

Healthy Work NRW 2009 – Survey on working conditions

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Abstract

In the present study a representative survey was conducted to collect data which would yield information on the working conditions of workers in North Rhine-Westphalia (LIGA.NRW 2009). In telephone interviews a total of 2000 employed persons from the age of 14 in North Rhine-Westphalia provided details of their work. In 1994, 1999 and 2004 similar studies had already been conducted, making it possible to draw trend comparisons and highlight developments. The questionnaire is based on the stress-strain model of industrial psychology.

More than half the workers questioned (56 %) work in the service sector, 30 % are in productive industry and only 14 % in commerce.

The average age of those surveyed was 41.

62 % of the workers stated that they are employed in small or medium sized enterprises ranging from 1 to 200 employees.

The results of the survey show that for workers in North Rhine-Westphalia it is primarily mental loads, such as high time pressure, high responsibility and excessive work load to be coped with that play a significant role. On top of this there are loads due to workplace reorganization / restructuring and the fear of unemployment.

Loads at the workplace

In the work sciences the concept of load is used in a neutral sense: loads are physical and mental demands and must not necessarily be rated as something negative. But most workers mainly associate with the term load poor conditions at the workplace or ones which are in need of improvement.

The questionnaire was constructed on the basis of the stress-strain model developed by Rohmert (1984) and extended to include mental loads (see DIN ESO 10075 “Ergonomic principles related to mental health”, 2004).

One of the survey's main concerns was to record factors which represent a subjective load at work, factors which show themselves in the workers in the form of strain (e.g. fatigue, headaches, back and joint pains). The effects of the load depend on an individual's personal performance profile, such as his physical constitution, and his existing competencies, skills and abilities. One and the same task may therefore trigger a stress reaction in individual A, be interpreted as a challenge by individual B and be merely day-to-day routine for individual C.

An overview of loads

To record the loads at the workplace the workers were asked the following question: "Work or the situation at the workplace can impose a load physically and mentally. I am just about to name a number of factors which you may possibly experience as loads at your workplace. For each item I would like you to tell me whether it is "no load" for you at work, a "slight load", a "fairly strong load" or a "strong load".

