



MARSELISBORGCENTRET

**Arbejdsmedicinsk Klinik**

Hospitalsenheden Vest  
Regionshospitalet Herning

Rehabiliteringscenteret **AiR**  
KOMPETANSESENTER

# FOCA – Research Centre for Youth and Working Life

A multi centre research initiative  
focusing on successful integration  
into education and employment

Thomas Lund, senior researcher, PhD

Dept. of Occupational Health, Regional Hospital Herning, Denmark ([www.amkherning.dk](http://www.amkherning.dk))

National Centre for Occupational Rehabilitation, Rauland, Norway ([www.air.no](http://www.air.no))

MarselisborgCentre, Århus, Denmark ([www.marselisborgcenteret.dk](http://www.marselisborgcenteret.dk))

# Outline

- Why? Background and aim
- Who? Participating institutions and structure
- How? Data sources
- What? Selected results
- Future plans, possibilities

# Why?

- Increasing problems integrating youth into education and gainful employment
- Increasing proportion of younger disability pensioners
- In some parts of the country, more than one third of those not enrolled in secondary education, rely on social benefits
- Growing concern for a large part of a generation for whom working life is over before it begun

# Why?

- In order for policy makers to make informed and evidence based decisions, policy and practice, a multi centre research initiative focusing on successful integration into education and employment, FOCA, has been proposed
- The proposal has been approved by The National Labour Market Authority, and is currently being processed in the Ministry of Employment
- 5 years, approx. 2,5 mill. CAD

# Who?

- Three participating institutions, one ongoing international collaboration, one more in the pipeline

University of  
Aalborg  
[www.aau.dk](http://www.aau.dk)



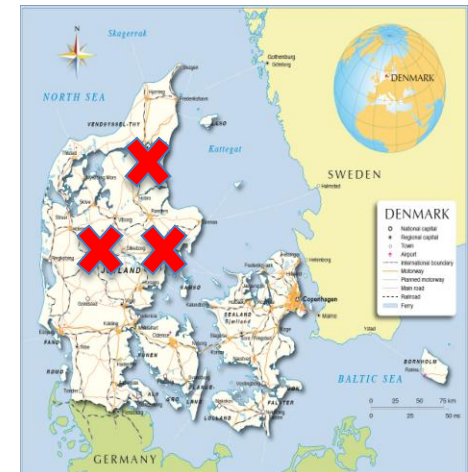
Dept. of Occup. Health,  
Reg. Hospital Herning



[www.amkherning.dk](http://www.amkherning.dk)



MarselisborgCentre, Århus.  
[www.marselisborgcenteret.dk](http://www.marselisborgcenteret.dk)



