

15.10.2013

Work Ability Index (WAI)

- ▶ Prof. (emer.) Juhani Ilmarinen, Finland
- ▶ International Forum on Social Entrepreneurship
- ▶ Ergoeduka and the Union of Czech Production Co-operatives,
- ▶ October 10-12, 2013; Proseč u Skutče, Czech Republic

Juhani Ilmarinen Consulting Ltd

- ▶ **Background** in Finnish Institute of Occupational Health: 30 years research in Work Ability and Ageing, development of Work Ability Index, Promotion of Work Ability concept, Age & Generation Management, Life course, and Work Ability House-modell
- ▶ **First National Prize for Innovative Practices in Employment and Social Policy, 2008 (SITRA, STM)**
- ▶ **Topics today:** Work Ability and Ageing, Work Well-being, Age - and Generation Management, Life course
- ▶ **Projects:**
 - ▶ Finland: Good work-Longer Worklife in Technology Industry
 - ▶ Germany: Work Ability, Age & Generation Management Training
 - ▶ Austria: Fit for the future –programme
 - ▶ Netherlands: Work Ability Implementation (Blik op Werk)
 - ▶ Australia: RWAS, ComCare, St George Bank
- ▶ www.jic.fi, juhani.ilmarinen@jic.fi, +358-400-815511

Work Ability- Milestones of research and praxis in Finland

1. WAI-Follow-up studies
1981-2009 (FIOH)



2. WAI-Promotion concepts
1990-1996 (FIOH)



3. WAI-Translations 1990-
(28 languages in 2009)

Translations of WAI in 2006


- ▶ Finnish ***
- ▶ Swedish ***
- ▶ English ***
- ▶ German ***
- ▶ Dutch **
- ▶ Portuguese ***
- ▶ Danish *
- ▶ Chinese **
- ▶ Estonian **
- ▶ Russian *
- ▶ Hebrew **
- ▶ Italian **
- ▶ French **
- ▶ Japanese **
- ▶ Polish **
- ▶ Latvian *
- ▶ Spanish **
- ▶ Norwegian **
- ▶ Serbian **
- ▶ Hungary **
- ▶ Slovenia **
- ▶ Thai *
- ▶ Korean *
- ▶ Taiwanese (*)
- ▶ Vietnamese (*)

Work Ability- Milestones of research and praxis

4. WAI- in occupational health services (FIOH 1992-)



5. WAI- International Co-operation 1992- (the Netherlands, Austria , Germany)



6. WAI- Research, International Workshops, Symposia, Conferences 1990- (ICOH, IEA, 14)

Venues of workshops, symposia and conferences under the auspices of the ICOH Scientific Committee "Ageing and Work" in 1990-2011

▶ 1990 The Hague (Netherlands)	Ageing and Work
▶ 1992 Haikko (Finland)	Ageing and Work
▶ 1994 Wijk aan Zee (Netherlands)	Ageing and Work
▶ 1994 Kitakuysu (Japan)	Path to Productive Ageing
▶ 1996 Stockholm (Sweden)	Work after 45?
▶ 1998 Helsingor (Denmark)	Ageing and Work
▶ 1999 The Hague (Netherlands)	Ageing and Work
▶ 2001 Tampere (Finland)	Work Ability
▶ 2001 Kitakyushu (Japan)	Ageing and Work
▶ 2002 Krakow (Poland)	Ageing and Work
▶ 2004 Verona (Italy)	Work Ability
▶ 2007 Hanoi (Vietnam)	Work Ability
▶ 2010 Tampere (Finland)	Work Ability
▶ 2011 Melbourne (Australia)	Older Workers and Workability

Work Ability- Milestones of research and praxis

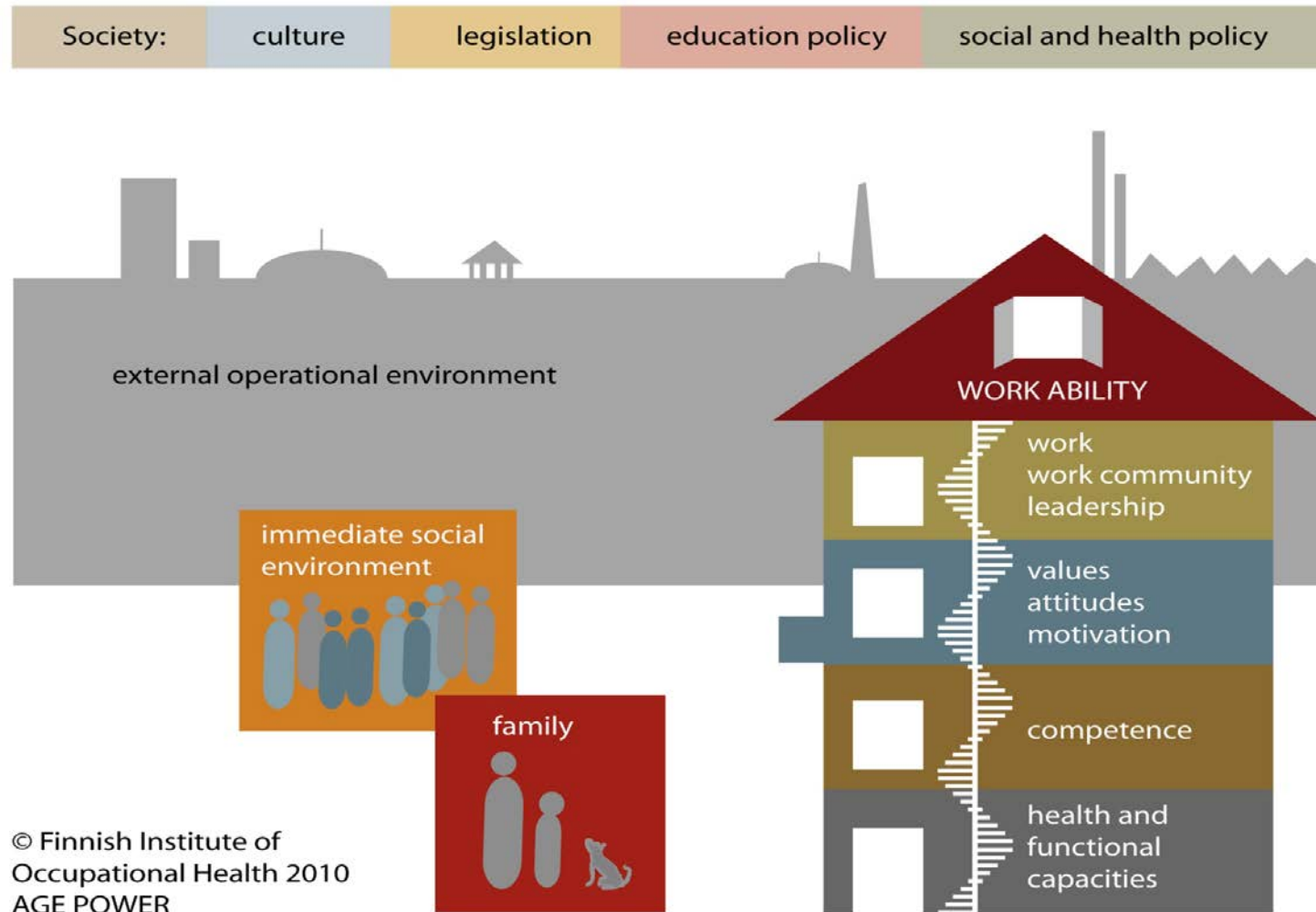
7. WAI-Training, Coaching and Consulting
(Germany, Austria)

8. WAI- Networks (Germany, Austria, the Netherlands)

9. WAI – Data Banks (Finland, Germany, Austria, the Netherlands)

10. Work Ability House – new concept
2002- (FIOH)


Work ability model




© Finnish Institute of
Occupational Health 2010
AGE POWER

Work Ability- Milestones of research and praxis

11. ABI Plus(Austria 2009-), Work Ability Survey (Australia 2009-)



12. WA-Personal Radar (Work Well-Being Index) & WA-Company Radar (Finland 2010-)



13. Work Ability- pre-and post doc classes in universities (Austria, University of Vienna)

Future of Work Ability

14. Work Ability - Management
Initiatives for social partners,
legislation, collective agreements

15. Work Ability – policy
Demographic change, prolonging
working life, increase in retirement age

16. Work Ability – Work well-
being
New paradigm

WORK ABILITY



INDEX

Kaija Tuomi
Juhani Ilmarinen
Antti Jahkola
Lea Katajarinne
Arto Tulkki

Lea Katajarinne

Finnish Institute of Occupational Health

Work Ability Index

7 Items

- Current work ability compared with the lifetime best
- Work ability in relation to the demands of the job
- Number of current diseases diagnosed by physician
- Estimated workimpairment due to diseases
- Sick leave during the past year (12 months)
- Own prognosis of work ability two years from now
- Mental resources

