

WORK STRESS AMONG PRESCHOOL AND KINDERGARTEN TEACHERS

UDC 613.86:373.211.24-053.4

Slavica Stevanović, Dušan Vešović, Srđan Lazić,
Jelena Gligorijević, Vanja Aćimović

Sanitary Medical School of Applied Sciences, VISAN, Belgrade, Serbia

ORCID iDs:	Slavica Stevanović	https://orcid.org/0000-0003-3065-4331
	Dušan Vešović	https://orcid.org/0009-0001-5338-8702
	Srđan Lazić	https://orcid.org/0000-0003-3244-6464
	Jelena Gligorijević	https://orcid.org/0009-0005-8917-2523
	Evica Jovanović	https://orcid.org/0009-0009-8910-5717

Abstract. *The aim of this research is to determine the etiological factors (causes) that influence the occurrence of work stress among employees in preschool institutions. Using a questionnaire, data on the employees of the preschool institution were obtained and processed using the method of descriptive statistics. The results show that symptoms related to work stress are manifested to a greater extent among younger employees (up to 30 years old) as well as among older people who are over 55 years old. Employees work with a large number of children and the very responsibility for one's life increases the possibility of experiencing stress. Daily interactions and encounters with different personality types, including colleagues, parents and co-workers, increase the potential for stress and burnout syndrome at work. Additionally, teaching involves a significant amount of work-related stress.*

Key words: *work stress, preschool institution, preschool and kindergarten teachers*

1. INTRODUCTION

Work stress is a series of harmful, physiological, psychological and behavioral reactions to situations in which the demands of the job are not in accordance with the capabilities, abilities and needs of an employee. In modern business conditions, work stress, especially the "burn-out" syndrome, is a sign of social and professional issues that eventually impact an employee's motivation, work output, and overall quality of life [9]. Stress is essentially psychological pressure, characterized by a relationship between individuals and their environment that is perceived as harmful or threatening [12]. According to Ivančević and

Received May 23, 2024 / Accepted November 29, 2024

Corresponding author: Slavica Stevanović

Sanitary Medical School of Applied Sciences, VISAN, Tošin Bunar 7a, 11080 Beograd, Serbia

E-mail: slavlab@gmail.com

Maytson, sources of stress at work can be divided into three groups: personal, interpersonal and organizational. As far as personal factors are concerned, personality types, life changes and demographic characteristics have been studied the most so far [8]. Personality factors that are important for the reaction to stress are ego strength, motivational structure and defense forces [7]. Numerous studies have proven that work stress is prevalent in Serbia. It is relatively easy to fire an employee in Serbia, as labor legislation is not yet fully aligned with European workers' rights [4]. In addition to this, abuse of subordinates by superiors is present to a large extent. The present desire for a faster and more successful career, jealousy and envy towards colleagues' achievements, results in psychological abuse among workers in similar positions. [4]. Working in preschool institutions is very complex and it requires maximum engagement, with intense physical and mental strain. Work stress is common among employees in preschool institutions due to daily frustrations, concerns about the safety of the children in their care, as well as frequent misunderstandings with parents, colleagues, and others in the work environment. Risk factors among employees in preschool institutions include unfavorable working conditions, a type of preschool institution, numerous groups, low salaries, age of children, marital status, etc.

2. RESEARCH OBJECTIVE

The aim of the research includes the following:

- To determine the etiological factors (causes) that influence the occurrence of work stress among employees in preschool institutions.
- To present data on the impact of work stress on the health of employees in preschool institutions, as one of the health risk factors.
- to identify measures to prevent work stress among employees in preschool institutions.

3. MATERIALS AND METHODS

The method of this research is descriptive analytics. Using a questionnaire, data on the employees of the preschool institution were obtained and processed using the method of descriptive statistics and presented in graphs and tables. The statistical significance of the difference in the connection between gender and age on the one hand and the influence of risk factors on the other hand was determined by the χ^2 (chi-square) test.

The questions for the survey questionnaire were modeled on various questionnaires of the World Health Organization (WHO) on general health, demographic indicators and self-assessment of stress [13].

