

# The contribution of job characteristics to socioeconomic inequalities in incidence of myocardial infarction

Martijn Huisman<sup>a,b,\*</sup>, Frank Van Lenthe<sup>a</sup>, Mauricio Avendano<sup>a</sup>, Johan Mackenbach<sup>a</sup>

<sup>a</sup> Department of Public Health, Erasmus University Medical Center, Rotterdam, The Netherlands

<sup>b</sup> Interdisciplinary Center for Psychiatric Epidemiology, University Medical Center Groningen, University of Groningen, P.O. Box 30001, Groningen, The Netherlands

Available online 10 March 2008

## Abstract

The current study estimated the contribution of job characteristics to socioeconomic inequalities in incidence of myocardial infarction (MI) during a 12-year follow-up period. Data were from the working population (aged 25–64 years) in the Netherlands longitudinal GLOBE study ( $N = 5757$ ). Self-reported information was available from baseline measurement (in 1991) for education, occupation, job demand, job control, fear of becoming unemployed, adverse physical working conditions, and smoking and alcohol use. Information on hospital admissions for MI among study participants was available until 2003, and was linked to baseline data via record linkage. Cox regression analyses were performed to estimate the hazard of MI in different socioeconomic groups before and after adjustment for job characteristics and health-related behaviours. Lower educated and manual workers had a higher risk of MI during follow-up, after adjusting for age, sex and marital status than higher educated and non-manual workers, respectively. After adjustment for occupation, the lowest educated still had an elevated risk of MI. After adjustment for education, no significant association of occupation with MI was observed. Job control and adverse physical working conditions were not significantly associated with MI after adjustment for socioeconomic position. These results suggest that the reduction of the socioeconomic position–MI association after adjustment for the two specific job characteristics reflect the effect of other unobserved factors closely related to both socioeconomic position and job characteristics. The results of this study point toward education as being the stronger predictor of hospital admitted MI, compared to occupational position and job characteristics, in the Dutch working population.

© 2008 Elsevier Ltd. All rights reserved.

*Keywords:* The Netherlands; Social inequalities; Socioeconomic position; Job characteristics; Cardiovascular disease; Myocardial infarction

## Introduction

There still is an unabated need for explanations of socioeconomic inequalities in health (Lahelma, 2006). One of the potential explanations that have received more attention in the past years has been the role of job characteristics in generating inequalities

in health. The study of the contribution of job characteristics is of special interest, as those characteristics rank so prominently in proposed psychosocial pathways leading to cardiovascular disease (Hemingway & Marmot, 1999), which is the group of diseases that contributes most to socioeconomic inequalities in mortality in European countries (Huisman et al., 2005).

Most studies have approached the issue using self-assessed health as the outcome measure of interest (Appendix, first table), either as the sole outcome measure

\* Corresponding author. Tel.: +31 50 3611526.

E-mail address: [martijn.huisman@med.umcg.nl](mailto:martijn.huisman@med.umcg.nl) (M. Huisman).

of the study (Borg & Kristensen, 2000; Borrell, Munta-ner, Benach, & Artazcoz, 2004; Hemstrom, 2005; Schrijvers, Van de Mheen, Stronks, & Mackenbach, 1998), or in combination with other health outcomes measured via self-report (Brand, Warren, Carayon, & Hoonakker, 2007; Lahelma, Martikainen, Rahkonen, Roos, & Saastamoinen, 2005; Rahkonen, Laaksonen, Martikainen, Roos, & Lahelma, 2006; Warren, Hoonakker, Carayon, & Brand, 2004). The results of those studies are clear. With the study of Lahelma et al. (2005) as the exception, they find that physical and psychosocial job characteristics contribute substantially to socioeconomic inequalities in self-assessed health. Besides self-assessed health, job characteristics have been found to ‘explain’ part of the association of socioeconomic position with other health outcomes based on self-report. Job characteristics have been found to partly explain socioeconomic inequalities in (1) self-reported physical illness/functioning (Brand et al., 2007; Lundberg, 1991; Monden, 2005; Sekine, Chandola, Martikainen, Marmot, & Kagamimori, 2006; Warren et al., 2004); (2) self-reported mental illness/functioning (Brand et al., 2007; Lundberg, 1991; Sekine et al., 2006); and (3) self-reported limiting long-standing illness (Rahkonen et al., 2006).

