

SIMSAM



What is SIMSAM?

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*Registry-based research in Sweden – past, present and future
Eugeniahemmet KS
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Overview

- Organization of the network
- SIMSAM Vision & Aims
- Focus and achievements of nodes/graduate school
- Activities 2013

SIMSAM



Swedish Initiative for Research on **M**icrodata in the **S**ocial **A**nd **M**edical Sciences

The National SIMSAM Network

➤ Swedish Research Council (VR) - 27 million SEK/year:

- Framework grants + grant for graduate school
- Period 1: Dec 2008 – Nov 2013
- Period 2: Jan 2014 – Dec 2018

➤ 6 research nodes + graduate school (SINGS), period1:

- Karolinska Institutet (KI) 2 nodes
SINGS
- Stockholm University (SU) 2 nodes
- Lund University (LU) 1 node
- Umeå University (UmU) 1 node

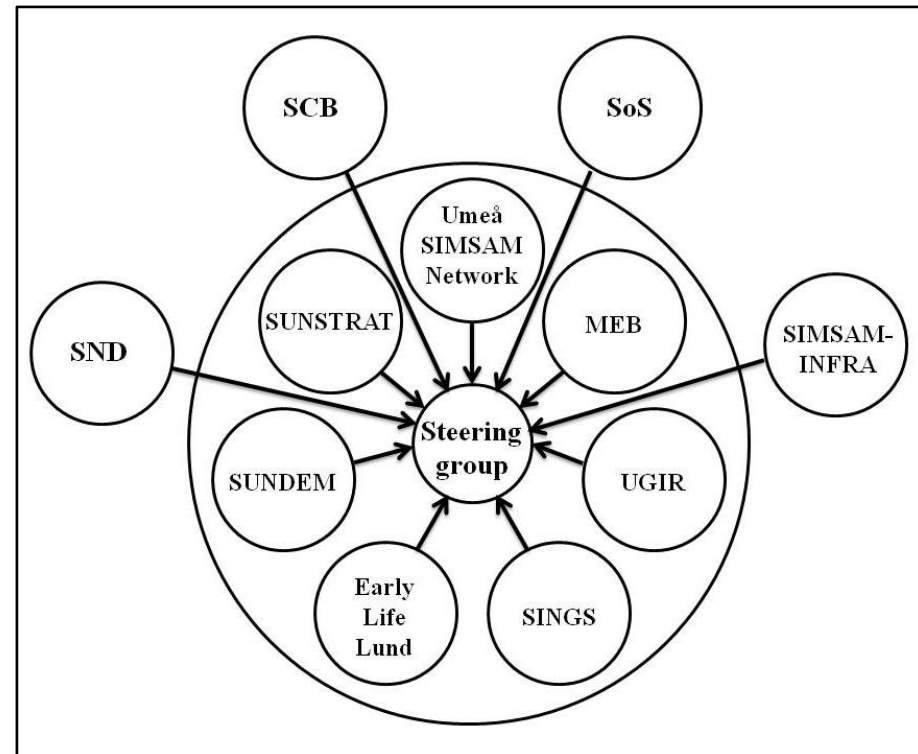
➤ Steering group

➤ Umeå node - coordinating role

➤ National coordinator 50%

➤ Scientific advisory board (SAB)

➤ www.simsam.nu



Scientific advisory group (SAB)

Irma Elo

University of Pennsylvania

- * Socioeconomic and racial/ethnic differences in health and mortality
- * Migration and health
- * Early life conditions and adult health and mortality
- * Neighborhood context and health
- * Demographic methods

John Hobcraft

University of York

- * Life-course and longitudinal analysis
- * Interplays of genetic and epigenetic and social sciences
- * Pathways to child and adult wellbeing and disadvantage

Øystein Kravdal

University of Oslo

- * Socioeconomic resources
- * Health
- * Mortality
- * Fertility
- * Family Behaviour

Elsebeth Lyng

Copenhagen University

- * Register-based health research including mortality and cancer incidence/evaluation of cancer screening programs

Anders Skrondal

Norwegian Institute of Public Health

- * Statistics, biostatistics, social statistics
- * Psychometrics

SIMSAM Vision

To create a world leading research community for register-based research for health and welfare

SIMSAM



Swedish Initiative for Research on **M**icrodata in the **S**ocial **A**nd **M**edical Sciences

SIMSAM Aims

- Promote utilization of registers and relevant methods to achieve revolutionary research results.
- Open national network where researchers exchange experiences and knowledge on how to use registers in research.
- Spread knowledge about registers as a research infrastructure nationally and internationally.
- Educate scientists with knowledge of how to use registers.

SIMSAM



Umeå SIMSAM Network (UmU)



- Microdata research on childhood for lifelong health and welfare
- Multidisciplinary research group:
 - *Epidemiology, environmental medicine, geography, sociology, statistics etc.*
- The Umeå SIMSAM Lab – a new research infrastructure
 - Linked health and socioeconomic registers (national and regional)
 - >13 million individuals followed over 50 years
- Selected publications
 - How can you prevent your child from contracting celiac disease? (Paediatrics, 2013)
 - Men and women are affected differently by unemployment.
(Sociology Health & Illness, 2013)
 - Ambient air pollution causes pre-term births. (Int J Environ Res Public Health, 2012)
 - Robust statistical methods for register-based research. (Statistics in Medicine, 2012)

MEB (KI)



- Transmitted and acquired determinants of health across the life-span
- Dept. of Medical Epidemiology and Biostatistics

