


Teacher Stress and Psychosocial Factors in Teachers from Latin America, North America and Europe

Estrés docente y factores psicosociales en docentes de Latinoamérica, Norteamérica y Europa

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Summary

In an fast-paced world like that of these days, in which information and knowledge change in thousandths of seconds, and therefore education at all levels must adapt to this. Teachers, who are at the center, must carry out all their activities urgently due to media pressure in their environment, the pressure from authorities, coworkers and even their students. This can lead to stress over time, that is why this research focused on relating stress and psychosocial factors in teachers from Latin America, North America and Europe, involving in a non-probabilistic sample $n = 81$ teachers from different countries, at basic education and university levels. The Teaching Scale (ED-6 $\alpha = 0.932$) and the Questionnaire of Psychosocial Factors at Academic Work (FPSIS $\alpha = 0.916$) were used for the data collection, with a non-experimental, correlational, cross-sectional to quantitative approach design. The results obtained indicate that there is a significant correlation between teacher stress and psychosocial factors, ($p = .000$), prevailing mostly the level of stress due to anxiety, depression, and non-adaptive beliefs that correlate with the psychosocial factors.

Keywords: Depression; Teacher Stress; Anxiety; Psychosocial Factors; Education.

Resumen

En un mundo acelerado como el de estos tiempos, en el que la información y el conocimiento cambia en milésimas de segundos y por ende la educación a todo nivel debe adaptarse a ella, esta como centro el docente, quien debe realizar todas sus actividades con urgencia por presión mediática que tiene de su entorno, autoridades, pares y hasta de sus estudiantes, lo cual en el transcurso del tiempo le puede generar estrés, por tanto esta investigación se centró en relacionar el estrés y los factores psicosociales en docentes de Latinoamérica, Norteamérica y Europa, en una muestra no probabilística $n = 81$ docentes de diferentes países, del nivel de educación básica y universitaria, para la recolección de datos se utilizaron la Escala Docente (ED-6 $\alpha = 0.932$) y Cuestionario de Factores Psicosociales en el Trabajo Académico (FPSIS $\alpha = 0.916$), con un diseño no experimental, correlacional, transversal de enfoque cuantitativo. Los resultados obtenidos indican que existe correlación significativa entre el estrés docente y los factores psicosociales, ($p = .000$), prevaleciendo en su mayoría el nivel de estrés por ansiedad, depresión, creencias desadaptativas que se correlacionan con los factores psicosociales.

Palabras Clave: Depresión; Estrés docente; Ansiedad; Factores psicosociales; Educación.

Introduction

The demands of globalization in this century along with the continuous growth of information and communication technologies have brought about substantial changes in the labor market, economy, and mainly in basic and university education (Parihuaman-Aniceto, 2017); García-Moran & Gil-Lacruz, 2016). This last field has been compelled to make drastic changes in order to comply with the standards of a high quality education, as in recent times, governments and responsible bodies are demanding greater transparency as to how future professionals who will be integrated into the labor market are being trained. Therefore, a great number of educational institutions are being bound to demand from their teaching staff that in addition to their scheduled academic hours, they must devote more working hours for administrative support, interaction with parents and tutoring to students. Although teachers are not responsible for some of these activities, they are required to perform them- for they play a fundamental role in the teaching learning process, besides the fact that these have been assigned by the authorities of their educational institutions. For Gonzalez, (2018); Chavarria et al., (2017), these new roles aforementioned are related to work overload and are directly linked to emotional fatigue as well as symptoms of anxiety and depression, thus leading to teacher stress (Parihuaman-Aniceto, 2017; Castillo, Fernandez and Lopez, 2014; Parihuaman-Aniceto, 2017; Castillo, Fernandez and Lopez, 2014).

Stress is one of the worldwide causes that leads to absenteeism, lack of commitment to the institution, dissatisfaction in the workplace, and it generates depression and anxiety in those who suffer from it (García-Rivera, Maldonado-Radillo and Ramírez, 2014; Reyes & Aguilar, 2015).

According to Zuñiga-Jara and Pizarro-León, (2018); González, (2018); Castro, (2008), as teachers have to deal with an excessive number of students in their classrooms, indiscipline, lack of interest in learning, poor support from parents, abuse of power of their directors or immediate bosses, handing in reports and other types of documents, all this leads to generating stress, which can negatively affect their teaching performance.

