

The effect of pre-employment factors on job control, job strain and psychological distress: A 31-year longitudinal study

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Abstract

This study examined the role of pre-employment factors, such as maternal antenatal depression, low birth weight, childhood socioeconomic position, early adolescence health risk behaviours and academic performance, in the relationship between work characteristics (low job control and high job demands, or job strain) and psychological distress at age 31. The data of 2062 women and 2231 men was derived from the prospective unselected population-based Northern Finland 1966 Birth Cohort study. Results of linear regression models showed that being female, father's low socioeconomic position, and poor academic achievement in adolescence were linked to low control and high job strain jobs at age 31, and that low control and high job strain were associated with psychological distress at age 31. Although having lower school grades, high absence rate from school, and moderate alcohol consumption at age 14 were significant predictors of psychological distress at age 31, the associations between job control, job strain and psychological distress remained after controlling for these and other pre-employment effects. As such, pre-employment factors do seem to link people to risky work environments, which in turn seem to relate strongly to psychological distress. However, the relationship between pre-employment factors and later psychological distress in adulthood is not completely explained by job environment.

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Introduction

Mental health problems have been recognized as the most rapidly growing reasons for early retire-

ment in many Western countries. Although a number of factors, such as genetic factors, disturbed family environment, pre-disposing personality traits, exposure to traumatic events, low social support and recent stressful life events, are known to increase the risk of affective disorders (Bruce, 2002; Kendler, Neale, Kessler, Heath, & Eaves, 1993) it has also been suggested that factors related to work life may predispose individuals toward such disorders (Kivimäki, Elovainio, Kokko et al., 2003; Kivimäki, Elovainio, Vahtera, Virtanen, &

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Stansfeld, 2003; Stansfeld, Fuhrer, Head, Ferrie, & Shipley, 1997; Stansfeld, Head, & Ferrie, 1999). Also evidence on the relationship between job characteristics and affective disorders has recently begun to emerge (Niedhammer et al., 1998; Stansfeld et al., 1997; Wall et al., 1997; Weinberg & Creed, 2000; Ylipaavalniemi et al., 2005).

The Job Strain Model (Karasek, 1990; Karasek, Baker, Marxer, Ahlbom, & Theorell, 1981), also known as the Demand-Control Model, has been one of the most widely tested models in research on the relationship between work and health. The model states that employees working under high strain (a combination of high work demands and low job control) have a higher risk of health problems than those with no such strain. Indeed, previous evidence, which is mainly cross-sectional, suggests that high job strain, high demand or low control are associated with depression, poor mental health, and psychological distress (de Lange, Taris, Kompier, Houtman, & Bongers, 2003; Karasek, 1990; Landsbergis et al., 1998; Mausner-Dorsch & Eaton, 2000; Stansfeld et al., 1997; Williams et al., 1997).

Previous studies on job strain and mental health have largely been focused on adulthood factors. We would like to suggest that pre-employment factors might influence job strain and mental health and therefore their role merits further consideration. For example, exposure to adversities, such as work stress, is not necessarily random. A genetically influenced set of traits may both increase an individuals' probability of selecting themselves into a high risk environment likely to produce job strain and increase their vulnerability to affective disorders (Kendler et al., 1995). Socioeconomic status during childhood may select people to lower academic careers (Osborn & Milbank, 1989) and related highly stressful work environment. It is also possible that poor health, especially poor mental health, which may largely be affected by early psychosocial factors (Wang, 2004), make one vulnerable to stressful work environment. Problems at school and negative health risk behaviour during adolescence may also restrict ones possibilities of choosing ones occupational status (Bradley & Corwyn, 2002).

Life course epidemiology has emphasized various developmental stages and processes defining the relationships between early risk factors, adulthood circumstances and health. The hypothesis defining the relationship between socioeconomic status and

health, emphasize the role of various developmental stages differently. They seem to underlie early risks as etiological factors, later risks as independent factors, later risk as pathways from early risks (selective hypothesis) or early and later risks as independent or additive factors. All of these hypotheses, which may be considered to be rather complementary than contradictory, have gained some empirical support (Wilkinson & Pickett, 2006).

The hypothesis behind the idea of critical period or early origin implies a stage in the individual's development in which an increased sensitivity to the influence of external agents may have crucial effects on later health. The foetal origin's hypothesis is well-known example which assumes that adverse social circumstances in early life and especially poor maternal nutrition during pregnancy lead to impaired foetal growth, biological programming of the foetus and increased risk of coronary heart disease, hypertension and diabetes later in life (Barker, Forsen, Uutela, Osmond, & Eriksson, 2001).

Thereafter, it is hypothesized that the individual can function only within the parameters set during this unique developmental opportunity. Barker (1991) describes this process as biological programming. The research on the effects of early factors, such as birth weight, on psychological problems or mental health, have mainly been restricted to research on antecedents of schizophrenia (Isohanni et al., 2000). The results of Cheung, Ma, Machin, & Karlberg (2004) showed that low birth weight for gestational age was related to psychological distress at age 42. It has also been shown that low birth weight may predict depressive disorders (Gale & Martyn, 2004; Patton, Coffey, Carlin, Olsson, & Morley, 2004).

Although the relationship between low socioeconomic position and poor health is widely reported (Adler et al., 1994; Marmot, 1997), less is known about the developmental pathways through which low SES in childhood leads to morbidity in adulthood. Childhood and adolescence are times of dramatic developmental changes, and these changes may result in differences in SES relationships. It has been, for example, suggested that development of biological organs that is less than optimal may not become a problem unless the system is stressed. The idea behind this pathway model is that although SES effects initially are large they gradually decrease over time, unless those early SES circumstances select individuals to poor circumstances or

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