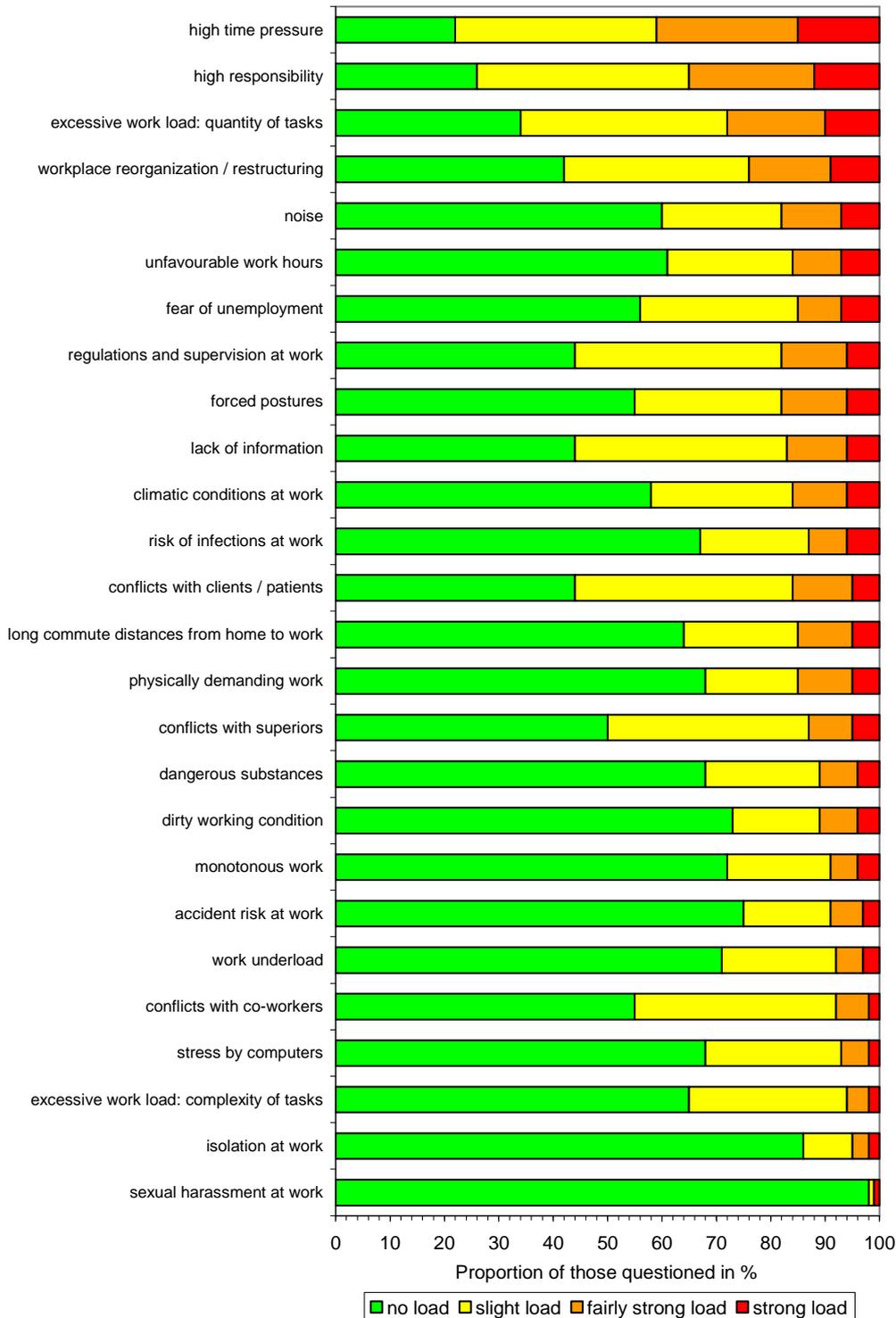


Figure 1: An overview of perceived loads

Figure 1 shows that in particular mental loads play a significant role for workers in North Rhine-Westphalia. Among the top ten loads, i.e. those which are felt as fairly strong or strong loads, there are seven mental load factors, and in contrast only three which are classified as physical loads.

At least half the workers claim to be affected slightly, somewhat or even strongly by the following seven mental load factors:

- high time pressure
- high responsibility
- excessive work load (quantity of tasks)
- restructuring or reorganisation measures
- regulations and supervision at work
- lack of information
- conflicts with customers and patients

Also significant for a large portion of workers are other mental loads such as fear of unemployment and conflicts with superiors. Among the physical loads mainly noise, forced postures, the risk of infections at work and climatic conditions (e.g. heat or cold) at the workplace create problems. Work underload as well as social loads arising from trouble and conflicts with colleagues, isolation, stress by computers and sexual harassment tend to play a lesser role in absolute terms. The consequences of social loads at the workplace are particularly serious for those affected, however.

Of those questioned three out of four feel subject to load from time pressure and high responsibility. More than 40 % even indicated that time pressure at work affected them fairly strongly or strongly.

Loads and age

Within the next few years the group of 30 to 49 year old workers, who are particularly important for companies on account of their experience and efficiency, will decline sharply. In contrast the percentage of workers who are over 50 will grow dramatically.

Demographic change is a highly significant challenge to the world of work. In this context the question arises as to the differences in perceived loads for various age groups.

Figure 2 gives an overview of the estimated loads for the 14 to 29 year olds, the 30 to 49 year olds and workers over 50 with respect to the 10 most significant load factors. It shows in each case the percentages of those questioned who said the relevant factor was a fairly strong load or a strong load.

Younger workers claim they are less subject to load than their older colleagues.

The results reveal a number of interesting differences in the various age groups. It is a common feature of all the age groups that high time pressure and high

responsibility play a crucial role. It is striking, however, that the relative load level of the 14 to 29 year olds with regard to seven of the ten most significant factors is less than in the other age groups. Younger people appear in particular to be affected to a smaller degree by mental loads at the workplace than older workers. This may be due to the high proportion of unskilled workers and low salary workers in this age group, whose duties probably involve time pressure and high responsibility to a lesser degree.