According to González (2018), the stress that teachers may suffer is also related to psychosocial factors, among which infrastructure, equipment, physical spaces, and technology affect their emotional health, as they are not properly designed or teachers have not been trained in the use of these media. In addition, teaching is a profession that demands a lot from those who practice it, having to be in contact with people with a variety of customs, ideologies, culture, which implies adapting recurrently to the changing situations in the groups and in society itself, which also generates stress (Perez, 2018). From this perspective, it is therefore relevant to carry out studies on the problems exposed, in order to assess if these have any incidence on teachers at all educational levels. This is the reason for declaring as a general objective to determine the relationship between teacher stress and psychosocial factors in teachers from Latin America, North America and Europe, and as specific objectives: (i) to determine the relationship between stress and psychosocial factors in the workplace conditions for teachers dimension; (ii) to determine the relationship between stress and psychosocial factors in the teachers' workload dimension; (iii) to determine the relationship with psychosocial factors significantly in the content and characteristics of the tasks on teachers dimension; (iv) to determine the relationship between stress and psychosocial factors in the work demands on teachers dimension;(v.) to determine the relationship between stress and psychosocial factors in the academic role and career development of teachers dimension;(vi.) to determine the relationship between stress and psychosocial factors in the social interaction and organizational aspects in teachers dimension; (vii.) to determine the relationship between stress and psychosocial factors in the performance remuneration dimension of Latin American, North American and European teachers.

Teacher Stress

Stress, in general terms, is an affectation that the human being has suffered since past centuries, González, (2018); Osorio & Cárdenas, (2017); Uribe, Patlán & García, (2014) refer that it is an automatic response of the organism before any event that is imposed on it and that feels that it is threatening, making the nervous system stimulate and react producing changes at a psychological (mental) or physiological (physical) level, and that occurs in a particular way between the person and the situation. For Sánchez (2017), stress is differentiated from labor stress; the latter occurs from the imbalance of the demands and pressures faced by the individual, due to pressure at work and non-optimal labor conditions, something that exceeds the resistance and capacity of the worker to be able to resolve and face them. Parihuaman-Aniceto (2017). For Orozco, (2018); Chiang, Riquelme & Rivas, (2018); Zuñiga-Jara and Pizarro-León, (2018); Cardozo, (2016); Barradas et al, (2015); Díaz, (2011) work stress is a physiological, emotional and behavioral response, which leads to a loss of motivation, and arouses feelings of inadequacy and failure in the worker, which generates a mismatch in his performance and impacts on his physical and psychological health, impairing his ability to concentrate, fluctuating changes in his mood, even getting to suffer from depression (Chiang, Heredia & Santamaría, 2017; Donayre, 2016). Stress does not distinguish race, nor economic status, much less professional status; that is why, teachers are no strangers to suffering from it, as De la Cruz mentions (2017); García-Moran & Gil-Lacruz, (2016) refer that teacher stress is an anguish that does not dissipate and it produces in the person under stress adverse reactions in his organism, thus using physiological mechanisms (tachycardia, insomnia, digestive disorders, hypertension), psychological mechanisms (irritability, anxiety, anger, depression), and behavioral mechanisms (boredom, digression, abuse of tobacco, alcohol, drugs) to react to these changes that are manifested for months, generating exhaustion and wear and tear on his health, manifested according to Cardozo, (2016); Castro, (2008) in negative and unpleasant emotions such as anger, anxiety, frustration, depression, anguish and nervousness. In addition, González, (2018); De la Cruz (2017); Sánchez, (2017), Patiño and Gutiérrez, (2013)

emphasize that teacher stress implies that teachers cannot work optimally and with quality, due to the lack of energy and enthusiasm they used to have to achieve their goals and fulfill their different activities, having been forced to adopt habits which are different from those they had, and having to face these physiological, psychological and behavioral mechanisms.

For Espadas, (2016); Castro (2008), the changes that are constantly being made at the level of educational standards, as well as the recognition of accredited educational institutions, have an incidence on teachers, who receive greater work pressure, with more workload and additional functions within the assigned academic hours without any additional benefit, continuous changes in curricular content, multiplied conflicts in the classroom, a higher number of students with special needs, the influence of technological means, which has demanded that they stay in their workplace many more hours than those planned, consequently leaving aside other obligations to be performed. As a result, all this leads to stress, with psychological manifestations such as anxiety based on non-adaptive beliefs, depression with changes of mood, apathy, sadness. These exert an influence on undesirable behavior on the part of teachers, Parihuaman-Aniceto, (2017) and wrongly facing these stressful situations with repercussion in the ill treatment of their students and the people close in their environment; a cognitive deterioration also shows, as their concentration and attention are affected; this reflects in a decrease of their academic performance (Sánchez, 2017; Cardozo, 2016).

