

Working conditions in Germany – Workloads, requirements and health

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The changing world of work, the question of the consequences of globalisation and the demographic change are factors which result, not only in the political sector, to the development of future-oriented design action with regard to the question: "How do we want to work in future?". The upheavals in the world of work can already be seen today directly in the changes in the working conditions and the requirements placed on the workers. Surveys have been repeatedly conducted since 1978 by the Federal Institute for Vocational Education and Training (BiBB) together with the Institute for Employment Research (IAB) to describe the continuously changing world of work. In order to also include workload and strain-related issues in particular, in addition to questions about qualification and labour market requirements, the Federal Institute for Occupational Safety and Health (BAuA) has been the project partner since the survey in 1998/99.

The current survey from 2005/2006 has now been conducted jointly by the BiBB and the BAuA. This co-operation permitted even greater concentration on the working conditions and the resultant strains.

The processed data now available offer differentiated and representative information on workers and workplaces in Germany. On the basis of these results, questions of efficient qualification strategies can be answered and further developed in a targeted manner. Moreover, there are indications of fields of action of necessary company intervention for safety and health at work. In contrast to many other studies, the survey is characterised by the fact that, on the one hand, it is a representative sample of the working population and, on the other, can illustrate correlations between workload and physical disorders due to the simultaneous surveying of loads and data on state of mind and illnesses. The survey therefore focuses, on the one hand, on questions about the job (main activities, requirement level, knowledge requirements, work requirements, need for further training, working conditions, workloads etc.) and questions on strain and health disorders and, on the other hand, on correlations between training and employment in the broader sense.

In the current – fifth – survey of gainfully employed people, 20,000 workers over the age of 15 with working hours of at least 10 hours per week were surveyed in Germany, gainful employment meaning an activity involving an income. People working in an honorary capacity were excluded just as were people in employment as part of their initial vocational training. Foreigners were only included in the survey if their command of German was sufficient. Although employed without fixed remuneration, family workers and people with an interruption in their activity of max. three months were surveyed. In contrast to the preceding surveys (personal face-to-face interviews), this survey was conducted by telephone using computers.

Representativeness

As with every representative survey, it is also important with a worker survey that the sample taken is a "copy" of the group about which findings are to be made. In particular features where it is known that they correlate with the features of interest should occur in the sample in – at least approximately – the same distribution, just as in reality. For this reason, a brief comparison with data from the microcensus precedes the description of the results.

The distribution of the following features in the 2004 microcensus (the most recent at that time) served as a basis for controlling the sample in the BiBB-BAuA worker survey: gender, age, federal states, marital status, education, nationality (German/non-German). In view of the assumption that a migration background has both an influence on qualification aspects and on possible job conditions and strains, questions were also asked about the migration background of the German nationals as regards nationality in contrast to the microcensus in the BiBB-BAuA worker survey. With 91.2 % Germans, the survey is just below the microcensus (91.7 %), 5.8 % are Germans with a migration background. The sample of foreigners is only representative to a limited extent because – as already mentioned – only foreigners with an adequate command of German were included in the survey.

The BiBB-BAuA worker survey reflects very well the proportion of employees and the self-employed as well as the proportion of workers with fixed-term and indefinite employment contracts. The distribution of occupations, branches and classes of company sizes is largely the same as that of the microcensus.

Monthly gross income

In addition to the specific local working conditions and the qualification possibilities, general conditions which ensure one's existence have a major impact on the perceived quality of work (refer also to www.inqa.de "What is Good Work?"). For this reason, the workers were asked about their monthly gross income. Fig. 1 shows that almost 45 % of those surveyed earn less than € 2,000 gross per month. The data also indicates that 15 % even earn less than € 1,500, with 5,8 % performing a small job (< € 400).

