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# ASSESSMENT OF WORKLIFE AREAS, TRUST IN SUPERVISOR AND INTERPERSONAL TRUST AS CONDITIONS OF SEVERITY OF STRESS AT WORK

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#### Abstract

**Objectives:** The aim of the paper is to present the findings from a study of the relationships between perception of worklife areas and trust in supervisor and interpersonal trust on the one hand, and assessment of the severity of stress at work on the other hand. **Material and Methods:** The study involved 1113 individuals working in different Polish organizations. The *Perceived Stress Scale* (PSS-10) was used to measure stress severity. Assessments of worklife areas were measured using the *Areas of Worklife Survey*, while trust was measured using the *Trust in Supervisor Scale* and the *Interpersonal Trust Measures*, a tool for measuring trust in co-workers. **Results:** The regression analysis results prove that stress severity depends to the largest extent on the assessment of worklife areas (workload, reward, and values), as well as trust in the skills and competencies of the supervisor and trust in co-workers, based on cognitive factors. The role of trust in the supervisor, emphasizing the latter's benevolence and the belief in their integrity and of trust in co-workers, based on emotions, and the relationships of these variables with stress require clarification. The model turned out to be statistically significant, the variables included in the model explain 45% of the variability of the dependent variable. **Conclusions:** Assessment of worklife areas is more significant for stress level prediction than the trust dimensions studied. Conclusions concerning the relationships between trust and stress must be cautious, and the matter should be studied further. Int J Occup Med Environ Health. 2022;35(6):719–30

#### Key words:

stress, worklife areas, trust in supervisor, trust in co-workers, cognition-based trust, affect-based trust

#### **INTRODUCTION**

Occupational stress is defined as a significant, unpleasant or negative experience of a worker [1] who feels unable to cope with pressure in the workplace due to the inability to meet the requirements placed on them and to cope with overly difficult tasks [2]. Occupational stress is an important issue not only for the individuals experiencing it, but also for organizations, which suffer significant financial losses related to it. Stress experienced in the workplace, as a result of threatening psychosocial factors, generates

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such high costs that it was identified in 2017 as the most significant occupational health and safety issue requiring intervention at the organizational level in European Union countries [3].

Meta-analyses of the results of studies on the effects of emotional strain experienced in the work setting suggest that such stress is significantly linked to an increased risk of illness and death, particularly as a result of cardiovascular diseases [4] and cancer [5]. The association between workplace stress and a higher incidence of musculoskeletal complaints, autoimmune diseases and upper respiratory infections [6] has also been confirmed. The high requirements placed on employees also increase the risk of absenteeism due to negative mental states, mental disorders, including in particular depression and anxiety, lack of self-satisfaction, substance abuse behavior, and distraction, reducing efficiency, performance, and productivity [7].

Therefore, the World Health Organization highlights the need to take into account psychosocial work stressors, both in research on the determinants of stress and in designing a model of a workplace conducive to health [8]. In line with the approach of the International Labour Organization, psychosocial risks are defined in terms of the interaction between the work process management, job content, organization, and other environmental determinants on the one hand, and the workers' competences and needs on the other hand. In this approach, psychosocial hazards are defined as aspects of work process design and management that may potentially cause psychological or physical harm and have a negative impact on the overall social and organizational context of the enterprise [9].

When proceeding to assess the work environment, with its psychological and social aspects, researchers often rely on the theory by Leiter [10], expanded together with Maslach [11,12]. This approach prescribes that attention be focused on workers' perception of 6 main spheres, which the authors referred to as worklife areas.

Workers assess their work in terms of how well they are able to meet the requirements placed upon then, how much freedom they have to decide about their tasks, how much support they receive from supervisors and co-workers, how consistent their values are with those of the organization, and how fair the organization is in its operations [11]. The way of perceiving these aspects can translate into stress experienced when performing occupational tasks.

