

Which two-question combinations of COPSOQ II have the best match with the dimensions of the long version?

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Background

- the COPSOQ II comes in three versions
- the short one is currently (and probably also in the future) the most widely used on the field (and in research)
- it is therefore important that the results obtained with a short version reflect the results obtained by the research version (“golden standard”)

Aim

- to explore, within the COPSOQ II, which question combinations for a short version have the best match with the dimensions of the research version

Methods (1)

- study population: public sector
 - administrative workers
 - library workers
 - teachers
 - social workers
 - technical personnel
 - kitchen personnel
 - cleaning personnel
 - cleaning at home
 - child care
 - nursing personnel
 - nursing at home
 - animation personnel
 - harbour personnel
 - police officers
 - professional fire fighters
 - monument watch specialists

Methods (2)

- cross-sectional questionnaire study
- target population: 1847
- 1457 subjects (78.9% response rate)

- 64.3 % women (n=937)
- mean age (yrs): 42.4 (SD 10.3)
- age range (yrs): 19 – 68

Methods (3)

- all scales 0-100
- fixed cut-off points: 45 and 55
- 3 categories:
 - favourable
 - unfavourable
 - in-between

- statistical approach
 - mean, Δ mean
 - weighted Kappa value for class agreement between categories (K)
 - proportion of the variance in the long explained by the short (R^2)
 - Wilcoxon matched-pairs signed rank test (p)
 - Spearman correlation coefficient (r)
- content of questions in relation to the dimension
- comparison final logistic regression models with high need for recovery as dependent variable
 - long
 - combinations in current short COPSOQ II
 - suggested combinations

Considered scales

- quantitative demands
 - tempo
 - emotional demands
 - influence at work
 - possibilities for development
 - meaning of work
 - commitment to the workplace
 - predictability
 - rewards
 - role clarity
 - quality of leadership
 - social support from supervisors
 - vertical trust
 - justice and respect
 - job satisfaction
 - work family conflict
- burnout
 - subjective stress
- degrees of freedom
 - job insecurity
 - variation of work
 - social community at work

1. Is your workload unevenly distributed so it piles up?
2. How often do you not have time to complete all your work tasks?
3. Do you get behind with your work?
4. Do you have enough time for your work tasks?

Quantitative demands

	mean	Δ mean	K	R ²	p	r
● long	41.80					
● short 1+2	46.42	4.62	0.73	0.89	0.000	0.94
● short 1+3	41.63	- 0.17	0.76	0.87	0.348	0.92
● short 1+4	43.10	1.30	0.74	0.85	0.000	0.91
● short 2+3	40.47	- 1.33	0.81	0.88	0.000	0.94
● short 2+4	41.93	0.13	0.78	0.87	0.348	0.93
● short 3+4	37.12	- 4.68	0.75	0.88	0.000	0.93



● $3+4$ vs. $2+4$

1. *Is your workload unevenly distributed so it piles up?*

- does this reflect quantity of demands?

2. *How often do you not have time to complete all your work tasks?*

- reflects better the quantity of work

3. *Do you get behind with your work?*

- can have other causes than work quantity

4. *Do you have enough time for your work tasks?*

Tempo (work pace)

1. Do you have to work very fast?
2. Do you work at a high pace throughout the day?
3. Is it necessary to keep working at a high pace?

Tempo (work pace)

	mean	Δ mean	K	R ²	p	r
● long	60.30					
● short 1+2	60.70	0.40	0.81	0.88	0.018	0.93
● short 1+3	59.32	- 0.98	0.84	0.90	0.000	0.95
● short 2+3	60.86	0.56	0.88	0.91	0.000	0.95

Tempo (work pace)

- $2+3$ vs. $1+2$

1. *Do you have to work very fast?*

- question type “do you” or “do you not” is more direct; generates an answer about the real behaviour

2. *Do you work at a high pace throughout the day?*

3. *Is it necessary to keep working at a high pace?*

- “necessity” does not always imply a real behaviour

Emotional demands

1. Does your work put you in emotionally disturbing situations?
2. Do you have to relate to other people's personal problems as part of your work?
3. Is your work emotionally demanding?
4. Do you get emotionally involved in your work?