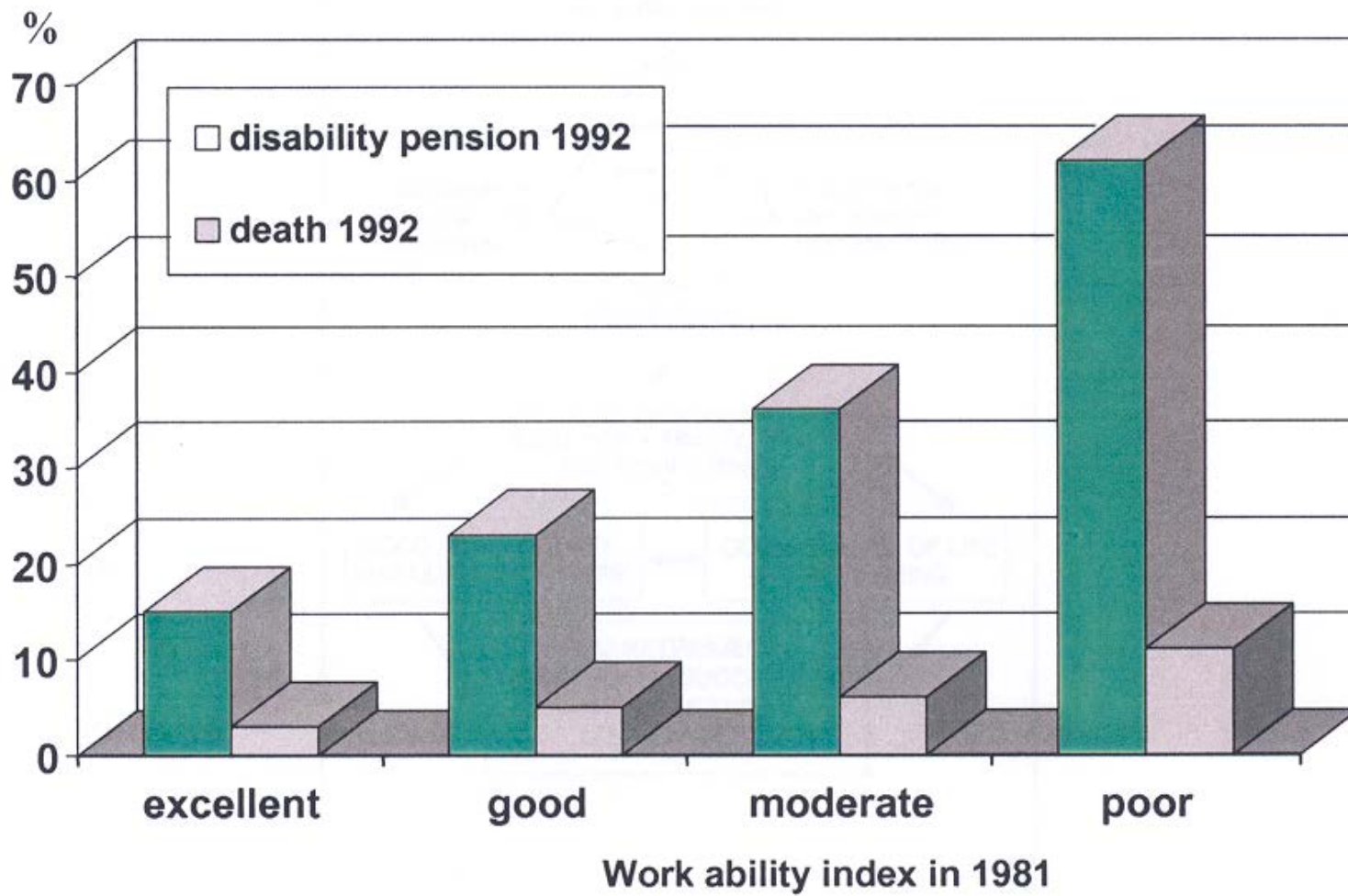
ICOH 2003

Lea Katajarinne

Work Ability Index

Scoring of the Questionnaire (range 7- 49 points)

<u>Points</u>	<u>Work ability</u>	<u>Objective of measures</u>
7 - 27	POOR	RESTORE WORK ABILITY
28 - 36	MODERATE	IMPROVE WORK ABILITY
37 - 43	GOOD	SUPPORT WORK ABILITY
44 - 49	EXCELLENT	MAINTAIN WORK ABILITY



Proportion of persons whose work ability improved or declined according to work content during follow-up of 11 years

	Improved		Declined	
	n	%	n	%
Men				
Physical work	82	6.1	100	31.0
Mixed physical and mental work	36	11.1	48	33.3
Mental work	83	10.8	152	27.6
Three groups combined	201	9.0	300	29.7
Women	n	%	n	%
Physical work	115	11.3	127	31.5
Mixed physical and mental work	99	9.1	140	25.7
Mental work	140	7.9	238	28.2
Three groups combined	354	9.3	505	28.3
Total	555	9.2	805	28.8