# Main masterminds

Merete Labriola<sup>1,2</sup>, senior researcher, PhD, associate professor

Johan Hviid Andersen<sup>2</sup>, director of research, professor

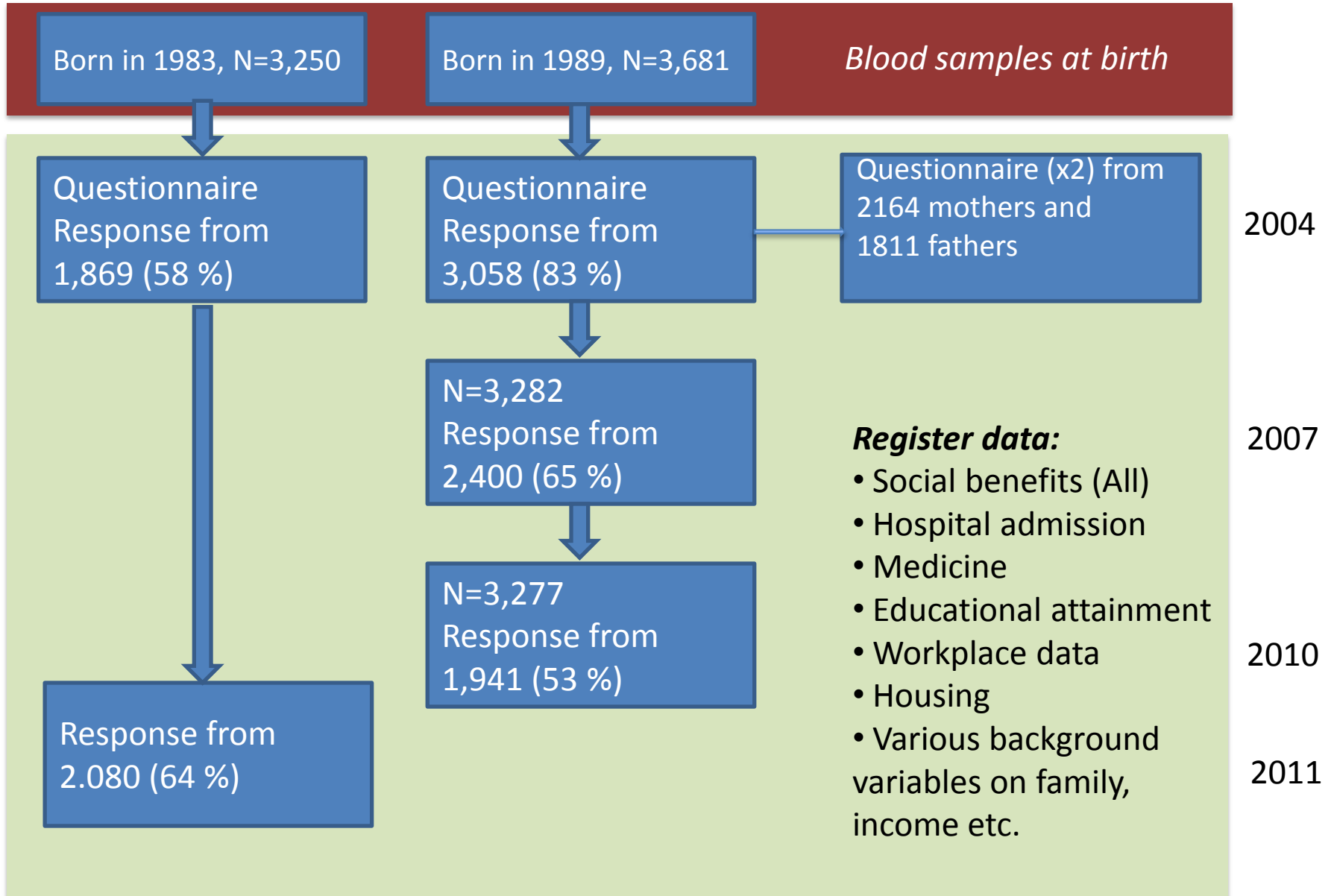
Claus Dalgaard Hansen<sup>3</sup>, sociologist, associate professor

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- <sup>3</sup> Dep. of Sociology, Social Work & Organization, Aalborg University, Denmark

# Intl. collaboration

- *Characteristics of the family of origin and educational and occupational attainment: the mediation effect of mental health problems among adolescents in Denmark and The Netherlands*
- Collaboration with University Medical Centre Groningen, Netherlands. Visiting scholar Karin Veldman March/April 2013

# How?





# What? Selected results from 3 studies

- Childhood adversities as predictors of labour market participation in young adulthood
- Personal predictors of educational attainment after compulsory school: Influence of measures of vulnerability, health, and school performance
- Trajectories of low back pain from 15 to 20 years of age
- All using the 1989-cohort
  - 3,681 born in 1989 in the county of Ringkjoebing, Denmark, 3,058 (83%) completed a questionnaire in 2004

# Labour market participation

- A total of 17.1% (19.9% males, 14.4% females) received social benefits for at least 4 weeks during follow-up.

