

# EXPLORING SOURCES OF TEACHERS' PERCEIVED STRESS IN ROMANIAN PRE-TERTIARY EDUCATION

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## O ANALIZĂ A SURSELOR DE STRES AUTOPERCEPUT ÎN RÂNDUL CADRELOR DIDACTICE DIN ÎNVĂȚĂMÂNTUL PREUNIVERSITAR ROMÂNESC

Valeriu FRUNZARU<sup>1</sup>, Cătălina CICEI<sup>2</sup>

**Abstract:** Stress has become a widespread phenomenon in the educational system, a large number of empirical studies documenting its prevalence. This paper presents the findings of a quantitative study ( $N=2165$ ) regarding the self-perceived stress of Romanian educators and teachers from pre-tertiary educational level. Based on the ten-item Perceived Stress Scale (*PSS*) (Cohen & Williamson, 1988), our study examines the relationship between the stress experienced by teachers and various demographic, organizational and job-related variables. The findings underline the fact that no significant differences in experiencing stress are due to different background variables (such as school location, fulfilling management and union leader roles, or being a commuter), age being positively correlated with perceived stress. Associations have been reported with various workplace hazards, as well as with the satisfaction regarding different aspects of the job and professional activity, dissatisfaction regarding the relationship with the students and paperwork being the strongest predictors. Starting from these results, the paper also outlines some practical measures that can be implemented in view of reducing the stress of Romanian teachers from pre-tertiary education.

**Keywords:** perceived stress, Romanian teachers, organizational and job-related stressors, pre-tertiary education.

**Rezumat:** Stresul a devenit un fenomen des întâlnit în sistemul educațional, un număr ridicat de studii empirice documentând prevalența sa. Această lucrare prezintă rezultatele unui studiu cantitativ ( $N=2165$ ) privind stresul auto-perceput al cadrelor didactice și educatorilor din sistemul preuniversitar. Bazându-se pe varianta alcătuită din zece itemi a

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<sup>1</sup> Valeriu Frunzaru este conferențiar în cadrul Facultății de Comunicare și Relații Publice din SNSPA, unde predă cursuri și seminarii începând din anul 2000. Experiența didactică este dublată de experiența în cercetare, domeniile sale de interes fiind ocuparea forței de muncă, educația și valorile sociale (cu accent pe valorile materialiste). A participat la numeroase cercetări pe teme precum accesul și echitatea în învățământul superior, așteptările studenților de la facultate și de la piața muncii sau valorile materialiste și atitudinile studenților față de învățământul vocațional. Valeriu Frunzaru este interesat, cu precădere, de redefinirea rolului universității ca instituție de învățământ orientată către piața muncii și către nevoile comunității, în general. De asemenea, activitatea sa de cercetare include și studierea impactului rețelelor sociale online asupra utilizatorilor, în special impactul acestora asupra studenților.

<sup>2</sup> Cătălina Cicei este lector universitar în cadrul Facultății de Comunicare și Relații Publice din SNSPA. Direcțiile sale de cercetare se concentrează în special asupra analizei diferențelor individuale în obținerea performanței academice a studenților, fiind avut în vedere rolul unor constructe psihologice precum personalitatea, motivația sau inteligența emoțională. O altă temă de cercetare este legată de tranziția de la școală la viața profesională activă din perspectiva dezvoltării angajabilității studenților.

scalei stresului perceput (PSS) (Cohen și Williamson, 1988), cercetarea de față examinează relația dintre stresul raportat de profesori și variate variabile socio-demografice, organizaționale și asociate postului. Rezultatele subliniază faptul că nu există diferențe semnificative legate de intensitatea cu care stresul este resimțit în raport cu diferite variabile legate de context (precum localizarea școlii, deținerea de roluri de conducere sau de reprezentant al sindicatului sau realizarea navetei), vârsta fiind asociată pozitiv cu stresul perceput. Asocieri au fost identificate și în raport cu variate aspecte ale securității și sănătății la locul de muncă, precum și în ceea ce privește satisfacția legată de diferite aspecte ale locului de muncă și activității profesionale, insatisfacția privind relația cu elevii și elaborarea de documente fiind cei mai puternici predictorii. Pornind de la aceste rezultate, lucrarea propune, de asemenea, o serie de măsuri care pot fi implementate în vederea diminuării nivelului de stres raportat de către profesorii români din învățământul preuniversitar.

