Societal Impact of Pain_2013

Brussels, May 15

EU Epidemiology of Chronic Pain in the Working Population

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Impact of Chronic Pain on Daily Activities

(Pain in Europe Survey, EJP 2005)

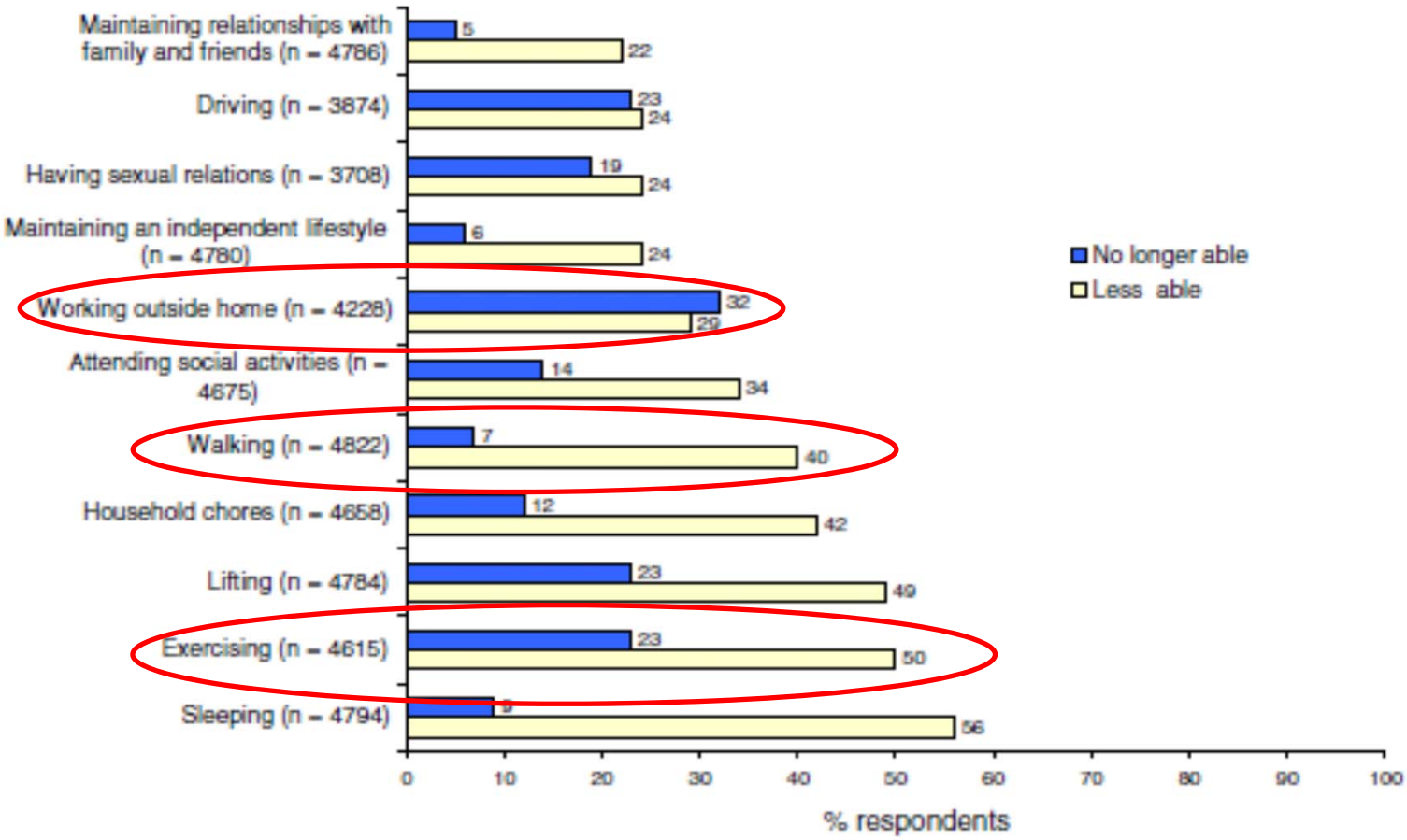


Fig. 7. The impact of chronic pain on daily activities. The graph shows percentage of respondents who were less able or unable to carry out the activities read out by the interviewers.

Employment Status of Responders

(Pain in Europe Survey, EJP 2005)

