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**SELF- EFFICACY THROUGH PSYCHOSOCIAL RISK FACTORS  
IN PRIMARY AND SECONDARY EDUCATION EMPLOYEES**

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***Abstract***

260 questionnaires that studied the workers' sense of self-efficacy in terms of factors of occupational stress and individual socio-economic factors, were administered during periodic medical checkup in two kindergartens, three secondary schools and a highschool. The employees' age, characteristics of commuting (distance and duration) and the sense of self effectiveness do not differ significantly among schools. The employees' length of employment in education is significantly lower ( $p = 0.002$ ), in the urban environment, in kindergartens as compared to secondary schools. Self-effectiveness is significantly lower as the stressor is higher, depending on the occupational stress factors as follows: in kindergarten with the level of payment ( $p = 0.0006$ ); at college with the stress of communicating with colleagues ( $p = 0.0026$ ); and with the perceived responsibility of work at college ( $p = 0.0443$ ) and at a secondary school ( $p = 0.0179$ ). Only at a rural school is self-effectiveness higher for administrative officials and teachers compared to auxiliary staff ( $p = 0.0208$ ). In no school, does the sense of self-effectiveness differ significantly depending on commuting, the socio-economic status, nor with the total number of people or children with whom he/she lives or the relations of communication at home and the membership in a certain religious community or being a religious practitioner, age, length of employment in education, marital status, gender, studies, function, residence or other occupational stressors. These results show that perceived self-effectiveness of educational employees presents significant differences depending on occupational stressors and different contextual factors depending on the school.

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**Keywords:** Self-efficacy, stress factors, psychosocial risk factors.



## 1. Introduction

The effect of occupational stress, both at the individual level, on the worker, primarily by reducing work capacity and satisfaction of the performed work, and in terms of social costs (absenteeism, inefficiency) show the importance of the knowledge of occupational stressors for the use of efficient coping mechanisms at both individual and organizational level (EU-OSHA, n.d.). Not only will the employee with significant stress at the workplace be affected but also the organization they work in, as well as the persons involved more or less in their personal and family life. Some authors classify workplace stressors as linked with the workload content (workload, inflexible work schedule, lack of control over work processes), or work-related context (interpersonal relationships, remuneration) (World Health Organization, n.d.).

The teaching staff is a professional category exposed to a wide range of professional stressors, the most frequent being considered the following: workload; difficulties in the relationship with administrators and colleagues, difficulties in the teaching process related to class activity, or being evaluated by others; etc. (Kyriacou, 2001). However, occupational stressors are extremely diverse, long-lasting or contextual, linked to the work process, or coming from the outside of the occupational sphere, linked to the worker or related to the social environment, residence, socio-economic status, etc.

Certain stressors can be perceived higher according to sex, some authors showing that women, due to workload, have higher levels of stress. (Nasser-Abu Alhija, 2015). The type of residence and commuting to the workplace (as distance or duration) can also constitute additional stressors for employees (Nomoto, Hara, & Kikuchi, 2015) Commuting may be a stress factor not only because of time, duration and transport modes, but also as it may interfere with living conditions: namely, reduction of time available for leisure activities (Costa, Pickup, & Di Martino, 1988).

## 2. Problem Statement

Individual factors, such as self-esteem, optimism, or self-efficacy, may represent stress-relieving factors. Perceived self-efficacy is a construct that shows an individual's perceived capacity to reach a certain goal. It is defined as "people's beliefs about their capabilities to produce levels of performance that have an impact on events that affect their lives" (Bandura, 1994). At teachers, high levels of occupational stress was related to low levels of job satisfaction which can diminish self-efficacy. In case of the teaching staff, high levels of occupational stress was related to low levels of job satisfaction that can diminish self-efficacy (Reilly, Dhingra, & Boduszek, 2014). Anxiety or depression may predispose to increased perception of occupational stressors as occupational stress can accentuate depression or anxiety. Cultural or spiritual factors can modulate perceptions of stress, for example, the presence of depression has been associated with more frequent private religious practices and less frequent worship attendance (Hayward, Owen, Koenig, Steffens, & Payne, 2012). Stress may be caused by time limited events, such as the pressures of examinations or work deadlines or by ongoing situations, such as family demands, job insecurity or long commuting journeys (Michie, 2002). The organizational changing in teachers' work at schools may reduce teacher resignations and may improve the teachers' wellbeing (Naghieh, Montgomery, Bonell, Thompson, & Aber, 2015).

