

## Measuring psychosocial workload in Belgium

Hugo D'Hertefelt\*

### Legislation and regulation

Belgium's employment law on employee well-being took a radical change of direction with the new Welfare at Work Act 1996. The Act's explanatory memorandum calls for a focus on emerging health hazards, including work-related stress. The Act itself cites psychosocial workload as one of the seven aspects of well-being.

The Royal Decree (regulations) of March 1998 singles out psychosocial workload as an area of risk to be analysed. It is also a regulation task and area of expertise for internal and external prevention services. The regulations set their remit as: *"to contribute to and assist in the study of workload, adapting the techniques and conditions of work to the physiology of the individual, preventing physical and mental work-related fatigue, and taking part in the analysis of the causes of workload-related disorders and other work-related psychosocial factors"*.

In March 1999, private sector employers and trade unions signed a collective agreement on a policy to prevent work-related stress. It cites four areas of stress risks: *job content, the physical circumstances of the job, work relations and working conditions*. The agreement sensibly allows for the *questioning* of workers to identify *whole-workforce* stress risks by cross-comparing the findings for groups of workers.

A final legislative and regulatory milestone was passed in February 2002, when Parliament passed a Welfare at Work (Supplemental) Act to make protection of workers against violence, psychological and sexual harassment in the workplace part of prevention policy.

### The front-line players

Until recently, there were two mainstays to safety and health at work policy: the safety engineer and the occupational health doctor. This set-up is being thrown into question by the emerging areas of well-being constituted by ergonomics and psychosocial workload, to which other disciplines can give specialized input.

Belgium's labour inspectorate system is still based on two key pillars – the technical inspectorate

and the medical inspectorate – which between them police most if not all of the technical and health aspects of work hazards.

*Company prevention advisers* tend to be technically trained, and so more focused on technical hazards. They are less well-versed with ergonomics, psychosocial factors and, even less so in psychological harassment at work.

For that reason, *external prevention services* must now have a risk management division as well as a medical surveillance division covering five fields of expertise or specialisms, including a prevention adviser on social aspects. Thirty-odd external services have so far been accredited to assist firms with all their statutory Welfare Act prevention responsibilities and tasks.

Some *consultants* are also active in analysing and taking remedial action on psychosocial workload. Emerging needs and demands for specialized input always create a market to which a private sector supply response develops.

### Questions

There has been a spate of congresses, day conferences, seminars, information meetings, workshops and publications in recent years dealing with psychosocial factors and work-related stress. The issue is on the agenda, but fundamental questions are still going unanswered:

- What is the problem, and how big is it?
- How to measure it?
- What to do about it?

This article seeks to address the first two questions, and especially to illustrate the project developed by the National Institute for Research on Working Conditions (INRCT) in cooperation with the not-for-profit organization Quest Europe to support firms in evaluating and taking remedial action on work-related stress.

### Nature and size of the hazard

#### Risk areas

Psychosocial workload is a holistic concept, whose constituent parts will briefly be examined here.

\* National Institute for Research on Working Conditions (INRCT/NOVA) Brussels

Institut National de Recherches sur les Conditions de Travail (INRCT)

Rue de la Concorde 60  
B - 1050 Brussels  
Tel.: +32 (0)2/511 81 55  
Fax: +32 (0)2/511 24 01  
hugo.dhertefelt@nova.inrct.be  
www.nova.inrct.be

Quest Europe asbl  
Rue de la Concorde 60  
B - 1050 Brussels  
Tel.: +32 (0)2/503 34 46  
Fax: +32 (0)2/511 24 01  
Mobile: +32 (0)478/22 05 28  
questeurope@skynet.be  
www.questeurope.com



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**Job satisfaction and work commitment** (or the lack of them) are a first component – whether or not psychosocial needs are being satisfied. They are only fulfilled if certain features are present in the work. Two sorts of needs can be distinguished. One is the need to avoid unpleasant factors, like bad working conditions, job insecurity, unfair pay, overwork, etc. These are also called “job-extrinsic factors”. Fulfilling this need leads to satisfaction; not doing so leads to the opposite – despondency. A measure of satisfaction is an essential part – but only a part – of motivation. Job-intrinsic factors are what determine motivation at work. They include, among other things, opportunities for learning, taking initiatives or deciding on how certain aspects of the work is done. If these things are there, they provide a solid basis of motivation; if not, demotivation may set in. While lack of satisfaction and motivation are known to affect both psychological health and well-being, this tradition of research has paid too little attention to their health hazards.