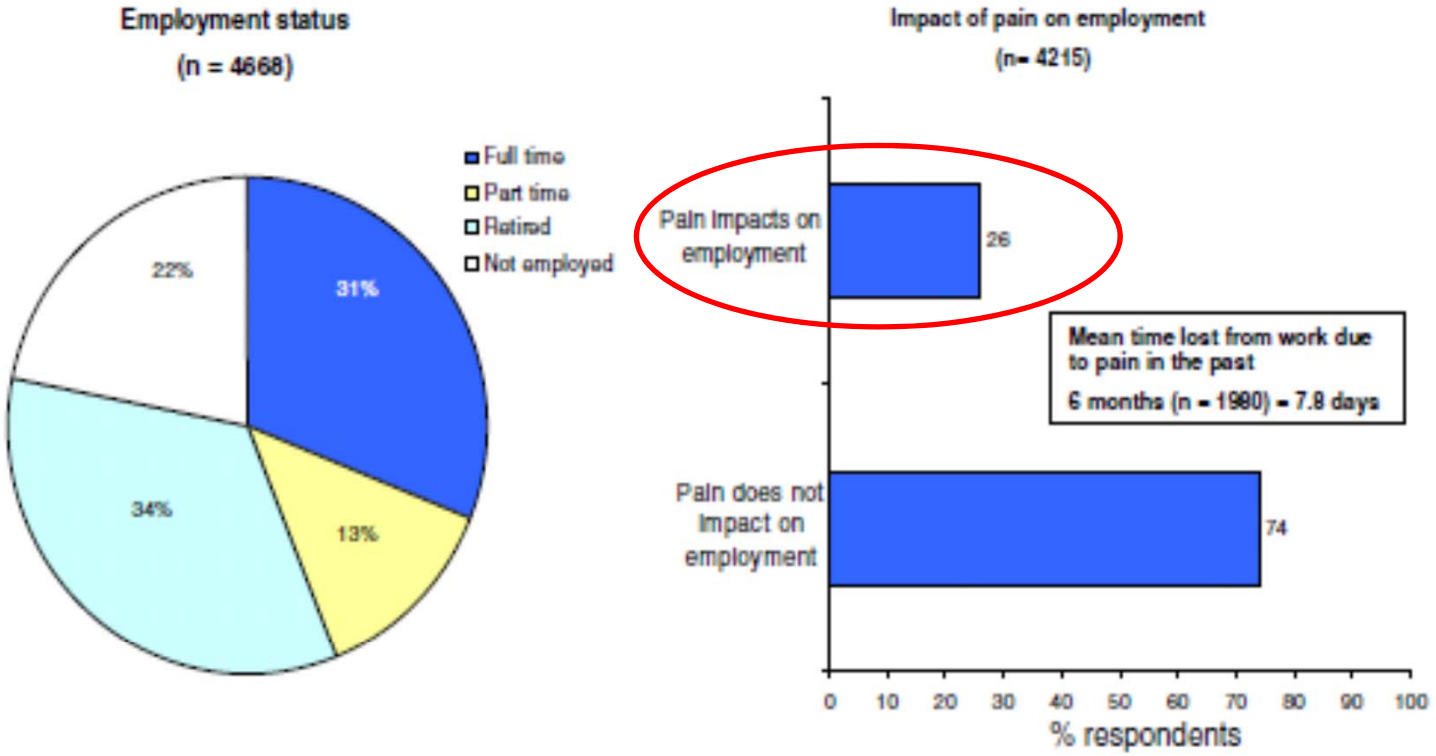


Fig. 8. Employment status of respondents with chronic pain, impact of pain on their employment status and lost days from work during the last 6 months for those who were full time or part time employed. From the structured interview questions: "Are you currently…? Employed full-time, Employed part-time, Retired, Not employed" and "In the past six months, how many days in total have you lost from work because of your pain?" and "Does your current employment status or the hours you work have anything to do with the pain that you experience?".

Mean Number of Days Lost

(Pain in Europe Survey, EJP 2005)

