

STRESSORS AND BURNOUT SYMPTOMS OF MATH TEACHERS IN CROATIAN PRIMARY AND HIGH SCHOOLS

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Abstract

The study, conducted on a sample of 361 elementary school math teachers and 238 high school math teachers from all Croatian counties, aimed to uncover possible differences in their perceptions of working conditions as potential stressors associated with burnout symptoms and intent to leave work. In addition to questions from Skaalvik's research, the impact of teacher workload in online teaching caused by the COVID-19 pandemic, the impact of pressure on teacher independence by principals and parents, and teachers' social status were analyzed. Factor analysis singled out ten factors and confirmed the high constructive validity of the questionnaire and the internal consistency of each factor. The differences in the attitudes of mathematics teachers regarding gender, school, years of experience, type of study they completed and formal teacher advancement were shown. Additional qualitative analysis of the comments of the teachers involved revealed the main sources of their dissatisfaction: the attitude of the Ministry, the additional burden of online teaching and parental pressure.

Keywords: teacher motivation, teacher stress, teacher burnout, job satisfaction, job requirements.

1 INTRODUCTION

Increased stress leads to less job satisfaction, decreased commitment and assessment of one's own teaching efficiency, burnout symptoms, and leaving the profession. This is one of the main reasons why teachers are increasingly thinking about leaving the profession [1]. On the other hand, job satisfaction is a major predictor of lower levels of exhaustion and vocation abandonment. Both stress and job satisfaction depend significantly on the organizational and social elements of the work environment and job requirements [2].

Stressors such as time pressure and workload, disciplinary problems, loss of autonomy, conflicts with management and parents, can lead to emotional exhaustion (low energy and persistent fatigue), depersonalization (negative attitudes towards students and colleagues) and feelings of not doing meaningful and important job [3]. This paper uses two approaches to detect and measure potential stressors: predefined question categories for presumed stressors and free comments from teachers from which new stressors can be glimpsed, primarily dissatisfaction with the attitude and communication of the Ministry of Science and Education towards teachers and privileged position of parents provided by the Ministry.

The questions in this study were selected according to the JD-R (Job Demands-Resources) model [2] and include two groups of variables that are related to the school context and can act on stress: job requirements can provoke psychological and physiological problems, while some organizational and social resources can enable greater satisfaction and personal growth of teachers.

The disadvantage of the model is that some variables such as peer relationships and autonomy can be both stressors and support in increasing satisfaction, depending on the circumstances.

2 MOTIVATION FOR WORK AND STRESS OF TEACHERS

Reasons or motives for choosing a teaching profession can be divided into three basic categories: altruistic motives (working with children, helping children in their success and development, desire to contribute to the well-being of society), intrinsic reasons (interest in transferring specific knowledge) and extrinsic reasons (long holidays, secure wages or social status) [4]. Work motivation theories view employees as social beings, as economic beings motivated solely by economic reasons that manipulate wages and rewards, or as self-actualizing beings who are proud of their work, work gives them the opportunity to advance and develop, and some aspects of work allow people to meet "higher order needs". They need acknowledgment, a sense of accomplishment, companionship, challenge, reputation, encouragement. The absence of some elements leads to dissatisfaction and that to a

decrease in productivity. Maslow's theory of the hierarchy of needs explains the gradation of needs from fundamental biological to the highest psychological. Vroom's theory assumes the expectation that the effort or commitment at work can lead to a certain level of achievement, and that achievement will be instrumental for achieving a long-term goal. The theory of justice assumes that a man compares the intensity of his work with what he gets in return and if he notices a disproportion, it makes him dissatisfied.

Business requirements, especially lack of time, strongly predict a lack of well-being, while perceived business resources included in the survey moderately predict higher levels of well-being [5].

There is a positive relationship between teacher self-efficacy and autonomy with engagement and personal satisfaction with the teaching profession, while emotional exhaustion is significantly negatively correlated with self-efficacy. Autonomy means that teachers are not expected to use teaching methods that are not comfortable for them or require more time to prepare. For teachers with high expectations, it is an opportunity to teach according to their own values, experiment with new ways and adapt them depending on the situation and needs of students. For teachers with low expectations, autonomy can provide an opportunity to hide personal shortcomings [6].

