is that some stress data has little scientific value and thus cannot be considered reliable. The literature consulted does, nonetheless, cite some results worthy of mention. For example, Hoel et al. (2001) estimate that the costs of workplace violence and stress to society account for 1% to 3.5% of GDP.

In the United Kingdom, the total approximate cost of mental wellbeing at work represents more than 10% of GDP (Cooper et al., 1996).

The American Institute of Stress points out that, if we consider loss of productivity, absenteeism, accidents, employee turnover, worker compensation, and medical, legal and insurance costs (direct costs), the annual cost of poor mental wellbeing at work amounts to more than \$300 billion for American companies (American Institute of Stress, 2004). What is more, using a slightly different cost formula than the one previously indicated, Cooper et al. (1996) report that stress costs American industry about \$150 billion annually. In Europe, a document published by the European Commission indicates that work-related stress costs amount to at least 20 billion euros annually (Commission européenne, 2002). In Great Britain, more specifically, it is estimated that occupational stress costs employers from £353 million to £381 million (amount for 1995-1996) and society from £3.7 to £3.8 billion (HSE, 2003).

Still on the topic of absenteeism, the authors of the HSE report suggest that, in Great Britain in 2001-2002 (a 12-month period), about 13.4 million work days were lost because of stress, depression or anxiety (conditions that are directly related to or worsened by work) (Kinman and Jones, 2003). These authors also indicate that each person affected by these conditions will be absent for 29.2 days on average.

Finally, a joint study by the Confederation of British Industry (CBI) and AXA PPP Healthcare provides some interesting data on absenteeism (CBI, 2003). These results reflect the experiences of 550 organisations in 2002. These organisations represent 1.4 million employees, or about 6% of the United Kingdom's workforce. Canadian data estimate that nearly 43% of workers had experienced an episode of psychological distress between 1994-5 and 2000-2001 (Marchand et al., 2005). As regards the impact on Canadian industry, data reported by Stephens and Joubert (2001) estimates the costs of poor mental wellbeing at \$4.5 billion.

This range of cost estimates shows how difficult it really is to accurately and consistently identify and evaluate the costs of poor mental wellbeing at work. The problem does not lie solely in the quality of the research that has been done, but in the manner in which the concept of poor mental wellbeing at work and the economic impacts have been considered (Brun and Lamarche, 2006).

All these millions, billions and percentages are mind-boggling and clearly show how difficult it is to estimate the costs of poor mental wellbeing at work. In fact, because of the wide variety of data sources, calculation methods and included/excluded cost indicators, it is basically impossible to compare the data, whether within the same country or on an international basis (Hoel et al., 2001). Will we run into the same problems if we try to estimate the costs of poor mental wellbeing at work on a microeconomic level? We will attempt to address this question in the following section.

4. Microeconomic costs

In this section, various internal cost indicators for business will be presented. However, it is important to note that there is no economic assessment of several of these indicators in the scientific literature. Difficulty in measuring these indicators may be one of the reasons why there is little data in this field. First of all, several authors have identified the organisational cost of poor mental wellbeing at work, but few have compiled a comprehensive list, and even fewer have been successful in evaluating these indicators with any accuracy.

In their research Hoel, Sparks and Cooper (2001) indicate that their findings represent only some of the most important factors and are not a comprehensive list of all possible costs. They discuss seven indicators that must be taken into account when estimating costs to the organisation:

- 1) Sick leave;
- 2) Early retirement;
- 3) Replacement costs associated with employee turnover (recruitment, training and development costs);
- 4) Costs for grievances, disputes and compensation;
- 5) Damage to equipment and decreased productivity caused by accidents and errors;
- 6) Decreased performance and productivity; and
- 7) Loss of reputation for the company.

Lastly, Kalia (2002) compiled a partial list of economic consequences related to employee mental wellbeing at work within an organisation. This list includes absenteeism, compensation claims, disputes and grievances, accidents, human errors, conflicts and interpersonal problems, violence, client service issues, resistance to change, quality issues and, finally, the loss of intellectual capital.

It is becoming increasingly apparent that absenteeism is not the only consequence of health problems that organisations must address. Presenteeism – which can be defined as working while ill – is also an important element that organisations must take into consideration. Let us now look more closely at the costs associated with absenteeism, and then with presenteeism.

4.1 Absenteeism

The impact of work stress has traditionally been assessed according to the absences it can cause. Results from the 2003 annual CCH Unscheduled Absence Survey show that 11% of unplanned absences are due to work-related stress, which is a 1% decrease compared to the 2002 results (CCH Incorporated, 2003). It should be noted that this survey was conducted amongst American organisations representing approximately two million employees.