### **3. Research Questions**

A point of interest of the study was the hypothesis that perceived self-efficacy correlates negatively both with the level of occupational stressors and with socio-economic factors or with those in the personal life (the perceived degree of communication with the family), belonging to a religious community or the status of religious practitioner. The question is to what extent the perceived self-efficacy presents correlations with other individual variables such as age, length of employment in education, marital status, gender, education, function, residence, and to what extent the correlations of self-perceived perceptions with the mentioned parameters are different depending on school unit or are independent of it.

### **4. Purpose of the Study**

The purpose of the study was to explore in the workers of the surveyed educational units, the associations between self-efficacy and 10 groups of job stressors (unable to change unpleasant aspects, increased responsibility, communication with superiors, communication with other employees, wage levels, work schedule, workloads, daily completion of documents, risks of disease, risks of injury) and between self-efficacy and socio-economic or personal factors according to the school unit.

At the same time we studied how the level of perceived self-efficacy is different according to the function of the employees in the unit and if the level of the occupational stressors is different depending on the school unit.

### **5. Research Methods**

During occupational medical check-up, performed at the units for 4 days in September 2017, the workers were presented to volunteer filling in a questionnaire consisting of 4 parts:

A. The individual characteristics of the workers were as follows: age, sex, type of residence (rural or urban), length of work in the unit, length of work in education, level of studies, position in the unit.

B. The questionnaire of estimation of the frequency of the occupational stress had the following answer types: 1 (absent), 2 (rarely), 3 (sometimes) and 4 (frequently). Therefore, a score of 2 indicates presence of the stressor, whereas 1 indicates its absence.

The following occupational stressors were studied:

- the characteristics of the work process through the following seven stressors: duties in the organization, decision-making and control roles, interpersonal relationships at the workplace, leadership type, career, tasks and the pace of work, the work program (EU-OSHA, n.d.).

- stress of the teaching staff represented by the routine "Daily completion of documents" (Preda, 2010).

- the perceived risk of injury and sickness at the workplace (Table 1).

**Table 01.** Possible causes of stress at workplace for employees

No.	stressors in school workplace
1	unable to change unpleasant aspects
2	increased responsibility
3	communication with superiors
4	communication with other employees
5	wage levels
6	Work schedule
7	Workloads
8	Daily completion of documents
9	risks of disease
10	risks of injury

C. The questionnaire representing the General Self-Efficacy Scale ("General self-efficacy scale") assessing perceived personal effectiveness (Baban, Schwarzer, & Jerusalem, 1996).

D. a questionnaire that studied other individual, socio-economic, and commuting characteristics, as well as belonging to and practising a religion, specifying the following:

- the number of people as well as the number of children with whom the employee lives at home;
- marital status, with the following variants: bachelor(noted B), married (noted M), divorced(noted D), widow/widower(noted W);
- number of rooms in the house: with increasing variations of response from 1, to 4 (i.e. 4 or more rooms);
- socio-economic status If you compare yourself with other people you know, do you think you have a financial situation: better (3), the same (2), worse (1);
- daily commuting as distance between home and the work place, expressed in kilometers as well as the length of commuting expressed in hours;
- relations of good understanding and communication with those with whom he lives at home the employee having 3 variants of answer as follows: very good (answer with a score of 3), sometimes we understand each other, sometimes we contradict each other (the answer with the score of 2), our relations are usually conflicting (answer with the score of 1);
- belonging to a religious community (score of 2) or another spiritual community (score of 1);
- practising a religion with the variants: a) No (score 0), b) yes but not a constant practitioner (score 1) and c) yes, constant practitioner (score 2).

Statistical tests used: ANOVA, Bartlett's Test, Kruskal-Wallis test; p value was significant at 0.05.

## 6. Findings

The College is located in the urban area, school no.1 also in urban area and schools no.2 and no.3 in the rural area. Both Kindergartens no.1 and 2 are situated in the urban area.

