



Universitätsklinikum
Hamburg-Eppendorf

Institute for Epidemiology and
Occupational Health for Healthcare
Workers (CVcare)

Stress in Healthcare – Can we measure and prevent stress in healthcare

Albert Nienhaus



1 Developement of Occupational medicine in Germany

2 Stress concepts and instruments

3 From analysis to action

4 Leadership and workers
health

5 Violence against HCWs

The working group at the CVcare



Current projects

- TB, HCV MRSA in HCWs
- Risk factors for CTS
- Ergonomics in nursing
- Work in Kindergartens
- Health of nursing students
- Stress in doctors
- Nurses-Instability Scale
- Violence
- Leadership and workers health



BGW

**Berufsgenossenschaft
für Gesundheitsdienst
und Wohlfahrtspflege**

Accidence Insurance for the Healthcare and
Welfare Sector

OSH in Germany 25 years ago



- A wall between OSH-experts and workers
 - Don't trust workers – they always complain about working conditions
 - Don't trust unions – they want pay rises for heavy, dirty or dangerous work
- Landmark ruling: Arbeitsschutzgesetz (Work Protection Law) in 1996
- Workers health can be impeded by physical, chemical and biological as well as **organizational** factors
- Risk assessment needs to consider organizational factors (psycho-social aspects of work)

- Employer needs to perform risk assessment and needs to start a continuous improvement process
 - Analyze, plan, act, evaluate
- Workers and workers representatives need to be involved in this process
- Occupational safety and health experts all the sudden were obliged to listen to workers and unionists.

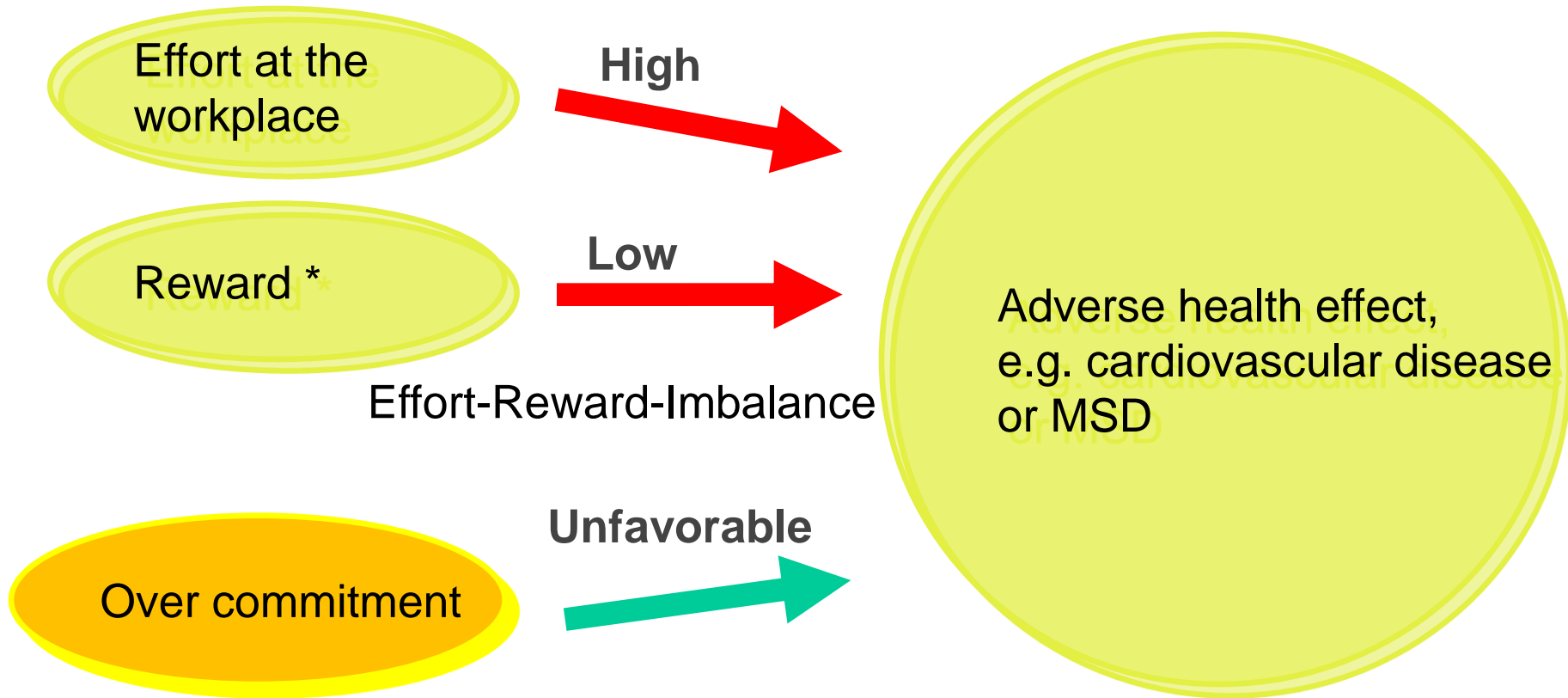
- Occupational health is more than occupational medicine
- Physicians should work together with Psychologists and other OSH-experts
- Instruments for risk assessment were developed
- Nowadays workers started to refuse cooperation





- Most instruments developed for risk assessment of work related stress are based on two concepts
- Effort-Reward-Imbalance from Siegrist in Germany
- Job Demand-Control-Model from Karasek (and Theorell) in the US