The subjects of the research were the employees of the preschool institution "Rakovica", the kindergarten "Labudić" - Gočka 59, Rakovica, in Belgrade. The research was conducted in 2023.

4. RESULTS AND DISCUSSION

Based on the survey, the following structure of respondents was obtained (table 1):

Table 1 Structure of respondents

Characteristics of respondents		N	%
Gender	Female	70	93.3
	Male	5	6.7
Age (years)	Up to 30	13	17.3
	31-40	39	52.0
	41-55	12	16.0
	Over 55	11	14.7
Marital status	Married	41	54.7
	Unmarried	25	33.3
	Divorced	9	12.0
Number of children	Without	24	32.0
	One	13	17.3
	Two	35	46.7
	Three	3	4.0
Residential question	Have their own apartment	39	52.0
	Do not have their own apartment	36	48.0
Education	Primary school	2	2.7
	High school	43	57.3
	College	23	30.7
	Faculty	7	9.3
Work experience (years)	Up to 20	16	21.3
	21-30	53	70.7
	Over 30	6	8.0
Working hours	Just before noon	68	90.7
	Before and afternoon	7	9.3
Health state	Bad	3	4.0
	Good	61	81.3
	Very good	6	8.0
	Perfect	5	6.7
Chronic diseases	No chronic diseases	54	72.0
	One	15	20.0
	Two or more	6	8.0
Alcohol consumption	Never	61	81.3
	Sometimes	13	17.4
	Often	1	1.3
Cigarette consumption	Smokers	40	53.3
	Non-smokers	35	46.7
Sedative usage	Yes	4	5.3
	No	71	94.7

Out of the total number of respondents (75), five of them are male. Such a small number of male respondents is probably a consequence of professional orientation because a significantly larger number of female candidates apply for the position of preschool teacher and nursery teacher. 52% of employees were between 31 and 40 years old, and most respondents were married (54.7%). The largest number of respondents have two children (46.7%) and 52% of respondents have resolved their housing issue. Most of the employees in the preschool institution have secondary education and more than half of the employees (57.35%) have 20-30 years of experience in that institution.

The largest number of respondents work before and after noon, 90.7% (68 employees) work for eight hours. 61 respondents (81.3%) rate their state of health as good, while when asked about chronic diseases, 28% of respondents answered that they have one, two or more diseases, 81.2% do not consume alcohol, 53.3% of respondents are smokers, and only 5.3% of them take sedatives.

Table 2 shows the workplace factors that, according to the survey, bother employees the most. The χ^2 square test determined whether there are significant differences in the presence of risk factors between men and women, as well as between subjects belonging to different age categories. The significance of these tests is shown in the columns marked with "sig".

Table 2 Workplace factors that bother employees the most

What bothers you most at work?	All respondents		Male		Female		sig	Up to 30		31-40		41-55		Over 55		sig
	N	%	N	%	N	%		N	%	N	%	N	%	N	%	
	Low salary	75	100.0	5	100.0	70		100.0	1.000	13	100.0	39	100.0	12	100.0	
Too much administration	70	93.3	0	0.0	70	100.0	0.000	13	100.0	34	87.2	10	83.3	3	27.3	0.000
Lack of protocol at work	42	56.0	5	100.0	37	52.9	0.040	2	15.4	29	74.4	8	66.7	3	27.3	0.000
Bad working conditions	56	74.7	5	100.0	51	72.9	0.178	6	46.2	35	89.7	12	100.0	3	27.3	0.127
Too many children in a group	72	96.0	3	60.0	69	98.6	0.000	10	76.9	33	84.6	12	100.0	7	63.6	0.000
Lack of professional satisfaction	25	33.3	5	100.0	20	28.6	0.001	0	0.0	5	12.8	11	91.7	9	81.8	0.001
Difficulty in parent-teacher communication	28	37.3	0	0.0	28	40.0	0.074	9	69.2	6	15.4	7	58.3	6	54.6	0.000
Excessive attention from the public	35	46.7	2	40.0	33	47.1	0.757	12	92.3	10	25.6	5	41.7	8	72.7	0.000
Regular children's injuries	58	77.3	1	20.0	57	81.4	0.002	13	100.0	22	56.4	12	100.0	11	100.0	0.000
Overload due to long working hours	25	33.3	5	100.0	20	28.6	0.001	0	0.0	2	5.1	12	100.0	11	100.0	0.000
Excessive reliance on computers	54	72.0	2	40.0	52	74.3	0.099	3	23.1	28	71.8	12	100.0	11	100.0	0.199
Mobbing	2	2.7	0	0.0	2	2.9	0.702	0	0.0	0	0.0	1	8.3	1	9.1	0.332
Conflict with colleagues	3	4.0	1	20.0	2	2.9	0.059	1	7.7	0	0.0	1	8.3	1	9.1	0.000