Psychosocial factors and Teacher Stress

In this twenty-first century where changes are constant, especially in the workplace where the demand of new profiles is being emphasized, and not having an established working schedule is a tendency, even though it is specified in the contract of the professionals, this is not actually reflected. Alongside, the workplace conditions are not the most suitable ones for the performance of their activities, and an excessive workload hinders the professional development of the workers in the academic field and their continuing education, also combined with a salary which is not in line with the expectations of the professionals or with the functions they perform; all this leading these psychosocial factors to have an effect on detriment of the worker's health and especially on the productivity of the organization, reduced performance and quality, absenteeism and abandonment, (Fernandez-Puig et al., 2015), not being aware of the losses caused to their institution by a staff that suffers emotional exhaustion or stress, thus leading to depression and anxiety, as referred to by Montiel-Jarquín et al., (2015), for they have long working hours, inadequate resting time, precarious or poorly preserved facilities, lack of materials and equipment, and a low payment. Chavarría *et al.*, (2016); Castillo, Fernández and López, (2014), state that teaching is currently recognized as a highly stressful profession because teachers have to face a great conflict in their activities, due to the increase in tasks for which they were not trained, having poor recognition, being overloaded at work, performing administrative functions, and being constantly subjected to changing roles. Sánchez, (2017) asserts that there are socio-labor factors that exert a certain influence on teachers, such as the working condition; some are hired for a short period while others enjoy job stability, these last ones are those with higher stress levels; in addition, they are overloaded and have very little social support, which results in dissatisfaction and stress.

According to Perez, (2018); Chiang, Heredia and Santamaría, (2017); Díaz, (2011) the psychosocial factors are the set of the individual's own conditions and those of his extra-labor environment, the level of pressure, the volume of work, job stability, recognition, high workload; if these have negative repercussions in an intense way as well as a prolonged exposure, negative effects are produced and there occur imbalances in health at the intellectual, physiological, psycho-emotional and social level, thus triggering stress.

For Osorio and Cárdenas, (2017) psychosocial factors are the intra-labor conditions that, like the individual's extra-labor conditions, influence on the appearance of stress when these turn into a risk, as among others, increased responsibilities, repetitive activities performed frequently and for long periods, labor instability and excessive work, Lemoset *et al.*, (2018); González, (2018).

Villanueva *et al.*, (2005) emphasizes that there are social factors which prompt teacher stress, such as loss of authority in front of parents, lack of motivation and indiscipline on the part of students, loss of status and prestige.

Fernández-Puiget *et al.*, (2015) state that psychosocial factors are the main cause of teachers' loss of health, and refer that this is manifested through chronic stress, also being susceptible to increase the risk of suffering emotional, cognitive and psychosomatic changes. Similarly, Unda, *et al.* (2016) refer that the International Labor Organization declares that psychosocial factors in the workplace contribute to a series of health damages if they are inadequate or at risk for the worker, who may have adverse effects of a psychological, behavioral, somatic or emotional nature causing stress, depression and pain, especially in the case of teachers, doctors, nurses, among others.

According to Graneros, (2018) the interaction between the worker and the physical-social environment, framed within psychosocial factors, can affect his health if he is subjected to tensions or stress, since not all workers face stressful situations in the same way, because everyone has their own characteristics that determine the magnitude and nature of their reactions. The physical environment must have adequate lighting for the performance of the workers' activities, so that it does not generate fatigue. Noise has negative repercussions if it exceeds the decibels allowed for an individual; also, the work space must comply with the standard measures, because if this is limited the worker is forced to maintain the same position for long periods of time. All these negative aspects could trigger stress (Graneros, 2018).

Method

Participants

The population consisted of 329 basic and higher education teachers from Latin America (Argentina, Bolivia, Peru, Colombia, Uruguay, Venezuela, Panama and Mexico), North America (The United States) and Europe (Spain). Being an exploratory study, the sample was of a non-probability, intentional type. According to Hernández, Fernández and Baptista, (2014) the selection of subjects does not depend on probability, but on the purposes of the researcher, using as an inclusion criterion the voluntary participation with the acceptance of informed consent. The participants were active teachers with at least one assigned classroom, so the total sample included 81 teachers, predominantly aged between 41 and 50 years (36%). Regarding the level of study, the master's degree has a higher percentage (48%), the majority is married (56%), and there live in Latin America (88%), North America (7%) and Europe (5%), as described in Table 1. As for the level of education where they work, (52%) work at the university, (75%) in a public institution. (59%) are in charge of between 1 and 3 classrooms. They mostly teach in the morning session (70%), and as described in Table 2, (73%) have devoted themselves to teaching for more than 11 years.

