

# School performance of foster children, links to long term outcomes, and what can be done about it

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# Menue

- Crash course in epidemiological analysis
- Results from national cohort studies, using register data
- SkolFam and other ways towards improvements for children in out-of-home care
- The path from 1's and 0's i national registers to helping a single child

# What is risk?

- **Increased/reduced probability**

- for something specific
- a relative concept
- a quantitative concept

For what?

Compared to whom/what?

How much?

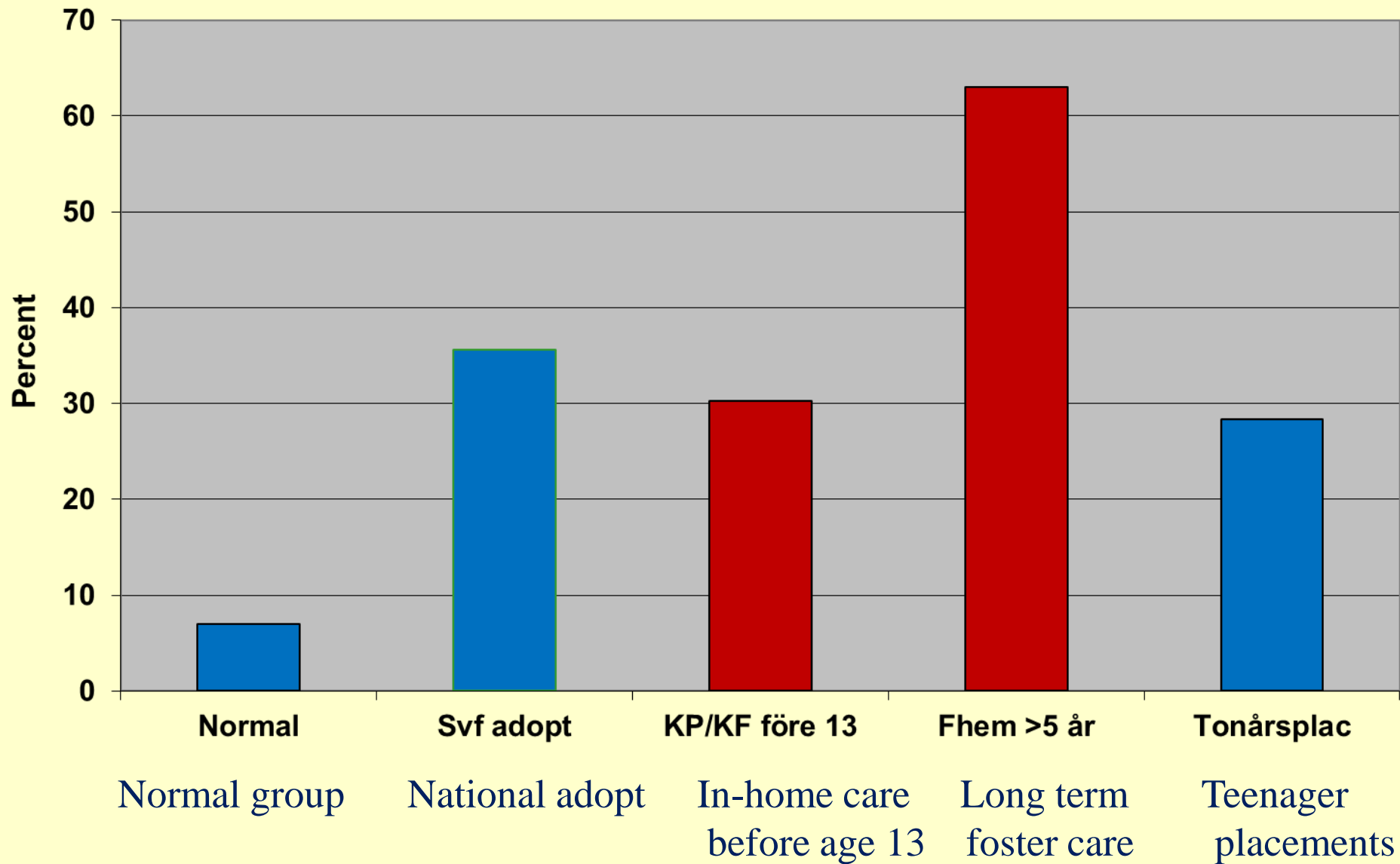
- The comparison group has always Relative Risk (RR) = 1
- RR = 2 is 100% more
- RR >2-3 are “high excess risks”, high over-risks
  
- 3% of all girls in Sweden become mothers before age 20
- 0,75% of all boys become fathers before age 20
  
- The risk of teenage parenthood is 4 times higher for girls compared to boys (RR = 4)
  
- RR does not say anything about “how many”

## To adjust for background factors (confounders)

- “If the distribution of these background factors were the same in the groups that we compare – are there still any excess risks?”
- Common examples: sex/gender, age, parental education
- Adjustments are done in multivariate analyses: each background factor’s unique association with the outcome (“all other variables being equal”)

# Parental risk indicators for different groups of children

## Birth mother mental health or substance abuse problems



# Interdisciplinary research, eg.

- Bo Vinnerljung, social work
- Anders Hjern, pediatrics
- Marie Berlin, sociology
- Eva Tideman, psychology

# National cohort study/registerdata

- Analyses of datasets with all born 1972-1981.  
Linking 10 national registers.
- Follow-up from age 16 to 2005 (age 24-33)
  - 930.000 persons, including
    - 7.000 children that grew up in foster care, average time in care 12 years
    - 9 000 children from families with public welfare three consecutive years
  - = examples of children from the social marginal

