Work environment, depression,
anxiety and stress in teachers of the Peruvian jungle in the Covid-19 context

Clima laboral, depresión, ansiedad y estrés en docentes de la selva peruana en el contexto Covid-19

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Abstract

Introduction: Nowadays, work climate is an important factor in organizations, since organizational processes depend on it, which influences the efficiency, effectiveness, productivity and quality of life of workers. **Objectives:** To determine the relationship between the work environment, depression, anxiety and stress in teachers of state educational institutions in the Peruvian jungle during the context of Covid-19. **Materials and methods:** This was a quantitative study with a non-experimental cross-sectional design and correlational scope. A virtual survey was applied to collect sociodemographic information. The Sonia Palma Work Climate Questionnaire or CL-SPC was used to measure work climate and the DASS-21 scale was used to measure depression, anxiety and stress. **Results:** The 26.3% of teachers reported having difficulties in the work environment; while 19.5% presented depressive symptoms, 23.3% anxiety symptoms and 18.8% reported a high level of stress; Regarding the relationship, the work environment showed a statistically significant relationship inversely with depression (Rho – 0.397**, p = 0.000), anxiety and stress (rho = -0.382**, p = 0.000), (rho = -0.366 **, p = 0.000). Conclusions: The increase in symptoms of depression, anxiety and stress decreases the work environment of teachers in state institutions in the Peruvian jungle; Faced with this, it is necessary to attend to the mental health of the teacher during the Covid-19 pandemic.

Keywords: work climate, anxiety, depression, stress, teachers, Peruvian jungle.

Resumen

Introducción: En la actualidad el clima laboral es un factor importante en las organizaciones, pues de esto dependen los procesos organizacionales por lo que influye en la eficiencia, eficacia, productividad y calidad de vida de los trabajadores. **Objetivos:** Determinar la relación que existe entre el clima laboral, depresión, ansiedad y estrés en docentes de instituciones educativas estatales de la selva peruana durante el contexto del Covid-19. **Materiales y métodos:** Fue un estudio cuantitativo con diseño no experimental de corte transversal y alcance correlacional. Se aplicó una encuesta en virtual que recopiló información sociodemográfica. Para medir el clima laboral se utilizó el cuestionario de Clima Laboral de Sonia Palma o CL-SPC y para medir la depresión, ansiedad y estrés se utilizó la escala DASS-21. **Resultados:** El 26.3% de los docentes reportaron tener dificultades en el clima laboral; mientras que el 19.5% presentó síntomas depresivos, el 23.3% síntomas de ansiedad y 18.8% reportaron nivel alto de estrés; respecto a la relación el clima laboral mostró una relación estadísticamente significativa de manera inversa con depresión (Rho – 0.397**, p = 0.000), ansiedad y estrés (rho = -0.382**, p = 0.000), (rho = -0.366**, p = 0.000). **Conclusiones**: El incremento de los síntomas de depresión ansiedad y estrés disminuye el clima laboral de los docentes de instituciones estatales de la selva peruana; frente a ello es necesario atender la salud mental del docente durante la pandemia por Covid-19.

Palabras Clave: Clima laboral, ansiedad, depresión, estrés, docentes, selva peruana

Introduction

El estrés como trastorno surge debido a los retos y problemas de adaptación que nos pone la vida con la globalización y actualización tecnológica en el campo laboral y social; lo cual genera otros problemas severos como la depresión y ansiedad. More than 264 million suffer from anxiety worldwide, although it is an adaptive response that prevents potential risks, it often exceeds the intensity of the stimulus and becomes pathological[1]. Equally important, depression is currently the main cause of morbidity in the world, causing suicide in more than 300 million people, affecting women in greater proportion[2]. It is worth noting that in a research before the pandemic context, it has been found that individuals subjected to long working hours have high clinical rates of depression, which are especially associated with the high incidence of depression[3]. which are especially associated with the female gender[4]. However, despite the empirical evidence, depression often tends to be stigmatized and ignored in the workplace, but there is evidence that it has a negative impact on both individual and collective productivity[5]. La actual pandemia provocada por el COVID-19 ha desafiado a las organizaciones académicas y de cualquier otra índole, como consecuencia, el clima laboral y la salud mental se han convertido en un tema de gran importancia a nivel mundial[6].

