

Work related factors and sickness absence from work –a pilot study among the Icelandic working population.

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Aim

- To investigate if stressful work conditions lead to increased short term or long term sickness absences from work over 5 years period.
- To investigate if individuals' BMI is an influencing factor in sickness absence from work
- To investigate if work conditions, BMI and sickness absence influence exit from the labour market for disability pension



Background

- The work environment is important for employees health
 - Job stress such as understaffed, high work load increases spells of sickness absence in Nordic elderly care (Elstad (2008) *Scandinavian Journal of Public Health*, 36 (5), pp. 467-474).
 - Low job content has been found to relate to increased risk of disability pension (Labriola et al. (2009) *Scandinavian Journal of Public Health*, 37 (7), pp. 778-780)
 - Low decision authority and low variation in work showed a statistically significant association with disability pension (Christensen et al. (2008) *European Journal of Public Health*, 18 (3), pp. 235-237.)
 - Studies show gender differences in sickness absence and exit from the labour market due to disability



Background

- Review of 36 studies found a clear trend towards spells of longer duration for obese workers. In studies from the USA, obese workers had about 1-3 extra days of **absence** per person-year compared with their normal weight counterparts. In European studies, the corresponding difference was about 10 d.
 - For overweight workers the data were conflicting, indicating either increased or neutral level of sick leave compared with normal weight.
 - Regarding underweight, the studies were very few and concerns regarding direction of causality were greater.
 - (Neovius et al. (2009) Obesity Reviews, vol 10, 1, pp 17-27)



Sickness absence - Iceland

- Registry data exists – but is limited and access is restricted
- Self reported population data exists
- Very few research exist on employees sickness absence in Iceland



Method

- In this research we apply a database where information about health, well-being and social determinants of health among the Icelandic population has been gathered for the years 2007, 2009 and 2012
- Individuals were asked about their job status, how many days they had been absent in the past 6 months, their height and weight, their satisfaction with working conditions (QPS-Nordic) as well as their background
- Logistic regression analysis was applied



Method

- Time away from paid work or school due to sickness the past 6 months
 - 0 days
 - 1-5 days
 - 6-10 days
 - 11-20 days
 - 21-30 days
 - 1-2 months
 - 3-4 months
 - 5 months or more
- Not worked or attended school the past 6 months
- Not worked or attended school the past 6 months for other reasons



Descriptives

Participants 2007 and 2009

Working population 2007	Women	Men
N	1470	1455
Age	46,6 years (18-79)	51,2 years (18-79)
BMI 26-30 in 2007	502 (35,2%)	744 (51,1%)
BMI 31+	342 (24,0%)	313 (21,5%)
Work load	10,9 (4-20)	11,8 (4-20)
Autonomy	5,8 (3-15)	6,1 (3-14)
Leadership	13,7 (4-20)	13,3 (4-20)
2009		
Short term sickness absence	129 (9,3%)	86 (6,4%)
Long term sickness absence	88 (6,3%)	54 (4,0%)

Participants 2007 and 2012

Working population 2007	Women	Men
N	1190	1187
Age	47 years (18-78)	52 years (18-79)
BMI 26-30 in 2007	409 (34,4%)	612 (51,6%)
BMI 31+	315 (26,5%)	256 (21,6%)
Work load	10,9 (4-20)	11,8 (4-20)
Autonomy	5,8 (3-15)	6,1 (3-15)
Leadership	13,8 (4-20)	13,3 (4-20)
2012		
Disability >75% in 2012	39 (3,3%)	28 (2,4%)
Short term sickness absence	80 (7,2%)	76 (6,9%)
Long term sickness absence	61 (5,5%)	51 (4,6%)



Crosstabs

Crosstabs	2009		2012	
	Short term sick leave	Long term sick leave	Short term sick leave	Long term sick leave
Overweight	NS	NS	NS	NS
Obesity	<0,001	NS	NS	NS
Work load	NS	NS	NS	NS
Autonomy	<0,01	<0,05	NS	NS
Leadership	NS	NS	<0,05	NS



The effect of age, work related factors and BMI in 2007 on short term sick leave in 2009

	11-29 days on sick leave the past 6 months in 2009			
	Men		Women	
Working population 2007	Exp(B)		Exp(B)	
Age	1,027	<0,01	1,002	NS
Work load	0,970	NS	1,048	NS
Autnomy	1,062	NS	1,071	NS
Leadership	0,967	NS	0,989	NS
Over-weight	1,203	NS	1,527	NS (<0,1)
Obese	1,773	NS	1,930	<0,05
Constant	0,022	<0,001	0,031	<0,001



The effect of age, work related factors and BMI in 2007 on long term sick leave in 2009

	More than 30 days on sick leave the past 6 months in 2009			
	Men		Women	
Working population 2007	Exp(B)		Exp(B)	
Age	1,027	<0,05	1,002	NS
Work load (high vs low)	0,970	NS	1,048	NS
Autnomy (high vs low)	1,062	NS	1,071	NS
Leadership (good vs bad)	0,967	NS	0,989	NS
Over-weight	1,203	NS	1,527	NS (<0,1)
Obese	1,773	NS	1,930	<0,01
Constant	0,022	<0,01	0,039	<0,001



The effect of age, work related factors and BMI in 2007 on short term sick leave in 2012

	11-29 days on sick leave the past 6 months in 2012			
	Men		Women	
Working population 2007	Exp(B)		Exp(B)	
Age	1,017	NS	1,009	NS
Work load (high vs low)	1,079	NS	1,031	NS
Autnomy (high vs low)	0,947	NS	1,041	NS
Leadership (good vs bad)	0,931	NS	1,085	NS
Over-weight	1,186	NS	1,141	NS
Obese	1,101	NS	1,609	NS
Constant	0,043	0,020	0,008	<0,001



The effect of age, work related factors and BMI in 2007 on long term sick leave in 2012

	More than 31 days on sick leave the past 6 months in 2012			
	Men		Women	
Working population 2007	Exp(B)		Exp(B)	
Age	1,044	<0,05	1,018	NS
Work load	1,035	NS	0,997	NS
Autnomy	0,908	NS	1,108	NS
Leadership	0,944	NS	1,080	NS
Over-weight	0,826	NS	0,992	NS
Obese	0,938	NS	1,313	NS
Constant	0,019	0,020	0,003	<0,001



The effect of age, working conditions, BMI and sick leave in 2007 on disability in 2012

	Disability pension >75% in 2012			
Working population in 2007	Men		Women	
	Exp(B)			
Age	1,019	NS	1,018	NS
Work load (high vs low)	0,805	<0,05	1,001	NS
Autonomy (high vs low)	1,343	<0,05	1,029	NS
Leadership (good vs bad)	1,005	NS	1,144	NS
Over-weight	0,570	NS	1,090	NS
Obese	0,249	NS <0,1	1,884	NS
Sick leave 1-5 days	0,897	NS	0,731	NS
Sick leave 6-10 days	0,987	NS	3,003	NS
Sick leave 11-20	0,000	NS	7,649	<0,01
sick leave 21-30 days	5,283	NS	5,669	NS
Sick leave more than 31 days	4,493	NS <0,1	8,581	<0,01
Constant	0,017	0,081	0,002	<0,001



Discussion

- These preliminary result indicate that a further study on both work related factors and individuals BMI is needed among the Icelandic working population, to understand better sickness absence from work and exit from the labour market to disability pension.
- Gender is an important factor



Discussion

- How reliable is the data?
 - Self reported data
- What should be the next step?
 - Observe more health outcomes in relation to sickness absence?
 - Observe occupations in relation to sickness absence?