# Grades final year of primary school (age 16)

- **Low/incomplete grades= worst 1/6 in the country** ( $< (M-1SE)$ )
- Low-average= 1/3 ( $-1SE - M$ )
- Average-high = 1/3 ( $M + 1SE$ )
- High grades=best 1/6 ( $>(M+ 1SE)$ )
- High attrition of data for children from the social marginal = our results are underestimations

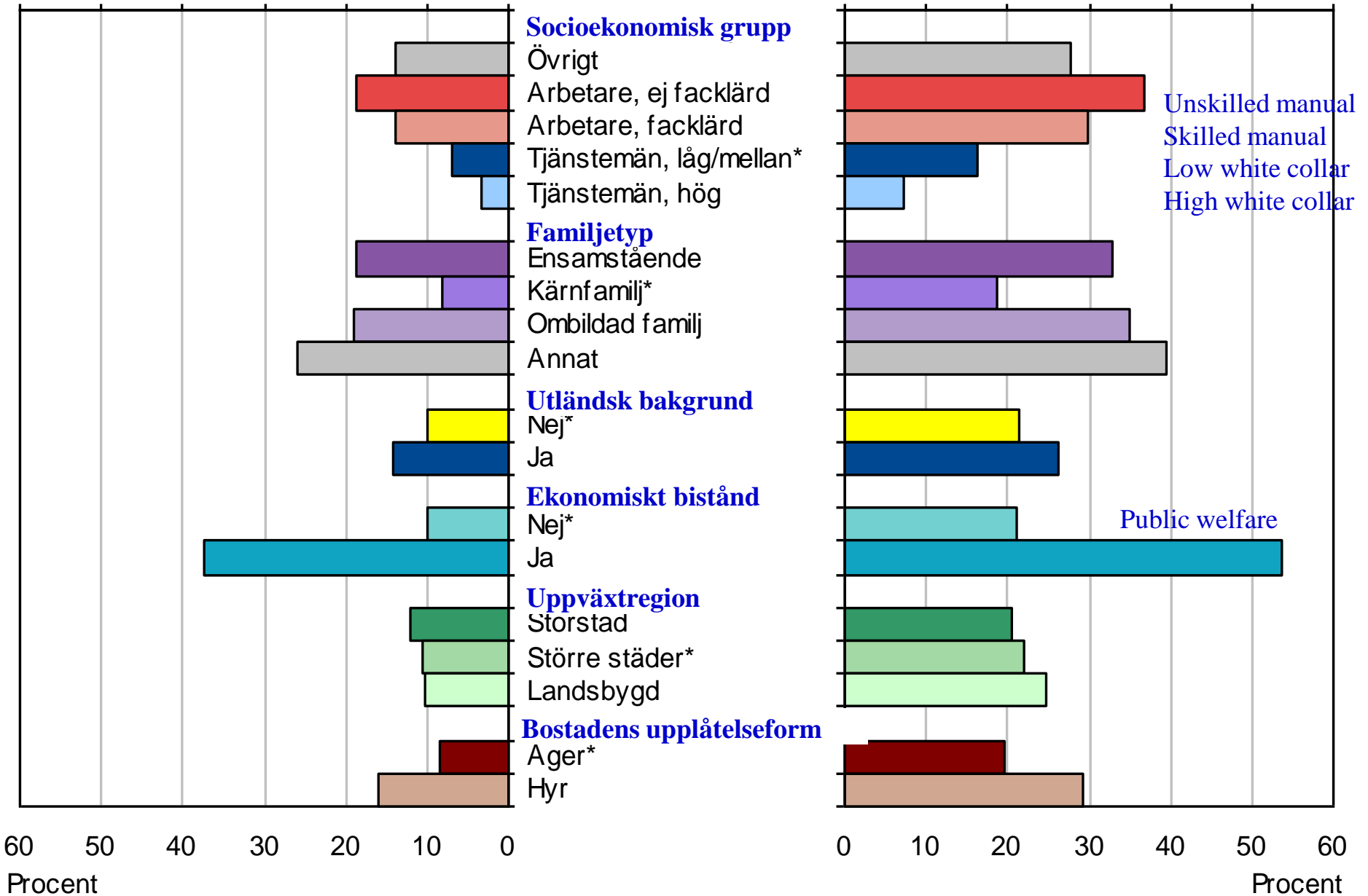


# Poor grades (school performance) have links to eg.

- Low cognitive capacity
- Other individual traits
  
- Behavioral problems
- Mental health problems
  