Variable	Level	Women, N (%)	Men, N (%)	Total, N (%)	P, gender diff.
LMP	Active	1,317 (85.6)	1,217 (80.1)	2,534 (82.9)	<0.000
	Passive	221 (14.4)	303 (19.9)	524 (17.1)	

# Labour market participation

- Labour market marginalisation increased with number of childhood adversities, but only for females.

	CA	N	Model I	Model II	Model III	Model IV
Women	0	879	1 (-)	1 (-)	1 (-)	1 (-)
	1-2	536	1.54 (1.13-2.11)	1.53 (1.12-2.09)	1.58 (1.10-2.27)	1.54 (1.07-2.22)
	3-5	82	3.50 (2.09-5.85)	3.54 (2.11-5.95)	3.52 (1.91-6.48)	3.37 (1.82-6.24)
Men	0	939	1 (-)	1 (-)	1 (-)	1 (-)
	1-2	506	1.30 (1.00-1.70)	1.27 (0.97-1.67)	1.13 (0.82-1.56)	1.11 (0.81-1.55)
	3-5	54	1.74 (0.94-3.23)	1.51 (0.80-2.87)	0.96 (0.38-2.41)	0.99 (0.39-2.49)

Model I crude. Model II adjusted for SES. Model III further adjusted for educational factors. Model IV further adjusted for SRH

# Labour market participation

	Negative life event	Model I	Model II	Model III	Model IV	AF
Women	Parents divorced	1.84 (1.35-2.52)	1.84 (1.34-2.52)	1.86 (1.29-2.68)	1.82 (1.26-2.63)	16.1%
	Lost parents	1.73 (0.87-3.44)	2.00 (0.99-4.01)	1.92 (0.84-4.40)	1.87 (0.82-4.28)	2.8%
	Parents alcohol/drug abuse	1.71 (1.08-2.71)	1.72 (1.08-2.73)	1.37 (0.77-2.42)	1.31 (0.74-2.33)	2.4%
	Abused	4.89 (2.79-8.57)	4.92 (2.79-8.65)	5.40 (2.78-10.49)	5.10 (2.60-9.97)	12.7%
	Witness violent event	2.21 (1.46-3.33)	2.23 (1.47-3.37)	2.56 (1.61-4.08)	2.47 (1.54-3.94)	12.0%
	Parents acc./disease	1.09 (0.75-1.58)	1.06 (0.73-1.56)	1.26 (0.83-1.92)	1.21 (0.79-1.85)	3.5%
Men	Parents divorced	0.99 (0.72-1.36)	0.97 (0.70-1.34)	0.80 (0.53-1.21)	0.79 (0.52-1.20)	-
	Lost parents	1.07 (0.51-2.25)	1.02 (0.48-2.16)	0.65 (0.19-2.20)	0.66 (0.19-2.24)	-
	Parents alcohol/drug abuse	1.96 (1.22-3.16)	1.78 (1.09-2.91)	1.17 (0.61-2.27)	1.18 (0.61-2.29)	1.0%
	Abused	2.84 (1.39-5.81)	2.74 (1.33-5.63)	1.72 (0.68-4.33)	1.75 (0.69-4.41)	1.6%
	Witness violent event	1.51 (1.02-2.21)	1.52 (1.03-2.23)	1.53 (0.98-2.40)	1.51 (0.95-2.38)	4.9%
	Parents acc./disease	1.25 (0.88-1.77)	1.14 (0.79-1.63)	0.92 (0.59-1.44)	0.96 (0.61-1.50)	-

Model I crude. Model II adjusted for SES. Model III further adjusted for educational factors. Model IV further adjusted for SRH