**Cuvinte cheie:** stres auto-perceput, cadre didactice din România, stresori organizaționali și asociați postului, educație preuniversitară.

## Introduction

Due to its high incidence and deleterious effects, teacher stress has become a topic of great concern for the researchers in the educational field, being extensively examined in an array of studies. A traditional definition regards teacher stress as “the experience by a teacher of unpleasant negative emotions such as anger, frustration, anxiety, depression and nervousness, resulting from some aspect of their work” (Kyriacou 2000 as cited in Kyriacou & Chien, 2004, p. 86). Traditionally, the construct has been investigated through various angles, the most frequent being related to its occurrence and to the types of stressors peculiar to the teaching profession (e.g. Kyriacou & Sutcliffe, 1978), or its consequences such as psychological distress (Chaplain, 2008; Chan, 2002) or burnout (Abel & Sewell, 1999; Betoret, 2006). Research has also been conducted on samples composed of kindergarten educators (Tsai, Fung & Chow, 2006), primary school teachers (Borg, Riding & Falzon, 1991), secondary school teachers (Abel & Sewell, 1999), or even academics (Abouserie, 1996), offering a broad picture of this complex phenomenon.

A large number of empirical studies draw attention to the fact that educators represent at an international level, in what concerns the prevalence of stress and burnout, a vulnerable occupational group (Howard & Johnson, 2004). Solid research has been conducted in this direction; some empirical studies suggesting that up to a third of teachers can experience elevated levels of stress (e.g., Borg & Riding, 1991; Capel, 1991; O'Connor & Clarke, 1990).

Sutton & Huberty (1984, p. 189) consider that the consequences of stress are experienced by the actors employed in the educational setting “as a function of their jobs and the inherent responsibilities”. From this perspective, Tsai et al. (2006) draw attention to the fact that stress has impairing outcomes, asserted at both the personal and the organizational level. Several studies examined the effects of teacher stress. For example, various researchers indicate that job stress represents a core predictor for teachers' burnout (e.g., Abel & Sewell, 1999; Mearns & Cain, 2003; Russell, Altmaier & Van Velzen, 1987). Other studies examine the relationship between teacher stress and mental

health (Travers & Cooper, 1993), psychosomatic health (Kinnunen & Salo, 1994), job satisfaction (Klassen & Chiu, 2010, Sutton & Huberty, 1984), career commitment (Borg et al., 1991) or occupational commitment and intention to quit the organization (Klassen & Chiu, 2011). From another perspective, Klassen & Chiu (2010) suggest that classroom stress is negatively linked with self-efficacy related to the class management and instructional strategies.

A great interest can be traced in the scientific literature regarding the types of stressors peculiar to the teaching profession. Russell et al. (1987, p. 269) draw attention to the fact that in this group can be included, among others, the “negative aspects of the job such as disciplinary problems, student apathy, overcrowded classrooms, involuntary transfers, excessive paperwork, inadequate salaries, demanding or unsupportive parents, and lack of administrative support (...)”.

From other perspective, job stressors are associated with (Kyriacou, 2001, as cited in Howard & Johnson, 2004, p. 400): “teaching students who lack motivation, maintaining discipline, time pressures and workload, coping with change, being evaluated by others, dealings with colleagues, self esteem and status issues, problems dealing with administration/management, role conflict and ambiguity and poor working conditions”. Other authors mentioned in Forlin (2001) consider that stressors related to the teaching profession consist in personal, administrative (e.g., workload or extracurricular demands) and classroom variables (e.g., student misbehaviour or class size).

Boyle, Borg, Falzon & Baglioni Jr. (1995) provide evidences according to which teacher stress is a multidimensional construct comprised of five factors, namely Time/Resource Difficulties, Poor Colleague Relations, Professional Recognition Needs, Pupil Misbehaviour, and Workload. According to the authors, the last dimensions are the strongest predictors of teacher stress. Also, Kyriacou & Chien (2004) draw attention to the fact that coping with reforms in the educational system and having to adapt to various transformations of educational policies can represent, also, an important stressor.