On the other hand, in Peru, a research has been conducted that shows the importance of strengthening the working conditions of professionals, which implies the working environment within the organization, otherwise it could affect their quality of life[7]. However, not many studies have been carried out in state institutions, despite the fact that these have had greater difficulties to face the context of the pandemic due to their low economic and technological resources, compared to private institutions[8]. Considering, in addition, that these institutions represent an important percentage at the national level since there are approximately 80 thousand public schools[9]. This warrants a study of this nature, whose results could serve as a theoretical basis for future research, showing a new proposal for coping with depression and work environment in teachers of state institutions.

Research conducted in Colombia in a sample of 100 teachers and 394 students of a public university in Colombia found that there are no significant differences between the levels of depression of students and teachers, considering that among those between 16 and 35 years old, there are moderate and severe levels of depression, which may be a consequence of the isolation forced by the COVID-19 pandemic and the changes made in the teaching environment and work environment[10]. Similarly, in an investigation where they had a total of 1633 teachers of Basque belonging to the Department of Education of the Basque Autonomous Community (CAV). It was found that 32.2% of the participants had symptoms of depression, which could lead to a decline in the work environment and rhythm of life of teachers in the face of the COVID-19 pandemic[11].

Un estudio realizado en un hospital de Ecuador, durante la pandemia por Covid-19 con 284 trabajadores entre personal de enfermería y administrativo, dicho estudio reportó que la presencia del trastorno del estrés fue mayor en el personal de enfermería 69,2% en comparación con el personal administrativo 30,8%, frente a ello argumentaron que el estrés fue mayor debido a la alta exposición al riesgo de contagio; sin embargo la prevalencia de estrés también es importante en el personal administrativo que no estuvo en la primera línea de atención contra el Covid-19, posiblemente su estrés esté relacionado al riesgo de contagio por trabajar en entornos de alta infección[12]. Mientras que, en el contexto peruano, un estudio vía telefónica y uso de redes sociales realizada con 2,375 personas con diagnóstico de Covid-19 mostraron que el 82,1% algún tipo de trastorno mental. Los trastornos más prevalentes fueron: ansiedad (34,15%), depresión (25,22%), estrés agudo (13,81%), estos hallazgos plantean la necesidad de establecer acciones de promoción, prevención y tratamiento psicoterapéutico para brindarles mejores herramientas psicológicas a la población afectada y en riesgo como el personal docente[13].

Based on the evidence presented, this study aimed to determine the relationship between the work environment and depression, anxiety, and stress in teachers in the peruvian jungle in the Covid-19 context during the year 2021.

Methodology

Research design
The present research is quantitative with a non-experimental design because the variables were not manipulated, it is also cross-sectional because the information was collected at a certain time, its scope is descriptive-correlational since it attempts to find the relationship between work climate and depression in teachers of state institutions in the San Martín region[14].

Participants
The non-probabilistic convenience sampling technique was used, 268 primary and secondary school teachers from the San Martín region were approached, of whom one did not agree to participate in the study, one was excluded because of missing data, so that data were finally collected from 266 participants.

Procedures
Data collection was by means of the Google Forms virtual form. Initially, the informed consent form was presented, informing about the objectives of the study, and each potential participant was free to decide whether or not to participate in the study. Subsequently, the collection questions were presented, which included information on socio-demographic data such as gender, age and education, as well as a permit to the UGEL San Martín for data collection.

Variables and instruments
To measure the work climate, the Work Climate Questionnaire or CL-SPC was used, which was validated and created by

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Sonia Palma Carrillo in the country of Peru[15]. It consists of 5 dimensions, each of which is made up of 10 items.