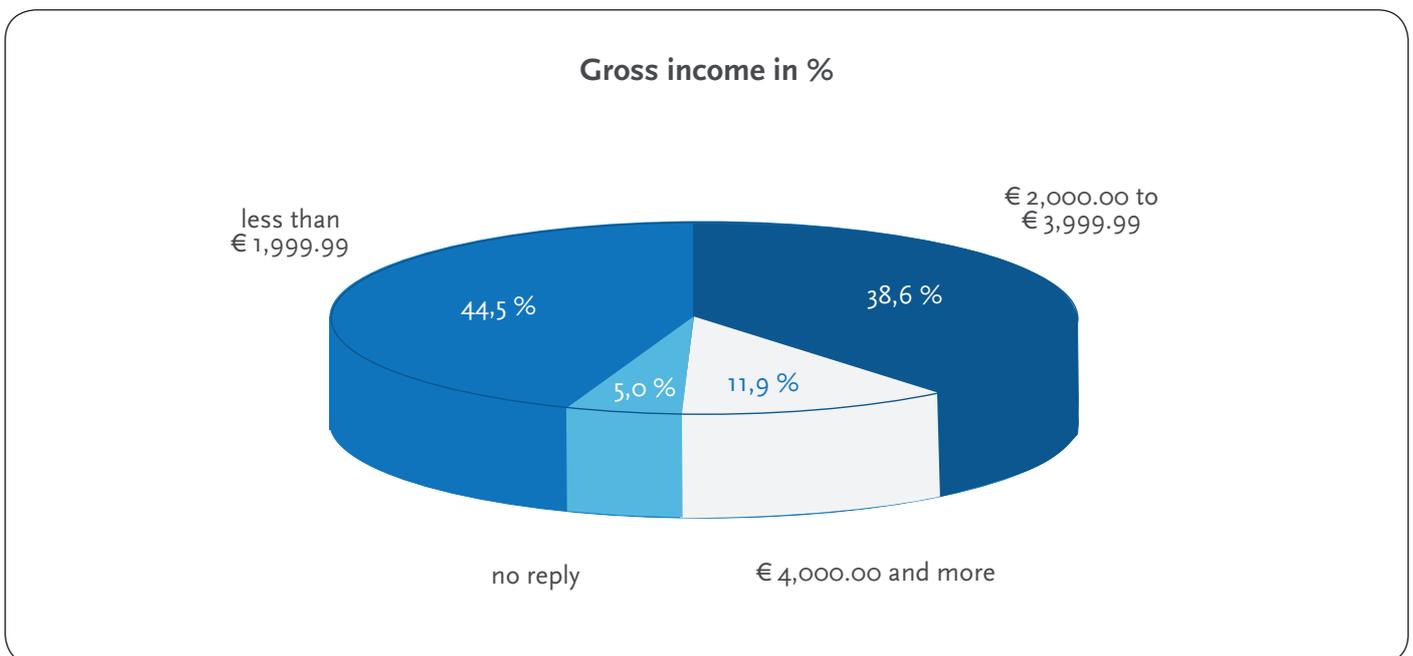


Fig. 1: Monthly gross income

Fear of becoming unemployed and the economic situation of the company

One major load factor in working life is the fear of losing one's job. This is easily seen in connection with the economic situation of the company.

Although almost 80 % of those surveyed have little or no fear of losing their job (Fig. 2), only about 55 % judge the economic situation of their company to be good or very good. However, it was noticeable with this question that more than one quarter of those surveyed did not give any assessment.

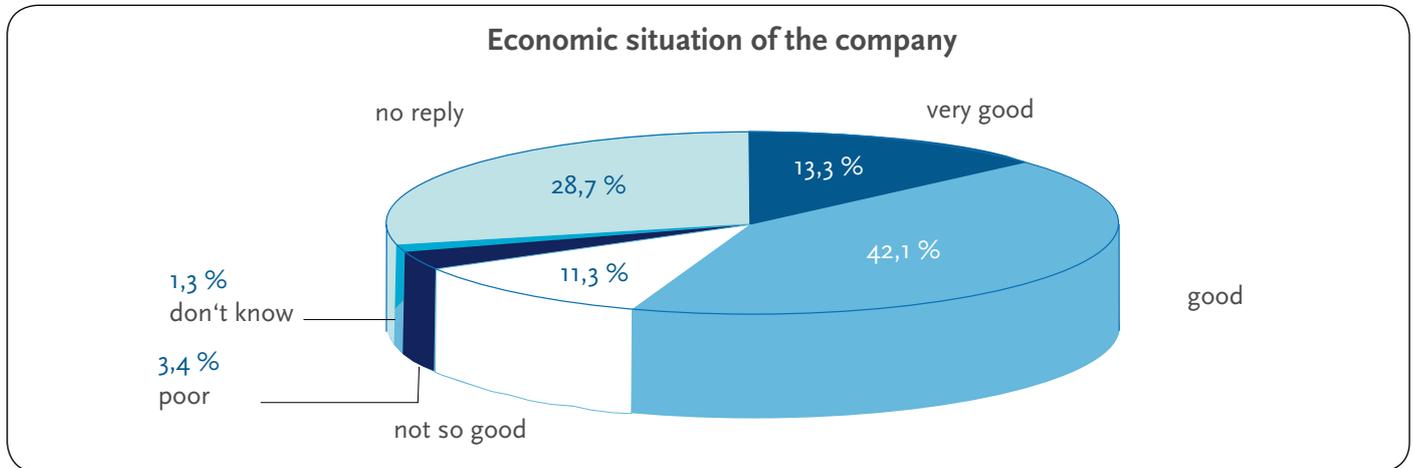


Fig. 2: Risk of losing one's job

Working hours

Furthermore, working hours are also a major characteristic of a job. If the weekly working hours agreed with the employer are compared with the actual time worked (Fig. 3), it becomes noticeable that the actual weekly working hours are higher.¹

Whereas only 35.4 % have agreed weekly working hours of 40 or more, the weekly working hours in real terms of 61.0 % are above this limit. 15.6 % even work 48 or more hours per week.

When examining the weekly working hours it must not be forgotten that 5.5 % of those surveyed pursue at least one other gainful activity in addition to their main job. The diagram clearly shows that, as a result, frequently more than 48 hours are worked per week (21.5 %).