Research examining teachers’ stress has underpinned the role various socio-demographical factors, such as gender, age, professional experience or school location. For example, even if gender represents a variable that is examined in a plethora of studies, the findings are mixed. Klassen & Chiu (2010) provide evidences according to which teaching stress (generated by workload and student behavior) is strongly experienced by women. Antonoiu, Polychroni & Vlachakis (2006) emphasize this finding, underlining the fact that the most important factors relate, among others, to workload, monitoring student’s progress, or teacher-student and peer interaction. However, Kyriacou & Chien (2004) indicate that gender does not influence the level of teacher stress which is experienced.

Age can also be considered a significant predictor. From this perspective, the occurrence of job-stressors is higher for young teachers (Russell et al., 1987), who tend to experience increased levels of stress (Meng & Liu, 2008) and burnout (Antonoiu et al., 2006) than their older counterparts.

Also, empirical evidences suggest that teachers from urban schools report higher levels of stress triggered by work relations and work conditions (Abel & Sewell, 1999). However, Meng & Liu (2008) provide different results, underscoring the fact that rural teachers report higher levels of stress. The risk of experiencing an increased level of

stress is also greater when teaching in a large school (Kyriacou & Chien, 2004). Also, educators who lack professional experience are vulnerable in experiencing stress (Meng & Liu, 2008).

Although in Romania, the research focusing on this topic is still sparse, a great concern from the public and the institutional perspective has emerged in the last years, regarding the prevalence of stress in the educational field. According to Kelly & Berthelsen (1995), the teachers are currently exposed in their jobs with significant demands arising from social, educational and economic constraints, and in many countries teaching is considered to be one of the most stress-prone professions (Cooper, Sloan, and Williams, 1988 as cited in Tsai et al., 2006). The current study focuses specifically on the perceived stress reported by a national sample of teachers from the pre-tertiary education system. Having in view the multiple and diverse pressures that are exerted, teaching in the pre-tertiary Romanian educational system can be considered a stress-prone activity. Starting from the basis that perceived stress strongly impacts the individual's efficiency in the personal and professional life spheres, reducing both the overall wellbeing and job efficacy, we focused our research only on the general, non-specific stress reported by teachers, provided that a future study would only examine job stress. We examined three types of stress factors, focusing on demographic, organizational and job variables.

Starting from the previous discussion, the following research questions emerged:

RQ1: Are there any differences regarding Romanian teachers' perceived stress across various demographic categories?

RQ2: What is the impact of various job and organizational variables on teachers' perceived stress?

RQ3: Which are the strongest predictors of teachers' perceived stress?

Based on these general research questions, we conducted a survey on Romanian pre-tertiary teachers taking into consideration the job, organizational, and demographical variables. The paper focuses on teacher perceived stress and not on occupational stress. Thus, this paper reveals the Romanian teachers' general stress considering both job and organizational factors.

## Method

### *Sample and procedure*

The results of this study are based on a survey conducted in September 2014. Respondents ( $N=2165$ ) were Romanian educators and teachers from kindergarten to secondary schools. More precisely, they teach in kindergarten ( $N=294$ ), primary education ( $N=726$ ), lower secondary education ( $N=806$ ), upper secondary education ( $N=752$ ), and centres for special education for the pupils with disabilities ( $N=106$ ). Due to the fact that some teachers (such as those who teach Religion or English language) perform their activities in more than in one educational level (in the same school) and other teachers can work in two or more schools, the sum of all the subsamples is higher than the initial number of participants. The majority of the teaching staff (87.9%) works

in only one school, 10.5% teach in two schools, and 1.6% in more than two schools (usually in three schools). Participants are generally women (77.1%), from the urban area (73.9%). The sample was heterogeneous with respect to age, which ranged between 20 to 70 years old ( $M = 43.2$ ,  $SD = 9.9$ ).