- Pooors support from home, adverse childhood etc
  
- School related factors
  
- Poor peer status in school

## Flickor

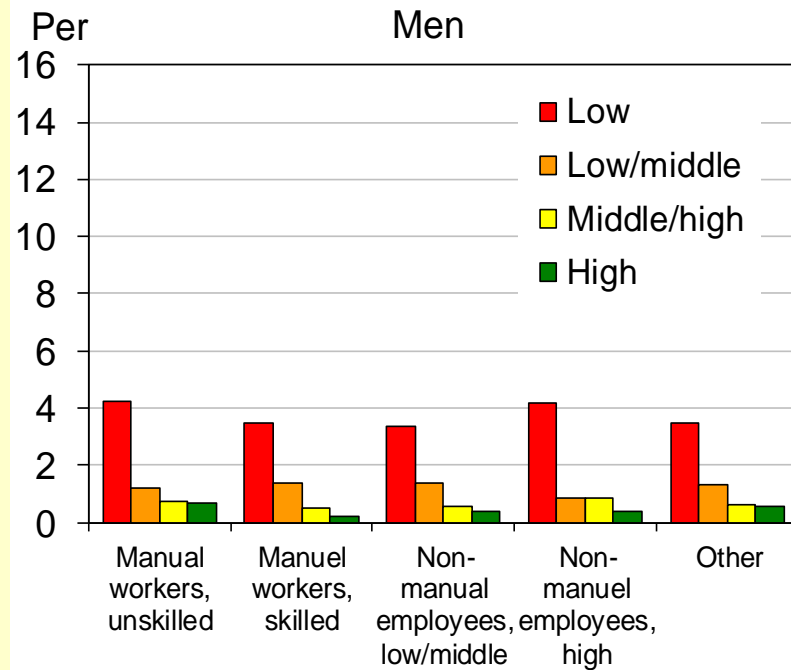
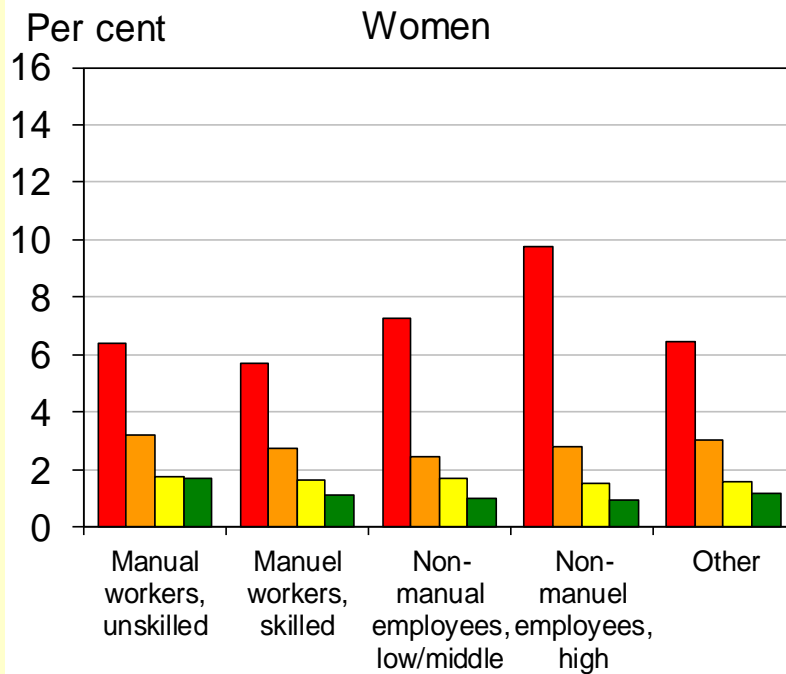
## Pojkar



# Good school performance/an education

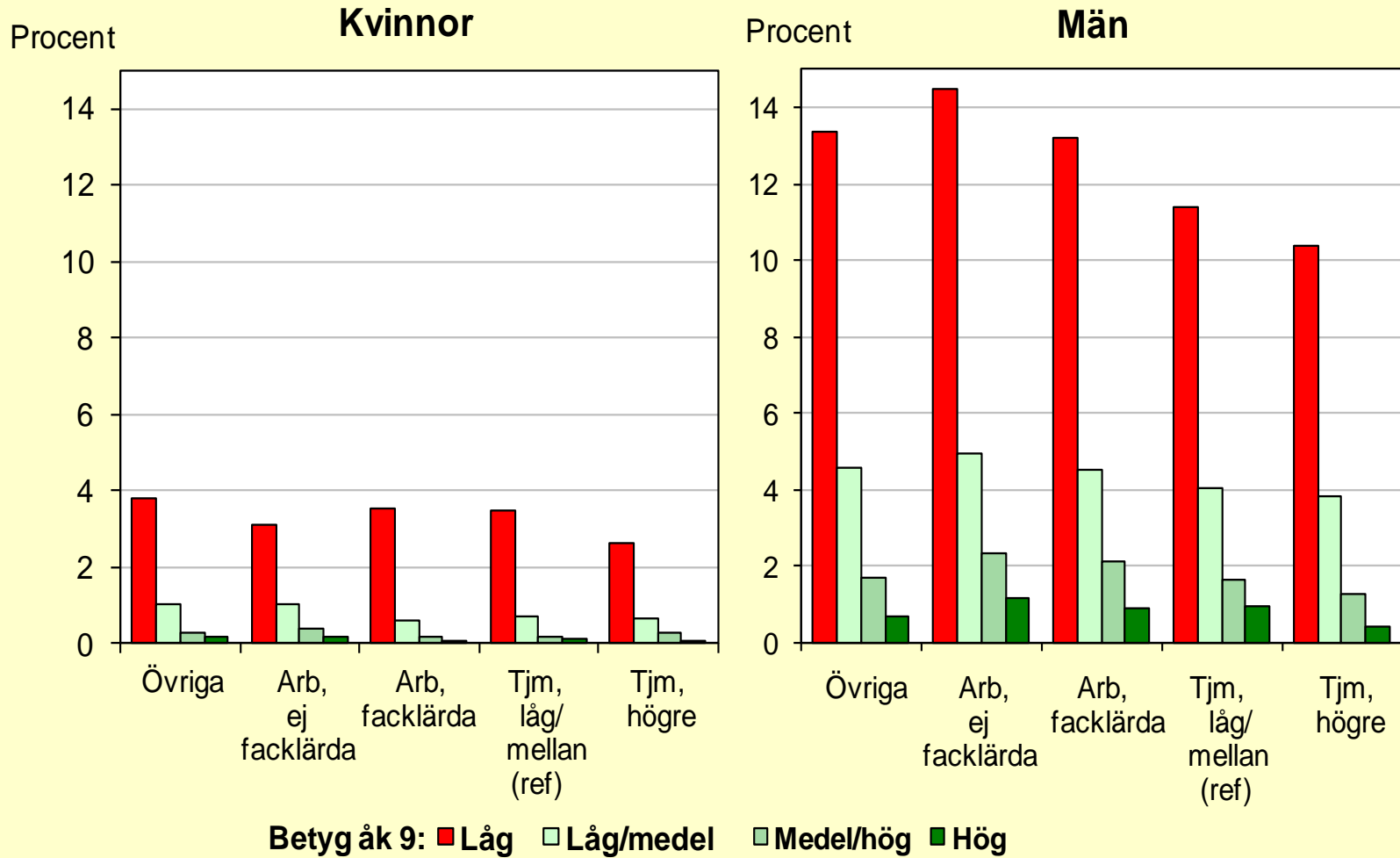
- We knew this was ..
  - The best protective factor for the long term development of vulnerable children
  - “Escape from disadvantage...” (Doria Pilling, 1990)
- But grades from end of primary school is a strong predictor for **all** childrens future outcomes