Table 1.
Description 1 of the sample in percentages

Age	% of teachers	Level of studies	% of teachers	Marital status	% of teachers	Residing	% of teachers
20 to 30	1	University graduate	3	Married	56	Latin America	88
31 to 40	21	Bachelor	16	Single	22	Northamerica	7
41 to 50	36	Master's degree	48	Divorced	9	Europe	5
51 to 60	31	Doctorate	32	Cohabiting	12		
61 or more	11	Other	1	Widowed	1		

Table 2.
Description 2 of the sample in percentages

Educational worklevel	% of teachers	kind of Institution	% of teachers	Number of classrooms	% of teachers	Teaching session	% of teachers	Teaching experience	% of teachers
Initial	5	Public	75	1 to 3 classrooms	59	Morning	70	1 to 5 years	9
Primary	26	Private	22	4 to 6 classrooms	21	Afternoon	14	5 to 10 years	18
Secondary	11	Public and Private	3	More than 6 classrooms	20	Evening	16	More than 11 years	73
Institute	6								
University	52								

Instrument

The ED-6 Teacher Stress Scale, elaborated by Gutiérrez, Morán, Sanz and Inmaculada (Orozco, 2018) was used to collect data on the teacher stress variable. It was applied to the Peruvian population by Parihuaman-Aniceto (2017) and it consisted of 55 items. However, it was adapted for this study because the sample included three different types of contexts. When the ED-6 was adapted, the validation of the content was made by expert judgment. There were four experts in the subject living in Mexico, Panama, the United States and Peru the ones who evaluated the instrument. They suggested that small changes be made, as well as the elimination of some items. This was considered pertinent to take into account, and it may be observed in Annex 1. The reliability of the ED-6 was verified with Cronbach's Alpha (table 5) obtaining $\alpha=0.932$ (Very high reliability). The ED-6, (table 3) has 5 dimensions and 39 items of Likert scale type, with a valuation of 1 (totally in agreement) to 5 (totally in disagreement). It was self-applicable in an approximate time of 25 minutes of group administration.

Table 3.
Description of the instrument: Teacher stress ED-6

Dimensions	Items	Instrument
Stress due to anxiety	1,2,3,4,5,6,7,8,9,10	ED-6 Teacher Stress Scale
Stress due to depression	11,12,13,14,15,16,17	
Stress due to non-adaptive beliefs	18,19,20,21	
Stress due to work pressure	22,23,24,25,26,27,28,29,30,31,32,33,34	
Stress due to poor coping	35,36,37,38,39	

The Questionnaire of Psychosocial Factors in Academic Work (FPSIS) elaborated by Blanca Silva Gutiérrez in 2005 was used for the psychosocial factors variable (table 4). This was applied with a Peruvian population by Graneros, (2018), and it consisted of 50 items; it was however adapted for this study, because the sample included three types of different contexts.

Since the FPSIS questionnaire was adapted, the validation of its content was made through expert judgment, with four experts in the subject who live in Mexico, Panama, the United States and Peru. They evaluated the instrument, suggesting some changes in the wording and the deletion of some items; this was taken into consideration, as it can be observed in Annex 2. The reliability of the FPSIS questionnaire was analyzed with the Cronbach's Alpha (table 5) obtaining $\alpha=0.916$ (Very high reliability). The FPSIS (table 3) has 7 dimensions and 44 Likert scale-like items, with

a valuation of 0 (never) to 4 (always); it was self-applicable in an approximate time of 25 minutes of group administration.

Table 4.

Description of the instrument: Questionnaire of Psychosocial Factors in Academic Work (FPSIS)

Dimensions	Items	Instrument
Workplace Conditions	1,2,3,4,5,6,7,8,9,10	Questionnaire of Psychosocial Factors in Academic Work (FPSIS)
Workload	11,12,13,14,15	
Tasks Content and Characteristics	16,17,18,19,20,21,22,23	
Work pressure	24,25,26,27,28,29	
Role of the Academician and Career Development	30,31,32,33,34	
Social Interaction and Organizational Aspects,	35,36,37,38,39,40,41,42	
Performance Compensation	43,44	

Table 5.

Reliability test for the teacher stress variable and psychosocial factors

Instrument	Cronbach's Alpha	Number of elements
ED-6 Teacher Stress Scale	0.932	39
Questionnaire of Psychosocial Factors in Academic Work (FPSIS)	0.916	44

Type, design and study focus

The present study is of a descriptive type, for according to Hernández, Fernández and Baptista (2014) descriptive studies measure concepts and defines variables when describing contexts or phenomena which seek to specify characteristics and profiles of the participants, in this case teacher stress and psychosocial factors. The design of the study is non-experimental, transverse and correlational, where the researcher does not manipulate any variable, but just measures them through the application of data collection instruments in a single moment and a unique time, in order to contrast if there is any relationship between them. As for the approach, it is quantitative since measurements have been established, and they undergo a process of statistical analysis. (Hernandez, Fernandez & Baptista, 2014).

Procedure

The execution of the research was carried out by stages, as described below:

First stage: A literature review was carried out to confirm the problem detected from a theoretical foundation that would support the study to be carried out, and at the same time allow for the selection of an instrument validated in the different countries that would be included in the sample to make a diagnosis of the study variables.

Second stage: A selection of the population to which the data collection instruments would be applied was made, so that all participants would be teachers at the different levels of education, and at least with an assigned classroom.

