

Questionnaire work-attributed stress

Dutch Labour Inspectorate

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1 Introduction

The purpose of the questionnaire is to research psychosocial risks in greater depth and breadth. By using the list of questions, research into the frequency of work stress symptoms can be carried out into what an employee experiences through and attributes to previously described stressors.

The questionnaire is based on the wording of the Working Conditions Act (*Arbowet*) regarding psychosocial burden of work in the Netherlands. The Working Conditions Act describes the psychosocial burden of work as: the factors of sexual intimidation, aggression and violence, bullying and work pressure that can create stress in the working situation. Stress is described as a state that results in the experience of negative physical, psychological or social consequences.

There may be talk of work stress if an employee cannot satisfactorily carry out the qualitative and quantitative demands of their job. The demands of the job are those demands that are predetermined for the work. These can vary in quantity, quality and work tempo. If there is work-attributed stress, then an employee is constantly under a high level of time pressure and/or working at a high tempo. Particularly when in combination with limited possibilities to regulate or, in other words, limited say in and about the work, then work stress forms a risk to employees' health. Besides the demands of the job, work stress can also be caused by various aspects within organisations and their direct surroundings, such as patterns of communication, work organisation, technology and the external socio-economic situation.

2 Theory

The legislature assumes that there is talk of work stress if the employee attributes their stress symptoms to their work. This approach is in line with the perception of the stress process in the individual as described by Bakker, De Jonge and Taris (2003). Bakker et al describe that an objective stressor should firstly be experienced before this can have a psychological effect on the person. Employees are not always aware of the objective stressors that are present. Objective stressors that are not experienced also do not lead to stress (Bakker et al, 2003). Gaillard (1992) described that stress only arises when a person thinks that the disharmony between the demands, which are set by the immediate surroundings, and the ability of the person to do the job. Buunk and De Wolff (1992) indicate that in cases of stress it primarily concerns all those situations that give cause for negative feelings in people. De Jonge, Le Blanc and Schaufeli (2003) describe work stress as stress during or through the work situation. An individual's perception of stress is a symptom which can be attributed to a stressor in the work situation.

From the definitions as described and the perception of the person, work stress can be psychologically understood to comprise two aspects: symptoms of stress and stressors.

Work stress is defined by attributing symptoms of stress to stressors. This definition is based on the premise that both are inextricably connected with each other (holistic approach). Work stress comprises symptoms of stress that are attributed to stressors (see Figure 2.1). Therefore the components of work stress are inseparable in a psychological sense; just as the beach is made up of the sea and the sand. Remove one of the aspects, then this is no longer a beach; there is no work stress.

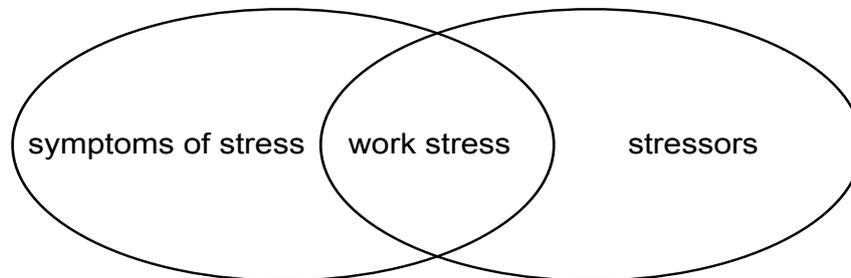


Figure 2.1: Holistic model of work stress

People experience symptoms of stress and, in case of work stress, attribute those same symptoms of stress to stressors. People couple the inner perception of symptoms of stress to the perception of stressors in their surroundings. In other words, people give a meaning to their symptoms of stress by pointing the symptoms to sources in the work situation (stressors). Work stress is a form of identification, of giving a meaning.

2.1 Which symptoms of stress

Symptoms of stress can be divided roughly into four categories: (1) negative emotions with a low level of activity (depressed) e.g. unhappy, (2) negative emotions with a high level of activity (tension) e.g. worry, (3) mental fatigue e.g. concentration problems and (4) exhaustion e.g. completely exhausted. A list is given in Table 2.1 of the symptoms of stress that are used in the questionnaire.

Table 2.1: List of symptoms of stress

Symptoms of stress that can be caused by psychosocial burden of work		
Irritation	Worrying	Forgetfulness
Boredom	Turning things over in your head	Mentally exhausted
Emotional	Sleep problems	Exhausted
Anxious	Tense	Listless
Aversion	Fretting	Concentration problems
Cynical	Animosity	Completely exhausted
Unsure	Unbearable situation	Difficulty in relaxing
Unhappy	Lying awake at night	Downcast

The symptoms vary in their seriousness. The frequency (how often the symptom occurs), the duration and the intensity all play a role in the seriousness of the complaint. A person experiencing work stress

can express this through these symptoms. These symptoms are therefore important indicators for the presence of work stress caused by the psychosocial burden of work (collection of stressors).