Among the psychosocial factors which may determine the severity of stress, attention is focused slightly less frequently on the assessment of trust in supervisor and in co-workers (interpersonal trust). Trust can be presented in very many different ways, but in the psychosocial approach it is presented as the ability to rely on another person in a situation of risk, or as a relationship that facilitates cooperation [13]. The basis for trust is provided by the constancy and predictability of other people's behavior, which compensates to a large extent for uncertainty [14]. This variable may be significant for the way of perceiving stressors, the severity of stress felt, and reaction to stress in the workplace. Hofstede et al. [15] note that social trust can modify the identification of stressors by the employee, for instance a conflict at work may be more easily and rapidly identified by employees with low levels of social trust. Rhee [16] argues that trust can be related to stress as a determinant of its severity, acting most often as a buffer, a factor weakening the effect of stressors and reducing the severity of subjectively perceived stress. However, the author emphasizes that trust can also amplify some stressors. In fact, trust involves the risk of being exploited, as it represents a certain vulnerability shown to others, which the respective individual accepts [17]. Trust in supervisor and co-workers can therefore both be a source of support in difficult situations, protecting the individual from uncertainty and anxiety, and involve

a risk of situations in which others let down the employ-

ee's trust, potentially resulting in stress. Particularly im-

portant are the relationships between the subordinate and the superior, who can make decisions with regard to matters relevant to the employee. Due to formal dependence, power and hierarchy, this relationship is asymmetrical by assumption. The factors named as those shaping trust in the supervisor include the latter's skills, allowing him or her to enjoy greater authority in the eyes of the subordinates. Another aspect is benevolence, expressed by the supervisor's positive attitude towards the subordinate and behavior favorable to the latter, without expecting tangible benefits in return, as well as integrity of the leader's behavior. This reflects the principles guiding the supervisor's conduct and translates into fair treatment of the subordinates [18].

Interpersonal trust is also an important aspect. McAllister [19] distinguishes 2 types of trust in his approach: cognition-based and affect-based trust. The cognitive aspect is based on rational thinking, on the opinion one has about the other person, developed on the basis of experience and observations of the partner's behavior. It results from the willingness to rely on the other person's diligence, knowledge, and competencies. The affect-based component of trust concerns feelings. It is based on preferences and the emotional connection between people, on care and bonding.

Research findings show that trust in supervisor is beneficial for the well-being of subordinates, while interpersonal trust positively influences stability and coherence of the worker group [13,18], which makes it possible to conclude that high trust in one's manager and co-workers is a negative predictor of stress.

## Aim of the study and hypotheses

The aim of the study was to examine whether and to what extent assessments of worklife areas and trust in supervisor and interpersonal trust were predictors of stress at work. The following research hypotheses were put forward:

H1: Assessments of worklife areas are negative predictors of stress.

Stress was assumed to be associated with the assessment of the following areas:

- H1a: workload,
- H1b: control,
- H1c: reward,
- H1d: community,
- H1e: fairness,
- H1f: values.

H2: Trust in supervisor is a negative predictor of stress. Stress was assumed to be associated with the assessment of the following areas of trust in supervisor:

- H2a: skills and competencies,
- H2b: benevolence and integrity.

H3: Interpersonal trust is a negative predictor of stress. Stress was assumed to be associated with the assessment of the following types of interpersonal trust:

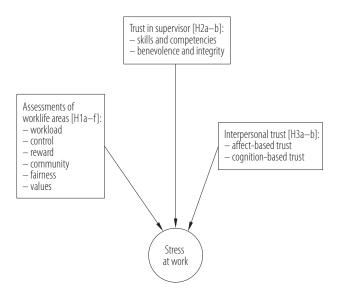
- H3a: affect-based,
- H3b: cognition-based.

Figure 1 shows the theoretical model of variable dependency.