Employed teachers show greater self-efficacy and greater stress, are less committed to the profession, and are more likely to give up compared to employees for vocational training. Primary school teachers have higher self-efficacy compared to secondary school teachers, men are 5% better. Self-efficacy increases with years of experience, and from the middle of working life it will begin to decline slightly, so professional development programs are needed that can improve skills, knowledge and self-confidence [7]. Different types of support will be needed even after listening to professional development in order to effectively implement everything they have learned [8].

Emotional exhaustion and depersonalization have shown a significant relationship with all work-related stressors [9]. Married female teachers are more exhausted than married male teachers. Control of student disobedience and lack of time significantly increase teacher burnout. Teacher evaluation by students and lack of time significantly increase neuroticism. Teachers who are graded low will show a higher degree of depersonalization, likely to show rudeness, cynicism and distance from their students to avoid stress. Research [10] has shown that individuals who often joke with others and maintain a cheerful outlook on life have lower levels of emotional exhaustion and depersonalization and achieve better feelings of personal achievement.

Too many students is one of the factors that can make teacher's work more difficult [11], as well as insufficient expertise of teachers to deal with the problems of students with special needs [1].

Although teachers state insufficient involvement in the school's decision-making process as a source of stress, their involvement in decision-making sometimes causes even more conflict with management, and stress occurs again. In Norwegian schools, teachers work together and plan the program of work. The youngest teachers have support and learn from other colleagues, and they all help each other. Although teamwork has been described as a source of enjoyment and satisfaction at work, it has been shown that it can also be challenging and stressful. Teamwork often leads to disagreements and even open quarrels in front of students [1].

Stress is caused by students' verbal aggression, lack of school administration support, lectures in subjects other than their profession, school pressure to achieve good results, lack of participation in decisions and rivalry among fellow teachers [12].

Today, it is possible to expect that verbal aggressions can easily spread to social networks and the digital world, which can cause serious psychological consequences and a lack of working reputation. Frequent publication of school rankings is one of the factors that cause great stress and pressure on teachers. Lack of support from colleagues or school administration is also one of the possible stress activators. Poor working conditions and future perspective are key factors although stress is not limited to socio-professional factors, but is also influenced by family and personal issues that are reflected in the work of teachers.

Teachers' remarks that they are exposed to great stress in their work by parents are becoming louder [13]. While parents give high priority to their involvement in educational issues and participation in decision-making, teachers resist. Class teachers often have problems with parents who come to school too much as well as with those parents who never come to school.

3 METHODOLOGY

3.1 Aim of the research

The research was prompted by a similar study conducted in Norwegian high schools [6], and aimed to determine the attitudes of mathematics teachers from Croatian primary and secondary schools on the demands of the teaching profession as potential stressors and on organizational and social business resources. Their influence on teachers' self-assessment, burnout symptoms, job satisfaction and teachers' motivation for further work was also investigated.

In relation to the usual questions in research on this issue, questions were added about the workload of teachers in online teaching caused by the COVID-19 pandemic, about the pressure on teacher independence by principals and parents, and about the social status of teachers.

The frequencies of answers to all questions and arithmetic means were analyzed. Differences by gender, years of work experience in education, employment school, completed study, and teacher advancement were analyzed by nonparametric statistical methods by Mann-Whitney and Kruskal-Wallis test because the data were not normally distributed. An exploratory factor analysis was performed. Qualitative analysis of teachers' comments revealed the main sources of dissatisfaction from the teacher's perspective, as well as support for such research because there is hope that the results will change the Ministry's attitude towards teachers.

3.2 Sample and selection procedure of respondents

The structure of the sample is shown in Fig 1.