Emotional demands

	mean	Δ mean	K	R ²	p	r
● long	44.63					
● short 1+2	42.79	- 1.84	0.70	0.81	0.000	0.89
● short 1+3	40.93	- 3.70	0.80	0.89	0.000	0.95
● short 1+4	41.26	- 3.37	0.74	0.86	0.000	0.92
● short 2+3	48.00	3.37	0.82	0.90	0.000	0.95
● short 2+4	48.30	3.67	0.80	0.90	0.000	0.95
● short 3+4	46.34	1.71	0.81	0.86	0.000	0.93

● **1+2** vs. **3+4**

1. Does your work put you in emotionally disturbing situations?

2. Do you have to relate to other people's personal problems as part of your work?

3. Is your work emotionally demanding?

- is more direct and to the point than 1

4. Do you get emotionally involved in your work?

- is more direct and to the point than 2

Influence at work

1. Do you have a large degree of influence concerning your work?
2. Do you have a say in choosing who you work with?
3. Can you influence the amount of work assigned to you?
4. Do you have any influence on what you do at work?

Influence at work

	mean	Δ mean	K	R ²	p	r
● long	42.48					
● short 1+2	40.19	- 2.29	0.70	0.75	0.000	0.86
● short 1+3	44.18	1.70	0.63	0.74	0.000	0.85
● short 1+4	54.49	12.01	0.43	0.65	0.000	0.80
● short 2+3	30.58	-11.90	0.55	0.68	0.000	0.82
● short 2+4	40.81	- 1.67	0.71	0.79	0.000	0.88
● short 3+4	44.83	2.35	0.64	0.75	0.000	0.86

COPSOQ III core: only question 1 (modified)

● **1+3** vs. **2+4**

1. Do you have a large degree of influence concerning your work?

- very bleary question

3. Can you influence the amount of work assigned to you?

2. Do you have a say in choosing who you work with?

- important item in context of psychosocial environment

4. Do you have any influence on what you do at work?

- comprises 1 and 3

Possibilities for development

1. Does your work require you to take the initiative?
2. Do you have the possibility of learning new things through your work?
3. Can you use your skills or expertise in your work?
4. Does your work give you the opportunity to develop your skills?

Possibilities for development

	mean	Δ mean	K	R ²	p	r
● long	65.88					
● short 1+2	66.17	0.29	0.75	0.85	0.109	0.92
● short 1+3	71.66	5.78	0.69	0.80	0.000	0.88
● short 1+4	66.65	0.77	0.76	0.87	0.000	0.93
● short 2+3	64.91	- 0.97	0.78	0.90	0.000	0.94
● short 2+4	59.88	- 6.00	0.68	0.86	0.000	0.93
● short 3+4	65.36	- 0.52	0.79	0.88	0.109	0.93

- 2+3 in stead of 1+2
- 1+2: statistically only better Wilcoxon p (=0.109)
- 2+3: better combination of questions
 1. *Does your work require you to take the initiative?*
 - is not really about possibilities for development
 2. *Do you have the possibility of learning new things through your work?*
 3. Can you use your skills or expertise in your work?
 - important item in context of possibil. develop.
 4. Does your work give you the opportunity to develop your skills?

Meaning of work

1. Is your work meaningful?
2. Do you feel that the work you do is important?
3. Do you feel motivated and involved in your work?

Meaning of work

	mean	Δ mean	K	R ²	p	r
● long	80.62					
● short 1+2	80.78	0.16	0.80	0.92	0.159	0.95
● short 1+3	81.28	0.66	0.86	0.93	0.000	0.97
● short 2+3	79.84	- 0.78	0.83	0.94	0.000	0.97

COPSOQ III core: only question 1

Commitment to the workplace

1. Do you enjoy telling others about your place of work?
2. Do you feel that your place of work is of great importance to you?
3. Would you recommend a good friend to apply for a position at your workplace?
4. How often do you consider looking for work elsewhere?