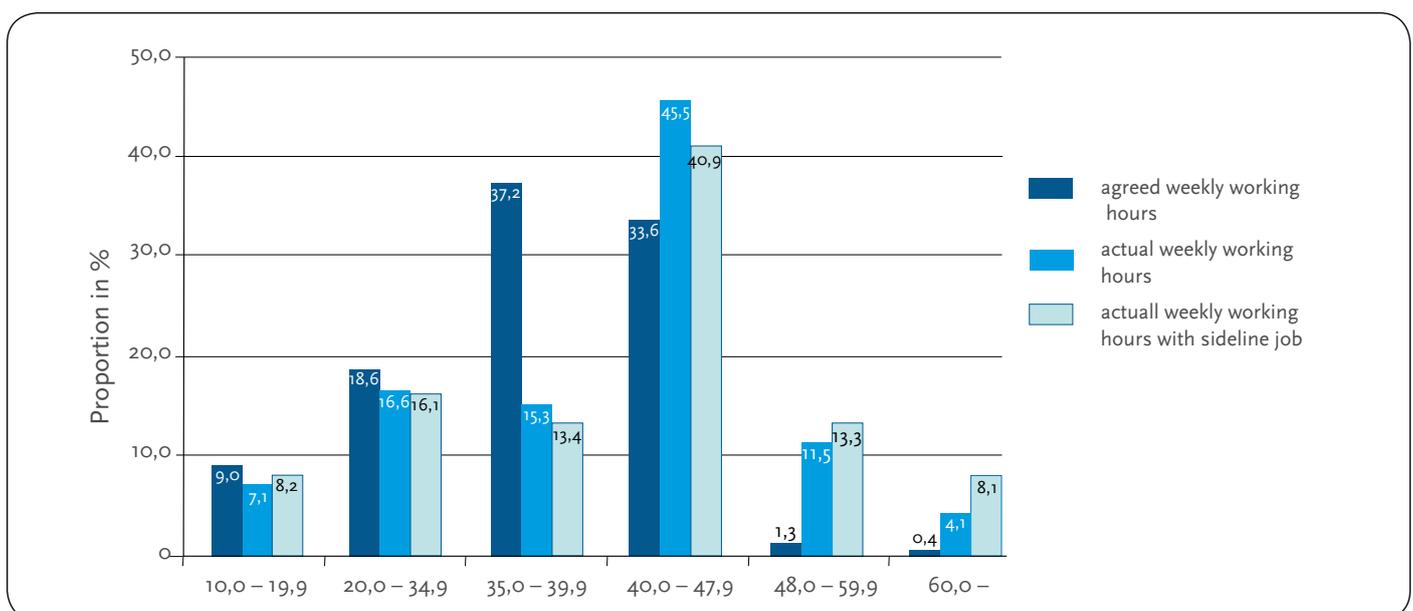


Fig. 3: Agreed and actual weekly hours

¹ For this comparison only those surveyed with agreed weekly working hours were used as there could otherwise have been systemic distortions.

Special working time models

Many workers have special working time arrangements, at least occasionally (Fig. 4), as a result of which particular workloads can arise in addition to the duration of working time: weekend, night and shift work or flexible working hours place particular demands on the workers. The BiBB-BAuA survey asked whether the workers work in these working time forms "also only occasionally".²

Roughly one in four of those surveyed does shift work at least occasionally. Almost 70 % report that they work at least sometimes on Saturdays, approx. 40 % even on Sundays and public holidays. Roughly one in five has a night shift at least sometimes. A similar number does on-call service.