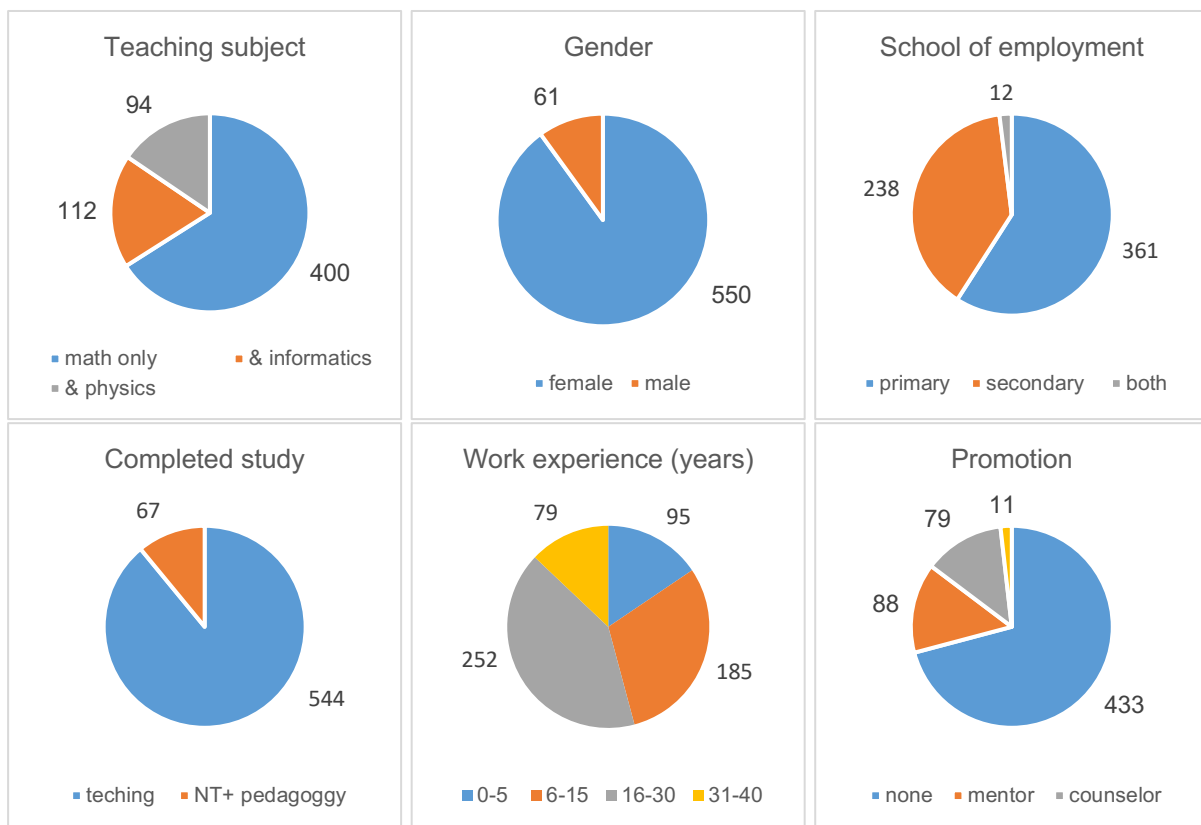


Figure 1. The structure of the sample

In June 2020, questionnaires were sent by e-mail to the addresses of almost 20,000 primary and secondary school teachers from all Croatian counties who participated in the training organized by the Ministry of Science and Education on the occasion of the "School for Life" reform. Questionnaires were voluntarily completed by 2829 research participants, of which 611 were mathematics teachers.

3.3 Questionnaire

The survey used a questionnaire that teachers received via e-mail and filled out voluntarily. The answers offered to all questions are according to the Likert scale from 1: "I completely disagree" to 6: "I completely agree", except for questions about autonomy in work (1 to 5).

The internal correlation of the questionnaire question, ie the measure of reliability of the instrument is high (Cronbach's Alpha is 0.809, and lambda 6 is 0.926). Also, in order to check the contextual validity, high internal correlations of questions from each category of questionnaire in the range from 0.807 to 0.928 were obtained, and for additional questions from 0.701 to 0.812.

The questions are grouped into several categories according to [6], and additional question categories are marked with an asterisk:

Teachers' personal characteristics (8 general questions): gender, school where they work, county, years of experience, years of life, type of studies they completed, subjects they teach, career advancement.

Job requirements: lack of time, ie excessive workload (5 questions) with additional workload due to online teaching (* 3 questions), problems with student discipline (2 questions), pressure on teacher independence (* 3 questions) and low student motivation (4 questions).

Business resources: one organizational resource - teacher autonomy (6 questions) and three social resources - relationship with colleagues (3 questions), school administration support (3 questions) and collective school culture (3 questions).

Dependent variables: self-assessment of teacher effectiveness (5 questions), social status and respect by parents (* 3 questions), satisfaction with the teaching profession (4 questions) and intention to leave the teaching profession (4 questions).