The health effects of **work-related stress** have come in for more study. This is the second element involved in psychosocial workload. The definition of work-related stress in the Belgian collective agreement on company stress policy is based on the World Health Organization definition, and refers expressly to “*a situation which is perceived as negative by a group of workers, which causes complaints or abnormalities that can be physical and/or social...*” This part of the definition reflects what is happening from the worker’s view. The final part of the definition looks at stress as a (mis) match between demands and expectations : “*(a situation) which is caused by the fact that employees cannot meet the demands and expectations placed on them by their work situation*”. These demands and expectations have been elaborated extensively by social science research. High

demands and too little decision-making discretion are the root causes of ill health, especially when combined with a lack of social support. This tends to be the case with low-skilled workers and those in subordinate jobs. They have less “control” over their work and working conditions, and generally draw fewer positive stimulants like esteem, prestige or recognition from it. But too much autonomy can also create problems, which may happen with some graduate-level and/or managerial posts. Too much work autonomy can become a burden in itself.

Mental and emotional workload are two other risk areas. They present more specific types of problem.

**Mental workload** refers to how information is perceived and processed when performing work. It is determined by the inherent demands of the operation, and (the limitations of) the operator’s processing ability. There are clear points of contact with cognitive ergonomics here. Information processing is an essential part of many occupations and jobs involved with information and communication technology. By contrast, it is underestimated in repetitive manual work, where sensorimotor activity requires what may be a large volume of information to be processed in a very short time, when these activities also involve significant mental activity.

**Emotional workload** relates to the emotional reactions experienced when working in circumstances and conditions which are less than ideal or perceived as inappropriate. It is also part of “interpersonal” work, where insight into others’ emotions and control over one’s own are essential to doing the job properly (customer-, student-, patient-facing, etc.). This is known as “emotional work” and is inherent to many education, health care, social welfare, sales and executive jobs. The working environment has experienced a seismic shift from industrial production towards service provision. And the nature of work and the associated risks have changed with it.

#### Size of the risk

There is still scant information in this area. In 1994, the INRCT and the Christian mutual insurance organizations did a survey on the share of stress in **long-term absences (> 1 month)**. Around 10% of the survey population seemed to be affected by “pure” stress, meaning a serious inability to operate normally, although not suffering any clearly-identified physical illness. There were proportionately more low-skilled workers in this group than in a healthy control group. Stress is generally acknowledged to be involved in many other dis-

orders, too, like cardiovascular diseases, infections, gastric disorders, back pain, etc. It can therefore be said that, while it may not be the main cause, stress is jointly responsible for about a third of long-term sickness absences.

This finding is borne out by data on **incapacity for work or invalidity**, meaning absence from work due to sickness for more than a year. In Belgium, there are 175 000 such workers – 5% of the total private sector work force. About a third of these – 50 000 people – are incapable of working due to psychological disorders. It is the single largest category, ahead of the 44 000 people with motor disorders. The psychological disorders referred to here are acute psychiatric illnesses, but workers who feel that things are not right with them, and have been assessed that way by the control bodies.

Experiential evidence suggests that, as a **general rule**, about 10% of workers have major difficulties. They have acute problems of work-related stress and suffer regular bouts of depression because they can no longer cope and feel that work – and even more so, life – is getting on top of them. About 30% of workers are vulnerable, but still coping. Without preventive measures, they could sooner or later slip into the serious risk class. For the acutely stressed group, the main form of prevention must be damage limitation measures (tertiary prevention), like individual support and counselling. This approach is not enough for the second risk group, where measures are needed to prevent the risk (primary prevention) and/or damage (secondary prevention). Obviously, such measures cannot just be focused on the individual, but must also take work-related stress factors into account.