The costs resulting from absenteeism that are assumed by the organisation can be diverse. As an example, disability premiums paid by the employer to an external insurer represent an amount spent by the organisation so that the absent employee's salary (or part of the salary) will be covered during the disability period. The employer's contribution to the Workers' Compensation Commission in order to compensate workers facing a psychological health problem is another cost that can be linked to absenteeism. All the more 'indirect' consequences related to an employee's absence (overtime for colleagues, hiring replacement workers, etc.) also have an economic impact on the organisation.

The magnitude of short-term and long-term disability claims for psychological health problems can be demonstrated using the findings from Watson Wyatt's 2002-2003 survey entitled *Staying at Work* (Macleod et al., 2002). These indicate that psychological problems are the main cause of short-term (79%) and long-term (73%) disability claims amongst survey participants. These results show that the average cost of absences, in relation to the insurance plan, would be equivalent to 3.5% of the total payroll; half of this amount would be related to the short-term inability to work, and the other half to the long-term inability to work and worker compensation for workplace injury.

In a study conducted by Kessler et al. (1999), data from two national surveys was used to estimate short-term inability to work because of a major depression. The results of this study show that employees

suffering from depression have between 1.5 and 3.2 times more short-term absences and that the average cost of missed work varies between \$182 and \$395 per employee. The authors conclude that these costs are amongst the highest that must be assumed by employers for all chronic illnesses.

Employee absenteeism data is verifiable, especially within large organisations that have information management systems providing a relatively accurate picture of the number of absences and missed work days. Whenever baseline data is available, the manner in which it can be used varies. Essentially, there are two approaches to measuring the impact of absenteeism: the Lost Wages Method, and the Friction Cost Method.

4.1.1. Lost Wages Method/Human Capital Method

One of the most common methods for calculating the costs of absenteeism is the Lost Wages Method, also called the Human Capital Method (Berger et al., 2001). This method, which is mainly used to measure the economic impact of illness and premature death, is relatively straightforward since it involves multiplying the number of days lost by the absent employee's daily salary or by the organisation's, or economic sector's, average salary. The estimates obtained using this method are considered to be low since they exclude a significant number of indirect cost indicators (legal fees, medical expertise fees, worker replacement costs, lost production, etc.) and suggest that the absent employee's salary sums up the impact of health problems on the organisation's productivity.

4.1.2. Friction Cost Method

The Friction Cost Method (Koopmanschap et al., 1995) also involves measuring absenteeism and its economic impact within the organisation. This calculation method attempts to quantify the impact of absenteeism by identifying short- and medium-term costs. Short-term losses are established based on the amount of time needed by the organisation to return to productivity levels that existed prior to the absenteeism; this period of time is called the 'friction period'. By identifying this period, one assumes that productivity losses are limited to the amount of time required to replace the absent worker and for this new worker to become productive. As a result, it also includes the costs of hiring and training new personnel. Medium-term losses are established mainly at a macroeconomic level, and the authors believe it takes five years to measure them. This method has its limits, however, and it relies heavily on an organisation's job structure. In some organisations, for example, absent employees are not replaced, and work is redistributed to colleagues, or, in some cases, is simply not done at all. To date, this calculation method has not been widely used (Rothermich and Pathak, 1999).

4.2 Presenteeism

It is becoming increasingly apparent that absenteeism is only the tip of the iceberg when it comes to the impact of mental wellbeing at work. In fact, a recent study (Biron et al., 2006) shows that workers go to work in spite of illness 50% of the time, while 40% of those who remain at work show signs of heightened psychological stress. The phenomenon of being at work but not working at one's full capacity for health reasons is called presenteeism (Hemp, 2004). Presenteeism has numerous impacts on the organisation's financial burden.

The data reported by Hemp (2004) and taken from Bank One clearly shows the economic impact of presenteeism. In this organisation, the financial losses resulting from reduced productivity due to health problems (expenses related to presenteeism) account for a large portion of the health costs. Hemp also points out that presenteeism can reduce an employee's productivity by 33% or more. What is

more, the author states that presenteeism is a phenomenon that could cost an organisation much more than absenteeism.

Another study, carried out by Stewart et al. (2003), assessed workplace production hours lost both for employees suffering from depression and those who were not. A cost was then associated with these hours, based on the hourly wage reported by study participants. On average, workers who are depressed report a higher number of lost production hours attributable to their state of health, compared to workers with no signs of depression. Furthermore, the authors show that, in more global terms, lost production hours for people suffering from depression are mainly linked to presenteeism (production hours lost while the employee is at work). Specifically, 82.1% of all lost production hours are linked to presenteeism.