Third stage: The two instruments used were published in a single form using the Google Forms platform, placing in the first section the informed consent, in which the freedom to participate was emphasized, and the compulsory indication to fill in the two data collection instruments.

Fourth stage: An invitation to participate in the research was sent through the social network Whatsapp and by mail in order to collect the information. A presentation message was included, with the link to the questionnaires. The administration of the questionnaires was then carried out in fifteen consecutive days.

Fifth stage: The Consolidated Excel was downloaded from Google Forms, after the set time elapsed. It was first quantified and then later the descriptive and inferential analysis was made using Excel and SPSS v.24 programs.

Results

The inferential analysis was performed through the Kruskal-Wallis test, in order to contrast the general hypothesis test and the specific hypotheses of the study.

Table 6 shows the analysis of the relationship between teacher stress and psychosocial factors in general; a strong positive correlation is contrasted between stress and workplace conditions ($p=0.000$), workload ($p=0.003$), content and characteristics of the task ($p=0.000$), role of the academician and career development ($p=0.001$), social interaction and organizational aspects ($p=0.001$). There is also a strong correlation between stress in general and psychosocial factors in general ($p=0.000$); these results conclude that there is a relationship between teacher stress and psychosocial factors of teachers from Latin America, North America and Europe.

Table 6.

Results of the correlation analysis between teacher stress and psychosocial factors

Psychosocial Factors	General stress level	
	Kruskal-Wallis	Sig.
Workplace Conditions	20.225	0.000*
Workload	11.732	0.003*
Task Content and Characteristics	18.055	0.000*
Work Requirements	1.635	0.441
Role of the Academician and Career Development	14.134	0.001*
Social Interaction and Organizational Aspects,	14.009	0.001*
Performance Compensation	5.714	0.057
Psychosocial Factors in General	23.468	0.000*

From the evaluation of table 7, there can be observed the relationship between stress and psychosocial factors in the dimension workplace conditions for teachers; there is a direct and significant relationship with the stress level of anxiety ($p=0.001$), stress level of depression ($p=0.003$), stress level due to non-adaptive beliefs ($p=0.015$), stress level due to work pressure ($p=0.000$) and stress level due to poor coping ($p=0.030$). It can then be concluded that there is a significant relationship between teacher stress and psychosocial factors in the dimension workplace conditions for Latin American, European and North American teachers.

Table 7.

Analysis of the relationship between stress and psychosocial factors in the dimension of workplace conditions in teachers.

	Stress level due to anxiety		Stress level due to depression		Stress level due to nonadaptive beliefs		Stress level due to Work pressure		Stress level due to poor coping	
Psychosocial factors	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.
Workplace conditions.	13.773	0.001*	11.482	0.003*	8.412	0.015*	26.163	0.000*	7.014	0.030*

From the evaluation of table 8, there can be observed the relationship between stress and psychosocial factors in the workload for teachers dimension, directly and significantly with the stress level of anxiety ($p=0.010$), stress level of depression ($p=0.032$), stress level of work pressure ($p=0.001$), concluding that there is a significant relationship between teacher stress in the dimensions stress level of anxiety, depression and work pressure and psychosocial factors in the workload dimension of teachers from Latin America, North America and Europe. However, there is no relationship between teacher stress in the stress level due to non-adaptive beliefs dimension ($p=0.303$), and stress level due to poor coping ($p=0.193$) with psychosocial factors.

Table 8.

Analysis of the relationship between stress and psychosocial factors in the dimension workload for teachers

	Stress level due to anxiety		Stress level due to depression		Stress level due to non-adaptive beliefs		Work pressure stress level		Poor coping stress level	
Psycho-social factors	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.
Workload	9.249	0.010*	6.855	0.032*	2.386	0.303	14.379	0.001*	3.287	0.193

From the evaluation of Table 9, a significant positive relationship can be observed between stress and psychosocial factors in the content and characteristic of the teachers' task dimension, with the stress level of anxiety ($p=0.008$), stress level of depression ($p=0.026$), stress level due to non-adaptive beliefs ($p=0.006$), stress level due to work pressure ($p=0.000$); it can therefore be concluded that teacher stress and psychosocial factors are significantly correlated in the content and characteristics of the task dimension of teachers from Latin America, North America and Europe. However, no relationship was found between stress due to poor coping and psychosocial factors in the content and characteristic of the task dimension.

Table 9

Analysis of the relationship between stress and psychosocial factors in the content and characteristic of the teachers' task dimension.

	Stress level due to anxiety		Stress level due to depression		Stress level due to non-adaptative beliefs		Work pressure stress level		Poor coping stress level	
Psychosocial factors	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.
Content and characteristics of the task	9.709	0.008*	7.336	0.026*	10.339	0.006*	21.915	0.000*	2.830	0.243

From the evaluation of Table 10, which analyzes the relationship between stress and psychosocial factors in the teachers' work demand dimension, it is observed that there is no correlation between these variables and their dimensions.

