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NEUROTICISM, EDUCATION AND SELF-ASSESSED HEALTH IN THE GENERAL POPULATION OF THE UNITED STATES. CAN SMOKING BEHAVIOUR EXPLAIN THE ASSOCIATIONS?

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ABSTRACT. In this study we investigate the interrelation between neuroticism, education, smoking and health. Two lines of research are brought together: one studying the relationship between neuroticism and health and the other studying the association between education and health. As lower educated people more often score high on neuroticism, we study the relationships of education and neuroticism with health simultaneously. Moreover, we hypothesize that smoking behaviour is a common explanatory factor in these associations. A 1996 US general population sample is employed to test the hypotheses. The associations between education and neuroticism on the one hand and self-assessed health on the other hand proved to be substantially smaller when education and neuroticism are mutually controlled for. Yet, the hypothesis that smoking behaviour provides an explanation for educational differences in health was only supported for men.

KEY WORDS: education, inequality, neuroticism, self-assessed health, smoking

INTRODUCTION

In this study, we bring together two lines of research in order to examine the relationship between neuroticism, education, smoking and self-assessed health. In psychological studies, the association between neuroticism and perceived health is examined and questions about explanations for this relationship have been addressed (e.g. Costa and McCrae, 1987; Goodwin and Engstrom, 2002; Smith and Spiro, 2002; Williams et al., 2004). Social epidemiological and sociological studies frequently describe and try to explain the association between education and health (Ross and Wu, 1995). Why is it important to bring these lines of research together? First, there is the assessed association between education and neuroticism
and this calls for a simultaneous study of the associations between education, neuroticism and health. Second, both lines of research might have an important explanatory (or intermediating) factor in common, namely smoking behaviour.

In the psychological literature, the association between neuroticism and health has often been studied, although mostly in restricted samples such as patients or students (for instance, Vollrath et al., 1999; Williams et al., 2004). Goodwin and Engstrom (2002) were the first to describe the relationship between the five-factor personality model and health perception in a community-based sample for the United States. They found that among respondents without self-reported medical problems, openness, extraversion and conscientiousness were associated with the perception of good health, while neuroticism was associated with the perception of poor health. Among respondents with self-reported medical problems, agreeableness, openness, extraversion and conscientiousness were positively associated with good health, whereas neuroticism again was negatively associated with perception of good health. In Goodwin and Engstrom’s study the associations were strongest for neuroticism.

Although there are inconsistent findings and arguments with regard to the degree to which neuroticism affects objective health or only perceived health (Costa and McCrae, 1987), it is clear that neuroticism is empirically associated with self-assessed health (Goodwin and Engstrom, 2002), which in itself is a predictor of mortality. However, neuroticism, as well as a number of other personality factors, cannot explain the effect of self-assessed health on mortality in follow-up studies (Mackenbach et al., 2002). The exact way neuroticism affects self-assessed physical health therefore is still rather unclear. Some studies have showed that there are substantial associations between neuroticism and health-related behaviours (Lemos-Giraldez and Fidalgo-Aliste, 1997; Bermudez, 1999). People who score high on neuroticism have a higher chance of starting to smoke and lower cessation rates (Eysenck and Eaves, 1980; Breslau et al., 1993; Droomers et al., 2002). Given the strong negative health effects of smoking, this might provide a partial explanation for the association between neuroticism and self-assessed health (Williams et al., 2004, p. 90). Testing this hypothesis is one way of advancing our knowledge about the relationship of neuroticism and health. The second line of research that is important in this study deals with the