# MATERIAL AND METHODS

## The study sample

A survey was conducted in 2021 among 1113 people working in different organizations across Poland to demonstrate the connection between assessment of worklife areas, trust in supervisor and interpersonal trust on stress. Sample A included 538 women (48% of the sample) and 575 men (52% of the sample). The respondents were working people aged 18–77 years. The mean age of the respondents was nearly 45 years (M±SD 44.8±14.08). Most of the respondents, 599 (54% of the sample), had higher education, including engineering and bachelor's degrees, others had secondary education (431 respondents, 39% of the sample), vocational (71 respondents, 6%), and elementary education (12 respondents, 1%).



**Figure 1.** Theoretical model of variable dependency (with hypotheses)

The survey covered 241 respondents working in microenterprises, employing  $\leq 9$  people (22% of the sample), 304 working in small businesses, employing  $\leq 49$  people (27% of the sample), 238 working in medium-sized businesses, employing  $\leq 249$  people (21% of the sample), and 330 working in large enterprises, employing  $\geq 250$  people (30% of the sample). The study included representatives of different professions involving working with people, things, ideas, and data (information). None of these professional groups prevailed. The majority of the respondents (957 people, 86% of the sample), worked under a full-time contract of employment. The remaining 156 respondents (14% of the sample) were employed under civil law contracts, contracts of mandate, and contracts of specific work.

A group of 734 persons included employees of private businesses (66% of the sample), 319 persons were employed in state institutions (29% of the sample), 31 in cooperatives (2.7% of the sample), and 29 persons in NGOs (2.3% of the sample). The mean length of service of the respondents was just over 22 years (M $\pm$ SD 22.14 $\pm$ 14.74). The respondents included 273 people holding managerial positions (24.5% of the sample).

#### **Procedure and measures**

The survey was conducted online in 2021 by a professional research firm. Participation in the survey was voluntary, and the respondents were assured of anonymity, informed about the purpose of the study and the possibility of opting out. The research project was approved by the Research Ethics Committee of the Institute of Psychology at the university (approval number 2020-29-11).

The severity of stress at work was assessed using the *Perceived Stress Scale* (PSS-10) by Cohen et al. [20], in the Polish adaptation by Chirkowska-Smolak and Grobelny [21]. The scale contains 10 questions concerning situations constituting sources of stress at work, for example: "In the last month, how often have you been upset because of something that happened unexpectedly?" The respondents' task was to respond to them using a Likert scale, with 1 meaning "never" and 5 meaning "very often." The reliability coefficient is high at  $\alpha = 0.82$ .

Worklife areas were assessed using the *Areas of Worklife Scale* by Maslach and Leiter [10,11] in the Polish adaptation by Terelak and Izwantowska [12]. This method is used to study the subjective assessment of the employee's functioning in the working environment, in its individual areas, and to identify inconsistencies between the requirements of the organization and the aspirations, capacities, needs and values of the respondents (example items: "I have enough time to do what's important in my job," "I have control over how I do my work"). The questionnaire consists of 29 statements, grouped together into 6 scales:

- the Workload scale is related to the extent to which the employee is able to cope with the requirements placed on them at a certain level and within a certain time;
- the *Control* scale measures the extent to which the employee decides on the scope of the tasks performed and on the manner of their performance;
- the *Reward* scale concerns the employee's perception that the employer looks after their well-being, both in terms of securing access to work tools and technology

and in terms of social-emotional security, as well as rewards and recognition;

- the *Community* scale is related to the assessment of social relations in the workplace, it examines the feeling of having access to emotional and instrumental help from superiors and co-workers;
- the *Fairness* scale addresses the way in which employees perceive organizational fairness, particularly in relation to decisions of personal importance;
- the *Values* scale is used to assess the similarity of the values important for the organization and for the employee [11].

The respondents' task was to take a position on each statement included in the questionnaire, using a Likert scale, with 1 – "strongly disagree," and 5 – "strongly agree." The values of Cronbach's  $\alpha$  coefficient for the individual scales of the tool range of 0.70–0.89 and indicate their satisfactory, high reliability.