2.2 Which stressors

The stressors to which the employee can attribute their stress symptoms can be divided into (1) qualitative aspects of work that are not time-related, (2) quantitative aspects of work that are time-related and (3) aspects that involve interaction between people. The following subparagraphs give a deeper explanation of the stressors.

Content of the work

In the questionnaire the content of the work is described as the tasks that people are required to carry out for their job.

The content of the work can cause stress through an imbalance in the relationship between the content and the employee's capacities. If the employee partially or wholly cannot satisfy the demands of the job or if the content of the work does not live up to the employee's expectations, then this will lead to negative emotions and, in the end, to work stress (Gaillard, 1992). The content of the work can also include tasks that require high levels of accuracy and concentration. These tasks demand greater mental exertion than other tasks because they necessitate the use of the work memory (Meijman, 2002).

Insufficient opportunities for learning also have a negative effect on the employee's motivation and learning behaviour (De Jonge, Le Blanc & Schaufeli, 2001). In relation to work stress, Van Veldhoven (1996) observes that work content providing little challenge in combination with very limited room for decision-making is experienced as exhausting work.

Apparatus and machines

The questionnaire describes 'Apparatus and machines' as being equipment used at work, such as means of communication, computers, electrical appliances and hand tools. Equipment that does not work properly can also cause symptoms of stress. Stress can arise when people cannot satisfy the demands set by surroundings due to badly working equipment and they have no possibility of solving the problems themselves (Gaillard, 1992).

Contacts

The questionnaire describes contacts as the interaction with colleagues, managers and third parties. This concerns less the possibility of being able to have a conversation, but has more to do with functional contacts, such as the possibility of being able to help one another and to support each other. The level at which help is given (assisting one another) and mutual collaboration between colleagues and with managers are also forms of social support.

Poor communication between people at work can cause stress through one party frustrating or annoying the other party (Keijsers, 1990). They also lead to (individual) tensions that come with

negative emotions, such as irritation, feeling threatened or feeling anxious (Buunk & De Wolff, 1992). Lack of information can also eventually lead to stress either because the employee cannot satisfy the expectations set for them or because they do not know what is expected of them (Buunk & De Wolff, 1990).

Major events

Major events are described in the questionnaire as rude behaviour, aggression & violence, undesirable forms of contact (bullying at work and sexual intimidation) and dealing with disappointment and sadness. Drastic events such as aggression, violence, threat to one's own integrity and the confrontation with disappointment and sadness in others can be coupled with negative emotions such as intense anxiety and/or dread (Van der Ploeg, 1997).

Quantity of work

The questionnaire indicates that the quantity of work relates to the work on offer. Aspects that play a role in this include: the occurrence of peaks and troughs in the work; whether or not there are interruptions during the work; the possibility of urgent tasks; the division of tasks and whether or not there is a backlog in the planning.

In case of too little work on offer, or irregularity therein, the employee can become bored and irritated (Gaillard, 1992). On the other hand, too much work can also lead to stress. Being confronted once in a while with too much or too little work does not present a problem, as long as the employee does not experience the confrontation with too much or too little work as threatening. But when the employee judges the situation to be threatening, then this can lead to work stress (Gaillard, 1992).

Weight of the work

The (mental) weight of the work is described in the questionnaire as constantly having to do one's utmost and having to be constantly fully aware. Once home at the end of the day, the person cannot tolerate any complaints. They have no energy left to do anything else once the working day is over.

The weight of the work is a form of mental strain that causes mental tension. However, mental tension does not have to lead to symptoms of stress. When the employee wants to stop work because they cannot do any more, but there is no possibility to do so, then work stress is created (Meijman, 2002).

Work pace

It is indicated in the questionnaire that the work pace affects the speed of working in the mental sense. Aspects that play a role here include: running and standing still, speed of handlings and constantly having to maintain full attention on the work in order to be able to finish the work on time. Work pace is closely related to the quantity of work and together they form work pressure.

Mulder and Mulder (1992) indicate that tasks in which quick decisions must be made on the basis of incoming data demand an immense effort on the part of the work memory. Such mental tasks are exceedingly taxing through the extremely limited capacity of the work memory. On the other hand, employees indicate that too little work can also lead to problems because the attention slackens.

Demands for too much and too little work are both sources of work stress that can lead to symptoms of stress. In order to be able to carry out a mental task then an effort must be made. According to the weight of the work, stress may be created if the employee either cannot or does not want to carry on, but is still obliged to do so.