3.4 Data analysis

The frequencies of answers to all questions and arithmetic means were analyzed. Differences according to gender, years of work experience in education, employment school, completed studies and teachers' career promotion by non-parametric statistical methods Mann-Whitney and Kruskal-Wallis were investigated because the observed data did not meet the condition of normal distribution. An exploratory factor analysis was made. Qualitative analysis of teachers' comments revealed the main sources of dissatisfaction from the teacher's perspective, as well as support for such research because there is hope that the results will change the Ministry's attitude towards teachers.

4 RESULTS

4.1 Descriptive statistics

Table 1. shows descriptive statistics for each set of questions with percentages of teachers who agree or strongly agree with the statements (answers 5 and 6 on a 6-point Likert scale).

Table 1. Percentage of teachers who strongly agree with the above statements

Question groups		%
The disciplinary problem makes it difficult to hold classes and takes away energy		45.5
They are overwhelmed with teaching preparation and administrative work		72.6
Students are poorly motivated and give up as soon as they face a challenge		46.9
Teachers have the support of colleagues and school administration		52.4
There is a developed school culture and a common set of norms and rules		40.8
Teacher self-efficacy	Satisfaction with one's own work	76.5
	They see the positive results of their work every day	46.4
Teachers have a high degree of autonomy	Adaptation of teaching materials, speed of progress and ways of dealing with students	59.3
	Curriculum changes and work on topics that are not in the curriculum	36.7

Satisfaction with the vocation	They enjoy and look forward to going to school	57.4
	Their job is profitable	7.2
Leaving the teaching profession	They would like to have another job, they were thinking about change	17.4
	After the experience with online teaching, they think more intensively about leaving the profession	27.8
Satisfaction with teacher status	They feel respect for the environment and respect for parents	30.3
	The public understands the workload of teachers during teaching and non-teaching working days	2.2
Strong pressure on teachers	By parents	21.8
	By principals and professional services	11.4
Consequences of online teaching: due to COVID-19 are that more time to prepare, a sense of constant availability of teachers and stress due to non-participation of students		85%

4.2 The influence of teachers' personal characteristics on their attitudes

Differences based on the personal characteristics of mathematics teachers are very different from those observed in computer science and technical culture teachers [14].

Gender: Although mathematics female teachers are more likely to be overworked ($p = 0.168$) and to prepare more often outside of regular working hours ($p = 0.125$), the difference is not statistically significant, which is otherwise true for teachers of other subjects. They feel they are doing important job ($p = 0.000$), they enjoy working as teachers ($p = 0.039$). Parents are more likely to ask for higher grades for their children ($p = 0.001$). They suffer more from the consequences of switching to online classes because they need more time to prepare ($p = 0.000$), they have a more pronounced feeling that there is no time for daily rest because they are constantly available to students ($p = 0.000$) and stress due to students who do not participate in school activities ($p = 0.000$).

Male teachers generally have a better relationship with school management and can always get help and advice ($p = 0.016$). A larger number of teachers want another job ($p = 0.038$), if they could re-elect, they would never choose the teaching profession ($p = 0.002$).

School of employment: Primary school teachers prepare for teaching more often outside working hours ($p = 0.011$), students show less interest in school activities ($p = 0.027$). They help each other more ($p = 0.049$), apply common norms and rules of conduct ($p = 0.000$) and share goals with school management ($p = 0.031$). They find that they are doing important work (0.038), they see greater positive results of their teaching every day ($p = 0.007$) and they are more frustrated because of inactive students in online teaching ($p = 0.019$).

Secondary school teachers are less exposed to parents seeking higher grades in the information hour for their child ($p = 0.019$).

Completed study: Somewhat surprisingly, this factor indicates the least differences. Teachers who did not complete teacher training but acquired pedagogical competencies after completing another, mostly engineering study, less notice a common set of norms and behaved in school ($p = 0.016$), consider their work less important ($p = 0.019$), would rather do some another job ($p = 0.036$) and would not re-choose the teaching profession ($p = 0.075$).

Work experience in education: Beginner teachers with up to 5 years of experience have the most positive attitude in all matters concerning relations with colleagues and management, mutual help and goals ($p = 0.001$ to 0.021) and feel that they are doing a profitable job ($p = 0.005$).