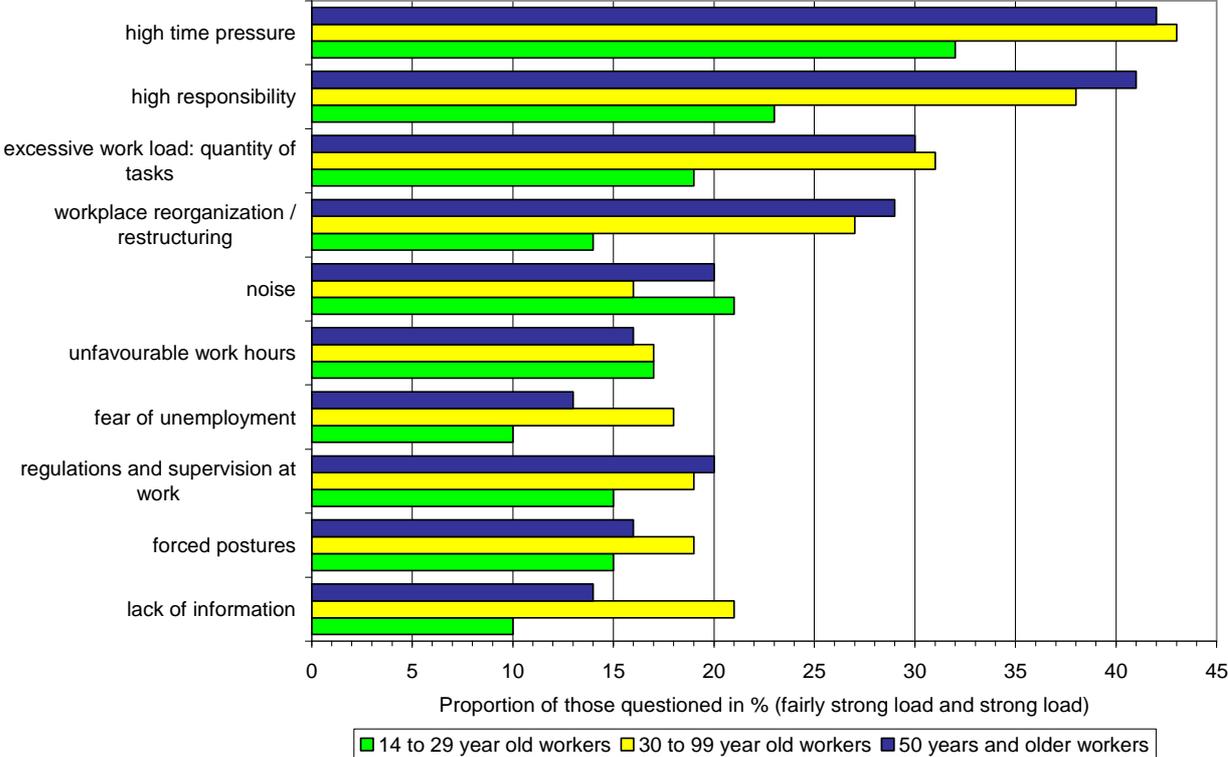


Figure 2: Perceived loads and age

The group of 30 to 49 year olds and that of those of 50 and over differ only slightly in terms of their perceived loads. The middle generation of workers is affected comparatively strongly by lack of information.

Loads in different economic sectors

The activities and duties in the three economic sectors of services, production and commerce differ substantially. It can therefore be expected that there will also be evident differences in the load profiles as well.

Workers in the service sector reported that they are exposed to relatively high mental loads. In the production domain, on the other hand, the workers suffer more from physical loads.

Figure 3 shows the estimates for the workers in these three economic sectors with regard to the 10 most significant factors and the differences in the perception of

loads. The workers in the service and production sectors reported they tend to be exposed to greater loads than those in commerce.

The workers in the service sector said for example that they were affected relatively strongly by mental loads such as time pressure, high responsibility, the quantity of tasks to be performed and workplace reorganization / restructuring. With respect to the factors not listed in Figure 3 it is striking that with 22 % of the workers in the service sector a high proportion claimed that were subjected fairly strongly or strongly to loads from infection hazards at the work place.

The workers in the production sector claimed that were subjected relatively strongly to noise, forced postures and climatic conditions at the workplace. Specifically for the production sector, the statements by those questioned also revealed the physical load factors not shown in Figure 3 such as

- physically demanding work (24 % exposed fairly strongly or strongly to load)
- dirty working conditions (22 % exposed fairly strongly or strongly to load)
- dangerous substances (17 % exposed fairly strongly or strongly to load) and
- accident risk at work (16 % exposed fairly strongly or strongly to load).

The workers in commerce indicated, as mentioned above, a tendency towards lower load levels. There is no evidence of loads on workers in commerce which are specific to this sector.

