CHAPTER
12

Relationships between socio-emotional skills and stress, anxiety and depression disorders in education professionals in the COVID-19 pandemic

https://doi.org/10.56238/emerrelcovid19-012

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ABSTRACT
The COVID-19 pandemic has generated several challenges worldwide in different spheres of society, including education. This study examined the effects of the COVID-19 pandemic on teaching routine, its associated stress, anxiety, and depression disorders, and how educators' social-emotional skills are related to these disorders. The main hypothesis was that social-emotional skills have a significant protective effect on psychological problems, suggesting that they should be developed to reduce the prevalence of these disorders. Method: An online survey was conducted through a questionnaire sent to educators of Basic Education and Higher Education from all over Brazil. Results: Based on data from 231 education professionals, it was found that most participants had mild to moderate levels of stress, extremely severe levels of anxiety, and normal levels of depression. Participating teachers reported an abrupt and intense change in work routine during quarantine, but also demonstrated elevated levels of positive thinking, emotional self-control, ability to cope with stress, collaboration, openness to the new and another, and good self-management. It was also found that the more social-emotional skills, the lower the total rates of disorders. Conclusion: The results suggest that social-emotional skills were important factors for better coping with the pandemic, but that health and well-being involve other elements in addition to skills. It is expected that these findings can support intervention strategies aimed at professionals in the field of education.

Keywords: COVID-19, Psychological Disorders, Socio-emotional skills.

1 INTRODUCTION

The COVID-19 pandemic has generated numerous public health challenges, due to high transmission rates and millions of deaths worldwide, requiring the adoption of several preventive measures, such as social distancing, to contain the spread of the virus. At the social and political level, there have been significant socioeconomic impacts and increased individual, social and programmatic vulnerabilities, including unemployment, financial instability and amplification of inequalities (Duarte, Santo, Lima, Giordani, & Trentini, 2020; Farias & Junior Milk, 2020; Pavani, Silva, Olschowsky, Wetzel, Nunes, & Souza, 2020). In this context, research points to several consequences in the lives of individuals, particularly in terms of isolation, fear of infection by the virus and disruption in family relationships, social ties, academic life, work and finances. These effects have been directly and indirectly linked to the physical and emotional health of the population, such as increased rates of

anxiety, depression, harmful use of substances, among other psychological implications (Duarte et al., 2020; Ornell, Schuch, Sordi, Kessler & 2020; Rajkumar, 2020; Vindegaard & Benros, 2020).

In this scenario of prolonged confinement and restriction of interpersonal relationships and daily activities, in addition to other risk factors, individuals began to face new experiences and mental health challenges, with potential aggravation of psychological conditions before the pandemic, such as stress, anxiety, depression, sleep disorders, substance use, among others (Cui et al., 2022; Xiong et al., 2020)

A specific group significantly affected by the conditions imposed by the pandemic context was that of education professionals, who, compared to other professional categories, had a higher prevalence of negative mental health outcomes during the pandemic (Kush, Badillo-Goicoechea, Musci, & Stuart, 2022). In addition to the concerns and stressors inherent to their teaching career, education professionals faced a series of particular changes in their professional routine, such as the closure of educational institutions and the adaptation to the remote modality of work, with the use of technological tools for the continuity of distance learning (Araújo et al., 2020).

In Brazil, in a study conducted by Oliveira (2021) with a group of educators, it was found that these professionals felt more anxious and with greater work overload during the pandemic. In the same sense, a study conducted with Bahian educators on the impacts of the pandemic on their emotional life showed that 86.8% reported loneliness, anxiety and stress and 55.3% mentioned that social isolation intensely affected their mental health (Lima, 2021).

Among the various factors that influence these mental health indicators, social-emotional skills represent an important aspect to be considered. It is a construct that encompasses competencies that refer to knowledge and skills necessary to recognize and manage emotions, achieve goals, develop emotional resilience and demonstrate empathy, establish and maintain healthy relationships and make responsible decisions. Such skills establish a relationship with the quality of development and social and emotional adjustment, with positive effects on the promotion of well-being and quality of life of individuals, as they are associated with social, behavioral, academic and labor outcomes important for healthy development, as well as play a crucial role in the process of behavior change (Carvalho & Silva, 2017; Domitrovich, Durlak, Staley, Weissberg, 2017; Marin at al., 2017).