The trust indicators were obtained using 2 tools. The Trust in Supervisor Scale compiled by Wnuk [18] measures trust towards one's superior in terms of assessing the latter's skills and competencies (the belief that the supervisor makes the right decisions, properly motivates others, solves problems effectively, and has knowledge of the aspects they deal with at work; example item: "My supervisor is very knowledgeable about the area they deal with") and kindness and integrity (the belief that the supervisor is honest and fair, that they keep their promises); example item: "My supervisor is honest in conversations with me"). The tool consists of 2 scales, referring to the 2 dimensions mentioned above. The 2-factor structure of this measure was confirmed by factor analysis. The tool consists of 8 statements to assess the first dimension discussed, and 12 statements to assess the second dimension, and the respondent's task is to take a position on them using a 5-point Likert scale from 1 – "strongly agree" to 5 – "strongly disagree." The values of the individual reliability coefficients are very high:  $\alpha = 0.92$  for the *Skills* and *Competencies* scale, and  $\alpha = 0.92$  for the *Benevolence* and *Integrity* scale.

The Interpersonal Trust Measures by McAllister [19], in the Polish language version prepared for the purposes of this study, was used to examine affect-based and cognition-based trust in co-workers. The Polish version of the tool was prepared using a back-translation procedure. The tool consists of 2 scales: Affect-Based Trust (5 items) and Cognition-Based Trust (6 items). The first scale is based on the respondent's belief that there is an individual or that there are some individuals at work with whom the respondent has a relationship based on honesty, with whom he or she can talk freely about the difficulties experienced at work, and who will be willing to listen attentively (example item: "I can talk freely to this individual about difficulties I am having at work"). The second scale contains the belief that the respondent shares their duties with an individual who does their job professionally, whose competencies and preparation for the job the respondent does not doubt, and whom others respect as a co-worker (example item: "This person approaches his/her job with professionalism and dedication"). The respondent's task is to take a position on the individual statements using a 5-point Likert scale from 1 – "strongly disagree" to 5 – "strongly agree."

The reliability coefficients for the scales are high:  $\alpha = 0.95$  for the *Affect-Based Trust* scale and  $\alpha = 0.86$  for the *Cognition-Based Trust* scale. Confirmatory factor analysis conducted using the JASP 0.14.1 software indicates satisfactory measures of fit of the 2-factor model to the data, comprising respectively 6 items and 5 items in 2 scales: standarized root mean squared residual (sRMR) = 0.032, comparative fit index (CFI) = 0.96, normed fit index (NFI) = 0.96, goodness of fit index (GFI) = 0.99, adjusted of fit index (AGFI) = 0.98 for the *Interpersonal Trust Measures*.

#### **RESULTS**

To verify the hypotheses, correlation coefficients were calculated and multiple hierarchical regression analysis with dominance analysis was performed. The statistical

**able 1.** Descriptive statistics of the variables, correlations and intercorrelations between areas of worklife, components of trust and perceived stress in 1113 individuals rom different Polish organizations in 2021, Poland

| , Jan., 1                 | 2     | S    |           |           |           |           | Correlation | ation     |           |           |           |           |
|---------------------------|-------|------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| Variable                  | N.    | OS.  | -         | 2         | 3         | 4         | 5           | 9         | 7         | 8         | 6         | 10        |
| 1. Workload               | 19.38 | 4.52 |           |           |           |           |             |           |           |           |           |           |
| 2. Control                | 11.07 | 2.16 | 0.297***  |           |           |           |             |           |           |           |           |           |
| 3. Reward                 | 13.35 | 3.07 | 0.349***  | 0.506***  |           |           |             |           |           |           |           |           |
| 4. Community              | 17.73 | 3.85 | 0.235***  | 0.457***  | 0.616***  |           |             |           |           |           |           |           |
| 5. Fairness               | 18.59 | 4.07 | 0.282***  | 0.434***  | 0.627***  | 0.516***  |             |           |           |           |           |           |
| 6. Values                 | 17.35 | 3.41 | 0.251***  | 0.541***  | 0.631***  | 0.581***  | 0.675***    |           |           |           |           |           |
| 7. Skills and competences | 38.37 | 9.74 | 0.251***  | 0.432***  | 0.595***  | 0.539***  | 0.636***    | 0.648***  |           |           |           |           |
| 8. Kindness and integrity | 31.58 | 7.98 | 0.231***  | 0.422***  | 0.570***  | 0.526***  | 0.620***    | 0.649***  | 0.904***  |           |           |           |
| 9. Affect-based trust     | 17.52 | 4.24 | 0.032     | 0.270***  | 0.347***  | 0.505***  | 0.296***    | 0.385***  | 0.399***  | 0.405***  |           |           |
| 10. Cognition-based trust | 21.69 | 4.32 | 0.132***  | 0.305***  | 0.352***  | 0.524***  | 0.325***    | 0.439***  | 0.459***  | 0.468***  | 0.755***  |           |
| 11. Stress                | 26.59 | 90.9 | -0.487*** | -0.399*** | -0.506*** | -0.435*** | -0.426***   | -0.495*** | -0.468*** | -0.425*** | -0.228*** | -0.379*** |