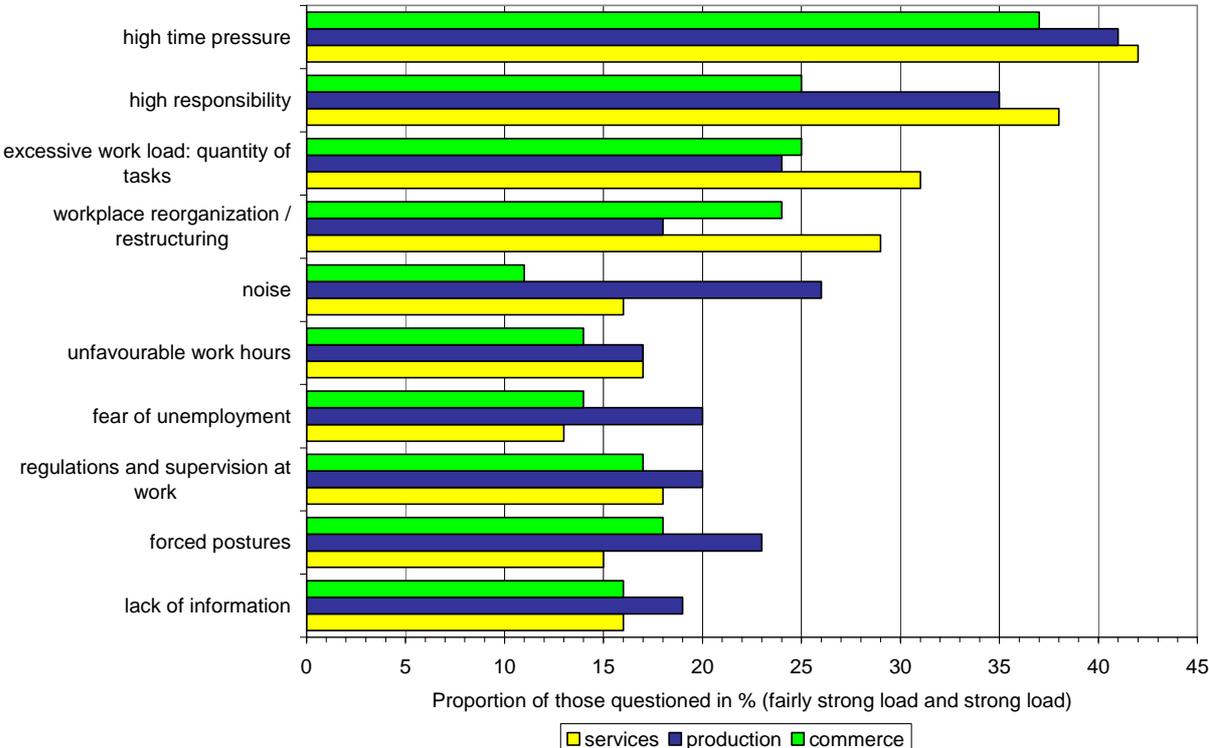


Figure 3: Perceived loads and economic sectors

Comparing the current perceived loads on workers in the different economic sectors with those from the year 2004, it can be seen that the load due to high responsibility has generally declined, while those from the amount of work to be performed and also noise have increased.

