PSYCHOLOGICAL STRESS IN THE WORKPLACE AND THE CHALLENGES IT REPRESENTS

Christian Conrad

University of Library Studies and Information Technologies

Abstract: Psychological stress is currently a big challenge for both practice and science. On the one hand, studies show that the use of language and the understanding of the effects and impacts of the stress-strain concept – despite DIN EN ISO 10075-1 – are inconsistent and lead to uncertainty in practice and misunderstandings in the field of science. On the other hand, there is a lack of concrete studies on urgently needed identification approaches and limit value analyses of psychological stress. The present article examines company-based identification approaches to psychological stress, which in turn define and discuss the relevant elements in order to eventually reduce them with suitable measures. [4]

Keywords: psychological stress, incorrect stress, psychological influencing factors, occupational health and safety measures, DIN EN ISO 10075-1

Introduction

Work today is becoming increasingly important in people's lives: job fulfilment is a prerequisite for prosperity, health, self-determination and social peace. [1] Digital transformation, artificial intelligence, and Big Data, as well as the increase in work speed and complexity of tasks that result from them, are driving companies and their employees ever closer to their performance limits. [2] While in the past the working population was primarily confronted with physical stress, the technological changes of recent years, along with the associated increase in intellectual activities, have led to a clear shift towards mentally stressful occupations. The requirements profile of today's employees is therefore constantly growing. [1] Added to this is the anxiety caused by the increase in fixed-term employment and the fear of job loss, as well as fears about the future, triggered by the Coronavirus pandemic and the war in Europe. [3]

From the point of view of both ergonomics and psychology, it is therefore of great importance not only to maintain physical and mental health by avoiding impairments, but also to improve it. This interest, however, should be the responsibility not only of employees and society, but primarily of companies, since the well-being of employees is closely linked to their malpractices and achievement potential, which in turn have a major influence on the quality of work results and the success of companies. [4]

Psychological stress and its consequences, as well as ways of dealing with them, will therefore be the focus of every organisation in the future. The following question needs to be clarified here: what is actually meant by psychological stress? [5]

According to the European standard EN ISO 10075-1, psychological stress is defined as **"the totality of all measurable influences that come to people from outside and have a psychological effect on them."** [4] "Psychological effect" means that stress exerts influence on human experiences, thinking, and behaviour. Stress can therefore be perceived as those influences that affect the human system with all its individual characteristics. In the context of work, stress is nothing other than the working conditions that can be found in a workplace. [3]

They can be assigned to the following areas:

• **Work content**: This concerns the quantitative and qualitative requirements such as excessive or insufficient demands, monotonous and repetitive tasks, unclear tasks, high levels of responsibility.

• **Work organization**: for example, the scope for action of employees, work processes, information channels, duty rosters.

• **Social relationships**: these include the working atmosphere, the management style, the type of communication within the workforce, and in a negative sense also harassment at work, and the like.

• **Working conditions**: for example, the design of the workplaces and work equipment, but also indoor climate, noise and lightning.

• **Forms of work**: for example, fixed-term or part-time employment contracts and demands for availability during leisure time. [6]

For the sake of conceptual clarity, it should be noted that the influencing factors mentioned above as examples must not necessarily be misunderstood as harmful. Work-related influences can be viewed as stressful with respect to their intensity, duration, combination, and predictability. Whether they actually become stressful, depends to largely on the individual performance characteristics of the employees. [5]

Strain, on the other hand, represents the consequence and effect of stress. According to EN ISO 10075-1, it is defined as "**the individual, immediate (not long-term) impact of psychological stress on a person, depending on his or her respective permanent and current prerequisites, including individual coping strategies (his or her state).**" [3]