Commitment to the workplace

	mean	Δ mean	K	R ²	p	r
● long	64.83					
● short 1+2	62.38	- 2.45	0.57	0.71	0.000	0.82
● short 1+3	55.82	- 9.01	0.55	0.79	0.000	0.88
● short 1+4	67.73	2.90	0.69	0.77	0.000	0.87
● short 2+3	61.94	- 2.89	0.65	0.80	0.000	0.89
● short 2+4	73.82	8.99	0.54	0.68	0.000	0.80
● short 3+4	67.36	2.53	0.69	0.73	0.000	0.85

Rewards

1. Is your work recognised and appreciated by the management?
2. Does the management at your workplace respect you?
3. Are you treated fairly at your workplace?

Rewards

	mean	Δ mean	K	R ²	p	r
● long	64.77					
● short 1+2	63.07	- 1.70	0.86	0.94	0.000	0.96
● short 1+3	64.48	- 0.29	0.88	0.95	0.087	0.97
● short 2+3	66.56	1.79	0.85	0.93	0.000	0.95

Role clarity

1. Does your work have clear objectives?
2. Do you know exactly which areas are your responsibility?
3. Do you know exactly what is expected of you at work?

Role clarity

	mean	Δ mean	K	R ²	p	r
● long	76.64					
● short 1+2	74.69	- 1.95	0.75	0.93	0.000	0.97
● short 1+3	76.45	- 0.19	0.88	0.93	0.132	0.97
● short 2+3	78.76	2.12	0.81	0.88	0.000	0.93

COPSOQ III core: only question 1

Quality of leadership

- To what extent would you say that your immediate superior...
 1. makes sure that the individual member of staff has good development opportunities?
 2. gives high priority to job satisfaction?
 3. is good at work planning?
 4. is good at solving conflicts?

Quality of leadership

	mean	Δ mean	K	R ²	p	r
● long	57.16					
● short 1+2	58.69	1.53	0.82	0.87	0.000	0.93
● short 1+3	58.36	1.20	0.84	0.92	0.000	0.95
● short 1+4	57.19	0.03	0.86	0.92	0.589	0.96
● short 2+3	57.02	- 0.14	0.84	0.92	0.589	0.96
● short 2+4	55.85	- 1.31	0.85	0.93	0.000	0.96
● short 3+4	55.57	- 1.59	0.79	0.88	0.000	0.93

COPSOQ III core: 2 + 3 + 4

- **2+3** vs. **1+4**
- 1+4: statistically slightly better for mean and Kappa
- 2+3: better combination of questions
 - 2. ... gives high priority to job satisfaction?*
 - comprises 1 and 4
 - 3. ... is good at work planning?*
 - important aspect of leadership
 - 1. ... makes sure that the individual member of staff has good development opportunities*
 - 4. ... is good at solving conflicts?*

Social support supervisors

1. How often is your nearest superior willing to listen to your problems at work?
2. How often do you get help and support from your nearest superior?
3. How often does your nearest superior talk with you about how well you carry out your work?

Social support supervisors

	mean	Δ mean	K	R ²	p	r
● long	54.58					
● short 1+2	60.74	6.16	0.77	0.91	0.000	0.95
● short 1+3	54.45	- 0.13	0.88	0.92	0.253	0.95
● short 2+3	48.54	- 6.04	0.75	0.92	0.000	0.95

COPSOQ III: only question 2 (modified)

● $1+2$ vs. $1+3$

1. How often is your nearest superior willing to listen to your problems at work?

2. How often do you get help and support from your nearest superior?

- partly comprised in question 1 (“willing to listen to your problems”: reflects an intention to help)

3. How often does your nearest superior talk with you about how well you carry out your work?

- positive feedback is an important issue in psychosocial work environment; reflects top down communication

Vertical trust

1. Does the management trust the employees to do their work well?
2. Can you trust the information that comes from the management?
3. Does the management withhold important information from the employees?
4. Are the employees able to express their views and feelings?