Modell: Effort-Reward- Imbalance - ERI




Personal factors

Siegrist 1996, 2001

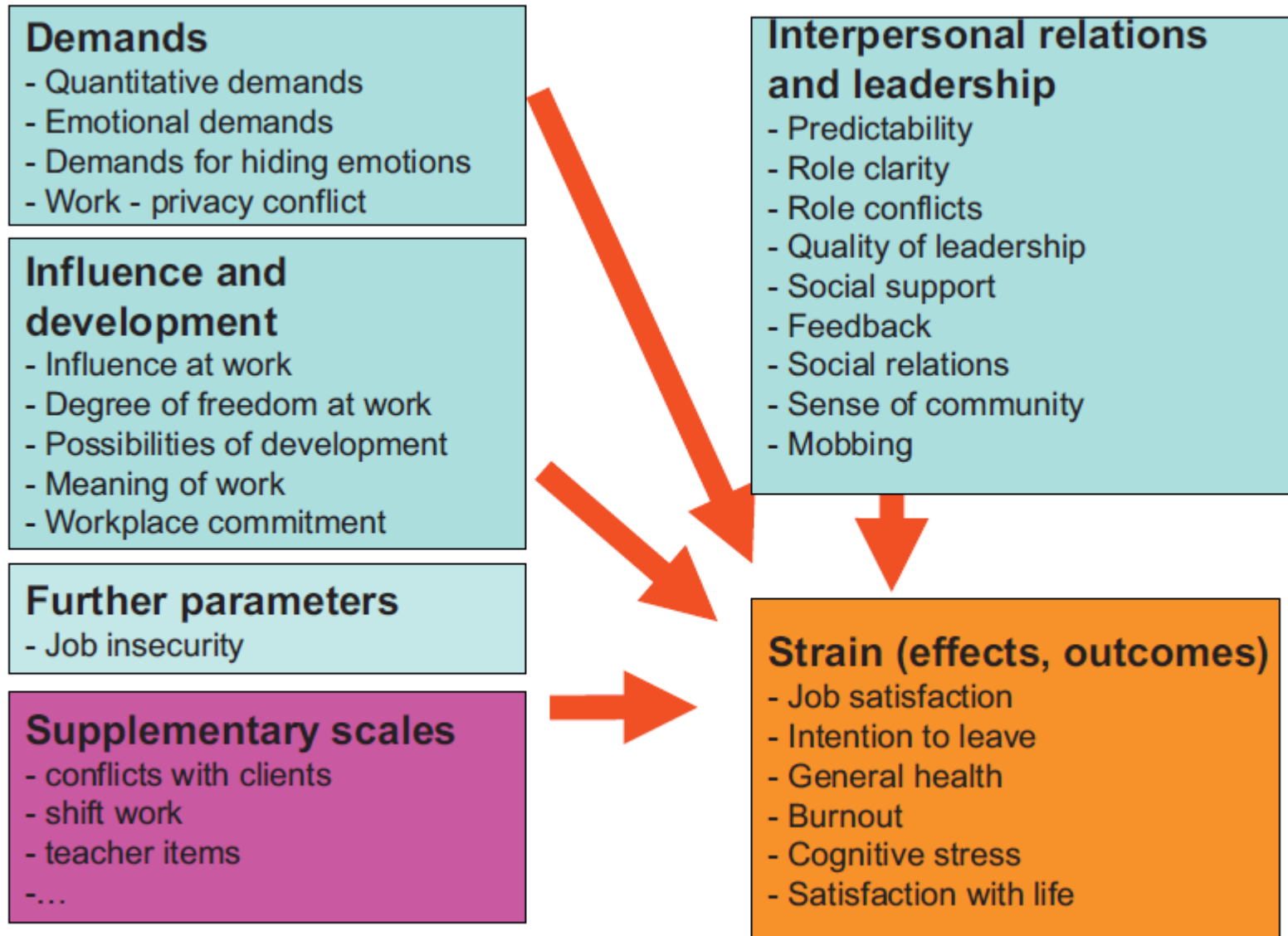
* salary, appreciation of leader or colleagues,
sense of achievement, job security, promotion

Demand-Control-Model (Karasek – Theorell 1990)

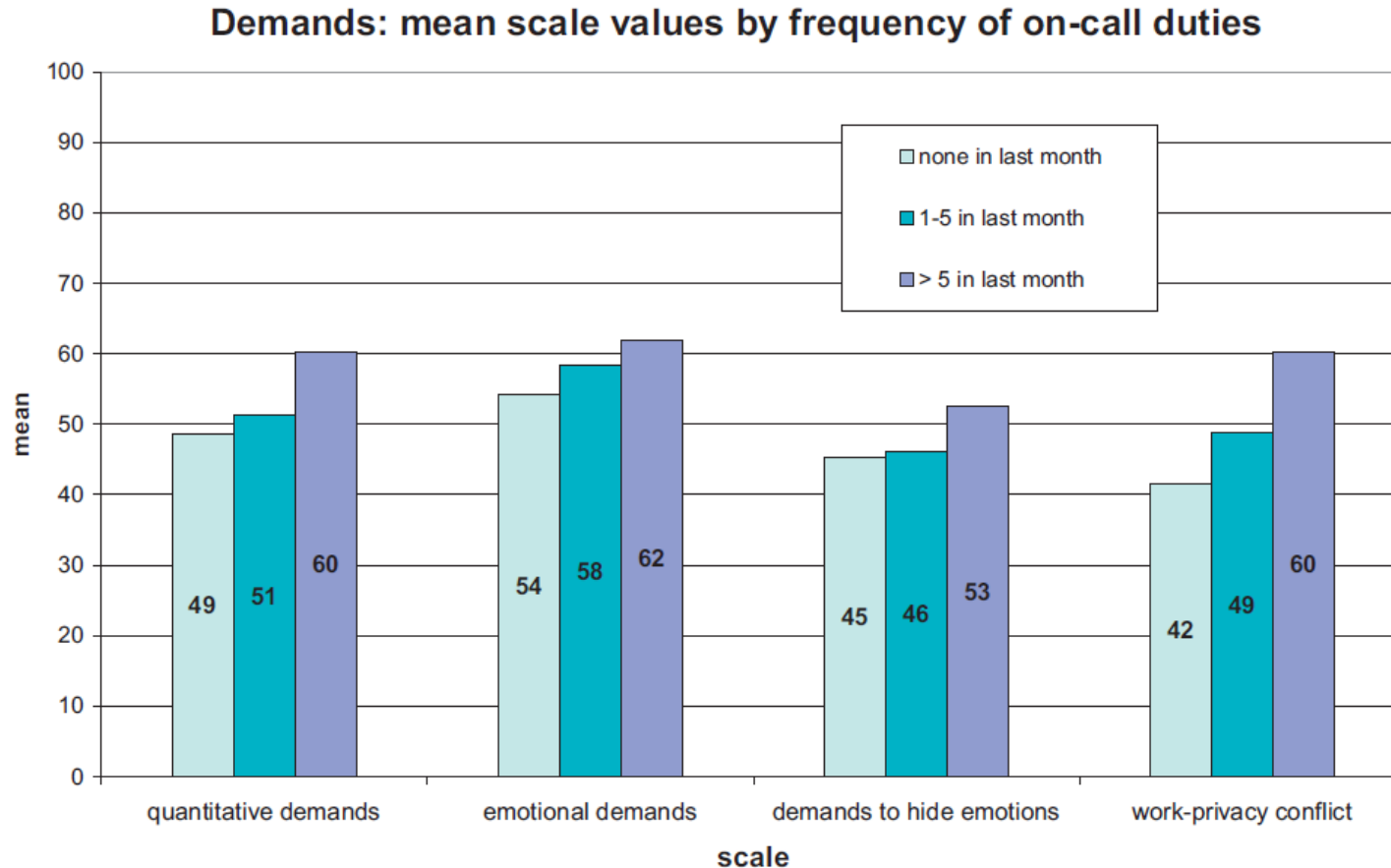
	Low Job Demand	High Job Demand
Low Control	Passive Job	High-stress Job
High Control	Low-stress Job	Active Job