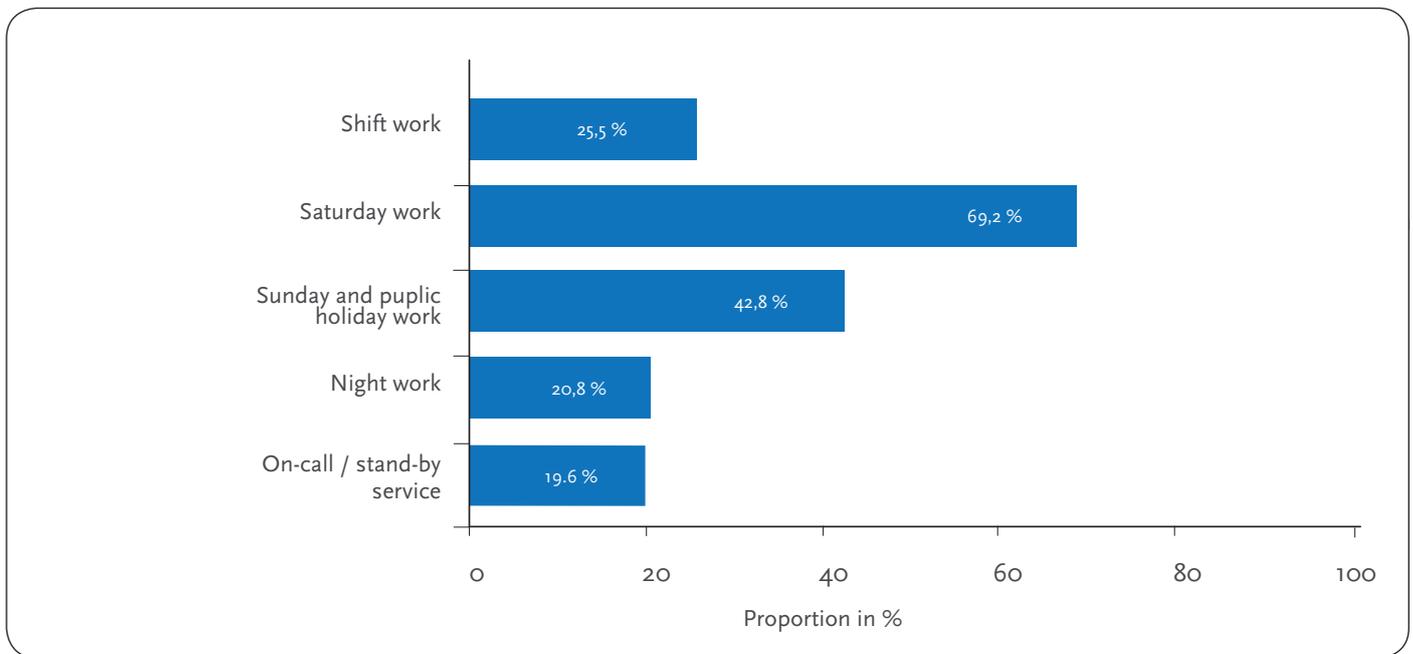


Fig. 4: Frequency of special working time models

Physical loads and ambient conditions

As regards the working conditions (shown in table 1), "frequently working while standing or sitting" is mentioned in particular. This proportion corresponds roughly to the values which were already determined in the mid-80s as part of this worker survey. In the 1998/99 survey, the proportion was somewhat higher at 60 %. An examination of the perceived load shows that frequent standing or sitting is also perceived as a load by only one quarter to one fifth of workers. By contrast, fewer of those surveyed indicate that they have to frequently lift heavy loads. The proportion approximately corresponds in turn to the figures determined for 1985/86 whereas the proportion in 1998/99 was higher at 26.2 %.

The proportion of workers who state they work in noisy conditions has risen again after a decline at the end of the 90s (22 %) compared with the 80s (26 %). Somewhat fewer of those surveyed (13.9 %) mention being exposed to negative environmental and ambient influences, such as smoke or dust, compared with the 80s and 90s (15 % in each case), whereas the proportion of workers who indicate being exposed to cold or wet has continuously risen since the 1985/86 study (1998/99 – 19 %; 2005/06 – 21.2 %). As in 1998/99, approx. 9 % of the workers complain about poor lighting conditions.

The load rates – i.e. the proportion of workers who feel exposed to a load by these factors – are very much higher for all ambient conditions.

² The comparable question in the microcensus is geared to the proportion of workers who work constantly or regularly, e.g. Saturdays.

Table 1: Working conditions and the resultant loads

Working conditions and resultant load	Frequently working conditions in % ³	Perceived load in % ⁴
Working while standing	56.4	25.7
Working while sitting	53.4	19.6
Lifting / carrying heavy loads (M.: > 20 kg; F.: > 10 kg)	22.8	51.9
Smoke, dust, gases, vapours	13.9	57.3
Cold, heat, wet, moisture, draughts	21.2	53.1
Oil, grease, dirt, filth	17.6	31.8
Constraint posture (bent over, squatting, kneeling, lying)	14.3	50.8
Shaking, bumps, vibrations	4.6	54.4
Bright light, poor lighting	9.3	57.1
Hazardous substances, radiation	6.8	36.1
Protective clothing and equipment	21.1	11.8
Noise	23.9	54.0
Microorganisms (germs, bacteria, mould, viruses)	7.5	35.9

³ **Introduction:** I'll now read out a series of working conditions to you. Please tell me at each point whether it occurs in your occupation frequently, sometimes, seldom or never.

Question, e.g.: Standing while working. How frequently does that occur?

⁴ **Question – only if the answer was "frequently" or "sometimes":** Is that a load situation for you?

Smoking at the workplace

As part of the ongoing discussion about protecting non-smokers at the workplace, this issue is also to be broached briefly. The survey shows that smoking takes place at 35.3 % of the workplaces, even frequently at roughly half of them (see Fig. 5).

