

14 Psychological aspects of adverse indoor workplace conditions

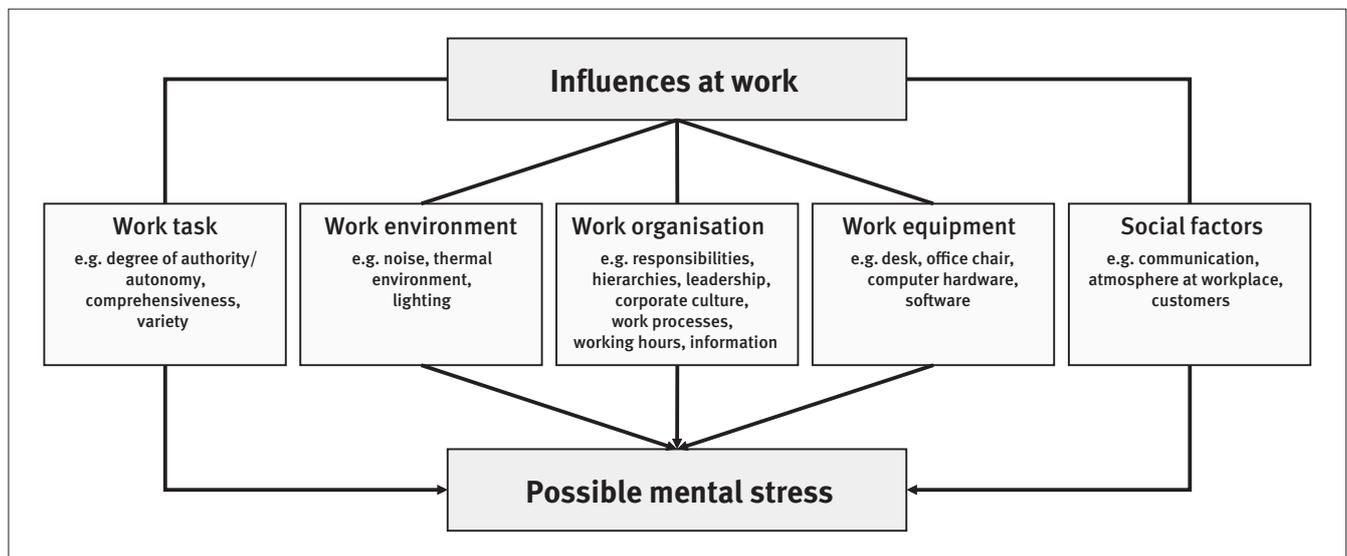
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Any attempt to arrive at a better understanding of mental stress in indoor workplaces and the psychological aspects of adverse indoor workplace conditions must be based on a consistent definition of the terms mental stress and mental strain. These definitions are set out in DIN EN ISO 10075-1 [1], where mental stress is deemed to be “the totality of all influences that people

are subject to from the world around them and that affect them mentally”. Put simply, employees are subject to influences at work that can stem from the work task, work environment, work organisation, work equipment or social factors (Figure 29).

Having said that, mental stress and the impairing effects that can result from it can come from any aspect of a person’s life – not just their work. This makes it difficult to separate work-related incidences of stress from those that originate outside the workplace, such as problems at home.

Figure 29: Influences of work on people and the mental stress and impairing effects they can cause



Mental stress can lead both to positive (learning or training effects, activation) and negative (monotony, mental satiation, mental fatigue and stress in general) consequences of strain. The same incidence of stress can produce different strains in different people. Several factors determine whether stress generates impairing or stimulating effects, among them the resources available to the individual.

There is a complex web of causes behind complaints and disorders in employees, in which noxae, attribution and stress-related impairing strain play a role. There may be overlaps with Multiple Chemical Sensitivity Syndrome (MCS), Sick Building Syndrome (SBS) and Building-Related Illness (BRI) and differential diagnosis will be required. The following personal factors are known to influence complaints and the way they are perceived:

- risk perception,
- anxiety,
- somatisation disorders,
- attribution (errors) and
- impairing strain.

Group dynamics can have a major effect on the extent and proliferation of complaints and symptoms but real organic illnesses can also be the cause. This aspect must therefore always be taken into account before embarking on time-consuming, potentially counterproductive measurement of possible chemical, biological or physical exposure. If multiple complaints occur following extensive redecoration work, relocation or restructuring, the factors mentioned above may be the cause if there is no evidence of harmful exposure.

14.1 Data collection methods

The checklists developed by the Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA; Federal Institute for Occupational Safety and Health) for identifying consequences of impairing strain (Checklisten zur Erfassung von Fehlbeanspruchungen, ChEF) [2] give an indication of whether such consequences exist and any workplace-specific factors that may have given rise to them. The checklists cover general stress, mental fatigue, monotony and mental satiation, each with 15 to 18 statements to be used for self-assessment and third-party assessment. They

provide an overview of the different impairing consequences that can arise from mental stress during work. The time required to complete all four lists is roughly 20 to 30 minutes per person. They are recommended as a method of documenting the aspects mentioned above so as to gain an initial impression.

14.2 Application

Owing to the checklists' indicative nature, there are certain practical consequences for users of this method:

- It cannot be used to deliver a comprehensive assessment of individuals' level of strain. The intention is merely to give the user an indication of what changes could be made to work activities.
- The completed questionnaires should primarily be evaluated in qualitative terms.
- It is essential to have the consent of all persons in authority and all stakeholders (employers, management, employees, employee representatives) before using the checklists in the workplace.

A separate assessment is carried out for each work activity task though activities performed at various workplaces can be considered one unit. It is also possible to assess activities performed by several employees. The statements on the checklists are responded to with a "yes" or a "no." No response is given in the case of factors that cannot be judged. There are separate lists for third-party assessment, e.g. by technical inspectors, and self-assessment by employees. Additional worksheets are provided for comparing the self-assessment and third-party assessment.

The ChEF procedure includes questionnaires for self-assessment, filled in by the employees, and questionnaires for third-party assessment, which are completed by people conducting workplace investigations. The parts concerning performance and experiences are blacked out on the questionnaires to be completed by third parties since these are factors that cannot be observed. The process of comparing third-party assessments and self-assessments using the worksheets points to action that could be taken to optimise workplace-specific factors. If it is not possible to conduct third-party and self-assessments, each type of assessment can be employed on its own.

The BAuA tool box, which can be found in the German version of the practical experience (Informationen für die Praxis) section at www.baua.de, lists other suitable methods.

14.3 References

- [1] DIN EN ISO 10075-1: Ergonomische Grundlagen bezüglich psychischer Arbeitsbelastung – Teil 1: Allgemeines und Begriff (11.00). Beuth, Berlin 2000
- [2] Checklisten zur Erfassung von Fehlbeanspruchungsfolgen. Published by: Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA), Dortmund. www.baua.de/de/Informationen-fuer-die-Praxis/Handlungshilfen-und-Praxisbeispiele/ChEF.html