Based on the obtained results, it can be seen that a statistically significant difference between men and women exists in the following factors: too much administration, numerous

groups of children, regular children's injuries (these factors are more prevalent among women), lack of work protocols, poor working conditions, lack of professional satisfaction, overload due to long working hours (these factors are more prevalent among men).

Furthermore, differences between respondents from different age categories exist in the following risk factors: too much administration (most often among the youngest respondents, and least among the oldest respondents), lack of work protocols (most common among respondents from the 31-40 category), poor working conditions (most often among respondents from the two middle age categories), lack of professional satisfaction (most often among the respondents of the two oldest categories), difficulty in parent-teacher communication (most often among the youngest respondents), excessive attention from the public most often among the youngest respondents), regular children's injuries (most rarely among respondents from the 31-40 category, fully present in the other categories), overload due to long working hours (most often among the respondents of the two oldest categories), excessive reliance on computers (most often among the respondents of the two oldest categories).

The largest number of respondents stated that low salaries, a large number of children in groups, and injuries among children most often cause a negative attitude towards work.

In the "Labudić" kindergarten, all groups exceed the standard enrollment numbers, with the youngest daycare groups having 29 children, and the preschool age groups containing up to 45 children.

The χ^2 square test was used to determine whether there are statistically significant differences in the presence of complaints between subjects belonging to different age categories. The significance of these tests is shown in the column marked with sig (Table3).

Table 3 Presentation of complaints that the respondents stated that they have noticed in themselves

Do you have any of the listed symptoms?	All respondents		Up to 30		31-40		41-55		Over 55		sig
	N	%	N	%	N	%	N	%	N	%	
You frequently feel tired, irritable, and overly sensitive	17	22.7	3	23.1	5	12.8	2	16.7	7	63.6	0.005
You have frequent headaches, stomachaches or back pain	32	42.7	6	46.2	8	20.5	10	83.3	8	72.7	0.000
You feel tense and find yourself shouting at colleagues for something that has never happened	5	6.7	0	0.0	2	5.1	1	8.3	2	18.2	0.324
You suffer from insomnia	15	20.0	1	7.7	5	12.8	4	33.3	5	45.5	0.041
You started to hate the morning because of the sound of the clock reminds you that it's time to go to work	65	86.7	13	100.0	32	82.1	12	100.0	8	72.7	0.093
You imagine yourself on a desert island rather than doing the job you once adored	58	77.3	5	38.5	34	87.2	12	100.0	7	63.6	0.000
You have a lot of responsibilities and frequently fall behind schedule	10	13.3	1	7.7	3	7.7	2	16.7	4	36.4	0.086
I don't have any mentioned symptoms	9	12.0	6	46.2	2	5.1	1	8.3	0	0.0	0.000

Based on the significance obtained, it can be seen that statistically important differences in the occurrence of complaints between respondents of different age categories exist in the following complaints: you frequently feel tired, irritable, and overly sensitive (most often among the oldest respondents), you have frequent headaches, stomachaches or back pain (most often among the respondents from the two oldest categories), you suffer from insomnia (most often among the respondents from the two oldest categories), you imagine yourself on a desert island rather than doing the job you loved before (most often among the respondents from the two middle age categories), I don't have any mentioned symptoms (the most common response of the youngest respondents).

