

# Suicidal behaviour and eating disorder – a register-based survival analysis

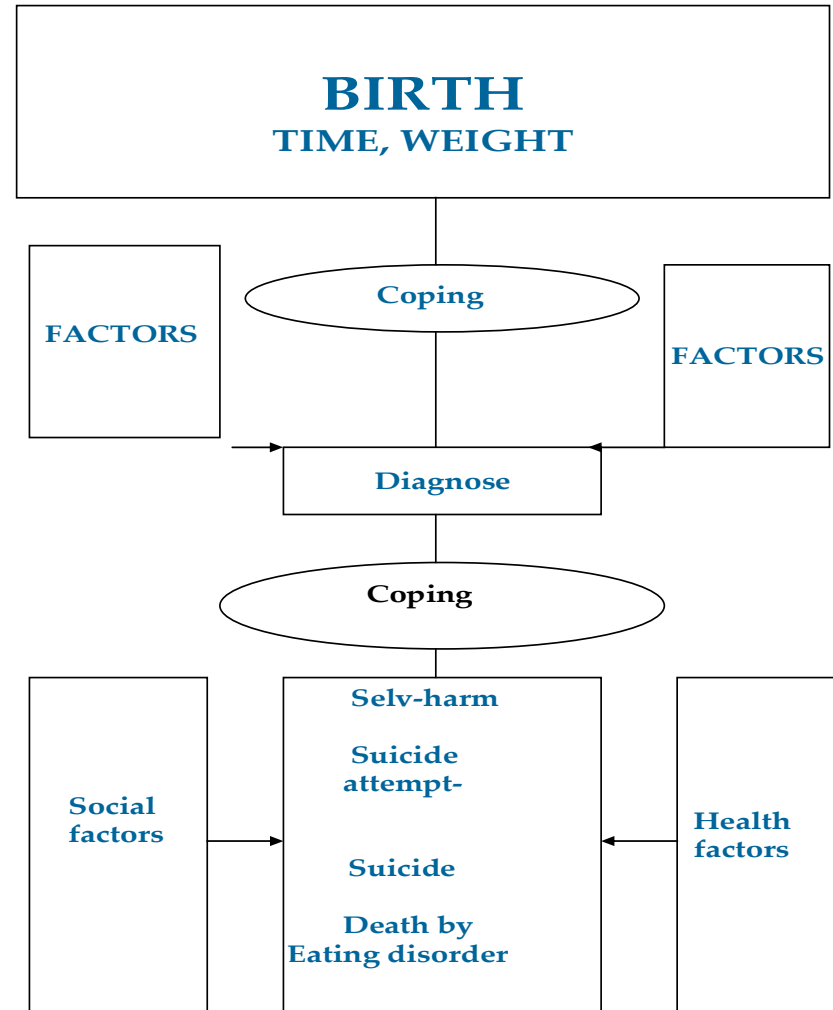
By Ph.d. Lilian Zøllner and MScE Erik Christiansen