 $^{***}$  p < 0.001; \*\* p < 0.01; \* p < 0.05.

analyses were performed using the SPSS statistical package (v. 27) and JASP 0.14.1. The first step of the analysis involved calculating correlation coefficients. Table 1 contains descriptive statistics for all the studied variables, the means obtained, the standard deviations, as well as the correlations and intercorrelations between the studied variables.

In a subsequent step, multiple hierarchical regression analysis was conducted to test the extent to which the assessments of individual worklife areas and trust dimensions contributed to explaining stress variance. The assessments of individual worklife areas and dimensions of trust in supervisor and interpersonal trust were treated as explanatory variables, while the total score on the PSS-10 was treated as an explained variable. Three models were built, and 2 sets of variables were input as part of the analysis. The first set of variables consisted of assessments of worklife areas (block a), while the second set consisted of the individual dimensions of trust (block b). The results of the analysis are presented in Table 2.

The results prove that among the assessments of individual worklife areas, significant negative predictors of stress are represented by the assessments of the *Workload* area (the higher the score, the lower the perceived workload), as well as the *Reward* and the *Values* area. In the first model, the assessment of the *Community* area also marked itself as a predictor. Assessments of worklife areas explain about 42% of the stress variance. Adding the trust scale components to the worklife areas increases the explained variance to 45% (cf. columns analysis 1 block a and analysis 1 blocks a and b in Table 2). The trust dimensions alone explain approx. 27% of the stress variance (cf. column analysis 2 block b in Table 2).

The trust components negatively related to stress are trust in supervisor in the skills and competencies dimension and cognition-based interpersonal trust. These are strong negative predictors of stress. After including worklife area

**Table 2.** Multiple hierarchical regression, multiple regression and dominance analyses on stress in 1113 individuals from different Polish organizations in 2021, Poland