The survey was administered online ( $N=909$ ) and on paper ( $N=1256$ ), guaranteeing the anonymity of the respondents. The paper-and-pencil and online administration of the questionnaires was done with the support of the Romanian Free Trade Union Federation in Education and it took approximately 15 minutes to complete.

### Measures

Stress was measured using the Perceived Stress Scale (PSS) developed by Cohen, Kamarck & Mermelstain (1983). We used a ten-item PSS version presented by Cohen and Williamson (1988). The responses to PSS items are made on a Likert scale ranging from 1 (*never*) to 5 (*very often*), the internal consistency of PSS being good ( $\alpha = .82$ ). The factor analysis shows that the Barlett's test of sphericity is significant ( $p < .01$ ) and the KMO that measures sample adequacy is 0.85. The principal component analysis yielded two factors with eigenvalues greater than 1.0 that explain together 54.4% of the construct (Table 1). Nevertheless, the findings show that the second factor is composed only by the reverse items of the scale. Therefore, a total score of perceived stress was counted by summing all of the ten items. Thus, the total score of PSS can range for 10 to 50.

**Table 1. Rotated Component Matrix for PSS**

Item	Component	
	1	2
In the last month, how often have you felt nervous and "stressed"?	.765	
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	.730	
In the last month, how often have you been angered because of things that were outside of your control?	.712	
In the last month, how often have you felt that you were unable to control the important things in your life?	.680	
In the last month, how often have you been upset because of something that happened unexpectedly?	.676	
In the last month, how often have you found that you could not cope with all the things that you had to do?	.653	
In the last month, how often have you felt that you were on top of things?		.802
In the last month, how often have you felt confident about your ability to handle your personal problems?		.776
In the last month, how often have you been able to control irritations in your life?		.717
In the last month, how often have you felt that things were going your way?		.666

Note. Only loadings greater than 0.25 are shown.

A sociological questionnaire was constructed for the current study, collecting data regarding various socio-demographical variables (e.g., age, gender, nationality, geographical region, educational level and number of schools in which teaching activities were deployed, family income, school location-urban or rural, school management or union leader position, commuting, time needed to get to school etc), organizational and

job variables (such as workplace risks and satisfaction regarding various aspects of the job and professional activity). For example, family income was measured on an ordinal scale, with values from “*not enough for our bare necessities*” to “*we can buy all we need without efforts*”. The evaluation of workplace hazards such the risk of fire, earthquake, epidemic, but also of students’ injury, drug and alcohol consumption were measured on a Likert 5 point scale (ranging from “1” – “*not at all*” to “5” – “*very great extent*”). The level of teachers’ satisfaction related to various aspects of the job and teaching activity (school material conditions, class size, relationship with students, relationship with students’ parents, timetable, teachers’ prestige, and paperwork) was measured as well on a Likert 5 point scale (ranging from “1” – “*not at all satisfied*” to “5” – “*very great extent*”).

## Results

The findings show that the respondents seem to have a rather lower level of stress ( $M = 25.55$ ,  $SD = 4.85$ ). If theoretically PSS could range between 10 to 50, in our sample the lowest value was 10 and the highest was 43. Results indicate that there were not significant effects for gender, residential area, nationality, trade union leader position, school management position or commuting on regarding the perceived stress experienced (Table 3). Thus, the level of perceived stress does not vary significantly in the case of male and female teachers ( $t(2045) = 1.13$ ,  $p > .05$ ). Moreover, teaching in an urban school ( $t(2052) = .60$ ,  $p > .05$ ), or being a commuter ( $t(2041) = -.83$ ,  $p > .05$ ) does not increase the level of stress reported. Union leaders ( $t(1991) = -1.19$ ,  $p > .05$ ) and school managers ( $t(2043) = 1.37$ ,  $p > .05$ ) do not experience higher stress than their counterparts, whereas no significant differences have been identified from this perspective between Romanian and Hungarian teachers ( $t(2007) = .36$ ,  $p > .05$ ).