# Suicide attempts

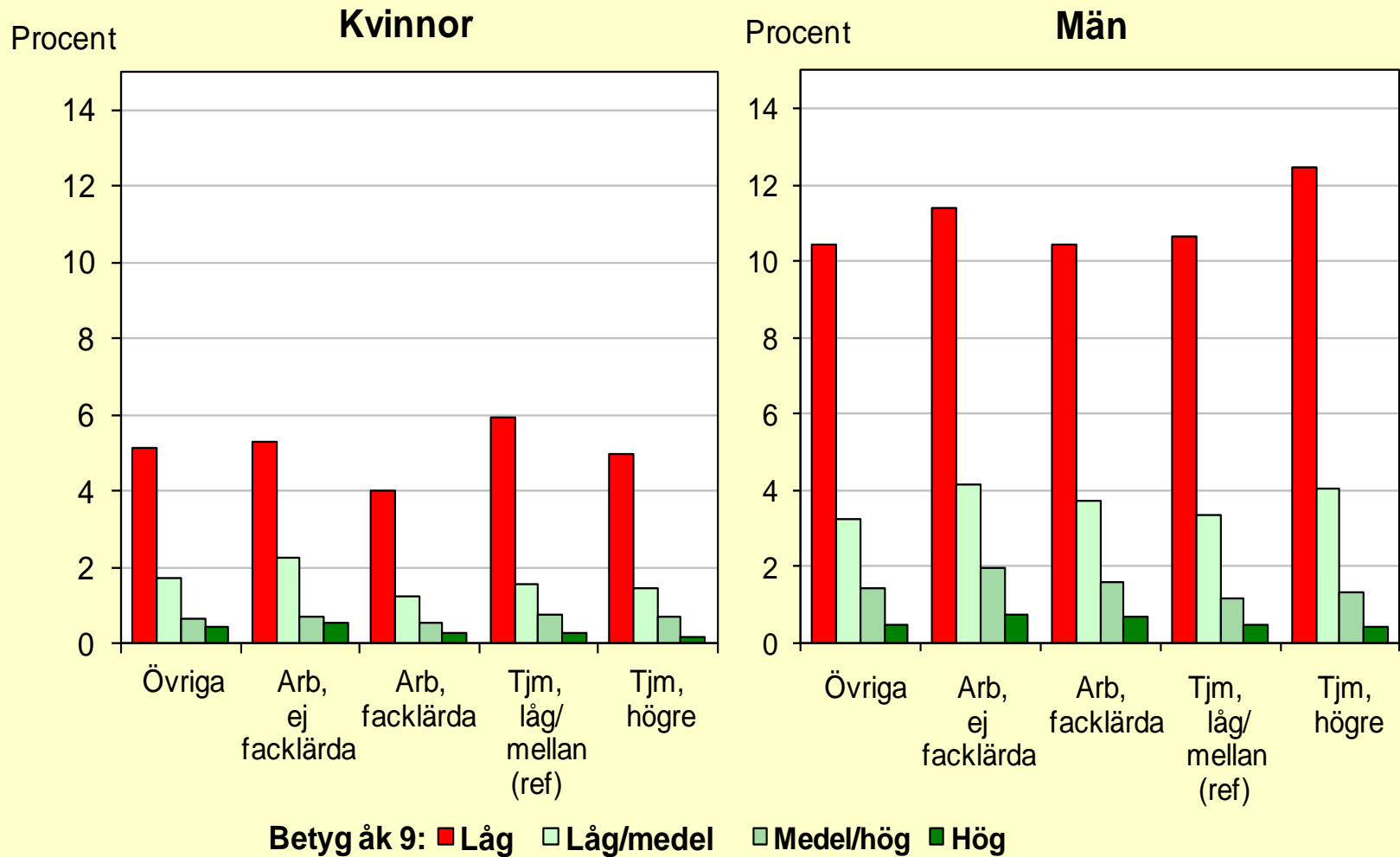


SES for parents at age 10

# Serious criminality from age 20



# Drug abuse from age 20



# Statistically attributable risks of no/low grades

In the entire population (born 1972-1981)

- 31% of suicide attempts
- 48% of drug abuse
- 55% of serious criminality (PAR)

For those with poor school performance

- 70-88 % of outcomes above attributable to no/low grades (AR)

What does this mean for foster children and other children from the social marginal?