- Developed by Kristensen and Borg, Denmark
- Integrates different models of work related stress
- Takes risk factors and resources into account
- Exposure and resources  Outcome or effect
 - Demands
 - Influence and development
 - Social relations
 - Personality
 - Workplace specific questions can be added

Dimensions of COPSOQ



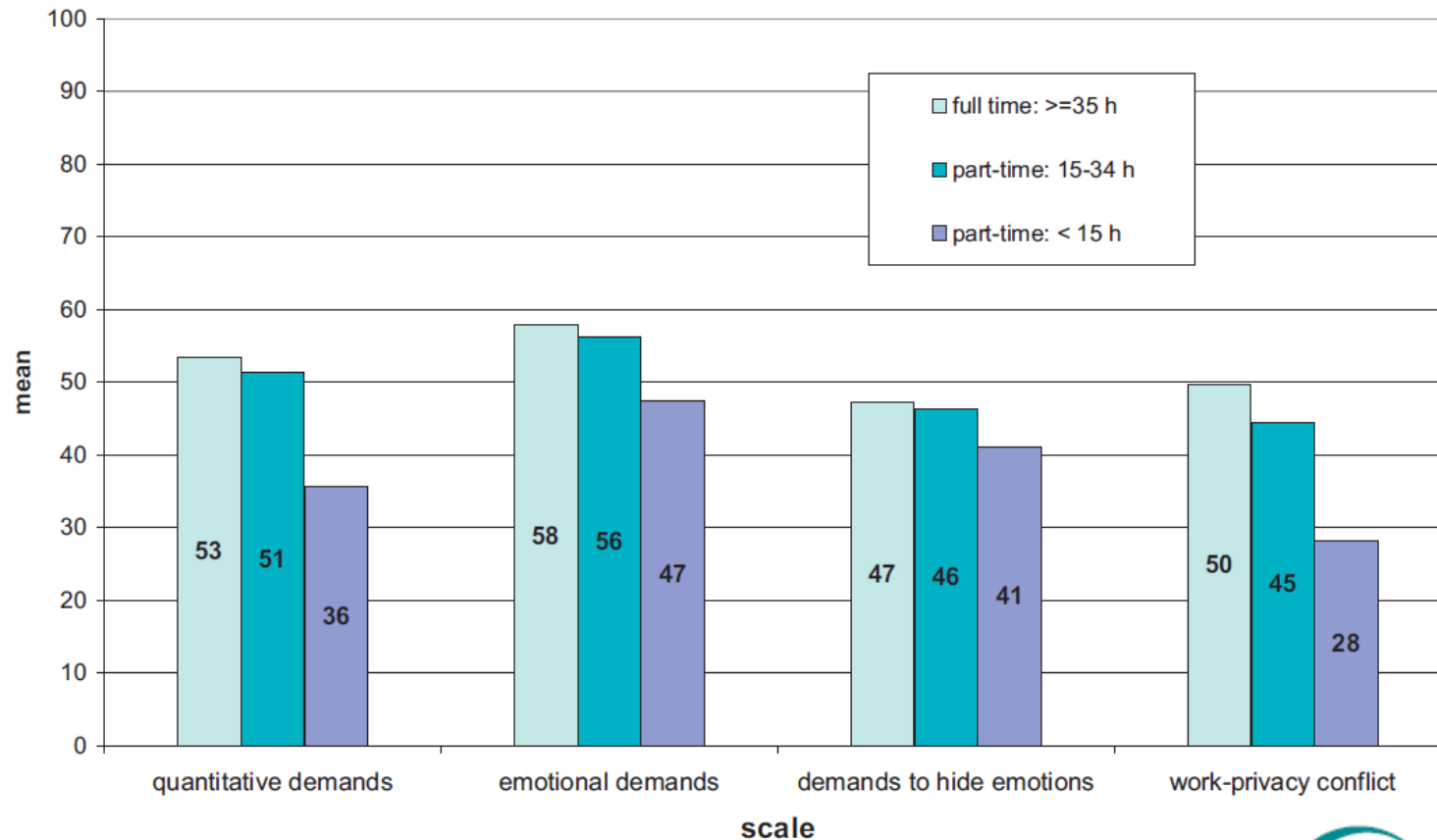
