



## ORIGINALES

### The psychological impact of the Pandemic on teachers. A school nurse's approach

El impacto psicológico de la Pandemia en los docentes. Un enfoque de la enfermera escolar

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#### ABSTRACT:

**Introduction:** The COVID-19 pandemic has meant for teachers the introduction of new protocols forcing them to assume new responsibilities related to the control of students' health. This circumstance may have generated psychological problems, such as burnout and stress. The present study has measured the prevalence of burnout, resilience and perceived stress among teachers and their relationship and association with each other.

**Method:** This is a descriptive, analytical and cross-sectional study on a sample of 222 teachers from educational centers. Different validated surveys were used to measure each dimension: The BEL Scale for measuring burnout, based on the Maslach Burnout Inventory; the Connor-Davidson Resilience Scale CD-RISC 23 and the Perceived Stress Questionnaire PSS-14.

**Results:** The results show a low prevalence of burnout and a high correlation between all the dimensions. The levels of resilience are high and the level of perceived stress is very low. The Odds Ratio showed that women are twice as resilient as men and "experience" has a decisive influence on the development of resilience, being a protective factor, as well as on the development of stress.

**Conclusión:** This study could guide those responsible for health and educational administrations in the design of future policies related to the psychosocial health of teachers.

**Key words:** COVID, teacher, mental health, school nurse, burnout, resilience, stress.

#### RESUMEN:

**Introducción:** La pandemia del COVID-19 ha supuesto para los profesores la introducción de nuevos protocolos obligándoles a asumir nuevas responsabilidades relacionadas con el control de la salud de los alumnos. Esta circunstancia ha podido generar problemas psicológicos, como el burnout y el estrés. En el presente estudio se ha dimensionado la prevalencia de burnout, resiliencia y estrés percibido, entre los profesores y su relación y asociación entre ellas.

**Método:** Es un estudio descriptivo, analítico y transversal, sobre una muestra compuesta por 222 docentes de centros educativos. Se han utilizado diferentes cuestionarios validados: La Escala BEL para medir el burnout, basada en el Maslach Burnout Inventory; La Escala de resiliencia de Connor-Davidson CD-RISC 23 y el cuestionario de Estrés Percibido PSS-14.

**Resultados:** Los resultados muestran una baja prevalencia de burnout y una intensa relación entre todas las dimensiones. Los niveles de resiliencia son altos y el nivel de estrés percibido es muy bajo. La Odds Ratio muestra que las mujeres desarrollan el doble de resiliencia que los hombres y que la "experiencia" influye decisivamente en el desarrollo de la resiliencia, siendo factor protector, así como en el desarrollo de estrés.

**Conclusión:** Este estudio podría orientar a los responsables de las administraciones sanitarias y educativas en el diseño de futuras políticas relacionadas con la salud psicosocial del profesorado.

**Palabras clave:** COVID, docente, salud mental, enfermera escolar, burnout, resiliencia, estrés.

## INTRODUCTION

In September 2020, the beginning of the academic year 2020-21 in Spain, and in Andalusia in particular, posed a great challenge for the Education System. The COVID-19 pandemic forced the teaching community to implement on short notice, the health measures established by the Consejería de Salud y Familias of the Junta de Andalucía and the Servicio Andaluz de Salud in order to prevent and handle future outbreaks in educational environments <sup>(1)</sup>. In this context, the Ministerio de Educación of the Spanish government introduced a general description of the possibilities of e-learning as well as recommendations for school managers, teachers, workers and parents. During the first weeks after the suspension of face-to-face classes, numerous manuals, regulations, action guides and protocols are published in swift succession in relation to the new actions to be undertaken in the centers in which, among other measures, online teaching is proposed as a response to the closure of classrooms and becomes the only way to access education in all national schools and in all educational levels <sup>(2)</sup>. This implied an extraordinary effort from the teaching staff to implement the new protocols and regulations.

Thus, education needed to adopt an online model overnight, and although this methodology had already been used to some extent, none of the teachers, nor the actors involved, students and parents, were fully prepared to assume this situation in terms of material, methodology or content. To date, few studies have analyzed the effect of online education on teachers during the pandemic period, although they all agree on the impact on health in relation to stress and efforts to adapt to new strategies <sup>(3)</sup>.