**11th EUROPEAN SYMPOSIUM ON SUICIDE AND  
SUICIDAL BEHAVIOUR**

**SLOVENIA 2006**

*Centre for suicide research, 2006*





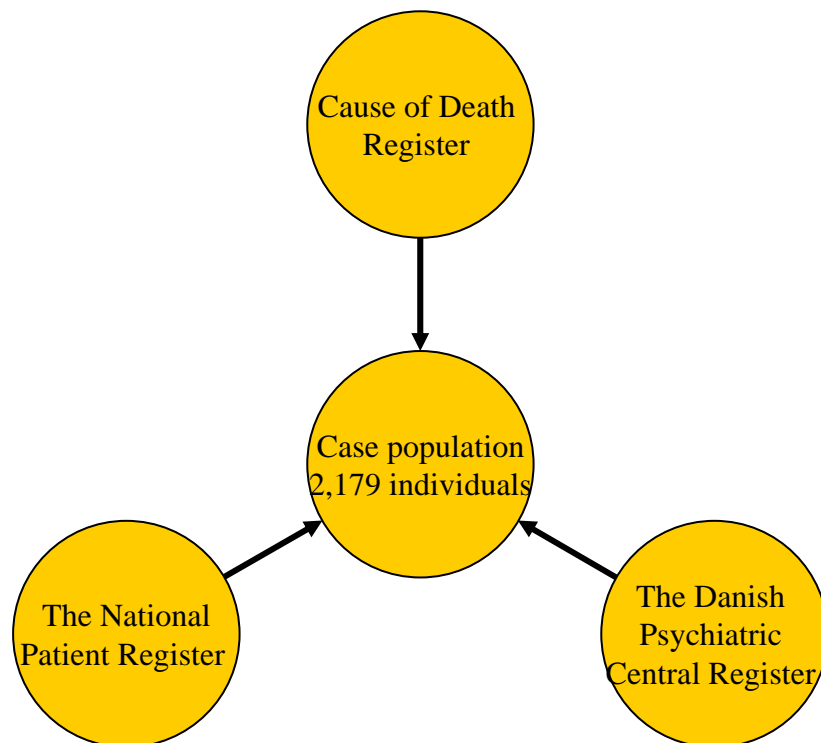
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- Methodology: Danish register-based nested case/control study
- Participants: 2,179 individuals (female: 94 %) diagnosed with eating disorder during 1990-2000 and 19,611 controls matched by gender and age.



Participants were identified from 3 registers.



For every case:

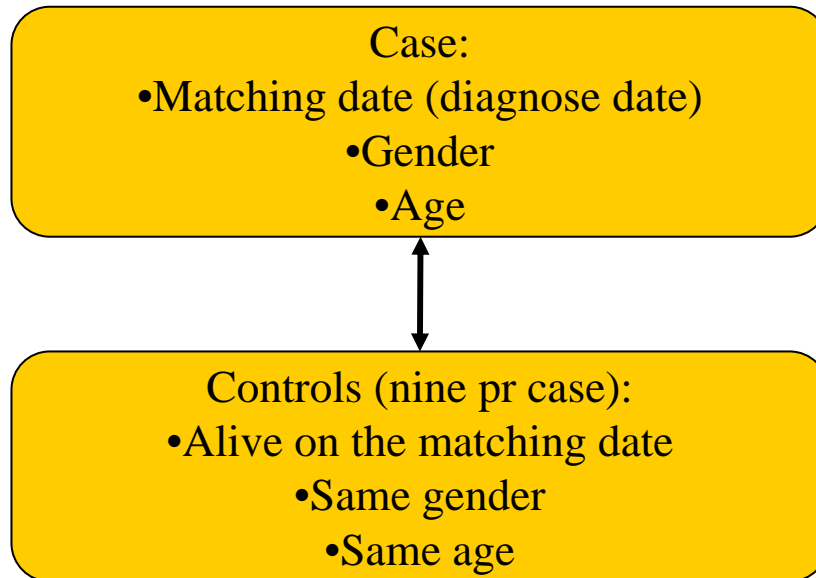
- Personal identification number (CPR)
- Date of the **first** admission or death (called matching date)
- Type of eating disorder
- Age
- Gender