Some COPSOQ examples



Psychosocial work load and stress in the
geriatric care, Nübling et al 2010

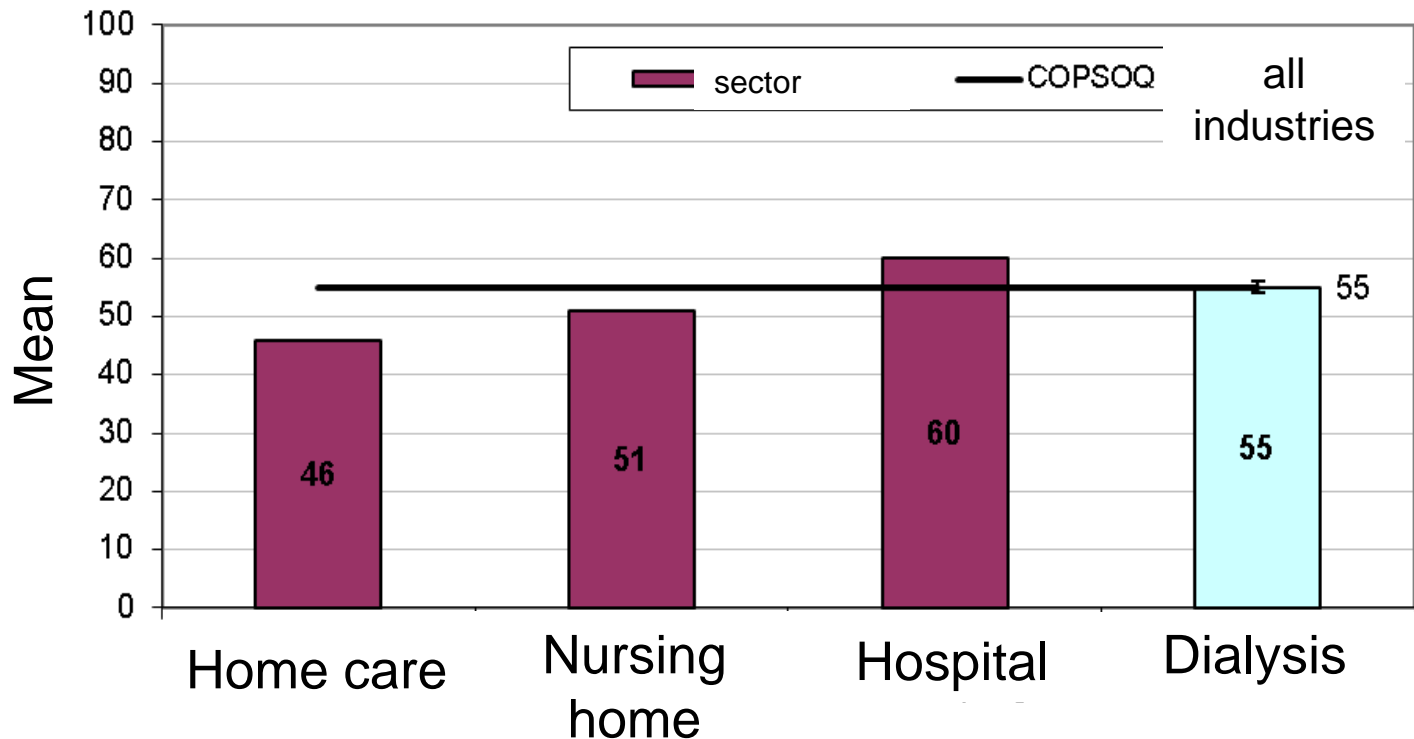
Some COPSOQ examples

Demands: mean scale values by working hours per week



Psychosocial work load and stress in geriatric care,
Nübling et al 2010

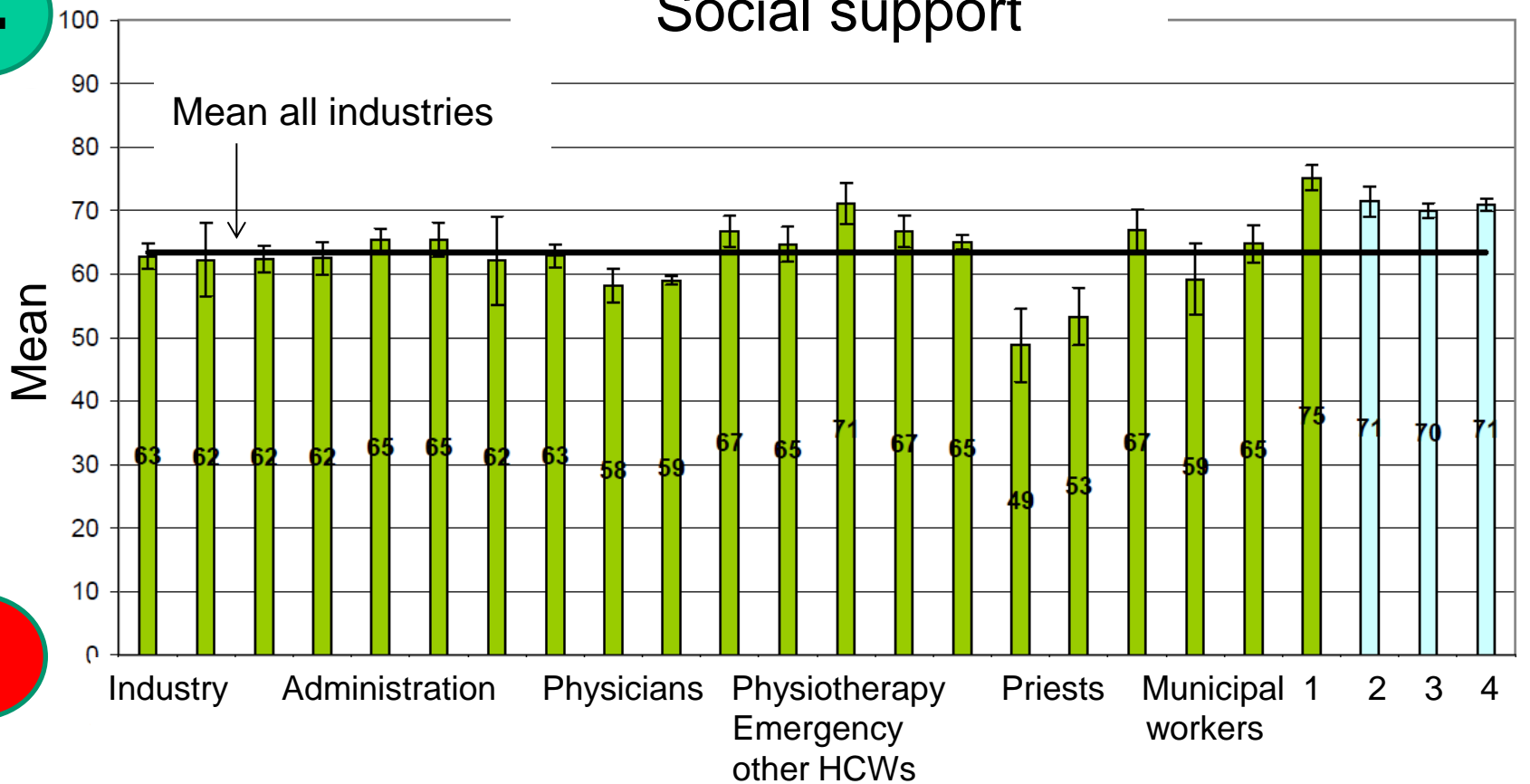
Quantitative Demands