When compared to traditional education, distance education is potentially more innovative, efficient and effective and can improve the students' learning process and their results <sup>(4)</sup>. This process may have contributed to the development and/or aggravation of certain psychological issues in teachers, as shown by several studies that correlate professional burnout, somatic burden, change-related stress and emotional exhaustion among teaching professionals <sup>(5,6)</sup>. However, the implementation and application of regulations may have had an influence on the development of resilience in teachers as an adaptive response to overload in terms of organization, planning, execution and especially health training required <sup>(7)</sup>. Undoubtedly, the COVID-19 pandemic may have had a direct impact on the occupational health of teachers, since they have been forced to respond to the demands of these training programs and therefore be exposed to longer working hours, and to the emotional demands caused by the assumption of roles unrelated to teaching, such as the

identification and notification to health services of symptoms related to active infection, the triage of students suspected of COVID, the management of isolation situations or the effective application of hygienic-sanitary measures, as well as the arduous task of the functional adaptation of the centers, which are structurally and logistically very limited. All of this may have had an influence on the levels of perceived stress <sup>(8)</sup>.

In Spain, a study carried out by the CSIF union (Central Sindical Independiente y de Funcionarios) on a sample of 10.000 people, including the participation of 9572 teachers, found that around 93% suffer from stress and emotional exhaustion. Likewise, 77.28% of teachers considered that the bureaucratic tasks set after the state of emergency are "excessive" <sup>(9)</sup>. Similarly, the International Labour Organization, in its study on emerging risks in working environments, recognized work-stress as a problem derived from the new working conditions <sup>(10)</sup>. Education is among the most affected sectors <sup>(11)</sup>.

Teacher job stress could be defined as a potentially pathogenic, emotional, physiological, and behavioral response, which can negatively influence the work activity of teachers and their pedagogical performance. It can cause a loss of motivation, which usually progresses to feelings of inadequacy and failure, possibly having a negative impact on health <sup>(12)</sup>. However, not all individuals react in the same way to stress. Resilient individuals can successfully cope with stress or unfavorable situations and even become stronger after painful or adverse experiences. Different behaviors and abilities to maintain an appropriate basal activity in response to stimuli have probably a genetic basis <sup>(13)</sup>.

In this context, Burnout syndrome can be considered a maladaptive response to work stress which occurs in primary and secondary school teachers in both public and private educational institutions who have direct contact with students, colleagues, administrative staff and parents, and who are in turn subject to difficult working conditions, low salaries and affected by an ever-changing educational system, possibly developing emotional fatigue, depersonalization or cynicism, hostile and aggressive attitudes and, eventually, feelings of job dissatisfaction and thoughts of low personal fulfillment <sup>(14)</sup>. Burnout syndrome was described in depth in 1986 by Maslach and Jackson. The most currently accepted definition indicates that this syndrome manifests itself through three main symptoms, which constitute three dimensions: 1) emotional exhaustion, 2) depersonalization or cynicism and 3) lack of personal fulfillment at work <sup>(15)</sup>.

Resilience can be defined as the ability to emerge from adversity, adapt, recover and access a meaningful and productive life, or as effectively coping with cumulative stressful life circumstances, or as a quality that makes it possible for individuals to cope with adversity <sup>(16)</sup>. The COVID-19 pandemic has compelled all nations to adopt drastic measures aimed at preventing the spread of the virus. The closure of schools, colleges and universities radically changed the activity of teachers, students and families and in a few weeks all levels of the education system were forced to change and adapt to these new circumstances. The development of teacher resilience and the adoption of appropriate coping strategies must have been central to the success of this transformation. Several studies show this relation <sup>(17-21)</sup>.

There are numerous studies on Teacher Burnout Syndrome <sup>(11)</sup> including some on resilience in teachers in times of pandemics <sup>(22)</sup> but so far none of them investigates

the relationship between Burnout and Resilience with the levels of perceived stress in teachers in times of the COVID-19 Pandemic. For all these reasons, taking into account the background and the gaps in knowledge observed in this field, the opportunity arises to delve deeper into this study.

The novelty of this research lies, firstly, in its "health-based" approach, since related studies have generally focused either on a purely clinical perspective, or on the educational center, or on the teaching staff. Secondly, it emphasizes the relevance of phenomena that can become real health problems and therefore be the target of greater attention in the design of appropriate policies by the health and educational systems.