A smaller percentage of employees have stress-related symptoms. The most common complaints that indicate work stress are reported by people over 55 years old (tired, irritable), while headaches, back pain and stomach aches are most common among employees aged 41-55.

Problems in communication and satisfaction with the quality of life of employees are given in Table 4.

Table 4 Interpersonal relationships and quality of life

Questions	Answers	N	%
Do you bring work issues home?	no	19	25.4
	to a lesser extent	34	45.3
	yes	22	29.3
Is there nervousness and intolerance towards superiors and colleagues?	never	27	36.0
	sometimes	42	56.0
	often	4	5.3
	every day	2	2.7
Do you get into conflict with children's parents?	never	41	54.7
	sometimes	32	42.6
	often	2	2.7
Do you get into conflicts with co-workers?	never	58	77.4
	sometimes	16	21.3
	often	1	1.3
Are you familiar with how to channel stress?	yes	63	84.0
	I'm not interested	1	1.3
	No, I'd like to know how	11	14.7
Are you satisfied with the quality of life?	yes	15	20.0
	mostly	45	60.0
	no	15	20.0

74.6% of employees take their work problems home after their shift, while 25.4% forget them after leaving work.

The results show that nervousness and intolerance towards superiors and colleagues are sometimes present among 56% of respondents, never among 36%, often among 5% and every day among 3% of respondents.

When asked about conflicts with children's parents, 54.7% of respondents answered that they never get into conflicts, 42.6% sometimes, and 2.7% often have conflicts with children's parents. When it comes to conflicts with their co-workers, 77.4% of respondents answered that they never get into conflicts, 21.3% sometimes, and 1.3% have frequent conflicts with co-workers.

When asked about satisfaction with the quality of life, 45 (60%) respondents were generally satisfied, while there is an equal number (20%) of those who answered that they were satisfied and those who answered that they were not.

The employees of the preschool institution are mostly (as much as 84%) familiar with the method of channeling stress, and only one respondent stated that he is not interested in channeling stress.

In order to cope with stress, respondents resort to different techniques and behavioral modalities. The largest percentage, 37.33% (28 respondents), employees in preschool institutions, cope with stress by being active. Talking with colleagues is important for 24 of them, while 11 respondents can rely only on themselves, and the same number have no problems with stress, while only one respondent copes with stress by taking sedatives.

The obtained results indicate that symptoms related to work stress are manifested to a greater extent among younger employees (up to 30 years old), and especially in those over 55 years old. Stress is most often managed through leisure activities and discussions with colleagues.

Work stress and burnout syndrome at work have been investigated by preschool and kindergarten teachers and primary and high school teachers in numerous countries, which indicates that it is a recognized and widespread public health problem [6]. These studies have shown a high frequency of work stress and burnout syndrome with a prevalence of up to 70%, depending on whether the measured frequency was assessed by high emotional exhaustion, high depersonalization or low inefficiency and feeling of unfulfillment at work. An analysis of the frequency of burnout syndrome among preschool and kindergarten teachers and primary and high school teachers in 36 countries showed a prevalence of burnout syndrome of 38.29% for emotional exhaustion, 29.45% for cynicism, 68.75% for feeling ineffective and unfulfilled at work, with significant differences among countries. The countries with the highest frequency of emotional exhaustion are: South Africa, China, Cyprus and South Korea. In contrast, Mexico and Belgium have the lowest levels of burnout [6].

Kiparski et al. indicate that numerous studies have confirmed that the teaching profession has turned into a very stressful occupation [5]. It has been shown that about 10% to 40% of teachers in Eastern European countries suffer from intense stress or burnout, while the percentage is 50% to 70% in countries like Japan and Taiwan. Some studies in European countries have indicated that 60% to 70% of teachers are under stress, and about 30% of teachers show signs of burnout [2]. There is evidence that teachers who experience stress show a wide range of non-specific symptoms of ill health and are more likely to smoke cigarettes [3]. A Hungarian study found that: laryngitis, diseases of the loco motor system as well as the cardiovascular system are more common among teachers than among people who aren't teachers. It was found that teachers in kindergarten, primary and secondary schools are subject to a higher risk compared to teachers in higher education. Teachers and nurses in kindergarten and preschool settings are recognized as a key professional group in the research on workplace burnout syndrome [8].