For education professionals, knowing how to express themselves, worrying about understanding the other, working in teams, setting common goals, postponing the satisfaction of individual needs in favor of collective goals, cooperating, managing time, among other skills, are qualities expected from the perspective of skills social-emotional. In the group-class, it is up to the teacher to configure the contours and nuances of personal relationships to promote meaningful and lasting learning in their students (Abed, 2014; Arace, Prino, Scarzello, 2021). Therefore, social-

emotional skills are considered essential for managing the social and emotional challenges related to the profession and for building positive relationships. Therefore, these aspects should be taken into account in the structuring and planning of training aimed at this audience, to promote their well-being and personal, social and professional success (Aldrup, Carstensen, Köller, Klusmann, 2020; Arteaga-Cedeño, Carbonero-Martín, Martín-AntónMolinero-González, 2022).

Given this, this study aimed to evaluate the presence of socio-emotional skills and the levels of stress, anxiety and depression in educators coping with the COVID-19 pandemic. The specific objectives were to describe the profile of the participating educators and to evaluate their routines during the pandemic period; assess the different socio-emotional skills and levels of anxiety, depression and stress of the participants; and analyze the relationships between socio-emotional skills and levels of stress, anxiety and depression . We started from the hypotheses that (1) the COVID-19 pandemic has altered the routine of education professionals, increasing the levels of stress, anxiety and depression and that (2) educators with higher rates of social-emotional skills have lower rates of stress, anxiety and depression.

2 METHODS

2.1 PARTICIPANTS

We used a convenience and reference chain sampling composed of 231 education professionals from Basic to Higher Education, located in different regions throughout Brazil.

2.2 INSTRUMENTS

1. Sociodemographic questionnaire: prepared by the authors of the study, containing questions about age, gender, who they live with, region in which they reside, level of education, financial status, whether they contracted COVID-19 and whether anyone in the family or close to them has died from COVID-19.
2. To evaluate the work routine of the participants during the pandemic, a semi-structured questionnaire prepared by the authors of the study themselves was used, containing questions about the work model, in which segment they teach, the number of hours dedicated to work, adaptation to the remote model and access to technology tools.
3. To assess the levels of stress, anxiety and depression, the DASS-21 questionnaire was used, a self-report scale that assesses negative emotional states of stress, anxiety and depression. It was translated and validated in Brazil by Vignola (2013). The instrument contains 14 items divided into a set of three subscales. The depression subscale assesses dysphoria, hopelessness, devaluation of life, self-deprecation and lack of interest. The anxiety

subscale assesses autonomic arousal, situational anxiety, and the subjective experience of anxious affect. The stress subscale is sensitive to levels of chronic arousal and assesses the difficulty of relaxing and whether the subject feels easily disturbed, agitated, irritable, overreactive and impatient. For application, the subjects are asked to answer the questions from a 4-point Likert scale from "Strongly disagree", whose score is zero, to "Totally agree" whose score is 3 (Cunha, 2007), about feelings that happened in the previous week. However, in the present study, the questions were asked considering the pandemic period, from March 2020 to February 2022.

4. To assess the levels of social-emotional skills, a semi-structured questionnaire was used, elaborated by the authors of the study, inspired by the Big Five model (Gomes & Golino, 2011), containing 15 questions, divided into 5 subscales composed of 3 questions each. Each scale relates to competence to be investigated. The subjects were asked to answer the questions from a 3-point Likert scale from "never", whose score was 0, to "often" whose score was 3. Similarly to the other questionnaires, participants were asked to respond considering the pandemic period.

2.3 PROCEDURES

This was an online study in which education professionals received, through virtual social media (e-mail, WhatsApp, Facebook, Twitter, Instagram, among others), electronic contacts and through the snowball technique (chain reference, in which one participant indicates another and so on), an invitation to participate in the research, in which they should answer four questionnaires structured on the Google Forms platform: (1) sociodemographic profile; (2) routine adjustments during the COVID-19 pandemic; (3) DASS-21; and (4) questions to identify the presence of social-emotional skills. Participation took place through agreement with the objectives and with the terms of consent available in full for consultation before access to the questionnaires.