## How to measure it ?

There are various ways of analysing it, from the standpoint of the individual or work environment, and using either objective or subjective parameters. Opinions differ about the relative merits of “objective” methods versus “subjective” methods based on the worker’s own judgment.

Reliable objective methods for analysing psychosocial workload are not thick on the ground. Measuring individuals’ physiological and biochemical reactions is costly and time-consuming. The results are difficult to interpret and, above all, the link with stress is not always clear-cut. Most of all, such an approach is not capable of full-scale use in the work environment. Expertise and

evaluation, although clearly helpful in giving an updated list of flashpoints, must be approached with caution, due to the possibility of differential interpretation by observers.

Collecting individual opinions from workers guarantees a measure of objectivity. Questionnaires are ideally suited to such an approach. Several standardized questionnaires have been developed to measure psychosocial workload and work-related stress. In Belgium, Dutch and American questionnaires are used alongside certain Belgian models.

Participatory methods of risk analysis are often used, among other things, to evaluate and improve production quality. A group of workers draws up the list, evaluates the flashpoints, and looks for solutions. This method is also suited to determining and assessing psychosocial workload hazards.

Very often, a mix of methods gives the best results. So, a questionnaire allows relatively quick and consistent evaluation of the experiences of a large number of workers, but is only a diagnostic rather than a problem-solving tool as such. When combined with group discussion (e.g., divisional or functional), survey findings can be put to practical use and turned into priorities and measures to be taken. So it is not just about finding the best way of collecting data, but also focusing on how they are turned into practical measures.

## The Quest Europe-INRCT project

In 1998, the non-profit-making body Quest Europe and the INRCT public agency decided to carry out a joint questionnaire-based survey on psychosocial workload. Quest Europe was licensed to use the VBBA<sup>1</sup> inventory in Belgium, while the INRCT applied itself to processing the questionnaires, creating and managing a database.

The VBBA had been developed some years previously by Marc van Veldhoven for a joint project by an external prevention service, two universities and the then Dutch Institute for Working Conditions (now TNO/Arbeid). Marc van Veldhoven reviewed 50 Dutch and international instruments for psychosocial workload and work-related stress, and came up with a sort of “greatest common denominator” of the aspects studied and the items used in these 50 check-lists and questionnaires. Then, in a development stage, he conducted surveys to test the reliability and unidimen-

<sup>1</sup> From the Dutch acronym Vragenlijst Beleving en Beoordeling van de Arbeid (“Questionnaire on the Experience and Assessment of Work”).

sionality of the scales created. That resulted in a questionnaire which, psychometrically-speaking, was a substantial net improvement on what had gone before. He also considered inter-scale validity and validity in relation to external criteria like sickness absence. It was put out for extensive practical testing in firms and prevention services in the Netherlands.

These were all compelling arguments for the INRCT to use this tool. It has sufficient scientific credibility, and has established its credentials and use in the field. Over 100 000 workers from more than 1 000 organizations in the Netherlands have already replied to it.

### The questionnaire : the VBBA

The VBBA comes in two versions: an abridged version of 108 questions divided between 14 scales, and an extended version of 232 questions distributed between 27 scales plus 42 additional questions. A scale comprises a series of questions measuring a particular aspect of psychosocial workload and work-related stress. An overview of the underlying structure and scales of the extended version is given below. The figures in brackets give the number of items in the scale concerned. The scales are given in *italics*.

