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Perceived self-efficacy and its relationship with the perception of the characteristics of remote work in a pandemic situation in a sample of colombian primary, secondary and university basic education teachers

Autoeficacia percibida y su relación con la percepción de las características del trabajo remoto en situación de pandemia en una muestra de docentes colombianos de educación básica primaria, secundaria y universitaria

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SUMMARY

The article presents the results of the study aimed at identifying self-perceived efficacy and its relationship with the perception of the characteristics of remote work in conditions of the COVID-19 pandemic in a sample of Colombian teachers. In the quantitative study, with a descriptive-correlational level, 385 teachers from seven different departments participated, with an average age of M=34.5(SD=2.8), who worked at the educational levels from elementary school to teaching programs postgraduate. For the collection of the information were used the General Self-efficacy Scale (Baessler and Schwarzer, 1996) and the Quarantine Virtual Teacher Work Questionnaire, which was designed ad-hoc for the present study and measured the four factors: work at home and organization; the methodology; family, social and work environment and personal satisfaction. The results showed the presence of a medium level of self-perceived efficacy, probably associated with abrupt changes in the virtual teaching modality. In the study sample, there were found difficulties related to the reconciliation between virtual work and different aspects of the family environment, and a medium level in the management of methodological and technological tools and job satisfaction. Being discussed the implications of the virtual teaching experience during the pandemic and its

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importance for teachers' preparation in technological tools and innovative methodologies to implement virtual and mixed education.

Keywords: *Self-perceived efficacy, virtual teaching, teacher, COVID-19 pandemic.*

RESUMEN

Se presentan resultados del estudio orientado a identificar la eficacia autopercibida y su relación con la percepción de las características del trabajo remoto en condiciones de la pandemia de COVID-19 en una muestra de docentes colombianos. En el estudio cuantitativo, con nivel descriptivo-correlacional, participaron 385 docentes de siete diferentes departamentos, con edad promedio de M=34,5(Dt=2,8), que se desempeñaban en los niveles educativos desde la primaria hasta los programas de posgrado. Para la recolección de información se utilizó la Escala de Autoeficacia General (Baessler y Schwarcer, 1996) y el Cuestionario de trabajo docente virtual en cuarentena, diseñado ad-hoc para el presente estudio, que valoró los cuatro factores: trabajo en casa y la organización, la metodología, conciliación del entorno familiar, social y laboral y la satisfacción personal. Los resultados mostraron la presencia de un nivel medio en la eficacia autopercibida, relacionado probablemente con las dificultades asociados al cambio abrupto en la modalidad de enseñanza. Se presentaron mayores dificultades relacionados con la conciliación entre el trabajo virtual y diferentes aspectos relacionados con el entorno familiar, un nivel medio en el manejo de herramientas metodológicas y tecnológicas y en la satisfacción laboral. Se discuten las implicaciones de la situación vivida durante la pandemia desde la importancia de una mayor preparación de los docentes en las herramientas tecnológicas y metodologías innovadoras para implementar educación virtual y mixta.

Palabras clave: *Eficacia autopercibida*, *enseñanza virtual, docente, pandemia de COVID-19.*

INTRODUCTION

The situation of COVID-19 pandemic has had multiple repercussions on social life in all countries of the world, both at the level of physical and mental health (1-3) the consequences at the economic level (4), and changes in routines and habits of life in general. One of these aspects was related to the move to remote working mode due to the implementation of the mandatory quarantine, where many companies had to implement immediate measures to ensure social distancing, changing people's lifestyles (5).

Some authors have highlighted the benefits of this type of work, considering its advantages for new forms of economic organization, strengthening of intellectual capital, a configuration of remote work teams at an international level, including greater autonomy for workers, reduction of stress, strengthening of family ties, reduction of expenses, among others (6). However, this type of work performance entails its difficulties, among which may be a lack of skills necessary from the point of handling technologies, the need to acquire different skills to those related to their profession, or, also, the missed opportunity of normal social interaction and connection with co-workers, causing frustration, loneliness, and stress (6).

The profile of a teleworker may vary depending on the work; however, it requires having some basic characteristics that allow them to carry out successfully their functions of the position in this work modality. In this respect, success depends on the worker's ability to integrate excellent management of technology with communication, literacy, and audio-visual skills and with his personal and work profile, based on proactivity and constancy for the achievement of proposed objectives, as well as decision-making skills (7).