To assess depression, anxiety and stress the DASS-21 scale was used, which was developed by Lovibond & Lovibond, but at the beginning this survey was only intended to assess depression and anxiety, years later Crawford & Henry in 2003 created a new scale called "Stress". This form contains 2 dimensions and 21 items[16].

Analysis plan

This research made use of statistical techniques for the processing of information with the Software Package for Social Sciences (SPSS) in its version 25, among the statistical processes for the analysis of the data can be included: Use was made of the median to explain the levels of both depression and work climate in teachers of state institutions in the Peruvian jungle. The normality of the data was determined, which will guide the correlation statistics to be used in this research. The level of relationship between both variables was established at a significance level p<.05 for hypothesis testing. With respect to the normality tests, using the Kolmogorov - Smirnov statistic assumption, it is observed that the data do not have normal distribution, therefore, we will use non-parametric statistics and we will use Spearman's correlation coefficient.

Ethical Aspects

For an adequate development of the research, prior to the application of both instruments, the previous permissions presented to the educational institutions and the director of the UGEL San Martin, Peru, were considered. Likewise, the principle of autonomy was respected and confidentiality was used for the consideration of personal data and their respective protection[17].

Results

A total of 268 primary and secondary school teachers from the San Martin region were approached, of which one did not agree to participate in the study, one was excluded because of missing data, so that data were finally collected from 266 participants. The majority of the participants were female (58.4%). The median age was 42 years, the majority age group was 27 to 59 years old (88%), they were from the jungle region (95.9%), they reported having a bachelor's degree (38.7%), working status (50.4%), working from 3 to 10 years (42.5%) and having been teaching virtually for almost two years (72.9%) (Table 1) (Table 1).

Table 1. Sociodemographic characterization of the participants

Features	f	%
Genre		
Male	116	43.6
Female	150	58.4
Age		
18 a26	12	4.5
27 a 59	234	
60 and over	20	7.5
Academic degree		
Bachelor	78	29.3
Doctor	5	1.9
Licensed	103	38.7
Master's Degree	45	16.9
Others	35	13.2
Employment status		
Hired	132	49.6
Named	134	50.4
How long have you worked at the institution?		
1 to 2 years	65	24.4
3 to 10 years	113	42.5
11 and over	88	33.1
How long have you been teaching virtually?		
Almost one year	72	27.1
Almost 2 years	194	72.9

Source: Data collection. Age classification Source: MINSA

With respect to the dimensions of the work climate variable: (26.3%) of teachers reported having low levels of work climate, (28.9%) with work involvement, (25.2%) with supervision, (37.6%) reported problems with communication, and (30.1%) with working conditions. (Table 2)

Table 2. Levels of the Work Climate variable and its dimensions

	Low Level		Medium level		High Level	
	f	%	f	%	f	%
	f	%	f	%	f	%
Work environment	f	%	f	%	f	%
Labor involvement	70	26.3	134	50.4	62	23.3
Supervision	77	28.9	169	63,5	20	7.5
Communication	67	25.2	178	66.9	21	7.9
Employment status	100	37.6	136	51.1	30	11.3

Regarding the levels of depression, anxiety and stress, 52 participants (19.5%) reported a moderate level of depression, (23.3%) a high level of anxiety, and (18.8%) reported a high level of stress (Table 3).

Table 3. Levels of the variable Depression, anxiety and stress and their dimensions.

	Low Level		Medium level		High Level	
	f	%	f	%	f	%
Depression	75	28.2	139	52.3	52	19.5
Anxiety	77	28.9	127	47.7	62	23.3
Stress	89	33.5	127	47.7	50	18.8

With respect to the normality tests, using the Kolmogorov - Smirnov statistical assumption, it is observed that the data do not have normal distribution, therefore, we will use non-parametric statistics and we will use Spearman's correlation coefficient. (Table 4)

Table 4. Normality Test Statistics		
	Statistician	p
Work environment	0.254	0.000
Labor involvement	0.096	0.000
Supervision	0.125	0.000
Communication	0.161	0.000
Employment status	0.193	0.000
Depression, anxiety and stress	0.253	0.000
Depression	0.138	0.000
Anxiety	0.12	0.000
Stress	0.099	0.000

