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Abstract

For many years Sweden has experienced high rates of sickness absence among employees.

Sickness absence is often regarded as an indicator of health in a population, with low rates of absence associated with good health and high degrees of absence associated with poor health.

The aim of the current paper is to examine this hypothesis, i.e. that the high rates of sickness absence in Sweden is an indicator of poor health. Sickness absence and health data was

obtained from official government statistics in order to compare Sweden with six other

European countries and a number of health-related variables. The hypothesis was not

supported by the results of this study. While Sweden has a high rate of sickness absence, it

ranks highly on a range of health variables when compared to other European countries.

Instead, sickness absence may be more strongly associated with rates of unemployment. In

times of high unemployment, sickness absence is low, and in times low unemployment,

sickness absence is high. While public health programs are essential components of primary

health care initiatives, the evidence from this study indicates that they are unlikely to have

significant impact on sickness absence in Sweden. Instead more effort should be made to

intervene early following sickness absence through providing timely vocational rehabilitation

and disability management programs.

Introduction

A key component of disability management is prevention of workplace injuries. At a systems level this includes the introduction of policies that encourage companies to implement prevention measures. At a company level this includes a range of interventions including workplace modification, job redesign, safety training and health and wellness programs (Shrey, 1995). However, it is critical that policy and practice be informed by evidence to ensure that prevention efforts address the problem areas of concern and avoid wastage of scarce resources. In this context, the starting point for governments and companies in designing policies and prevention activities is the collection of data. For example, government incentive schemes which encourage employers to prevent injury should be based on information about incidence rates for various injury types across different industries to ensure a targeted approach. Similarly, employer-based prevention programs should be based on a thorough review of data such as average cost per claim, average claim duration and claim incidence (Buys & Randall, 2009; Harder & Scott, 2005; Mital, 1995).

In an effort to reduce the economic burden of illness and injury, one area that has received considerable attention by both governments and employer alike is the prevention of sickness absence. Sickness absence from work is now recognized as a major public health issue in many countries that has significant economic and social costs for workers, their families, employers and society (Alexanderson & Hensing, 2004). This is particularly a problem in Sweden, with national data indicating that Swedish workers are absent from work due to ill health on average around three weeks per year (Försäkringskassan, 2010). This figure is twice the rate of absence when compared to workers in other similar countries (Försäkringskassan, 2009) and costs the Swedish State over 1 billion euro per year, equaling the costs for health care (Alexanderson & Hensing, 2004).

The causes of the high rate of sick absence in Sweden are still not clearly understood. This is partly explained by the lack of funding for research, and the multi-factorial nature of this phenomenon (Alexanderson & Hensing, 2004). However, in an effort to target prevention efforts, an area that is worthy of examination is the relationship between sickness absence and health. It is reasonable to hypothesize that high rates of sickness absence will be associated with poor health. In Australia, for example, a country with similar demographic and economic profile to Sweden, it was found that employees with poor health were far more likely to be on sickness absence and nine times more likely to have sick days compared to healthy workers (Medibank Private, 2005). Understanding this relationship could be critical to preventing absence from work due to sickness. The aim of this study is to therefore test the hypothesis that the high rates of sickness absence can be explained by poor health in the Swedish population. In addition, two questions were addressed:

- 1) Are there any health related factors that explain the fluctuations in the sickness absence rate in Sweden?
- 2) Are there any health related factors that explain why Sweden has the highest sickness absence rate in Europe?

Method

Sickness absence and health statistical data was analyzed and compared between Sweden and a number of other European countries, including Denmark, Finland, France, Netherlands, Norway, Great Britain and Germany. The data was drawn from official national and international sources, including the Swedish National Social Insurance database for the years 1970 to 2005, and the Eurostat and the Labour Force Surveys (LFS), for the years 2000 to 2005. Health variables examined were infant mortality, life expectancy, healthy life expectancy, self-reported health, physical activity, mental well-being, social exclusion,

workplace safety, use of tobacco, use of alcohol, use of drugs index, calorie intake, vegetable and fruit intake, obesity and incidence of lung cancer. These variables were included both because they are all well established health determinants within the World Health Organisation (WHO, 2010), and also because comparative data was available. The countries included in the comparison were chosen because they have similar economic and social structures to Sweden.