It is important to count on or develop attributes and values to adapt to work at home, creativity and commitment to developing the work properly in that space of "freedom", manage a healthy work environment, a workplace that is appropriate, comfortable, and quiet, with a convenient time management to plan and evaluate activities, that is, impose a routine and work schedules, prioritizing the urgent and managing time efficiently without affecting, for example, sleep or family relationships, and thus have a good mood and a future perspective to perform the work with the same or better quality remotely (8,9).

One of the key elements in the remote work process is the presence of intrinsic motivation, which allows, in addition to a self-management of work, the exercise of a responsibility to fulfil the required activities and maintain high productivity and efficiency (8).

For this reason, under normal conditions, not all people are suitable for remote work, as it is required, at least, a process of preparation and adequate training to ensure good work performance and adequate work well-being of workers in these conditions (9).

Having regard to the foregoing, the fact that the vast majority of firms are obliged to switch to remote working under pandemic conditions has led to the need to adapt to new working conditions for workers who have not previously performed their duties in this way, demanding to learn and show new skills to fulfil their job duties, achieve concentration, maintain discipline, learn the use of technological means, be efficient, have high expectations and manage a quiet working environment with all family members at home, learn new things in record time, among others. These demands can sometimes exceed people's ability to adapt to work, causing additional stress and adversely affecting the mental health of workers (10).

The present study focused on the education labor sector. Although this modality existed before the pandemic in the education sector, not all teachers and students were familiar with it. The arrival of the COVID-19 and compulsory isolation provision imposed an immediate change of teaching at all educational levels towards virtuality (11).

In this order of ideas, all educational institutions that have operated in person had to change their methodologies and adapt them to virtual teaching to offer students continuity in their educational processes. This implies a very significant change in all aspects of teaching: rapid learning and efficient management in virtual technology platforms for education; detailed design of contents and materials necessary to support virtual teaching without diminishing its quality; design of strategies for the monitoring, control, and feedback of learning processes by students; creative and functional assessment strategies to maintain motivation to learn.

METHODOLOGY

Quantitative research, descriptive-correlational level, cross-sectional design, ex-post fact.

Participants

The sample of the study was composed of 385 teachers of higher education and of primary and secondary basic education, who performed their work in person and had to work virtually due to the health emergency of the COVID-19 pandemic. The sampling was done intentionally through a call on social networks. In terms of geographical distribution, the sample included participants from 6 departments of Colombia: 30.8 % of teachers perished in the department of Antioquia, 20.7 % in Putumayo, 16.3 % in Cundinamarca, 13.9 % in Sucre, 11.5 % in Norte de Santander, 11.5 % in Magdalena and 6.7 % north of Santander.

In terms of gender, 60.6 % of the participants were women and 39.4 % were men; the most frequent educational level was the master's degree (55.8 %), followed by the doctorate (13.5 %), specialization (18.3 %), undergraduate (11.2 %) and technical (1.4 %).

63.5 % of the participants worked in a public educational institution and 36.5 % were in private. As for the years of work experience, 36.1 % had 2 to 5 years, 34.6 % over 9 years, 14.9 % less than one year, and 14.4 % from 5 to 8 years.

Of the educational level at which 30.4 % worked, 27.4 % worked at the undergraduate level, 20.1 % at the secondary level, 16.3 % at the primary level, and 5.8 % at the technical level. 52.4 % were teachers in the exact sciences and 47.6 % in the social sciences.

The average age of the participants was M=34.5 (SD=2.8), where 33.2 % were over 45 years old, 32.8 % were between 26 and 38 years old, 23.6 % were in the range of 39 to 45 years, 10.4 % between 18 and 25 years.

Concerning marital status, 40.8 % were single, and 59.2 % were married (and free marriage); 57.7 % had children and 42.3 % had no children.

Measures

For the measurement of the self-efficacy variable, the General Self-efficacy Scale (25) was used, presented in the Likert format of 10 items with a 4-point response option. The instrument obtained α=0.87 in the Spanish validation (26);

α=0.91 in the Ecuadorian population (27); and α=0.74 in the validation of the Colombian population (28).