Regarding the correlation between work climate with depression, anxiety and stress, the results show a statistically significant inverse relationship with depression (Rho - 0.397**, p = 0.000), anxiety (rho = -0.382**, p = 0.000) and stress (rho = -0.366**, p = 0.000). (Table 5)

Table 5. Spearman's correlation between the variables work climate and depression, anxiety and stress and dimensions.		
	Work Climate	
	Rho	p
Depression	-0.397**	0.000
Anxiety	-0.382**	0.000
Stress	-0.366**	0.000

Discussion

The difficulties brought about by the context of virtual education have caused many teachers to engage in maladaptive behaviors, generating anxiety, stress, and depression, directly affecting the work environment of teachers[18]. In this sense, the main objective of this research was to determine the relationship between work environment and depression, anxiety and stress in teachers in the Peruvian jungle.

An inverse and significant correlation was found between work climate= with depression (rho= -0.397**, p = 0.000), anxiety (rho -0.382**, p = 0.000) and stress (rho -0.366**, p = 0.000); in view of this, it can be assumed that the more teachers have difficulties in the work climate, the more depression, anxiety and stress they experience. Dentro del contexto de la pandemia, la ansiedad, depresión y estrés podría estar generándose por el elevado riesgo de contagio del Covid-19; pues el miedo a exponerse a morir o de contagiar a sus familiares debido a la exposición al virus, pudo haber influido en la generación de los síntomas de ansiedad, depresivos y estresores[12]. De esta manera, un docente pudo reducir una percepción adecuada o armoniosa respecto al clima laboral.

These results are similar to the research reported by Ozamiz-Etxebarria[11] where they found medium and high levels of depression, stress and anxiety. Likewise, in another study by Prada[10] found moderate and severe levels of depression, showing that teachers have been affected by teaching in virtual contexts.

In general, 23.7% of the teachers who participated in the study report high levels of depression, anxiety and stress,

i.e., such teachers feel tired, sad, depressed and sometimes even feel that they are worth little; anxiety levels are similar, 23% of the teachers show high anxiety problems, and are characterized by nervousness and fear for no reason that they experience in some situations; likewise, 18.8% of the teachers show stress problems. Therefore, more than 50% of the teachers evaluated have symptoms of anxiety, depression and stress at medium and high levels, which means that the teachers do not have a good state of mind and that there are situations that lead to maladaptive reactions[19]. In this sense, the frequent emotional manifestations experienced by teachers are: frustration, mental fatigue, worries, excessive anxiety, depression, stress, feelings of haste and urgency. Internationally, results such as those found in Costa Rica determined that teachers present symptoms such as worry, insomnia, sweating, disturbance, anxiety and tension suggest that teachers experience high levels of stress and are prone to develop depression, which is accompanied by excessive crying and sadness, lack of energy and social changes[20]. In Ecuador, similar results show that 62.12% of teachers consider that the economic and work situation is worse than before, 47.73% present emotional exhaustion, 50.76% emotional disorder and 30.30% marked anxiety, thus concluding that teachers show burnout factors and are at the limit of anxiety and depression, which affects their work performance[21].In addition, within a pandemic context, research on teachers in Ecuador shows that there is stress, depression and anxiety in postgraduate teachers with a medium to low coping capacity in the presence of Covid-19 and with low levels of psychological disorders[22].

The next two most affected dimensions are work involvement (28.9%) and working conditions (30.1%), which indicate that teachers do not feel involved in their work, since their working conditions are not what they are used to. There are difficulties that generate great demotivation among teachers and, consequently, may influence the students and the quality of the education they provide[23]. Therefore, it is clear that the psychological well-being of teachers is being affected during the pandemic and that there are variables that may be having negative effects on teachers that need to be monitored[24,25].