## MATERIAL AND METHOD

The present study is analytical, observational, descriptive, and cross-sectional, and was carried out on a sample composed of 222 teachers from educational centers of Pre-school, Primary, Secondary, Baccalaureate and Vocational Training of the Axarquía region in Malaga <Spain>. The participants were chosen through *purposive sampling*. The following criteria were considered for the inclusion of teachers in the research: 1) exercising their profession in the educational centers of the municipalities of the Axarquía region in Malaga and 2) freely participating in the study and providing informed consent. The initial sample was composed of 188 teacher COVID coordinators, a collective composed mainly of school principals. Although the study was initially restricted to teacher COVID coordinators, we finally decided to include all teachers, as it would provide a broader, richer perspective. This way, the sample universe consisted of 860 teachers.

### a) Instruments

The Google Forms platform was used to host the survey containing the questionnaires that make up the study. This website makes it possible for participants to fill in self-administered questionnaires online. This method was chosen to avoid direct contact with teachers and to enable a safer, more agile participation. A single set of questionnaires was designed to integrate each of the dimensions and variables studied. The set of questionnaires used consists of the following:

- **Informed Consent:** This document supports and validates the ethical aspects of scientific research, providing information to participant subjects about the nature and objectives of the study, identifying the principal investigator, offering guarantees of confidentiality and anonymity and finally requesting authorization to participate in the completion of the set of questionnaires.
- **SD-14 Scale:** Questionnaire of sociodemographic and labor variables: This instrument was designed to collect information on sociodemographic and labor aspects: age, gender and marital status, type of center, ownership of the center, academic training, holding a management position, being a COVID Coordinator, seniority in the professional practice, seniority in the current center and suffering from a chronic disease.
- **BeL Scale:** Questionnaire on Occupational Burnout. It is based on the Maslach Burnout Inventory, hereinafter MBI <sup>(23)</sup>. In our study have used the adaptation to

the Spanish context of Salanova and Schaufeli <sup>(24)</sup>. This adaptation is composed of 15 items on a Likert scale that scores from 0 to 6 with values ranging from "never" to "always", and explores 3 independent but interrelated dimensions or subscales. The emotional exhaustion subscale describes feelings of being overwhelmed and emotionally exhausted by work. The Cynicism (or depersonalization) subscale describes an impersonal response and a lack of feelings towards the subjects. The Professional Efficacy subscale describes feelings of positive competence and professional accomplishment. Therefore, we decided to keep the scores of each subscale, corresponding to the different dimensions of Burnout, separate. As for the outcome, both the burnout construct and each of its dimensions are considered as continuous variables, and as for the diagnosis of "being burned out", the authors' only suggestion is to classify the scores using a percentile system for each scale. Thus, subjects above the 75th percentile were included in the "high burnout" category, subjects between the 75th and 25th percentile were included in the "medium burnout" category and subjects below the 25th percentile were included in the "low burnout" category.

- **CD-RISC23 Scale: Questionnaire on Resilience.** We used the Connor and Davidson Resilience Scale <sup>(25)</sup>. The scale consists of 23 items with Likert-type response format with five response options - "not at all", "rarely", "sometimes", "often", and "almost always"-, scored from 0 "not at all", to 4 "almost always". The scale ranges from 0 to 92, where higher scores indicate higher levels of Resilience. We have used the Spanish version provided by the authors of the original version <sup>(26)</sup>. The CD-RISC23 scale explores the following dimensions: Self-Efficacy-Persistence-Tenacity, Control under Pressure, Support Networks-Adaptability, and lastly Control and Purpose.
- **PSS-14 Scale: Questionnaire on Perceived Stress.** A self-reported instrument that assesses the level of stress perceived during the past month and the degree to which people find their life unpredictable, uncontrollable, or feel overwhelmed. It consists of 14 items in a Likert-type response format with five response options, scored from 0 "never" to 4 "very often."

### **b) Procedure**

The present study was carried out in the School Nursing Unit of the Health Management Area of Malaga East-Axarquía, in the province of Malaga <Spain>, from October 2020 to May 2021. After designing the set of questionnaires and hosting them in Google Drive, an e-mail was sent to each of the 188 COVID coordinators teaching in the area, explaining the nature of the study and inviting them to participate in it.