Table 10.

Analysis of the relationship between stress and psychosocial factors in the teachers' work demands dimension.

	Stress level due to anxiety		Stress level due to depression		Stress level due to non-adaptative beliefs		Work pressure stress level		Poor coping stress level	
Psychosocial factors	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.
Work demands	3.509	0.173	1.671	0.434	0.371	0.831	0.741	0.690	0.205	0.903

From the evaluation of Table 11, in which the relationship between stress and psychosocial factors in the role of academics and career development for teachers is analyzed, it is observed that the conditions of anxiety stress level ($p=0.001$), depression stress level ($p=0.001$), work pressure stress level ($p=0.000$) and bad coping stress level ($p=0.001$) correlate significantly, so it is concluded that stress is related to psychosocial factors in the academic and career development role dimension of teachers from Latin America, North America and Europe.

Table 11.

Analysis of the relationship between stress and psychosocial factors in the teachers' academic and career development role dimension.

	Stress level due to anxiety		Stress level due to depression		Stress level due to non-adaptative beliefs		Work pressure stress level		Poor coping stress level	
Psychosocial factors	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.
Academic and career development role	14.877	0.001*	13.417	0.001*	3.196	0.020	17.484	0.000*	9.170	0.001*

From the evaluation of Table 12, in which the relationship between stress and psychosocial factors in the teachers' social interaction and organizational aspects dimension is analyzed, it is observed that the stress level conditions due to anxiety ($p=0.003$), stress level due to depression ($p=0.017$), stress level due to non-adaptive beliefs ($p=0.005$), stress level due to work pressure ($p=0.000$) and stress level due to poor coping ($p=0.000$) are significantly correlated with social interaction and organizational aspects. It is concluded that there is a significant positive relationship between stress and psychosocial factors in the social interaction and organizational aspects dimension of teachers from Latin America, North America and Europe.

Table 12.

Analysis of the relationship between stress and psychosocial factors in the teachers' social interaction and organizational aspects dimension.

	Stress level due to anxiety		Stress level due to depression		Stress level due to non-adaptive beliefs		Work pressure stress level		Poor coping stress level	
	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.
Psycho-social factors	11.613	0.003*	8.202	0.017*	10.570	0.005*	18.649	0.000*	15.437	0.000*
Social interaction and organizational aspects										

From the evaluation of Table 13, which analyzes the relationship between stress and psychosocial factors in the teachers' performance remuneration dimension, it is observed that the stress level of work pressure ($p=0.025$) correlates with the performance remuneration dimension. No relationship was found between anxiety stress level, depression, non-adaptive beliefs and poor coping. There is no correlation with psychosocial factors in the performance remuneration dimension.

Table 13.

Analysis of the relationship between stress and psychosocial factors in the teachers' performance remuneration dimension.

	Stress level due to anxiety		Stress level due to depression		Stress level due to non-adaptive beliefs		Work pressure stress level		Poor coping stress level	
	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.	Kruskal-Wallis	Sig.
Psycho-social factors	1.665	0.435	2.160	0.340	3.151	0.207	7.388	0.025*	0.872	0.647
Performance remuneration										

Discussion

According to the results obtained from the contrast of the general hypothesis, there is a significant positive relationship ($p=0.000$) between stress and psychosocial factors in teachers, which coincides with Graneros, (2018); Donayre (2016) refers to aspects related to the work environment such as the physical environment that generate stress in teachers, which can lead to a more acute stress called burnout (2018); Chavarría et al, (2017); Osorio and Cárdenas, (2016) refer that stress is a mental affectation that is influenced by the physical-emotional demands

produced by the interaction with students in a negative way together with the problems of psychosocial factors, which hinder the teaching performance. Chiang, Heredia and Santamaría, (2017) state that stress is a factor that is presented by the labor demands in the job associated to the scarcity of physical and material resources, as well as the interaction taking place in stressing environments. In his research, Díaz, (2014) determined that teachers who suffer stress are prone to develop burnout by the constant psychosocial risk factors presented to them, highlighting the daily coexistence teachers have with their students. Iniesta (2016) emphasizes that in Europe labor stress affects almost 40 million workers producing harmful effects on their health and on the productivity and competitiveness of the companies, making it necessary to make an annual investment of 20,000 million euros in order to fight it back.