2.4 ETHICS

The study followed all guidelines and regulatory standards for research involving human beings, as recommended by the National Health Council (CNS) and the National Research Ethics Commission (CONEP). The confidentiality of the answers provided for this study was ensured, as well as of the participants, who were initially informed about the objectives and potential risks arising from their participation. All participants signed the Free and Informed Consent Form (ICF). The project was approved by the Ethics Committee of the Federal University of São Paulo (UNIFESP, Proc.: 5.249.868).

2.5 DATA ANALYSIS

Mental health indices were assessed using thePressure, Anxiety and Stress Scale (DASS-21), an instrument adapted and validated in Brazil (Vignola & Tucci, 2014). This instrument, in Likert scale format and self-completion, consists of 21 questions with scores ranging from 0 (does not apply) to 3 (applies a lot), referring to feelings in a period of social isolation due to the COVID-19 pandemic. Items 1, 6, 8, 11, 12, 14 and 18 constitute the subscale for stress assessment; 2,4, 7, 9, 15, 19 and 20 for anxiety; and 3, 5, 10, 13, 16, 17 and 21 for depression. To obtain the respective severity levels for each disorder, following the cutoff points of the original scale (DASS-42, as shown in Table 1), all values were added and multiplied by two (Santos et al., 2022; Silva-Costa et al., 2022).

Table 1. Severity levels, according to DASS-21 cutoff points.

	Normal	**Lightweight**	**Moderate**	**Severe**	**Extremely severe**
Stress	0-10	11-18	19-26	27-34	35-42
Anxiety	0-6	7-9	10-14	15-19	20-42
Depression	0-9	10-12	13-20	21-27	28-42

The indices of social-emotional skills were evaluated by a semi-structured questionnaire, elaborated by the authors of the study themselves. This instrument, in the format of a Likert scale and self-completion, was composed of 15 questions with scores ranging from 0 to 3. To calculate the total index of skills, all items whose response was equal to or greater than 2 points were considered and summed.

Data were analyzed using the statistical software JAMOVI, version 2.3.16, at a significance level of 5%. Data analysis began with the performance of the Shapiro-Wilk test, to verify the assumption of normality of the variables, and the Levene test, to test homogeneity. Subsequently, the descriptive analysis consisted of the descriptive exploration of the variables, including calculation of the prevalences. The sociodemographic data of the different groups were compared using descriptive (mean, standard deviation and median) and inferential statistics.

For non-parametric data, the Mann-Whitney test was used for comparison between independent groups. The Kruskal-Wallis test was used to verify the relationship between the indices provided by the DASS-21 scale and the qualitative variables with three or more categories, to perform multiple comparisons in case of statistically significant differences between the groups. In cases where there was a significant relationship, multiple comparisons of the categories two by two were performed using the Dwass-Steel-Critchlow-Fligner (DSCF) test (Barros et al., 2022; Cunha et al., 2018; Lacerda et al., 2017).

Bivariate logistic regression models were used to identify variables associated with levels of severity of anxiety, depression and stress (dependent variables). For the dependent variable, 0 was

assigned to those whose scores did not correspond to the level of severity, and 1 was assigned to those whose scores corresponded to the level of severity (normal, mild, moderate, severe or extremely severe).

To verify the correlation of data regarding indexes of social-emotional skills and stress, anxiety and depression, the Spearman rank correlation coefficient was used, and coefficients from 0 to 0.3 were classified as insignificant correlation; 0.3 to 0.5 (-0.3 to -0.5) as low positive correlation (negative); 0.5 to 0.7 (-0.5 to -0.7) as moderate positive (negative) correlation; 0.7 to 0.9 (-0.7 to -0.9) as high positive correlation (negative); and 0.9 to 1.0 (-0.9 to -1.0) as a very high positive (negative) correlation (Almeida et al., 2011; Mukaka, 2012).

2.6 FINDINGS

The study had the participation of 234 education professionals. After checking all the answers obtained, 03 participants were excluded due to incomplete or incorrect completion of form items. In total, the data of 231 professionals were considered valid and analyzed. Specific cases, in which only a certain data has not been filled in or has been filled out incorrectly, were maintained or considered omitted, depending on the analysis performed and the test used.

As can be seen in Table 2, most participants were female (78.2%) with a mean age of 44.2 years (*SD* = 10.2) and living in the state of São Paulo (80.9%). The predominant level of education was complete lato sensu graduate (53.9%), followed by complete undergraduate (22.2%) and master's (10.4%). Most reported obtaining monthly income in the ranges of 4 to 5 minimum wages (32.6%) and 6 to 8 minimum wages (29.1%).