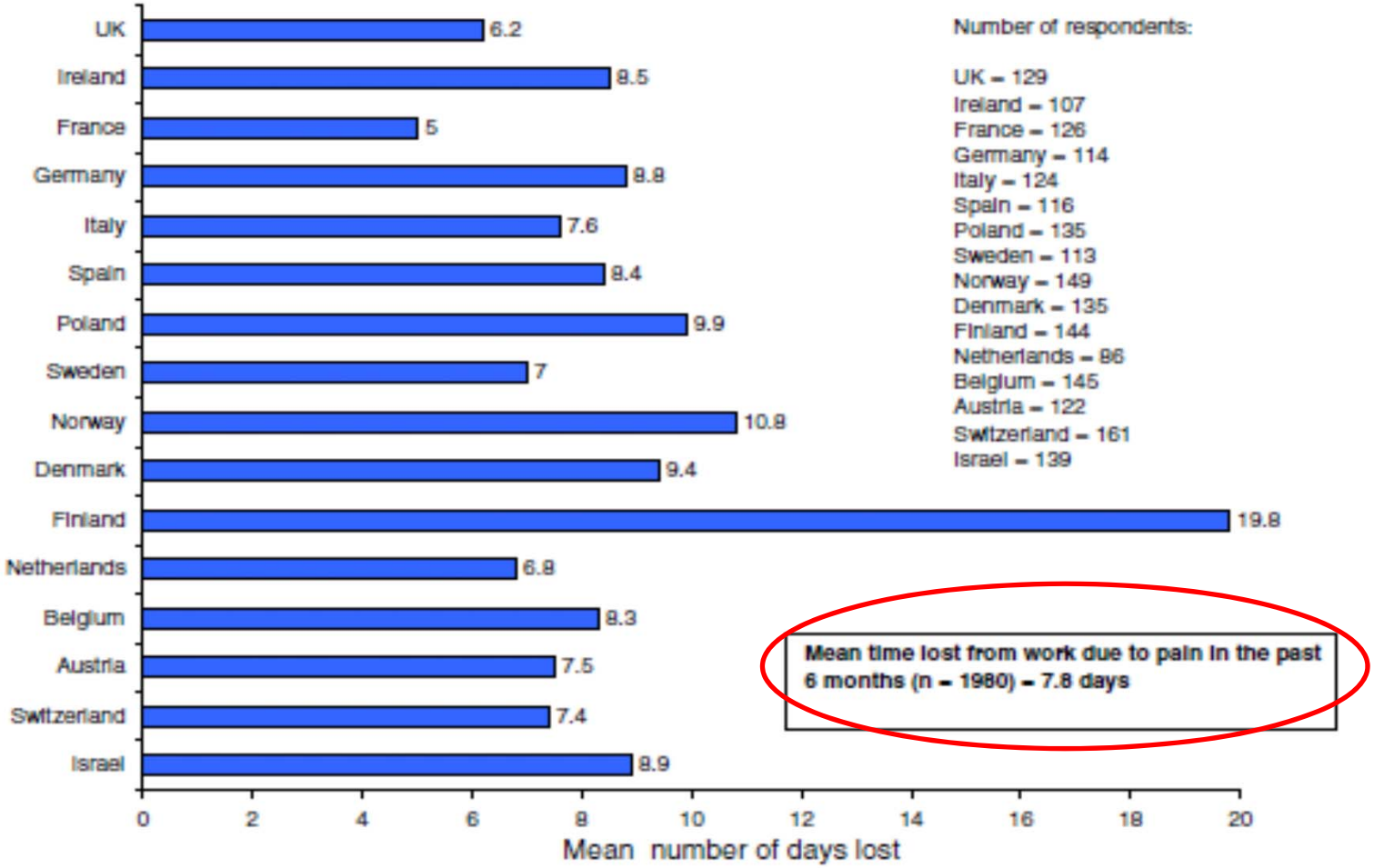


Fig. 9. Mean number of days lost during the last 6 months of full or part time employment in the 16 countries.

Changes in Employment

(Pain in Europe Survey, EJP 2005)

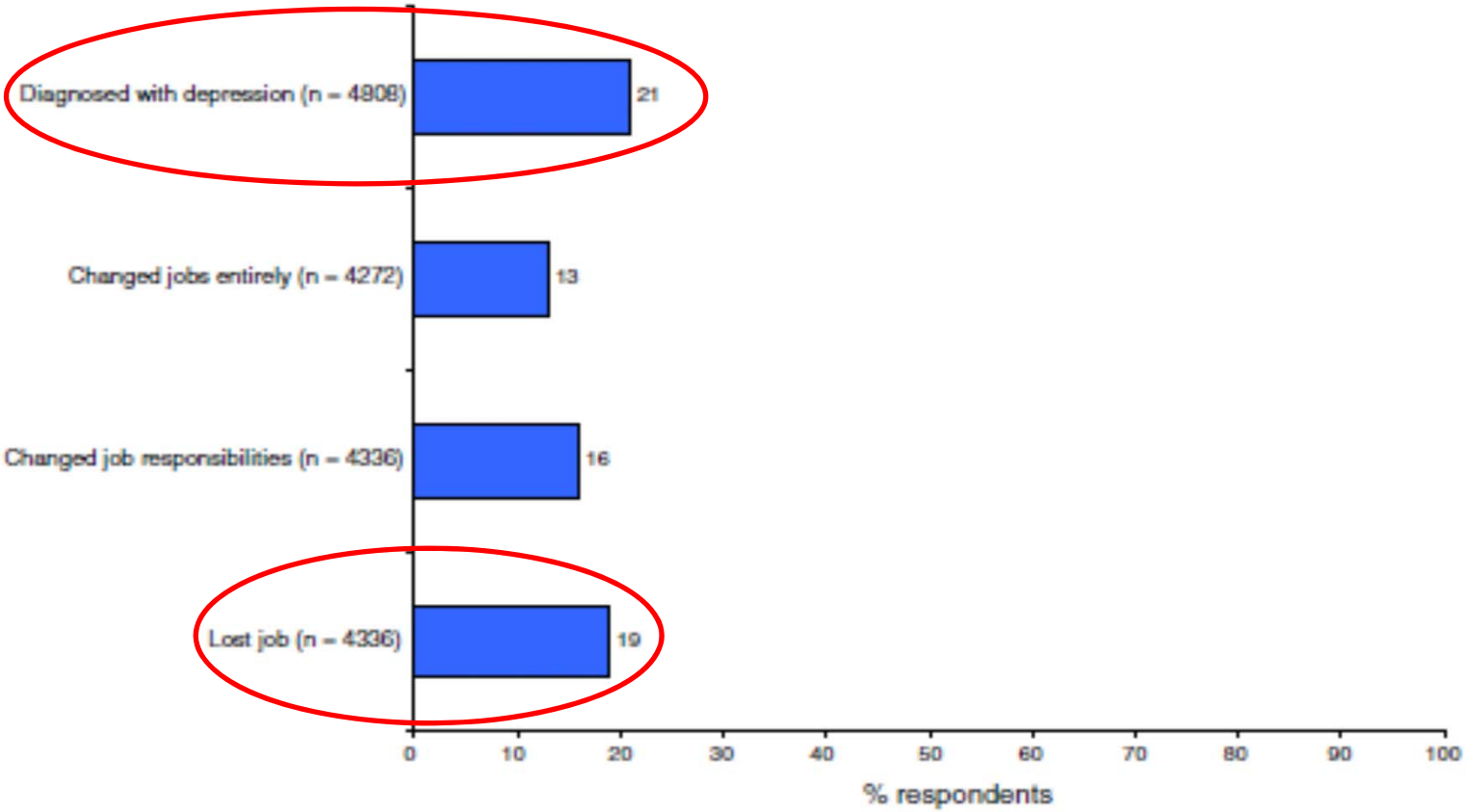


Fig. 10. Changes in employment situation and depression caused by chronic pain.

Job Changes due to Pain

(Pain in Europe Survey, EJP 2005)

Table 2a

Job and emotional changes due to pain by country

	% Respondents								
	UK ($n = 243$)	France ($n = 232$)	Germany ($n = 232$)	Italy ($n = 233$)	Spain ($n = 255$)	Poland ($n = 220$)	Sweden ($n = 292$)	Norway ($n = 289$)	Denmark ($n = 298$)
Lost job	25 IFGTPBZ	15	14	17	22 IFGPB	14	24 IFGPBZ	24 IFGPBZ	29 IFGTPLBAZ
Changed job responsibilities	16	12	11	28	8	19	28	28	21
Changed jobs entirely	18	12	8	20	4	13	25	22	11
Diagnosed with depression	24 PDE	18 D	20 D	22 PD	29 IFGTPDLNBAZE	14	24 PDZE	28 IFGPDNBAZE	11

Source is answers to questionnaire questions: "Have any of the following ever happened as a result of your pain…? (Read list)" and: "Have you ever been diagnosed with depression by a medical doctor as a result of your pain?"

