

A new tool for assessing psychosocial factors at work: The Copenhagen Psychosocial Questionnaire

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Background

The need for valid and reliable instruments for assessment of exposures applies to the psychosocial field as well as to other fields of work environment research and practice. At the National Institute of Occupational Health (NIOH) in Denmark the Copenhagen Psychosocial Questionnaire (COPSOQ) for assessing psychosocial work environment factors has been developed in three versions: A long version for researchers, a medium size version to be used by work environment professionals, and a short version for the workplaces. The whole concept has been labelled “the three-level concept”.

By developing the COPSOQ, we have tried to reach a number of goals:

1. To develop valid instruments for use at different levels.
2. To improve communication between researchers, work environment professionals, and workplaces.
3. To make national and international comparisons possible.
4. To improve surveys of the psychosocial work environment.
5. To improve and facilitate evaluations of interventions at the workplaces.
6. To make it easier to operationalise complicated theories and concepts.

Methods

The whole project has consisted of a number of phases. During the first phase psychosocial questionnaires from a number of countries were collected in order to study the different models, concepts, and questions. Sixteen questionnaires from Finland, Sweden, UK, USA, Denmark, and the Netherlands were included in this process. We found several of the questionnaires inspiring and of good quality but concluded that we could not use any of them for our purpose. During the second phase we selected 145 questions from the 16 questionnaires and added 20 new questions of our own. These 165 questions were tested empirically in a survey of a representative sample of 1858 adult Danish employees (20-60 years of age, 49% women, response rate 62%). During the next phase the responses were analysed for internal consistency, factorial validity, missing values, and response patterns. Our purpose was to develop a number of scales, each based on several questions in order to improve reliability and validity of the assessments. In this way the research questionnaire was developed with 141 questions comprising 30 different dimensions (scales). (See figure 1, next page).

During the following phase the length of the scales was reduced so that the maximum number of questions in each scale was 4 (in a few cases: 5). Also, a number of scales on individual characteristics were excluded. In this way the medium size questionnaire with 95 questions and 26 dimensions was developed. In the long and the medium size versions of COPSOQ all scales go from 0 to 100 points.

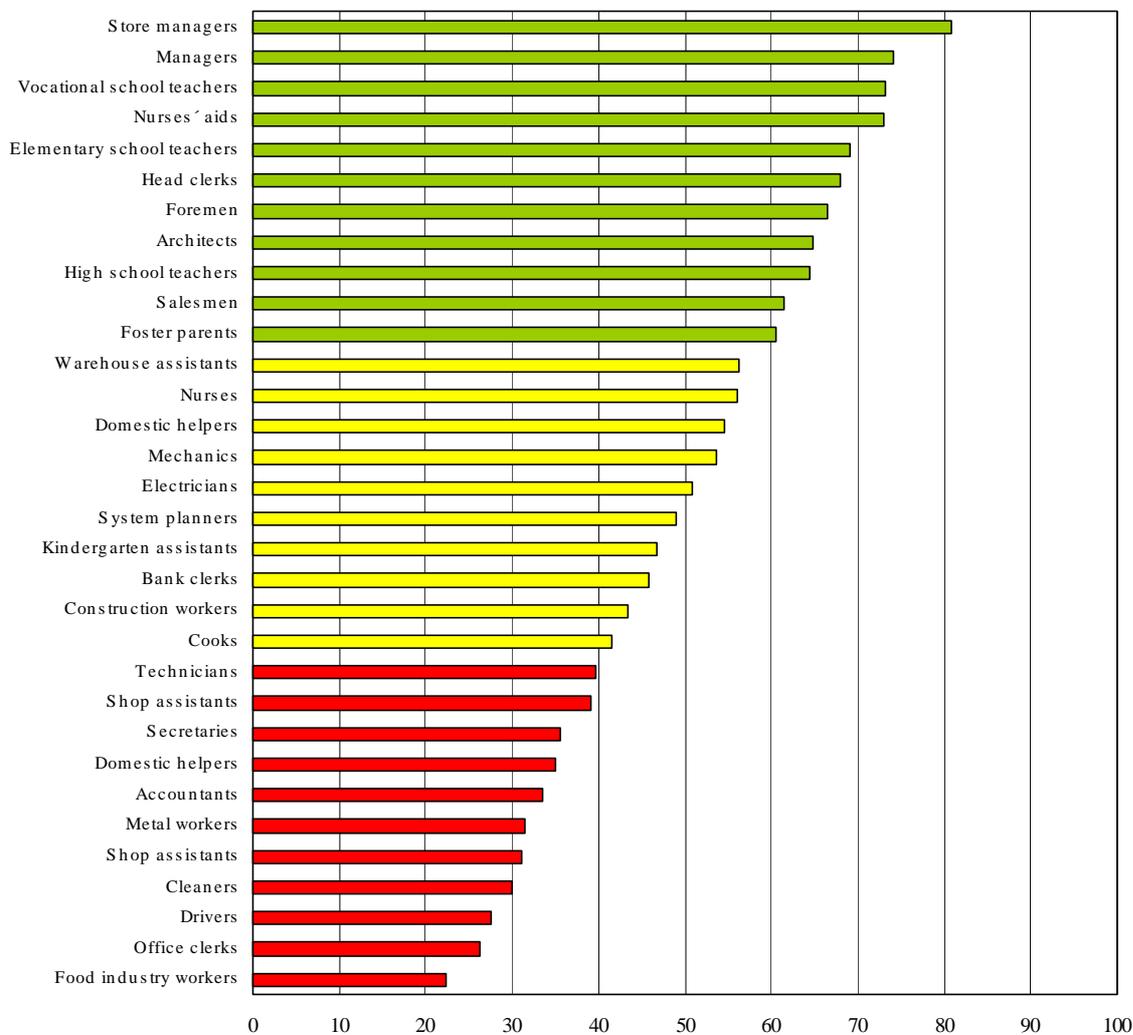
Finally, the short questionnaire was developed by reducing the number of dimensions as well as questions. The short questionnaire comprises 44 questions and only 8 dimensions. Some of these dimensions include several of the dimensions of the longer versions of COPSOQ (see figure 1).