Table 2. Sociodemographic profile of the participants.

Gender	**n**	**%**
Female	179	78,2%
Male	50	21,8%
State	**n**	**%**
São Paulo (SP)	186	80,9%
Alagoas (AL)	12	5,2%
Minas Gerais (MG)	10	4,3%
Mato Grosso (MT)	04	1,7%
Rio de Janeiro (RJ)	04	1,7%
Distrito Federal (DF)	03	1,3%
Bahia (BA)	02	0,9%
Paraná (PR)	02	0,9%
Rio Grande do Sul (RS)	02	0,9%
Santa Catarina (SC)	02	0,9%

Goiás (GO)	01	0,4%
Maranhão (MA)	01	0,4%
Pernambuco (PE)	01	0,4%
Level of training	**n**	**%**
Postgraduate (lato sensu) complete	124	53,9%
Complete graduation	51	22,2%
Masters	24	10,4%
Incomplete post-graduation (lato sensu)	15	6,5%
Doctorate	10	4,3%
Post-doctorate	05	2,2%
Incomplete graduation	01	0,4%
Monthly income	**n**	**%**
4-5 minimum wages	75	32,6%
6-8 minimum wages	67	29,1%
2-3 minimum wages	46	20,0%
≥9 minimum wages	35	15,2%
≤1 minimum wage	07	3,0%

Regarding the type of institution in which they worked (table 3), 55.2% of the professionals were linked to private educational institutions, with Elementary Education (PE) being the main level of education in which they taught (34.3%). The majority (67%) of the professionals worked only in a school/educational institution, and the working day of 40 hours per week or more was the main work period reported by 50.4% of the participants. During the period of the COVID-19 pandemic, 45.7% of education professionals taught entirely online, which, according to the Kruskal-Wallis test with comparison between groups through the DSCF test, had statistically higher rates of stress compared to those who proceeded with the performance of fully asynchronous activities (p = 0.04), as well as those who developed activities both online and in person (p = 0.007); 72.2% characterized as "difficult" the process of adaptation to the remote teaching model, which presented statistically higher rates of stress (p = <,001), anxiety (p = <,001) and depression (p = 0.01) compared to those who considered the process "quiet"; 67.4% reported that the work demand was multiplied, which presented statistically higher indices of stress (p = <,001), anxiety (p = 0.007) and depression (p = 0.002) compared to professionals whose work routine did not undergo significant changes; and 54.3% needed to seek more access to digital media and/or acquire new equipment.

Table 3. Characterization of work during the pandemic period.

Type of institution	**n**	**%**
Toilet	127	55,2%
Public	87	37,8%
Both (public and private)	14	6,1%

No response	02	0,9%
Levels of education in which he teaches	**n**	**%**
Elementary School (EF)	79	34,3%
Early Childhood Education (EI)	43	18,7%
High School (MS)	34	14,8%
Elementary School + High School (EF + EM)	26	11,3%
Higher Education (ES)	19	8,3%
Early Childhood Education + Elementary School (EI + EF)	19	8,3%
No response	04	1,7%
Early Childhood Education + High School (EI + EM)	02	0,9%
Elementary School + Higher Education (EF + ES)	01	0,4%
Early Childhood Education + Elementary School + High School (EI + EF + EM)	01	0,4%
High School + Higher Education (EM + ES)	01	0,9%
Number of schools/institutions	**n**	**%**
01 school/institution	154	67,0%
02 schools/institutions	65	28.3 %
≥3 schools/institutions	07	3,0%
No response	04	1,7%
Working period	**n**	**%**
Full-time (40 hours per week or more)	116	50.4 %
Part-time	84	36.5 %
Three days (morning, afternoon and evening)	23	10.0 %
He was laid off during the pandemic	04	1.7 %
He was fired from one of the work shifts	03	1.3 %
Have you taught online classes?	**n**	**%**
Yes, all classes	105	45,7 %
Online and in person	81	35,2 %
Yes, but only a few classes	27	11,7%
No, the work occurred entirely asynchronous	10	4,3%
Took time off work for medical/health reasons	02	0,9%
No response	05	2,2%
How did you consider the process of adapting to the remote model?	**n**	**%**
Difficult	166	72,2%
No problem	53	23,0%
No response	11	4,8%
Have there been changes in the work routine?	**n**	**%**
The work was multiplied	155	67,4%
Had a little more work	58	25,2%
There were no significant changes in the work routine	07	3,0%
No response	10	4,3%
Internet access and media resources	**n**	**%**
Had to seek more access and/or acquire equipment	125	54,3%
It had easy access	77	33,5%
Had a lot of difficulty accessing the internet and media resources	21	9,1%
No response	07	3,0%