COPSOQ in Nursing Compared to other industries

Social support

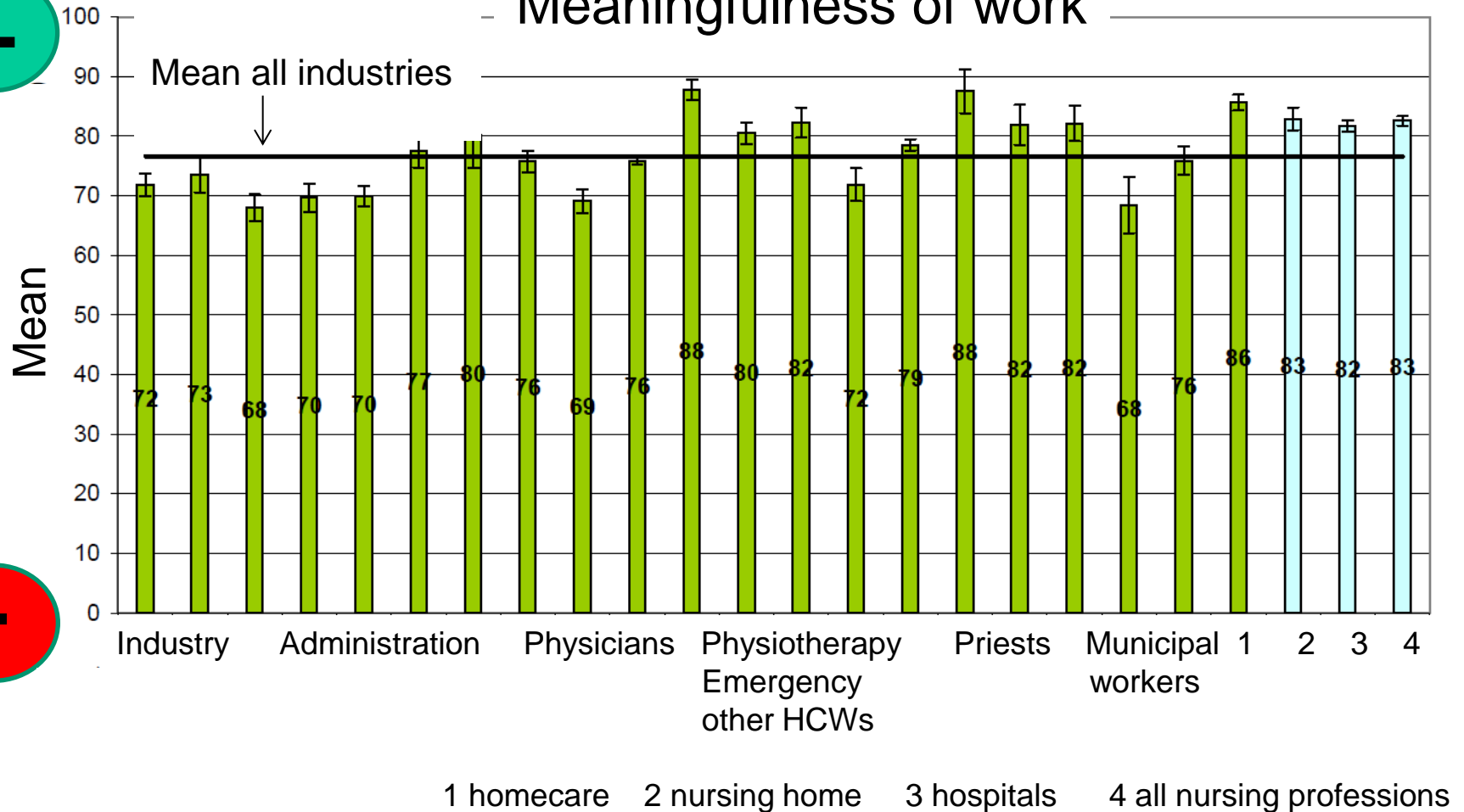


1 homecare 2 nursing home 3 hospitals 4 all nursing professions



COPSOQ in Nursing Compared to other industries

Meaningfulness of work



Positive in 4 Scales

- Quantitative demands
- Emotional demands
- Work-privacy conflict
- Social relations