In College, from the 92 questionnaires distributed to employees, 86 were filled in and returned. In School no.3, 32 questionnaires were completed and returned out of the 33 distributed, whereas in School no.2, 42 questionnaires were returned out of the 44 distributed. In School no. 1, 39 out of the 40 distributed questionnaires were returned. For Kindergarten no.1, 34 questionnaires were completed and returned out of the 38 distributed, while in Kindergarten no. 2, 27 questionnaires out of the 28 distributed were returned.

The large number of completed and returned questionnaires in schools is explained by the employees' participation in the regular medical checkup. They also volunteered to participate anonymously in the study, while waiting for medical evaluation. There are no significant differences in the respondents' self-efficacy scores depending on the school unit, employees having relatively high average values relative to the maximum score which is 40 (Table 2)

**Table 02.** Average scores of self-efficacy according to school

	Obs	Total	Mean	Variance	Std Dev
<b>College</b>	70	2236.0000	31.9429	14.9822	3.8707
<b>Kindergarten no.1</b>	33	1051.0000	31.8485	17.3826	4.1692
<b>Kindergarten no.2</b>	26	850.0000	32.6923	13.0215	3.6085
<b>School no. 1</b>	32	1039.0000	32.4688	25.6119	5.0608
<b>School no. 2</b>	38	1278.0000	33.6316	10.0228	3.1659
<b>School no. 3</b>	25	821.0000	32.8400	17.8900	4.2297

Descriptive Statistics for Each Value of Crosstab Variable, p = 0.3630

Length of work experience in education according to school is significantly lower ( $p = 0.002$ ) in kindergartens (with an average of 13.7 years in Kindergarten no.1 and 12.1 years in Kindergarten no.2) versus in secondary schools (an average of 22.3333 in School No. 1 and 21.24 years in College).

The average age of employees does not show significant differences depending on the school unit having the following values: College, average age 44.83 (range between 25-63 years); Kindergarten no. 1 average age of 41.03 (ranging between 18-58 years); Kindergarten no.2 average age 41.67 (ranging between 28-59 years); School no. 1 average age of 45.55 (range between 23-62 years); School no. 2 average age of 43.34 (range of values between 22-60 years); School no. 3 average age of 42.52 (range of values between 25-57 years);

The marital status shows close relative frequencies in the school units, with a greater proportion of divorced employees (one fifth) in the college (Table 3).

The study level is higher ( $p = 0.0001$ ) in college (average score of 3.7), lower in the two kindergartens (knidergaten no. 1 = 2.96; knidergaten no. 2 = 3.03), whereas in school no.1 it was 2.9 and in school

no. 2 = 3.7. The graphic representation of the average scores of occupational stressors on a "radar" chart (with the central point of origin and axes of the radial values) produces a polygon, the angles, having average values of the stress sources and encompassing the surface that can be termed "a stress spot" of the school unit (Fig.1). Presence of the stressor is indicated by a mean score value of 1 while a value above 2 of the mean score indicates a stressor with an important frequency.

**Table 03.** Marial status according to school unit

school unit	college		kindergarten no.1		kindergarten no.2		school no.1		school no.2		school no.3	
	Freq.	Percent %	Freq.	Percent%	Freq.	Percent %	Freq.	Percent%	Freq.	Percent%	Freq.	Percent%
<b>B</b>	6	8.80	5	14.70	4	16.00	3	10.00	3	8.80	1	4.00
<b>M</b>	41	60.30	22	64.70	18	72.00	23	76.70	25	73.50	22	88.00
<b>D</b>	14	20.60	3	8.80	2	8.00	2	6.70	1	2.90	1	4.00
<b>W</b>	7	10.30 %	4	11.80	1	4.00	1	3.30	4	11.80	1	4.00
<b>Total</b>	68	100.0	34	100.0	25	100.0	30	100.00	34	100.0	25	100.0

The average score of stressors in the total group of respondents (in all school units) shows that the main stressor is "wage levels" (average score of 2.29), followed in decreasing order by "daily completion of documents" (2, 04), "increased responsibility" (1.95), "workloads" (1.79), "unable to change unpleasant aspects" (1.74), "work schedule" (1.72), "communication with superiors" (1.69), "communication with other employees" (1.69)

"risks of disease" (1.57), "risks of injury" (1.42).