Most of the education professionals participating in the study presented mild (24.3%) and moderate (22.2%) levels of stress, extremely severe (37.8%) levels of anxiety, and normal (38.3%) levels of depression (Table 4). According to the Mann-Whitney test, there were no statistically significant differences between the female and male groups concerning the total indices and levels of severity of stress, anxiety and depression assessed by the DASS-21 scale (Table 4).

Table 4. Stress severity level of the participants. Data expressed as a percentage (%).

Stress		
Severity level	**N**	**%**
Normal	41	17,8%
Lightweight	**56**	**24,3%**
Moderate	51	22,2%
Severe	44	19,1%
Extremely severe	38	16,5%
Anxiety		
Severity level	**N**	**%**
Normal	66	28.7 %
Lightweight	20	8.7 %
Moderate	36	15.7 %
Severe	21	9.1 %
Extremely severe	**87**	**37.8 %**
Depression		
Severity level	**N**	**%**
Normal	**88**	**38.3 %**
Lightweight	28	12.2 %
Moderate	45	19.6 %
Severe	25	10.9 %
Extremely severe	44	19.1 %

A positive association was identified between not having contracted COVID-19 and having a normal level of stress during the pandemic period (OR = 2.54; CI = 1.62-3.97; p = 0.01). Negative associations were identified between higher income brackets and extremely severe stress level, i.e., the higher the source of income, the lower or no association with stress was identified. Compared to professionals whose monthly income was equal to or less than 1 minimum wage, education professionals with monthly incomes of 4 to 5 and above 9 minimum wages were more likely not to present extreme level of stress (OR = 5.99; CI = 1.07-33.29; p = 0.04; OR = 12.80; CI = 1.61-101.50; p = 0.01, respectively).

Negative associations were found between having contracted COVID-19 and having normal and mild levels of anxiety, meaning that participants who contracted the disease increased the chance of having increased anxiety levels. Participants who did not contract COVID-19 were less likely (OR= 3.45) to have normal and mild levels of anxiety, while those who contracted COVID-19 were more likely to have an extremely severe level of the disorder (OR = 3.45; CI = 2.50-4.76; p = <.001).

Negative associations were found between having contracted or having a family member or close person who passed away from COVID-19 and normal, mild levels of depression, meaning those who contracted the disease or lost someone to COVID-19 increased the chances of developing depression. Participants who reported contracting COVID-19 were more likely to have an extremely severe level of the disorder (OR = 2.75; CI = 1.86-4.07; p= <.001). Regarding socioeconomic status, in comparison with participants whose monthly income was less than or equal to 1 minimum wage, professionals with income from 4 to 5, 6 to 8 and above 9 minimum wages were less likely to present an extremely severe level of depression. Respectively, these participants had 7.9 (OR = 7.99; CI =

1.47-43.43; p = 0.01), 7.7 (OR = 7.76; CI = 1.40-42.87; p = 0.01) and 8.8 (OR = 8.86; CI = 1.41-55.5; p = 0.02) more chances of not presenting an extremely severe level of the disorder.

Through the Spearman correlation coefficient test, it was verified that the higher the indexes of social-emotional skills, the lower the total indices of stress (rho = -0.5; p = <,001), anxiety (rho = -0.4; p = <,001) and depression (*rho* = -0.5; p = <,001), demonstrating a moderate negative correlation between the development of social-emotional skills and each disorder (Table 9).

Table 9. Correlation between social-emotional skills (total index) and mental health indices (stress, anxiety and depression).

		Stress	**Anxiety**	**Depression**
Total index of social-emotional skills	*Rho*	-0.50***	-0.46***	-0.52
	p-value	<,001	<,001	<,001

Legend: * p = <.05; ** p = <.01; p = <,001.