Poor work ability, %

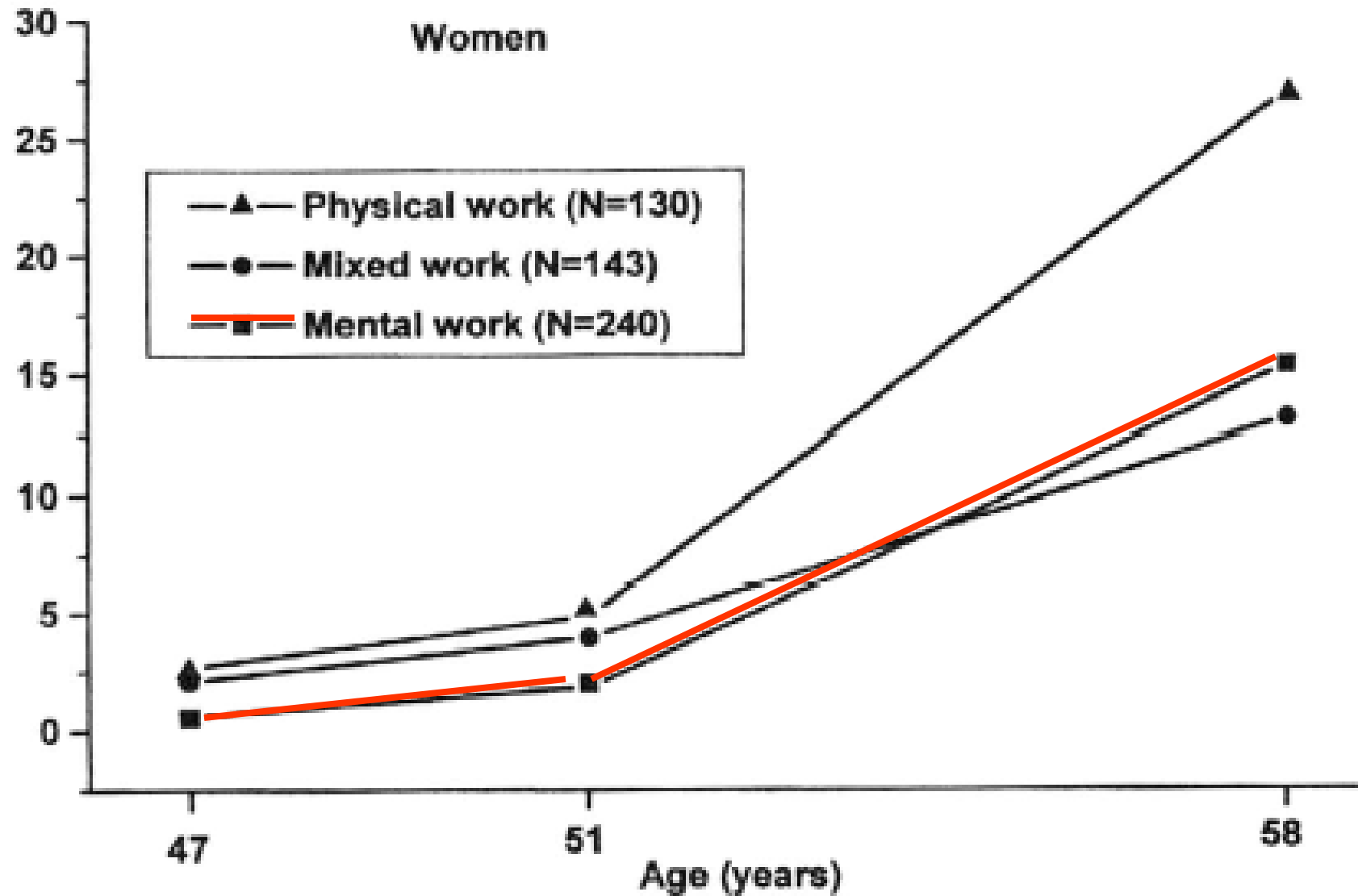
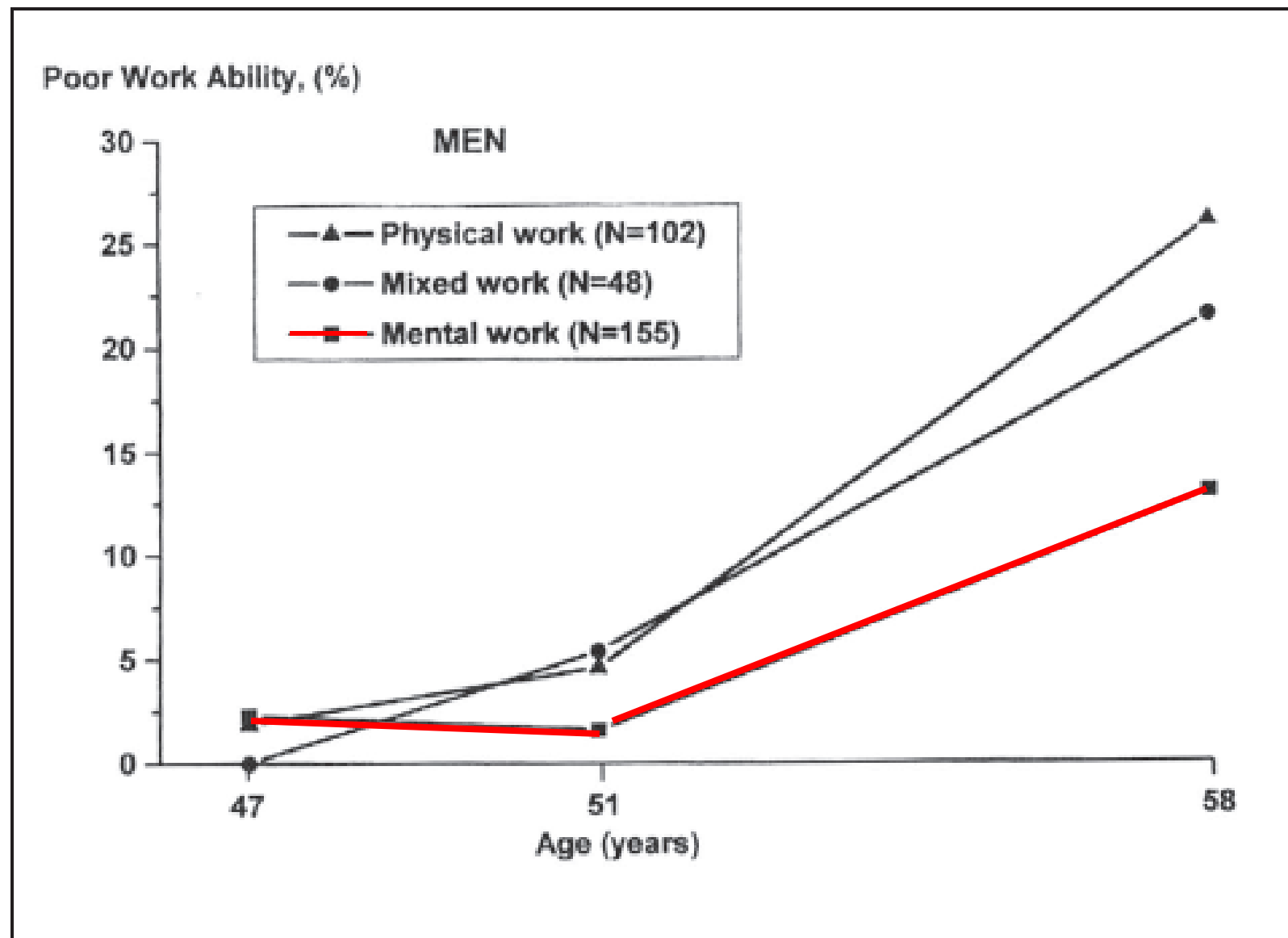
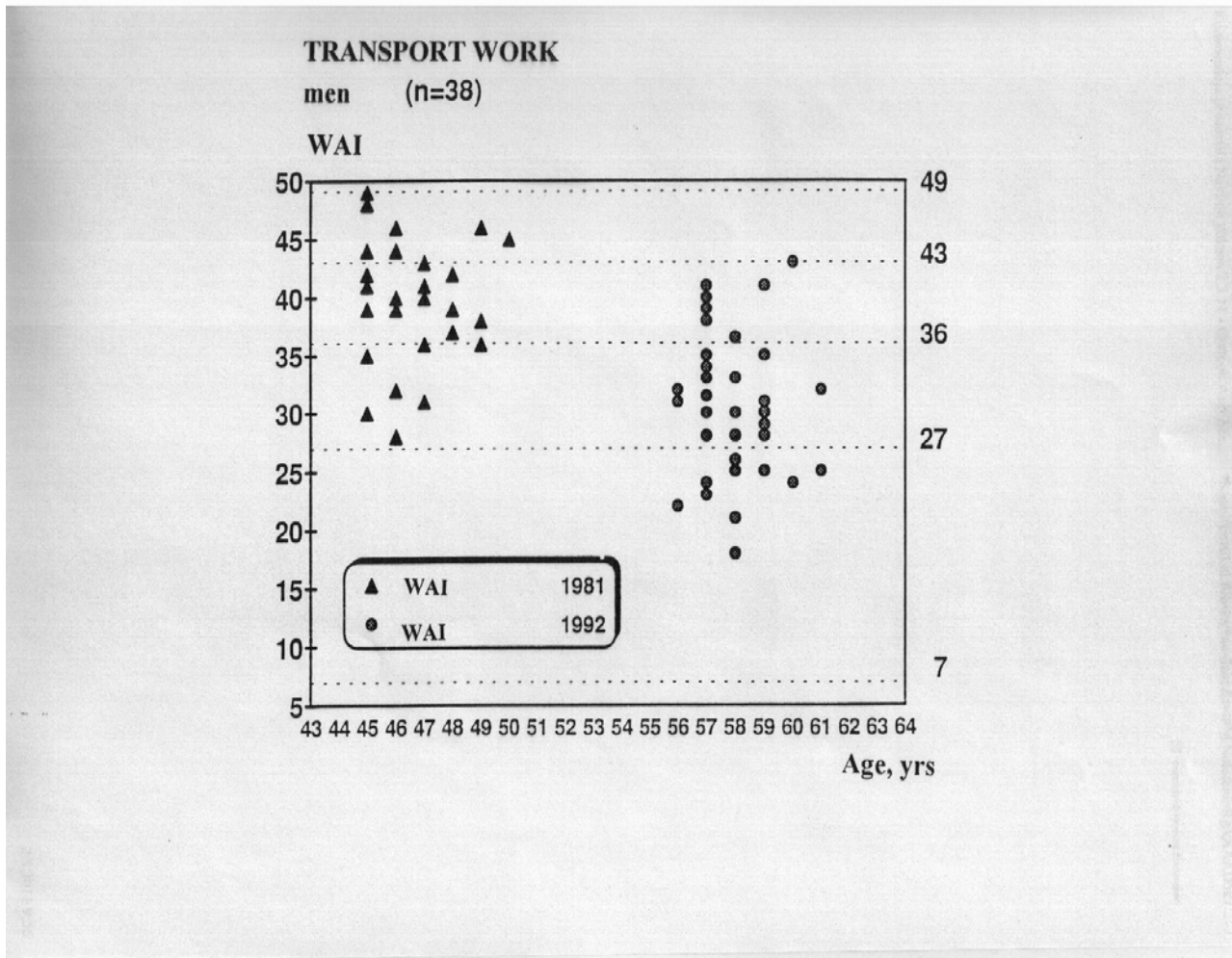


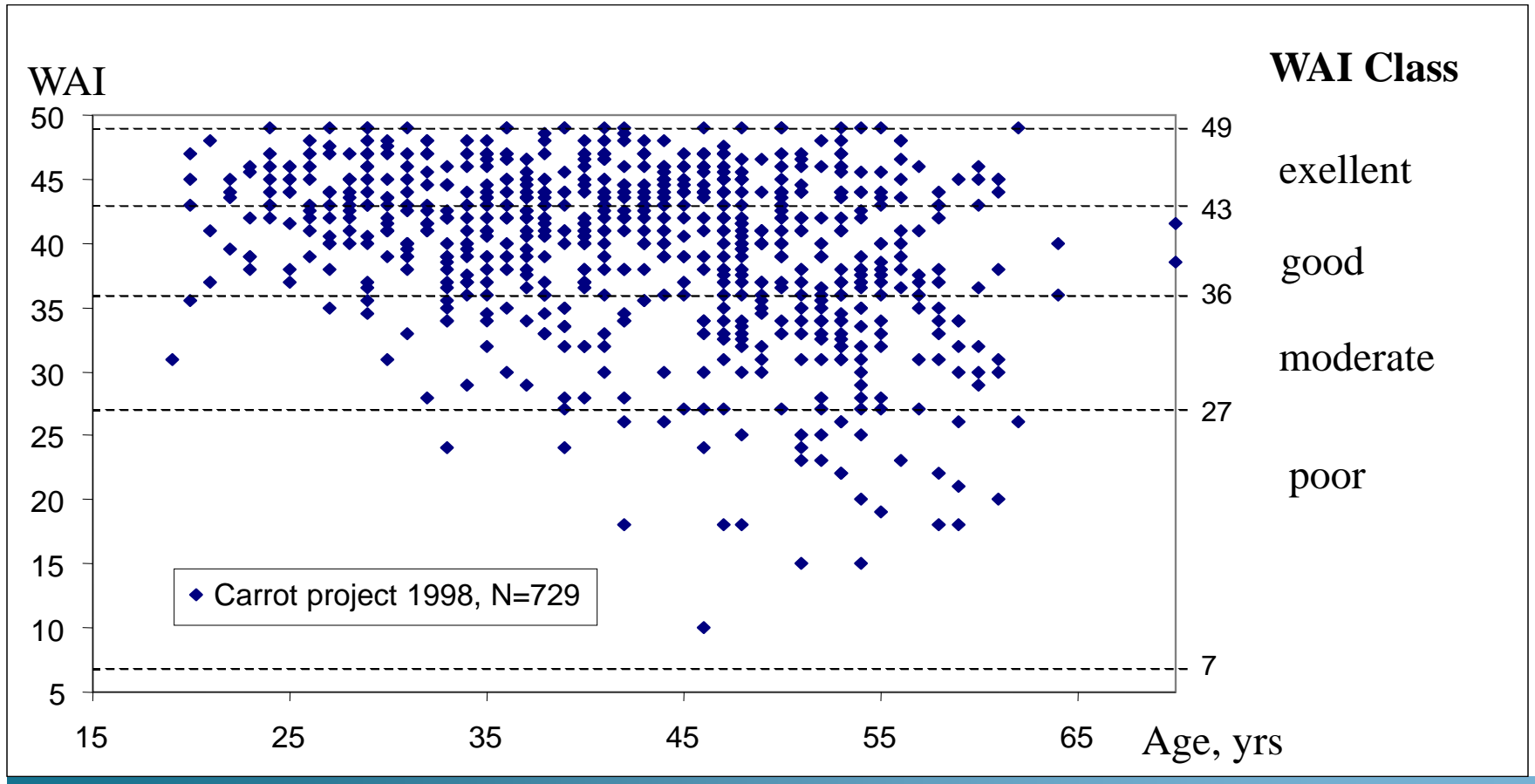
Abb./Tab. 87: Verteilung der Männer und Frauen mit »schlechter« Arbeitsbewältigungsfähigkeit nach Art der Arbeit und Lebensalter