A) they do very poorly in school

B) school failure is added to other risk factors



## No/incomplete/low grades      Above average

### Boys

Normal group	22%	41%
In home care before teens	55%	15%
Children from welfare families	57%	13%
Grown up in foster care	<b>60%</b>	11%

### Girls

Normal group	11%	60%
In home care before teens	37%	27%
Children from welfare families	40%	25%
Grown up in foster care	<b>43%</b>	23%

Grown up in foster care: > 5 years in care (M= 11 years in care), left care after age 17. All persons with disability pension at age 23 år are excluded from the analysis

# What factors increase the risk for poor grades among foster children?

- Sex/gender \*\*\*
- Birth year --
- Age at placement --
- Time in care --
- Mother mental health problems --
- Mother substance abuse --
- Father mental health problems --
- Far substance abuse --

# Negative expectations...

- Results from two trials indicate that social workers, teachers and foster parents commonly
  - Underestimate the cognitive capacity of foster children
  - Have pessimistic expectations of school performance
- Same results in Danish and British studies

# Foster children: Five-fold disadvantaged by the care and education system

- High risks of school failure
- Lower grades than peers with same IQ
- Lower education than peers with same IQ
- Lower education than peers with same grades
- Lower chances of secondary education if they had poor grades (eg. fewer use adult education)

# Frequency of outcomes: examples

	Long term foster care	Majority
Only primary school at age 25	27%	6%
Suicide attempts after age 20, girls	14%	2%
Serious criminality after age 20, boys	37%	5%
Drug abuse after age 20, boys	22%	4%
Living on welfare at age 25, boys	14%	1%

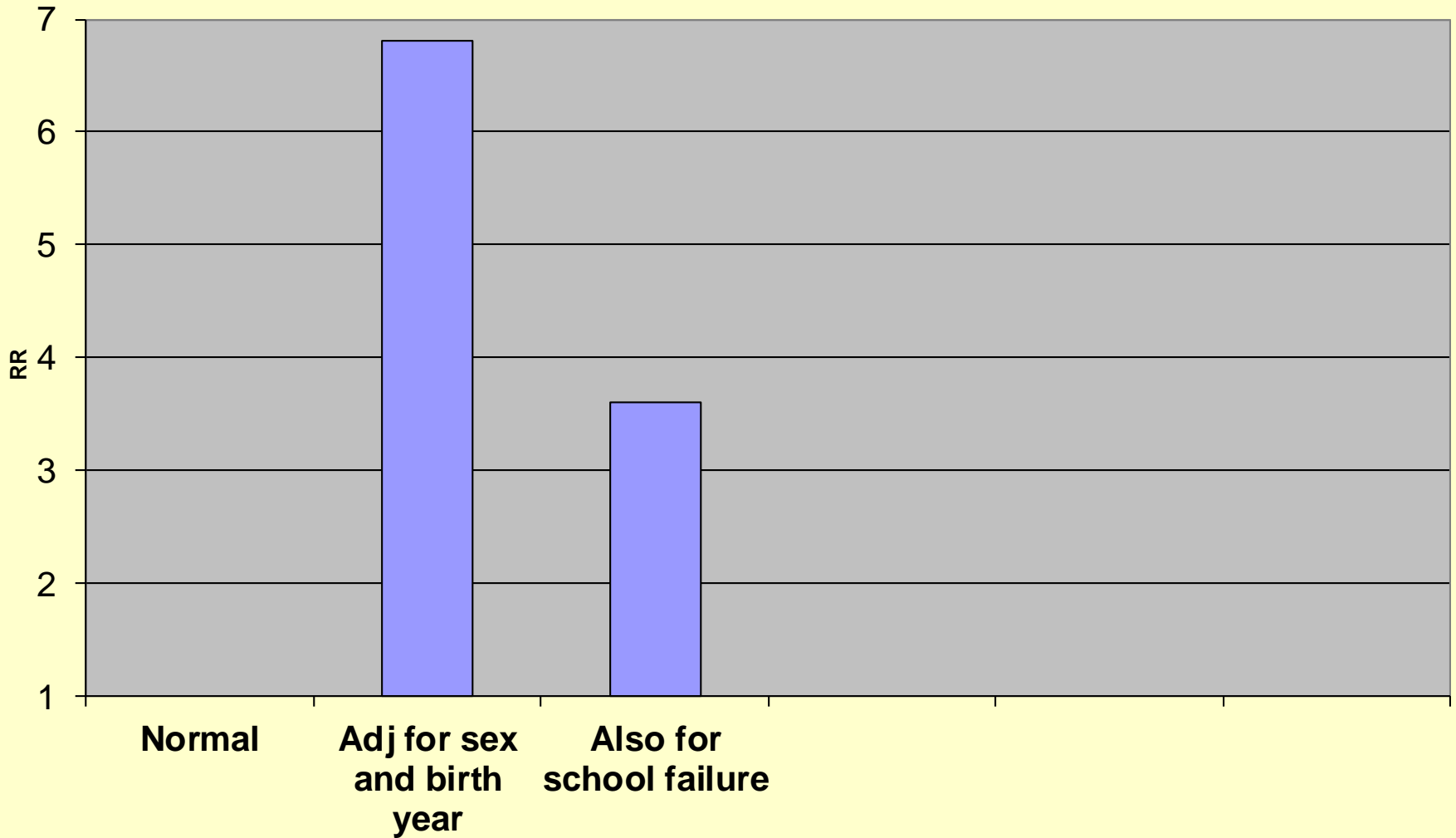
## Children growing up in foster care have high risks for future..

- Suicide RR = 6.4
- Suicide attempts RR = 6.2
- Serious mental health problems RR = 5.0
- Drug abuse RR = 6.8
- Alcohol abuse RR = 4.9
- Serious criminality RR = 7.5
- Teenage parenthood RR = 3.8
- Welfare dependency RR = 9.8

(adjusted for sex and birth year)