Statistical testing at the 95% confidence level where: U, greater than UK; F, greater than France; G, greater than Germany; T, greater than Italy; S, greater than Spain; P, greater than Poland; W, greater than Sweden; Y, greater than Norway; D, greater than Denmark; L, greater than Finland; N, greater than

Job Changes due to Pain

(Pain in Europe Survey, EJP 2005)

Table 2b
Job and emotional changes due to pain by country

	% Respondents						
	Netherlands ($n = 294$)	Belgium ($n = 286$)	Finland ($n = 290$)	Ireland ($n = 272$)	Switzerland ($n = 274$)	Austria ($n = 279$)	Israel ($n = 299$)
Lost job	29 IFGTPLBAZ	15	22 GP	15 UFGSBZ	16 SB	20 FGSB	25 IFGTPBZ
Changed job responsibilities	20	9	19	24	15	20	17
Changed jobs entirely	16	9	14	23	12	11	14
Diagnosed with depression	19 D	19 D	22 PD	19 D	18 D	21 PD	16

Source is answers to questionnaire questions: *"Have any of the following ever happened as a result of your pain...? (Read list)"* and: *"Have you ever been diagnosed with depression by a medical doctor as a result of your pain?"*

Statistical testing at the 95% confidence level where: U, greater than UK; F, greater than France; G, greater than Germany; T, greater than Italy; S, greater than Spain; P, greater than Poland; W, greater than Sweden; Y, greater than Norway; D, greater than Denmark; L, greater than Finland; N, greater than Netherlands; B, greater than Belgium; A, greater than Austria; Z, greater than Switzerland and E, greater than Israel.

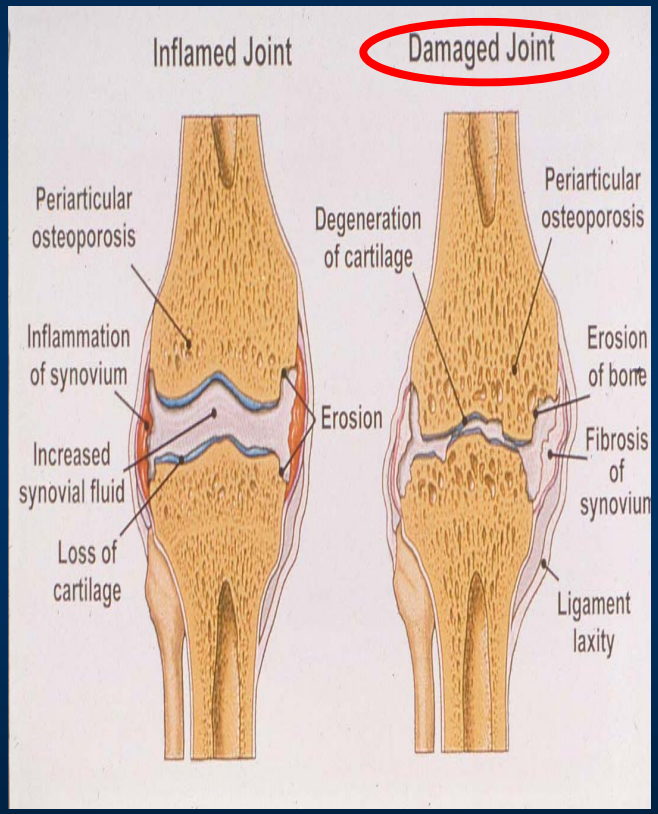
Health in the European Union
(EUROBAROMETER 2007)

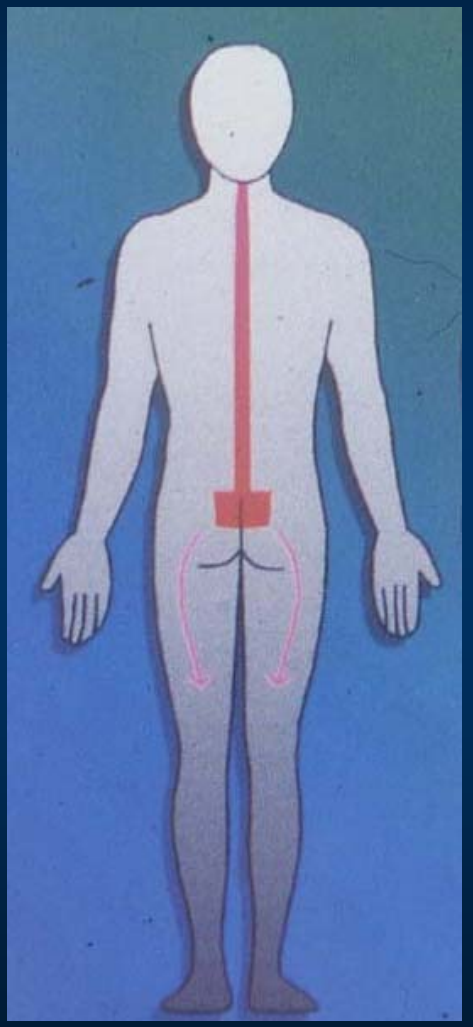
CHRONIC PAIN

Prevalence	25 %
Localization	back 66 %
	joints 52 %
	neck 32 %
	head 31 %
Numbers	23 million persons (18-64 yrs)
	(***about 10 % of EU workforce***)
Lost days	367 million

http://ec.europa.eu/health/ph_publication/eb_health_en.pdf

Chronic Muscle_Skeletal Complaints in Workers





de Vries et al. BMC Musculoskeletal Disorders 2011, 12:126
http://www.biomedcentral.com/1471-2474/12/126