These results assert that moods such as depression and anxiety are linked to stress. According to García-Rivera, Maldonado-Radillo and Ramírez, (2014) both depression and anxiety generate mood swings manifested with irritability, lack of ability to feel pleasure, appetite and insomnia. For Bermúdez, (2018) depression is a mental affectation suffered by approximately 350 million people in the world and is considered as one of the disabilities that influences absenteeism from work. Being linked to stress, in turn it influences on the drop of performance and productivity of the worker, according to Iniesta (2016) and Fernández-Puig, (2015). Martínez, (2015) states that the relationship that may exist between the individual and the assessment he uses as a coping strategy, if adequate and sufficient, it will allow him to adapt to these stressful or threatening situations so that stress is not generated. Chiang, Heredia and Santamaría, (2017) state that the stress level due to work pressure and anxiety are factors that affect the worker as they are linked to work demands, thus creating an imbalance in their physical and psychological health, with psychosomatic changes that damage his professional performance.

Cardozo, (2018) demands that multidimensional intervention policies be generated in the teaching community in order to alleviate this problematic situation and provide a better quality of work for the improvement in the performance and commitment of the teaching work. Lemos et al., (2018) in his research on psychosocial factors associated with stress on Colombian university professors coincides with this study when referring that the overwhelming demands in academic work, variability and overload in tasks are risk factors for the physical and psychological health of the teacher, finding that there is a high presence of significant levels of stress, depression and anxiety in the teachers who were part of the research. Castillo, Fernández and López, (2014) report that teachers experience depression and anxiety due to the academic role they play with the entire student community, as they are exposed to acute stressors of various kinds. Vargas, (2018); Chiang, Heredia and Santamaría, (2017) emphasize that work-related stress has an incidence on workers in terms of psychosocial factors related to the demand and pressure of work, complexity of the task, work overload, routine activities, and lack of support in the professional development of the worker. Domínguez-Rodríguez, Prieto-Cabras and Barraca-Mairal, (2017) state that the overload of work within the assigned activities or the accomplishment of tasks that do not correspond to the worker, or daily repetitive tasks for prolonged times, or even tasks that do not correspond to the worker lead to a picture of stress, anxiety and depression, just as the administrative works and changes of roles to which the teacher is submitted (Chavarría et al., 2017; Donayre, 2016). For Vargas, (2018); Vieco and Abello, (2014) the affectation of psychosocial factors as shown in these results lead to negative consequences for the institution as it influences the absenteeism of the worker to his job, whether for justified or unjustified causes, increasing lost work hours for the organization, which results in low productivity, poor quality of service and an overload of work in other workers. In addition Vargas (2018) states that the implication of social interactions at work can become an incentive for better performance of the worker, since through these, social relations are built within the organization, giving the workers a sense of pertinence. Notwithstanding this study has offered the possibility to conclude that there is interference with this dimension because it is correlated with anxiety, depression, non-adaptive beliefs, poor coping and stress. Cháidez and Barraza, (2018); Solanes, et al., (2013) mention that coping with stress on teachers is a cognitive and behavioural effort to resolve specific internal and/or external demands that are excessive for people and endanger their well-being, something

which coincides in this study, as bad coping with stress is present in almost all the correlations with psychosocial factors.

Donayre, (2016) refers that in addition to good labor relations and effective communication with all members of the educational community, something which favors the positive evaluation of the work done, if combined with monetary remuneration and economic incentives, it will allow teachers to feel optimum well-being, but if the opposite occurs, they will perceive it as stressful factors, an aspect that coincides with the results obtained in this study.

For future studies, it would be important to include a larger sample of teachers in studies of this type that include several countries from different continents, since in this research it is a limiting factor, as it is not possible to assert whether all the results can be generalized. However, there were interesting results related to other sociodemographic and general aspects, which would be relevant if expanded within the subject of teacher stress and psychosocial factors.

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Anex 1

Teacher Stress Questionnaire ED-6

Next, you will find a series of statement, of which you will have to choose the one that in your opinion relates to you, considering a valuation of 1 to 5, taking into account that:

1 = totally agree 2 = in agreement 3 = indifferent, neither one nor the other
 4 = disagree 5 = totally disagree

No.	Ítem					
	Stress level due to anxiety	1	2	3	4	5
1	It's hard for me to calm down after work setbacks.					
2	At many times during the workday I feel tense and nervous.					
3	Work stress is modifying my sleep habits.					
4	There are work tasks that I face with fear.					
5	Work problems are affecting my physical health.					
6	Tension at work is altering my eating habits.					
7	In the Educational Institution there are situations of tension that make me sweat cold.					
8	When facing problems at work, I feel that my breathing is altered.					
9	Work strains cause me to go to the bathroom more often than usual.					
10	I take some tranquilizers or drugs to relieve my physical discomfort from feeling pressure at work.					
	Stress level due to depression					
11	I feel sad more often than what was normal for me because of work problems					
	ELIMINATED					
12	I tend to be pessimistic about work problems.					
13	I see the future without any illusion.					
14	I feel like I'm falling apart emotionally.					
15	I feel like crying for no apparent reason.					
16	I don't have the energy to take on the work of a teacher.					
17	I find it hard to concentrate when I go to work.					
	Stress level due to non adaptative beliefs					
18	I believe there are no good or bad teachers, but good or bad students.					
19	Including students with Special Educational Needs in the classroom is a mistake that spoils the performance of the rest.					
20	I'm paid to teach, not to educate people.					
21	I feel uncomfortable having to teach students who don't value education.					
	Work pressure stress level					
22	When I finish my long hours of work I feel exhausted.					
23	As the working day progresses, I feel a greater need for it to end.					
24	Making my curricular schedule is difficult for me					
25	All I ask of some students is that they don't bother me while I teach the rest of the class.					
26	There are classes in which I spend more time drawing attention (scolding students) than explaining.					
27	Students' personal bad moments affect me personally					

