The Impact of Diabetes on Workplace Presenteeism: A Cross National Study in the European Union
Paul C Langley, Ph.D., College of Pharmacy, University of Minnesota; Heejung Bang, Ph.D., Associate Professor, Weill Medical College, Cornell University; Kathy Annunziata, Kantar Health

Abstract

OBJECTIVES: The purpose of this study is to consider the extent to which estimates of the impact of diabetes on presenteeism can vary between major industrial countries and to assess the relative contribution of absenteeism, socio-demographic and health risk factors.

METHODS: Data from the 2008 National Health and Wellness Survey, a national survey of five EU countries (the UK, France, Spain, Germany and Italy) were used to estimate an ordered probit regression analysis of the determinants of presenteeism for those employed full-time, part-time or self-employed. Presenteeism was determined by respondents assessing the extent to which workplace productivity was impacted by their health status on a 10-point scale. The model includes health risk factors (BMI, alcohol use, smoking), the Charlson Comorbidity Index (CCI) along with controls for absenteeism experience and diagnosed diabetes.

RESULTS: Absenteeism, the percentage of time lost in the previous seven days, was the dominant factor impacting presenteeism for all countries (odds ratios 16.17 Germany to 9.23 Spain). With the exception of Spain, obesity and morbidity obesity had a positive and significant impact with odds ratios in the range 1.33 – 1.04 and 2.08 – 1.60 respectively. The presence of diabetes was significant for all countries except Italy ranging from 1.76 (Spain) to 1.46 (UK). Replacing diabetes with CCI resulted in significant odds ratios in range 1.33 (Germany) to 1.17 (UK).

CONCLUSIONS: The presence of diabetes has a significant and negative impact on workplace presenteeism. The impact of diabetes is of a similar order of magnitude to the presence of obesity and morbidity obesity.

Introduction

The impact of chronic disease and its comorbidities on employment status and workplace absenteeism and presenteeism has been extensively studied at least in the US. In the case of diabetes there are a large number of studies that have addressed its impact on workplace participation (Vijan et al., 2004) and the impact of diabetes comorbidity conditions on absenteeism (Kivimäki et al., 2007). Stewart et al. (2007) have reviewed what has not been considered in either study or not the impact of diabetes on employment status, workplace absenteeism and presenteeism can be generalized to other countries where labor market conditions and attitudes may be different than those in the US.

Objective

To assess the extent to which the impact of diabetes (type 1 and type 2) on presenteeism varies between the labor markets of the big 5 EU countries.

Methods

The National Health and Wellness Survey is a large scale, Internet-based survey that has been utilized extensively over the past decade. The present analysis is based upon the 2008 survey of the UK, France, Spain, Germany and Italy. Respondents were adults age 18 or over.

The determinants of absenteeism are explored through the application of an ordered logit model. Absenteeism is determined by respondents indicating time off due to ill health in the past seven days utilizing questions from the Work Productivity and Activity impairment scale (Reilly, 2002).

Apart from diabetic status, the models included demographic and socio-economic characteristics, together with health risk factors (BMI, alcohol use, smoking) as potential confounding factors along with controls for absenteeism experience and diagnosed diabetes. The impact of the Charlson Comorbidity Index (CCI) was also explored. Odds ratios were estimated for all variables. Only employed respondents were included in the analysis.

Results

Regression results are presented in Table 1. Absenteeism, or the percentage of work time missed due to health, had the greatest impact on presenteeism in all the countries (odds ratios ranging from 16.2 in Germany to 9.23 in Spain). The presence of diabetes is significant in all countries other than Italy in having a negative impact on workplace presenteeism.

Aside from Spain, obesity and morbid obesity also had positive and significant impact on presenteeism in all the countries. The odds ratios for obesity ranged from 1.93 (Germany) to 1.04 (France). The odd ratios for morbid obesity ranged from 2.09 (UK) to 1.16 (France).

The results where the CCI replaces the diabetes variable are shown in Table 2. Again, absenteeism was the dominant factor for presenteeism. Also, aside from Spain, obesity and morbid obesity also had positive and significant impact on presenteeism in all the countries. The odds ratios for obesity ranged from 1.3 (Germany) to 1.04 (Spain). The odd ratios for morbid obesity ranged from 2.08 (UK) to 1.16 (France).

Conclusions

The presence of diabetes has a significant and negative impact on workplace presenteeism in all five EU countries. While absenteeism is clearly the major driver in the presenteeism model – as a predictor of presenteeism – diabetes, and more generally the presence of comorbidities, has a significant, independent effect on presenteeism.

References