Results

Sickness absence in Sweden is well documented due to the long history of the National Social Insurance Scheme, which has been responsible for collecting data on this issue. All Swedes aged 16-65 years are covered by the Scheme. To receive the sickness benefit, workers must fulfill two eligibility criteria: 1) they must suffer from a disease or injury, which 2) leads to a reduction of working capacity as certified by a medical practitioner.

The Swedish sickness data can be presented in several ways, the most common being to present the “sickness rate”, which is the average number of sick days per year per worker, calculated by dividing the total amount of days on sickness absence (i.e. days where sickness benefit has been funded from social insurance) by the total number of insured individuals (approximately 4.5 million Swedes). The average number of sick days between 1970 and 2005 is presented in Figure 1.

Insert Figure 1 here

As can be seen in Figure 1 the average Swede in 2005 was on sickness benefit 15 days and that sickness absence fluctuates greatly over time, ranging from 12 days in 1998 to 25 days in 1987. In Figure 2 the sickness rate for males and females is presented.

Insert Figure 2 here

It is evident from Figure 2 that the sickness rate for men is significantly higher than for women during the period 1970 - 1980. However between 1980 and 2005, the sickness rate for women exceed that for men and in fact, this difference exponentially increased between 1998 and 2004. Figure 3 provides the sickness absence rates for Sweden compared to other European countries. Unlike Figures 1 and 2, Figure 3 is not based on days on sick leave, but is a measurement of sickness absence in terms of the proportion of employees aged 20–64 who have not been working at all during an investigated week due to their own illness, injury or temporary disability.

Insert Figure 3 here

It can be seen from Figure 3 that sickness absence in Sweden is significantly higher when compared to other European countries. In Sweden around 4% of workers on average per week are on sickness absence compared to approximately 2% in the comparison countries. This difference is highly significant given the actual numbers of workers on sickness absence represented by these statistics. Of interest is also the significant decline in the Netherlands in the rate of sickness absence from being the highest in 2000 to one of the lowest in 2005. It is noticeable that this occurred following changes to the Occupational Disability Insurance Act in the late 1990's that were designed to encourage return to work of injured or ill employees. There is evidence to suggest that further legislative changes in the Netherlands since 2005 (e.g. the introduction of the Work and Income (Ability to Work) Act (2006)) have continued to impact sickness absence rates (Chotkowski, 2007).

If sickness absence is related to poor health, the data in Figure 3 suggest that that the level of health of Swedes should be significantly poorer when compared to other European countries. However, examination of health data does not support this hypothesis. On the contrary, the data indicates that Swedes have comparatively good health in a range of areas. In Table 1 different health related variables are compared among the seven countries. For each variable, the countries are ranked from top to bottom with a higher ranking equating to a higher level of health on each variable.

Insert Table 1 here

It is evident from the data that Sweden is one of the most “healthiest” countries, ranking in the top three all variables, except mental well-being. In other words there is no relationship

between sickness absence and health in Sweden and no health-related reasons which account for high rates of sickness absence among Swedes.

Discussion

The hypothesis that high rates of sickness absence can be explained by poor health in the Swedish population was not supported. In terms of fluctuations in sickness absence rates, particularly in the period 1982-2005, it is difficult to find any health related data to explain this finding. The most common health issues among workers on long-term sickness absence are musculo-skeletal (back, neck and shoulder) and mental health problems and disabilities. Collectively, approximately 70% of absent workers suffer from these two diagnoses (Försäkringskassan, 2010). Back, neck and shoulder problems have been common for many years, while the number of workers with mental health conditions has grown considerably during the last decade. From a public health perspective, the situation in Sweden has steadily improved since the 1980's with Swedes living longer, eating better food, drinking and smoking less, and increasing the amount of exercise. The exception is mental health among women, and especially among the young. However, this is not a dramatic development that would account for the fluctuation in absence rates (Försäkringskassan, 2009). In summary, as the general health of the Swedish population is good and has continued to improve over the last two decades, there is no evidence that fluctuations in sickness absence can be explained by changes in the health status of the population.

If fluctuations in sickness absence are not related to health status, what does account for these changes? One possible explanation is the association between sickness absence, employment conditions and fear of job loss (Figure 4).

Insert Figure 4 here

In economic downturns and consequent high unemployment, sickness absence is low, and in times of sustained economic growth and low unemployment, sickness absence is high. This phenomenon may be due to the fact that workers fear losing their jobs in poor economic conditions, and therefore are unwilling to report sick and to be a “burden” for the employer and the company (Askildsen, Bratberg & Nielsen, 2005). This phenomenon has been described as presenteeism (Ashby & Mahdon, 2010), a situation in which employees report to work even though they are ill. High rates of presenteeism have been found in a number of countries, including Sweden (Vingard, Alexanderson & Norland, 2004). It has also been found to be more prevalent than absenteeism, and is considered to have a major impact on productivity and poor employee health (Ashby & Mahdon, 2010).