### **c) Ethical aspects**

The present work has followed the fundamental principles of the declaration of Helsinki (WMA, 2016). The project of this study was sent to the Comité Provincial de Ética de la Investigación Biomédica de Andalucía (PEIBA) for assessment and authorization, being accepted on December 23, 2020 (internal reference number: 2547-N-20). It was also sent to the Comisión de Valoración de Proyectos de Investigación de la Delegación de Territorial de Educación, Deporte, Igualdad, Políticas Sociales y

Conciliación of Malaga, and its favorable opinión was communicated on December 30, 2020.

#### d) Data analysis

The period for receiving responses to the questionnaires was March to May 2021. At a later stage, data was collected from the platform, classified, stored in a database created for this study, and exported to the SPSS v.26 application for Windows for processing, recoding of variables and subsequent data analysis.

## RESULTS

222 teachers participated in our study. The predominant gender was female, with 154 women (69.4%) and 68 men (30.6%), aged between 25 and 62 years, with a mean age of 43.7 years (dt=8.4 years). The distribution of professional seniority shows that most of the teachers are veterans, with the majority group being teachers who report a seniority of between 11 to 20 years (45%) followed by the group of 21 to 30 years (19.4%). 6.3% are over 30 years and 17.6% less than 5 years of seniority. However, 53.1% of the teachers reported a seniority at their current center of less than 5 years, compared to 3.1% who reported between 21 and 30 years of seniority. Regarding the type of academic training, 82.4% of the teachers are graduates (Diploma, Bachelor's Degree), compared to 15.8% of postgraduates (Master's degree, PhD.) Regarding the type of center where they teach, 42.3% are kindergartens and/or primary schools, while 57.7% correspond to secondary schools, high schools and/or vocational training centers. 20.3% of the teachers hold managerial positions and 17.1% are COVID Coordinators at their center. Finally, it should be noted that approximately 1 out of every 4 participants reported suffering from a chronic disease such as diabetes, hypertension, heart disease, asthma, etc.

**Table 1**

*Descriptive characteristics of the sample*

N=222

<b>Gender</b>	<b>%</b>	<b>f</b>
Female	69,4	154
Male	30,6	68
<b>Age (years)</b>	<b>%</b>	<b>f</b>
21-30	8,6	19
31-40	24,3	54
41-50	45,5	101
51-60	19,8	44
>60	1,8	4

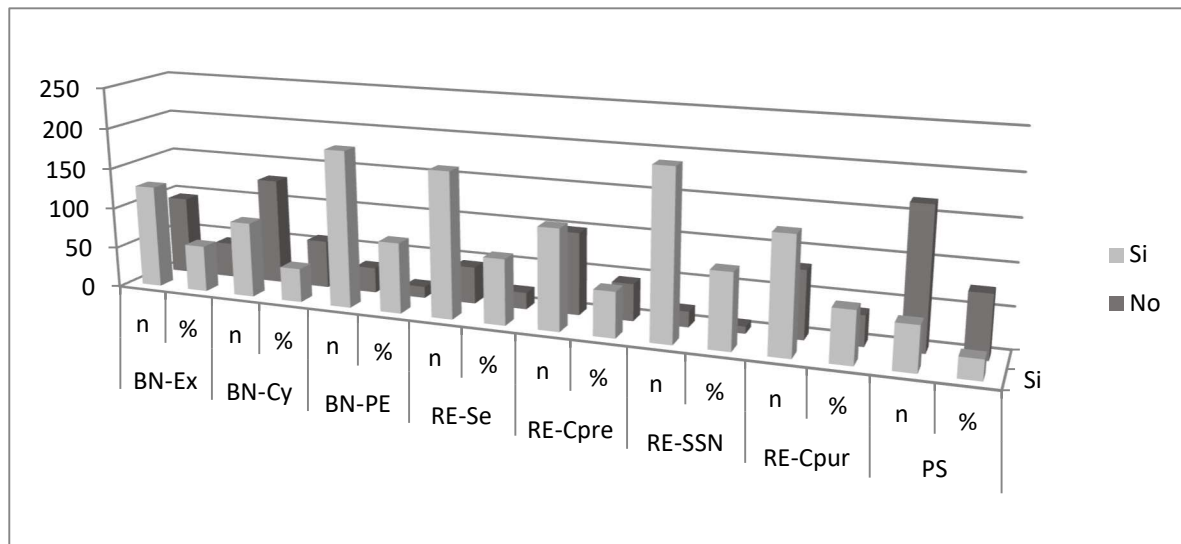
<b>Professional Seniority (years)</b>	<b>%</b>	<b>f</b>
<=5	17,6	39
6-10	11,7	26
11-20	45,0	100
21-30	19,4	43
>30	6,3	14
<b>Seniority in the Center (years)</b>	<b>%</b>	<b>f</b>
<=5	53,1	118
6-10	19,8	44
11-20	23,4	52
21-30	3,2	7
>30	0,5	1
<b>Managerial position</b>	<b>%</b>	<b>f</b>
Sí	20,3	45
No	79,7	177
<b>Teaching COVID coordinator</b>	<b>%</b>	<b>f</b>
Sí	17,1	38
No	82,9	184
<b>Chronic illness</b>	<b>%</b>	<b>f</b>
Sí	23,9	53
No	76,1	169
<b>Academic Training</b>	<b>%</b>	<b>f</b>
Graduate	83,9	186
Postgraduate	16,1	36
<b>Type of center</b>	<b>%</b>	<b>f</b>
Pre-school-Primary	41,4	92
Secondary-Baccalaureate-Vocational training	58,6	130