28	I am affected by students' verbal aggressions					
29	I am discouraged by parents' lack of support for their children's discipline problems.					
30	I am affected by the rivalry between groups of teachers					
31	I feel like I'm so far from my professional and labor self-realization.					
32	I'm quite distanced from the teacher's ideal I started with.					
33	I've lost my motivation for teaching.					
34	I am discouraged by the instability of my teaching position at the educational institution.					
	Poor coping stress level					
35	I feel welcomed in the classroom (or classrooms) in which I work*.					
36	My social relationships outside the institution (family, partner, friends, etc.) are very good.					
37	My colleagues have my moral and professional support.					
38	I deal effectively with problems that sometimes arise with co-workers.					
39	I easily solve problems at work and with my students.					

Anex 2

Questionnaire on Psychosocial Factors in the Academic Work (FPSIS)

Below, you will find a series of statements, of which you will have to choose one of the following options:

0 = never 2 = almost never 3 = often 4 = always

No.	Workplace conditions	0	1	2	3	4
1	Noise in general interferes with my academic activities					
2	Lighting in my classroom is not adequate in the educational institution					
3	The temperature in the classroom and/or other academic environments is not adequate					
4	There is poor hygiene in my classroom and other environments of the educational institution					
5	Exposed to dust, gases, solvents, or vapors in the classroom where you teach your classes					
6	Exposed to microbes, fungi, insects, or rodents in the classroom where you teach your classes					
7	Lacks a faculty room to do your academic work					
8	The space where you work is inadequate for your academic work.					
9	There is overcrowding (limited space) in classrooms or spaces for developing the academic work.					
10	You do not have the necessary equipment and materials to carry out your academic activity					
	Workload					
11	You have excess academic or administrative activities in your daily workday.					
12	The work demands that you receive do not correspond to your level of knowledge, skills and abilities.					
13	Your workday lasts more than nine hours a day					

14	You work on weekends and during vacations in academic activities of your educational institution without being recognized.					
15	You perform different academic functions: teaching, research, tutorials, management within the working day.					
	Content and characteristics of the task					
16	Your work is repetitive, routine and boring					
17	Faces problems with student behavior					
18	Your job does not allow you to develop new skills and knowledge					
19	Participate in research projects that are not of interest to you					
20	There are constant changes in the subjects or courses you teach					
21	You teach classes in areas that are not of your specialty					
22	You teach classes to groups with a high number of students					
23	You are engaged in activities of coordination and supervision of personnel					
	Labor requirements					
24	Your job requires a high degree of concentration					
25	You are required to stay for many hours in uncomfortable postures (standing or sitting)					
26	You require prolonged visual effort					
27	Your job requires creativity and initiative					
28	You are compelled to enroll in programs run by the Ministry of Education or other higher education entity					
29	You make constant use of verbalism					
	Role of the Academician and Career Development					
30	You develop activities you are not in agreement with or you do not like at all.					
	ELIMINATED					
31	You have difficulties in the use of computer programs, the Internet and use of multimedia.					
32	Your professional training and the current demands of your job are not compatible.					
33	The status you currently have as a teacher or academician does not meet your expectations					
34	At your educational institution, opportunities for promotion to academic positions (dean, director, coordinator) are limited.					
	Social interaction and organizational aspects					
35	You have difficulties in relationships with co-workers					
36	You are required to participate in various working groups					
37	You have problems in your relationship with your immediate boss					
38	There are inadequate assessment processes for your academic performance					
39	The academic staff control systems are incorrect					
40	There are communication problems about the changes that affect your work					
41	Your participation in decision-making within the educational community is limited.					
42	The information you receive about the effectiveness of your performance is not clear and straightforward.					
	Performance Remuneration					
43	You are dissatisfied with the salary you receive for the academic work you do.					
	ELIMINATED					

	ELIMINATED					
44	In your institution there are economic stimulus programs in recognition of your academic work (for projects, publications, etc.)					