Significant differences between average stress scores in all the school units are as follows:

- "communication with superiors" ( $p = 0.0004$ ) has the lowest average value in school no. 3 compared to the other school units. The maximum average value is recorded in both kindergartens and college.

- "wage levels" has the maximum value for college workers followed by kindergartens, and the minimum score is recorded in school no.3. ( $p = 0.00$ );

- "daily completion of documents" ( $p = 0.02$ ) shows the minimum value in school no.3 and the maximum value in Kindergarten no.1, school no.2 and college;

- "unable to change unpleasant aspects" ( $p = 0.0007$ ) has a maximum value in both kindergartens and college and the minimum value in the three schools;

- "communication with other employees" has the minimum score in school no.3. and the maximum value in both kindergartens, in college and in school no.2 ( $p = 0.003$ ).

Stressors represented by "increased responsibility", "workloads", "work schedule", "risk of disease", "risk of injury", did not show significant differences depending on the school unit.

Regarding the average distance of commuting, there are insignificant differences among schools ( $p = 0.64$ ) as follows: College (2.67 km), Kindergarten no.1 (5.24 km), Kindergarten no.2 (6.57 km), school no.1 3.53 km), school no.2 (11.77 km), school no.3 (3.75 km).

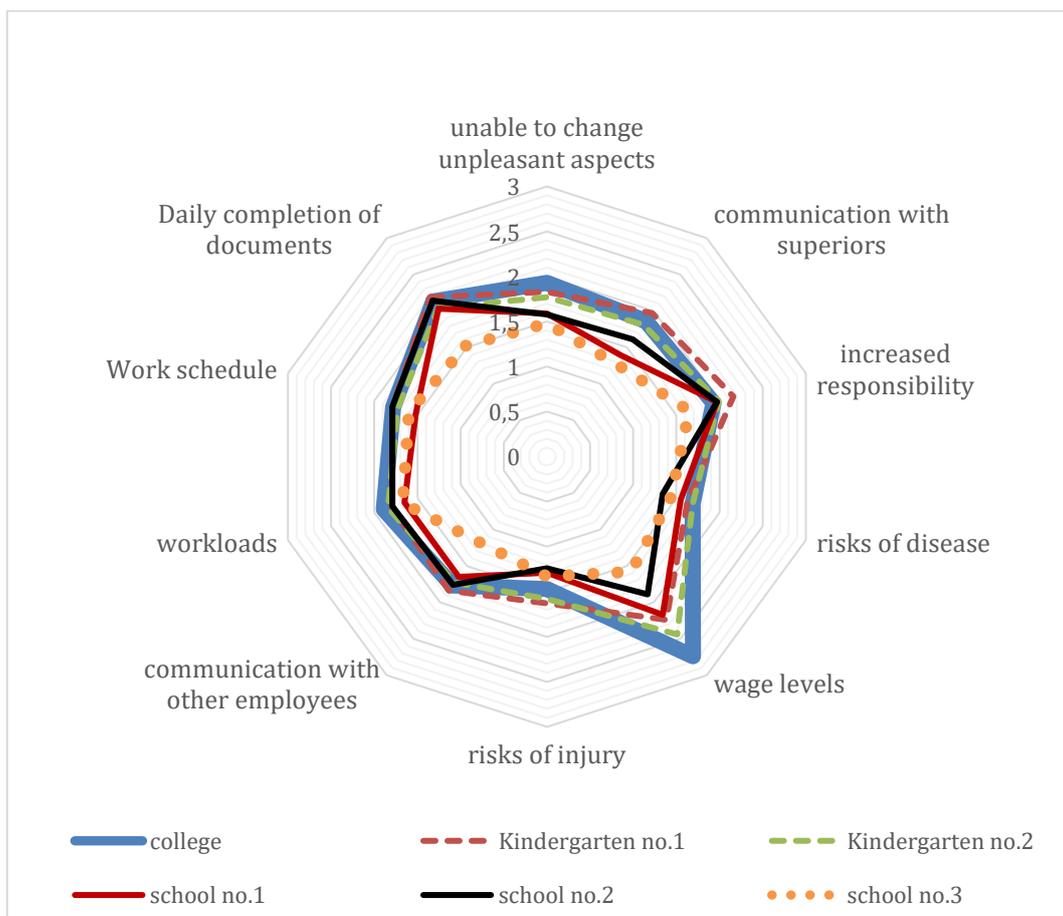
The average duration of commuting is slightly insignificant ( $P = 0.33$ ), with the following average values: College (0.49 hour), Kindergarten no.1 (0.59 hour), Kindergarten no.2 (0.78 hour), school no.1 0.4 hour), school no.2 (0.8 hour), school no.3 (0.61 hour).