Irregular working times

Irregular working times are understood in the questionnaire to be shift work, evening work, night work and weekend work. The biological activities in the body are arranged for sleeping at night and working by day. By working at night the natural rhythm is disturbed and the employee has to fight off sleep. This costs extra effort and the individual becomes tired more quickly (Jansen, 2003). Van Limborg (1995) describes how employees who work at night are less good at standing up to work pressure. With comparable performances, employees experience stress more quickly when working at night than by day. Working at irregular times is more mentally taxing because the energetic state is not at its best for the given situation. If the employee begins to experience the irregular working times as a threat, then this can lead to a disruption in the energy regulation, which in turn can lead to negative stress reactions (Gaillard, 1992).

Working in the evenings and at weekends affords little if any time for weekend recreation. Not being able to take part in activities in an individual's private life can cause tension and conflicts for the employee or in their interaction with their immediate surroundings, which are stressful in themselves (Buunk en Kleber, 1990).

Breaks and/or days off

Breaks are described in the questionnaire as the rest periods that are planned into the working day and days off as days that the employee can take as free days. Not being able to take breaks and days off can lead to stress.

Meijman and Dormolen (1992) report that driving examiners who have no 'free' time between the exams develop a state of continuous activity. The following morning they reported increased feelings of tension and irritation. When a break is missed through work obligations then this can lead to stress. In that case then there are conflicting expectations from the employee and the working situation that can lead to stress (Buunk & Kleber, 1990). The same thing applies when free days cannot be taken, whilst the home situation demands such. Peeters and Heiligers (2003) indicate that this can also lead to a work-home conflict.

Overtime

Overtime is described in the questionnaire as working more hours than those agreed in the individual employment contract. Overtime represents an exceptional circumstance for which the employee is not always mentally prepared. The energetic state is not tuned into possible cognitive and physical activities (Gaillard, 1992). If overtime is seen to be threatening then this can lead to stress. Stress can also be created through conflicting interests between the private life and the work situation. These conflicting interests create a role conflict for the employee and deny the employee their own

possibilities for regulation. An individual's own need for recreation also determines whether or not overtime is experienced as stressful (Buunk & Kleber, 1990).

3 Processing, standardisation and analysis

The questionnaire (appendix 1) is built up of pairs of questions. Each pair comprises two questions. The first question asks the employee whether he/she experiences a certain symptom of stress during or because the work. If that is the case, then the following question asks what stressor causes the symptom of stress. Using a digital version of the questionnaire will allow the employee to describe a source themselves under 'other cause'.

Processing

For every symptom of stress there are five possible answers: never, seldom, sometimes, often or always. In accordance with Fine & Kinney's method of risk assessment 'never' means 0 risk points, 'seldom' means 1 risk point, 'sometimes' means 2 risk points and 'always' means 6 risk points. The total score of symptoms of stress is the score for work stress. The score per stressor is calculated by the number of times that a stressor is given as cause of stress.

Standardisation

To attain the score for work stress, two boundary values have been fixed, namely at 16 and 32 points. These two boundary values have the following traffic light model as basis:

- Green: With a score of between 0 and 15 points, an employee experiences work stress sporadically. The experiences are such that the chance of negative results is very limited.
- Amber: Between 16 and 31 points the employee regularly experiences work stress. Employees with a score of between 16 and 31 risk points have on average almost 2.75 times as much chance of having health complaints than employees scoring between 0 and 15 risk points.
- Red: When a score of 32 or more risk points is recorded then an employee experiences structural work stress. Employees with 32 risk points or more have on average 5.5 times as many health complaints as employees scoring 0 to 15 risk points.

Statistical analysis

By using the correlation coefficients between the score for work stress and the scores for the stressors, then research can be carried out into which stressors have a collective character. With the assistance of multiple regression analysis, research can be carried out into the effects of the collective stressors in terms of frequency of symptoms of stress. The dependent variable is the score for work stress. The independent variables are the scores per stressor. In order not to violate the assumptions concerning normality, then both the dependent (y) as well as the independent variables ($x_{(1,2,...)}$) should firstly be transformed. Good results are achieved by taking the third cube root ($y^{1/3}$, $x_{(1,2,...)}^{1/3}$).

Appendix 1: Questionnaire work-attributed stress

Questionnaire work-attributed stress

Dear sir or madam,

Welcome to the research concerning psychosocial risks. The psychosocial risks for you and your colleagues will be charted with the help of this research. You will be asked to answer around 50 questions that all concern psychosocial risks.

On the basis of your answers and those of your colleagues it will be possible to sketch a reliable picture of the risks. Assessment will be made hereby as to whether correct and sufficient measures have been taken to prevent the risks as well as to manage it and limit its negative results. If this is not the case then supplementary measures will need to be taken by your employer.

Before starting it is important for you to know that your data will be dealt with confidentially. Reporting will only take place at group level and individual data will not be included in the report.