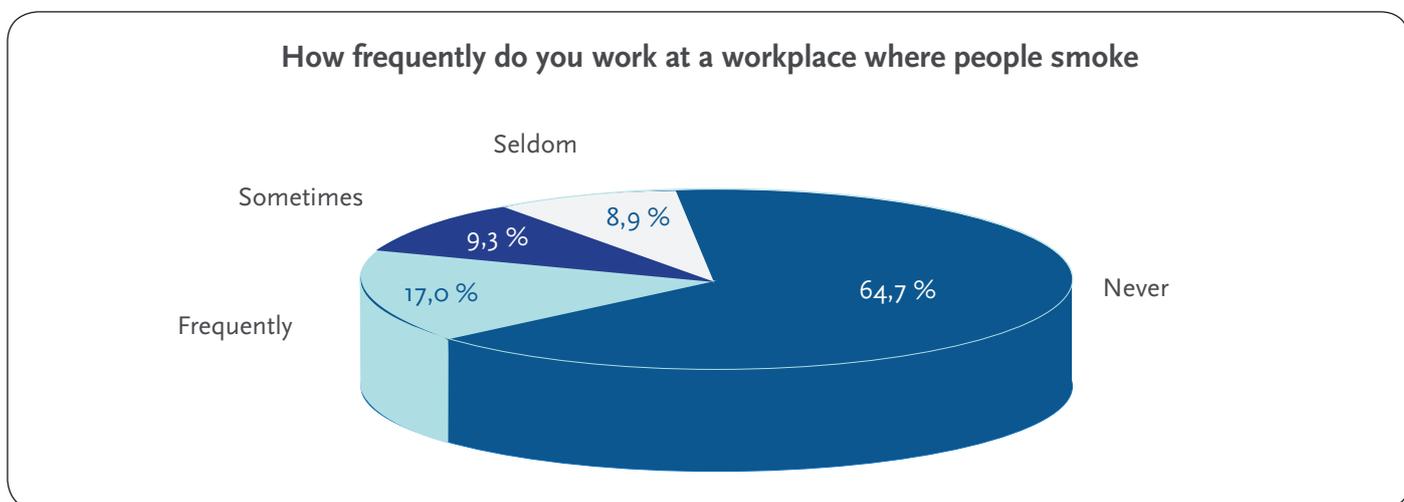


Fig. 5: Smoking at the workplace

In the evaluation of the question about the perceived load caused by smoking at the workplace, only those workers who do not smoke themselves at the workplace were asked – however, this may also include smokers. This produces a load figure of 53.9 % for workplaces at which people smoke sometimes or frequently. The rate is slightly higher at 58.2 % if the evaluation is limited to workplaces where people frequently smoke.

Work requirements and conditions

Most of those surveyed feel they can cope with the requirements placed on them (see Fig. 6). Whereas 13.7 % feel they tend to be underchallenged by the occupational requirements and only 4.6 % overtaxed, this ratio is reversed with the work volume. Here, only 6.4 % indicate they are underchallenged, by contrast 17.4 % overtaxed.

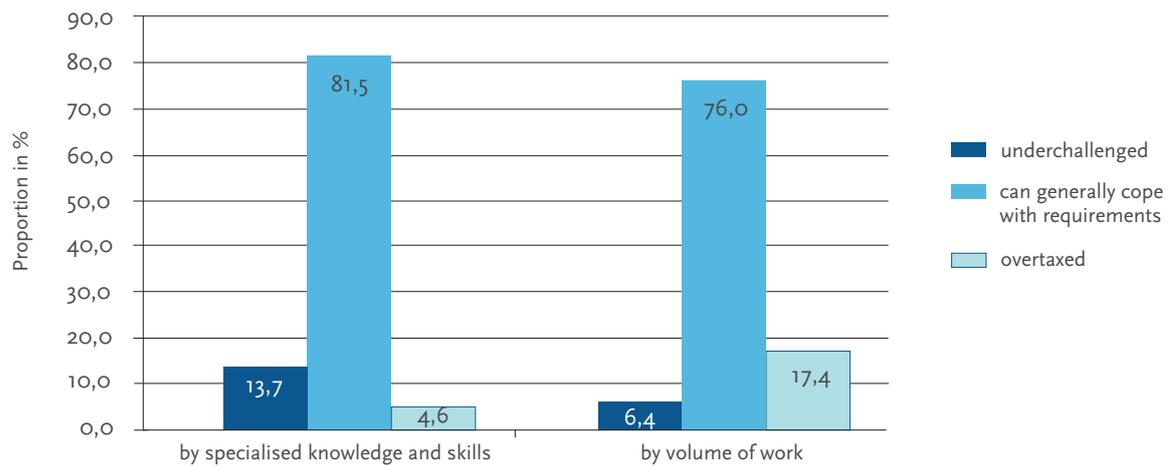


Fig. 6: Requirements placed on quality and quantify

Mental loads and requirements

The discussion about the rise in mental loads and requirements owing to work activities is now being rarely held in a controversial manner. Empirical findings clearly show that requirements in this field are satisfied by the majority of the workers, depending on the branch and occupation. However, regardless of the evaluation of these facts by the experts, the situation is, at the same time, such that not every worker also perceives that as a strain. If the work requirements are examined in detail, the question also arises here, analogously to the physical loads, firstly on what percentage of the workers certain requirements are placed and, secondly, how many of them feel this as a burden. Table 2 provides information on this.