For the measurement of working conditions during the quarantine, the ad-hoc design for the present study of the Quarantine Virtual Teaching Work Questionnaire was carried out, considering different aspects related to the virtual work process from home such as organization of schedules, workstations, interferences, and distractions during working time; the ability to manage virtual media; interference with family life, relationship with colleagues and superiors; as well as motivational aspects, related to teaching performance in the form of remote work from home, among others. The questionnaire was configured as a Likert scale with answer options: 1 = Never or nothing; 2 = Sometimes or little; 3 = Enough times or enough; 4 = Always or Much. Initially, the questionnaire was applied to 10 people to verify their comprehension of the questions. As a second step, the scale was submitted to expert judgment and Cohen's Kappa concordance index was calculated for the measures of coherence, sufficiency, clarity of wording of items, and relevance, indicating satisfactory values among 0.763 and 0.962 (value of p between 0.0001 and 0.007), presenting a high degree of agreement between the judges.

The instrument in its initial design was applied to 85 volunteer teachers as a pilot. Exploratory factor analysis with the extraction of main components and varimax rotation initially yielded 5 factors with a total explained variance of 73 % and allowed debugging the instrument, eliminating items with factor load less than 0.4, which allowed for improved the KMO, continuing the significant test of Bartlett. Finally, the confirmatory factor analysis projected 4 factors with an explained variance of 80 %, meeting the parsimony criterion. The 4 components showed auto values above 1.

Table 1 presents the final 20 items of the scale with their corresponding factor load, distributed in 4 factors that were named: Factor 1: Work at home and organization (schedules, job, types of interference and distractors); Factor 2: Work at home and methodology (skills in the management of virtual media); Factor 3: Work at home and family, social and work environment (relationship with family, relationship with co-workers and superiors); Factor 4: Work at home and personal satisfaction (motivation, expectations, commitment, personal growth, freedom).

Finally, the internal consistency coefficient of Alpha Cronbach was calculated, indicating a value of 0.946, which indicated a good internal consistency of the scale. Regarding the constitutive dimensions of the scale, their values oscillated between α=0.085 and α=0.970.

Additionally, was used a sociodemographic survey for the variables of age, gender, marital status, children, educational level, type of institution, years of experience, and area of performance.

Procedure

The study considered all the technical, procedural, and ethical regulations following resolution 8 430 of 1993 of the Ministry of Health and the Code of Ethics of the Psychologist. The informed consent was included in the online questionnaire that was applied to the teachers participating in the study. Participation was voluntary from a virtual call on social networks.

Statistical analyses

Analysis of normality indicated that all study variables showed an abnormal distribution. For information analysis, descriptive statistics were used to calculate the mean of the study variables. Considering the non-parametric distribution of the study variables, for the comparison of values of variables by groups, the Mann-Whitney U statistic was used for two groups and Kruscal-Wallis for more than two groups. The Spearman statistic was used for the correlation of the variables. The SPSS version 25 software was handled.

RESULTS

Self-efficacy showed values located at a medium level in the sample of this study

About the variables related to remote work, the lowest value showed work at home and family

Table 1. Factorial loading of items final scale version

Ítems	Factors 1	2	3	4
1. I do not feel interference to carry out my work responsibilities from home.	0.717			
2. Working from home does not interfere with my family and social life.			0.748	
3. I manage technology well enough to do my job		0.756		
4. Working at home satisfies my interests and corresponds to my needs				0.715
5. I consider that I make good use of my time, fulfilling all my tasks and work functions from home	0.753			
6. Working at home allows me to develop my professional skills				0.754
7. I can easily learn what I need to do my virtual job well		0.874		
8. I consider that I have a suitable and comfortable place for my work routine	0.670			
9. I manage to carry out my work functions from home through technological means satisfactorily		0.893		
10. It is easy to reconcile working from home and domestic and family activities			0.728	
11. Work at home is in line with my expectations and aspirations				0.667
12. I can manage work hours responsibly and autonomously from home	0.723			
13. Working at home gives me an identity and makes me feel useful				0.680
14. The need to learn how to use technology to perform my duties from home does not generate stress for me		0.637		
15. Working from home has allowed me to maintain a good relationship with my coworkers			0.732	
16. Working at home makes it easier for my merits to be valued fairly				0.662
17. Working at home stimulates my work commitment				0.713
18. It is easier to relate to my superiors and work team from home			0.724	
19. Working at home allows me to work with pleasure and motivates me to work				0.730
20. Working at home gives me a feeling of freedom and makes me grow personally				0.715

Extraction Method: Principal Component Analysis
Rotation Method: Varimax Normalization with Kaiser
a. The rotation has converged in 5 iterations.

and work environment, indicating the presence of difficulties in terms of reconciling virtual work and different aspects related to the family environment. The highest score was obtained in the variable of work at home and methodology, indicating good management and appropriation of virtual media by the study sample. Regarding the variables Work at home and organization and Work at home and personal satisfaction, medium-high values were obtained, indicating a satisfactory level in these aspects (Table 2).