| Variable and model summary                 |                       | β                            |                       | Zero-order -<br>correlation | $\mathbb{R}^2$ |            |       |
|--------------------------------------------|-----------------------|------------------------------|-----------------------|-----------------------------|----------------|------------|-------|
|                                            | analysis 1<br>block a | analysis 1<br>blocks a and b | analysis 2<br>block b |                             | alone          | additional | М     |
| Areas of worklife survey                   |                       |                              |                       |                             |                |            |       |
| Workload                                   | -0.336***             | -0.316***                    | _                     | -0.487***                   | 0.237***       | 0.084      | 0.161 |
| Control                                    | -0.051                | -0.046                       | _                     | -0.399***                   | 0.159***       | 0.002      | 0.081 |
| Reward                                     | -0.153***             | -0.154***                    | _                     | -0.506***                   | 0.256***       | 0.011      | 0.134 |
| Community                                  | -0.107***             | -0.056                       | _                     | -0.435***                   | 0.189***       | 0.002      | 0.096 |
| Fairness                                   | -0.013                | 0.007                        | -                     | -0.426***                   | 0.182***       | 0.001      | 0.092 |
| Values                                     | -0.217***             | -0.166***                    | _                     | -0.495***                   | 0.245***       | 0.011      | 0.128 |
| Dimensions of trust                        |                       |                              |                       |                             |                |            |       |
| Skills and competences                     | _                     | -0.209***                    | -0.422***             | -0.468***                   | 0.219***       | 0.008      | 0.114 |
| Kindness and integrity                     | _                     | 0.131*                       | 0.043                 | -0.425***                   | 0.181***       | 0.003      | 0.092 |
| Affect-based trust                         | _                     | 0.164***                     | 0.183***              | -0.228***                   | 0.052***       | 0.011      | 0.032 |
| Cognition-based trust                      | _                     | -0.260***                    | -0.344***             | -0.379***                   | 0.144***       | 0.026      | 0.085 |
| Model fit and summary                      |                       |                              |                       |                             |                |            |       |
| F                                          | 133.66***             | 92.56***                     | 101.30***             |                             |                |            |       |
| $\mathbb{R}^2$                             | 0.42                  | 0.46                         | 0.27                  |                             |                |            |       |
| Adjusted R <sup>2</sup> (AR <sup>2</sup> ) | 0.42                  | 0.45                         | 0.27                  |                             |                |            |       |
| $\Delta R^2$                               | 0.42***               | 0.04***                      | 0.27***               |                             |                |            |       |

Analysis 1 block a and blocks a and b — multiple hierarchical regression (2 blocks); analysis 2 block b — multiple regression (only dimensions of trust as independent variables);  $R^2$  alone — value of  $R^2$ —the amount of variability accounted for by each predictor (for example Workload in first row) with no other predictors (other areas of worklife and trust dimensions) in the regression equation; Additional  $R^2$  (after other predictors entered) — the amount of variability accounted for by each predictor after all 9 other predictors were entered on the previous step; M  $R^2$ =  $R^2$  Alone + Additional  $R^2/2$  — averaged the 2 amounts of variability accounted for by each predictor;  $\beta$  — standardized regression coefficients.

Dependent variable: stress.

Bolded are variables that are significant in a model that includes all the predictors (areas of worklife and trust dimensions).

assessments and trust scale dimensions in the model, the dimensions of affect-based interpersonal trust and benevolence and integrity constitute positive, but very weak predictors of stress.

Due to the relatively high correlations of >0.4 between the assessments of the individual worklife areas and between the trust components (cf. Table 1), and to the associated difficulties in interpreting the regression analysis results, in order to minimize inference errors [22], dominance analysis was additionally performed to capture the most significant stress predictor [23].

In the course of the dominance analysis, a regression model was constructed with a single variable, and subsequently the remaining 9 variables were input in the model, with a calculation of the additional R<sup>2</sup> and the average R<sup>2</sup>, whose values demonstrate the significance of the respective independent variable in explaining the dependent variable. Significant predictors were assumed to be those

<sup>\*\*\*</sup> p < 0.001; \*\* p < 0.01; \* p < 0.05.

for which the mean R² took a value >0.08. As results from Table 2 (column 3), significant variables in the regression models, explaining stress variance, stress turned out to be the assessments of the workload, reward, and values areas, trust in supervisor in the skills and competencies dimension (mean R² of over 0.1), as well as assessments of the community and fairness areas, and trust in supervisor in the benevolence and integrity dimension (mean R² of >0.09). Cognition-based interpersonal trust and assessment of the control area are less significant stress predictors (mean R² of >0.08). Affect-based interpersonal trust explains the smallest percentage of the stress variance. In general, the dimensions of trust in supervisor are more significant than the dimensions of interpersonal trust. Finally, on the basis of both analyses, i.e., of regression

Finally, on the basis of both analyses, i.e., of regression and dominance, the significant variables negatively related to stress and stronger stress predictors were assumed to be the assessments of the workload, reward, and values worklife areas, and among the trust dimensions, above all trust in supervisor in the skills and competencies dimension and cognition-based interpersonal trust. Trust in supervisor in the benevolence and integrity dimension and affect-based interpersonal trust are weak positive stress predictors.