If a requirement occurs frequently (e.g. 51.4 % for „work process repeats itself in every detail“), this is not tantamount to saying that it is viewed by everyone as a load (cf. 14.4 % of those surveyed where the work steps repeat themselves). What is particularly noticeable in the table is the pressure from deadlines and performance to which roughly one worker in two is frequently exposed. It is viewed by almost 60 % of those affected as a load. The situation is similar for disruptions to work. And specified minimum performances (numbers or time) lead to high load rates just as fast working. Almost 60 % have to keep their eye on various processes at the same time; but only one worker in four sees this as a burden.

Table 2: Work requirements and the resultant load

Working conditions and resultant load	Frequent requirements in %	Perceived load in %
Pressure from deadlines and performance	53.5	59.4
Performance of work specified down to the last detail	22.9	29.7
Work process repeats itself in every detail	51.4	14.4
New tasks	39.1	15.8
Improving procedures; trying out new things	27.8	-
Disrupted during work; interrupted (colleagues, poor material, machine faults, telephone)	46.1	59.8
Numbers, minimum performance, time specified	31.1	45.0
Things not learned / not mastered are demanded	8.8	39.5
Keeping an eye on various types of work / processes at the same time	58.7	26.5
Small mistake – great financial loss	15.4	44.6
Going to the limits of one's capabilities	17.0	69.2
Working very fast	44.0	42.1
Situation acts as a mental load	12.1	-

Latitude for action, control and resources

According to the current findings, a strong influence, related to the satisfaction and health of the workers, is attributed to the latitude for action, the control possibilities and in particular support at the workplace.

After all, one worker in eight is frequently not informed in good time about decisions (Table 3). At 73.5 %, the proportion of workers who feel this procedure to be a load situation is very high. This percentage is even higher among workers to whom not all the necessary information is available, which, after all, relates to one worker in twelve.

Table 3: Non-existent control and the resultant load

Control and resultant load	Frequently lacking control in %	Perceived load in %
Not informed in good time about decisions	12.9	73.5
Not received all necessary information	8.0	78.6

Roughly 40 % indicate that they have little influence on the work volume allocated to them but only one in five workers feels this is a load situation (Table 4). Approximately 30 % of those surveyed are not allowed to decide themselves when they take a break. According to their own statements, a subjectively perceived load thus arises for roughly one worker in six.

Table 4: Latitude for action, which does not exist or only seldom, and the resultant load

Latitude for action and the resultant load	Never/seldom latitude for action in relation to ... in %	Perceived load in %
Planning one's own work oneself	14.0	13.4
Influence on work volume allocated	40.1	19.3
Deciding oneself when to take a break	28.9	17.4

With regard to the existing resources (Table 5), it is noticeable that a large proportion of those surveyed (83.3 %) generally view co-operation with colleagues as good.

The fact that the required support was frequently available was mentioned in fewer cases (69.7 %). That applies in particular to the support from supervisors (51.5 %).

Table 5: Available and lacking resources and the resultant load

Resources	Frequently resources in relation to ... in %	Never/seldom resources in relation to ... in %	Perceived load in %
Being part of a community at the workplace	74.6	9.5	25.2
Co-operation with colleagues is good	83.3	3.0	51.7
Support from colleagues when needed	69.7	6.1	37.7
Support from supervisors when needed	51.5	16.3	40.2

When resources are not available, that can result in load situations. That becomes evident, for example with the support from supervisors (16.3 %) which is never or seldom offered; 40.2 % feel this is a load. The lack of support from colleagues results in similarly high load percentages (37.7 %) but occurs considerably less frequently (6.1 %). More than half of those surveyed feel that, when co-operation with colleagues cannot be described as good, this is a burden; this, however, was seldom indicated (3.0 %).

Job satisfaction

If the mean satisfaction values in Table 6 are examined, it becomes obvious that the workers are, on the whole, satisfied with their jobs.

The only „dip“ can be seen with the promotion opportunities with which those surveyed tend to be less satisfied. It is of interest that the highest figure was recorded for total satisfaction, alongside the satisfaction with the nature and content of the activity.

Table 6: Job satisfaction

Job satisfaction	Mean value*
Income from this activity	2.71
Promotion opportunities	2.11
Working hours	2.93
Working atmosphere	3.17
Direct supervisors	3.10
Nature and content of the activity	3.20
Workplace conditions	3.01
Possibilities of applying skills	3.09
Possibilities of further training and learning more	2.81
Work equipment (incl. software and furniture)	2.96
Physical working conditions	2.98
Total satisfaction	3.20

* 4 = very satisfied; 3 = satisfied; 2 = less satisfied; 1 = dissatisfied

Health

In addition to the general state of health (Fig. 7), the workers were also asked about individual health complaints during or directly after work.