Only 15-35 year old individuals were included



## Controls were identified

### Matching procedure:



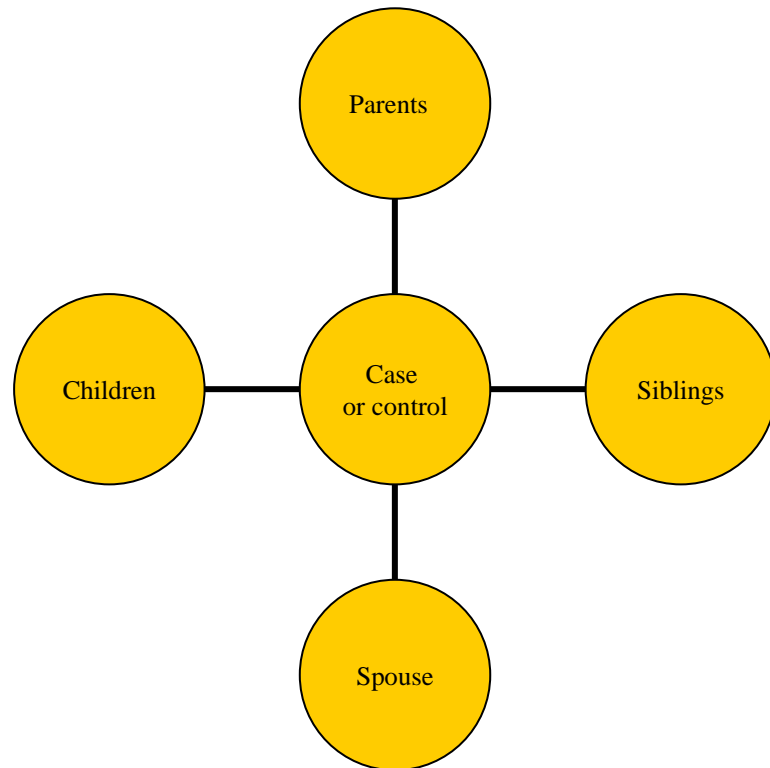
A control was matched to a case by:

- Alive on the matching date (the case's diagnose date)
- Gender
- Age
- Not diagnosed with eating disorder before the matching date

9 controls were matched to every case



# Family relations were identified



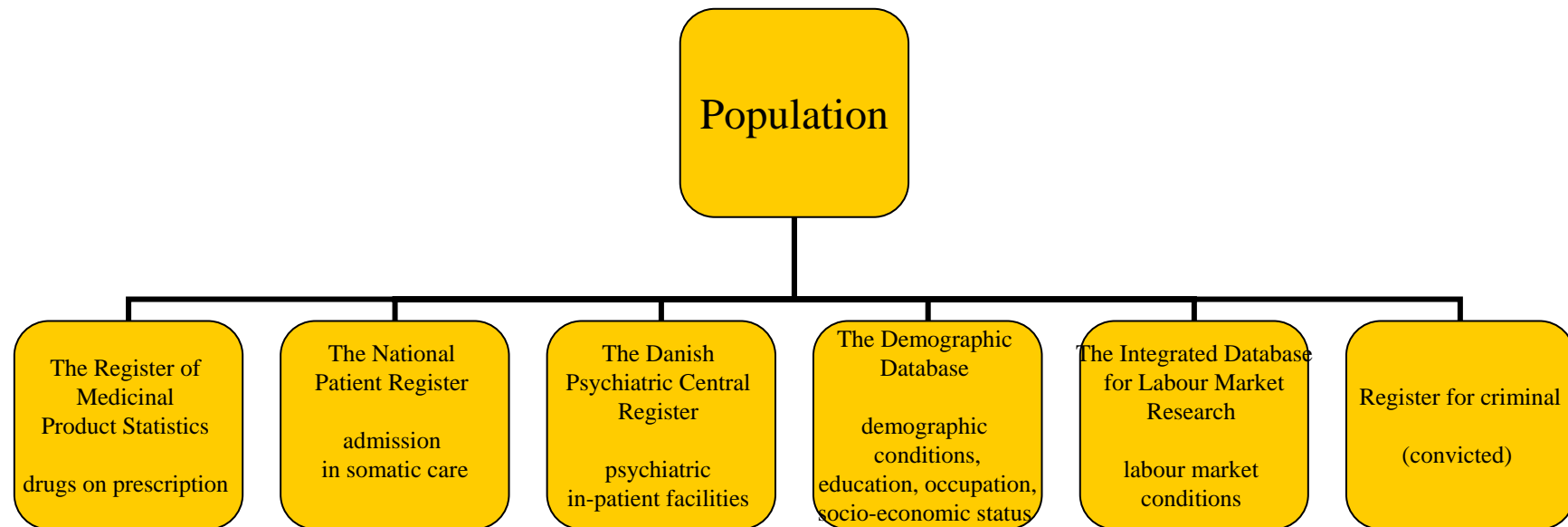
Population:

- Cases
- Controls
- Family



## Data on the population

For every individual data from various registers were found:



Data were analyzed by the use of Cox and conditional logistic regression

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## **Part I. Risk factors for eating disorder**

### **Factors relating to birth:**

The time at the birth and the weight at the time of the birth

### **Factors relating to parents:**

Age, income, level of education, mental illness, death, breach of the law

### **Factors relating to siblings:**

Only child, eating disorder among siblings



# Part I. Risk factors for eating disorder

## Results (only adjusted analysis)

Factor:	P	OR*
Eating disorder among parents	P=0.0517	3.45
Father have been admitted to psychiatric department	P<0.0001	1.50
Mother have been admitted to psychiatric department	P<0.0001	1.44
Father is educated on a mellemlangt niveau compared to elementary school	P=0.0027	1.25
Father is educated on a videregående niveau compared to elementary school	P=0.0007	1.38
Parents are not living together	P=0.0036	1.17
Father doomed for incest	P=0.0355	3.03
Mother doomed for breaking the law but not incest, sexual crime, the road traffic act, commit a theft and violence	P=0.0095	1.60
The individual was born with low birth weight	P=0.013	1.47
A sibling is diagnosed with eating disorder	P<0.0001	4.58
The individual is the only child	P=0.0468	1.20

\* Can in this setup be interpreted as relative risk



## **Part II. Risk for suicidal behaviour among young eating disorder cohort – 4 year follow-up**

An analysis of 1,408 individuals (female: 94 %) diagnosed with eating disorder during 1990-1997

4 years follow-up

Estimation of the function of the distribution of attempted suicide, suicide and all deaths

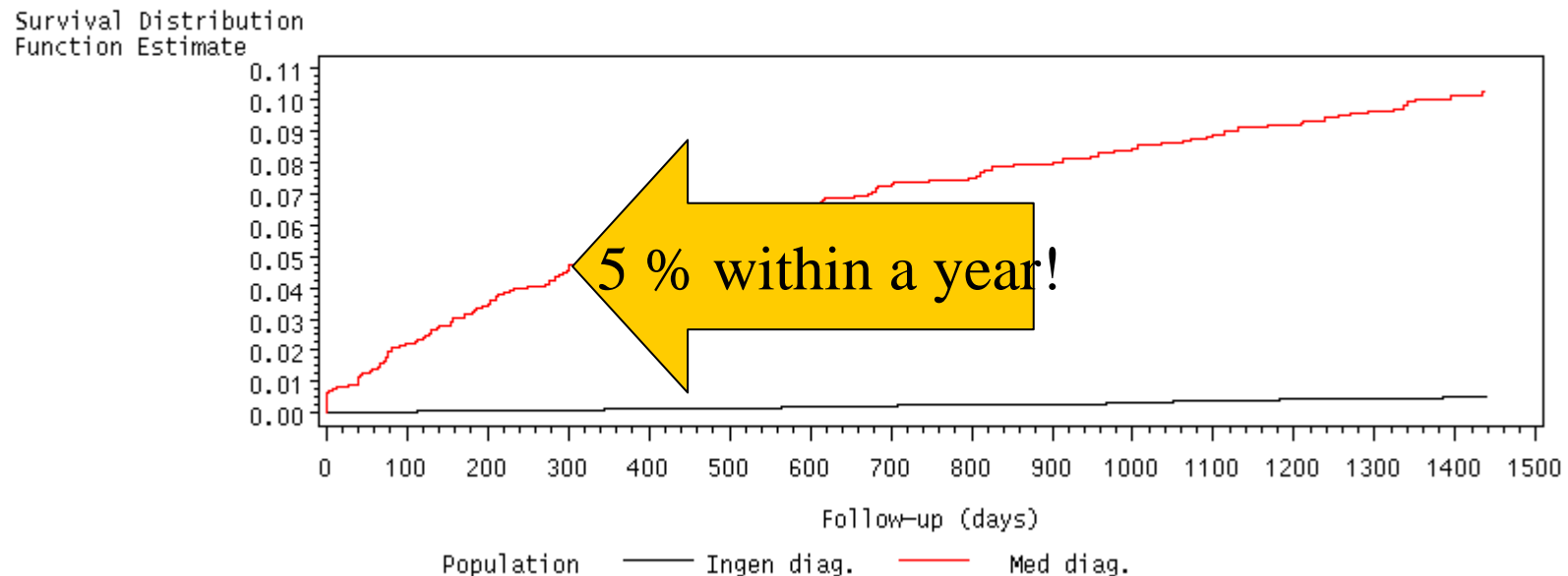
Estimation of risk factors for attempted suicide, suicide and all deaths



