

Computer usage at work: Risks and opportunities for employees

25 baua: Facts

Computer usage is an integral part of everyday work life in many professions. Working with a computer often gives employees more freedom to organize their work independently. However, professional computer usage is often accompanied by increased work pressure. The results of the BIBB/BAuA Employment Survey 2012 suggest that certain psychosomatic complaints, such as eye complaints or emotional exhaustion, are becoming increasingly important in the digital world of work.

The current public debate on our world of work is characterised by terms such as “digitisation” and “work 4.0”. One of the points of discussion is how new information and communication technologies are changing the work environment. This fact sheet demonstrates the extent to which different occupational groups and employment groups use a computer for professional purposes. It also explains whether psychological demands, employee satisfaction and well-being vary depending on the extent to which the computer is used. Analyses based on the BIBB/BAuA Employment Survey 2012 show that occupational computer usage is widespread in Germany. The survey covers 19,647 employees aged between 15 and 65. Four out of five respondents stated that they frequently (66 %) or sometimes (16 %) work with computers. On average, computer usage takes up almost 50 % of their working time. Compared to 2006, professional computer usage has been risen slightly – a trend that will likely continue.

Characteristics of professional computer users

Occupational computer usage varies only slightly by respondents' age and gender. However, it does increase with their level of education. Whereas 87 % of the highly educated often work with computers, this applies only to 46 % of workers with a low level of education. As expected, there are also distinct differences across occupational groups (Fig. 1). Frequent usage of computers is particularly common in commercial and administrative occupations as well as in technical occupations. In these occupations, more than 90 % frequently work with computers. This proportion is significantly lower in construction occupations (20 %) or occupations in agriculture, forestry, farming, and gardening (33 %).

In comparison to the last survey in 2006, computer usage has increased across the occupational groups considered, with the largest increase to be observed for occupations in agriculture, forestry, farming, and gardening (2012: 33 %, 2006: 21 %).

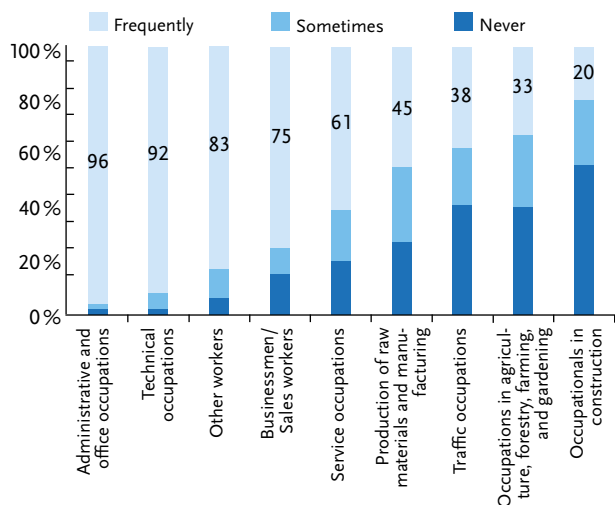


Fig. 1 Share of computer users by occupational group (in %)

Working conditions of frequent computer users

Employed individuals working with computers are often less likely to perform monotonous activities and, overall, have greater autonomy in carrying out their work than employees working less often with a computer (Fig. 2). For example, 77 % of frequent computer users report being able to often arrange their work themselves, whereas this only applies to 48 % of non-users. However, employees who frequently use a computer are also exposed to increased pressure at work: 57 % of them often have to work under

great time pressure or pressure to perform. In contrast, only 39 % of those working without computers face increased pressure at work. Further analyses show that these computer work-related differences in (psychological) demands and resources persist regardless of educational level and occupational group.