**Table 3. Differences in experiencing perceived stress**

	t	df	Sig. (2-tailed)
Gender	1.137	2045	.256
Urban / Rural	.609	2052	.542
Romanian / Hungarian	.369	2007	.691
Union leader	-1.198	1991	.231
School manager	1.372	2043	.170
Commuter	-.835	2041	.404

The correlations between perceived stress and age ( $r(2016) = .05$ ,  $p < .01$ ), time needed to get to school ( $r(2042) = .05$ ,  $p < .01$ ), and income ( $r(2003) = -.15$ ,  $p < .01$ ) were small, but significant. It can be noticed that, in the case of Romanian teachers, age is positively associated with stress, although empirical evidences suggest that younger teachers are prone at reporting high levels of stress (e.g., Ming & Liu, 2008). However, we assign this finding to the fact that the current research examined only general stress and not job-specific teacher stress.

The negative correlation between stress and family income indicates that teachers with a lower income perceived themselves as being more stressed. This result has to be interpreted in the context that almost a half (48.2%) of the respondents considers that their families do not have enough money for fulfilling the bare necessities, or that the amount is satisfying in covering their basic needs. Therefore, the high level of poverty among the Romanian teachers can be associated with high levels of perceived stress.

Considering the distinctiveness of the teaching activity and its multiple demands, our investigation paid attention to the workplace security and students' health risks from kindergartens and schools. The results show perceived stress is positively associated with the perceptions of hazards, such as the extent to which the school can be affected by fire ( $r(2037) = .13, p < .01$ ), earthquake ( $r(2041) = .10, p < .01$ ), and epidemic ( $r(2009) = .09, p < .01$ ).

Also, teachers can be confronted with specific student problems that generate high pressures, such as students' injury (especially in kindergarten and in primary school) and drug or alcohol consumption (especially in secondary school). The findings indicate that working in an establishment in which the risk of students' injuries ( $r(2037) = .13, p < .01$ ), of drug consumption ( $r(2022) = .13, p < .01$ ), and alcohol consumption ( $r(2023) = .09, p < .01$ ) is high is associated with increased levels of perceived stress.

From another perspective, stress is negatively associated with a set of variables examining the level of satisfaction related to various aspects of the job (Table 4). The strongest correlations can be found between the self-perceived stress and the satisfaction regarding the relationship with students ( $r(2062) = -.25, p < .01$ ) and the heavy paperwork (reports, assignments, verbal process, etc.) ( $r(2046) = .21, p < .01$ ). Being the most important factors deriving from teachers' activity that are connected with perceived stress, proper measures could be implemented by schools management levels in order to reduce their negative effects.

**Table 4. Correlation matrix between satisfaction related to various job aspects and perceived stress**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Stress							
2. Satisfaction regarding school material conditions	-.061**						
3. Satisfaction regarding class size	-.101**	.367**					
4. Satisfaction regarding relationship with students	-.250**	.243**	.301**				
5. Satisfaction regarding relationship with students' parents	-.182**	.257**	.254**	.649**			
6. Satisfaction regarding timetable	-.181**	.255**	.263**	.310**	.289**		
7. Satisfaction regarding teachers' prestige	-.143**	.357**	.335**	.309**	.344**	.367**	
8. Satisfaction regarding paperwork	-.209**	.206**	.313**	.237**	.238**	.273**	.432**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

In order to examine the predictors of perceived stress, we ran a linear multiple regression (Table 5). The controlled variables gender and family income were recoded in

dummy variables (e.g. 1= “female” or “income covers more than basic needs” and 0= “male” or “income covers at most basic needs”).

**Table 5. Multiple linear regression with PSS as a dependent variable**

	B	Std. Error	Beta	t	Sig.
(Constant)	30.597	1.166		26.25	0.00
Age	0.025	0.013	0.05	1.912	0.06
Gender	0.794	0.295	0.07	2.69	0.01
Family income	-1.025	0.254	-0.105	-4.036	0.00
Student injury	0.392	0.125	0.088	3.125	0.00
Drug consumption	0.267	0.205	0.058	1.303	0.19
Alcohol consumption	-0.203	0.196	-0.046	-1.035	0.30
Satisfaction regarding school material conditions	0.273	0.126	0.063	2.17	0.03
Satisfaction regarding class size	0.157	0.125	0.037	1.256	0.21
Satisfaction regarding relationship with students	-1.137	0.205	-0.191	-5.55	0.00
Satisfaction regarding relationship with students' parents	-0.229	0.171	-0.046	-1.341	0.18
Satisfaction regarding timetable	-0.39	0.148	-0.075	-2.631	0.01
Satisfaction regarding teachers' prestige	0.031	0.124	0.008	0.251	0.80
Satisfaction regarding paperwork	-0.445	0.115	-0.113	-3.864	0.00