A special challenge for the profession of a teacher is the introduction of inclusive education into the educational system starting from preschool institutions and the earliest ages [10].

Preschool and kindergarten teachers do not have the initial knowledge and skills to work with children with developmental disabilities. Their professional and personal experiences with children with developmental disabilities are only sporadic and the experience of isolation and neglect is common [11]. At the same time, their work is not

sufficiently recognized as significant. Preschool and kindergarten teachers who work with children with developmental disabilities are exposed to additional stressful situations, so there is a greater risk of experiencing stress and burnout.

As professional stress and burnout syndrome at work is increasingly recognized as a factor that affects health and is examined among different professional groups, there is a need for a reliable and valid instrument for its examination, as well as interventions for its reduction [1]. There is ample evidence from the general literature that the nature and effectiveness of individual coping behavior moderates the relationship between stress and health and that personality characteristics may be important determinants of coping [8].

5. CONCLUSIONS

Based on the results of this research, the following can be concluded:

- Seventy-five people are employed in the Rakovica Preschool, DV "Labudić", most of them female due to the peculiarity of the profession.
- Symptoms related to work stress (irritability, hypersensitivity, headache, stomachache, back pain, insomnia, chronic fatigue, etc.), are manifested to a greater extent among young employees (up to 30 years old) as well as among older employees who are over 56 years old.
- Employees work with a large number of children and the very responsibility for one's life leads to an increase in the possibility of being stressed out.
- Daily events and encounters with different personality types, both among colleagues, parents and co-workers, increase the level of possibilities for stress and burnout syndrome at work.
- Employees are dissatisfied with their personal income.
- Preschool employees are generally familiar with the method of channeling stress.
- Management organizes trainings and various types of support for employees in order to empower them to prevent stress.
- Being a teacher entails a high level of work stress.

The effectiveness of overcoming stress largely depends on the intensity and duration of stress disorders caused by stress factors, but also on the situation and general circumstances in which measures to overcome stress are used, as well as on the capacity and ability of the person who experienced stress.

Given the fact that the profession of preschool and kindergarten teachers is considered one of the occupations with a risk of work stress, it is important to prevent the possible consequences of stress in the workplace. The proposal for measures arising from the analyzed results and conclusions, with the aim of reducing work stress in the work of preschool and kindergarten teachers employed at DV "Labudić", is the following:

- professional selection
- full and timely information of all who may be exposed to stress
- improving working conditions (fewer children in a group, a sufficient number of employees, reducing administration, etc.)
- organizing work in a better way and improving teamwork
- implementing good technological, organizational and psychological measures
- controlling the health status of employees more often (periodic systematic examinations)

- improving the motivation of employees through constant rewards and praise for a job that is well done
- improving communication with superiors and colleagues
- training (on computers) and preparation program for dealing with stressful situations.

In this way, in addition to adequate personal income and protection at work, the quality of work increases, stress is reduced and the quality of life is improved.

Future research could show which of these preventive measures is the most effective over a longer period of time. However, the question still remains whether the ability to manage stress is primarily determined by the personality characteristics of the employees or by the adequate implementation of prevention measures.

