

THE HEALTH CONDITION IN THE SAMI POPULATION OF SWEDEN, 1961-2002: CAUSES OF DEATH AND INCIDENCES OF CANCER AND CARDIOVASCULAR DISEASES

ABSTRACT

Introduction. The Sami people are the natives of northern Scandinavia and the Kola Peninsula. The knowledge about the health and living conditions of the Swedish Sami is extremely limited, which contrasts with the large amount of detailed information on health, demographic and socio-economic issues available for other circumpolar native populations. The encounter with the western society and the acculturation process has, for many native populations, had dramatic health consequences. Early contacts brought infectious diseases, such as smallpox and tuberculosis, while western influences during the last five decades have had more profound effects on the lifestyle, causing a dramatic increase of lifestyle-related western diseases, such as cancer, diabetes, stroke, obesity and hypertension. Mental health has also been negatively affected in many native populations due to western influence, with dramatic increases of suicide rates and drug abuse. Although the role and status of the Sami population in Sweden has been described in a historical context, these aspects of acculturation have not been thoroughly evaluated in relation to health.

Objectives. The overall objective of this thesis was to investigate the health conditions of the Sami population of Sweden, using causes of death and incidences of cancer and cardiovascular diseases as health indicators, and to evaluate their possible association with demographical and acculturative factors, such as assimilation, integration, separation and marginalization.

Study design. In order to establish a large database for epidemiological studies of the Swedish Sami population, a Sami cohort was constructed departing from a group of index-Sami, identified as either reindeer-herding Sami, or Sami eligible to vote for the Sami parlia-



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ment. Relatives to index-Sami were identified in the National Kinship Register and added to the cohort. The cohort contained a total of 41,721 persons (7,482 reindeer-herding Sami and 34,239 non-herding Sami) and selections from this population were used for the different studies. A four-fold larger, demographically matched, non-Sami control population was compiled in the same way.

Results. A study of causes of death in the Sami population of Sweden 1961-2000 showed that the differences in overall mortality and life-expectancy of the Sami, compared to the control population, were relatively small. However, Sami men showed a significantly lower SMR for cancers, but a higher one for external causes of injury. For Sami women a significantly higher SMR was found for diseases of the circulatory system and diseases of the respiratory system. An increased risk of dying from subarachnoid haemorrhage was observed among both Sami men and women. The increased risk of dying from accidents among reindeer-herding Sami is suggested to be caused by the increased socio-economic pressure and the extensive use of terrain vehicles. It is concluded that commercial reindeer management is one of the most dangerous occupations in Sweden. In a study of the cancer risk among the reindeer-herding Sami between 1961-1997, an overall lower risk to develop cancers, particularly prostate and malignant lymphoma, was observed among the reindeer-herding Sami. The risk for stomach cancer was significantly higher in relation to their non-Sami neighbours.

Conclusions. The Sami and non-Sami had similar risk factor patterns for CVD. The main differences were related to working conditions and lifestyle factors of the reindeer-herding Sami - the women showed a more unfavourable risk factor pattern than the men. Incidence ratios of stroke and acute myocardial infarction in the Sami population of Sweden were studied between 1985 and 2002. The results partly confirmed the mortality pattern. Higher incidences of stroke were seen among Sami men and women, compared to their non-Sami neighbours, while the mortality rates due to stroke were similar. Mortality ratios of acute myocardial infarction were increased for Sami women, while the incidence ratios were on the same level. A higher risk of subarachnoid haemorrhage was observed among all groups of Sami. According to traditional socio-economic risk factors, the differences in the levels of income and education observed between the Sami and non-Sami, were poorly associated with the disparities of CVD. As has been shown, only minor differences in health were found when comparing the health situation of the Sami with their non-Sami neighbours. This is in clear contrast to several other native populations, for which the health situation is largely unfavourable in comparison to that of the general population.

Discussion. The observed differences between the Sami and non-Sami probably reflect differences in lifestyle, psycho-social and genetic factors. The relation between these factors and the acculturation process is discussed, and it is suggested that separation, or segregation, of the reindeer-herding Sami and the assimilation of the other Sami have influenced the health conditions of the Sami, but with the largest impact probably prior to 1961, and thus outside of the scope of the studies in this thesis. Thus, the similarities in health between the Sami and non-Sami during the period 1961-2002 are probably a result of centuries of close interaction that has caused similarities in culture, attitudes and lifestyle, as well as equal accessibility to health-care services and social security systems.

Keywords: Sami, reindeer-herder, cardiovascular disease, cancer, cause of death, acculturation

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