## Part II. Risk for suicidal behaviour

Estimation of the function of the distribution of attempted suicide compared to matched control group

Kumulerede procent for indlagt med kontaktårsag E4



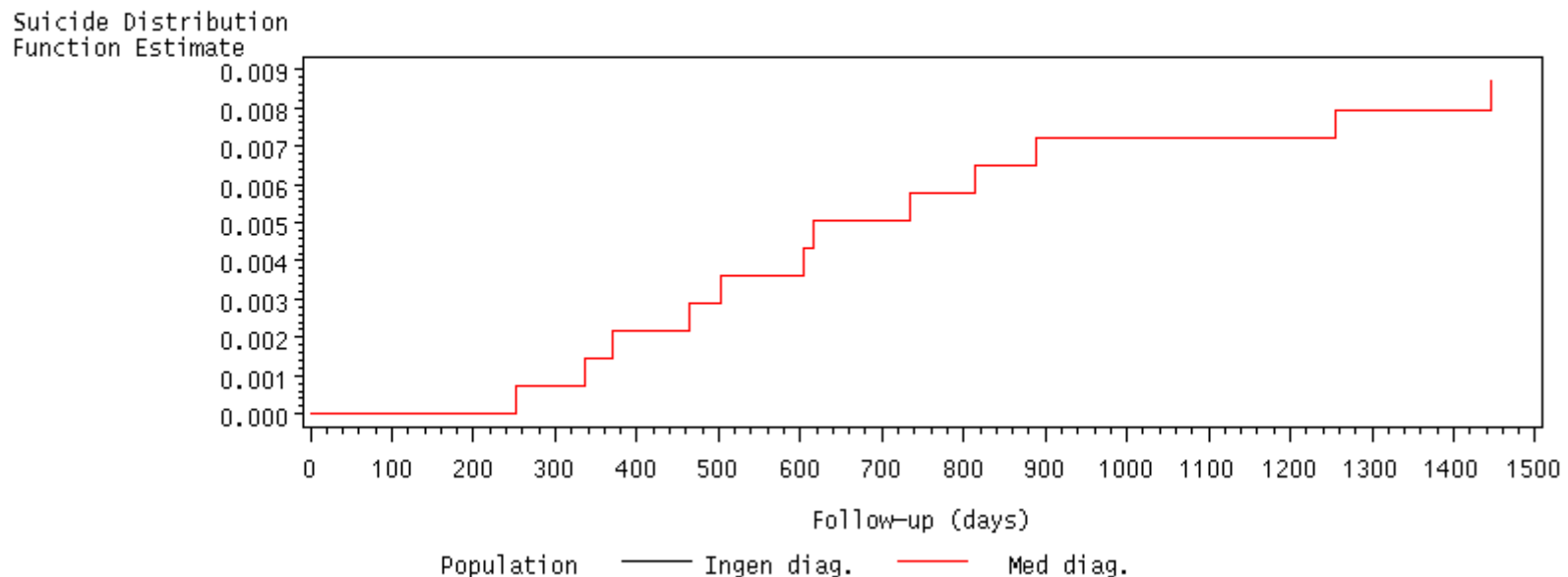
142 (10 %) among individuals with eating disorder and only  
62 (0.5 %) among controls, within 4 years



## Part II. Risk for suicidal behaviour

Estimation of the function of the distribution of suicide compared to matched control group