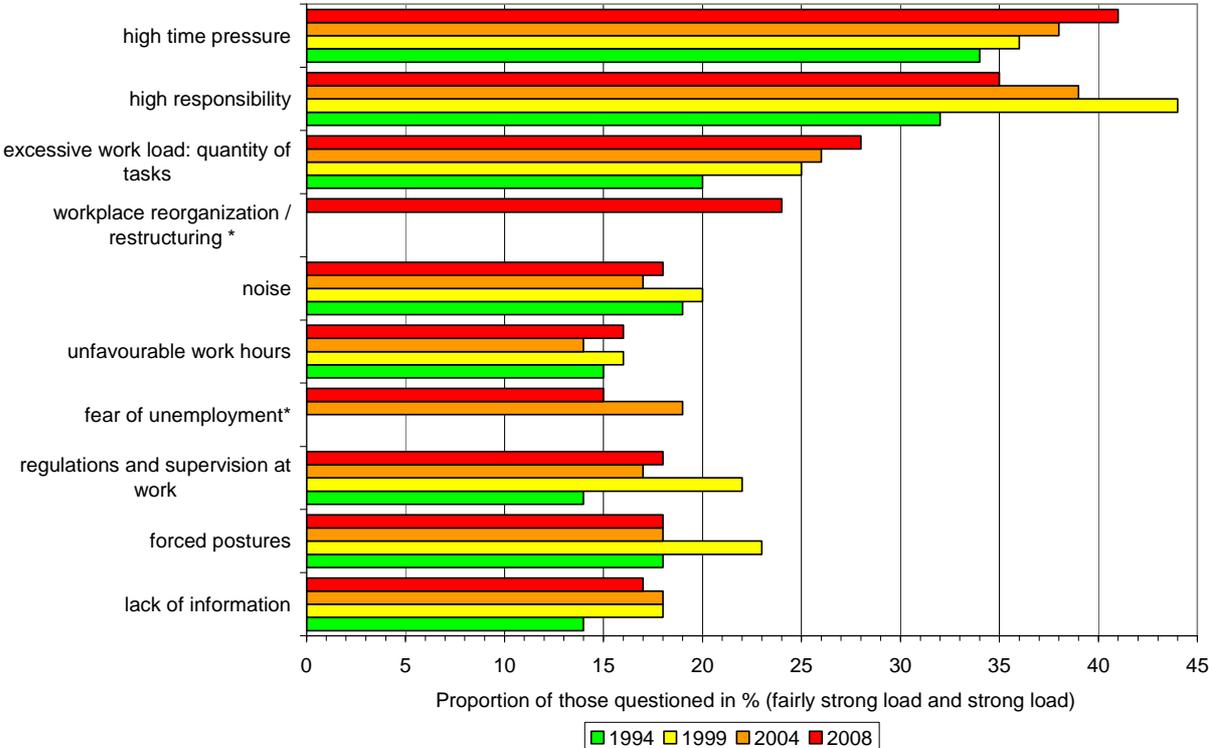
There are two significant changes: In the service sector, time pressure has increased sharply. Whereas in 2004 "only" 29 % of workers said they were affected by this fairly strongly or strongly, the corresponding percentage in 2008 rose to 42 %. In the production sector, on the other hand, the latitude of decision had shrunk because the proportion of workers who indicated they were subjected fairly strongly or strongly to load from regulations and supervision at work rose from 14 to 20 %.

Loads – a comparison of trends

A comparison of the estimated loads for 1994, 1999 and 2004 revealed that the observed rise in loads between 1994 and 1999 did not continue with the same intensity between 1999 and 2004 (MWA 2005).

The percentage of workers who reported that they were fairly strongly or strongly burdened by high responsibility, forced postures and climatic conditions tended to decline. There was evidence of slight decreases in the load level with respect to noise, physically demanding work and dangerous substances.

Figure 4 gives an overview of the estimates obtained in the 1994, 1999, 2004 and 2008 conducted surveys with respect to the 10 most significant load factors. In each of the surveys about 2000 workers were questioned. The figure shows the percentages of workers who said they are subject to fairly strongly or strongly to loads from the relevant factor.



* Data was collected for the first time in 2004 and 2008 respectively

Figure 4: Perceived load as a trend

There are indications of clear increases in the estimated loads with respect to the factors of high time pressure and the quantity of tasks – the level of mental load has risen steadily since 1994 for these two factors! There is a gratifying decrease in the proportion of those questioned for which high responsibility at the workplace is a special problem.

It should be noticed that the dimension of “workplace reorganization / restructuring” was added for the first time in 2008 and ranked fourth right away. With regard to the other load factors there is no evidence of a trend in the sense of a systematic increase or decrease in level. For instance, the percentages of people especially affected by the factors noise, regulations, supervision and lack of latitude of decision rise slightly, they stagnate with respect to forced postures and unfavourable climatic conditions, and they fall with respect to loads due to lack of information.

The load level has hardly changed since 2004, but: Time pressure and the quantity of tasks have increased!

The high load level shown in 2004 for workers in North Rhine-Westphalia hardly changed overall by 2008, but the pressure to perform at the workplace rose further.

References

- LIGA.NRW (2009): Gesunde Arbeit NRW 2009. Belastung – Auswirkung – Gestaltung – Bewältigung. Landesinstitut für Gesundheit und Arbeit NRW, Düsseldorf
- MWA (2005): Arbeitswelt NRW 2004 Belastungsfaktoren – Bewältigungsformen – Arbeitszufriedenheit. Ministerium für Wirtschaft und Arbeit NRW, Düsseldorf
- Rohmert, W. (1984): Das Belastungs-Beanspruchungskonzept. In: Zeitschrift für Arbeitswissenschaft, Nr. 4, S. 193-200