Table 2. Descriptive data of study variables

Variables	Mean (SD)
Work at home and organization	3.2 (0.6)
Work at home and methodology	3.4 (0.6)
Work at home and family and work environment	2.7 (0.7)
Work at home and personal satisfaction	3.0 (0.6)
Self-efficacy	3.3 (0.5)

The comparison of study variables according to gender groups showed a statistically significant difference in the variable Work at home and family and work environment (p=0.035) in favor of the male gender, indicating that men present better adaptation in this aspect (Table 3).

A statistically significant difference was also obtained in the variable Work at home and personal satisfaction (p=0.043), in this case in favor of the female gender, indicating that, although the women in the sample have greater difficulties in reconciling work at home and family environment, report greater personal satisfaction in remote work situations (Table 3).

Table 3. Comparison of study variables according to gender

Variables	Femenino Median (IR)	Masculino Media (IR)	Mann Whitney U	Valor p
Work at home and organization	3.2(1)	3.2(1)	5 161.000	0.991
Work at home and methodology	3.7(2.8)	3.7(2.3)	4 943.500	0.590
Work at home and family and work environment	2.5(1)	3.1 (1.1)	3 125.000	0.035
Work at home and personal satisfaction	3.3(2,7)	2.9(2.2)	3 058.500	0.043
Self-efficacy	3.3(2)	3.4(1.5)	4 492.500	0.110

Regarding the comparison of the study variables according to age, a statistically significant difference was identified in the Work at home and methodology variable (p=0.002) with higher scores in younger age groups, indicating better handling of tools technologies related to work at these ages.

Likewise, a statistically significant difference was shown in the variable Work at home and personal satisfaction (p=0.039), indicating higher scores in younger age groups (Table 4).

Table 4. Comparison of study variables according to age

Variables	18-25 Median (IR)	26-38 Median (IR)	39-45 Median (IR)	> 45 Median (IR)	Chi-Square	P
Work at home and organization	3.7(.5)	3(2.3)	3.2(1.5)	3.5(3)	4.782	0.189
Work at home and methodology	3.7(2)	3.7(2.3)	3.4(2.1)	3(2)	14.750	0.002
Work at home and family and work environment	2.6(0.3)	2.5(2)	2.5(2.1)	2.7(2.5)	0.668	0.881
Work at home and personal satisfaction	3.5(0.4)	3.1(0.8)	2.8(2.1)	2.7(1.5)	6.799	0.039
Self-efficacy	3.5(1)	3.3(2.3)	3.6(1.4)	3.2(2)	7.223	0.065

The comparison of variables according to marital status showed a statistically significant difference in the variable Work at home and family and work environment (p=0.048), showing higher scores in the single group (Table 5).

Table 5. Comparison of study variables according to marital status

Variables	Single Median (IR)	Married Median (IR)	Chi-Square	P
Work at home and organization	3.2(3)	3.2(2.8)	1.017	0.907
Work at home and methodology	3.7(2)	3.5(2.8)	1.769	0.778
Work at home and family and work environment	3(2.3)	2.5(2)	6.012	0.048
Work at home and personal satisfaction	3(2.7)	3(2.7)	0.984	0.912
Self-efficacy3.4(2)	3.2(3)	2.195	0.700	

The comparison of study variables according to the educational level of the sample participants indicated a statistically significant difference in the Work at home and personal satisfaction variable (p=0.023), showing an increase in satisfaction levels in remote work situations as the educational level of the teacher increases (Table 6).