Regarding specific social-emotional skills, it was found that the higher the indices of conscientiousness, extroversion, agreeableness and emotional resilience, the lower the total indices of stress, anxiety and depression, demonstrating a low to moderate negative correlation between the development of social-emotional skills and each disorder (Table 10).

Table 10. Correlation between specific social-emotional skills and mental health indices (stress, anxiety and depression).

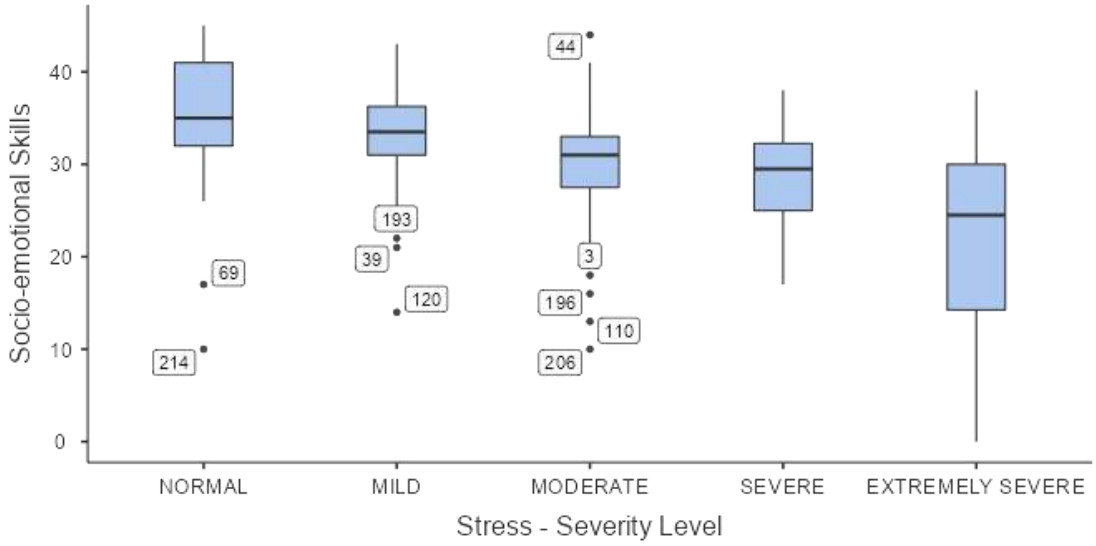
		Stress	**Anxiety**	**Depression**
Aperture	*Rho*	-0.09	-0.07	-0.11
	p-value	0.16	0.26	0.09
Conscientiousness	*Rho*	-0.43***	-0.42***	-0.48***
	p-value	<,001	<,001	<,001
Extraversion	*Rho*	-0.46***	-0.46***	-0.51***
	p-value	<,001	<,001	<,001
Amiability	*Rho*	-0.36	-0.36***	-0.40***
	p-value	<,001	<,001	<,001
Emotional resilience	*Rho*	-0.49***	-0.45***	-0.48***
	p-value	<,001	<,001	<,001

Legend: * p = <.05; ** p = <.01; p = <,001.

Through the Kruskal-Wallis test (one-factor ANOVA – non-parametric), for multiple comparisons of the total index of social-emotional skills , statistically significant differences were identified between groups of different levels of severity of each disorder with the indices of social-emotional skills.

