



Organizational level health based cut-off points for psychosocial work environment factors

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Cut-off points vs. benchmarks and well-being



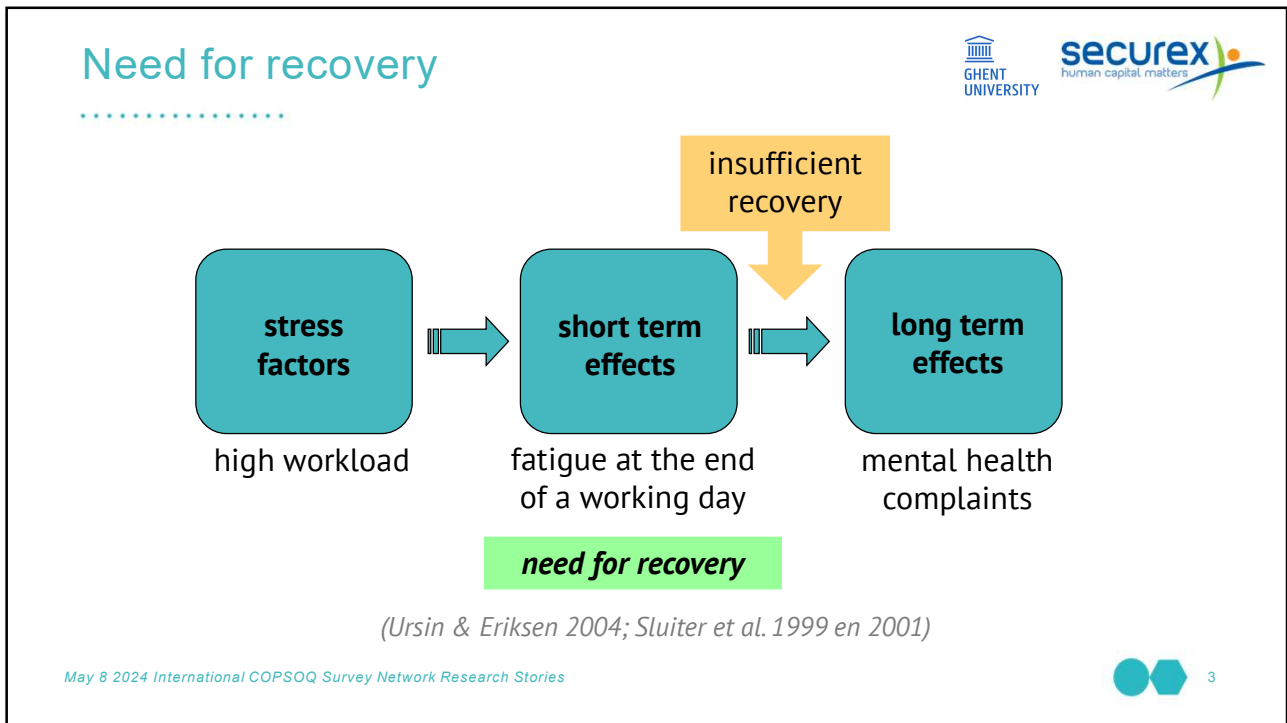
- Cut-off points
 - based on relevant outcome (health or well-being) parameter
 - distinction between “good” and “bad” for health and well-being
 - *health based* reference values
 - *individual level*
- Benchmarks
 - based on average or “best” among similar jobs or industrial sectors
 - better or worse compared to peer organizations
 - *“peer group” based* reference values
 - *group level*
 - no distinction between actually “good” and “bad” for health and well-being