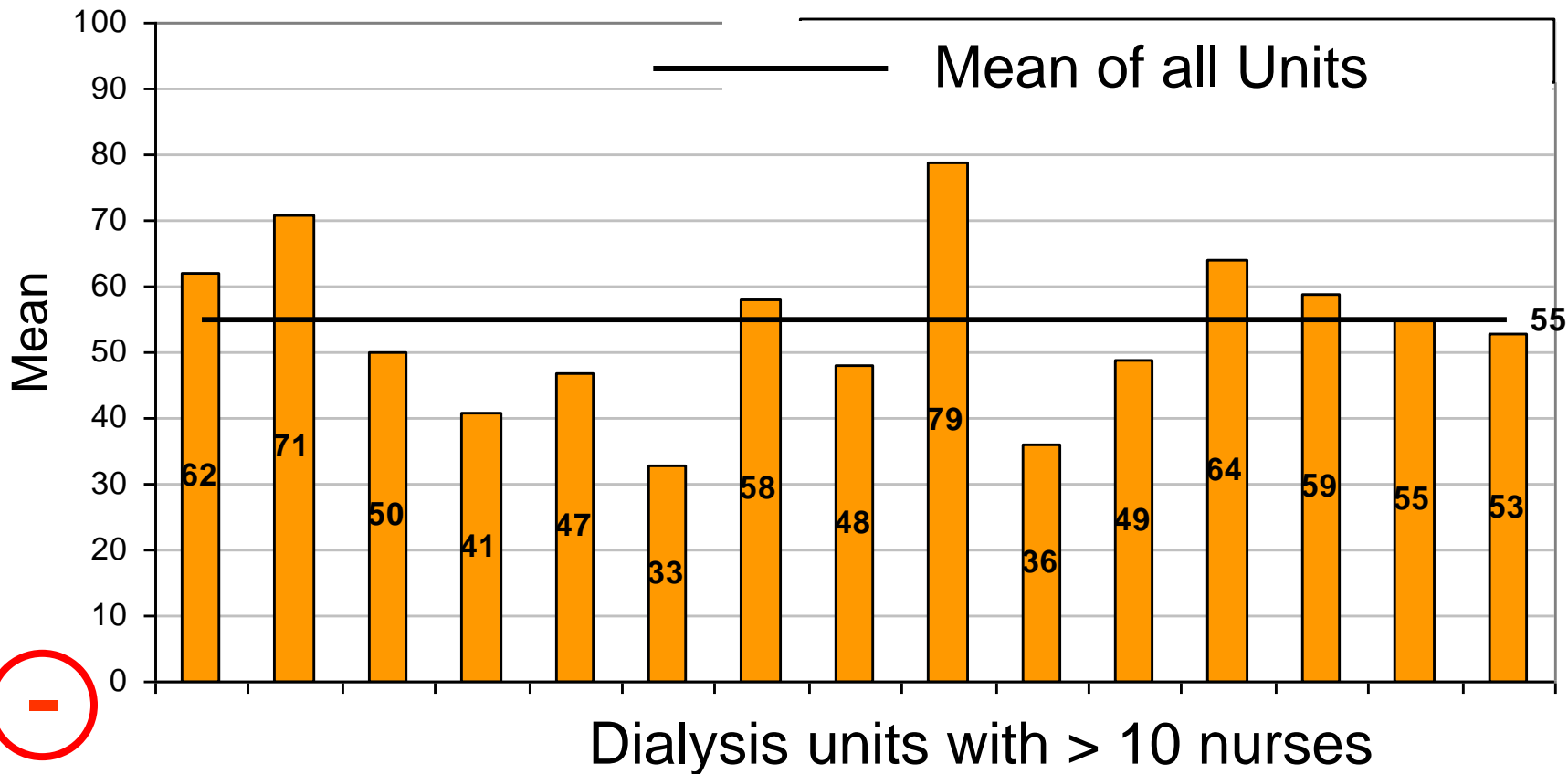
Negative in 7 Scales

- Influence at work
- Decision latitude
- Career opportunities
- Leadership
- Feedback
- Mobbing / bullying
- Predictability





Leadership in 15 dialysis units



- Second survey after risk assessment with COPSQ
 - all dialysis units received report of COPSQ results and advices for potential improvements of working conditions
 - Consultation by a psychologist was offered for free
- Study question of the second survey:
 - Did the dialysis units start the action circle?
- Methods:
 - Telephone interview with 64 dialysis units
- Results:
 - 32 units discussed results with nurses
 - 12 units were interested in consultations, 8 actually booked it
 - **Only 16 (25%) units took actions**