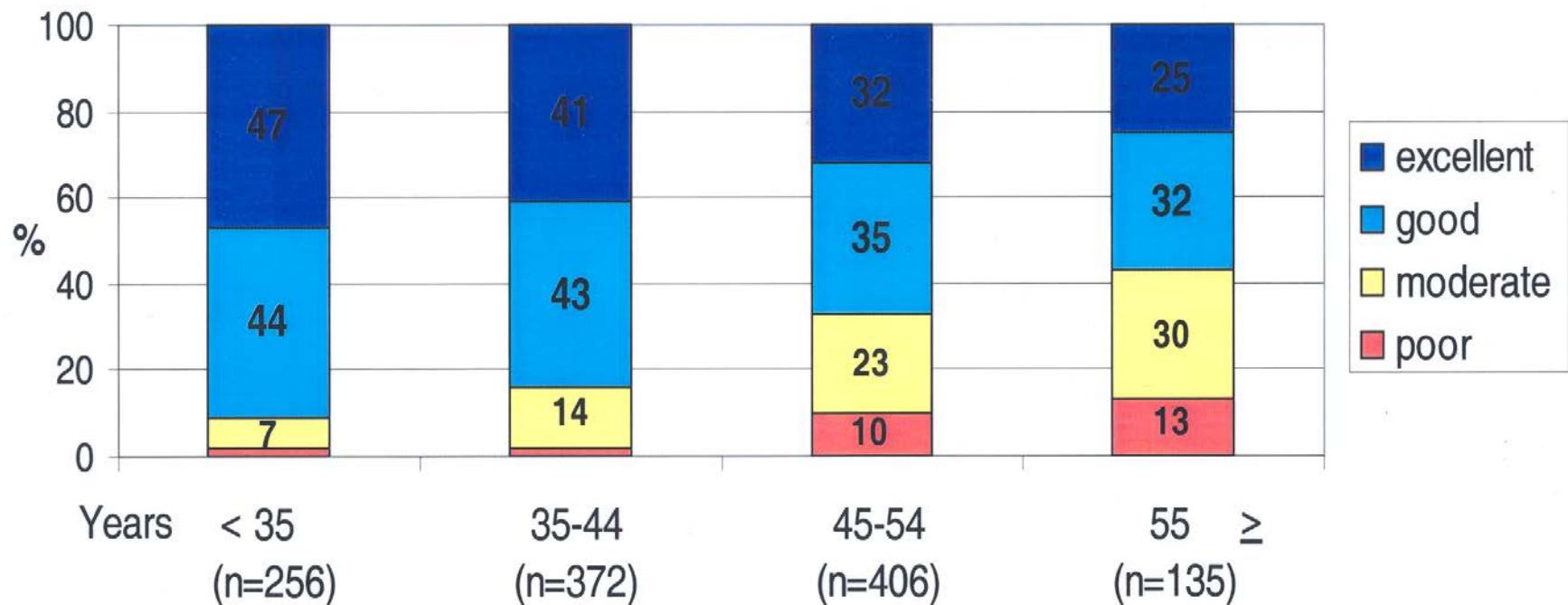
Work Ability in transport work 1981 ja 1992



Work ability index (WAI)



Work Ability Index by age groups



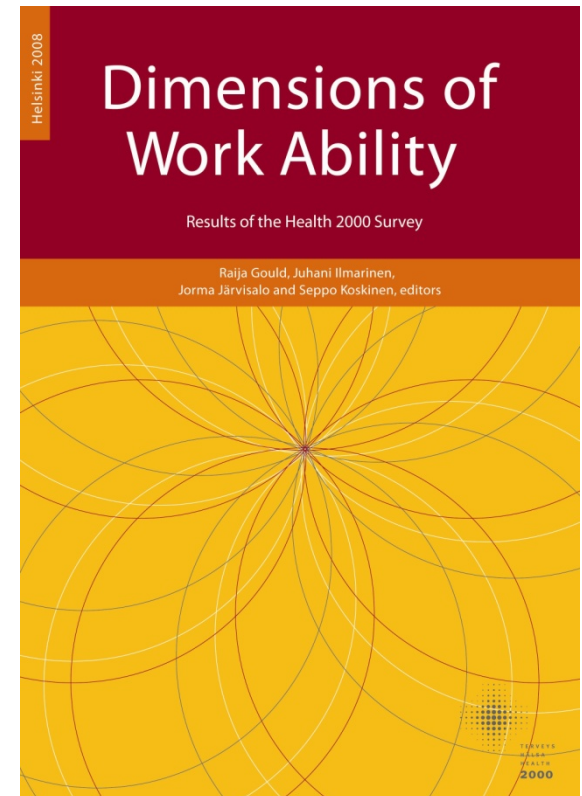
Health2000 Survey on Work Ability

Raija Gould,
Juhani Ilmarinen,
Jorma Järvisalo,
Seppo Koskinen, eds.

Dimensions of Work Ability

Results of the Health 2000 Survey

Helsinki 2008



Finnish Centre for Pensions
ELÄKETURVAKESKUS



Finnish Institute of
Occupational Health



Kansanterveyslaitos
Folkhälsoinstitutet
National Public Health

Kela  2012

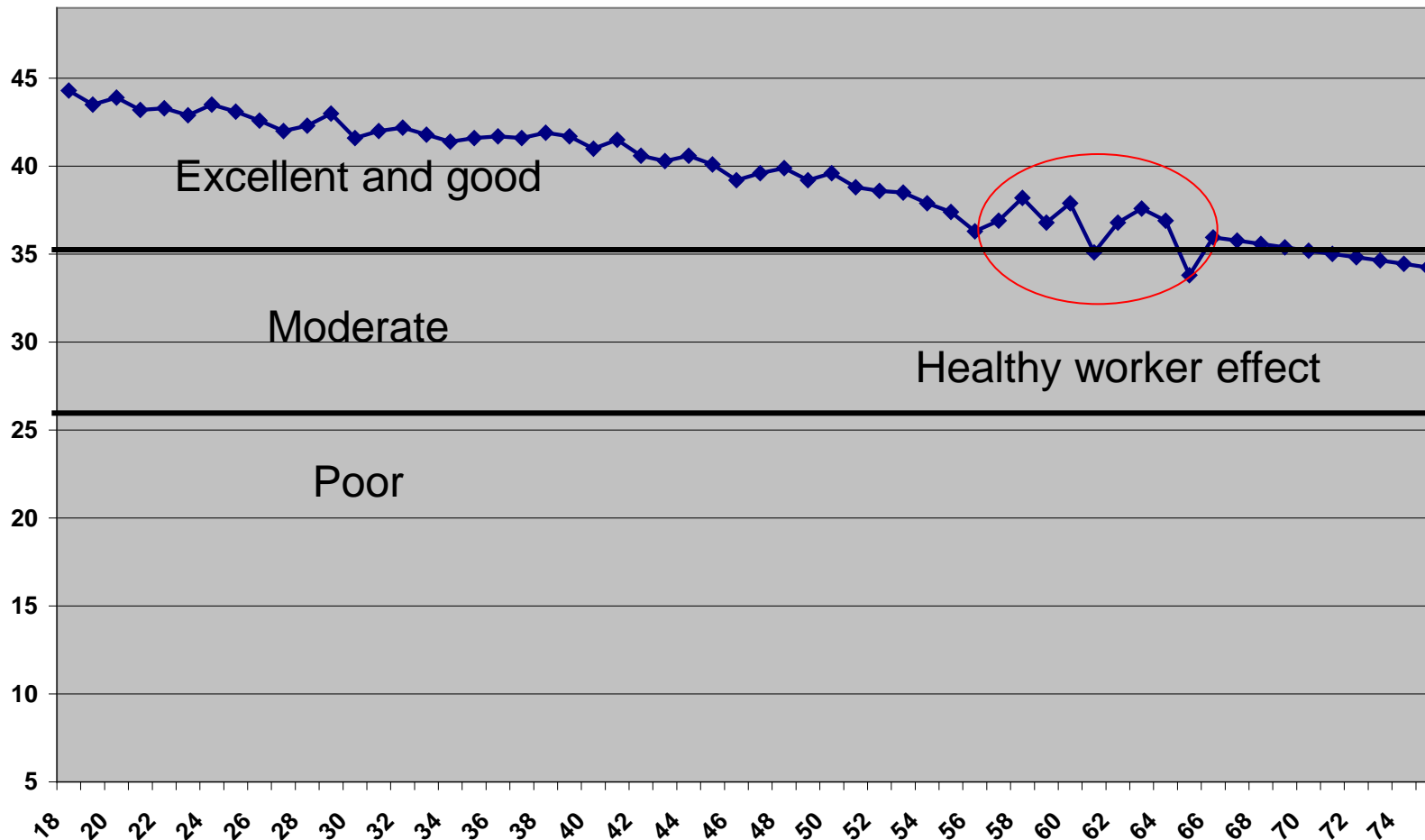
Age-adjusted mean of WAI according to occupation