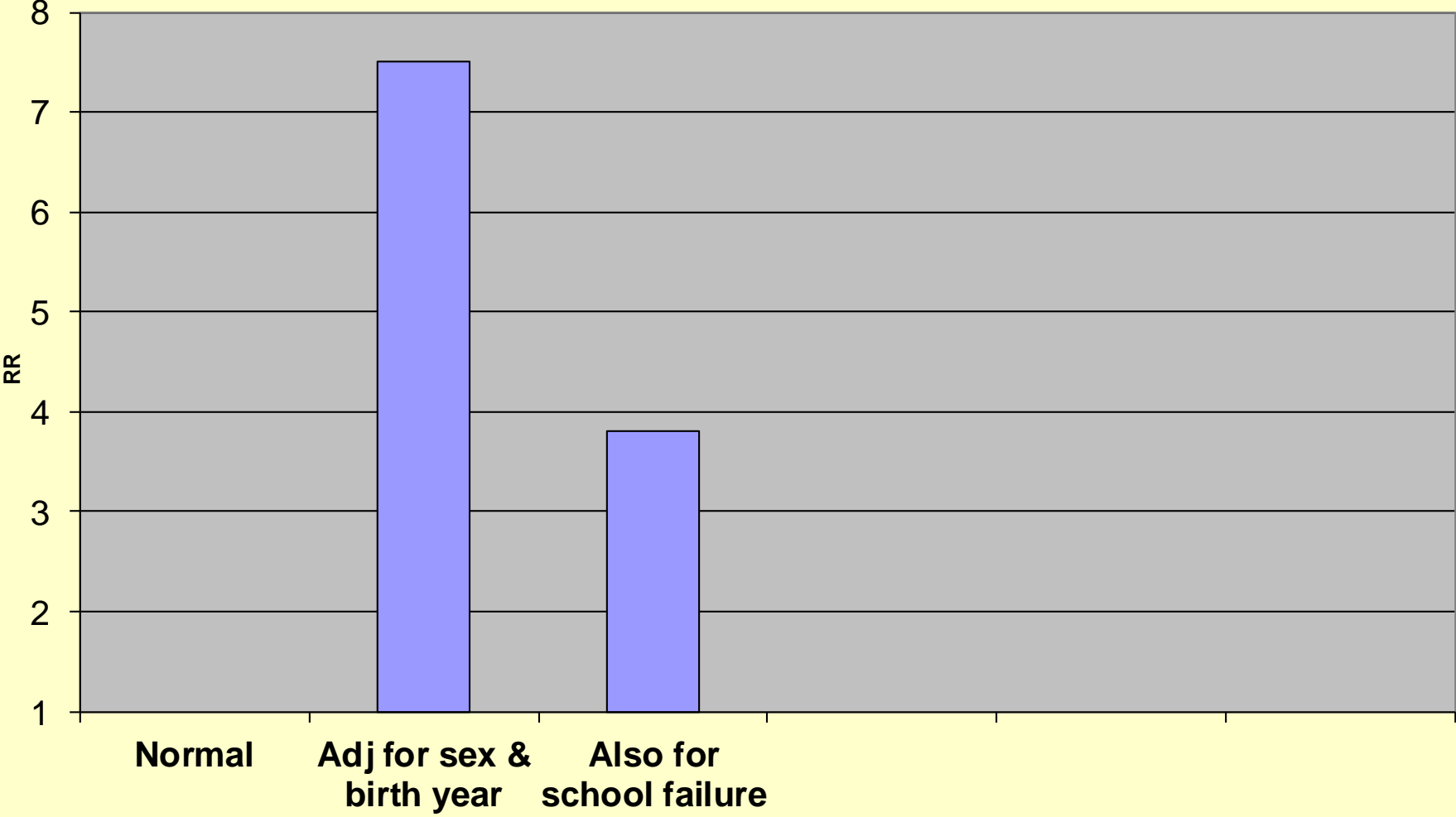
- Adjusting results for poor school performance reduced overrisks with 40-50%
- It is very rare to find a single variable that has this strong statistical "explanatory" power in analyses of national population data

# Long term foster care: Drug abuse after age 20





# Long term foster care: serious criminality after age 20



# The power of school failure

No indication of serious psychosocial problems

(after age 20: no suicide attempt, substance abuse, serious criminality, and not living on welfare at age 25)

	foster care	majority
No/low grades, men	42%	81%
Grades above mean, men	72%	94%
No/low grades, women	55%	87%
Grades above mean, women	79%	96%

# Analyses of foster children only

- No/low grades by far the strongest risk factor for all negative outcomes
- Parental pathology variables no or weak associations with outcomes
- No associations between age at placement or time in care, after controlling for school failure
- Absence of school failure the only strong factor that predicts good outcomes – regardless of how “good outcome” is defined

- National adoptees do substantially better than children who grow up in foster care
  - regardless of outcome measure
- Also after adjustments for
  - Birth parental mental health problems
  - Birth parental substance abuse
  - Birth parental education
  - Age at placement in substitute care

# Conclusions

- Children who fail at school are a high risk group for future psychosocial problems – regardless of socioeconomic background
- School failure seems to be the strongest **risk mechanism** for foster children's long term development (same for other children from the social marginal)
- The good news: school performance is **a variable risk factor** .  
(in contrast to sex, age, genes, experiences from early childhood etc)
- If we want to improve foster children's poor life chances – then we have to help them do better in school..

# So.....

- Sonia Jackson (1994) was right: poor school performance/low education is the strongest risk factor for foster childrens future
- It is a **determinant** for foster childrens future

# Epidemiology, exploratory research

How many? Changes over time?  
Who? Patterns of care? How? Care leavers experiences.  
Prevalence of eg, mental and somatic health problems  
Global outcomes? Links, associations?



# Longitudinal studies

Risk factors, protective factors?  
Risk mechanisms, mediators, moderators?



Clinical trials

# Literature review: evaluated interventions aiming at improving foster childrens school performance

- What has been done?
- What seems to work?