Adjusted R square = .11

The findings show that the most significant predictors of perceived stress are satisfaction regarding the relationship with students ( $\beta=-.19$ ,  $p<.001$ ) and paperwork ( $\beta=-.11$ ,  $p<.001$ ). Variables relating to the risk of students' drug or alcohol consumption do not influence self-perceived stress as well as those relating to the satisfaction concerning the class size, the relationship with the students' parents or the professional prestige. However, individual factors such as gender ( $\beta=.07$ ,  $p=.01$ ), age ( $\beta=.05$ ,  $p=.06$ ) or family income ( $\beta=-.10$ ,  $p<.001$ ) predict perceived stress.

## Discussions

This article examines the factors that influence self-perceived stress in the case of Romanian teachers. The results confirm previous findings from other studies that underline the impact of the level of satisfaction regarding various job factors, the perception related to workplace risks and hazards, and socio-demographical factors, such as age, gender, and family income, on teachers' stress.

Beyond the negative effects on the quality of life, teachers' stress can lead to the decrease of the occupational commitment and to diminished levels of professional self-

efficacy. Thus, some measures need to be taken both at the school level and on the government level in order to reduce teachers' self-perceived stress. One of the most important recommendations is that more money should be invested by central and local governments in education in order to improve material and working conditions, as well as raising teachers' salaries. Investing in creating safer schools less exposed to risks such as fire and earthquake can diminish teachers' stress. Due to the fact that education funding is made in reference with the number of students, the management is tempted to increase the class size in order to cover the expenses. A higher sum of money allocated to schools per student can have a positive impact on class size, and also on teaching conditions.

Informing the teaching staff regarding how to deal with students' injury (especially in the primary school) and alcohol or drug consumption (especially in secondary school) can reduce the stress caused by the perception of these risks. Paperwork, which is one of the most important stressors, can be diminished by the reducing of number of reports, assignments, verbal processes etc. that have to be submitted and by training teachers in using ICT in order to deal with these kind of job demands. Also, special trainings could be delivered in view of improving teacher-student relationship, and promoting student-centred education.

Although the current study addresses a topic that hasn't been previously examined at a large scale in the Romanian pre-tertiary educational system, and having in view that based on the sample structure various aspects of experiencing stress can be examined (e.g., related to gender, age, school location, position, family income etc), some important research limits must be highlighted. Thus, the design focused on examining only the general, perceived stress, and not the occupational stress, which would be more appropriate when investigating particular professional groups such as teachers. Hence, an explanation could be provided regarding the small magnitude of the correlations and the reduced power of the predictive model included in the study. From this perspective, it is advisable that future research using specific measures that assess teacher stress should be conducted.

Also, the effects of various individual variables (such as gender, age, family income, etc), risks and hazards and of satisfaction related to different job factors (e.g., timetable, paperwork, relationship with students, class size) should be examined segregated according to the level of education (kindergarten, primary school, lower secondary education, upper secondary education and centres for special education for the pupils with disabilities). The evidences provided in the quantitative study could be enriched with qualitative data that explore the prevalence, the main occupational stressors, the coping strategies used, and the personal and professional effects of teacher stress. Having in view that the current research is based on a cross-sectional design, longitudinal studies could be conducted in the future, on smaller samples of Romanian teachers.

New research directions could examine various effects of teacher stress such as burnout, mental or physical health, work-life balance, job and life satisfaction, organizational commitment, absenteeism, or turnover intentions. Personal demands (such as family pressures) could also be included in the research model. However, a

stronger emphasis should be laid on examining the individual differences that impact the experience of stress, such as personality traits and self-efficacy, coping strategies or social support.

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