The distinction between stress and strain enables a differentiated approach. It makes it clear that the same stress factor, e.g. time pressure, can lead to individually different types of strain with both positive and negative consequences. [5] If the degree of strain is not within acceptable limits, it is referred to as "incorrect strain". Consequently, both too high and too low stress levels can lead to incorrect strain. A simple explanatory approach to clarify what psychological stress and its consequences entail is shown in the stress-strain model (Figure 1). [5]
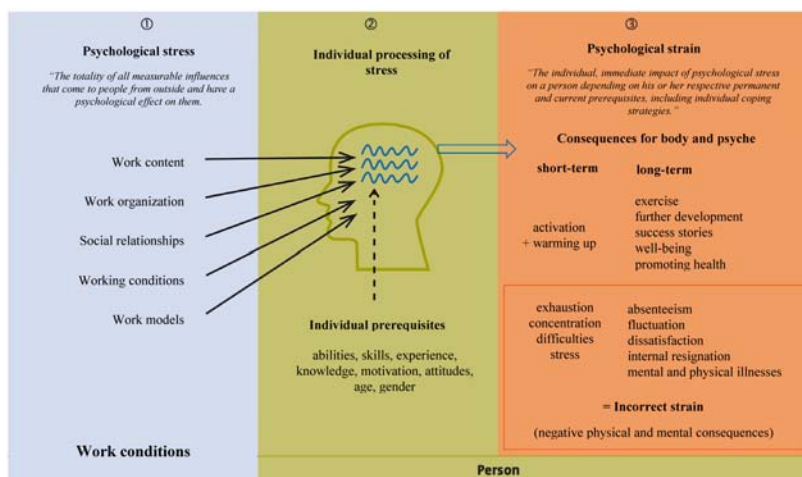
Fig. 1. Stress, strain and their consequences [7]

The stress-strain concept presented here, based on Romert, can be applied to all activities, be they physical, mental, social or other. [8] Whether stress has a positive or negative effect on employees also depends on individual prerequisites and a person's coping mechanisms. The extent to which psychological stress exerts an effect on a person's well-being, is also linked to individual factors such as skills, qualifications, motivation, attitudes, but also personal characteristics such as health, age, and gender. [3]

In accordance with the principle of "behavioural and relationship prevention", working conditions must be designed in such a way that health risks caused by psychological stress are avoided and employees' resources are promoted. In the course of this research, specific stress factors are therefore presented and possible recommendations for action are derived. [8]

Research methodology

The analysis of the research question: *which measures from today's perspective are effective in the identification and subsequent prevention of psychological stress factors in the workplace* is carried out by applying a scoping review. Scoping reviews are characterized by the examination of different publication formats, used to describe the existing state of knowledge on a specific subject area for the purpose of documenting existing findings, defining research questions, concepts, and theories and gaining new research findings. [8]

In the largest employer study in Germany "#whatsnext – Healthy Working In the Hybrid Working World" by the Techniker Krankenkassen (TK) in cooperation with the Institute for Corporate Health Consulting (IFBG) and the

HR magazine (Haufe) for corporate health management (BGM), almost 1,100 organisations were questioned about their working conditions in an anonymous online survey between September 12, 2022 and October 31, 2022. The key results showed that companies attributed growing relevance to the topic of mental health. The survey sample consisted of three quarters of private companies (69.3%) and one quarter of public institutions (26.5%). Only a small group of 47 organisations (4.3%) did not belong to either sector (Figure 3).² In terms of the size of the organisations – based on the number of employees – it can be seen that the majority of those participating in the study were large organizations with more than 1000 employees (29.7%) and medium-sized organizations with 50 to 249 employees (26.8%) (Figure 2).²
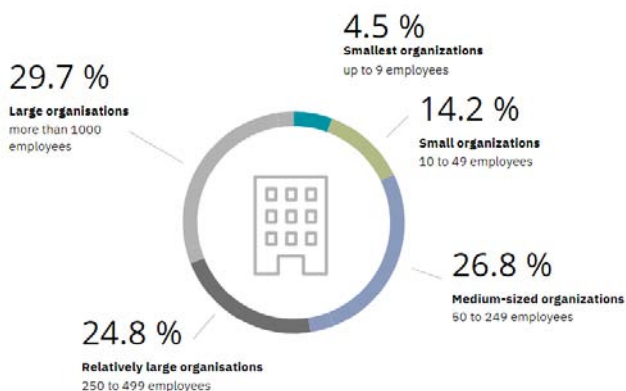