Forsman & Vinerljung, 2012



# Inclusion criterias

- Targeting children in primary school (age 6-16)
- Evaluated with
  - RCT, pre and post measurements
  - Quasiexperimental design, pre and post measurements
  - Pre and post measurements with age/population standardized instruments, no comparison group
  - Published in English or in a Scandinavian language

# Massive searches gave..

- **11 relevant studies (in 30 years)**
- 4 from UK, 3 from USA, 3 from Kanada,  
1 from Sweden - **Skolfam in Helsingborg**
- Very little has been done although the problem has been known since 1970ies

# Results

- Positive results (9 of 11 studies):
  - 4 tutoring projects, eg. Paired Reading
  - 1 center based structured learning program
  - 2 programs distributing learning material (eg, the Letterbox Club in UK)
  - "school coordinator" (USA)
  - SkolFam in Helsingborg
- No improvements
  - One tutoring project in the US, was not adapted to children's daily curriculum
  - Behavioral training in residential care

# More results....

- All 9 successful programs improved literacy skills
- 7 programs tried to improve numeracy skills :
  - 3 positive results, 2 mixed results, 2 failed

# The Helsingborg trial - SkolFam

- 25 foster children age 7-12 were tested with standardized psychological and educational instruments
- Results were used to
  - access available support from school
  - tailor individual educational support and interventions
  - advice teachers/schools, foster parents - and the children
- All was done by an educational psychologist and a special teacher, working only in the program.
- Re-tests after 24 months to evaluate the program

# The educational psychologist and the special teacher....

- worked only in the project
- had their loyalty to the children, were the childrens "champions"
- worked with short-time, concrete plans that were evaluated and revised continuously
- worked as a team with the social worker
- were enthusiastic about their work

# Important

- Organisational top-down support
  - initiated or supported by top level local politicians
  - joint project child welfare/school administration
  - not just demands from child welfare on schools to do more. Child welfare/SkolFam did a lot of the work.
- Focus on educational goals
  - This is not "treatment".
  - It is helping **underachieving children** to do better in school, to reach their potential.



## **What they did in the foster homes: (examples)**

Routines in daily life for foster parent/child...

- reading together
- doing home work - predictability and structure
- monitoring news (TV, newspapers)
- handling cash, counting money
- doing skills training in maths and hand writing
- maps, geography, spatial issues
- concepts of time
- playing games, cards
- motorical training



# Results after first measurements

- Normal cognitive capacity (average a bit lower than peers, same as international adoptees). Emotional functioning relatively OK
- 75% were substantially underachieving in school
- Large **knowledge gaps** were common
- Most foster parents, social workers and teachers had low/pessimistic expectations on the children's school performance.
- The problem with large knowledge gaps was not understood
- Lots of pseudo-psychological explanations to why the children did poorly in school
- Pathologizing of children was very common, “amateur diagnoses”

# Results after 2 years

“Clinical knowledge” says that the foster children’s school performance should have deteriorated –we should see larger gaps between them and normal population peers

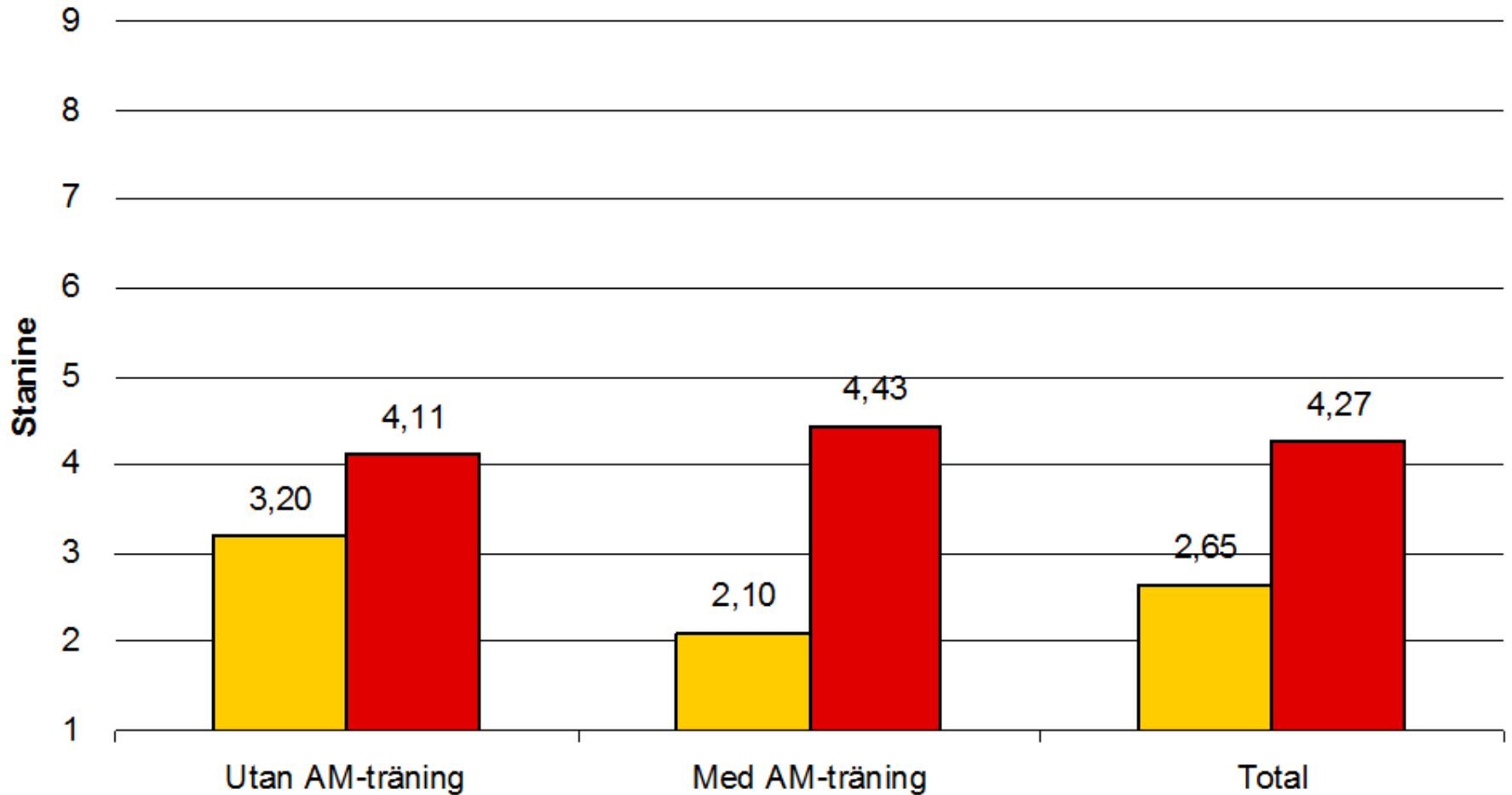
- Wisc IQ Total \*\*\* (p<0,001)
- Wisc IQ Performance \*\* (p<0,01)
- Wisc IQ Verbal \* (p< 0,05)
- Spelling (DLS) \*
- Reading speed \*
- Word Chains \*
- Magne’s Math diagnosis n.s.