The prevalence analyses of the study variables yield the following results: In relation to Burnout, the sample of teachers scores medium-high levels for Exhaustion, with a prevalence of 56.8% and relatively low levels for Cynicism, with 41.4%. The levels of Professional Effectiveness are very high, with a prevalence of 86%. In relation to Resilience, considerably high values stand out for each of the dimensions: 79.7% of the teachers reported high Self-efficacy, 55% did so for the dimension Control under

Pressure, 91.4% for Support Networks and 63.1% for the dimension Control and Purpose. On the other hand, the analysis of the prevalence of Perceived Stress shows a low percentage of teachers expressing stress, with 24.3%, as can be seen in figure 1.

**Figure 1**

*Prevalence of the study variables*



Note: BN-Ex: Burnout Exhaustion. BN-Cy: Burnout Cynicism. BN-PE: Burnout Professional Efficacy. RE-Se: Resilience Self-Efficacy. RE-Cpre: Resilience Control under Pressure. RE-SSN: Resilience Social Support Networks. RE-Cpur: Resilience Control and Purpose. PS: Perceived Stress.

The correlation between the study variables show an intense relationship, with a very high degree of significance. There is a direct relationship between Burnout and Cynicism, while the relationship between both of them and Professional Effectiveness is indirect. Burnout and Resilience score very high in all their dimensions. We can observe the indirect correlation of the variables Burnout and Cynicism with all the dimensions of Resilience. The relationship between Cynicism and Support Networks and Cynicism and Control and Purpose have one of the highest correlation coefficients. On the other hand, it is worth noting the relationship between the Burnout dimensions with Stress, positive for Burnout and Cynicism and negative for Professional Effectiveness. An indirect correlation can also be observed between the dimensions of Resilience and Stress, highlighting the relationship between the dimension Support Networks and Stress with one of the highest correlation coefficients.



**Table 2***Correlation Analysis between study variables*

		1	2	3	4	5	6	7	8
1.- BN-Ex	r	1	,620**	-,153*	-,196**	-,135*	-,232**	-,245**	,319**
2.- BN-Cy	r		1	-,383**	-,338**	-,212**	-,389**	-,409**	,424**
3.- BN-PS	r			1	,546**	,296**	,570**	,536**	-,341**
4.- RE-Se	r				1	,642**	,658**	,612**	-,366**
5.- RE-Cpre	r					1	,513**	,382**	-,207**
6.- RE-SSN	r						1	,601**	-,459**
7.- RE-Cpur	r							1	-,384**
8.- PS	r								1

Note:

\*\*. The correlation is significant at the 0.01 level (bilateral).

\*. The correlation is significant at the 0.05 level (bilateral).

The results show that there is no statistically significant relationship between the dimensions of Burnout, Stress or Resilience, and sociodemographic variables, such as age, marital status, type of center, ownership of the center, academic training, management position, role of COVID Coordinator and seniority in the current center. However, a statistically significant but indirect relationship was observed between gender and Resilience in the dimension Control and Purpose ( $r = -.167$ ,  $p < .05$ ). The same tendency is observed between the variable Management Position and Perceived Stress, that is, an indirect and significant relationship ( $r = -.151$ ,  $p < .05$ ). Both relationships are weak.