OCCUPATION	Women	Men
Managers and senior officials	40.3	41.9
Teachers	40.4	41.0
Physicians + other health care experts	40.4	42.4
Nurses	40.6	
Practical nurses	38.7	
Other professionals	40.2	41.9
Office and customer service clerks	40.6	41.3
Chefs, cooks, waiters and waitresses	38.5	39.6
Sales persons	40.4	
Other service and care workers	39.5	
Construction workers	38.2	39.1
Repairmen		40.9
Manufacturers		39.5
Process personnel	37.9	39.4
Drivers		39.1
Other workers	37.5	39.9
Agricultural and forestry workers	37.1	38.7

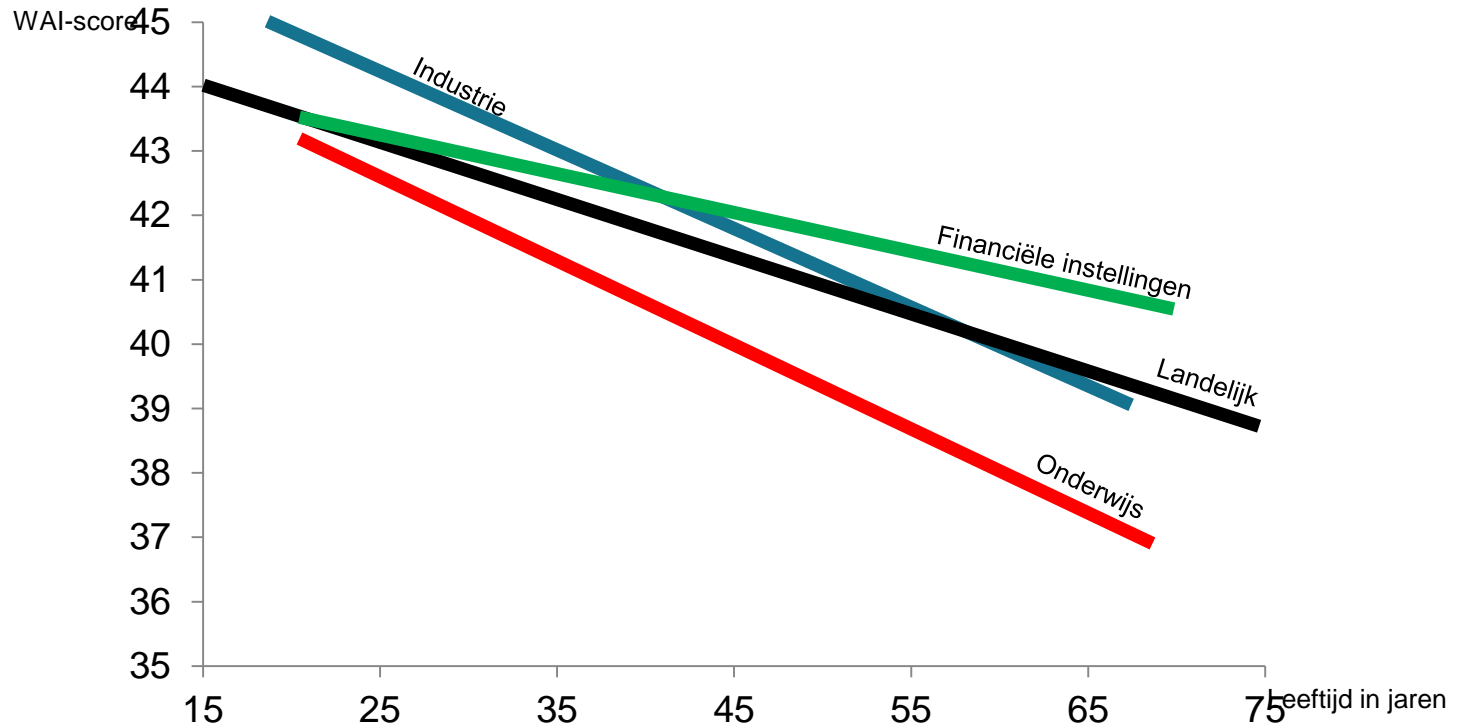
Age-adjusted mean of WAI according to branche

Branche	Women	Men
Banking and insurance, IT	40,7	41,8
Education	40,3	41,4
Health and social services	39,6	42,2
Other services	40,0	40,7
Public administration	39,6	40,1
Trade and transport	39,8	40,3
Industry and Construction	39,5	40,2
Agriculture, Forestry, Fishing	37,7	39,3