Table 6. Comparison of study variables according to educational level

Variables	Technology Median (IR)	Bachelor Median (IR)	Specialty Median (IR)	Magister Median (IR)	PhD Median (RI)	Chi-Square	P
Work at home and organization	3.7(.5)	3.5(2)	3.4(2)	3.3(2.8)	3(3)	4.867	0.301
Work at home and methodology	3.7(1.5)	3.7(1.8)	3.5(2)	3.7(2.8)	4(2.3)	5.252	0.262
Work at home and family and work environment	3(2)	3(2.5)	2.7(2.5)	2.5(3)	2.7(2.5)	2.804	0.591
Work at home and personal satisfaction	2.5(2.2)	2.7(2.2)	2.8(2)	3(2.7)	3.4(2.2)	3.672	0.023
Self-efficacy	3.6(2.2)	3.2(1.3)	3.4(1.5)	3.3(3)	3.6(2)	1.931	0.748

The comparison of study variables according to having children showed a statistically significant difference in the variables of Work at home and the organization (p=0.025) and Work at home and family and work environment (p=0.045) in favor of the group who do not have children.

Similarly, a statistically significant difference was obtained in the variable Work at home and personal satisfaction (p=0.041), but in this case, in favor of the group that has children, indicating that people with children obtain greater personal satisfaction in a situation of remote work (Table 7).

Table 7. Comparison of study variables according to having children

Variables	Yes Median (IR)	No Median (IR)	Mann Whitney U	p
Work at home and organization	2.8(2.1)	3.2(3)	3 469.500	0.025
Work at home and methodology	3.6(2.8)	3.7(2.6)	5 077.000	0.627
Work at home and family and work environment	2.5(3)	2.9(3)	3 877.500	0.045
Work at home and personal satisfaction	3.3(2.5)	2.9(2.2)	3 923.000	0.041
Self-efficacy	3.4(3)	3.3(2)	5 080.000	0.639

In the comparison of study variables according to the groups of time of work experience, a statistically significant difference was identified in the variables of Work at home and methodology (p=0.039), Work at home and family and work environment (p=0.045) and Work at home and personal satisfaction (p=0.027), showing the same trend towards higher scores in the groups with less work experience (Table 8).

Table 8. Comparison of study variables according to years of work experience

Variables	**0-1 year Median (IR)**	**2-5 years Median (IR)**	**5-8 years Median (RI)**	**9 and more Median (IR)**	**Chi-Square**	**P**
Work at home and organization	3.2(2)	3.2(2.5)	3.0(2.3)	3.2(3)	4.557	0.207
Work at home and methodology	3.7(1.8)	3.7(2.3)	3.3(1.5)	3.5(2.8)	8.382	0.039
Work at home and family and work environment	2.8(2.8)	2.7(3)	2.2(3)	2.3(3)	6.377	0.045
Work at home and personal satisfaction	3.2(2)	3.1(2.7)	2.6(2.7)	2.5(2.7)	7.342	0.027
Self-efficacy	3.5(1.4)	3.4(2)	3.1(2.3)	3.3(3)	2.698	0.441

In the comparison of study variables according to the type of institution where one works, a statistically significant difference was identified in the variables of Work at home and methodology (p=0.001), Work at home and family and work environment (p=0.014) and Work at home and personal satisfaction (p=0.013), in favor of private institutions (Table 9).

Table 9. Comparison of study variables according to the type of institution

Variables	Public Median (IR)	Private Median (IR)	Mann Whitney U	P
Work at home and organization	3.2(2.8)	3.2(3)	4 869.500	0.724
Work at home and methodology	3.4(2.8)	3.9(2.2)	3 679.500	0.001
Work at home and family and work environment	2.3(2)	2.7(2.3)	3 478.500	0.014
Work at home and personal satisfaction	2.8(2.2)	3.3(2.4)	3 982.000	0.013
Self-efficacy	3.3(2.5)	3.4(1.3)	4 868.000	0.721

The comparison of study variables according to the groups of educational levels where the teachers in the study sample worked showed a statistically significant difference in the perception of self-efficacy (p=0.026) in favor of undergraduate and postgraduate levels. The statistically significant difference was also identified in the variables of Work at home and methodology (p=0.005), Work at home, and personal satisfaction (p=0.042), where both variables show an increase in scores as the educational level in which they work increases (Table 10).

