



**Karolinska  
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**Institutionen för folkhälsovetenskap**

# Unemployment and morbidity and mortality -epidemiological studies

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## **ABSTRACT**

The aim of this thesis is to examine the associations between unemployment and mortality and morbidity and what roles pre-existing risk factors, such as psychiatric diagnoses, alcohol disorders, behavioural risk factors, sickness absence and socioeconomic factors, might have in these associations.

The studies were based on two populations: the Swedish conscription cohort 1969/70, and the Stockholm population 1990/91. The Swedish conscription cohort 1969/70 contained 49,321 men, born in 1949–51, who during mandatory conscription examination went through psychological assessment and screening for mental disorder, and were surveyed for information on social background and alcohol and drug use. Information from registers on mortality from 1971–2006 and morbidity 1973–2006, and mid-life labour market information 1990–94, was linked to the cohort. The Stockholm population 1990/91 consisted of all 24–58 year-olds in Stockholm Sweden during these years, 386,885 men and 384,183 women. Registered labour market information 1990–1994 and morbidity 1993–94 were linked to this cohort. Data were entered into Cox proportional hazard regression models and logistic regression models.

In study I, psychiatric diagnosis at age 18 screening, before or at an early stage of labour market entry, was found to be associated with increased risk of suicide and suicide attempt in middle age. In studies II and IV, poor health and risk factors for poor health, measured between ages 10 and 42, were found to be more prevalent among persons who became unemployed in middle age than among those who remained employed. In studies II and IV, it was also found that those who became unemployed had increased risk of mortality – from all-cause mortality, from natural causes including cardiovascular disease, and from external causes (both suicide and causes other than suicide). They also had an increased risk of hospitalisation from alcohol-related causes. The increased risks of the unemployed were to a large extent attenuated by controlling for confounders, but remained significant for mortality, violent death, external death other than suicide, and hospitalisation from alcohol-related causes. The strongest confounder in the associations between unemployment and mortality and morbidity was previous sickness absence. In study III, sickness absence in the Stockholm population was found to be a predictor of unemployment in men and in women. In study III, it was also found that unemployment in 1992–93 was associated with a (statistically significantly) increased risk of suicide for men in 1994–95. This elevated risk was strongly attenuated by controlling for sickness absence before unemployment.

The conclusion is that unemployment is associated with an increased risk of mortality and alcohol-related hospitalisation. The persons in poor health and with risk factors for poor health showed an increased risk of unemployment. After taking into account that the unemployed had poorer health and more risk factors for poor health, the associations between unemployment and mortality and alcohol-related hospitalisation were strongly attenuated. Even after controlling for differences in poor health and risk factors for poor health, there were statistically significantly increased risks of mortality and alcohol-related hospitalisation associated with unemployment.