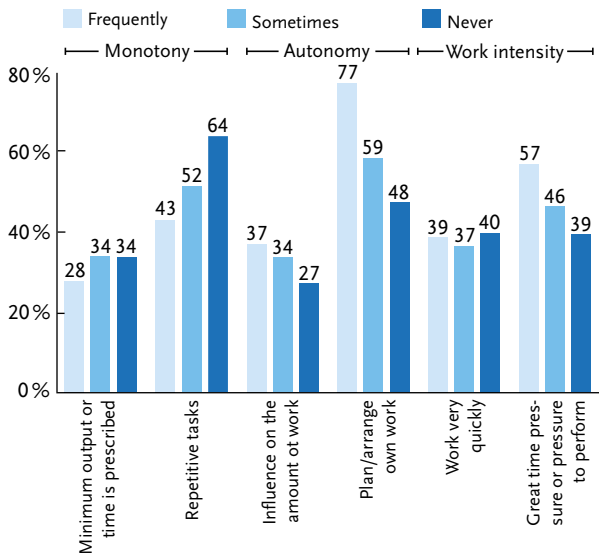


Fig. 2 Working conditions by frequency of computer use (in %)

Psychosomatic complaints

Frequent computer users more often report suffering from psychosomatic complaints (Fig. 3). For example, 22 % of the employees who frequently use a computer at work report work-related eye problems. In comparison, this only applies to 15 % of the employees who rarely or never use a computer at work. Emotional exhaustion is also more common among frequent computer users (27 %) than among non-users (19 %).

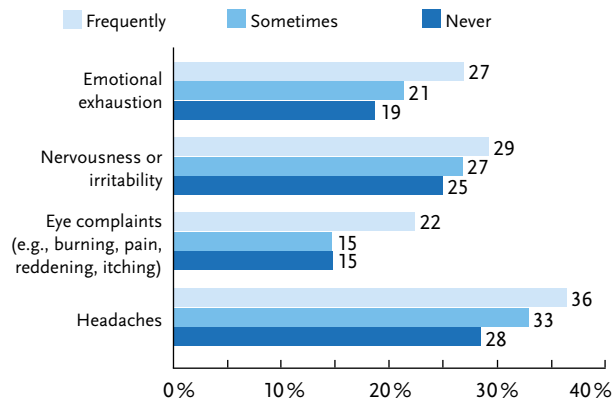


Fig. 3 Psychosomatic complaints that occur during work or on working days, according to the frequency of computer use (in %)

Job satisfaction

Irrespective of the frequency of computer use, about 90 % of the working population is overall (very) satisfied with their work. Income satisfaction is higher among those who work with computers (75 %) than among those who never work with computers (63 %). It should be noted that income satisfaction is directly related to the level of income. Individuals who frequently work with computers are predominantly employed in occupations with a higher income. These occupations include technical, administrative, and office occupations, for example. In these occupations, no less than 80 % report a high level of income satisfaction. Further analyses again suggest that the links between psychosomatic complaints or job satisfaction and computer use cannot be (completely) attributed to differences across educational or occupational groups.

Conclusion

The extent to which employees use a computer at work varies substantially across occupational groups. The digital workplace gives many employed individuals more freedom. At the same time, however, it may also lead to increasing demands. The results of the BIBB/BAuA Employment Survey are in line with existing scientific studies¹. In practice, it is necessary to create an operational and political framework to protect employees as best as possible from the risks of working with computers². The scientific community should develop indicators for exploring digital change in the world of work more closely and derive more far-reaching recommendations for action.

Further Information

- 1 Bundesministerium für Gesundheit und Soziales (BMAS), Hrsg., 2016. Monitor – Digitalisierung am Arbeitsplatz. Aktuelle Ergebnisse einer Betriebs- und Beschäftigtenbefragung. Berlin: BMAS. Verfügbar unter: www.bmas.de/DE/Service/Medien/Publikationen/a875-monitor-digitalisierung-am-arbeitsplatz.html
- 2 Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA), Hrsg., 2011. Technologien im Büro – Chancen und Risiken im Umgang mit PC, E-Mail & Co. 2. Auflage. Dortmund: BAuA. Verfügbar unter: www.baua.de/dok/8658022