# Labour market participation

	Negative life event	Model I	Model II	Model III	Model IV	AF
Women	Parents divorced	1.84 (1.35-2.52)	1.84 (1.34-2.52)	1.86 (1.29-2.68)	1.82 (1.26-2.63)	16.1%
	Lost parents	1.73 (0.87-3.44)	2.00 (0.99-4.01)	1.92 (0.84-4.40)	1.87 (0.82-4.28)	2.8%
	Parents alcohol/drug abuse	1.71 (1.08-2.71)	1.72 (1.08-2.73)	1.37 (0.77-2.42)	1.31 (0.74-2.33)	2.4%
	Abused	4.89 (2.79-8.57)	4.92 (2.79-8.65)	5.40 (2.78-10.49)	5.10 (2.60-9.97)	12.7%
	Witness violent event	2.21 (1.46-3.33)	2.23 (1.47-3.37)	2.56 (1.61-4.08)	2.47 (1.54-3.94)	12.0%
	Parents acc./disease	1.09 (0.75-1.58)	1.06 (0.73-1.56)	1.26 (0.83-1.92)	1.21 (0.79-1.83)	3.5%
Men	Parents divorced	0.99 (0.72-1.36)	0.97 (0.70-1.34)	0.80 (0.53-1.21)	0.79 (0.52-1.20)	-
	Lost parents	1.07 (0.51-2.25)	1.02 (0.48-2.16)	0.65 (0.19-2.20)	0.66 (0.19-2.24)	-
	Parents alcohol/drug abuse	1.96 (1.22-3.16)	1.78 (1.09-2.91)	1.17 (0.61-2.27)	1.18 (0.61-2.29)	1.0%
	Abused	2.84 (1.39-5.81)	2.74 (1.33-5.63)	1.72 (0.68-4.33)	1.75 (0.69-4.41)	1.6%
	Witness violent event	1.51 (1.02-2.21)	1.52 (1.03-2.23)	1.53 (0.98-2.40)	1.51 (0.95-2.38)	4.9%
	Parents acc./disease	1.25 (0.88-1.77)	1.14 (0.79-1.63)	0.92 (0.59-1.44)	0.96 (0.61-1.50)	-

Model I crude. Model II adjusted for SES. Model III further adjusted for educational factors. Model IV further adjusted for SRH

Table I. Personal and family predictors for educational attainment after compulsory school.

	n	%	Completed (n=2467)		Still studying (n=312)				Dropped out (n=202)				Never attained (n=72)					
			Base	OR crude	OR adjusted 1	95% CI	OR adjusted 2	95% CI	OR crude 1	OR adjusted 1	95% CI	OR adjusted 2	95% CI	OR crude 1	OR adjusted 1	95% CI	OR adjusted 2	95% CI
Personal predictors																		
Grades: oral	2889																	
Danish																		
8 or above	2102	72.8	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
7 or below	787	27.2	2.5	1.8	1.4-2.5	1.7	1.2-2.3	3.3	2.4	1.6-3.4	2.1	1.5-3.1	2.6	1.5	0.7-3.2	2.0	0.9-4.2	
Grades: written	2874																	
maths																		
8 or above	1962	68.3	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
7 or below	912	31.7	3.2	2.4	1.8-3.3	2.4	1.8-3.3	3.9	2.6	1.8-3.8	2.5	1.7-3.6	4.0	3.1	1.6-6.3	2.5	1.1-5.5	
Self-esteem	2973																	
Normal/high	2236	75.2	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Low	737	24.8	2.0	1.6	1.1-2.2	1.6	1.1-2.2	1.7	1.3	0.8-1.9	1.3	0.8-1.9	2.9	1.3	0.6-2.8	1.5	0.6-3.6	
Sense of coherence	3022																	
Normal/high	2438	80.7	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Low	584	19.3	1.7	1.4	0.99-2.0	1.4	0.98-2.0	2.1	1.8	1.1-2.7	1.8	1.2-2.6	2.2	1.9	0.8-4.1	1.8	0.7-4.5	
General health status	3033																	
High	2904	95.8	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Low	129	4.3	1.8	1.2	0.6-2.5	1.2	0.6-2.4	2.6	2.2	1.1-4.2	2.2	1.1-4.2	4.2	2.4	0.8-7.9	2.7	0.8-9.3	
Depressive symptoms	2999																	
No	1958	65.3	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Yes	1041	34.7	1.2	0.9	0.7-1.3	0.9	0.7-1.3	1.4	1.1	0.8-1.6	1.1	0.7-1.6	1.6	0.9	0.4-1.8	0.7	0.3-1.6	
Body mass index	2878																	
Low weight	273	9.5	0.9	0.8	0.5-1.3	0.8	0.5-1.3	0.8	0.7	0.4-1.4	0.7	0.4-1.4	0.97	1.1	0.4-3.2	1.3	0.4-4.1	
Normal weight	2301	80.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Overweight	304	10.6	1.0	0.9	0.6-1.4	0.9	0.6-1.4	1.4	1.4	0.9-2.3	1.3	0.8-2.1	2.1	2.6	1.1-6.0	3.5	1.4-8.6	
Family predictors																		
Income	3052																	
Highest	1017	33.3	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Middle	1018	33.4	1.5	1.4	0.98-1.9	1.2	0.8-1.8	1.5	1.3	0.9-2.0	1.3	0.8-2.2	1.4	1.7	0.7-3.8	2.4	0.8-7.3	
Lowest	1017	33.3	2.3	1.9	1.3-2.7	1.6	1.1-2.5	3.6	2.6	1.7-4.0	2.2	1.3-3.6	3.8	3.6	1.6-8.0	3.7	1.2-11.8	