Fig. 2. Sample description of the study based on the size of the organisations²

Table 1. Sample description of the study based on the size of the organisations²

	N	%
Private Companies	759	69.3%
Manufacturing businesses	156	20.6%
Construction companies	21	2.8%
Sale, Maintenance and Repair of Vehicles	31	4.1%
Transportation and Storage	22	2.9%
Information and Communication	76	10.0%
Financial and Insurance Services	41	5.4%
Real Estate Housing	11	1.5%
Freelance, Scientific and Technical Services	51	6.7%
Other scientific services	89	11.7%
Health and Social Services	67	8.8%
Other	154	20.3%
Additional	39	5.2%
Total	**758**	**100.0%**

	N	%
Public Service Institutions	**290**	**26.5%**
Public Administration (Federal and State Authorities, Municipalities, City or District Administrations, etc.)	110	38.1%
Academic Institutions (Universities, Universities of Applied Sciences, Research Institutes, etc.)	34	11.8%
Insurance Companies (Social Insurances, Statutory Health Insurance Companies, etc.)	31	10.7%
Health Institutions (Hospitals, Clinics, etc.)	23	8.0%
Other	31	10.7%
Additional	60	20.7%
Total	**289**	**100.0%**
Other	47	4.3%
No Data	2	0.2%
Total	**1.098**	**100.0%**

Results

For years, mental illnesses have been one of the top three reasons for sick leave, explains Karen Walkenhorst, Human Resources Director of the TK (Techniker Krankenkasse). Last year the total proportion of sick days due to mental illnesses, reported by the TK, was around 17.5% and was well ahead of musculoskeletal disorders (13.7%) and only behind diseases of the respiratory system such as flu and colds (25.3%), as shown in Figure 4.[3] The World Mental Health Report, conducted by the World Health Organization (WHO), also confirms this trend. Accordingly, cases of anxiety disorders and depression worldwide have increased by 25% in the first year of the pandemic.
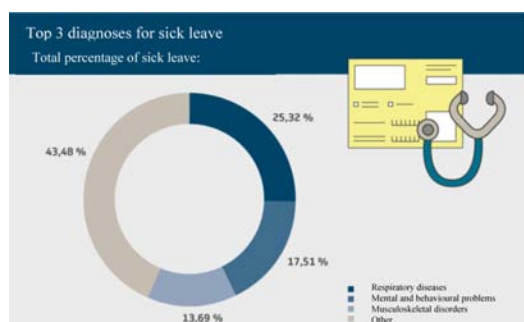

Fig. 4. Top 3 diagnoses for sick leave[5]

In addition, it was determined that the average number of sick days per employee have increased in the past ten years due to psychological stress. If in 2012 every TK-insured worker was on sick leave for an average of 2.46 days

following a psychological diagnosis, the number of sick days for the same reason has risen to 3.33 in 2022. This corresponds to an increase of a good 35%.[3]

However, not all organisations seem to take this problem seriously. Only half (51.5%) of the organisations in the current survey have regularly performed risk assessment of mental stress according to §5 ArbSchG (Figure 5). It is astonishing that the proportion has only changed marginally since 2020, at that time the value was 50.3% of the nearly 1,200 participating organisations.[2]
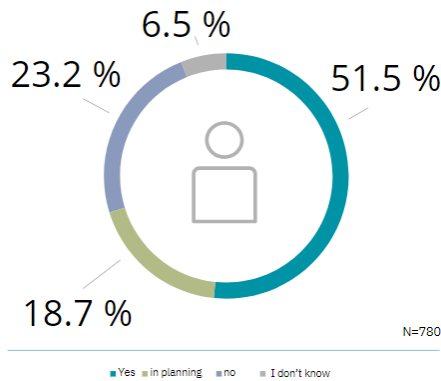

Fig. 5. Organisational implementation of psychological risk assessment[2]