BMC
Musculoskeletal Disorders

RESEARCH ARTICLE Open Access

Staying at work with chronic nonspecific musculoskeletal pain: a qualitative study of workers' experiences

Haitze J de Vries[1*], Sandra Brouwer[2], Johan W Groothoff[2], Jan HB Geertzen[1] and Michiel F Reneman[1]

Results: A total of 16 motivators and 52 success factors emerged in the interviews. Motivators were categorized into four themes: work as value, work as therapy, work as income generator, and work as responsibility. Success factors were categorized into five themes: personal characteristics, adjustment latitude, coping with pain, use of healthcare services, and pain beliefs.

Conclusions: Personal characteristics, well-developed self-management skills, and motivation to work may be considered to be important success factors and prerequisites for staying at work, resulting in behaviors promoting staying at work such as: raising adjustment latitude, changing pain-coping strategies, organizing modifications and conditions at work, finding access to healthcare services, and asking for support. Motivators and success factors for staying at work may be used for interventions in rehabilitation and occupational medicine, to prevent absenteeism, or to promote a sustainable return to work. This qualitative study has evoked new hypotheses about staying at work; quantitative studies on staying at work are needed to obtain further evidence.

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Occupational activities and osteoarthritis of the knee

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Conclusions

Knee OA is an increasingly common cause of morbidity and work limitation in later life. Occupational activities that physically load the joint – notably, squatting and kneeling for substantial parts of the working day, regular heavy lifting, climbing, and high physical workload – are likely to contribute to disease occurrence and/or progression and to symptom aggravation. Where possible these exposures should be minimised at source by job design, difficult though this may be to achieve in practice. In any event, workers who are overweight and who have these elements in their daily work should be strongly encouraged to lose weight.

Biomechanical and Psychosocial Work Exposures and Musculoskeletal Symptoms among Vineyard Workers

Christophe BERNARD[1–3], Laurène COUROUVE[4], Stéphane BOUÉE[4], Annie ADJÉMIAN[1], Jean-Claude CHRÉTIEN[1] and Isabelle NIEDHAMMER[5–8]

[1]CCMSA, [2]Sénat, [3]OECD/OCDE, [4]CEMKA, [5]INSERM, U1018, CESP Centre for Research in Epidemiology and Population Health, Epidemiology of Occupational and Social Determinants of Health Team, [6]Univ Paris-Sud, [7]Université de Versailles St-Quentin, France and [8]UCD School of Public Health, University College Dublin, Ireland

Table 1. Prevalence of musculoskeletal symptoms

	Men n=2,824		Women n=1,123		
	Cases (n)	Cases (%)	Cases (n)	Cases (%)	*p*
Neck/shoulder	779	27.6	363	32.3	***
Back	1,630	57.7	542	48.3	***
Upper extremity	805	28.5	425	37.8	***
Lower extremity	753	26.7	235	20.9	***

Chi-Square test, comparison between men and women. ***: $p<0.001$.

BMJ open
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Relationship between years in the trade and the development of radiographic knee osteoarthritis and MRI-detected meniscal tears and bursitis in floor layers. A cross-sectional study of a historical cohort

Lilli Kirkeskov Jensen,[1] Søren Rytter,[2] Jacob Louis Marott,[3] Jens Peter Bonde[1]

Table 2 Risk of radiographic tibio- and patellofemoral knee osteoarthritis (OA) and magnetic resonance imaging-detected meniscal tears and bursitis

Disorder	Floor layers, n (%)	Graphic designers, n (%)	Adjusted, OR* (95% CI)
Tibiofemoral OA†	17 (18.9)	8 (16.7)	2.46 (0.83 to 7.28)
Patellofemoral OA	7 (7.8)	9 (18.8)	0.44 (0.14 to 1.37)
Tears of medial meniscus‡	62 (67.4)	26 (53.1)	2.82 (1.25 to 6.36)
Tears of lateral meniscus‡	12 (13.0)	11 (22.4)	0.78 (0.29 to 2.10)
Peripatellar bursitis			
Prepatellar	1 (1.1)	5 (10.2)	0.14 (0.02 to 1.55)
Superficial infrapatellar	4 (4.3)	2 (4.1)	0.90 (0.14 to 5.75)
Deep infrapatellar	10 (10.9)	2 (4.1)	3.53 (0.64 to 19.6)
Periarticular bursitis	71 (77.2)	31 (63.3)	2.04 (0.89 to 4.69)
Subgastrocnemius	57 (62.0)	24 (49.0)	1.76 (0.82 to 3.75)
Semimembranosus–gastrocnemius	43 (46.7)	17 (34.7)	1.49 (0.67 to 3.29)
Others§	14 (15.2)	0 (0)	–

Values are represented as OR with 95% CI. Floor layers (n=92) are compared with graphic designers (n=49).
*OR is calculated relative to the reference group of graphic designers and adjusted for body mass index, previous knee traumas, knee straining sports activities and age.
†Missing radiographs in two floor layers and one graphic designer.
‡Unilateral or bilateral meniscal tears.
§Others: anserine, lateral (LCL) and medial (MCL) collateral ligament, iliotibial bursae and extracapsular synovial cysts.