#### DISCUSSION

The study results make it possible to formulate theoretical conclusions concerning the observed relationships between the studied variables, as well as practical conclusions. The first theoretical conclusion concerns the assessment of the working environment, the assessment of worklife areas, and the second one to the trust employees have in their supervisor and in their co-workers.

The results indicate that the assessment of the working environment is highly significant for the severity of stress perceived by the workers. Analysis of the research material leads to the conclusion that among worklife areas, the predictors of stress are the following:

- workload, related to the feeling of not being overly burdened with tasks;
- values, i.e., the employee's feeling that their values match those of the organization;
- reward, i.e., the feeling of being recognized for the tasks performed.

Assessments of the remaining worklife areas are weaker, but also important determinants of worker stress. They include assessments of the following areas:

- community, i.e., the feeling of support and good teamwork:
- fairness, related to the existence of clear principles,
   rules in terms of the distribution of assets, and a clear
   career path of promotion in the workplace;
- control, i.e., the feeling of autonomy, of freedom to make decisions.

The results obtained confirm the outcomes of previous studies, which also prove the association between the assessment of selected worklife areas with stress at work [24]. They are also consistent with the results of research by Brom et al. [25], pointing to the existence of relationships between assessments of worklife areas and other variables related to stress and health, such as employee well-being and occupational burnout. All the hypotheses concerning negative associations of worklife area assessments with stress, making up hypothesis H1 (H1a–f), should therefore be accepted.

Stress predictors also include dimensions of trust in supervisor and interpersonal trust. Among the trust components, the dimension of trust in supervisor, based on a positive assessment of the latter's skills and competencies, has dominant importance in predicting stress levels. This means that the belief about the supervisor having the knowledge, skills and competencies required to lead the organization and people, and the feeling that the manager is doing it right, associated negatively with stress, can be of key importance for employee well-being. Li and Tan [26] emphasize the importance of trust in su-

pervisor for the sense of psychological security. The significant role of this variable is also confirmed by the results of the research by Liou [27], who indicates that trust in supervisor contributes to stress reduction. The results of other authors' studies also prove the relationship between trust in supervisor and the well-being of subordinates [28,29]. Similarly, cognition-based interpersonal trust, resulting from the belief that one's co-workers are well-prepared for their job, is negatively associated with stress. On the basis of the results obtained, hypotheses H2a and H3b should be accepted.

On the same basis, hypotheses H2b and H3a should be rejected, and the relationships between the variables assumed in them should be approached with caution. Although the correlations between the variables these hypotheses concern and stress are negative, in the research model adopted, which takes into account multiple variables, the varying trust in supervisor in the benevolence and integrity dimension and affect-based interpersonal trust appear to be weak positive predictors of stress. The scores on scales assessing worklife areas, trust in supervisor in the skills and competencies dimension and cognition-based interpersonal trust are suppressors of affect-based interpersonal trust and of trust in supervisor in the benevolence and integrity dimension. Negative suppression is found here, occurring when the inclusion of other variables in the model reverses the sign of the relationship between the predictor and the explained variable. This surprising result requires further exploration and clarification. The results suggest that trust, based on the belief about the benevolence of others, both one's coworkers and one's supervisor, about their integrity and the superior's positive attitude towards the subordinate, may in certain situations involve some kind of emotional burden. The positive association between the dimensions of trust discussed and stress may perhaps have its origin precisely in the determinants mentioned above, in social relations. Zieliński [13] discusses the possible

negative consequences of trust as a factor that can lead, e.g., to blind trust in others or unnecessary duties towards the supervisor or co-workers. A review of the literature suggests that trust may be associated with excessive interpersonal commitments, opportunistic behavior, lack of objectivity and of effective control, and impaired vigilance [30], which may result in worse performance at work [31] and ultimately be reflected in the severity of subjectively experienced stress.