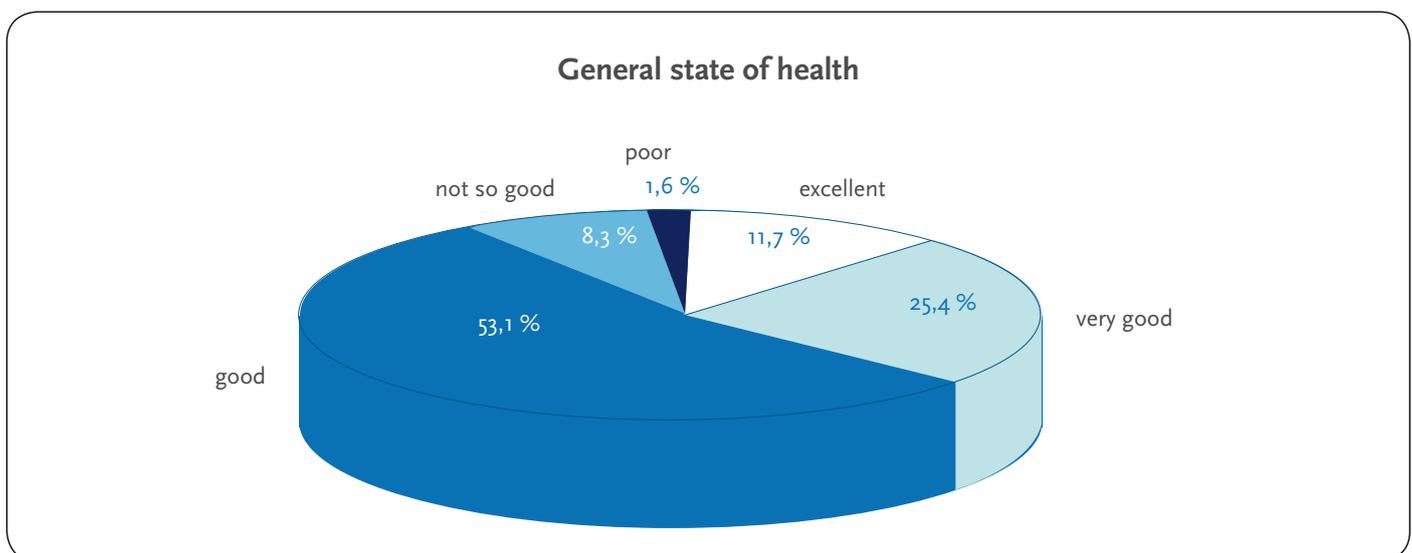


Fig. 7: General state of health

Whereas only 10 % indicate their general state of health as not good (Table 7), three acute health complaints are mentioned by more than 40 % of those surveyed:

- Pains in the lower back / back pains
- Pains in the neck and shoulder area
- General tiredness, weariness, exhaustion

In view of the first two complaints mentioned, many of those surveyed have already undergone medical or therapeutic treatment.

Table 7: Health complaints and medical / therapeutic treatment

Health complaints and appropriate medical or therapeutic treatments	Health complaints in % ⁵	of which treated medically/therapeutically ⁶
Pains in the lower back, back pains	42.6	67.4
Pains in the neck, shoulder area	46.1	61.7
Pains in the arms and hands	20.4	48.4
Pains in the hips	11.1	60.6
Pains in the knees	18.4	54.4
Pains in the legs, feet, swollen legs	20.2	35.1
Headaches	28.9	36.5
Heart pains, twinges, pains in the chest	5.4	63.2
Shortage of breath	2.7	67.7
Coughing	7.4	53.0
Runny nose or sneeze attacks	12.1	34.6
Eye complaints, i.e. burning, pains, reddening, itching, tears	19.2	47.8
Skin irritations, itchiness	8.2	50.2
Sleep disorders at night	19.8	21.8
General tiredness, weariness, exhaustion	42.7	14.9
Stomach or digestion complaints	10.3	59.8
Deterioration in hearing, noises in ear	12.6	50.9
Nervousness, irritability	27.3	13.8
Dejection	18.3	16.1
Giddiness	4.8	51.9
Burnout	7.1	27.5
Depression	4.1	54.1
Other complaints	2.8	42.0

⁵ **Introduction:** Please tell me whether you frequently have the following health complaints during or directly after work.

Question, e.g.: Pains in the lower back, back pains

⁶ **Introduction:** I'll mention your complaints once again. Please tell me in each case whether you were treated because of these complaints by a doctor or therapist.

Question, e.g.: Pains in the lower back, back pains

Workplace health promotion

About only one third of the companies offered health promotion activities in the last two years (see Table 8). By contrast, over half of them offered no activities whatsoever in this respect.

Table 8: Workplace health promotion measures

Health promotion measures in the last 2 years	in %
No	57.3
Yes, of which	33.0
I don't know	5.7
No reply / missing	4.0