If poor health does not explain the high degrees of sickness absence in Sweden there must be other reasons for this phenomenon. Sweden has an older working population and there is an association between incidence of chronic illness and age (Wen, 2004). However, after controlling for this variable, differences in sickness absence rates between countries remain approximately the same (Försäkringskassan, 2009). There is a view that the Swedish benefit system is too generous, encouraging workers to be absent from work. However, other European countries also have similar sickness insurance systems, but do not experience such high absenteeism rates (Försäkringskassan, 2009). For example, in relation to the period covered by the data, all comparison countries, except the UK, had income related sickness insurance systems with benefit levels that provided 100% wage replacement during sickness absence. In contrast the benefit level in Sweden was only 80%. Although beyond the scope of this paper a number of other explanations may account for Sweden's high rate of sickness absence including the ‘welfare state’ mentality, encouraged by the country's long tradition of providing social insurance benefits, the role of the physicians in certifying employees unfit for

work, a dysfunctional insurance system and lack of economic incentives to encourage employers to be involved in employee return to work programs.

The findings of this study have implications for the delivery of rehabilitation services to people on sickness absence. Vocational rehabilitation practitioners will need to take an ecological approach to case management (Dobren, 1993), in which they address the constellation of factors that impact return to work. This may include a range of issues other than just the functional implications of the illness or disability, such as attitudes toward work, the role of the family in supporting the return to work process, engagement of doctors in agreeing to transitional work options and managing the bureaucracy of the social insurance system. Furthermore, it is critical that absent workers are referred to vocational rehabilitation services as soon as possible (Marnetoft et. al, 2007) to avoid the pervasive psychological effects of long-term absence from the workplace. Clearly, the findings of this study question the wisdom of embedding vocational rehabilitation activities within a public health framework aimed at increasing population health as a means of managing sickness absence. Instead, vocational rehabilitation activities are better situated within a policy framework that encourages employers to be involved in return to work process. In this context, approaches such as disability management have considerable utility in increasing return to work outcomes (Buys & Randall, 2009). Given that presenteeism may be as much of a problem as sickness absence (Ashby & Mahdon, 2010), disability managers who are based in the workplace and interacting regularly with workers will be in an ideal position to address this issue.

There a number of limitations to this research. The study only examined a limited number of health-related variables in relation to sickness absence – there may be other that account for the high rates. The method of data collection was restricted to national and international statistical sources. It is possible that other data collection methods such as surveys or in-depth, semi-structured interviews with workers might have elicited a better understanding of the

relationship between health and sickness absence. The relationship between sickness absence and unemployment rates is an association and there is no evidence that there is a causal relationship between the two variables. It is evident that further research is required to determine the causes of the high rate of sickness absence in the Swedish population. Armed with this research the Swedish government can implement effective policies and interventions to address the situation. In the meantime researchers and policy advisers need to use caution when looking at public health interventions as a way of decreasing sickness absence as there does not appear to be a relationship between the two areas.

Conclusion

The implication of the results of this study is that we avoid making assumptions about the causes of phenomena such as sickness absence in designing disability management interventions. It is critical that we base programs on sound research data to ensure they are targeted at addressing the problems of concern. This article provides a good example of the need to examine the range of systemic issues that impact on sickness absence, including the roles of key stakeholders in the lives of workers and the economic disincentives to return to work.

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FIGURE 1
The average number of sick days in Sweden between 1970 and 2005.

FIGURE 2
Sickness rate for males and females in Sweden between 1970 and 2005.

Source: Labour Force Surveys (arbetskraftsundersökningar), Eurostat

FIGURE 3

Sickness absence rates for Sweden compared to other European countries.

Source: Labour Force Surveys (arbetskraftsundersökningar), Eurostat.