- Job characteristics : *work pace and volume* (11), *emotional workload* (7), *mental workload* (7), *physical effort* (7)
- Variety : *task diversity* (6), *learning opportunities* (4)
- Autonomy : *task autonomy* (11), *participation* (8)
- Relations and communication : *relations with colleagues* (9), *relations with immediate superior* (9), *opportunities for contact* (4), *communication* (4)
- Job-related problems : *task unclarity* (5), *changes in tasks* (5), *information* (7), *problems with the work* (6)
- Working conditions : *pay* (5), *career opportunities* (4), *job insecurity* (4)
- Satisfaction : *pleasure in work* (9), *organizational involvement* (8), *turnover intention* (4)
- Strain : *need for recovery* (11), *worry* (4), *quality of sleep* (14), *emotional reactions at work* (12), *fatigue at work* (16)

All the scales connected with job characteristics, variety, autonomy, relations and communication, job-related problems and working conditions can be considered as work-related factors. These are the potential work-related stressors. The scales

connected with satisfaction and strain are the individual-related factors. They are the possible reactions to stress. Because the focus is on work, a whole series of stress-related aspects were not included, like psychological personality attributes, coping, health complaints and privacy.

The time allowed to complete the questionnaire is relatively short : about 15 minutes for the abridged version and 30 minutes for the extended version. Some may still find that (too) long, but not when the amount of information received is considered. All questions on the work-related factors can be answered by *always* – *often* – *sometimes* – *never*. Most of the individual-related questions are *yes* – *no* answers.

### The approach

A series of information meetings, training sessions and conferences were staged between 1998 and 2000 to familiarize company and external prevention advisers with the topic and with the VBBA as a measurement tool.

From the start of 1998, *logistical support* was stepped up. The questionnaires were tailored to client requirements, using either the extended or abridged version, or even a combination of the two, company specific data (e.g., department, function), additional questions if required, specified number of copies, etc. The questionnaires are designed to be OCR input and processed. A statistics package for social science research (SPSS) was used for analysis. A statistical report was output showing average scores for the various scales. The organization's overall average scores are compared with those of the reference file. The organization's subunits (divisions, functions, etc.) are compared to the general average.

*Support* all through the process rapidly proved to be essential. To begin with, this was essentially geared to the preparatory phase, i.e., how to get started. Later, the focus shifted towards clarity and accessibility of the statistical report. Later still, it turned towards follow-up, i.e., extracting feedback from the results, and especially what to do with it. Action was taken on all these points to improve the quality of support. For example, a task force named "InterVisie" set up to help psychosocial workload specialists from the various external prevention services swapped ideas throughout the process : introduction of a survey, results analysis and feedback, follow-up and remedial action.

### The database



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The Belgian reference file currently holds around 18 000 observations (completed questionnaires) collected in approximately 200 organizations across different sectors. The biggest single file segment (about a third) comprises observations from industry. The service (for-profit) and care sectors each account for about a quarter of the observations. The remainder come from the public sector and building industry. More than half the observations are from organizations with between 100 and 500 workers. The others are equally divided between organizations with over 500 workers, and those with under 100 workers.

The file is also functionally divided. Most observations are fairly evenly split between white- and blue-collar workers, but already over 1 000 managerial staff and just short of 2 000 care workers have answered the VBBA.

Other analytical criteria are age, educational level, type of work (day, shift, night, irregular), type of contract (permanent, temporary) and gender.

### Benchmarking

Feedback of the results to firms and organizations is a service provided as part of the statutory risk analysis obligations. Risk analysis is meant to take place at three levels : organization-wide, job or function groups, and the individual. The VBBA questionnaire survey does precisely this. The results for each organization taken separately on the different scales of the VBBA can be compared to reference values in the full file or a substantial part of it, and positive or negative variances identified. Inter-subgroup positions can be compared against the organization average, making it possible to identify which functions, divisions, age groups, etc. are exposed to specific aspects of psychosocial workload. Finally, the results can also be fed back to the individual, but only at the individual's request and by a trustworthy official, usually the occupational health doctor, so that anonymity and the confidentiality of information are not in any way at risk.

### The scientific survey

As well as opportunities for organizations to benchmark themselves against others, an extensive reference file offers scientific research potentials.

To start with, a major focus was put on the quality of the measurement tool and the analytical potentials. A validity survey was carried out using the French and Dutch language versions of the questionnaire to check whether the underlying

concepts had been properly evaluated. The results for both versions indicated that they had. When enough observations have been collected for the English and German versions, a similar study will be done for them.