Vertical trust

	mean	Δ mean	K	R ²	p	r
● long	66.03					
● short 1+2	70.43	4.40	0.69	0.78	0.000	0.87
● short 1+3	69.04	3.01	0.69	0.77	0.000	0.87
● short 1+4	64.23	- 1.80	0.64	0.75	0.000	0.86
● short 2+3	67.67	1.64	0.71	0.81	0.000	0.90
● short 2+4	62.88	- 3.15	0.66	0.82	0.000	0.90
● short 3+4	61.36	- 4.67	0.64	0.81	0.000	0.89

● $1+2$ vs. $2+3$

● $2+3$: mathematically K, R², r slightly better

● $1+2$: better combination of questions

1. Does the management trust the employees to do their work well?

- necessary for double direction of trust

2. Can you trust the information that comes from the management?

3. Does the management withhold important information from the employees?

- comprised in 2

4. Are the employees able to express their views and feelings?

Justice and respect

1. Are conflicts resolved in a fair way?
2. Are employees appreciated when they have done a good job?
3. Are all suggestions from employees treated seriously by the management?
4. Is the work distributed fairly?

Justice and respect

	mean	Δ mean	K	R ²	p	r
● long	56.95					
● short 1+2	58.73	1.78	0.78	0.86	0.000	0.92
● short 1+3	55.83	- 1.12	0.74	0.86	0.000	0.92
● short 1+4	58.59	1.64	0.73	0.83	0.000	0.91
● short 2+3	55.25	- 1.70	0.77	0.85	0.000	0.93
● short 2+4	58.00	1.05	0.77	0.85	0.000	0.92
● short 3+4	55.13	- 1.82	0.73	0.81	0.000	0.90

Justice and respect

● **1+4** vs. **2+4**

1. Are conflicts resolved in a fair way?

2. Are employees appreciated when they have done a good job?

- reflects more “respect” than 1

3. Are all suggestions from employees treated seriously by the management?

4. Is the work distributed fairly?

- reflects more “justice”

Job satisfaction

Regarding your work in general. How pleased are you with

1. your work prospects?
2. the physical working conditions?
3. the way your abilities are used?
4. your job as a whole, everything taken into consideration?

Job satisfaction

	mean	Δ mean	K	R ²	p	r
● long	66.29					
● short 1	65.53	- 0.76	0.61	0.63	0.000	0.75
● short 2	64.91	- 1.38	0.44	0.49	0.000	0.67
● short 3	63.73	- 2.56	0.62	0.67	0.000	0.75
● short 4	70.28	3.99	0.55	0.60	0.000	0.73

1. *How pleased are you with your work prospects?*

- seems to be more important for measuring job satisfaction in the long version

2. *How pleased are you with the physical working conditions?*

3. *How pleased are you with the way your abilities are used?*

4. *How pleased are you with your job as a whole, everything taken into consideration?*

- seems more logical for measuring job satisfaction?

Degree of freedom (control over working time)

1. Can you decide when to take a break ?
2. Can you take holidays more or less when you wish ?
3. Can you leave your work to have a chat with a colleague ?
4. If you have some private business, is it possible for you to leave your place of work for half an hour without special permission ?