Teachers with 6-15 years of experience would most like to have a job other than a teacher's job ($p = 0.000$), both before the pandemic ($p = 0.000$) and during the pandemic ($p = 0.000$) they thought of changing professions the most. Due to online teaching, they have a more pronounced feeling that they are constantly available ($p = 0.015$) and feel more stress due to students who do not participate in school activities ($p = 0.010$). Together with teachers with 16-30 years of experience, they experience work accelerated and stressful, with no time to recover ($p = 0.000$), administrative jobs take them too long ($p = 0.048$) and they mostly complain about the weak interest of students in school activities (0.048).

Teachers with 16-40 years of experience in education have a sense of maximum autonomy ($p = 0.002$).

Career promotion: Most of the differences stem from advancing in the teacher hierarchy. Teachers who are not elected to a higher title, nor are they heads of county councils or members of professional groups, find it more difficult to control student behavior ($p = 0.001$) and are more dissatisfied with administrative obligations ($p = 0.011$), their students show less interest in teaching ($p = 0.007$), find it harder to get students interested in more serious work at school ($p = 0.026$), have a more positive attitude about relationships among colleagues ($p = 0.012$), would rather do another job ($p = 0.003$) and would not re-choose the teaching profession ($p = 0.008$). They think most intensively about changing jobs before ($p = 0.004$) and after the experience with online teaching ($p = 0.016$), they feel the least respect and appreciation of parents in the information class ($p = 0.017$) and when they meet them in a public place ($p = 0.032$), the director mostly interferes in concluding grades ($p = 0.000$)

Teachers in the position of mentors feel the most respect from the parents of their students both in public ($p = 0.032$) and in the information hour ($p = 0.017$), the least of them parents ask for a higher grade ($p = 0.001$), the principals have the least control over the conclusion of grades ($p = 0.000$)

Teacher counselors are most satisfied with their teaching ($p = 0.000$) and see positive results on a daily basis ($p = 0.019$), online teaching experiences have least encouraged them to think about leaving the teaching profession ($p = 0.029$). They have the most autonomy ($p = 0.000$) and enjoy working as teachers the most ($p = 0.001$).

4.3 Factor analysis - content validation testing

An exploratory factor analysis was performed to check the correlation of the questions within the categories themselves, possibly to confirm the grouping of individual questions into categories and at the same time to check the contextual validity of the instrument. Factor analysis was performed on a set of 353 teachers (since no imputation was made for records that were not filled with subsequently added categories). The high value of Kaiser-Meyer-Olkin sample suitability measure ($KMO = 0.878$) and Bartlett $p = 0.000$ confirmed the appropriateness of using factor analysis. Furthermore, due to the ratio of the number of observed variables to the number of questions ($> 7: 1$), the mean value communalities $0.713 (> 0.6)$ was observed, which also confirmed the suitability of factor analysis on the selected sample.

The Principal Component Analysis (PCA) extraction method was selected, along with the Varimax rotation method with Kaiser normalization, giving 10 well-defined factors. Most of the coefficients in the matrix of rotated components are greater than 0.8, and only one is the limit of 0.549.

Table 2. Results of factor analysis - contextual validity

Factors - (% variance)	Question category (number of questions)	Internal connectivity (reliability)	
		Mathematics teachers	Skaalvik 2017.
F1 (14,2%)	Relations with colleagues and school management (6)	0.950	0.86
	Collective school culture (3)		0.78
F2 (9,8%)	Satisfaction with the teaching profession (4)	0.895	0.90
	Motivation to leave the teaching profession (4)		0.90
F3 (8,1%)	Teacher autonomy (6)	0.896	0.85
F4 (7.0%)	Motivation of students for learning (4)	0.909	0.89
F5 (6.9%)	Teacher self-efficacy (5)	0.817	0.88
F6 (6.3%)	Lack of time (5)	0.807	0.83
F7 (5,3%)	Pressure on teacher independence * (3) and respect from parents (2) *	0.801	
F8 (4.3%)	Teacher workload in online teaching * (3)	0.747	
F9 (3.5%)	Solving student disciplinary problems (2)	0.812	0.87
F10 (3.2%)	Public envy due to lack of understanding of workload * (2)	0.701	

Table 2. shows the structure of the questionnaire by category, the measure of the internal correlation of the questions within each category (Cronbach alpha) and the corresponding percentage of variance explained by the factors. Issues related to relationships with colleagues and school administration and collective school culture showed a large interrelationship of 0.950. These issues have a common structure and one factor was obtained for them. A similar situation occurred with questions from the categories of satisfaction with the teaching profession and motivation to leave the teaching profession where the internal connection of the unique factor is 0.898.