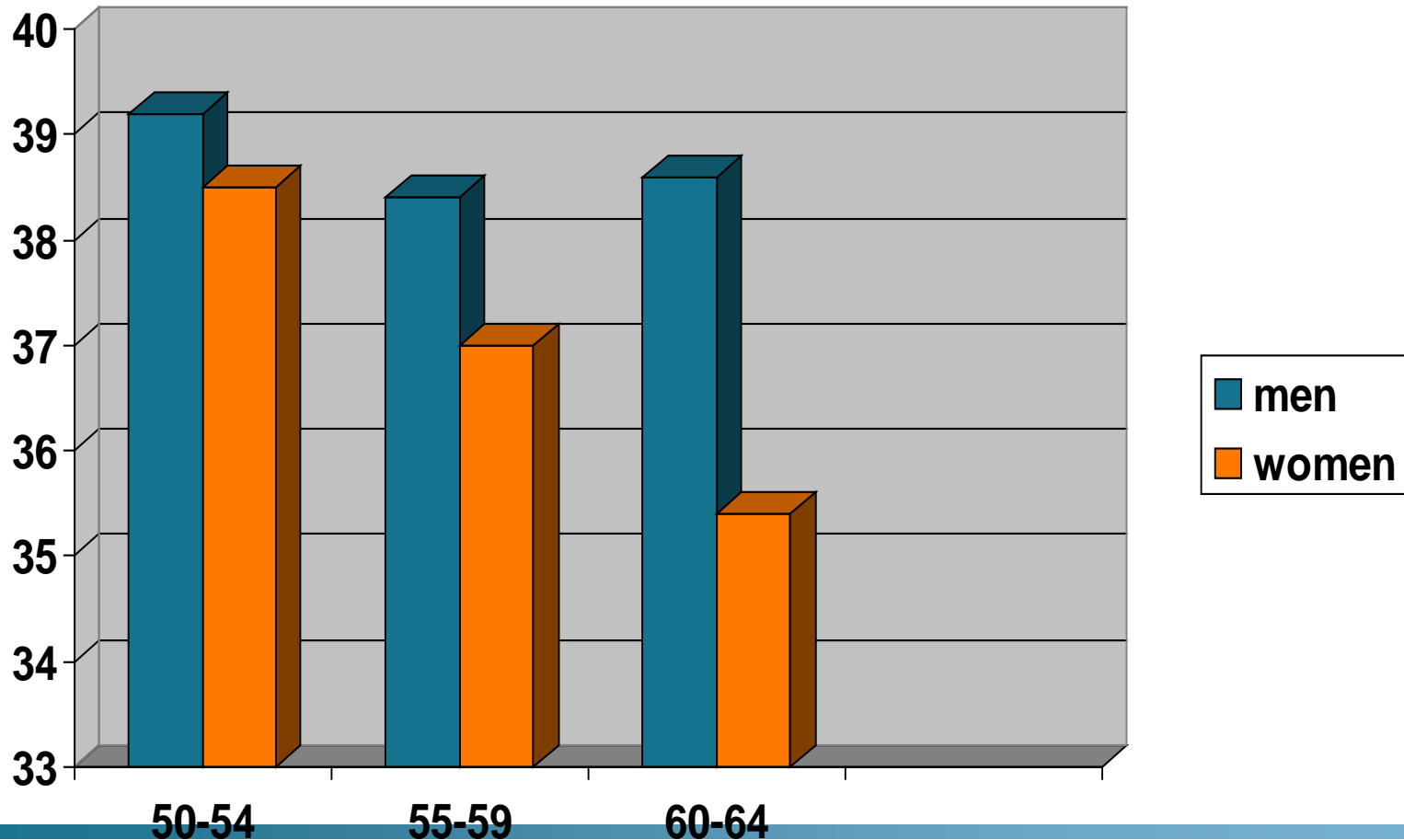
Work Ability and age in Finland



Verschillen in ontwikkeling WAI-score naar sector

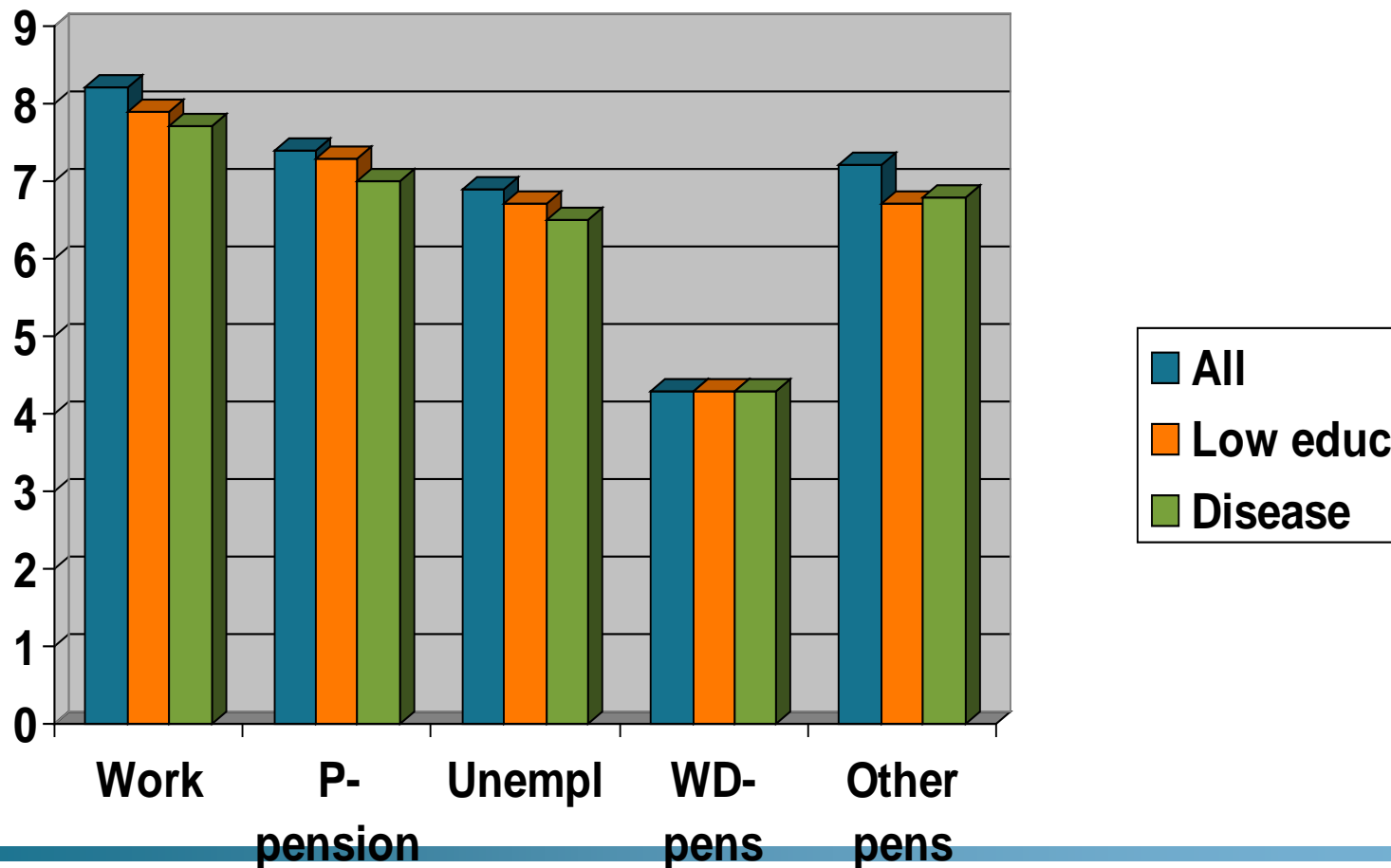


Work ability index (7-49) among working men and women by older age groups
Gould and Polvinen, 2006

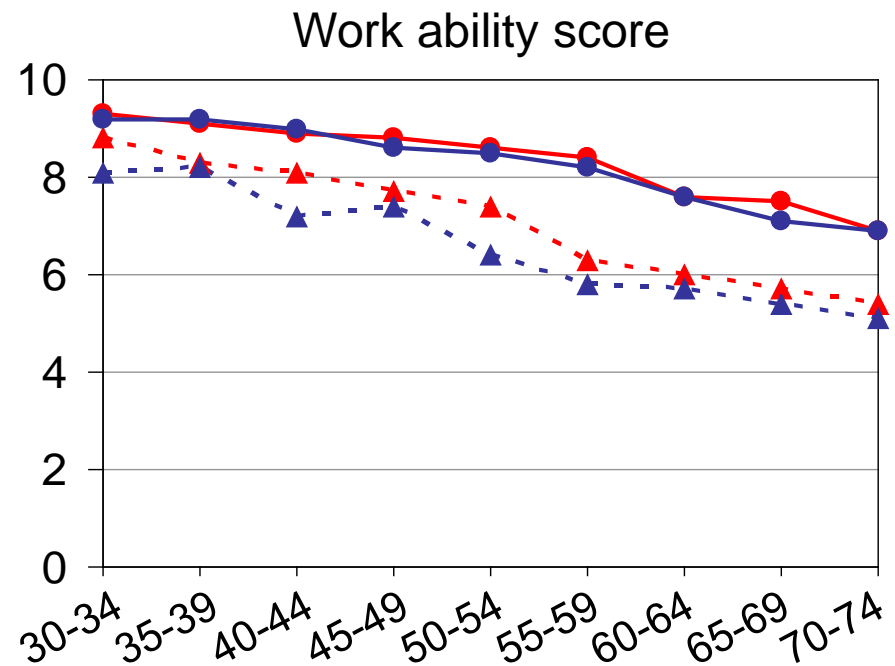
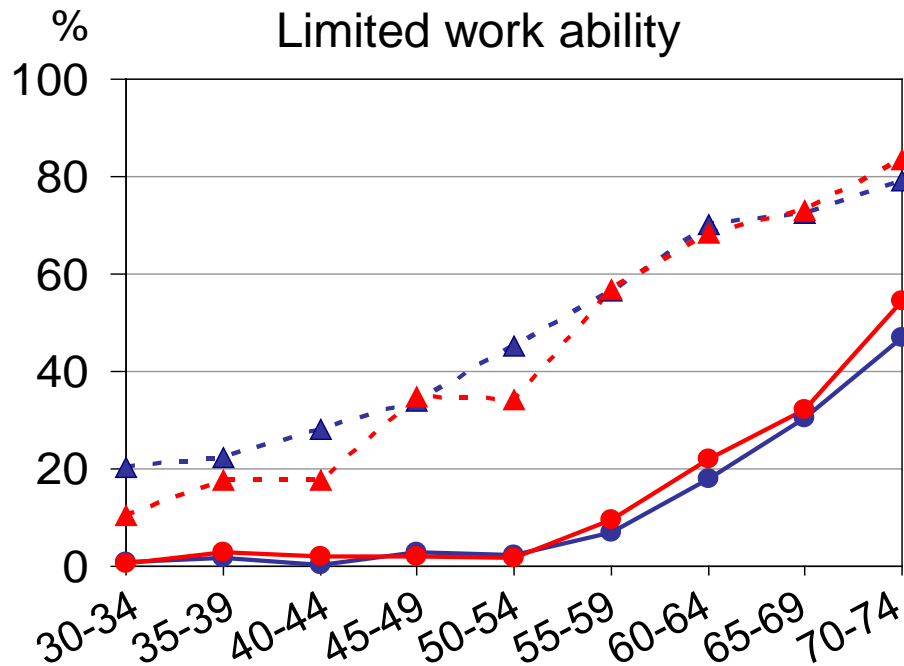


Work ability compared with lifetime best (0-10) by life phase, 55-64 years

Gould and Polvinen, 2006



Proportion (%) of those with limited work ability and the mean work ability score for those chronically ill and those with no chronic illness



Chronically ill

---▲--- Women

---▲--- Men

Not chronically ill

—●— Women

—●— Men

Work ability among 30–64-year-olds without and with **back or neck disorder** (age adjusted)

Disease	Mean work ability score	Persons with limited work ability		Prevalence of disease (%)
		Proportion (%)	Odds Ratio	
Back disorder				
Women: Without disease	8.3	16	1.0	28
With disease	7.8***	26	2.2**	
Men: Without disease	8.1	17	1.0	32
With disease	7.5***	26	1.8***	
Neck disorder				
Women: Without disease	8.2	17	1.0	20
With disease	7.8***	27	2.1***	
Men: Without disease	8.0	18	1.0	12
With disease	7.2***	33	2.6***	

Work ability among 30–64-year-olds without and with **mental disorders** (age adjusted)

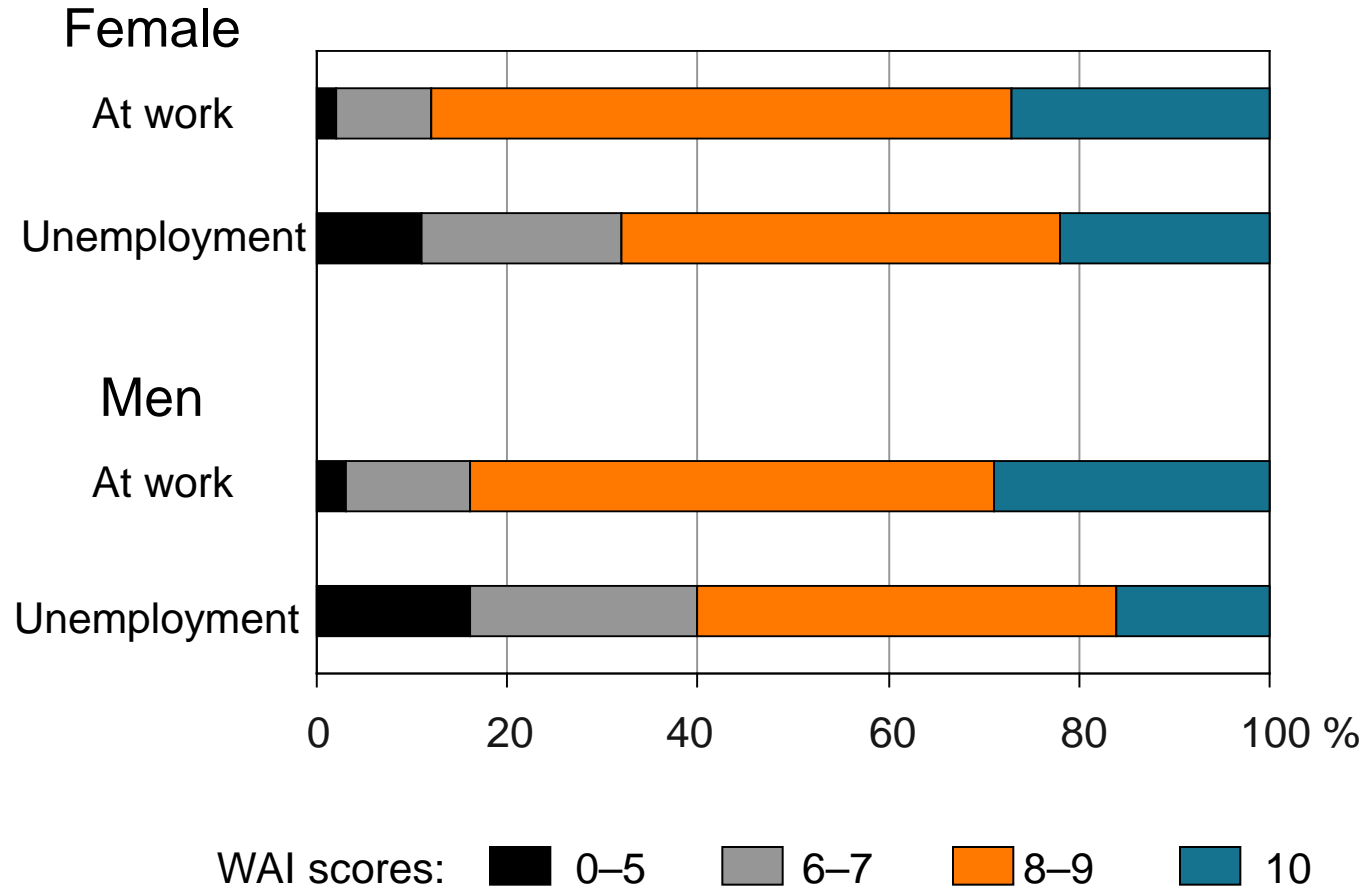
Disease	Mean work ability score	Persons with limited work ability		Prevalence of disease (%)
		Proportion (%)	Odds Ratio	
Depression				
Women: Without disease	8.4	16	1.0	11
With disease	6.7***	43	5.7**	
Men: Without disease	8.1	18	1.0	7
With disease	6.2***	47	5.9***	
Psychosis				
Women: Without disease	8.2	19	1.0	1
With disease	6.5***	62	11.7***	
Men: Without disease	7.9	20	1.0	1
With disease	6.8***	74	21.4***	

