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Current and lifetime exposure to working conditions. Do they explain educational differences in subjective health?

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Abstract

Previous research has shown that the association between education and health is partly mediated by working conditions. So far, most studies fail to take into account working careers and instead focus on working conditions at one point in time. This study examines the extent to which current and lifetime exposure to working conditions differ between educational groups, and whether taking into account lifetime exposure rather than current exposure improves our understanding of educational differences in health. A representative sample of the Dutch population ($n = 1561$) with retrospective information about working careers shows that lower educated men are significantly more exposed to adverse working conditions than higher educated men. These differences increase over the life course. Among women there are relatively small educational differences in exposure. Lifetime exposure to adverse working conditions explains a significant part (a third) of the health differences between the highest and lowest educated men. Moreover, measurements of lifetime exposure to working conditions offer a better explanation for educational differences in health than measurements of current exposure. Among women, only relative lifetime exposure to working conditions can explain a small part of the educational differences in health, while current and absolute lifetime exposure do not explain these differences.

Keywords: Education; Health; Inequalities; Working conditions; Lifetime exposure; Life course; The Netherlands; Methodology

Introduction

Social inequalities in health are a persistent phenomenon in all modern societies. A vast number of studies has described in detail the magnitude and nature of differences in health between educational, income and occupational groups for a growing number of societies and periods (Mackenbach, Kunst, Cavelaars, Groenhof, & Geurts, 1997; Marmot, 1994). A smaller number of studies report on the causes of social health differences. Variations between social groups in lifestyles, such as smoking, exercising and diet, play a significant role in bringing about health differences (Ross & Wu, 1995; Stronks, Van de Mheen, Looman, & Mackenbach, 1996). Another important, possibly even more important, factor are material circumstances. Several kinds of material circumstances are distinguished, such as a person's financial situation, housing conditions, quality of the neighbourhood and working conditions (MacIntyre, 1997). Differences in these circumstances can explain a substantial part of social health inequalities (Borg & Kristensen, 2000; Schrijvers, Van de Mheen, Stronks, & Mackenbach, 1998, 1999). Stronks et al. (1996) estimated that, in the Netherlands, material factors account for about 30–40% of the increased risk

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of the lower educated (compared to the higher educated) to be in poor health. Especially, working conditions might be relevant as people spend a substantial amount of time at work.

Although working conditions are often subsided with material factors in the dichotomy behaviour versus material circumstances, they are not all simply material in nature. Some are more psychosocial (e.g. autonomy) or have equal material and psychosocial implications for one's health (e.g. noise). There is ample evidence for negative effects of both adverse physical and psychosocial working conditions on general health (Amick et al., 2002; Borg & Kristensen, 2000; Lallukka et al., 2004).

Over the last few years, there has been growing attention among sociologists and social epidemiologists to the effects on adult health of circumstances earlier in life, such as childhood class, family circumstances or first occupation (Amick et al., 2002; Blane, Berney, Davey Smith, Gunnell, & Holland, 1999; Davey Smith, Hart, Blane, Gillis, & Hawthorne, 1997; Holland et al., 2000; Power, Manor, & Matthews, 1999; Lundberg, 1993; Lynch, Kaplan, & Shema, 1997). These studies acknowledge that a person's health is not only affected by his or her current situation, but also by the exposure to circumstances earlier in life. Although this may seem obvious, most studies on socio-economic inequalities in health use a static approach, which links current social position and current circumstances—that is, measured at time of interview—to current health (Lantz et al., 1998; Ross & Wu, 1995; Schrijvers et al., 1998, 1999). Few studies take account of lifetime circumstances or duration of exposure to particular risk factors (Power et al., 1999). Consequently, the potential importance of lifetime exposure to negative circumstances is neglected. With regard to circumstances that affect health, Blane (1999) has argued that "advantages and disadvantages tend to cluster cross-sectionally and accumulate longitudinally". Thus, we may expect that studying lifetime exposure to adverse circumstances can improve the explanation and understanding of social inequalities in health. As working conditions are a potentially important factor, the present study employs unique data on occupational careers to test the above-mentioned expectation for the impact of adverse working conditions on educational differences in health. So far, the life course perspective has not been applied to working conditions in this respect.

Theoretical as well as empirical reasons underlie the choice to study health differences between educational groups. Previous research has showed that education is a major stratifying factor in modern societies, especially with regard to health (Mackenbach, 1992; Ross & Wu, 1995). Classical sociological studies have showed that education has strong effects on income and labour market careers (Blau & Duncan, 1967; Mincer, 1974). In the Netherlands, education is a more important factor than class with regard to health (Van Berkel-Van Schaik & Tax, 1990). Furthermore, a practical argument is that everybody has an educational level, whereas not everybody has a job and thus cannot be assigned a class in a straightforward manner.

The research question of this study is twofold: To what extent can differences in current or lifetime exposure to working conditions explain educational inequalities in health? And, does taking into account lifetime exposure to adverse working conditions rather than exposure at one moment improve the explanation of educational inequalities in health? Before addressing these questions, I describe the extent to which current and lifetime exposure to working conditions differ between educational groups and how they are related to subjective physical health.

Previous research, theory and hypotheses

Although it may seem obvious that lower educated people have jobs with worse working conditions than higher educated people, surprisingly few reports in the literature deal with this issue explicitly. While variations in (psychosocial) working environment have been described for a range of occupations and other labour-related classifications (e.g., type of industry), few studies have investigated differentiation between social classes or educational groups (Borg & Kristensen, 2000; Wieling & Reemers, 1998). Nonetheless, the available research on labour market careers and working conditions suggests that there are substantial differences in exposure to working conditions between people of different educational levels. Lower educated people are more frequently exposed to adverse working conditions than higher educated people (Wieling & Reemers, 1998). Moreover, jobs of lower educated people often involve not just one but rather a combination of several negative conditions. This is the cross-sectional clustering of advantages and disadvantages referred to by Blane (1999).

The next question is whether there is (differential) accumulation over time. People with a high education start to work at a later age than lower educated people. The lowest educated may start working at the age of 16 and in older birth cohorts at even younger ages. People with a tertiary diploma finish their full-time education 6–10 years later. Consequently, they start their first job at a substantially later point in their lives. Furthermore, lower educated people are more likely to start their working career in low prestige jobs with bad working conditions and they are also more likely to remain in those positions. Many jobs that require low skilled labour have limited possibilities for upward job mobility. Due to differences in health knowledge, higher educated people may be more aware of health hazards in