Prevalence, incidence, and recurrence of low back pain in scaffolders during a three year follow-up study

Table 1 Prevalence, incidence, and recurrence of low back pain in the past 12 months and chronic low back pain in the past 12 months during a 3 year follow-up period among scaffolders

Respons	Baseline 95% CI (n=288)	1st follow-up 95% CI (n=209)	2nd follow-up 95% CI (n=163)	3rd follow-up 95% CI (n=127)
LBP past 12 months				
Prevalence	60% (54 - 65%)	46% (39 - 52%)	46% (38 - 54%)	44% (36 - 49%)
Incidence	--	20% (15 - 25%)	21% (15 - 27%)	28% (21 - 36%)
Recurrence	--	65% (58 - 71%)	77% (70 - 83%)	64% (56 - 72%)
Chronic LBP past 12 months				
Prevalence	22% (17 - 27%)	11% (7 - 15%)	10% (6 - 15%)	12% (6 - 17%)
Incidence	--	5% (2 - 8%)	4% (1 - 7%)	7% (3 - 12%)
Recurrence	--	33% (27 - 40%)	65% (57 - 72%)	58% (50 - 67%)

95% CI = 95% confidence interval

LBP: low back pain

Elders LAM, Burdorf A. repub.eur.nl/res/pub/1110/02

Prevalence of Low Back Pain in Greek Public Office Workers

Panagiotis Spyropoulos, PhD[1], George Papathanasiou, MSc[1], George Georgoudis, PhD[1], Efstathios Chronopoulos, MD, PhD[2], Harilaos Koutis, MD, PhD[1], and Fotini Koumoutsou[1]

Results: Of the 771 office workers, 648 responded (84% return rate). The majority of the participants were women (75.8%). Among all responders, 33%, 37.8%, 41.8%, and 61.6% presented with point, one-year, two-year, and lifetime prevalence respectively. Sleep disturbances due to pain were reported in 37% of the office clerks with chronic low back pain. Multiple logistic regression models have revealed that significant determinants for predicting LBP occurrence are age, gender, body mass index, body distance from computer screen, adjustable back support, clerk body position while sitting, sitting time of greater than 6 hours, job satisfaction, repetitive work, and anger during last 30 days.

Conclusion: High proportions of Greek office workers suffer from LBP which might affect the Greek economy. The incidence of LBP status is significantly associated with some anthropometric, ergonomic, and psychosocial factors.

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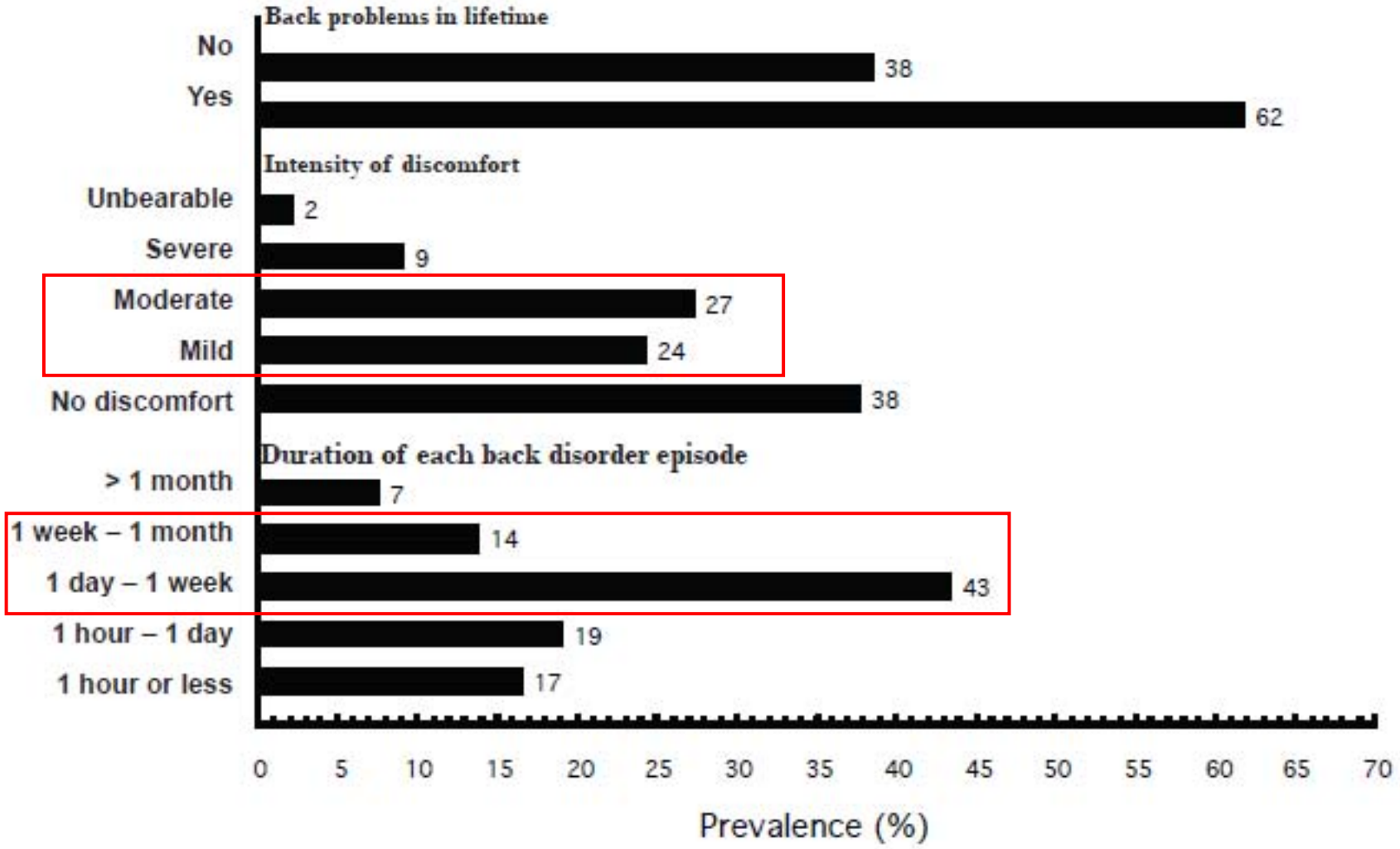