Be honest with yourself and be careful with your answers. Completing the list of questions will take you between 15 and 20 minutes.

Give your answers to the questions by making your chosen answer (O) black, hence: ●

With thanks in advance for your time and participation.

You will find the first questions on the last two pages. However, some explanation is required before you begin. You will be asked 24 questions about psychosocial risks, laid out in two parts. These questions always follow the pattern of (a) how often a particular symptom such as irritation occurs and (b) what is the cause of the symptom. An example of this principle is given by the following two questions.

a. I become irritated during or through the work.

- never = less than once every 3 months (if your answer is 'never' then ignore question b.)
- seldom = once every 3 months
- sometimes = monthly
- often = weekly
- always = daily

b. What is the cause of your irritation? Choose the most important cause(s).

- Particular tasks and/or jobs at work
- Apparatus and/or machines with which I work
- Contact with colleagues
- Contact with manager(s)
- Drastic events
- Quantity of work
- Weight of the work
- Work pace
- Irregular working times
- Breaks and/or days off
- Overtime
- Other cause at work

You can make it easier to determine the causes of the symptoms by first answering the question in your own words and then looking for the best answer or answers in the list. On the next page you will find notes explaining what is meant by the different sources of the symptom (stressors).

In order to make it easier for you to complete the form, the questions regarding work pressure are set out clearly in two tables. Firstly, answer the question in the left-hand column (the symptoms). You then follow by indicating in the second column what the most important stressor or stressors are of the symptom. If the cause is not included in the choices given, then choose the cause that fits best. However, if that is not possible, then choose the option 'Other cause at work'.

If your answer to a question in the left-hand column is 'never', then go straight on to the following 'a' question. After all, if you do not experience the symptom (answer 'never') then there can be no cause.

Explanatory notes regarding stressors

Particular tasks and/or jobs at work

This concerns what your job entails, in other words the tasks that you are required to carry out for your job.

Apparatus and/or machines

This can include equipment that you use at work, such as means of communication, computers, electrical apparatus, machines and hand tools.

Contact with colleagues

Contact with colleagues concerns the interaction that you have with your colleagues. This includes the contact you have with all the people who are also employed by the same employer, except for the managers.

Contact with manager(s)

Contact with manager(s) concerns the interaction that you have with the manager(s) who are involved in your daily work.

Major events

Major events can include aspects such as rude behaviour, aggression & violence, undesirable forms of contact (bullying at work and sexual intimidation) and confronting sadness and disappointment in others.

Quantity of work

The quantity of work relates to the work on offer. Aspects that play a role here include peaks and troughs in the work, whether or not there are interruptions during the work, the possibility of urgent tasks, the division of tasks and whether or not there is a backlog in the planning.

Weight of the work

The weight of the work concerns to what extent work is exacting. Aspects that play a role in the weight of the work include constantly having to do your utmost and having to be constantly fully aware. Once home at the end of the day, you cannot tolerate any complaints. You have no energy left to do anything else once the working day is over.

Work pace

The work pace concerns the speed at which the work must be carried out. Aspects that play a role here include running and standing still, speed of handlings and constantly having to maintain full attention on the work in order to be able to finish the work on time.

Irregular working times

Irregular working times are understood to be shift work, evening work, night work and weekend work.

Breaks and/or days off

Breaks are the rest periods that are planned into the working day and days off are the days that you can take as free days.

Overtime

Overtime is described as working more hours than those agreed in your individual employment contract. If you work part-time with, for example, an employment contract of 24 hours a week and you sometimes work an extra day, then that is overtime.

Other causes at work

Besides these stressors there are probably other sources in your work that are the cause of a particular symptom. You can record this by completing the 'other cause at work' section.

Questionnaire work-attributed stress (continued)

a. symptom

→

b. What causes the symptom?
Choose the most important options

	Never	Seldom	Sometimes	Often	Always		Particular tasks and/or jobs	Apparatus and machines	Contact with colleagues	Contact with manager(s)	Major events	Quantity of work	Weight of the work	Work pace	Working at irregular times	No breaks and/or days off	Overtime	Other cause at work	
	= less than once every 3 months																		
	= once every 3 months																		
	= monthly																		
	= weekly																		
	= daily																		
13a I have sleep problems caused by the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 13b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14a I feel unsure during or through the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 14b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15a I feel tense during or through the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 15b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16a I stay making concerns after my work on my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 16b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17a I feel animosity during or through the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 17b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18a I am unhappy about the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 18b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19a I am completely exhausted after work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 19b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20a I feel downcast during or through the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 20b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21a I am exhausted after work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 21b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22a I lie awake at night because of problems at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 22b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23a I find it hard to relax after work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 23b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24a I cannot bear my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	→ 24b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>