Degree of freedom (control over working time)

	mean	Δ mean	K	R ²	p	r
● long	41.59					
● short 1+2	52.39	10.80	0.55	0.83	0.000	0.91
● short 1+3	42.91	1.32	0.73	0.82	0.000	0.91
● short 1+4	29.13	-12.46	0.64	0.79	0.000	0.90
● short 2+3	54.08	12.49	0.41	0.74	0.000	0.83
● short 2+4	40.25	- 1.34	0.62	0.77	0.000	0.83
● short 3+4	30.79	-10.80	0.52	0.70	0.000	0.82

Degree of freedom (control over working time)

- 1 and 3: concern daily degree of freedom
 1. *Can you decide when to take a break?*
 2. *Can you take holidays more or less when you wish?*
 - has probably been interpreted as the yearly holiday (once a year)
 3. *Can you leave your work to have a chat with a colleague?*
 4. *If you have some private business, is it possible for you to leave your place of work for half an hour without special permission?*
 - comprised in 1

Job insecurity (insecurity over employment)

1. Are you worried about becoming unemployed ?
2. Are you worried about new technology making you redundant ?
3. Are you worried about it being difficult for you to find another job if you became unemployed ?
4. Are you worried about being transferred to another job against your will ?

(insecurity over employment)

	mean	Δ mean	K	R ²	p	r
● long	19.62					
● short 1+2	11.54	- 8.08	0.64	0.66	0.000	0.72
● short 1+3	19.37	- 0.25	0.77	0.78	0.290	0.84
● short 1+4	22.57	2.95	0.78	0.81	0.000	0.89
● short 2+3	16.74	- 2.88	0.65	0.75	0.000	0.82
● short 2+4	20.03	0.41	0.64	0.73	0.290	0.85
● short 3+4	27.80	8.18	0.58	0.82	0.000	0.94

Job insecurity (insecurity over employment)

1. Are you worried about becoming unemployed?

2. Are you worried about new technology making you redundant?

- comprised in 1 (and 4)

3. Are you worried about it being difficult for you to find another job if you became unemployed?

- very important for psychosocial burden

4. Are you worried about being transferred to another job against your will?

- not really job insecurity (not unemployed)

Social community at work

1. Is there a good atmosphere between you and your colleagues ?
2. Is there good co-operation between the colleagues at work ?
3. Do you feel part of a community at your place of work ?

Social community at work

	mean	Δ mean	K	R ²	p	r
● long	73.58					
● short 1+2	74.39	0.81	0.80	0.86	0.000	0.90
● short 1+3	73.97	0.39	0.87	0.94	0.001	0.97
● short 2+3	72.32	- 1.26	0.84	0.94	0.000	0.97

COPSOQ III core: only question 1

Social community at work

- social community is best reflected by 1 and 3

1. Is there a good atmosphere between you and your colleagues?

2. Is there good co-operation between the colleagues at work?

3. Do you feel part of a community at your place of work?

1. Do you often feel a conflict between your work and your private life, making you want to be in both places at the same time?
2. Do you feel that your work drains so much of your energy that it has a negative effect on your private life?
3. Do you feel that your work takes so much of your time that it has a negative effect on your private life?
4. Do your friends or family tell you that you work too much?

Work family conflict

	mean	Δ mean	K	R ²	p	r
● long	30.37					
● short 1+2	34.65	4.28	0.64	0.79	0.000	0.89
● short 1+3	30.73	0.36	0.72	0.82	0.000	0.90
● short 1+4	31.31	0.94	0.66	0.78	0.000	0.89
● short 2+3	29.54	- 0.83	0.72	0.80	0.019	0.89
● short 2+4	30.22	- 0.15	0.72	0.83	0.000	0.91
● short 3+4	26.32	- 4.05	0.73	0.81	0.000	0.89

COPSOQ III core: only question 1 (modified)

- 2+3 vs. 2+4
- 2+4: statistically R^2 , r slightly better
- 2+3: better combination of questions
 1. *Do you often feel a conflict between your work and your private life, making you want to be in both places at the same time?*
 2. *Do you feel that your work drains so much of your energy that it has a negative effect on your private life?*
 3. *Do you feel that your work takes so much of your time that it has a negative effect on your private life?*
 - this is what it's all about (comprises the other dimension of WFC: strain based and time based)
 4. *Do your friends or family tell you that you work too much?*
 - circumstantial, result, friends or no friends, ...