Psychological stress characteristics account in the meantime for some of the greatest challenges in working life. For the majority of the interviewees (85%), the amount of workload nowadays is rather demanding and the same applies to the complexity of the tasks (77.4%). In contrast, social isolation and increased home office work are perceived by most interviewees as less of a challenge (Figure 6).[2]
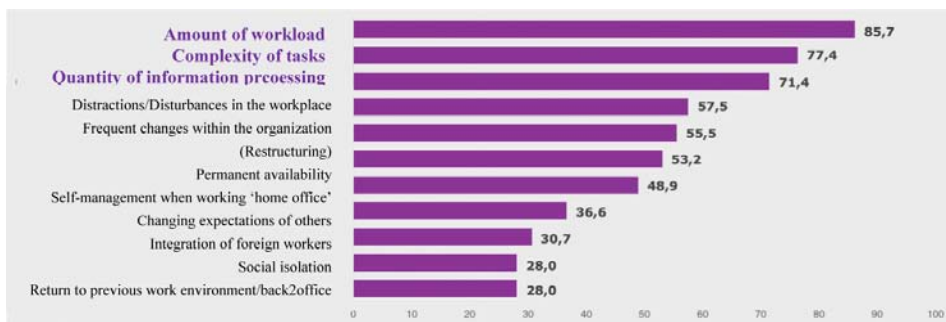

Fig. 6. Psychological stress characteristics in the workplace

Due to the growing number of stress characteristics, psychological responses, such as burnout, overexertion, and depression, are increasingly becoming the focus of attention for many companies. A good 38% of those surveyed stated that this topic was of "considerable" or "great" importance within the structure of their organisation. The degree of relevance that psychological complaints would acquire in the coming years was estimated to reach almost 70% (Figure 7)[2].
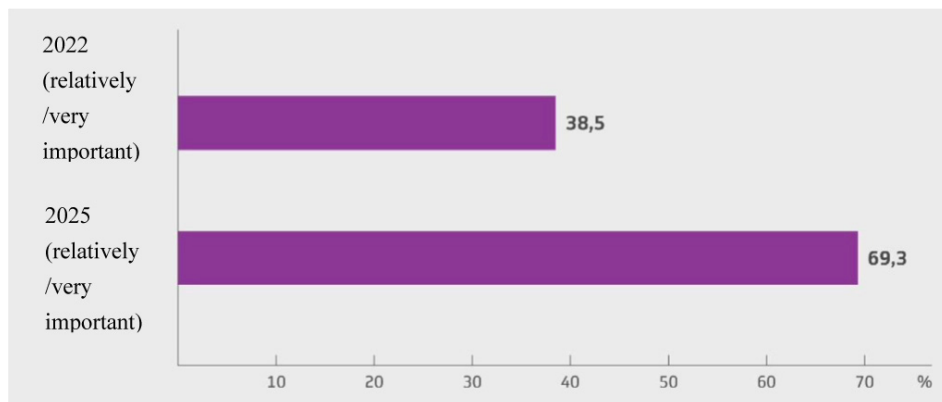

Fig. 7. Importance of mental health complaints

As a result, organizations today have a wide variety of options when it comes to minimizing psychological stress and offering Corporate Health Management (CHM) programmes in the workplace. The type and size of the organisation, the financial framework, and the level of development of CHM play a key role. This study examined 10 topics that are important in the context of CHM. The following illustration (Figure 8) shows in which areas the participating organisations already frequently offer assistant programmes.[2]
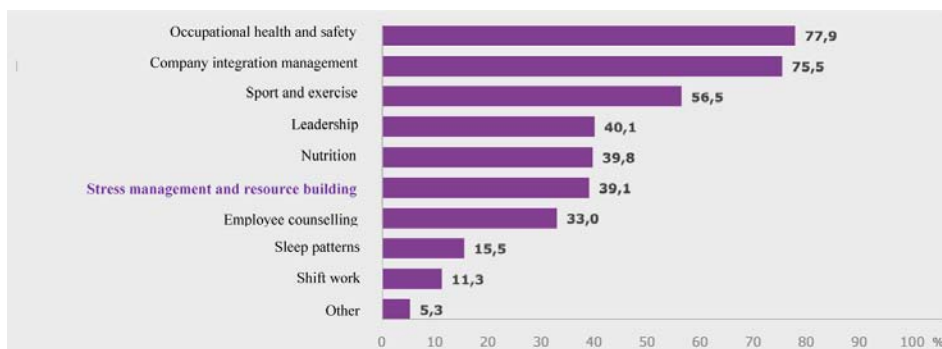