Work Ability Index by unemployed and handicapped people

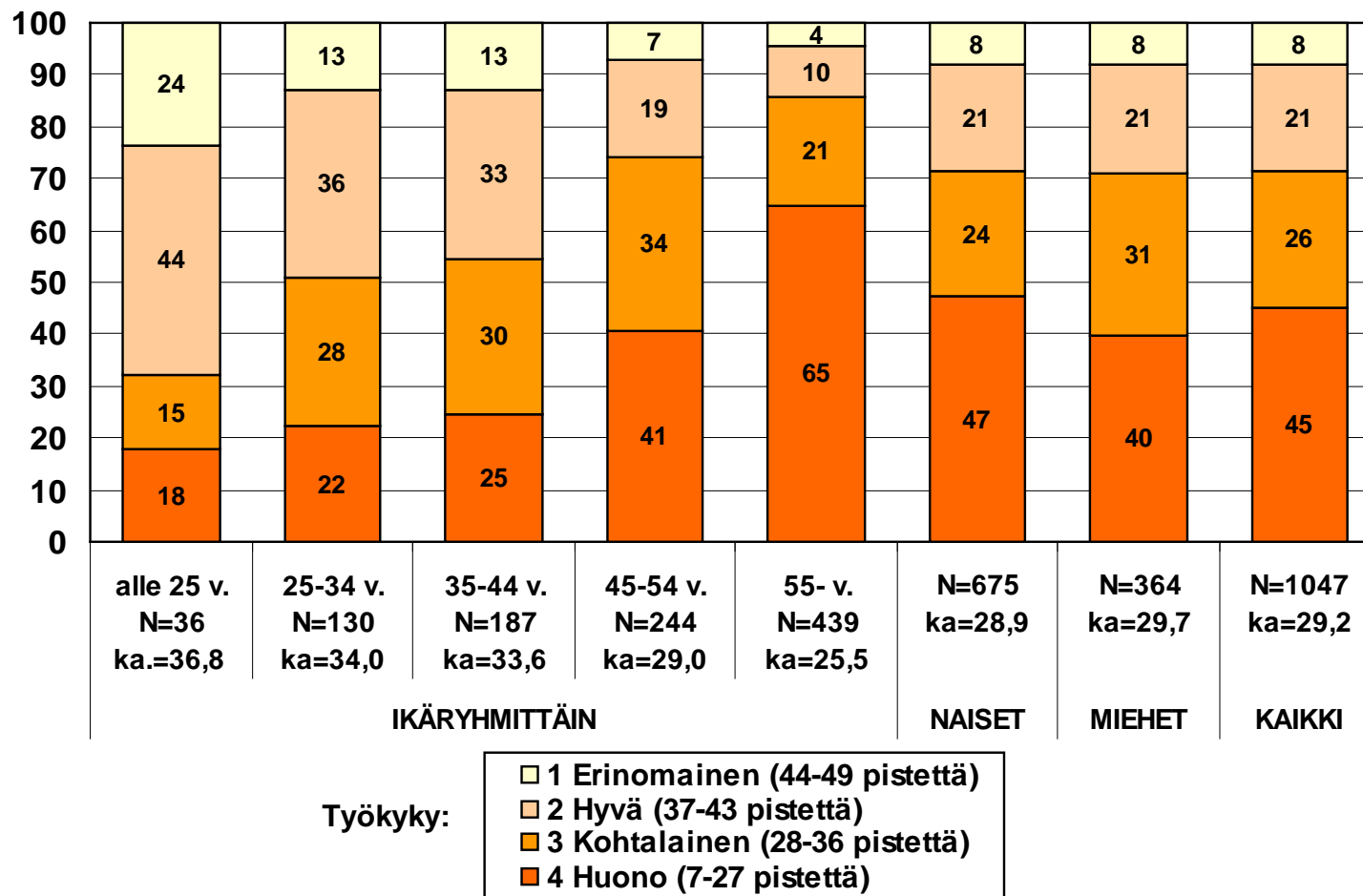
►Pasi Holm – Anneli Hopponen, 2007

►Pellervon taloudellinen tutkimuslaitos PTT, Finland

Work Ability Index–1st item, 30–64-yrs, (adjusted by age)



WAI among handicapped people by gender and age



Midlife work ability predicts disability in old age – A 28-year prospective study

► Mikaela B. von Bonsdorff¹

► Jorma Seitsamo²

► Juhani Ilmarinen²

► Clas-Håkan Nygård³

► Monika E. von Bonsdorff^{1,2}

► Taina Rantanen¹



► Gerontology Research Centre, Department of Health Sciences,
University of Jyväskylä,

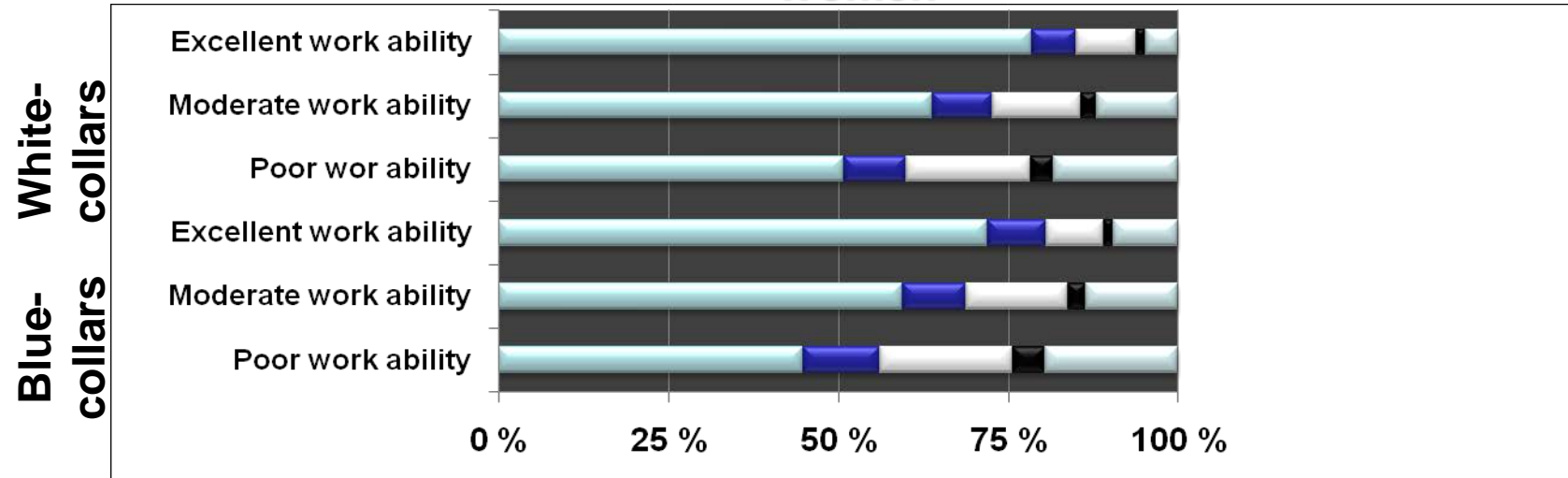
► Finnish Institute of Occupational Health, Helsinki