Table 1: Health variables in Sweden and seven other European countries

Infant mortality	Life expectancy	Healthy life expectancy	Self-reported health	Index of health and social problems	Physical activity	Mental well-being	Social exclusion
<p>UN Development program, Human Development Report 2004, Oxford University Press, New York.</p> <p>in: UNICEF Innocent Research Centre, Child poverty in perspective: An overview of child well-being in rich countries, 2007, Innocent Report Card, Florence</p>	<p>Sweden</p> <p>France</p> <p>Norway</p> <p>Germany</p> <p>the Netherlands</p> <p>United Kingdom</p> <p>Finland</p> <p>Denmark</p>	<p>Sweden</p> <p>France</p> <p>Norway</p> <p>Germany</p> <p>the Netherlands</p> <p>Finland</p> <p>United Kingdom</p> <p>Denmark</p>	<p>Denmark</p> <p>the Netherlands</p> <p>Sweden</p> <p>United Kingdom</p> <p>France</p> <p>Germany</p> <p>Finland</p> <p>United Kingdom</p>	<p>Sweden</p> <p>Norway</p> <p>the Netherlands</p> <p>Finland</p> <p>Denmark</p> <p>Germany</p> <p>United Kingdom</p>	<p>Finland</p> <p>Sweden</p> <p>Denmark</p> <p>United Kingdom</p> <p>France</p> <p>the Netherlands</p> <p>Germany</p>	<p>Norway</p> <p>Germany</p> <p>the Netherlands</p> <p>Denmark</p> <p>Sweden</p> <p>Finland</p> <p>France</p> <p>United Kingdom</p>	<p>Norway</p> <p>Sweden</p> <p>the Netherlands</p> <p>Denmark</p> <p>Germany</p> <p>Finland</p> <p>United Kingdom</p> <p>France</p>
<p>OECD Health Data 2005, as reported in: UNICEF Innocent Research Centre, Child poverty in perspective: An overview of child well-being in rich countries, 2007, Innocent Report Card, Florence</p>	<p>UN Development program, Human Development Report 2004, Oxford University Press, New York.</p>	<p>WHO (2003), The world health report 2003 – Shaping the future. Geneva.</p>	<p>(Norway missing) Health in the European Union, Special Eurobarometer 27, 26, 2006, 2 – TNS Opinion and Social</p>	<p>Wilkinson R and Pickett K. (2009) The Spirit Level: Why More Equal Societies Almost Always Do Better. Penguin Books Ltd UK. See www.spiritlevel.co.uk/knowledgecentre/methods_for_data_in_the_compilation_of_the_index</p>	<p>(Norway missing) European Commission, 2004, The citizens of the European Union and Sport, Special Eurobarometer, Brussels, EU.</p>	<p>Second European Quality of Life Survey (2007), Office for Official Publications of the European Communities, Luxembourg</p>	<p>Second European Quality of Life Survey (2007), Office for Official Publications of the European Communities, Luxembourg</p>
Work place safety	Use of tobacco	Use of alcohol	Use of drugs	Calorie intake	Vegetable and fruit intake	Obesity	Lung cancer incidence
<p>Sweden</p> <p>United Kingdom</p> <p>Denmark</p> <p>Finland</p> <p>the Netherlands</p> <p>Norway</p> <p>Germany</p> <p>France</p>	<p>Sweden</p> <p>Finland</p> <p>United Kingdom</p> <p>Denmark</p> <p>France</p> <p>the Netherlands</p> <p>Germany</p>	<p>Sweden</p> <p>the Netherlands</p> <p>Finland</p> <p>France</p> <p>United Kingdom</p> <p>Germany</p> <p>Norway</p> <p>the Netherlands</p> <p>Denmark</p> <p>United Kingdom</p>	<p>Sweden</p> <p>Finland</p> <p>the Netherlands</p> <p>United Kingdom</p> <p>Norway</p> <p>Germany</p> <p>Denmark</p> <p>France</p>	<p>Sweden</p> <p>Finland</p> <p>the Netherlands</p> <p>United Kingdom</p> <p>Norway</p> <p>Germany</p> <p>the Netherlands</p> <p>UK</p>	<p>France</p> <p>Denmark</p> <p>Sweden</p> <p>Finland</p> <p>Norway</p> <p>France</p> <p>Denmark</p> <p>Germany</p> <p>the Netherlands</p> <p>UK</p>	<p>Sweden</p> <p>the Netherlands</p> <p>Norway</p> <p>France</p> <p>Denmark</p> <p>Germany</p> <p>Finland</p> <p>United Kingdom</p>	<p>Sweden</p> <p>Finland</p> <p>Denmark</p> <p>United Kingdom</p> <p>Germany</p> <p>France</p> <p>the Netherlands</p>

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