Personal predictors of educational attainment after compulsory school

Table I. (Continued)

	n	%	Completed (n=2467)		Still studying (n=312)			Dropped out (n=202)					Never attained (n=72)					
			Base	OR crude	OR adjusted 1	95% CI	OR adjusted 2	95% CI	OR crude 1	OR adjusted 1	95% CI	OR adjusted 2	95% CI	OR crude 1	OR adjusted 1	95% CI	OR adjusted 2	95% CI
Highest education	3001																	
>15 years	170	5.7	1.0	1.0		1.0		1.0	1.0		1.0		1.0	1.0		1.0		
13-15 years	924	30.8	1.4	1.3	0.6-2.5	1.3	0.6-2.8	3.0	2.6	0.8-3.4	1.8	0.5-6.0	3.5	2.8	0.4-21.7	1.6	0.2-12.8	
10-12 years	1548	51.6	2.1	1.6	0.8-3.2	1.3	0.6-2.8	4.0	3.0	0.9-9.7	1.6	0.5-5.3	3.0	1.9	0.2-15.0	0.5	0.1-4.5	
<10 years	359	12.0	3.0	2.1	1.0-4.3	1.4	0.6-3.3	1.0	5.9	1.8-19.8	2.6	0.8-9.2	8.3	4.2	0.5-34.8	1.3	0.1-11.7	
Family type	3053																	
Two adults	2652	86.9	1.0	1.0		1.0		1.0	1.0		1.0		1.0	1.0		1.0		
One adult/not at home	401	13.1	1.7	1.1	0.7-1.6	1.1	0.7-1.8	2.4	1.0	0.7-1.6	1.1	0.6-1.8	2.5	0.8	0.4-1.7	0.95	0.3-2.8	

Values are odds ratios based on mlogit calculations. All the analyses are adjusted for gender and age when completing 9th grade.

Crude sample: Participants who completed the questionnaire at baseline in 2004 and with outcome information (n=3053 where 2467 completed, 312 were still studying, 202 dropped out and 72 never attained).

Adjusted 1 sample (personal predictors): adjusted for other personal predictors (n=2580 where 2152 completed, 240 were still studying 150 dropped out and 38 never attained a secondary education).

Adjusted 1 sample (family predictors): adjusted for other family predictors (n=3001 where 2442 completed, 305 were still studying, 194 dropped out and 60 never attained a secondary education).

Adjusted 2 sample: adjusted for all personal and family predictors (n=2548 where 2134 completed, 236 were still studying, 146 dropped out and 32 never attained).

Table II. Personal and family predictors for educational attainment after compulsory school in different educational tracks.