Summary

dimension	current	statistical
Quantitative demands	3+4	2+4
Tempo	2+3	1+2
Emotional demands	1+2	3+4
Influence at work	1+3	2+4
Possibil. development	1+2	1+2
Meaning of work	1+2	1+2
Commitment	2+3	2+3
Rewards	1+3	1+3
Role clarity	1+3	1+3
Quality of leadership	2+3	1+4
Social support supervisors	1+2	1+3
Vertical trust	1+2	2+3
Justice and respect	1+4	2+4
Job satisfaction	4	1
Degrees of freedom	-	1+3
Job insecurity	-	1+3
Social community	-	1+3
Work family conflict	2+3	2+4
Predictability	only 2 questions in long version	
Variation of work	-	only 2 questions in long version

suggested

- population: same subjects that responded both on long and short scales
- dependent variable: high need for recovery
- control variables
 - gender, age, full/part time work, satisfactory social contacts outside work, shift work, physical strain, occupational class (3 groups)
- independent variables: occupational exposure variables (scales 0-10)
- not included
 - job satisfaction, commitment to the workplace, work family conflict
- logistic regression forward conditional
- model fit parameters for comparison of the 3 models

OR (95%CI) for a high need for recovery; n=1090

variable	long version	current short	suggested short
Quantitative demands	1.38 (1.26-1.51) ^{***}	1.28 (1.17-1.39) ^{***}	1.31 (1.21-1.42) ^{***}
Predictability	0.92 (0.85-0.99) [*]		0.89 (0.83-0.96) ^{**}
Degrees of freedom	0.89 (0.82-0.96) ^{**}	0.91 (0.85-0.98) ^{**}	0.91 (0.85-0.98) ^{**}
Job insecurity	1.17 (1.09-1.26) ^{***}	1.10 (1.03-1.16) ^{**}	1.10 (1.03-1.16) ^{**}
Variation at work	0.91 (0.84-0.99) [*]	0.92 (0.85-1.00) [*]	0.91 (0.84-0.98) [*]
Justice and respect		0.88 (0.82-0.95) ^{**}	
Correct pred %	78.8	78.3	78.7
-2LL	995.37	1008.41	1002.29
Nagelkerke	0.279	0.265	0.271

**p<0.05*

***p<0.01*

****p<0.001*

all models corrected for: gender, age, full/part time work, satisfactory social contacts outside work, shift work, physical strain, occupational class (3 groups)

- quantitative demands
- emotional demands
- influence at work
- quality of leadership
- justice and respect
- social support superiors

Reasons?

Quantitative demands

	mean	Δ mean	K	R ²	p	r
● long	41.80					
● short 1+2	46.42	4.62	0.73	0.89	0.000	0.94
● short 1+3	41.63	- 0.17	0.76	0.87	0.348	0.92
● short 1+4	43.10	1.30	0.74	0.85	0.000	0.91
● short 2+3	40.47	- 1.33	0.81	0.88	0.000	0.94
● short 2+4	41.93	0.13	0.78	0.87	0.348	0.93
● short 3+4	37.12	- 4.68	0.75	0.88	0.000	0.93

- 2+3 vs. 2+4

1. *Is your workload unevenly distributed so it piles up?*
2. *How often do you not have time to complete all your work tasks?*
3. *Do you get behind with your work?*
 - can have other causes than work quantity
4. *Do you have enough time for your work tasks?*
 - reflects better the quantity of work

Emotional demands

	mean	Δ mean	K	R ²	p	r
● long	44.63					
● short 1+2	42.79	- 1.84	0.70	0.81	0.000	0.89
● short 1+3	40.93	- 3.70	0.80	0.89	0.000	0.95
● short 1+4	41.26	- 3.37	0.74	0.86	0.000	0.92
● short 2+3	48.00	3.37	0.82	0.90	0.000	0.95
● short 2+4	48.30	3.67	0.80	0.90	0.000	0.95
● short 3+4	46.34	1.71	0.81	0.86	0.000	0.93