REFERENCES

1. Agyapong, B., Brett-MacLean, P., Burbach, L., Agyapong, V. I. O., Wei, Y., (2023), Interventions to reduce stress and burnout among teachers: A scoping review. *International Journal of Environmental Research and Public Health*, Vol.20, No. 9, pp.5625. <https://doi.org/10.3390/ijerph20095625>.
2. Agyapong, B., Obuobi-Donkor, G., Burbach, L., Wei, Y., (2022), Stress, burnout, anxiety and depression among teachers: A scoping review. *International Journal of Environmental Research and Public Health*, Vol.19, No.17, pp. 10706. <https://doi.org/10.3390/ijerph191710706>.
3. Cox, T., Griffiths, A., (1995), Occupational stress and burn-out of teachers: a review, Sectoral Activities Programme, Working Papers, International Labour Office Geneva, Switzerland, ISBN 92-2-109748-X.
4. Backović, D., (2010), *Mentalno zdravlje i mentalna higijena (Mental health and mental hygiene)*, Belgrade. (in Serbian)
5. Einav, M., Confino, D., Geva N., Margalit, M., (2024), Teachers' Burnout – The Role of Social Support, Gratitude, Hope, Entitlement and Loneliness. *International Journal of Applied Positive Psychology*, pp.1-24, <https://doi.org/10.1007/s41042-024-00154-5>.
6. Garcia-Arroyo, J.A., Osca Segovia, A., Peiro, J.M., (2019), Meta-analytical review of teacher burnout across 36 societies: the role of national learning assessments and gender egalitarianism, *Psychology & Health*, Vol.34, No.6, pp. 733-753, <https://doi.org/10.1080/08870446.2019.1568013>.
7. Štajnberger, I., Čizmić, S., (1991), *Psihologija i savremena tehnika, (Psychology and modern technology)*, Zavod za udžbenike i nastavna sredstva, Belgrade. (in Serbian)
8. Marić, J., (2005), *Klinička psihijatrija, XI prerađeno i dopunjeno izdanje (Clinical psychiatry, XI revised and supplemented edition)*, Belgrade. (in Serbian)
9. Popov, S., Latovljević, M., Nedić, A., (2015), Sindrom izgaranja kod zdravstvenih i prosvetnih radnika: Uloga situacionih i individualnih faktora, (Burnout syndrome in health and educational workers: The role of situational and individual factors), *Psihološka istraživanja* Vol. 18, pp. 5-22 (in Serbian)
10. Rajić, M., Mihić, I., (2017), Doživljaj kompetentnosti i motivacija vaspitača za rad sa decom sa smetnjama u razvoju. (Experience of competence and motivation of educators for working with children with developmental disabilities). *Godišnjak Filozofskog fakulteta u Novom Sadu* Vol.42, No.2, pp.339–359. (in Serbian)
11. Stanković Đorđević, M., Nedeljković, J., (2018), Karakteristike ličnosti i prevladavanje stresa prosvetnih radnika u inkluziji, (Personality characteristics and overcoming stress of educational workers in inclusion), *Proceedings of the IX International Scientific-Professional Conference Improving the Quality of Life of Children and Youth Faculty of Special Education and Rehabilitation*, Tuzla, pp. 235–247.
12. Panić, T., (2011), *Medijatori efekata nezaposlenosti na mentalno zdravlje*, Doktorska disertacija, (Mediators of the effects of unemployment on mental health, Doctoral Dissertation), Faculty of Philosophy, University of Nis.
13. WHO / Stress at the workplace/ www.who.int

PROFESIONALNI STRES KOD VASPITAČA

Cilj ovog istraživanja je utvrđivanje etioloških faktora (uzroka) koji utiču na pojavu profesionalnog stresa kod zaposlenih u predškolskim ustanovama. Pomoću upitnika su dobijeni podaci o zaposlenima u predškolskoj ustanovi koji su obrađeni metodom deskriptivne statistike. Rezultati pokazuju da se simptomi vezani za profesionalni stres u većoj meri manifestuju kod mlađih zaposlenih (do 30 godina), kao i kod starijih osoba preko 55 godina. Zaposleni rade sa velikim brojem dece, sama odgovornost za nečiji život dovodi do povećanja mogućnosti stresa. Svakodnevni događaji i susreti sa različitim tipovima ličnosti, kako među kolegama, roditeljima, tako i među saradnicima, povećavaju nivo mogućnosti za stres i sindrom sagorevanja na poslu. Profesija vaspitača spada među profesije sa velikim stepenom rizika od nastanka profesionalnog stresa.

Ključne reči: profesionalni stres, predškolske ustanove, vaspitači