Yet, despite this impressive amount of interest into the role of job characteristics in health inequalities in general, only few studies have tested their contribution to inequalities in cardiovascular outcomes specifically. The majority of these have relied on self-reported measures as well, such as the Rose questionnaire (Lahelma et al., 2005; Marmot, Bosma, Hemingway, Brunner, & Stansfield, 1997), or other self-reported measures of cardiovascular disease (Brand et al., 2007; Lahelma et al., 2005; Marmot et al., 1997; Warren et al., 2004). As Macleod and colleagues have pointed out, there is always the possibility that people who report more health problems may also be inclined to report more work-related problems (Macleod & Davey Smith, 2003; Macleod et al., 2002), thereby generating spurious associations in cases where job characteristics are psychosocial in nature. This potential problem is what Kristensen (1996) called ‘the triviality trap’.

Longitudinal studies with more objective health outcomes (such as hospital admissions or mortality) may provide stronger evidence for a contribution of job characteristics to socioeconomic inequalities in (cardiovascular) health. However, those studies have been much scarcer, and they have pointed toward a more modest contribution of job characteristics to socioeconomic inequalities in health (Andersen et al., 2004; Virtanen & Notkola, 2002). This contrast between the findings of studies using objective outcomes with those using self-

reports points to an empirical need for more studies investigating the role of job characteristics using objective measures of cardiovascular disease. Until now, these studies have relied on measurement of exposure to characteristics of jobs via job exposure matrices, i.e. aggregated information on exposure to specific psychosocial characteristics on the job type level. According to Andersen et al. (2004), the use of a job exposure matrix entails a considerable amount of non-differential misclassification, which attenuates the effect of the psychosocial work environment, and thereby also its mediating role (Andersen et al., 2004). It would require information on exposure to job characteristics on the individual level to acquire closer approximations of their mediating role in the association of socioeconomic position with cardiovascular disease.

The current study aimed to assess the contribution of several psychosocial job characteristics, measured at the individual level, to socioeconomic inequalities in an objective measure of cardiovascular disease, i.e. the incidence of myocardial infarction.

## Methods

### Sample

Our data are from the longitudinal GLOBE study. The GLOBE study is a prospective cohort study that started in 1991 among 27,000 inhabitants (15–74 years) of 18 municipalities in the southeastern Netherlands, with the aim of identifying explanations for the existence of socioeconomic health inequalities in the Netherlands. The study area consists of Eindhoven, the fifth largest city of the Netherlands, and a number of surrounding municipalities, ranging from small and rural to medium-sized and urban in character. The region is characterised by the presence of several industries, including electro-technical industry and car industry. A detailed description of the design of the GLOBE study has been presented elsewhere (Mackenbach, Van de Mheen, & Stronks, 1994). We used data from the baseline survey (response was 70.1%;  $N = 18,973$ ) of 1991. These data were linked to hospital admission data from five hospitals in the catchment area of the GLOBE study, covering the period between 1991 and 2003. These data were available through the National Medical Registry database. For reasons of confidentiality, linkage was based on 6-digit area post-code, sex and data of birth. Because these hospitals virtually cover the whole source population of the study, linkage was close to 100% (for  $N = 18,797$  in total). A myocardial infarction (MI) was defined as code

Download English Version:

<https://daneshyari.com/en/article/954521>

Download Persian Version:

<https://daneshyari.com/article/954521>

[Daneshyari.com](https://daneshyari.com)