This research has the following limitations: First, the non-probabilistic sample evaluated was only 266 teachers so it is necessary to develop studies with a larger sample and that can empower the results found, on the other hand there is a marked difference in terms of the ages of the participants, so it is necessary to conduct other studies by age groups that have similar age characteristics; likewise it has not been possible to evaluate the equipment used by teachers and the quality of internet with what they had for teaching, so it is suggested to do other research to compare with other factors that may affect the work climate.

It is concluded that there is an inverse relationship between the work environment, depression, anxiety and stress in state teachers in the Peruvian jungle; in view of this, it can be assumed that the more teachers have difficulties in the work environment, the more depression, anxiety and stress they experience. The authorities of the Ministry of Education

should promote mental health care for teachers in the Peruvian jungle.

References

1. Organización Panamericana de la Salud, Organización Mundial de la Salud. Estrés laboral es una carga para los individuos, los trabajadores y las sociedades [Internet]. Pan American Health Organization / World Health Organization. 2016. Disponible en: https://www3.paho.org/hq/index.php?option=com_content&view=article&id=11973:workplace-stress-takes-a-toll-on-individuals-employers-and-societies&Itemid=135&lang=es

2. World Health Organization. Depression [Internet]. 2020. Disponible en: https://www.who.int/news-room/fact-sheets/detail/depression

3. Ogawa R, Seo E, Maeno T, Ito M, Sanuki M, Maeno T. The relationship between long working hours and depression among first-year residents in Japan. BMC Med. Educ. 2018;18(1):50. https://doi.org/10.1186/s12909-018-1171-9

4. Chun H, Cho I, Choi Y, Cho S. Effects of Emotional Labor Factors and Working Environment on the Risk of Depression in Pink-Collar Workers. Int. J. Environ. Res. Public Health. 2020;17(14):5208. https://www.mdpi.com/1660-4601/17/14/5208

5. Castellón Leal E, Ibern Regàs P, Gili Planas M, Lahera Forteza G, Sanz González J, Saiz Ruiz J. El abordaje de la depresión en el ámbito del trabajo: recomendaciones clave. Psiquiatría Biológica. 2016 ;23(3):112–7. https://doi.org/10.1016/j.psiq.2016.08.003

6. Cuenca-León K, Cabrera-Duffaut A, Vélez-León E, & Villavicencio-Caparó E. (2021). Estado de ánimo y de salud del personal universitario durante el periodo de aislamiento por COVID-19. https://doi.org/10.5281/zenodo.5792060

7. Oblitas-Guerrero SM. Clima laboral y satisfacción del profesional de enfermería en el servicio de emergencias de un hospital público de Chiclayo, Perú. Rev.exp.med. 2020; 6(1):23–7. http://rem.hrlamb.gob.pe/index.php/REM/article/view/381

8. Southwell BG, Kelly BJ, Bann CM, Squiers LB, Ray SE, McCormack LA. Mental Models of Infectious Diseases and Public Understanding of COVID-19 Prevention. Health Commun. 2020;35(14):1707–10.

9. Sistema de Gestión de la Calidad Educativa [SGCE]. Acreditaciones de instituciones educativas peruanas [Internet]. 2021. https://sgce.org.pe/

10. Prada R, Ganboa A, Hernandez C. Efectos depresivos del aislamiento preventivo obligatorio asociados a la pandemia del Covid-19 en docentes y estudiantes de una universidad pública en Colombia. Psicogente. 2021;24(45). http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0124-01372021000100108

11. Ozamiz-Etxebarria N, Berasategi Santxo N, Idoiaga Mondragon N, Dosil Santamaría M. The Psychological State of Teachers During the COVID-19 Crisis: The Challenge of Returning to Face-to-Face Teaching. Front. Psychol. 2021;11. https://doi.org/10.3389/fpsyg.2020.620718

12. Granja AP, Caisaguano AT, Santafé AR, Chicaiza BC, Camacho GC, Pinto KA, Paguay EA, Álvarez IS. Distrés y condiciones de trabajo en el personal administrativo y de enfermería del Hospital Pediátrico Baca Ortiz, Ecuador. Archivos Venezolanos de Farmacología y Terapéutica. 2021;40(6):613-8: http://doi.org/10.5281/zenodo.5557997