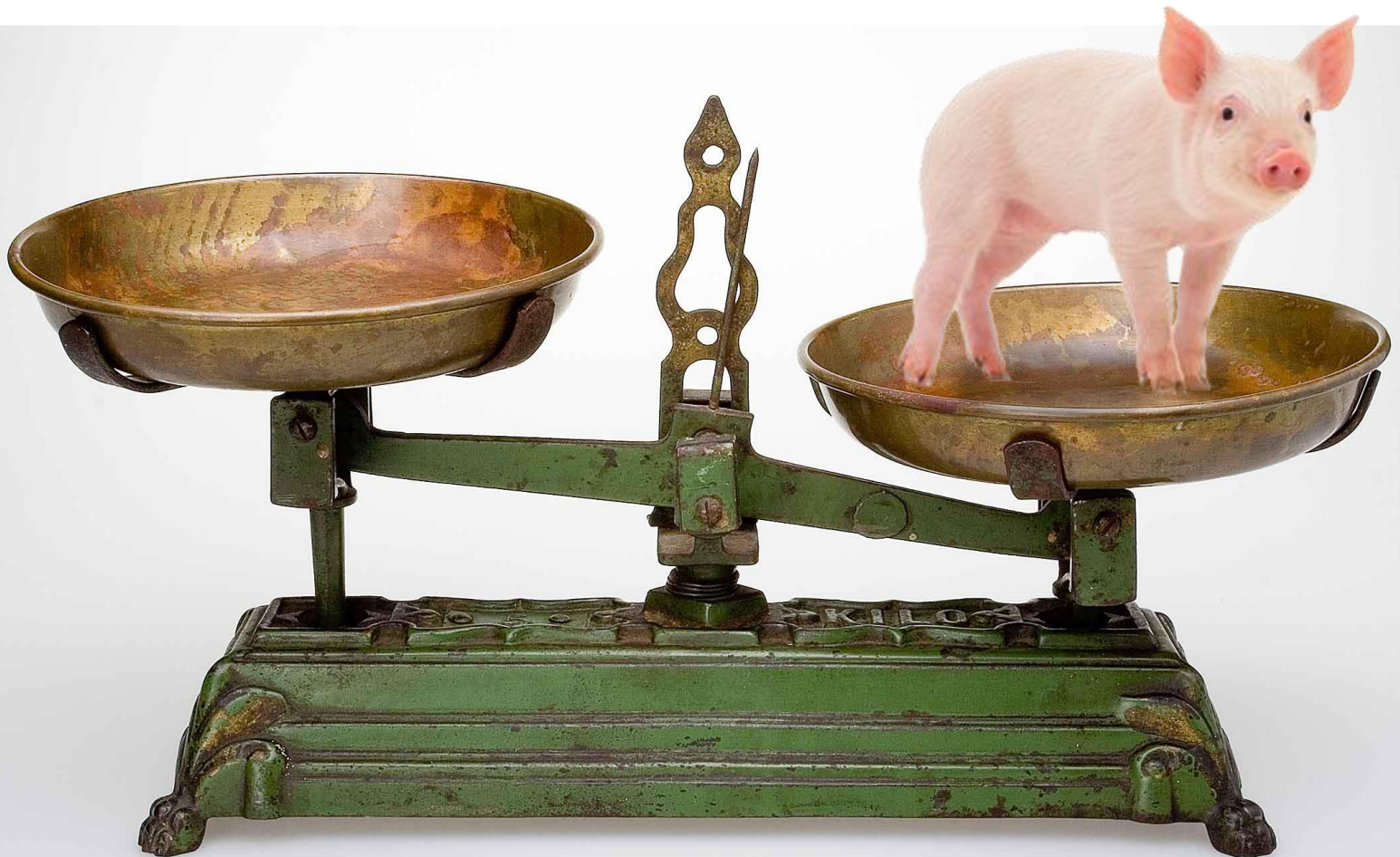
Nur vom Wiegen wird die Sau
nicht fett

If you want to rise a pig, you will have to feed it.



Nur vom Wiegen wird die Sau
nicht fett

By putting the pig on a scale, it will not grow



Analyze, plan, act

- Risk assessment of psycho-social working conditions is not easy.
- The step from analysis to action seems to be difficult to take
- Make sure you want to act before you analyze !!!!!
- A survey with no reaction will disappoint employees



- Risk assessment concerning stress at the work place can be performed in different ways
 - Standardized general questionnaire /survey
(Mitarbeiterbefragung), e.g. COPSOQ
 - Job specific standardized questionnaires
 - Moderated discussions about risk assessment

- Discussion groups at work floor level
- What is nice about my job
- What worries or disturbs me about my job
- How can we improve things
- What actions can we take
- What actions need to take the employer
- Moderator can be internal or external
- Start with building a steering committee with members who have decision-making power

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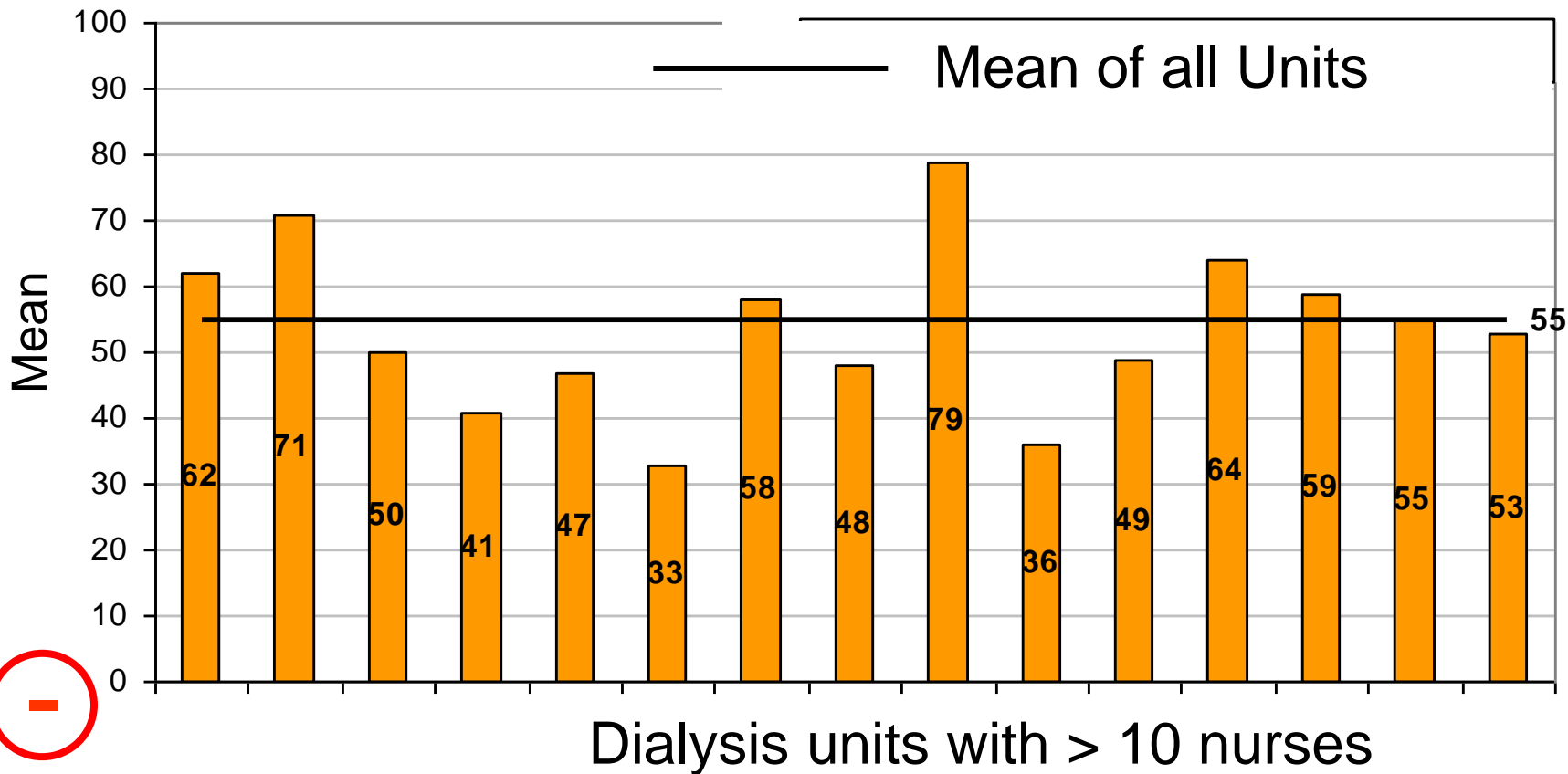
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Leadership in 15 dialysis units