Table 10. Comparison of study variables according to the educational level in which they work

Variables	Primary Me (RI)	Secundary Me (RI)	Tecnology Me (RI)	Bachelor Me (RI)	Postgraduate Me (RI)	Chi-Square	P
Work at home and organization	3.5(2.8)	3(2.5)	3.7(1.5)	3.2(2.3)	3.5(3)	6.030	0.197
Work at home and methodology	3(2.8)	3(2)	3.5(1.5)	3.7(2.3)	4 (1.5)	14.699	0.005
Work at home and family and work environment	2.5(2)	2.5(2.3)	3(2)	2.5(2.4)	3(3)	3.917	0.417
Work at home and personal satisfaction	2.9(2.5)	2.8(2.7)	2.8(2)	3. 2(2.6)	3.5(2.2)	7.544	0.042
Self-efficacy	3(3)	3(2)	3.1(2)	3.3(2)	3.6(2.3)	11.097	0.026

The comparison of study variables according to the area of performance did not indicate a statistically significant difference in any variable between the groups of social sciences and exact sciences (Table 11).

Table 11. Comparison of study variables by area of performance

Variables	Social Sciences Me (RI)	Natural Sciences Me (RI)	Mann Whitney U	Valor p
Work at home and organization	3.2(3)	3.2(2.5)	5145.500	0.561
Work at home and methodology	3.5(2.8)	3.7(2.3)	5074.500	0.447
Work at home and family and work environment	2.5(2.1)	2.5(2.3)	5262.000	0.757
Work at home and personal satisfaction	3.0(2.7)	2.9(2.7)	5309.500	0.842
Self-efficacy	3.3(3)	3.4(2.8)	5193.500	0.639

And finally, a positive, median, and statistically significant correlation was found between self-efficacy and all the constitutive variables of the remote work test, indicating that a higher level of perceived self-efficacy is related to better performance in each of the variables of remote work (Table 12).

Table 12. Correlation between variables of virtual work at home and self-efficacy

Correlated variables	Rho Spearman	p
Work at home and organization/self-efficacy	0.468**	0.0001
Work at home and methodology/self-efficacy	0.476**	0.0001
Work at home and environment/self-efficacy	0.436**	0.0001
Work at home and personal satisfaction/self-efficacy	0.583**	0.0001

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

DISCUSSION

The results of this study showed that, at a general level, the teachers participating in the study showed average values in terms of self-perceived efficacy. Studies of teacher self-efficacy during the pandemic have indicated that the abrupt and rapid changes that occurred in the transition from face-to-face to virtual teaching and the emergence of multiple difficulties associated with this process were related to the decrease in

the perception of their effectiveness in teaching performance (29-32).

In this regard, authors highlight the importance of well-perceived self-efficacy for success in teaching performance (33), this being a relevant factor that made it possible to mitigate the stress caused by multiple emerging difficulties associated with teaching performance during the COVID-19 pandemic (31).

On the other hand, self-perceived efficacy did not show a difference according to the gender of the teachers, which is consistent with other studies (34).

About the variables related to remote work, the lowest scores were identified in the variable Work at home and family and work environment, indicating the presence of difficulties regarding the reconciliation between virtual work and different aspects related to the family environment. Similarly, the results of this study showed that the group of married teachers with children reported greater difficulties in this variable and the variable of work at home and organization.

According to DANE (Departamento Administrativo Nacional de Estadística) (35), at the beginning of the quarantine/preventive isolation, 20.6 % of Colombians reported an increase in occupation overload from the start of the remote working day, with women showing the highest level of occupation. In the present study, likewise, men reported better adaptation and greater efficiency in reconciling their family life and working from home. This situation has been highlighted in other studies, where it is indicated that women have reported greater difficulties in terms of adapting to the work process from home since they had to assume household chores and curricular activities for their minor children who were also at home with virtual study and required great help, in addition to this, in some of the cases there have been difficulties with family life, which increased tension and work stress (36).

On the other hand, although the female teachers participating in the study reported greater difficulties in reconciling work and family environment, at the same time they indicated greater personal satisfaction related to the modality of remote work at home, as well as the teachers with children.

In this regard, studies related to the subject indicate that teleworking during the pandemic has had a positive impact on people's quality of life, considering aspects such as reduction of economic resources and time invested in commuting, improvement of eating habits, and sleep, use of free time, quality of family relationships, better attention and supervision of children, among others (37), improving the job satisfaction of workers (38,39).

However, some studies indicate that job satisfaction in the case of women was lower during the pandemic in remote work conditions due to interference with family obligations (40). Regarding these contradictory findings, it is important to consider the intervening variables, such as type of occupation, conditions of organizational support. In this order of ideas, research on the population of university teachers reports an increase in job satisfaction in the remote work modality (41), which is following the results of the present study.