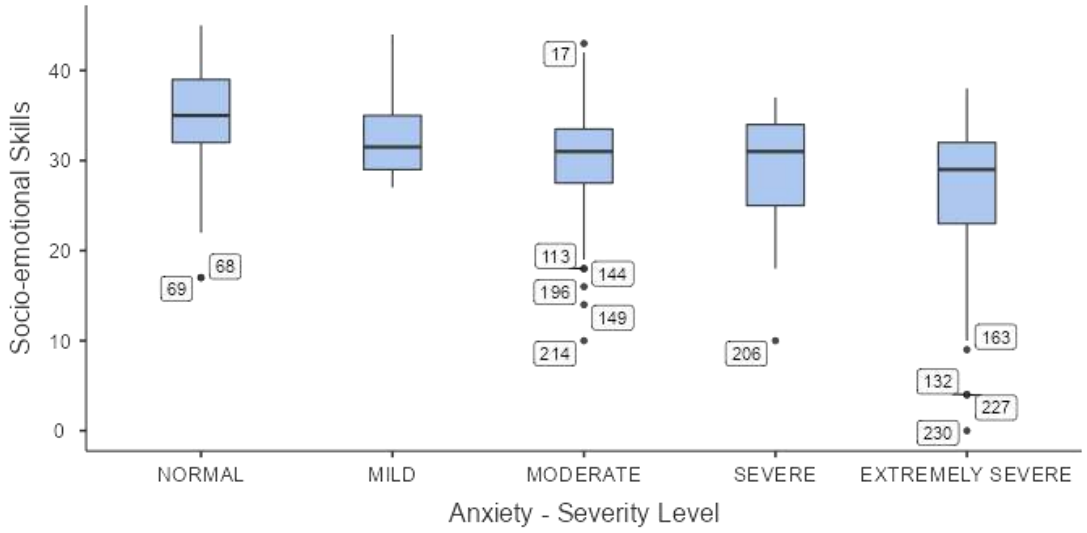
Education professionals with extremely severe stress levels had statistically lower rates of social-emotional skills compared to normal (p = <,001), mild (p = <,001) and moderate (p = 0.003) levels. Professionals with mild stress levels had statistically higher social-emotional skills indexes compared to participants with moderate (p = 0.006) and severe (p = <,001) levels. Professionals with normal levels of stress presented statistically higher indices of social-emotional skills when compared to professionals with severe level of the disorder (p = <,001) (Graph 1).

Figure 1. Multiple comparisons – Index of social-emotional skills between different groups of stress severity level.



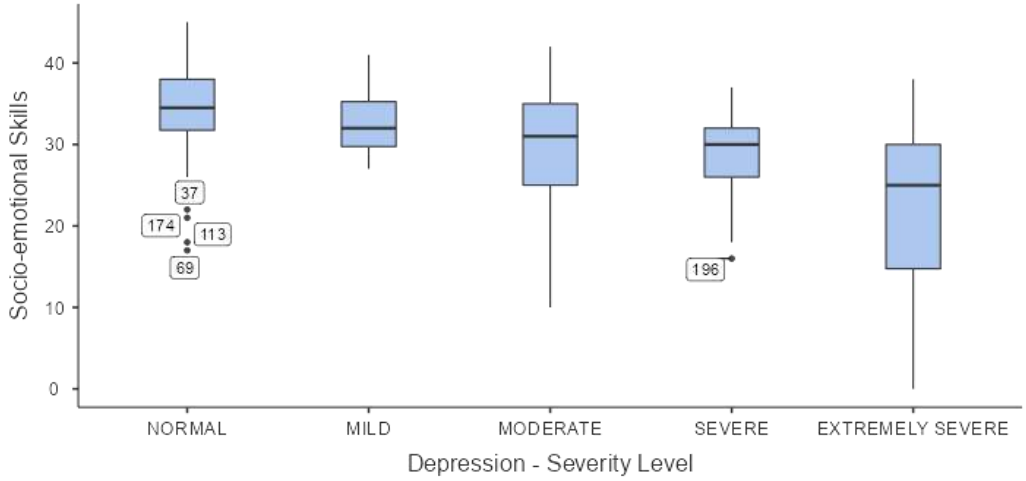
Education professionals with normal levels of anxiety presented statistically higher levels of social-emotional skills compared to professionals with moderate (p = 0.003), severe (p = 0.003) and extremely severe (p = <,001) levels of the disorder (Graph 2).

Figure 2. Multiple comparisons – Index of social-emotional skills between different groups of anxiety severity level.



Professionals with normal level of depression presented statistically higher indices of social-emotional skills compared to participants with moderate, severe and extremely severe level (p = <,001). Professionals with moderate level of depression presented statistically higher indices of social-emotional skills compared to professionals with extremely severe level of the disorder (p = 0.04) (Graph 3).

Figure 3. Multiple comparisons – Index of social-emotional skills between different groups of depression severity level.



By performing multiple comparisons of the indices of specific social-emotional skills for levels of severity of each disorder, through the Kruskal-Wallis test (one-factor ANOVA – non-parametric) and DSCF, statistically significant differences were observed between the groups.

Education professionals with extremely severe levels of stress presented lower levels of conscientiousness, extroversion, agreeableness and emotional resilience compared to professionals with normal and mild levels (p = <,001). On the other hand, professionals with normal stress levels presented higher indices of conscientiousness (p = 0.002), extroversion (p = <.001) and emotional resilience (p = <.001) about professionals with severe levels of the disorder.