# Norrköping's SkolFam

- Trial 2008 - 2011
- 21 children, two year between tests
- Working memory training was added for children with low numeracy skills
- WISC/cognitive ability – same results as in Helsingborg
- Literacy – similar results as in Helsingborg
- But Maths.....

# Math scores related to working memory training

## Magnes matematik relaterat till Arbetsminnesträning



Without WM training

With WM training

Total

## Case study – Jens, age 11 (from SkolFam, Norrköping)

At start of intervention:

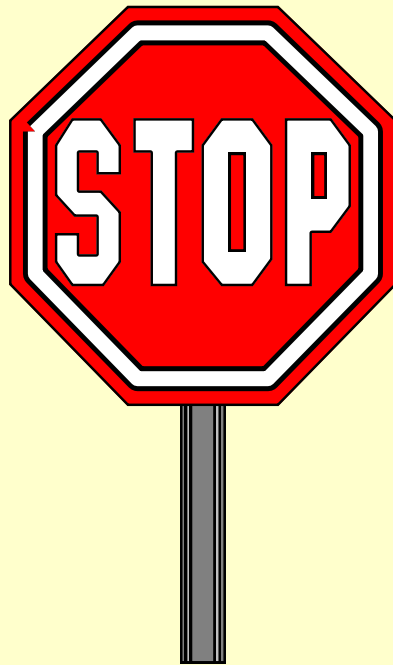
- Personal assistant in school, concentration problems, suspected ADHD, suspected learning disability
- IK 70, working memory 62 (WISC)
- Maths, stanine 1
- Working memory training with *RoboMemo*
- Planned support in other ways

After two years:

- IK 86 (+23%) , working memory 99 (+60 %)
- Math stanine 5
- No concentration problems
- Likes school!

# Implications

- Foster children's school performance and cognitive abilities should be viewed as variable mediators, not static traits.
- Both are also outcomes of long term care.
- Main problem: foster children are underachieving in school, compared to their cognitive capacity
- It does not have to be so. These children are not "damaged goods". They can improve their school performance, if given adequate help and support.



No "amateur diagnoses"!

Use standardized instruments  
for assessment

- Replicate other trials or learn from them.
- Psychological and educational assessment of all foster children at time of placement or 1-2 years after school start (cognitive capacity, reading/math skills etc)
- Systematic support to all foster children's school work, also targeting those that seem to do OK.
- Working memory training seems promising
- Systematic work to increase literacy and numeracy skills. Literacy and numeracy training in pre-school age has great potential.
- Use pre-schools/kindergartens that emphasize literacy and numeracy training
- Systematic policy for all foster care placements



- Encourage/facilitate entry into secondary and post-secondary education.
- Massive drop-out figures for Swedish foster children in secondary school. What can we do about it?
- Create incitements for care leavers to return to the education system in adult age.

Education is by far  
the largest economic investment society  
makes in its children.

Do the same for children in state care.

# Examples of scientific journal publications

- Tideman E, Vinnerljung B, Hintze K & Isaksson AA (2011). Improving foster children's school achievements: Promising results from a Swedish intensive study. *Adoption & Fostering*, 35, 44-56.
- Berlin M, Vinnerljung B & Hjern A (2011). School performance in primary school and psychosocial problems in young adulthood among care leavers from long term foster care. *Children and Youth Services Review*, 33, 2489-2487.
- Vinnerljung B & Hjern A (2011). Cognitive, educational and self-support outcomes of long-term foster care versus adoption. A Swedish national cohort study. *Children and Youth Services Review*, 33, 1902-1910.
- Forsman H & Vinnerljung B (2012) Interventions aiming to improve school achievements of children in out-of-home care: a scoping review. *Children and Youth Services Review*. 34, 1084-1091.

# Publications in Swedish

- *Social Rapport 2006*, kapitel 7. [www.socialstyrelsen.se](http://www.socialstyrelsen.se)
- *Social Rapport 2010*, kapitel 7. [www.socialstyrelsen.se](http://www.socialstyrelsen.se)
- *Skolprojekt inom Familjehemsvården* [www.helsingborg.se/skolfam](http://www.helsingborg.se/skolfam)
- *Skolprojekt inom Familjehemsvården. Projekt rapport SkolFam®2.*  
<http://www.allmannabarnhuset.se/index.cfm?id=108&l=2>
- Vinnerljung, B (2011) Hjälp fosterbarn att klara sig bättre i skolan. I A Fredriksson och A Kakuli (red) *Ett annat hemma. Om samhällets ansvar för placerade barn*, s 51-68. Stockholm: Gothia förlag.
- Hilma Forsman (2011). *Interventioner som avser att förbättra placerade barns skolprestationer*. Stockholms Universitet, Inst för socialt arbete.  
<http://www.uppsatser.se/uppsats/46838a7eb5/>