Fig. 8. Health-promoting assistance programmes offered by companies

What is particularly striking in this study is the fact that six out of the total 10 research areas display significant differences based on the type of the organisation. In the following areas public service institutions offer a higher percentage of assistance programmes than private companies:[2]

- Company integration management (87.7% vs. 70.7%)
- Nutrition (44.0% vs. 34.7%)
- Leadership (47.3% vs. 37.2%)
- Employee counseling (45.5% vs. 28.2%)
- Sport and exercise (63.2% vs. 54.3%)
- Stress management and resource building (47.3% vs. 35.9%)

In addition, certain tendencies with regard to the size of the organization are also evident. Large organizations with 250 to 999 employees and larger organizations with more than 1,000 employees offer assistance programmes in all of the above areas more frequently than organizations with fewer employees.[2]

Discussion

One of the most conspicuous results of the study is that the employees' mental health and the factors that influence it become increasingly significant for a lot of the companies.[2] It can therefore be concluded that the subject area of the research question posed at the beginning of this paper, will gain greater importance in the future. In order to answer the research question, the influencing factors from the stress-strain concept presented at the beginning were used (Figure 1):

- **Work content:** This is one of the biggest factors affecting the mental health of employees. The amount and complexity of work, deadlines, and pressure to perform are, according to the study the biggest stress factors that employees are currently faced with. Furthermore, the growing complexity of the tasks means that the level of responsibility is also increasing. In addition, personal problems and social issues such as the Coronavirus pandemic, or fears about the future, can lead to overexertion and even inability to work.

- **Work organization:** Psychological stress nowadays is caused by multiple factors. [1] It is therefore important to keep employees healthy right from the start, i.e., to give them enough freedom of action, to strengthen their resilience, and to support them in challenging times. A stress reduction programme alone is not enough. Rather, it is the task of each organisation to design the processes, procedures, and information channels in such a way that employees enjoy their work, feel valued, and are strengthened in their resources. Beside typical occupational safety measures, such as job security or ergonomic equipment in the workplace, actions for the psychological well-being of

employees are also becoming increasingly important (Figure 8). Structured Corporate Health Management (CHM) programmes take into consideration the individual as a whole, as well as their working and living environment. Yet, the study shows that this "holistic" CHM approach is only offered and carried out by a small proportion of the organisations surveyed (27%). In view of today's challenges, this is not enough.[6]

- **Social relationships:** According to the study, managers play a crucial role when it comes to the well-being of employees. The awareness of the manager as a role model has become even more firmly established compared to previous years. When it comes to accessibility, work effort or working hours, for example, employees look to their managers for guidance. A healthy management culture, based on appreciation and satisfying working conditions form the basis for optimal performance at work. However, although many organisations recognise the importance of exemplary leadership, only a few (38%) offer suitable measures to achieve this.[6]

- **Working conditions:** A digitally oriented professional world requires digital approaches. We have become more flexible and more independent of time and location when it comes to our work,. A large part of the workforce in many industries is, at least partially mobile or works from home. Health and safety digital solutions such as special layouts available to employees in mobile work environment, but also apps, health portals, digital consultations or wearable technology are a necessary requirement under the above mentioned conditions.   In addition, organisations must ensure that their workplaces meet legal standards (work equipment, atmosphere, noise pollution, etc.) and carry out regular risk assessments of psychological stress in accordance with Section 5 of the Occupational Safety and Health Act.[2]