Interestingly, all questions in the category of satisfaction with the teaching profession had high but positive factor loadings while all questions in the category of motivation to leave the teaching profession showed high but negative loads. It can be concluded that the two observed categories have the same structure and can be linked into one category. The different signs of the observed categories mean that the motivation to leave the teaching profession will weaken with an increase in general satisfaction with the teaching profession.

The results of the factor analysis confirmed the connection of the questions in other categories as well. Categories of questions not taken from [6]: pressure on teacher independence (0.801), teacher workload in online teaching (0.747), and public envy for not understanding teacher workload (0.701) showed a slightly weaker association.

4.4 Qualitative analysis of respondents' comments

The last section in the research provided an opportunity to leave comments on the researched issues and the survey itself. Comments can be grouped into several categories:

- **Neglect by the Ministry and submission to parents**
 - "During the COVID-18, the Ministry approached teachers through the media and parents, for example, it issued guidelines for the evaluation of students during online classes by publishing them on its website, not by sending a letter to schools to inform parents."
 - "The attitude of the Ministry towards the work of teachers / professional associates has been catastrophic in the last few years, but during the coronavirus and distance learning (+ shortly after that) - complete humiliation. Loomen (Moodle system) is for my term "lifelong learning platforms" on the verge of insulting intelligence; "
 - "The Ministry gives parents the (too) great right to be smarter than anyone. Try to imagine the outcome that equal access is allowed when, for example, you bring a child to the hospital. "
 - "A large amount of unnecessary administration and newly imposed online education causes resistance in me (and everything I can avoid I can do)
 - "The law is not on the side of the teacher nor does it protect them, when the student and the parent are not satisfied, they will do their best to prove the guilt of the teacher"
 - "I feel harassed by the Ministry which humiliates us as if we were uneducated, thieves and liars"
 - "Today it is more a question of the ability to maintain and protect your energy from energy leeches than anything else, unfortunately!"
- **The impact of online teaching**
 - „Am I still motivated to work in online teaching? I am not. Not in the least."
 - "If online teaching continues, I am thinking of looking for another job, because the subject I teach is very ungrateful for implementation in online teaching!"
- **Parental pressure**
 - "Pressures from unrealistic parents are an aggravating factor in school work that drains a lot of energy, especially at the end of the school year"
 - "Every day I watch my colleagues burst under the pressure of their students' parents. Most of them are wonderful, realistic and reasonable people, but that one mommy or big daddy is enough to drive a man crazy, and you're sorry for that class teacher in whose class 4, 5 of them appear. "
- **Positive attitude and expectations from the survey**

- "Rarely has a survey covered all the important issues of this business and the problems that afflict us so well."
- "Honestly, it's really good that I can at least share my frustration with this year's conclusion with the computer"
- "I hope that the results of the survey will be made public and forwarded to the competent ministry."

5 CONCLUSIONS

With all the love for job that most teachers consider a calling, research has also shown its darker side.

Most teachers enjoy their work even though they find their job very unprofitable, three quarters of them are very satisfied with the quality of their teaching and think they are doing an important job. Still, every sixth teacher wants to have another job and would not choose to be a teacher again. Teachers are overwhelmed with work, they prepare often outside of working hours, administrative workloads a lot, but they are aware that the public does not understand their workload at all during teaching and non-teaching days. Almost half of them are not satisfied with the motivation and commitment of students. With the cooperation and support of colleagues and the administration, as well as the collective school culture, there are twice as many satisfied than dissatisfied teachers. They have great autonomy in adapting teaching materials and the way they treat students, but not autonomy in dealing with topics that are not in the curriculum.

Their social status is degrading, few in society envy them, only a quarter of them are satisfied with the respect of student's parents and the environment. One-fifth of teachers believe that parents exceed the permitted level by intervening for a higher grade for their child, for which they have the support of professional services and principals to a lesser extent. Extremely significant sources of stress have been forced online teaching, which requires overworked teachers to prepare extra time for teaching materials and imposes a feeling of all-day availability and lack of time for personal and family obligations, with pronounced frustration due to non-participation of students in school activities.

It has been confirmed that women have more time pressure and physical and emotional exhaustion, which is also contributed by greater responsibilities at home. They enjoy the job more and consider it more important, but they also suffer more from the consequences of online teaching. Men have a better relationship with the administration, but are more inclined to leave the teaching job and would not re-elect it.