Review on Transformational leadership

- Lead with values
- Persuade with positive aims
- Be role model
- Improve team spirit
- Support
- Allow development
- Intellectual challenge



Relationships of All **Well-Being** Outcomes with **Transformational Leadership** (based on 86 studies and 34.000 participants)

Negative outcome	k	r
Depersonalization	12	-.29
Emotional exhaustion	32	-.27
Negative affect	14	-.24
General stress	39	-.19
Somatization	26	-.15
Positive outcome		
Occupational self-efficacy	12	.21
Personal accomplishment	10	.23
Affective well-being	24	.33
Work engagement	15	.40

15 to 40% of the
variance of the
well-being variables
is explained by
leadership

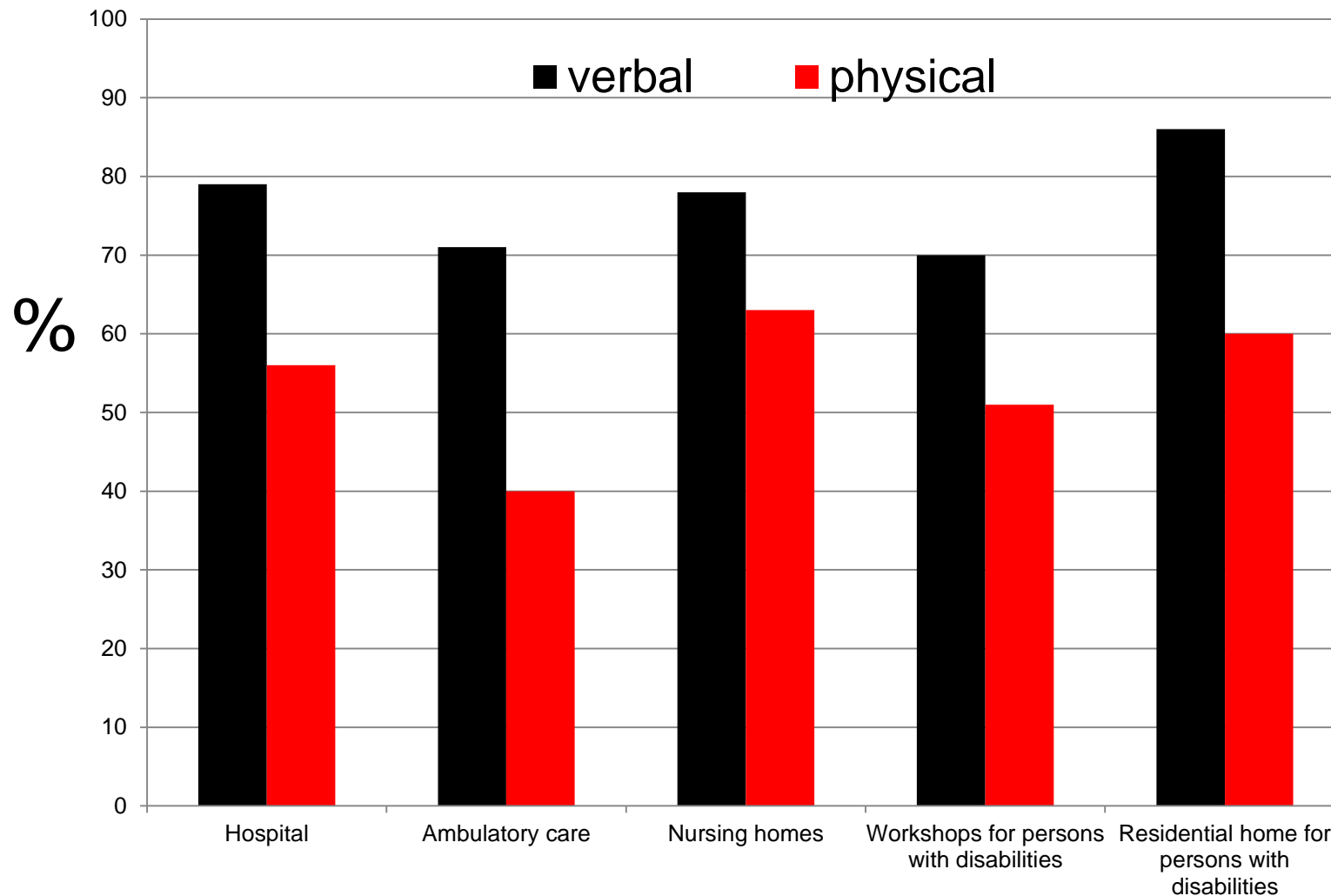
Vincent S, et al. under review

- Survey concerning verbale and physical aggression
 - Hospitals
 - Nursing homes
 - Ambulatory care
 - Care for persons with disabilities
 - Standardised questionnaire following SOAS-R
 - Response rate: 29-58%
 - N = 1,891
 - A. Schablon et al. BMJ 2013





Violence in the last 12 months



Scale from 0 to 10

Categorien: 0-3 low; 4-7 middle; 8-10 high

- **Stress (all)**

– low	33%
– middle	36%
– high	32%

Violence against nurses and other care givers

	OR	95%CI
• Frequently victim of violence		
– Age <30 years	1,8	1,3-2,5
– Longterm care / nursing home	1,6	1,2-2,0
– Institution is well prepared	0,7	0,6-0,9
• Highly stressed due to violence		
– Physical aggression weekly	2,1	1,4-3,2
– Longterm care / nursing home	0,5	0,4-0,8
– Institution is well prepared	0,6	0,4-0,8

Schablon et al BMJ 2013

- Be prepared to act before you analyze
- Keep it simple
 - There are very good tools available
- Leadership and violence might be important topics of the risk assessment





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We care for those who care

Thank you for your attention