Number of rooms at home is maximum in school units from the rural area: school no.3 (average of 3.68 rooms), school no.2 (average of 3.11 rooms) compared to the lowest average from the urban area in Kindergarten no.1 (average of 2.5 rooms).

"Number of people with whom the employee lives at home" shows significant differences between school units ( $p = 0.01$ ) having the minimum value in college (1.67) and maximum in Kindergarten no.2 (3.25) and in school no.3 (3.06).

"Number of children with whom the employee lives at home" differs insignificantly according to the school unit ( $p = 0.43$ ) having on average the following values: 1.23 (in college); 1.55 (in Kindergarten no.1); 1.67 (in Kindergarten no.2); 1.73 (in school no.1); 1.45 (in school no.2); 1.5 (in school no.3).

The perceived self-efficacy score does not present statistically significant differences (ANOVA, Parametric Test for Inequality of Population Means) in the surveyed school units, according to the following variables: "number of people with whom the employee lives at home", "number of children with whom the employee lives at home", "relations of good communication with those with whom the employee lives at home", "financial situation compared to those whom the employee knows", belonging to a religious community, practising religion, age, marital status, sex, seniority in education, seniority in unit, residence, study/education level.



**Figure 01.** Average scores of occupational stressors according to school unit

The perceived self-efficacy score shows statistically significant differences depending on occupational stressors (the perceived self-efficacy score being higher at lower stressor scores) in the following school units with:

- "wage levels" only at Kindergarten no.1 (p = 0.0006),
- "communication with other employees" only at College (p=0.0026),
- "unable to change unpleasant aspects" only at school no.1 (p=0.0163),
- "increased responsibility" in College (p=0.0443), and in school no.1 (p = 0.0179).

Perceived self-efficacy does not differ statistically significantly in any school, depending on the following occupational stressors: "Work schedule", "workloads", "risks of disease", "risks of injury".

According to the employee's position, self efficacy presents significant differences (p = 0.0208) only in school no.2 (Table 4).

**Table 04.** Score of perceived self-efficacy according to employees' position in school no.2

	Obs	Total	Mean	Variance	Std Dev
<b>Administrative staff</b>	3	110.0000	36.6667	2.3333	1.5275
<b>carer</b>	3	97.0000	32.3333	10.3333	3.2146
<b>Primary school teacher</b>	1	33.0000	33.0000	.0000	.0000
<b>worker</b>	2	60.0000	30.0000	.0000	.0000
<b>teacher</b>	21	729.0000	34.7143	5.0143	2.2393

## 7. Conclusion

The multitude of aspects that cause the emergence and forms of stress expression in socio-economic units (organizational climate, leaders, etc.) require a permanent re-evaluation of the stress particularities of occurrence and manifestation and of the appropriate ways of coping with it at the organizational and individual level. The main occupational stressor at school units is "wage levels" followed in descending order by the following: "daily completion of documents" "increased responsibility", "workloads", "unable to change unpleasant aspects", "work schedule", "communication with other superiors", "communication with other employees". In the studied units, the sense of self-efficacy does not differ significantly depending on the following: socio-economic status total number of people or children with whom he/she lives, relations of communication at home, commuting, the membership in a certain religious community or being a religious practitioner, age, length of employment in education, marital status, gender, studies, function, type of residence. Certain occupational stressors may differ significantly depending on the school unit and in some schools, self- efficacy may differ significantly depending on the employee's position. These results show that perceived self-effectiveness of educational employees presents significant differences depending on occupational stressors and different contextual factors depending on the school. The study outcomes pinpoint the necessity to carry out, in the future, cohort studies with large population groups that will provide additional data regarding the factors involved in the generation and complex individual and organizational interconditioning of stress in the workplace and first of all the factors related to organizational school culture characteristics.

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