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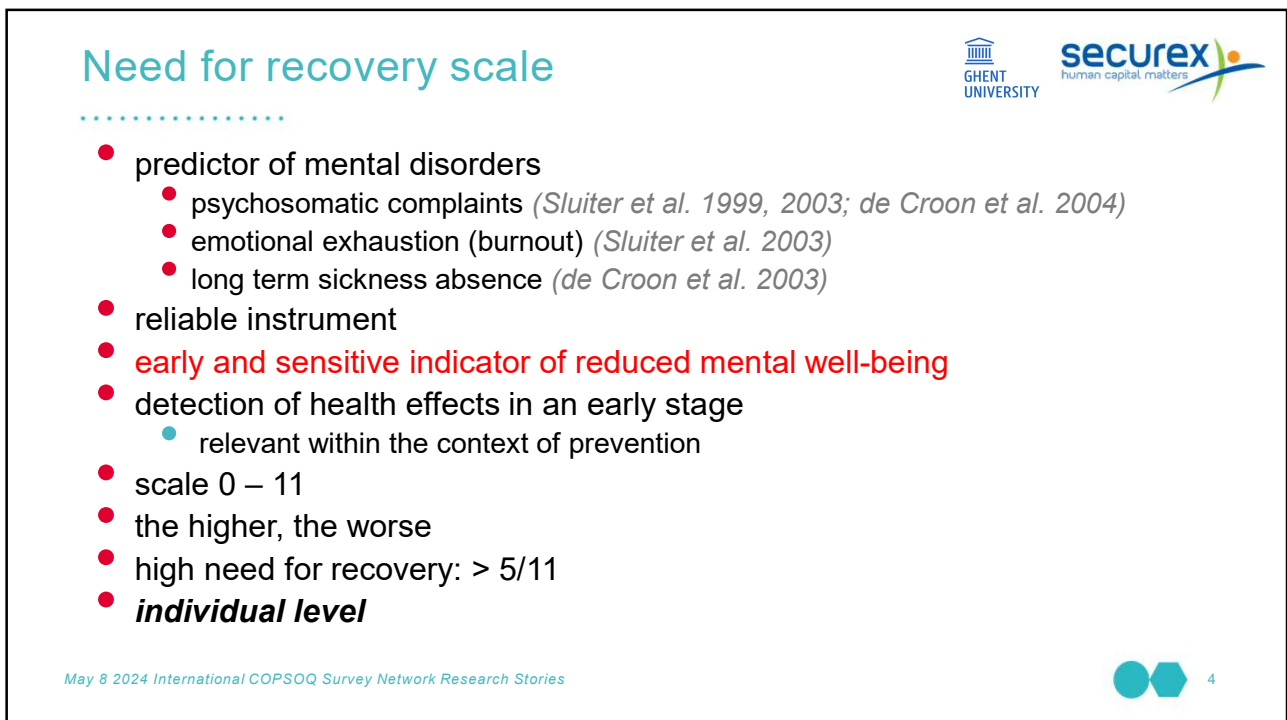


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Outcome parameter on organizational level



- % sickness absence within an organization = parameter for “sickness” within the organization
 - too late for prevention
 - impact on health of employee
- **% high need for recovery within an organization** = parameter for mental (un)wellbeing within the organization
 - measures to prevent sickness possible

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Aim



- to determine cut-off points on organizational level for a number of psychosocial work environment parameters based on the prevalence of high need for recovery within the organization

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Data collection



- screening “Well-being Indicator”
 - online questionnaire
 - assessment tool
 - prevention and well-being at work

- primary aim
 - mapping bottlenecks on well-being at work
 - identify priority action areas / employee groups
 - starting point for preventive actions in the company

- secondary aim
 - use pooled data for scientific research

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Study “population”



- baseline data 2015-2018

- **191** organizations with $\geq 60\%$ response rate
 - public sector: 44
 - private sector: 147
- average 181 employees/organization (19-1246)
- mean **response rate : 80.0%** (60%-100%)
- total n employees: 26558

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Reference % high NFR for ROC analyses



- mean % high NFR: **35.6%** - range 8.3% - 77.4% (!)
- >40% high NFR
 - 29.8% of organizations (n=57)
- ≤25% high NFR
 - 15.2% of organizations (n=29)

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Psychosocial work environment factors



- COPSOQ factors (short COPSOQ II)

<ul style="list-style-type: none"> • quantitative work demands • emotional work demands • recognition • social support supervisor • quality of leadership • possibilities for development 	<ul style="list-style-type: none"> • role clarity • job insecurity • organizational social capital • vertical trust • organizational justice • sense of community 	<ul style="list-style-type: none"> • exhaustion • subjective health • job satisfaction
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- non-COPSOQ factors