	Upper secondary school									Vocational education												
	n	%	Completed (n=1623)			Still studying (n=45)			Dropped out (n=55)			n	%	Completed (n=844)			Still studying (n=267)			Dropped out (n=147)		
			Base	OR	OR	95% CI	OR	OR	95% CI	Base	OR			OR	95% CI	OR	OR	95% CI	OR	OR	95% CI	
		crude	adjusted		crude	adjusted		crude	adjusted				crude	adjusted		crude	adjusted		crude	adjusted		
<b>Personal predictors</b>																						
Grades: oral Danish	1680										1161											
8 or above	1443	85.9	1.0	1.0			1.0	1.0			632	54.4	1.0	1.0				1.0	1.0			
7 or below	237	14.1	2.8	2.5	1.2-5.2	3.4	2.3	1.1-4.6			529	45.6	1.2	1.0	0.7-1.5	1.7	1.6	0.98-2.5				
Grades: written maths	1678										115											
8 or above	1365	81.4	1.0	1.0			1.0	1.0			579	50.4	1.0	1.0				1.0	1.0			
7 or below	313	18.7	3.8	2.9	1.4-6.0	3.3	2.4	1.2-4.7			571	49.7	1.5	1.4	0.97-2.0	2.3	1.9	1.1-3.0				
Self-esteem	1695										1210											
Normal/high	1313	77.5	1.0	1.0			1.0	1.0			884	73.1	1.0	1.0				1.0	1.0			
Low	382	22.5	2.6	1.9	0.8-4.2	1.1	1.2	0.6-2.6			326	26.9	1.6	1.4	0.9-2.0	1.7	1.3	0.8-2.1				
Sense of coherence	1710										1247											
Normal/high	1431	83.7	1.0	1.0			1.0	1.0			963	77.2	1.0	1.0				1.0	1.0			
Low	279	16.3	1.9	1.0	0.4-2.4	1.8	1.1	0.5-2.5			284	22.8	1.5	1.5	1.0-2.2	1.9	2.0	1.2-3.3				
General health status	1716										1247											
High	1656	96.5	1.0	1.0			1.0	1.0			1186	95.1	1.0	1.0				1.0	1.0			
Low	60	3.5	3.5	1.1	0.1-8.7	1.8	2.1	0.6-7.8			61	4.9	1.1	0.96	0.4-2.2	2.3	1.9	0.8-4.3				
Depressive symptoms	1703										1226											
No	1132	66.5	1.0	1.0			1.0	1.0			789	64.4	1.0	1.0				1.0	1.0			
Yes	571	33.5	1.3	0.8	0.4-1.6	1.0	0.9	0.4-1.7			437	35.6	1.1	0.98	0.7-1.4	1.5	1.2	0.8-1.9				
Body mass index	1644										1171											
Low weight	149	9.1	0.95	0.8	0.3-2.5	0.6	0.4	0.1-1.6			117	10.0	0.8	0.7	0.4-1.2	0.8	0.9	0.4-1.9				
Normal weight	1357	82.5	1.0	1.0			1.0	1.0			898	76.7	1.0	1.0				1.0	1.0			
Overweight	138	8.4	0.6	0.6	0.1-2.7	1.3	1.1	0.4-3.0			156	13.3	0.7	0.7	0.4-1.2	1.1	1.1	0.6-2.1				
<b>Family predictors</b>																						
Income	1723										1258											
Highest	705	40.9	1.0	1.0			1.0	1.0			300	23.9	1.0	1.0				1.0	1.0			
Middle	566	32.9	1.3	1.3	0.5-3.4	0.8	0.8	0.3-1.7			436	34.7	1.0	1.0	0.7-1.6	1.6	1.8	0.9-3.5				
Lowest	452	26.2	4.2	3.5	1.4-9.1	2.5	1.8	0.8-4.1			522	41.5	1.1	1.0	0.6-1.7	2.7	2.3	1.2-4.7				
Highest education	1709										1232											
>15 years	143	8.4	1.0	1.0			1.0	1.0			26	2.1	1.0	1.0				1.0	1.0			
13-15 years	655	38.3	1.7	0.9	0.2-4.3	2.1	1.5	0.3-6.8			250	20.3	0.8	1.0	0.4-2.9	2.9	2.2	0.3-18.0				
10-12 years	797	46.6	2.0	0.96	0.2-4.5	2.4	1.4	0.3-6.6			726	58.9	0.6	0.6	0.2-1.7	2.4	1.4	0.2-11.1				