Research was also done into ways of improving the analysis accuracy. Without going into too great detail, it is safe to say that this approach enables individuals to be allocated between risk-graded groups : acute risk, indicative risk, reduced risk and zero risk. Individual assistance and support to workers can be improved and organization-wide warnings given about the size and severity of the risks.

A file this size opens up other opportunities for working on the data. The idea is not just to test more or less long-standing models dealing with psychosocial workload in general, work-related stress and burnout in particular, but also to investigate certain high-risk groups, like older workers. Other issues can also be examined, like quality of workplace communication and relations, and their extremely negative forms – violence and psychological harassment.

## Conclusion

Psychosocial workload is a new kind of problem in Belgian workplace welfare policies. Focusing on the ill effects that psychosocial factors have on workers is effective, but still not enough to ground a real prevention policy on the matter. Various milestones have already been passed. Psychosocial workload is an aspect of well-being and recent changes in the law require a bigger focus on prevention and protection against extreme forms of undesirable behaviour (harassment, violence, etc.). The new approved external prevention services have hired or appointed specialists in psychosocial workload. A new specialized approach – psychology – will claim its place in prevention. The employers' organizations and trade unions have signed a collective agreement on work-related stress policy. Researchers and consultants are offering services to analyse and take remedial action on psychosocial workload problems. The joint Quest Europe-INRCT project fits into that frame. It provides assistance on analysis of psychosocial workload for company and external prevention services, human resources departments, company management and trade unions. The file created and since expanded is helping to further inform knowledge in this area. That knowledge can and will improve understanding and solutions to the many problems involved in psychosocial workload in general and work-related stress in particular. ■

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## The WOCCQ : WOrking Conditions and Control Questionnaire

The WOCCQ – *WOrking Conditions and Control Questionnaire* (I. Hansez) – is a Belgian psychosocial risk diagnostic aid developed at Liège University's Psychology of Work and Business Department (Prof. V. De Keyser). It can be used both to measure existing stress levels, and as groundwork for a prevention policy by identifying stressors in working conditions. It is a questionnaire-based method most suited to medium-sized and large firms. The basic tool consists of a questionnaire to measure control over working conditions (the WOCCQ), a standardized stress gauge, and a problem spotting guide. Other questionnaires can be added to refine the diagnosis according to the firm's specific features.

Work psychology research shows that stress develops when workers feel they lack what they need to cope with unavoidable job requirements. It can readily be imagined how the feeling of lacking control over aspects of one's work is likely to cause stress. Based on this premise, the WOCCQ evaluates workers' feelings of control over different aspects of their work, like resources, the future, work planning, task management, risks and time management. Using the findings, ideas for appropriate solutions for ways of reducing stressors can be suggested.

A workplace-specific flanking approach is also implemented, which entails getting all the different workplace actors directly involved. The kingpin of this approach is the steering committee. It is composed of company resource persons (personnel or human resources manager, workers' representatives, occupational health doctor, etc.) and supports the survey process, adapts it to the workplace, and puts in place a communication plan to ensure maximum participation by the workers.

A database (currently comprising over 8000 subjects) is being developed out of the surveys, which enables each new firm that uses it to be positioned against a reference set.

The method has received public funding both in the design (from the Federal Office for Scientific, Technical and Cultural Affairs) and promotion phases (jointly-funded by the Federal Ministry for Labour and Employment, and the European Social Fund). It has been used to acclaimed success both in Belgium and abroad, especially in France and Switzerland.

### Further details of the WOCCQ from :

Stéphanie Péters - University of Liège  
 Service de Psychologie du Travail et des Entreprises  
 Bd du Rectorat, 5 bat B 32 - 4000 Sart Tilman - Liège  
 Tel. : + 32 4 366 20 91 - Fax : + 32 4 366 29 44  
 E-mail : S.Peters@ulg.ac.be - [www.woccq.be](http://www.woccq.be)

The questionnaire is available in French and Dutch at :  
[www.woccq.be/index.jsp](http://www.woccq.be/index.jsp)