<ul style="list-style-type: none"> • work-private life balance • working more hours than desire • participation in decision making 	<ul style="list-style-type: none"> • <i>all factors: 0-100 score</i> • <i>mean value per organization</i>
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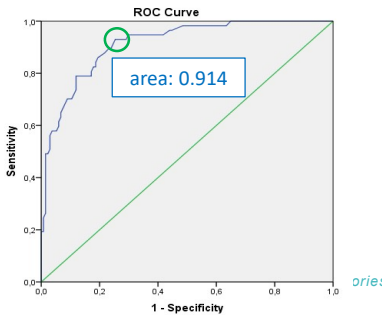
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ROC-analyses


- to determine cut-off points
 - optimum “maximum sensitivity + specificity”
 - “area under the curve (AUC)” determines the “value” of the considered parameter as detection-instrument



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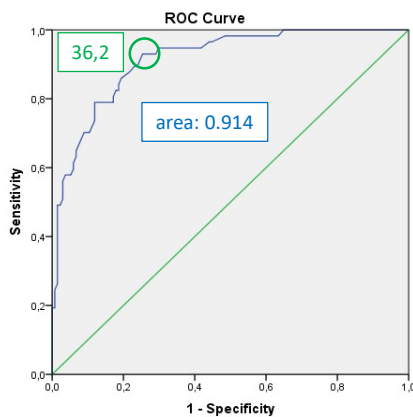
AUC	accuracy
1.00	perfect
↑	↑
realistic +/- 0.70	
↑	↑
0.50	worthless

- reference: % high NFR
 - ≤25% vs. >25%
 - >40% vs. ≤ 40%

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Exhaustion (burnout)




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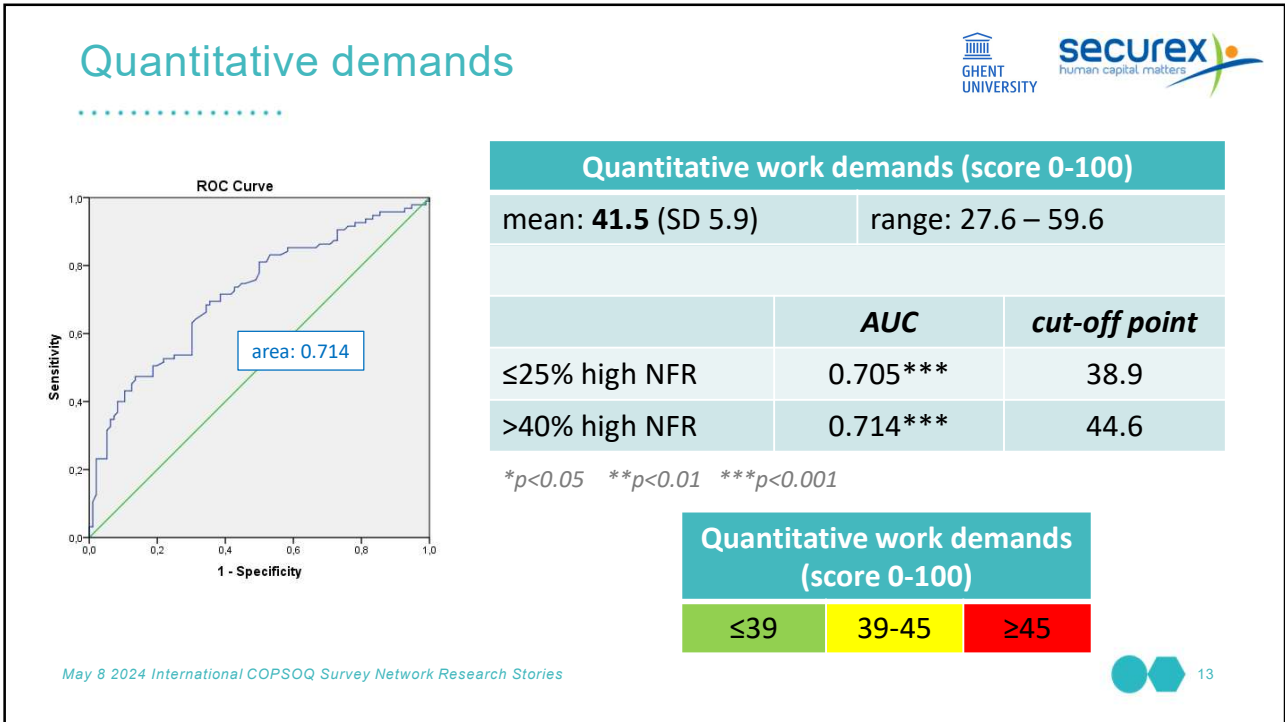
Exhaustion (score 0-100)			
mean: 36.4 (SD 5.1)		range: 21.9 – 53.8	
	AUC	90% CI	cut-off point
≤25% high NFR	0.898***	0.835-0.962	33.9
>40% high NFR	0.914***	0.872-0.955	36.2