- **Forms of work:** Teleworking/home office is currently the most common form of mobile work. However, desk sharing, job sharing, and workation are becoming increasingly important. [2] Location- and time-independent work creates flexibility and freedom. This expands the scope of action of employees, which in turn improves job satisfaction.[6] Organisational managers are therefore called upon to create or strengthen these structures so that different forms of work are anchored in the company culture in the long term.[2] At the same time, new forms of work such as the "New Work" concept, in which employees' wishes and ideas are given priority (e.g. through an improved work-life balance or the elimination of fixed workplaces), are becoming increasingly popular. [9]

With regard to the research question posed at the beginning, the analysis made so far, shows that organisations today possess a wide range of strategies for optimising their employees' health and well-being, and ultimately for minimizing psychological stress factors in the workplace.[2] The type and size of

the organisation, the financial resources, and the level of development of the CHM are of significant importance in this regard.**²** Unfortunately, the priority of this topic has not yet reached everyone, because the study shows that only 38% of organisations deal intensively with the identification of psychological stress and its consequences and implement appropriate measures against burnout, overexertion, and depression. In light of the present subject matter, this is not enough.

Results

Psychological stress is typically addressed on the basis of two factors: Companies need support in surveying psychological stress because of future predictions to increase, whereas scientific research, together with health institutions, provide assessment methods (e.g. questionnaires) to provoke the need for such. It is assumed that companies know best when the levels of psychological stress are high and consequently can lead to incorrect stress. However, the complexity of the overall context of interaction and the conditional relations among the stress factors rule out such assumptions and therefore are only marginally mentioned in the current survey. Nachreiner (1981) describes a similar situation, assuming that the assessment results of the eigenvalue in terms of perceived stress could possibly be more than the sum of the individual effects. It is therefore essential that psychological stress is recorded and assessed separately and not as part of the subjective perception or assessment of a company.

In addition to the statistical significance (probability value), the survey shows other relevant results. [6] There are stress factors that are very job-specific such as the amount of information processing. Other stress factors are cross-occupational. Stress factors that include time constraints or certain quantities are particularly noticeable. It can also be assumed that the respondents have different opinions and definitions of the influencing factors presented. [4] Nevertheless, the survey results can be easily divided into the five stress categories named. [3]

Conclusion

The success of a company is essentially dependent on the performance of its employees. This performance is seen as a consequence of the respective working conditions. [1] Therefore, the fundamental question of this research work: how limiting values of psychological stress can be identified and avoided, is the focus of many organisations. Since, as the present analysis has shown, this question is highly complex, the next step should be the creation of a new working model, with the help of which to examine future problems in this field, to redefine their component parts, and to develop research systems that enable

further exploration of stress factors and their implementation in statistical models. [4]

Finally, due to the rapid pace of digitalization in today's professional world, it must be noted that the problems outlined in current studies need to become the focus of future research. As this study shows, the stress factors defined in the results analysis, such as workload and complexity of tasks, deadlines and performance pressure are the same as the ones mentioned by the majority of the organisations.[2] Consequently, the above stress parameters should be taken into account in the analysis of future work conditions, so as to promote technical automation of work processes, for example. [4] Work-related stress, increased absenteeism, and reduced performance are just a few examples that can be reduced through a targeted health and safety management. The implementation of sensible preventive measures, effective intervention, and the motivation to adopt new approaches form the basis for a healthier and future-oriented working life. [5]

Notes

[1] **Eder**, Brigitte-Cornelia. Sichere Arbeit: Internationales Fachmagazin für Prävention in der Arbeitswelt. 15 Mai 2015, https://www.sicherearbeit.at/ausgaben (14 Mai 2024).

[2] **Hübers**, Mark. #whatsnext – Gesund arbeiten in der hybriden Arbeitswelt. Konstanz: Institut für Betriebliche Gesundheitsberatung GmbH (IFBG). 22 März 2023, https://www.tk.de/resource/blob/2145756/3005523ae7a54b38cbdd7445021cdb11/studie--whatsnext-2023-data.pdf (13 Mai 2024).

[3] **Fürstenberg**, Reinhild. Studie offenbart extremen Anstieg psychischer Belastungen am Arbeitsplatz. 22 März 2023, https://www.haufe.de/personal/hr-management/psychische-gesundheit-am-arbeitsplatz/psychische-erkrankungen-von-beschaeftigten-steigen-enorm_80_590678.html (2Mai 2024).