The relationship between the trust dimensions discussed and stress was found to be significant in both cases, but not strong, especially in the case of trust in supervisor in the benevolence and integrity dimension, which explains the variance of the stress variable least strongly. The results point at the same time to the potential greater importance of affect-based interpersonal trust, meaning that the respondents trust the people or the person they share their workplace with, who are benevolently inclined towards them. The more often the respondent agreed that there were such people in their workplace, the higher the severity of their stress. It should be remembered that such a result was observed only in the research model finally adopted, which explains the largest percentage of the variance of the stress variable. In addition, it is worth emphasizing that this is not a result enabling causal inference, as the study was correlational in its nature. The relationship shown here may result from completely different determinants, not covered by the project.

The practical conclusions that can be formulated on the basis of the research results discussed above point to the need for organizations to take responsibility for creating a working environment in such a way that employees do not feel excessive physical and mental strain, uncertainty, haste, or pressure, resulting from faulty work organization. This can be facilitated by adapting the amount and type of work to the workers' capabilities, preparing workers in advance for the performance of tasks, planning the latter in advance, involving workers in

setting work schedules, and looking after workers health through appropriate care programs. Adequate rewards for completed tasks, whether financial or other, are also significant for stress prevention. It is also very important to look after an appropriate atmosphere in the team, so that it gives people a feeling of support and belonging to the worker group. As far as trust is concerned, the supervisor's and the co-workers knowledge and competencies are the most relevant aspects. Assessment of these aspects of functioning of the supervisor and of those the worker shares their responsibilities is an important basis for trust, which is negatively associated with stress.

# Limitations of the study and future research directions

The study took into account only the associations of stress with assessments of worklife areas, assessments of psychosocial variables resulting from the specific organization's culture, and subjective feelings of trust in supervisor and interpersonal trust. This is one of its limitations. In addition to the organizational and social context, which can potentially cause psychological harm, future research should also take into account variables related to workers' personality, character, and temperament. The authors believe reactivity to be a variable particularly worthy of attention in relation to the severity of stress in the workplace and to affect-based trust. A manifestation of high reactivity is neuroticism, correlated negatively with agreeableness and confidence [32]. Investigating these traits may help to explain the results obtained here and expand the picture of the relationships between variables discussed. It would also be interesting to verify whether personality and temperamental variables have significant for trust in supervisor and interpersonal trust. It seems important to examine the potential role of selected emotional characteristics, such as self-control and the ability to manage emotions, which may be significantly associated with the stress response and form interpersonal trust.

In addition, it is desirable to take into account the specific nature of the job and the manner of its performance by the worker group in which the individual functions, and in particular the nature of the relationship with coworkers and with the supervisor resulting from that, as this may be significant for mutual trust within the team and trust in the supervisor. The research did not take into account sociodemographic variables related to length of service, such as time over which the employee has worked together with the other team members and the supervisor, which can also be significant for building a relationship based on trust. Conducting regression models for subsamples by organization size, occupation, and the nature of employer-subordinate relationships will be analysed in the future. It would also be valuable to enrich the research methodology by adding qualitative methods, such as interviews with employees. This would make it possible to obtain a better insight into their feelings and provide a source of important information on the relationships between trust and stress.

#### **CONCLUSIONS**

The research results presented in this paper lead to the conclusion that the assessment of worklife areas is more significant for predicting stress levels than the trust dimensions studied. The more employees feel overburdened with work, the less frequently they obtain satisfying rewards, the more they perceive a mismatch between their own values and those promoted in the organization, the higher the severity of their stress at work. Other worklife areas (community, fairness, and control) play a similar but less significant role. In the case of trust in supervisor and interpersonal trust, the dimensions concerning the perception of competencies and knowledge are more significant than the emotional attitude towards the trusted person. The lower the trust in supervisor, based on the latter's skills and competencies,

and cognition-based interpersonal trust, the higher the severity of stress. The significance of trust in supervisor, based on the belief about their benevolence and integrity, and of affect-based interpersonal trust require further research, and the role of these variables is inconclusive.

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