Kumulerede procent for selvmord



12 (0.9 %) among individuals with eating disorder and none among controls, within 4 years

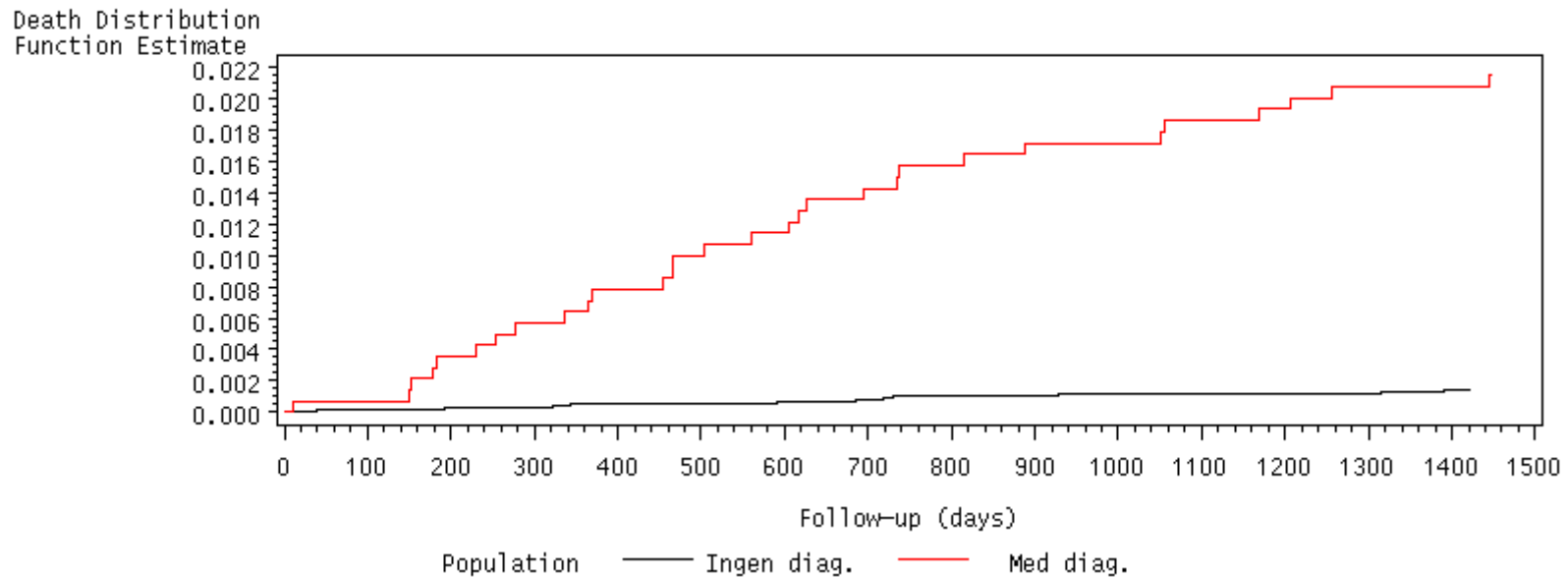
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## Part II. Risk for suicidal behaviour

Estimation of the function of the distribution of death compared to matched control group

Kumulerede procent for død



30 (2.1 %) among individuals with eating disorder and only  
18 (0.14 %) among controls, within 4 years

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## Part II. Risk factors for suicidal behaviour

Analyzed the correlation between survival and risk factors.

	Suicide attempt	Suicide	Death
Factor	HR	HR	HR
Age	insignificant	1.169* p=0.0012	1.193* p<0.0001
Establishing family	0.389* p=0.0012	insignificant	0.129* p=0.0436
Breaking up with a partner	0.358* p<0.0001	insignificant	0.299 p=0.0246
Becoming a parent	0.175 p=0.0145	insignificant	insignificant
Living alone	insignificant	6.155 p=0.0064	3.073 p=0.0026

\* Also significant in the adjusted model



# REPORT (IN DANISH)

[WWW.SELVMORDSFORSKNING.DK](http://WWW.SELVMORDSFORSKNING.DK)

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