► Tampere School of Public Health, University of Tampere

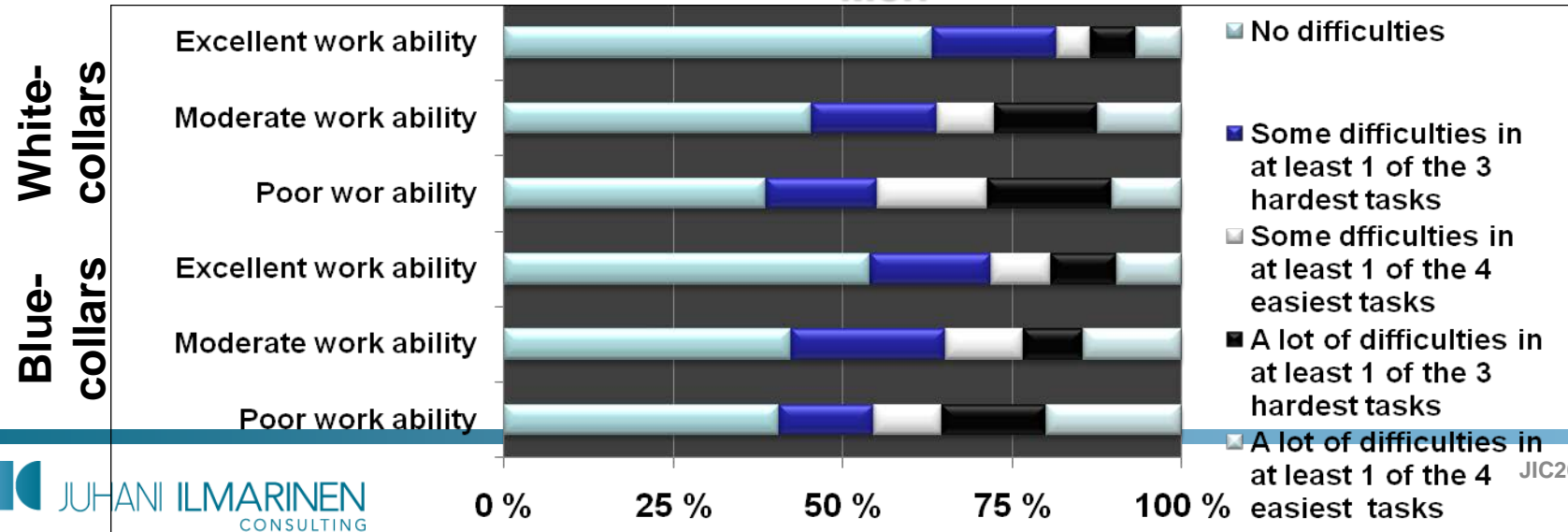
9 June 2010, Tampere

IADL disability at follow-up in 2009 according to professional class and work ability in midlife in the year 1981

Women



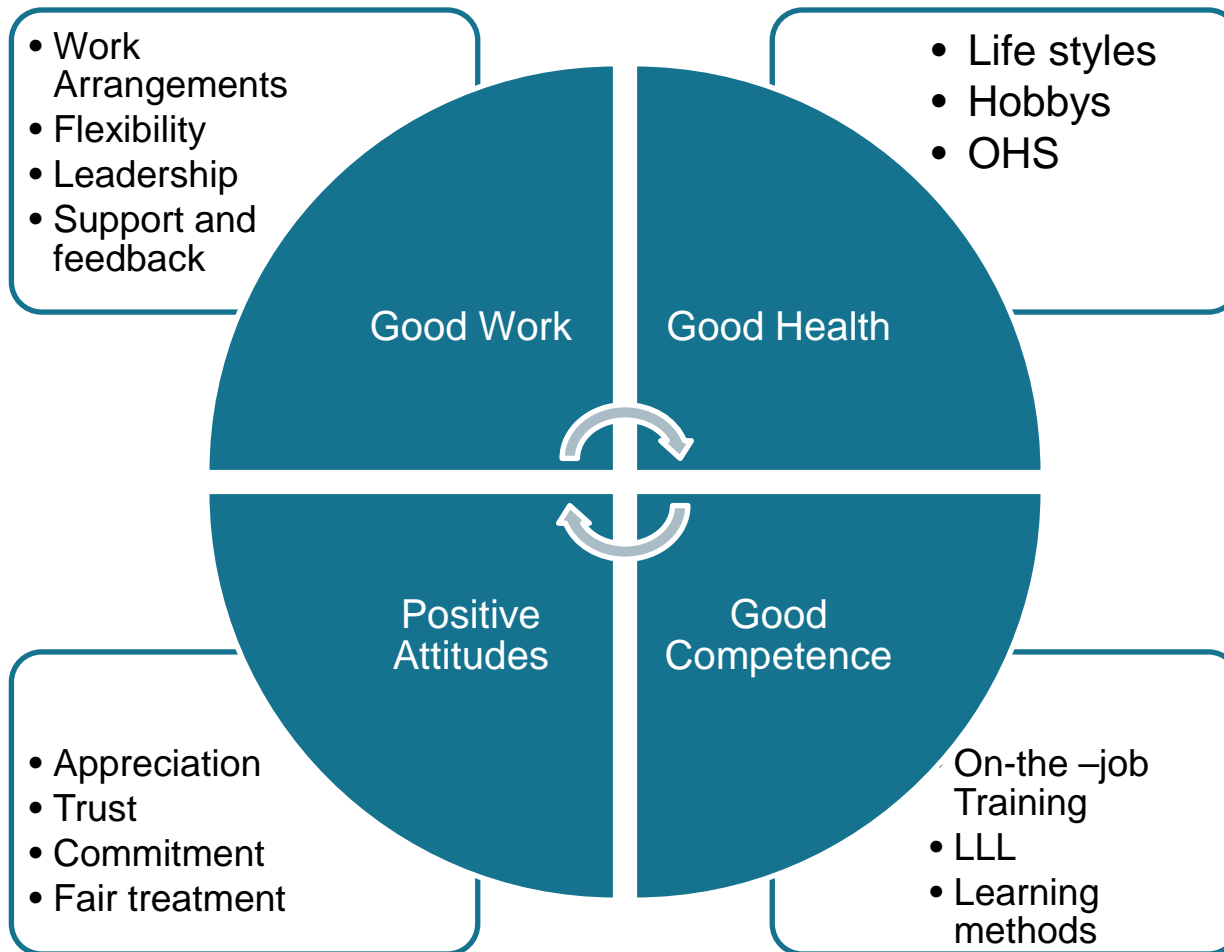
Men



Promotion of work ability

► An evidence based concept in workplaces

Promotion of Work Ability: Targets and Means



WAI as a resource for the organisation

Two overarching and strategic benefits:

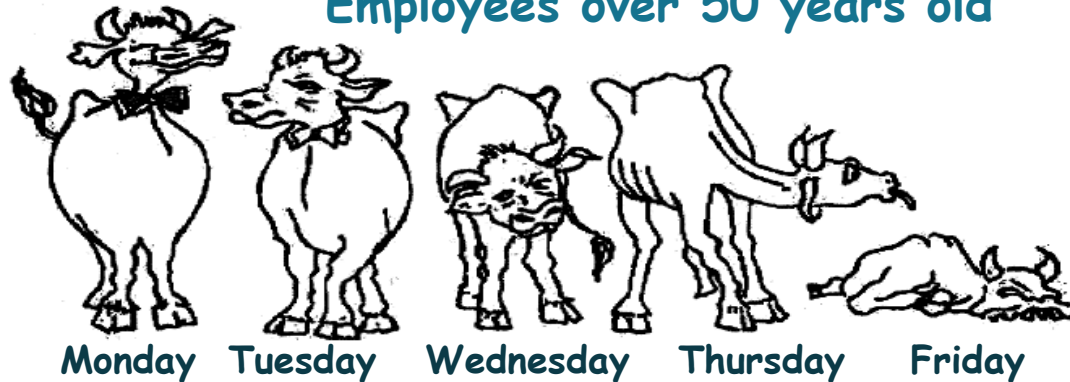
1. Brand reputation in the employment market (and in the community)
2. Cost benefits of improved productivity

WAI as a resource for the organisation

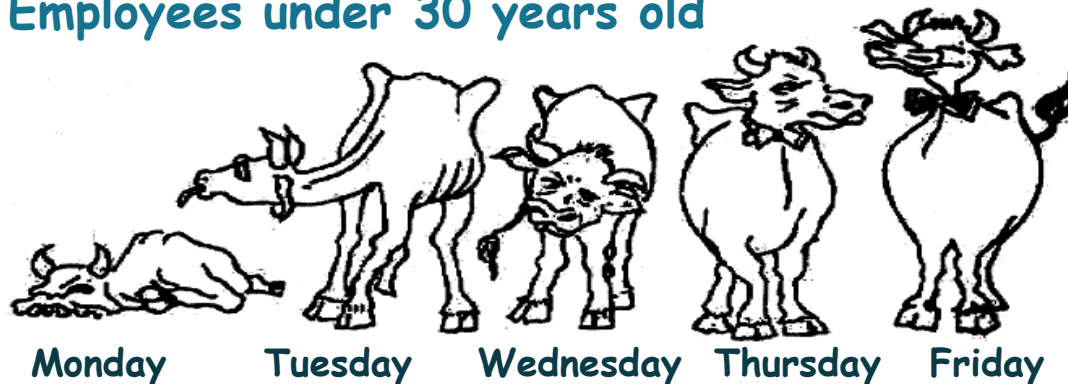
More discreet benefits include:

- ▶ Indicate the status of work ability and need for promotion
- ▶ Early indicator of risks of work disability and early exit
- ▶ Initiate preventive actions
- ▶ Evaluate the effects of actions
- ▶ Validated method for Occupational Health Services and for health promotion
- ▶ Initiate the discussion about ageing and work
- ▶ Improve the awareness of human work ability
- ▶ Improve the collaboration between employers and employees due to win-win possibilities
- ▶ Can be used as base for cost-benefit analysis

Employees over 50 years old



Employees under 30 years old



At least they understand each other on Wednesday