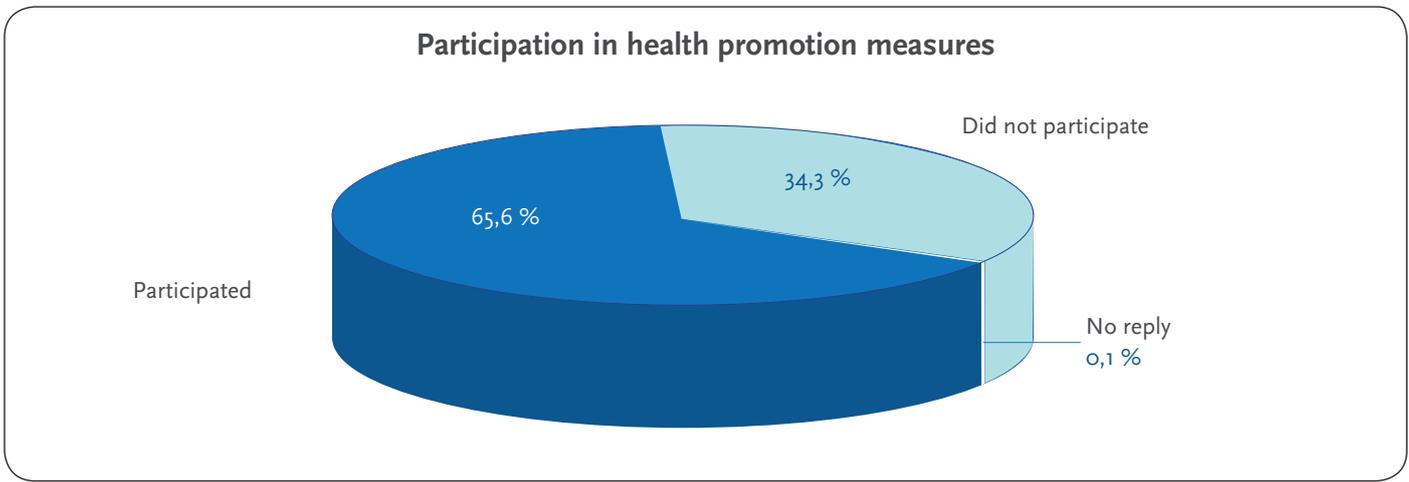


Fig. 8: Participation in health promotion measures

When health promotion measures were offered, they were taken up by 65.6 % of the workers (Fig. 8).

Risk assessment

Although prescribed by law, it is known that a risk assessment is by no means conducted at every workplace (Fig. 9). To make this assumption objective, the workers were asked whether a risk assessment had been conducted at their workplace. More than half of those surveyed gave a negative answer. Another 14.1 % were not sure, whereas only just over a quarter of the workers were able to reliably answer this question with Yes.

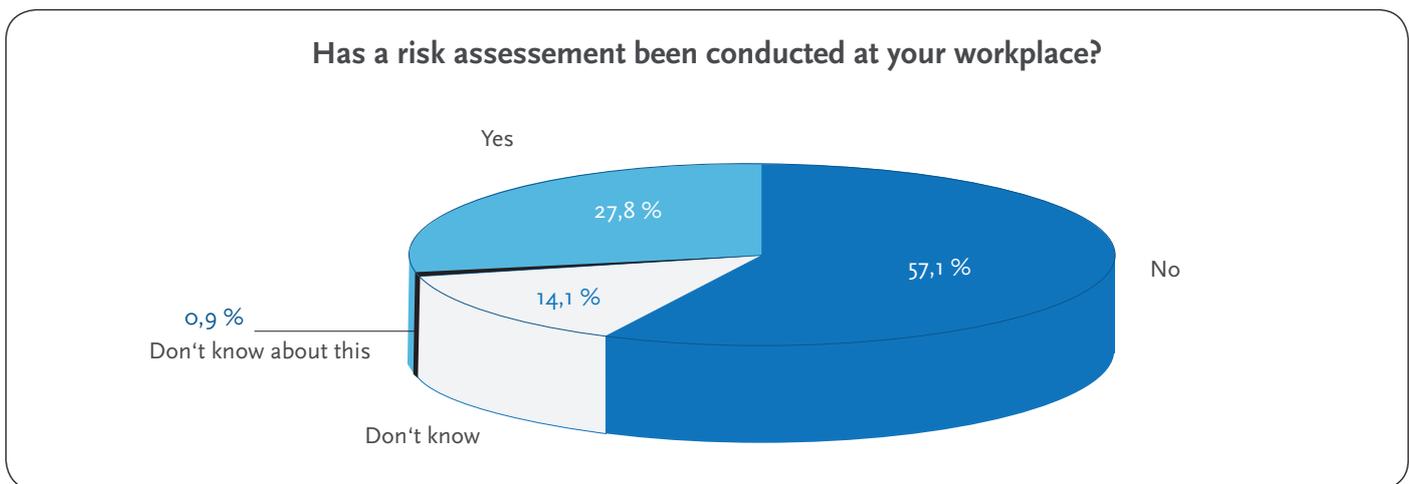


Fig. 9: Risk assessment

Outlook

The data presented here provide an initial overview of the situation of the workers in companies. You will find more detailed, e.g. occupation and branch-related evaluations, in the report "Sicherheit und Gesundheit bei der Arbeit 2005" [Safety and health at work 2005] and on our website www.baua.de/arbeitsbedingungen.

Further evaluations on occupational qualifications and further training can be found on the BiBB website (www.bibb.de/de/wlk21738.htm).

Source: www.baua.de/en/Topics-from-A-to-Z/Working-Conditions/Working-Conditions.html

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