4.3 Other economic impacts of work stress

When a company's workforce faces mental wellbeing problems, absenteeism and presenteeism are two consequences that have a significant impact on the organisation's finances. Productivity losses, wage-loss insurance premiums paid to insurers for short- and long-term inability to work, and overtime hours put in by other workers during an employee's absence are just a few examples of costs the organisation assumes for absenteeism and presenteeism. However, it is possible to identify other costs also borne by the company. These can be related to both absenteeism and presenteeism (common costs), or they may represent more general costs related to work stress. Several examples are presented in the following pages.

4.3.1. Cost of employee turnover

In addition to temporary absences from the organisation (absenteeism), poor mental wellbeing may also lead to permanent departures that will influence employee turnover rates within the company. Employee turnover can result in various types of costs. According to Hoel et al. (2001), the costs of recruitment (advertising and selection), training and development are the key replacement costs related to employee turnover.

These authors also state that an employee taking on new duties will perform below expectations during the training period, which has an economic impact that must not be overlooked. Furthermore, they report that the replacement of an employee could also have an impact on other workers, although they provide no details.

Tangri (2003) distinguishes between five major categories of costs related to employee turnover: employment termination costs; costs related to the vacant position; hiring costs; training costs; and overall financial losses. By identifying the percentage of employee turnover attributable to stress, and the total cost of this turnover, it would be possible to estimate the economic burden related to this work stress cost indicator.

According to data reported by the American Institute of Stress, it appears that 40% of employee turnover is directly related to work-related stress (American Institute of Stress, 2004). Along the same lines, the Institute also cites results from a survey that indicates nearly one respondent in five has already left a job because of work stress. Quick et al. (1997) argue that employee turnover costs are, in many cases, equivalent to approximately five times the employee's monthly salary.

4.3.2. Employee assistance programme

An employee assistance programme, or EAP, is a possible solution for employees who are experiencing problems. These programmes require the organisation's financial support and are thus another mental wellbeing cost indicator. Psychological health problems related to stress, anxiety, depression, or family and

relationship issues frequently seem to be the reason for an EAP consultation. In fact, Midwest Employee Assistance Programs Inc. says that 50% to 60% of employees experiencing difficulties have these types of problems (Tangri, 2003).

A study conducted by French et al. (2003) sheds light on the cost of these programmes. By comparing data obtained from a national survey conducted in the United States in 1993 and in 1995, these authors conclude that the annual average cost of external EAPs was \$21.47 in 1993 and \$22.19 in 1995, per eligible employee. According to this survey, 80% of the organisations with an EAP in 1995 had external assistance programmes, and 3% had both external and internal programmes.

4.3.3. Group insurance for health care

Mental illness at work may lead to a wide range of medical expenses. Even if most of these costs are covered by the public health system, some are borne by the organisation or the employee. Though the costs vary according to the country, the organisation and the type of insurance scheme, the main costs generally include ambulatory care, medical expertise, psychotherapeutic care, and so on. Employers who completed a survey by Watson Wyatt Worldwide in 2001 indicated that they expected to see increased group insurance costs for health care in 2003-2004 and 2004-2005 (Watson Wyatt Worldwide, 2001). However, this cost increase will not necessarily be borne entirely by the employer. For example, employers may increase the workers' contribution to the insurance premium in order to reduce the impact of this increase on the organisation's costs.

5. Discussion

It is clear, after analysing both the scientific and non-scientific literature, that a comprehensive list of poor mental wellbeing at work cost indicators does not exist. However, certain trends do emerge.

The impact of poor mental wellbeing on productivity can be broken down into two broad categories that are not mutually exclusive: absenteeism and presenteeism. It is important to differentiate between these two categories of costs because they include both common and different elements.

To clearly identify the impact of occupational mental illness, it is important to consider the costs related to presenteeism as well as to absenteeism, since the former has been reported to be a more costly phenomenon within organisations (Hemp, 2004). Indeed, according to the study by Brun et al. (2003), only 2% to 3% of people are absent from work for psychological disorders, while 40% of those who stay at work show signs of heightened psychological stress that interferes with their work. Presenteeism is therefore a phenomenon that accounts for a significant portion of stress costs.

Besides, the national data on absenteeism are also influenced by macroeconomic factors such as unemployment rates, working schedules, and the generosity of the insurance schemes (Bonato and Lusinyan, 2004).

This short paper helps identify a certain number of cost indicators that must be considered when estimating the economic impact of poor mental wellbeing on organisations. However, the information currently available on these indicators makes such estimates difficult. Admittedly, organisations could use the numbers or percentages indicated in the literature to somewhat accurately evaluate some of their costs. However, it appears obvious that further information is needed in order to obtain a cost estimate that more closely reflects the actual amounts spent by an organisation with regard to poor mental wellbeing at work.

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