After confirming the association between some sociodemographic variables and study variables, tests of independence and risk estimation were performed, calculating, with a 95% confidence interval, the Odds Ratio (OR) for variables that are dichotomous. Variables that consisted of more than two levels of measurement were recoded into new dichotomous variables, such as age, professional seniority and seniority in the center, with the aim of establishing relationships between them through the OR operator. Statistically significant results ( $p < 0.05$ ) are shown in Table 3. The association between Gender and Resilience stands out, indicating that women have twice the possibility of developing Resilience in its Control and Purpose dimension. Seniority and age are key factors in the development of Resilience. When seniority data is segmented in ranges, we observe how the age of the teachers is consolidated as a protective factor in favor of Resilience, and we can observe a clear tendency in each of the higher age ranges, which are more likely to develop Resilience in its dimension of Control under Pressure than teachers of younger age. Regarding the Professional Seniority variable, its relationship with Control and Purpose Resilience and Total Resilience is very strong. Teachers who report between 6 and 10 years of professional

seniority are three times more likely to develop Resilience than novice teachers. The same is true for the most senior group of teachers: those who report 21 to 30 years of work experience develop three times more Control and Purpose Resilience than teachers with minimal experience. Finally, Seniority in the Center is revealed as another powerful protective factor for Resilience, as can be seen in the results obtained in the 11 to 20 years and 21 to 30 years of seniority ranges. Most notably, the age range of more than 30 years shows 9 times more probability of developing Support Networks than teachers with less than one year of experience in the center. Finally, we observe that teachers who report less than 5 years of seniority in their current center are 3 times more likely to develop Perceived Stress than their colleagues in the next higher age range: 6 to 10 years.

**Tabla 3**

*Contingency table: tests of independence and Odds Ratio for the study variables.*

<b>Resilience: Control and purpose</b>			<b>N</b>	
<b>Gender</b>	Female	%Yes	75	
		%No	59,8	
	Male	%Yes	25	
		%No	40,2	
	Chi <sup>2</sup> : 5,655			
	OR: 2,020			
IC: 1,127 y 3,623				
<b>Professional Seniority</b> 21-30 years	<=5	<b>%Yes</b>	57,7	
		%No	30	
	21-30	%Yes	42,3	
		%No	70	
	Chi <sup>2</sup> : 5,850			
	OR: 3,182			
IC: 1,224 y 8,270				
<b>Seniority in the Center</b> 11-20 years	<=5	%Yes	59,1	
		%No	81,8	
	11-20	%Yes	40,9	
		%No	18,2	
	Chi <sup>2</sup> : 10,204			
	OR: 0,322			
IC: 0,158 y 0,655				

<b>Resilience: Self-Efficacy</b>			<b>N</b>	
Age 30-40 years	21-30	%Yes	20	
		%No	44,4	
	31-40	%Yes	80	
		%No	55,6	
	Chi <sup>2</sup> : 4,209			
	OR: 0,313			
IC: 0,100 y 0,978				
Age 40-50 years	21-30	%Yes	11,3	
		%No	34,8	
	41-50	%Yes	88,7	
		%No	65,2	
	Chi <sup>2</sup> : 7,667			
	OR: 0,240			
IC: 0,083 y 0,694				
Seniority in the Center 21-30 years	<=5	%Yes	97,8	
		%No	84,8	
	21-30	%Yes	2,2	
		%No	15,2	
	Chi <sup>2</sup> : 4,209			
	OR: 0,313			
IC: 0,100 y 0,978				
<b>Resilience: Control under pressure</b>			<b>N</b>	
Age > 60 years	21-30	%Yes	63,6	
		%No	100	
	>60	%Yes	36,4	
		%No	0	
	Chi <sup>2</sup> : 5,282			
	OR: 0,368			
IC: 0,204 y 0,664				
Seniority in the Center	<=5	%Yes	65,2	
		%No	87,5	

11-20 years	11-20	%Yes	34,8
		%No	12,52
Chi <sup>2</sup> : 7,738			
OR: 8,036			
IC: 1,477 y 43,714			

<b>Resilience: Total</b>		<b>N</b>	
	<=5	%Yes	71,1
		%No	44,4
Professional Seniority	6-10	%Yes	28,9
		%No	55,6
6-10 years			
Chi <sup>2</sup> : 4,656			
OR: 3,068			
IC: 1,092 y 8,623			