[4] **Renner**, Andreas. WHO (Weltgesundheitsorganisation) verzeichnet starke Zunahme psychischer Erkrankungen durch Corona. 17 Juni 2022, https://www.zeit.de/gesellschaft/zeitgeschehen/2022-06/psychische-gesundheit-corona-who (5 Mai 2024).

[5] **Arps**, Wiepke. #whatsnext – Gesund arbeiten in der hybriden Arbeitswelt. Arbeitskreis Betriebliche Gesundheitsförderung (AK BGF). 09 Mai 2023, https://www.tk.de/presse/themen/praevention/gesunder-arbeitsplatz/whatsnext-studie-gesund-arbeiten-in-der-hybriden-arbeitswelt-2145332 (13 Mai 2024).

[6] **Walkenhorst**, Karen. Pressekonferenz zur Vorstellung der Studie "#whatsnext – Gesund arbeiten in der hybriden Arbeitswelt". Presse und Politik der TK (Techniker Krankenkasse). 22 März 2023, https://www.tk.de/resource/blob/2146914/186b325e730114f6f54ed636e3b1e6db/statement-karen-walkenhorst-studie--whatsnext-2023-data.pdf (5 Mai 2024).

References

1. **Volk**, Georg. Determinanten von Mobbing am Arbeitsplatz: Der Einfluss der Führung und des Betriebsklimas auf die negative Kommunikation. Wiesbaden: Deutscher Universitätsverlag/GWV Fachverlag GmbH, 1. Auflage, 2004, Seite 1–7.
2. **Träger**, Thomas. Personalmanagement: Grundlagen, Prozesse und Instrumente. München: Verlag Franz Vahlen GmbH, 1. Auflage, 2021, Seite 1 – 5.
3. **Ackermann**, Sebastian. Sicherheit und Gesundheit bei der Arbeit – Grundlagen und Grundwissen. Wiesbaden: Universum Verlag GmbH, Band 5, 2019, Seite 169 – 175.
4. **Ferreira**, Yvonne, **Vogt**, Joachim. Psychische Belastung und deren Herausforderungen. Z. Arb. Wiss. (Zeitschrift für Arbeitswissenschaft) Springer Verlag, 2022, Seite 202 – 219.
5. **Wenchel**, Karl. Psychische Belastungen am Arbeitsplatz: Ursachen – Auswirkungen – Handlungsmöglichkeiten. Berlin: Erich Schmidt Verlag GmbH & Co. KG, 1. Auflage, 2001, Seite 11 – 17.
6. **Scharnhorst**, Julia. Psychische Belastungen am Arbeitsplatz vermeiden: Burnoutpräventionen und Förderung von Resilienz in Unternehmen. Freiburg: Haufe-Lexware GmbH & Co. KG, 1. Auflage, 2019, Seite 9 – 25.
7. **Cordes**, Brigitte. Arbeitsschutz in der Praxis: Psychische Arbeitsbelastung und Gesundheit. Berlin: Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) – c/o Bundesministerium für Arbeit und Soziales, 2017, Seite 4 – 10.
8. **Rothe**, Isabel, **Adolph**, Lars. Psychische Gesundheit in der Arbeitswelt: Wissenschaftliche Standortbestimmung. Bönen: Druck & Verlag Kettler GmbH, 1. Auflage, 2017, Seite 13 – 19.
9. **Brandes-Visbeck**, Christiane, **Thielecke**, Susanne. Fit für New Work: Wie man in der neuen Arbeitswelt erfolgreich besteht – Businessmodelle, Work-Life-Balance, Co-Working & Co. Pößneck: GGP Media GmbH / Redline Verlag, 2018, Seite 1 – 5.

About the Author

Christian Conrad, M.Sc. Specialization: Advanced Management

Owner and Managing Director of Matrix GmbH & Co. KG, PhD student at the University of Library Studies and Information Technologies in Sofia, Bulgaria.

To contact the Author: christian.conrad@vodafone.de