*p<0.05 **p<0.01 ***p<0.001

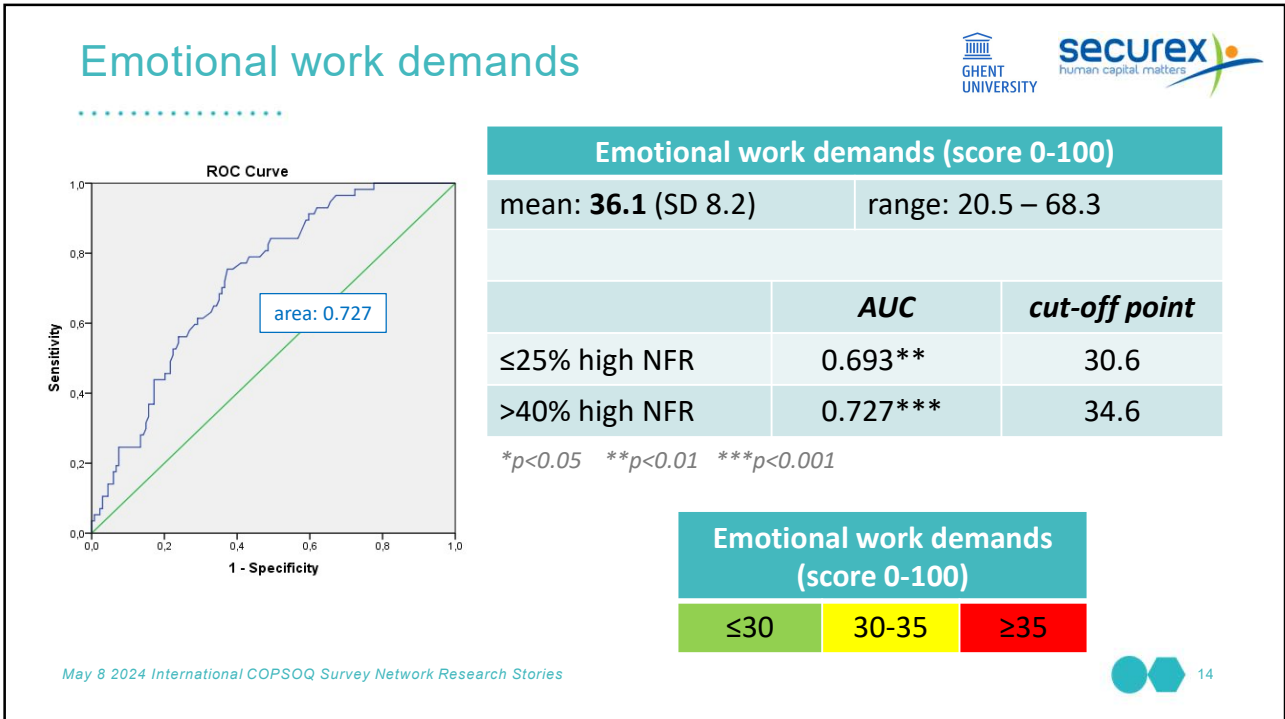
Exhaustion (score 0-100)		
≤34	34-36	≥36