- 2+3 vs. 3+4

1. *Does your work put you in emotionally disturbing situations?*
2. *Do you have to relate to other people's personal problems as part of your work?*
3. *Is your work emotionally demanding?*
4. *Do you get emotionally involved in your work?*
 - is more direct and to the point than 2

Influence at work

	mean	Δ mean	K	R ²	p	r
● long	42.48					
● short 1+2	40.19	- 2.29	0.70	0.75	0.000	0.86
● short 1+3	44.18	1.70	0.63	0.74	0.000	0.85
● short 1+4	54.49	12.01	0.43	0.65	0.000	0.80
● short 2+3	30.58	-11.90	0.55	0.68	0.000	0.82
● short 2+4	40.81	- 1.67	0.71	0.79	0.000	0.88
● short 3+4	44.83	2.35	0.64	0.75	0.000	0.86

COPSOQ III core: only question 1 (modified)

- 1 (mod) vs. 2+4

1. *Do you have a large degree of influence concerning your work?*

- very bleary question

3. *Can you influence the amount of work assigned to you?*

2. *Do you have a say in choosing who you work with?*

- important item in context of psychosocial environment

4. *Do you have any influence on what you do at work?*

- comprises 1 and 3

Quality of leadership

	mean	Δ mean	K	R ²	p	r
● long	57.16					
● short 1+2	58.69	1.53	0.82	0.87	0.000	0.93
● short 1+3	58.36	1.20	0.84	0.92	0.000	0.95
● short 1+4	57.19	0.03	0.86	0.92	0.589	0.96
● short 2+3	57.02	- 0.14	0.84	0.92	0.589	0.96
● short 2+4	55.85	- 1.31	0.85	0.93	0.000	0.96
● short 3+4	55.57	- 1.59	0.79	0.88	0.000	0.93

COPSOQ III core: 2 + 3 + 4

- 2+3+4 vs. 2+3
- 1+4: statistically slightly better for mean and Kappa
- 2+3: better combination of questions
 2. ... gives high priority to job satisfaction?
 - comprises 1 and 4
 3. ... is good at work planning?
 - important aspect of leadership
 1. ... makes sure that the individual member of staff has good development opportunities
 4. ... is good at solving conflicts?

Justice and respect

	mean	Δ mean	K	R ²	p	r
● long	56.95					
● short 1+2	58.73	1.78	0.78	0.86	0.000	0.92
● short 1+3	55.83	- 1.12	0.74	0.86	0.000	0.92
● short 1+4	58.59	1.64	0.73	0.83	0.000	0.91
● short 2+3	55.25	- 1.70	0.77	0.85	0.000	0.93
● short 2+4	58.00	1.05	0.77	0.85	0.000	0.92
● short 3+4	55.13	- 1.82	0.73	0.81	0.000	0.90

Justice and respect

- 1+4 vs. 2+4

1. Are conflicts resolved in a fair way?

2. Are employees appreciated when they have done a good job?

- reflects more “respect” than 1

3. Are all suggestions from employees treated seriously by the management?

4. Is the work distributed fairly?

- reflects more “justice”

Social support supervisors

	mean	Δ mean	K	R ²	p	r
● long	54.58					
● short 1+2	60.74	6.16	0.77	0.91	0.000	0.95
● short 1+3	54.45	- 0.13	0.88	0.92	0.253	0.95
● short 2+3	48.54	- 6.04	0.75	0.92	0.000	0.95

COPSOQ III: only question 2 (modified)

- 2 (mod) vs. 1+3

1. How often is your nearest superior willing to listen to your problems at work?

2. How often do you get help and support from your nearest superior?

- partly comprised in question 1 (“willing to listen to your problems”: reflects an intention to help)

3. How often does your nearest superior talk with you about how well you carry out your work?

- positive feedback is an important issue in psychosocial work environment; reflects top down communication

Conclusion

- core questions selected using Delphi round
- caution when using core questions to compose “short” dimensions
 - additional statistics
 - content analysis in relation to the dimension
- findings to be confirmed in other countries, other populations