Fig. 1. *Prevalence of self-reported recurrent back disorders by intensity, duration and time of onset*

BMC Musculoskeletal Disorders

BioMed Central

Research article

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Prevalence of complaints of arm, neck and shoulder among computer office workers and psychometric evaluation of a risk factor questionnaire

Shahla Eltayeb*[1,2], J Bart Staal[1], Janneke Kennes[3], Petra HG Lamberts[4] and Rob A de Bie[1]

Table 2: Prevalence rates of upper extremity musculoskeletal complaints during the previous year that lasted at least one week

Localization of complaints	Total Number of subjects with complaints	Total Prevalence (95% CI) (n = 264)	Male Prevalence (95% CI) (n = 133)	Female Prevalence (95% CI) (n = 131)
Neck complaints	89	0.33 (0.27 to 0.39)	0.24 (0.17 to 0.31)	0.42 (0.33 to 0.50)
Shoulder complaints	81	0.31 (028 to 0.37)	0.20 (0.13 to 0.27)	0.42 (0.33 to 0.50)
Upper arm complaints	32	0.12 (0.08 to 0.16)	0.10 (0.05 to 0.15)	0.13 (0.07 to 0.18)
Elbow complaints	16	0.06 (0.03 to 0.08)	0.07 (0.03 to 0.11)	0.04 (0.01 to 0.07)
Lower arm complaints	21	0.08 (0.05 to 0.11)	0.06 (0.02 to 0.10)	0.09 (0.04 to 0.14)
Wrist complaints	21	0.08 (0.05 to 0.11)	0.06 (0.02 to 0.10)	0.09 (0.04 to0.14)
Hand complaints	30	0.11 (0.07 to 0.15)	0.10 (0.05 to 0.15)	0.12 (0.06 to 0.17)
Any upper extremity complaint	154	0.55(0.48 to 061)	0.48. (0.06 to 0.39)	0.61.(0.52 to 0.69)

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Prevalence of complaints of arm, neck and shoulder among computer office workers and psychometric evaluation of a risk factor questionnaire

Shahla Eltayeb*[1,2], J Bart Staal[1], Janneke Kennes[3], Petra HG Lamberts[4] and Rob A de Bie[1]