The participants of the present study reported high scores in the variable of work at home and methodology, indicating good management and appropriation of virtual media and educational platforms, and a satisfactory level in aspects related to the organization of their schedules, workstations, and Control over interference and distractions. Other studies on the population of teachers during the pandemic have also indicated that this modality has allowed teachers to have the possibility of having greater autonomy, control of their work, and management of class management, adapting to the changes caused by the pandemic (42).

The comparison of the study variables according to age showed that the younger teachers reported a better use of technological tools and also greater personal satisfaction related to remote work. This finding is consistent with other studies that indicate the importance of having good management of technology in the educational field, since a considerable percentage of teachers, especially older ones, still have a basic or intermediate command of technology (42).

The educational level of the teachers participating in the study was associated with higher levels of personal satisfaction in the remote work modality, which could be related to greater

preparation and management of professional and technological skills (43).

On the other hand, less work experience was associated with greater skills in managing methodological aspects, better reconciliation between work and family environment, and greater job satisfaction in the sample of this study. This situation was probably due to the interference of the teaching experience in the face-to-face modality and resistance to breaking mental and methodological paradigms, one of the aspects highlighted by the studies related to the mental flexibility of teachers and their willingness to change teaching methodologies, where it has been identified that teachers with more experience in traditional methodological approaches have greater resistance to change (44). In the situation of the pandemic and the unforeseen and rapid transition to the virtual modality in education, teachers had to learn and relearn many things related not only to the management of technology but also to teaching methodologies, where, as indicated by results in the present study, teachers with less experience were more open to these changes.

In the comparison of study variables according to the type of institution where one works, a statistically significant difference was identified in the variables of Work at home and methodology, Work at home and family and work environment, and Work at home and personal satisfaction, in favor of private institutions, which could probably be related to the fact that private institutions have greater technological resources for the implementation of work at home, better salaries generating greater motivation, and a working day with fewer hours per week. The authors highlight enormous inequalities in business benefits in the public and private sectors, marked mainly by well-being and quality of working life (45).

The educational level variable where the teacher works were associated with the perception of self-perceived efficacy in remote work conditions, this being higher in teachers at the highest educational levels, undergraduate and postgraduate. Likewise, at these levels, better management of work methodology and personal satisfaction were reported.

This could be related to the fact that the management of students at lower educational levels is much more complex, presenting greater challenges for methodological adaptations, and time spent in virtual teaching conditions, among others, representing greater physical and metal exhaustion for teachers, as some studies highlight, indicating that during the COVID-19 pandemic, teachers faced various inconveniences to carry out their work, such as internet connection problems, lack of communication with parents or legal guardians and students, demotivation of students, overload of activities, among others (29,30).

And finally, the results of this study indicate the presence of a positive, median, and statistically significant correlation between self-efficacy and all the variables of virtual work. These findings are consistent with other studies that confirm the positive role that self-efficacy plays in job performance.

The feelings of self-efficacy in teachers harbor valuable information about how capable they feel to carry out teaching tasks and generate learning in students, their influence is fundamental in pedagogical performance, favoring learning and academic achievement of students (3,4). Self-efficacy beliefs are understood as the confidence that teachers have in their ability to help students learn, make significant differences in teaching, and use didactic strategies used to enhance the quality of student learning students (46).

In conditions of an abrupt change towards the virtual modality of teaching, also situated in the complex conditions of the COVID-19 pandemic, a positive perception of their self-efficacy as a teacher allowed teachers to adapt to the new changes and work demands and carry out their teaching work in the best possible way, allowing them to reduce stress and negative effects on mental health (31,32).

CONCLUSIONS

The pandemic has been a process of great magnitude, which has deeply affected institutions, processes, teachers, and students, forcing them to face hasty and accelerated changes, to continue

the academic process with new modalities and initiatives that will continue to have changes in the coming years to move from traditional forms of education and achieve distance education with new virtual teaching models.

The results of the present study indicated that to successfully face the change to the adaptations of the face-to-face teaching process to the virtual modality in conditions of the COVID-19 pandemic, the teachers participating in the study had to have several factors such as skills technological (47-49); mental openness towards new teaching methodologies (44); decision-making, self-organization, and time-management skills to navigate the difficulties associated with remote teaching, especially with elementary and high school students (29, 30), and to combine work with family life; and a good level of self-perceived efficacy (31).

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