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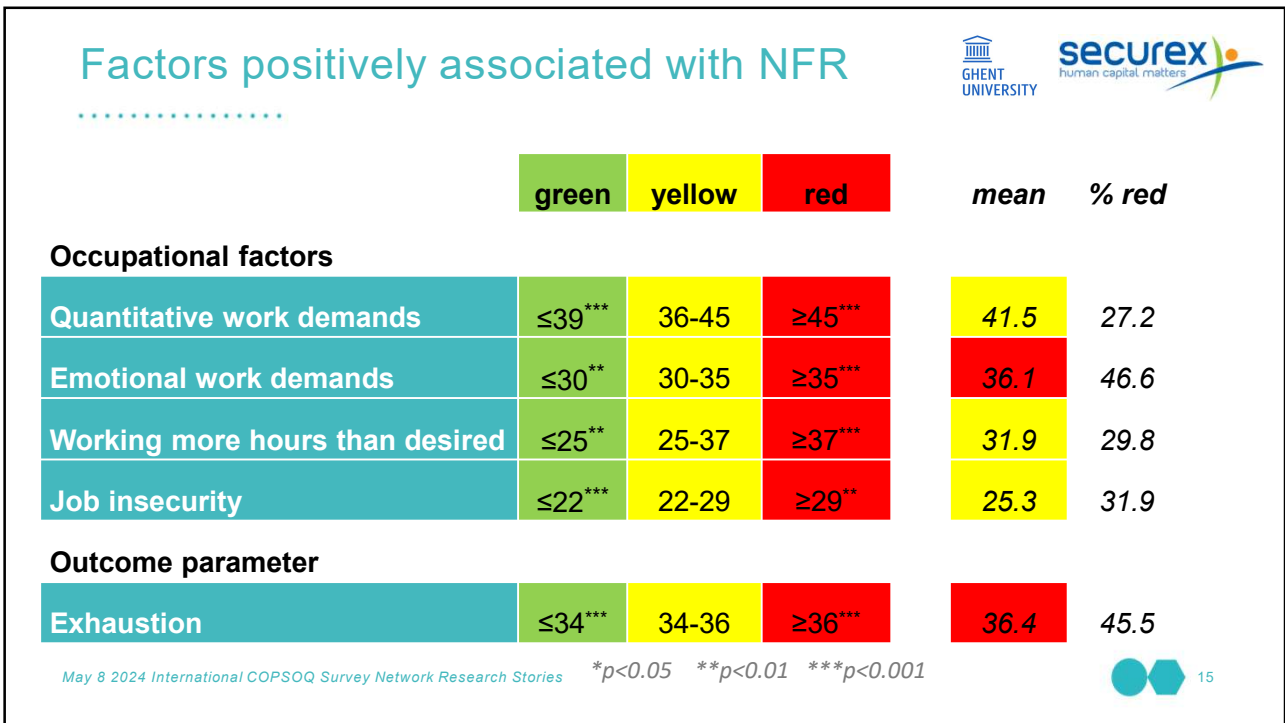
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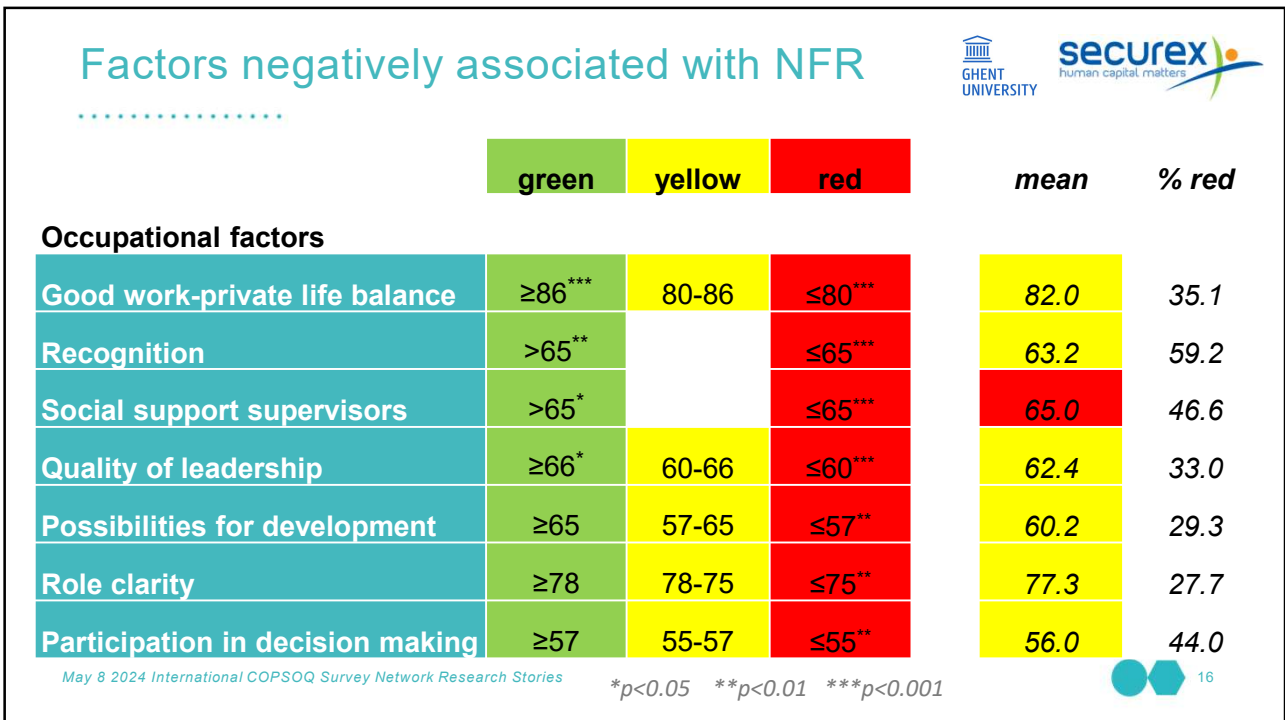
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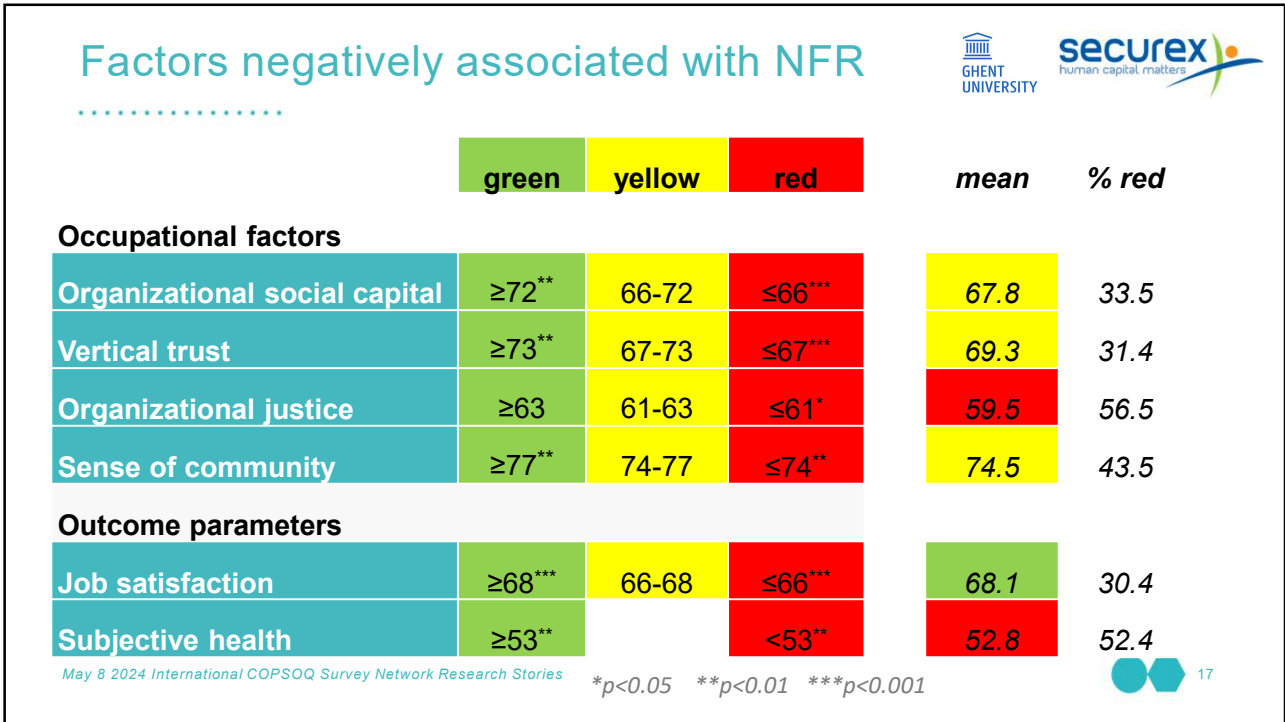
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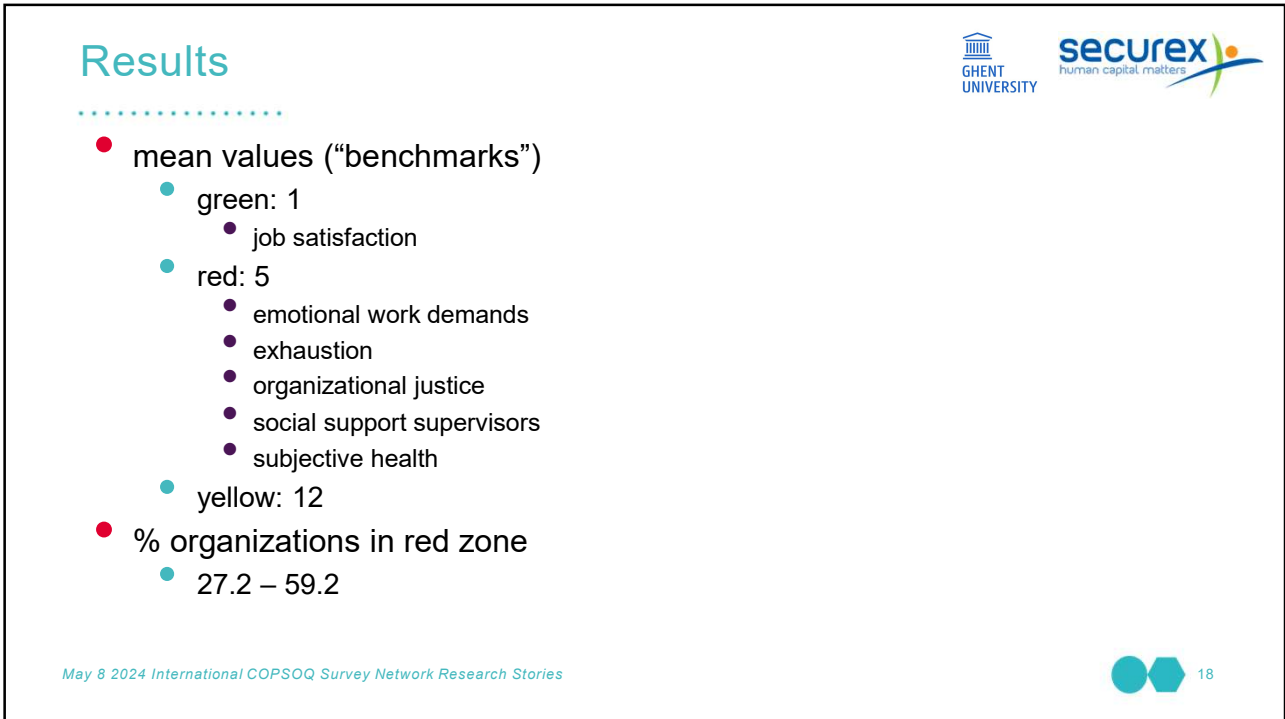
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Evaluation ROC analyses



	≤25% high NFR	>40% high NFR
AUC range	0.587 – 0.720 (0.898)	0.618 – 0.749 (0.914)
mean AUC	0.667 (0.680)	0.680 (0.693)
p<0.001	5	11
p<0.01	2	6
p<0.05	7	1
N.S.	4	0

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Conclusions





- no diagnostic values
- guideline values (health based) on organizational level

- ROC results for “red” zone: reliable
 - “don’t cross this line”
- ROC results for “green” zone: less reliable
 - “nice to have”

- further research necessary

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THANK YOU

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