13. Pacheco-Vásquez D. Guerrero-Alcedo J. Prevalencia de trastornos mentales en población peruana con COVID-19 atendida en el programa" Te Cuido Perú". Archivos Venezolanos de Farmacologia y Terapéutica. 2021;40(9):902-6: http://doi.org/10.5281/zenodo.5834712

14. Hernández R, Fernández C, Baptista M del P. Metodología de la investigación. Sexta Edición. Mexico: McGraw-Hill; 2014. 1–634 p. (6a ed). https://www.uca.ac.cr/wp-content/uploads/2017/10/Investigacion.pdf

15. Vargas CS, Barrientos AS. Análisis confirmatorio y coeficiente Omega como propiedades psicométricas del instrumento Clima Laboral de Sonia Palma. Revista de Investigación en Psicología. 2017;20(2):377–88. https://revistasinvestigacion.unmsm.edu.pe/index.php/psico/article/view/14047

16. Mellor D, Vinet EV, Xu X, Hidayah Bt Mamat N, Richardson B, Román F. Factorial Invariance of the DASS-21 Among Adolescents in Four Countries. Eur. J. Psychol. Assess. 2015; 31(2):138–42. https://econtent.hogrefe.com/doi/abs/10.1027/1015-5759/a000218

17. Asociación Médica Mundial. Declaración de Helsinki [Internet]. 2018 https://www.wma.net/es/policies-post/declaracion-de-helsinki-de-la-amm-principios-eticos-para-las-investigaciones-medicas-en-seres-humanos/

18. El estrés docente en tiempos de pandemia. Dilemas contemporáneos: educación, política y valores. Dilemas contemporáneos: educación, política y valores. 2021;8(especial):23–9. https://doi.org/10.46377/dilemas.v8i.2560

19. Carmo DRP do, Siqueira DF de, Mello A de L, Freitas E de O, Terra MG, Cattani AN, et al. Relationships between substance use, anxiety, depression and stress by public university workers. Rev Bras Enferm. 2020;73(1):e20190839. http://www.scielo.br/j/reben/a/JKpPWD3Dps35LRNHfyw4cvP/?lang=en

20. Retana-Alvarado D, González-Ríos J, Pérez-Villalobos D. Afrontamiento emocional implementado por las personas docentes en Costa Rica para el manejo del estrés. InterSedes 2022;161-183.

21. Mora Mora CE, Bonilla Guachamín GE, Bonilla Guachamín JA. Impacto de la pandemia de covid-19 en los docentes: burnout, ansiedad y depresión. RUNAE. 2021; 0(6):41-60. https://revistas.unae.edu.ec/index.php/runae/article/view/488

22. Cabezas-Heredia E, Herrera-Chávez R, Ricaurte-Ortiz P, Novillo Yahuarshungo C. Depresión, Ansiedad, estrés en estudiantes y docentes: Análisis a partir del Covid 19. Rev. Venez. Gerenc. 2021; 26(94): 603-622.

23. Ruiz-Pérez I, Escribà-Agüir V, Montero-Piñar I, Vives-Cases C, Rodríguez-Barranco M, Plazaola-Castaño J, et al. Prevalence of intimate partner violence in Spain: A national cross-sectional survey in primary care. Aten Primaria. 2017;49(2):93–101. https://doi.org/10.1016/j.aprim.2016.03.006

24. Gumbau SL, Soria MS, García-Renedo M. ¿Por qué se están "quemando" los profesores? Prevención, trabajo y salud: Revista del Instituto Nacional de Seguridad e Higiene en el Trabajo. 2003;(28):16–24. http://agora.edu.es/servlet/articulo?codigo=1012115

25. Figueroa-Quiñones J, Cjuno J, Machay-Pak D, Ipanaqué-Zapata M. Quality of Life and Depressive Symptoms Among Peruvian University Students During the COVID-19 Pandemic. Front. Psychol. 2022;13:781561. https://doi.org/10.3389/fpsyg.2022.781561