Figure 1. The dimensions and number of questions of the Copenhagen Psychosocial Questionnaire in all three versions: long, medium, and short.

Dimensions	Number of questions:			
	Research questionnaire	Middle questionnaire	Short questionnaire	
Quantitative demands	7	4	3	} 6
Cognitive demands	8	4		
Emotional demands	3	3	2	
Demands for hiding emotions	2	2	1	
Sensorial demands	5	4		
Influence at work	10	4	3	} 10
Possibilities for development	7	4	2	
Degree of freedom at work	4	4	1	
Meaning of work	3	3	2	
Commitment to the workplace	4	4	2	
Predictability	2	2	2	} 10
Role-clarity	4	4		
Role-conflicts	4	4		
Quality of leadership	8	4	2	
Social support	4	4	2	
Feedback at work	2	2	2	
Social relations	2	2		
Sense of community	3	3	2	
Insecurity at work	4	4		4
Job satisfaction	7	4		4
General health	5	5		1
Mental health	5	5		5
Vitality	4	4		4
Behavioural stress	8	4		
Somatic stress	7	4		
Cognitive stress	4	4		
Sense of coherence	9			
Problem focused coping	2			
Selective coping	2			
Resigning coping	2			
Number of questions	141	95	44	
Number of scales	30	26	8	

The medium size questionnaire for work environment professionals has been developed in a computerised version in which all dimensions have a national average of 50. Values above 60 and below 40 are considered statistically different from the national average. Average results are presented in yellow. Results better than the national average are presented in green, while negative deviations from the average are shown with red bars. When the questionnaire is used for assessing the psychosocial work environment of a workplace it is possible to compare each department as well as the whole workplace with the national average on all 26 dimensions. It is also possible to compare jobs, age groups, wage systems etc. This version of the questionnaire is being used by the occupational health services (OHS), the clinics of occupational health or by private consultants. ~~All these professionals have been able to acquire the system (including computer software) for a moderate price of \$150.~~ Figure 2 shows the distribution of jobs in the national sample on one of the key dimensions: Influence at work.

Figure 2. An example of the distribution on jobs of one of the COPSOQ dimensions: Influence at work. All the 32 jobs have at least 20 respondents.



The short questionnaire can be used by the workplaces without use of computer or even desk calculator. The points on each of the eight dimensions can be added by hand, and average values for departments or workplaces can then be calculated. A small pamphlet makes it easy to compare with national average values. If a better and more elaborate evaluation is wanted, the workplace is encouraged to contact work environment professionals for further assistance. In this connection the medium size questionnaire can be used in order to give a more detailed picture of the work environment.

Results

The three questionnaires now have been used for about two years. Almost all OHSs and many other work environment professionals in Denmark are now using the system. The short questionnaire has been distributed free of charge in more than 6,000 copies and has been copied from the Internet by hundreds of users. We do not collect the data and we have no surveillance system of users. The philosophy of the concept has been that the users could use the system as a tool for dialogue and development at the workplaces.

The researchers at NIOH cannot and do not wish to control the use of the questionnaires in practice. We have, however, developed a number of “soft guidelines” for the use of COPSOQ:

1. Never start a survey of the work environment in a workplace unless there is a clear intention to take action if indicated by the results.
2. All results are anonymous and participation is absolutely voluntarily.
3. The workers have the right to see and discuss all results.
4. The results from a workplace survey should be considered as a common tool for dialogue and future development – not as a judgment or a grade book!
5. All parties – workers, middle management and management – should participate and be committed during the whole process.

The National Institute in Copenhagen receives reactions, comments and questions concerning the concept almost every day, and many of the users have developed the system further for specific workplaces. It is our clear impression that this system has been an unprecedented success. Researchers at the Danish NIOH and other institutions in Denmark have used the COPSOQ dimensions for many studies, which facilitates comparisons between different investigations.

We hope to be able to update the database for national comparison values in 2002 on the basis of a new national survey in order to keep the system valid and reliable. In this connection we will look into the possibility of developing reference values for specific industries and branches.

The questions of the COPSOQ have been translated into English, and some of the questions also into Japanese, Spanish, German, and Flemish versions are under development.

Conclusions

The three-level concept of the COPSOQ has been successful in improving communication between researchers, work environment professionals, and the workplaces. The questionnaire seems to provide valid assessments of a broad range of psychosocial work environment factors. In Denmark the NIOH has plans for developing similar instruments for other fields of research.

References

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Kristensen TS, Borg V, Hannerz H. Socioeconomic status and psychosocial work environment. Results from a national Danish study. Scand J Public Health 2001 (in press).

www.ami.dk/apss (Shows the Danish version and average values on more than 30 jobs. English version is under preparation).