Primary school teachers are more positive about their relationship with colleagues and their willingness to help and are more satisfied with their teaching, they are more prepared outside regular working hours and have more problems with students' motivation.

Teachers who have not completed teacher training regret the choice of teaching job more and consider it less important.

Freshman teachers have the most positive attitude towards almost all variables concerning the school context. Those with 6-15 years of experience are most prone to change occupations, online classes are the hardest for them, and together with those with 16-30 years of experience they are more overworked and do not have time to recover. Those more experienced with over 30 years of experience in education have the most autonomy in their work.

Teachers who have not promoted in the profession have the most problems with discipline and motivation of students and the least autonomy, parents respect them less and have a more positive attitude about the relationship with colleagues, they would rather do other work, the principal interferes most in concluding grades. Mentors feel the most respect from the parents of the students. Counselors have the most autonomy in their work, they are most satisfied with their teaching and the experiences of online teaching have least encouraged them to think about changing professions.

New stressors can be seen from teachers' free comments, primarily dissatisfaction with the humiliating attitude and communication of the Ministry towards teachers, the privileged position of parents provided by the Ministry, failure to provide adequate infrastructure for online teaching, inadequate teacher reward system and lack of sanctions for "non-workers". The surprise is that few teachers mention the material status of teachers as a problem, especially since there was a strike in the same school year whose main demand was a salary increase.

Teachers' perception of the survey used in this research, which they say covered all important issues of teaching without embellishment and gives them a sense of hope that someone is still questioning and caring for teachers, and that the results will encourage relevant institutions to dialogue with teachers. They need to implement all changes in education.

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REFERENCES

- [1] E. M. Skaalvik, S. Skaalvik, "Job Satisfaction, Stress and Coping Strategies in the Teaching Profession - What do Teachers Say?" *International Education Studies*, vol 8., no. 3., pp. 181-192., 2015.
- [2] E. B. Demerouti, "The Job Demands-Resources". *Journal of Applied Psychology*, vol 86, no. 3, pp. 499-512, 2001.
- [3] C. J. Maslach, *Maslach Burnout Inventory manual (3rd ed.)*. Mountain View: CPP Inc., 1996.
- [4] R. C. Beck. "Motivation; theories and principles", Pearson, 2003.
- [5] E. M. Skaalvik, S. Skaalvik, "Job demands and job resources as predictors of teacher motivation and well-being". *Social Psychology of Education*, vol. 21, pp. 1251-1275, 2018.
- [6] E. M. Skaalvik, S. Skaalvik, "Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school." *Soc Psychol Educ*, vol. 20, no. 1, pp. 15-37., 2017.
- [7] R. M. Klassen, M. M. Chiu, "Effects on Teachers' Self-Efficacy and Job Satisfaction: Teacher Gender, Years of Experience, and Job Stress". *Journal of Educational Psychology*, vol. 102, no. 3, pp. 741-756., 2010.
- [8] D. J. Osman, J. R. Warner, "Measuring teacher motivation: The missing link between professional development and practice", *Teaching and Teacher Education*, vol.92: 103064, p. 12, 2020.
- [9] C. M. Kokkinos, "Job stressors, personality and burnout in primary school teachers". *British Journal of Educational Psychology*, vol. 77., no. 1., pp. 229-243., 2007.
- [10] S. K. Ho, "The relationship between teacher stress and burnout in Hong Kong: positive humour and gender as moderators". *Educational Psychology*. vol. 37, no.3, pp. 272-286, 2015.
- [11] N. Boru, "The Factors Affecting Teacher-Motivation", *International Journal of Instruction*, vol 11, no. 4, pp. 761-776, 2018.
- [12] E. Vazquez-Cano, A. I. Holgueras-Gonzalez, "Teacher stress factors and performance in high school in Ecuador", *KEDi Journal of Educational Policy*, vol 16, no.2, pp. 21-41., 2019.
- [13] S. Anastasiou, S., A. Papagianni, "Parents', Teachers' and Principals' Views on Parental Involvement in Secondary Education Schools in Greece", *Education sciences.*, vol 9, no. 3, pp. 333-344., 2020.
- [14] I. Boljat, "Motivation for work and burnout of teachers of Informatics, Technical Culture and vocational subjects", *Polytechnica: Journal of Technology Education*, vol 3., no. 2, pp. 7-18., 2020.