<b>Perceived Stress</b>		<b>N</b>	
	<=5	%Yes	86,5
		%No	68,8
Seniority in the Center	6-10	%Yes	13,5
		%No	31,2
6-10 years			
Chi <sup>2</sup> : 4,514			
OR: 2,902			
IC: 1,051 y 8,014			

<b>Resilience: Social Support Networks</b>		<b>N</b>	
	<=5	%Yes	100
		%No	90,9
Seniority in the Center	21-30	%Yes	0
		%No	9,1
>30 years			
Chi <sup>2</sup> : 9,901			
OR: 0,085			
IC: 0,047 y 0,153			

## DISCUSSION

The results of the study show, in relation to Burnout, a medium level of prevalence for the dimensions Exhaustion and Cynicism, and very high prevalence for the dimension Professional Effectiveness, so we understand that there is not a high level of Burnout among the teachers studied. Other studies show similar results <sup>(8)</sup>. In the correlation analyses, our results are close to those of related studies, in which a clear relationship between the dimensions of Burnout is appreciated <sup>(27, 28)</sup>. Burnout and Professional Effectiveness are indirectly related, while Burnout and Cynicism show a direct relationship where both variables correlating moderately. In view of the data, we can infer that, in general, teachers who score high in Burnout do so at low levels for the Resilience dimensions, and vice versa. This is also observed in similar studies <sup>(21)</sup>.

On the other hand, the levels of prevalence of Resilience of teachers are very high in all dimensions. It should also be noted that about 75% of the teachers who participated in the study say that they are not stressed. Correlation analyses show that Burnout and Resilience score very high in all dimensions. We can observe the inverse correlation between the Burnout variables Burnout Exhaustion and Cynicism with all the dimensions of Resilience, highlighting the relationship between Cynicism and Support Networks, and the relationship between Cynicism and Control and Purpose. On the contrary, all dimensions of Resilience correlate strongly and positively with Perceived Stress. Other studies, such as the one authored by De Vera García et al., support these results <sup>(27)</sup>.

Perceived Stress is inversely related to Resilience in all its dimensions, with Support Networks showing the strongest relationship. We understand, in view of the results obtained, that teachers who present high levels of Resilience will present less Perceived Stress than those who score low and vice versa. Similar results were obtained in the previous study <sup>(27)</sup>.

Finally, the calculation of the Odds Ratio of the study variables indicates a correlation between gender and Resilience Control and Purpose, with female teachers scoring twice as high as their male colleagues. Women, therefore, present high levels of emotional balance in stressful situations, and are more successful at coping with pressure than men. We can also observe the prominence of a factor that we could call "experience", and which is represented by the variables age, years of professional seniority and seniority in the center. All of them have a decisive influence on the development of Resilience, being a protective factor in most of its dimensions, as well as in the development of work-related stress. These trends are also observed in works such as that of R. Teles et al. <sup>(21)</sup>.

The conclusion can be drawn that a disruptive event such as the outbreak of the Pandemic could have had a positive impact on teachers, favoring the development of Resilience, as M. Aguaded Gómez et al. also highlighted in their analysis <sup>(30)</sup>.

### Limitations of the study

The most important limitation of this study arises from the online, self-reported and voluntary nature of the set questionnaires used for data collection. There could be a

voluntary response bias in which the most affected professionals could be more motivated to participate or, on the contrary, be the least interested.

Moreover, the results obtained do not allow us to establish causality between the variables studied. We believe that it would be necessary to conduct longitudinal or experimental studies that delve deeper into this matter.

Finally, the fact that this study is limited to a very specific geographic area prevents its direct extrapolation or generalization of the results to the global teaching community.

## CONCLUSIONS

Overall, we could conclude that the results obtained, in general, show the remarkable ability of teachers to adapt to situations as adverse and stress-generating as the Pandemic caused by COVID-19. This could have possibly contributed to increased levels of job burnout, as other similar studies have shown (29), decreasing professional effectiveness and resilience levels. However, as we observed in our study, this was not the case, which supports the results of other similar studies regarding teacher resilience.

Finally, this study could guide the authorities of healthcare and educational administrations in designing future policies and strategies for the prevention and coping of issues related to the psychosocial health of teachers.

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