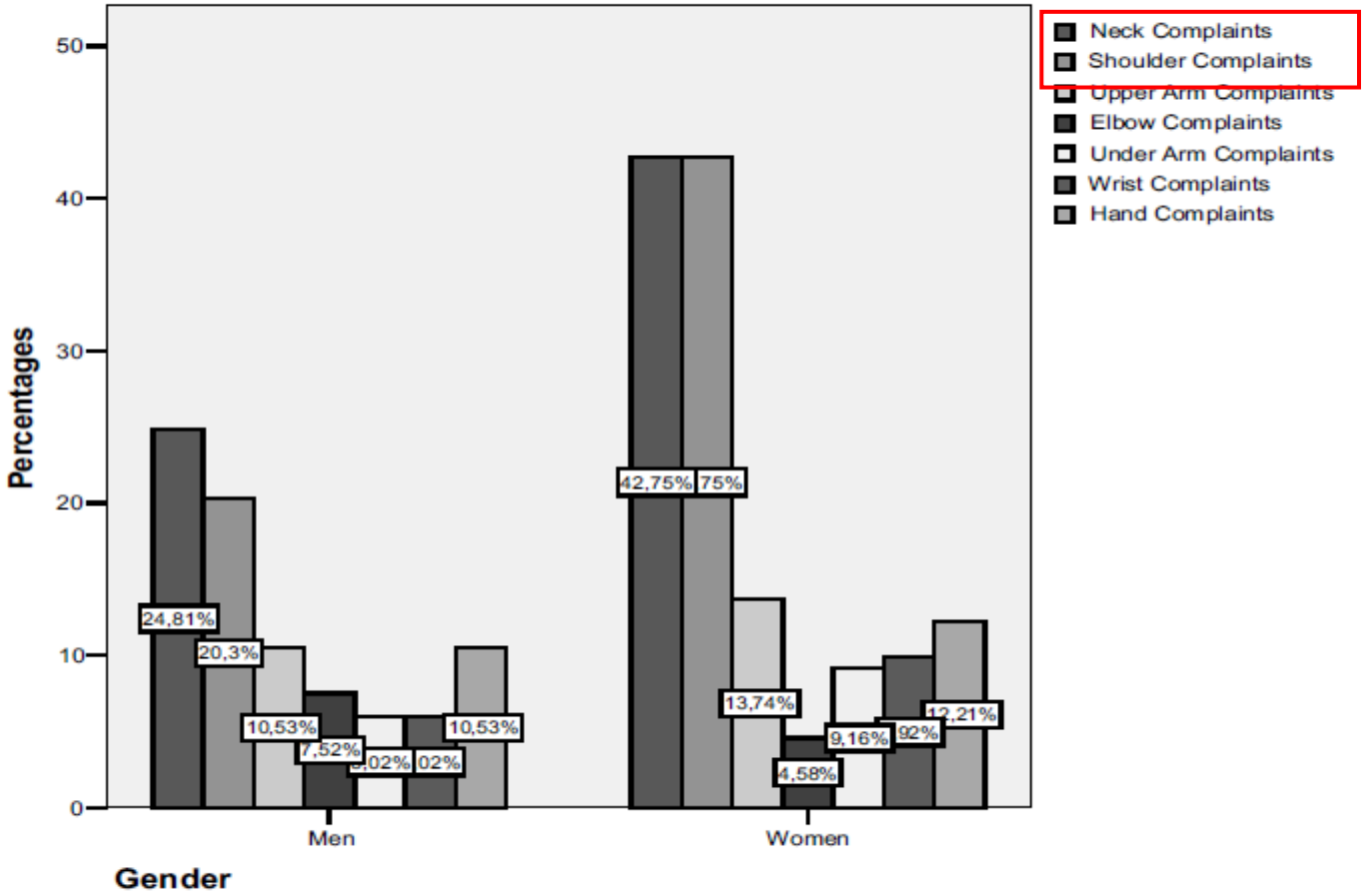

Figure 1
Percentages of upper extremity musculoskeletal complaints with a minimal duration of one week over the preceding year in groups according to gender.

RESEARCH ARTICLE Open Access

Low back pain around retirement age and physical occupational exposure during working life

Sandrine Plouvier*, Julie Gourmelen, Jean-François Chastang, Jean-Louis Lanoë and Annette Leclerc

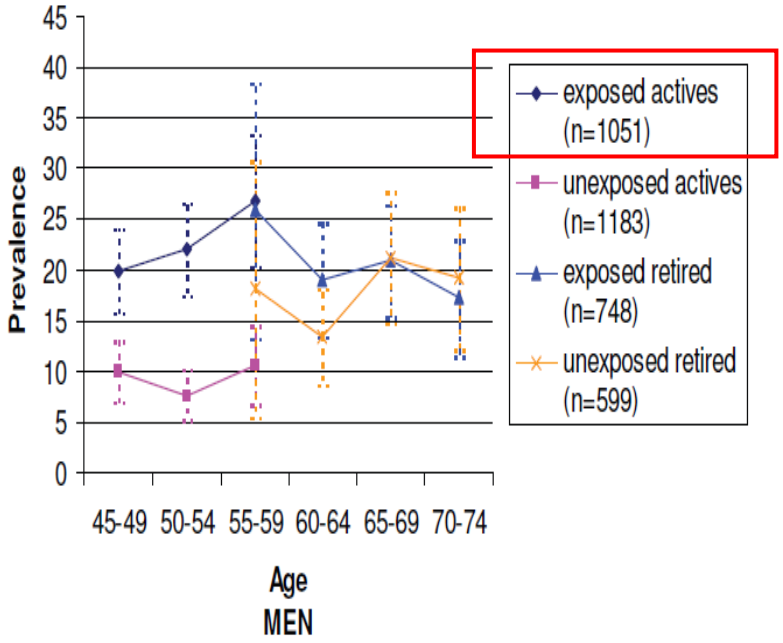

Figure 1 Prevalence of Low back pain for more than 30 days within the previous 12 months and its 95% Confidence Interval among men according to age and work status.

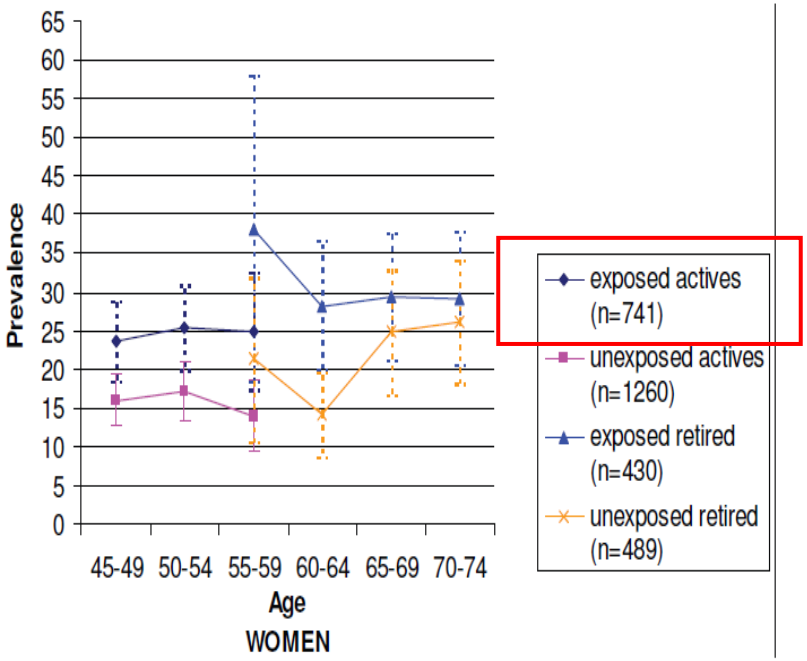

Figure 2 Low back pain for more than 30 days within the previous 12 months and its 95% Confidence Interval among women according to age and work status.

Physiopathologic Consequences of *Un*_relieved and *Un*_treated Chronic Pain

Cardiac: ↑ clot – ↑ HR and BP – ↑ O_2 demand – ↑ MI risk
Respiratory: ↓ alveolar ventilation – pneumonia
Gastro-Intestinal: ↓ motility – vomiting / nausea – *ileus*
Musculoskeletal: ↓ muscles and articular performances
Future Conditions with Pain: CRPS, PHN, FBSS
Impaired immune functions:
- ↓ natural killer cell counts
- effects on other lymphocyte functions

Personal: inability to perform ADL, worsening of QoL, self-esteem, depression, poor appetite and weight loss, withdrawal from social activities, social deprivation
Therapy: ↑ risk for use of inappropriate pharmaceutical molecules
Economic burden: increasing (both general and personal)