Personal predictors of educational attainment after compulsory school



**The aim of this study was to examine the trajectories of LBP from age 15, 18 and 20 year and the importance of parental LBP, SES, illness behavior, individual characteristics and other physical and mental symptoms for the development of LBP among adolescents and youth.**

Risk factors for low back pain (LBP). Odds ratios with 95 % Confidence Intervals.

		OR (95 % CI)
		Unadjusted
<i>Parental factors</i>	Low Household Income	1.4 (1.1-1.9)
	Lowest education	1.4 (1.1-1.9)
	LBP mother	1.8 (1.3-2.5)
	LBP father	1.5 (1.1-2.2)
<i>Adolescent factors</i>	Genetics	2.2 (1.8-2.8)
	Current smoking	1.8 (1.6-2.1)
	Passive, hours/day	1.08 (1.04-1.12)
	Work, part-time	1.3 (1.1-1.6)
	Pain killers	3.4 (2.7-4.2)
	Other somatic symptoms	5.9 (4.4-7.9)
	Depressive symptoms	2.6 (2.1-3.2)

Risk factors for low back pain (LBP). Odds ratios with 95 % Confidence Intervals.

		OR (95 % CI)	OR (95 % CI)
		Unadjusted	Adjusted
<i>Parental factors</i>	Low Household Income	1.4 (1.1-1.9)	<b>0.9 (0.7-1.4)</b>
	Lowest education	1.4 (1.1-1.9)	<b>1.2 (0.8-1.7)</b>
	LBP mother	1.8 (1.3-2.5)	<b>1.7 (1.1-2.4)</b>
	LBP father	1.5 (1.1-2.2)	<b>1.6 (1.1-2.4)</b>
<i>Adolescent factors</i>	Gender	2.2 (1.8-2.8)	<b>1.5 (1.0-1.7)</b>
	Current smoking	1.8 (1.6-2.1)	<b>1.8 (1.6-2.2)</b>
	Passive, hours/day	1.08 (1.04-1.12)	<b>1.08 (1.03-1.14)</b>
	Work, part-time	1.3 (1.1-1.6)	<b>1.4 (1.1-1.8)</b>
	Pain killers	3.4 (2.7-4.2)	<b>1.7 (1.3-2.1)</b>
	Other somatic symptoms	5.9 (4.4-7.9)	<b>2.1 (1.9-2.3)</b>
	Depressive symptoms	2.6 (2.1-3.2)	<b>1.5 (1.1-1.9)</b>

# Plans, possibilities

1. Cont. Risk factors educational attainment/LMP
  - Gender, ethnicity, accessibility
2. Barriers/promotors for specific (risk) groups
  - Individ. & institutional level
3. Factors determining choice of education
4. The role of work environment
5. Experience with various labour market initiatives, mentors/supervision etc.
6. "Screening" – tool for identification of high risk profiles with regards to edu. drop out/LM marginalization
7. Ongoing surveillance of work environment, employment and education
8. Adopt a life course epi approach in relation to studies on social inequality in health, work

# Thanks!

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Soon to be launched: [www.foca.dk](http://www.foca.dk)

# Papers

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- Rasmussen K, Hansen CD, Nielsen KJ, Andersen JH. **Incidence of work injuries amongst Danish adolescents and their association with work environment factors.** Am J Ind Med 2011; 54(2):143-52.
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