- Selected publications
 - Increased risk of suicide and heart disease directly after cancer diagnosis. (New Engl J Med. 2012)
 - Adults with ADHD committed fewer crimes when receiving medical treatment. (New Engl J Med. 2012)
 - Antibiotics and asthma – cause or effect? (Clin Exp Allergy. 2012)
 - Familial factors affect the association between the mother’s smoking during pregnancy and children’s drug dependence and problems. (Arch Gen Psychiatry. 2012)
 - High risk for chronic lymphatic leukemia for specific relatives: signs of future genetic discoveries. (Leukemia. 2012)

SIMSAM Early Life Lund (LU)



- Interdisciplinary research on early life exposure and health
- Division of Occupational and Environmental Medicine, Centre for Economic Demography, Swedish University of Agricultural Sciences (SLU)
- Selected publications
 - Increased risk for gestational diabetes and preeclampsia among women who have been exposed to air pollution. *EHP* 2013
 - Occurrence of malformations were somewhat more common in children whose father have had cancer compared to children whose father have not had cancer. *JNCI* 2011;103
 - Cognitive reserve measured as score is an important early predictor of dementia. *In review*
- *Examples of networking/dissemination of knowledge*
 - Network seminars with themes on epidemiological methods
 - Initiation of inventory of epidemiological cohorts in collaboration with SND and EpiHealth
 - Study Advisory Board – methods support for register-based research
 - Methodological courses on relationships with CED and EpiHealth

SUNDEM (SU)



- Register-based research in Nordic Demography
- Demography Unit (SUDA) of Department of Sociology
- Dept. of Human Geography

- Selected publications
 - Families where the father uses longer parental leave are more likely to have another child. (J. of Eur. Social Policy 2010)
 - Positive effects of the “daddy months” on fathers’ parental leave use, but no effect of the “gender equality bonus”. (J. of Eur. Social Policy 2012)
 - No difference in final number of children of Nordic women of different educational groups. (Dem. Research 2009)
 - Free school choice increases the variation in grades between schools. (Urban Studies 2013)
 - No negative effect of residential segregation on immigrants’ labor market integration. (Urban Studies 2009)

SUNSTRAT (SU)



- Social stratification dynamics
- The Swedish Institute for Social Research (SOFI)
- Selected publications
 - Education reduces ill health; those born 1943-1955 with one extra year in public school than others have somewhat reduced mortality (especially due to lungcancer and accidents). (PNAS 2012)
 - Education can be seen as a family resource: education of adult children is connected to parent's survival also when considering the parent's own social and economic resources. (Forthcoming in Demography)
 - In Sweden there is a non-linear connection between the proportion of women in the occupation and the level of salary, and sex integrated occupations have the highest salaries, weakening the support for the devaluation hypothesis. (Forthcoming in Acta Sociologica)
 - There are small positive effects from having had social benefits in order to receive social benefits in the future and therefore there is some support for duration effects. (Social Science Research (2013))

Upper GastroIntestinal Research (UGIR)



- Register-based research of diseases and surgery of the upper gastrointestinal tract
- Dept. of Molecular Medicine and Surgery (KI)
- Selected publications
 - Centralisation of esophageal cancer surgery saves human lives. (J Clin Oncol [IF 19] 2013)
 - Obesity surgery does not reduce the risk of obesity related cancer, but increases the risk of colorectal cancer. (Ann Surg [IF 8] 2010 + 2013)
 - Surgery for heartburn does not prevent esophageal cancer, which in many cases depends on relapse in heartburn after the operation. (Gastroenterology [IF 12] 2010 + Ann Surg [IF 8] 2013)
 - Medication of the type tetracycline and cortison increase the risk of acute inflammation of the pancreas. (Gut 2012 [IF 10] + JAMA Intern Med [IF 11] 2013)
 - Quality of life after esophageal cancer: Has prognostic value, increases in most (85%) over time but decrease in others (15%), is reduced by acute complications. (J Clin Oncol x 4 [IF 19] 2010-2012)
 - Debate articles aiming at stimulating clinical scientists to use register data in their research. (Läkartidningen x 4 2010-2013 + Svensk Kirurgi 2012)

SINGS Graduate School (KI)



- **Swedish INterdisciplinary Graduate School in register-based research**
- Dept. of Medicine, Clinical Epidemiology Unit
- Institute of Environmental Medicine
- Steering group: SIMSAM nodes + other research groups

- Multi- and interdisciplinary profile - Register-based research
- Increase cross-fertilisation, understanding of different perspectives
- Stimulate national and international collaborations
- Students: SIMSAM-nodes + other research environments

- Quantitative scientific disciplines using registers
- Cohort 1 (vt 2010 – vt 2012); Cohort 2 (vt 2011 – vt 2013); Cohort 3 (vt 2013 –



SIMSAM activities 2013

- Information booklet – importance of register-based research
- Dialogue with SoS och SCB – facilitate scientist's access to data
- Data management group – spread information (data + experiences)
- SIMSAM-INFRA: SIMSAM knowledge/infrastructure => researchers
- National meetings + meetings with SAB
 - Stockholm **25 + 26 April**
 - Umeå **16 + 17 October**





Registry-based research in Sweden – past, present and future

April 25, 2013 | Eugeniahemmet, Karolinska University Hospital | Solna

The excellent opportunities for registry-based research in Sweden can improve health, but this 'goldmine of data' is underused and there are also methodological limitations and funding issues requiring attention.

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**Karolinska
Institutet**