Education professionals with extremely severe levels of anxiety presented lower indices of conscientiousness and emotional resilience than professionals with mild (p = 0.01; p = <,001, respectively) and normal (p = <,001) levels and lower rates of extroversion and agreeableness with professionals with normal level (p = <,001). On the other hand, professionals with normal levels of anxiety presented higher indices of conscientiousness (p = 0.01) and extroversion (p = <,001) than professionals with severe levels of the disorder.

Education professionals with extremely severe levels of depression presented lower levels of conscientiousness, extraversion, and emotional resilience compared to education professionals with normal (p = <,001), mild (p = 0.02; p = <,001; p = <,001, respectively) and moderate (p = 0.04 ; p = 0.006; p = 0.003, respectively). Professionals with mild levels of depression presented higher rates of emotional resilience than professionals with severe levels (p = 0.008). On the other hand, professionals with normal levels of depression presented higher indices of conscientiousness (p = <,001), extraversion (p = 0.004) and emotional resilience (p = <,001)

3 DISCUSSION

Regarding the profile of the participants, there was a higher prevalence of female education professionals, with a mean age of 44 years, a result similar to the research conducted by Carvalho (2018) on the profile of basic education teachers in Brazil, using IBGE data. Another fact that is related to the present study is the higher prevalence of participants with post-graduation, complete latu-sensu. This demonstrates that, in general, the education networks have been adapting to the requirement established by the educational legislation (Brasil, 2014), but that the exception of the secondary level, in the normal modality, is still allowed for teachers of early childhood education and the initial years of elementary school, a formative level that has been increasing in recent years (Carvalho, 2018)

Regarding the adaptation to the work model during the period of social isolation, due to the COVID-19 pandemic, 75% of the participants said they had worked with remote or semi-face-to-face models of teaching, and 72% said that this adaptation was very difficult. In a survey conducted by Santana et al. (2022), the difficulties experienced during the pandemic are similar, falling mainly on the use of different educational tools and on time management or personal organization to meet the various demands.

Concerning data on disorders such as anxiety, depression and stress, with the analysis of data obtained through the DASS-21 scale considering the conditions imposed by the pandemic, it was possible to verify that anxiety was the most present disorder among the participants.

To be able to evaluate this approach to teacher mental health, it is necessary to broaden the view of the concept of health and how the profession is contextualized in Brazil. In the health-disease process, work is considered a social determinant. Therefore, there is a high concern in the articulation between health, subjectivity and social context with broader factors, such as quality of life. Particularly, the professional activity in the educational area is evaluated as a complex activity with demands of continuous physical, psychological and social balance, which reflects on the perception of quality of life in general (Santos et al., 2020).

A survey conducted by Santos (2020) pointed out that the working conditions of most teachers in Brazil include lack of infrastructure, low remuneration, high number of students in the classroom and the feeling of devaluation before society, which can predispose them to physical and psychological problems, even in the period before the beginning of social isolation due to the pandemic. These data suggest that even in conditions given as "normal", mental health already represented a concern among professionals in the category.

In recent decades, it has been possible to notice an ascending indicator in the illness process linked to the working conditions of education professionals (Pereira et al., 2020). In a pandemic context, there was an intensification of this process, due to the closure of schools, social isolation and

the abrupt change to remote teaching modalities. According to Silva and Santos (2021) distance or remote learning put into practice in the field of education in a verticalized way, without a deep knowledge of the needs and particularities of this educational reality, further potentiated the precariousness of teaching work by triggering processes of loss of autonomy, imposition of pedagogical practices and overload of attributions. The issue of sudden, unstructured and difficult adaptation to remote or distance learning profoundly impacted the teaching work, which already came from a historical process of precariousness. Educators reported, in several types of research, increased working hours, pressure to achieve results and ensure the minimum bond with students, despite the most different variables that aggravated the difficulty in exercising educational practice (Santos et al, 2020).

In this scenario, Santos, Lima and Sousa (2020) pay attention to structural conditions, the absence of a formative process to face the new modality of work. This research also highlighted the pressure suffered by teachers to comply with the curriculum and the school calendar, in a hurry and without planning. The difficulty of students accessing remote learning and their families when accompanying their children on the new journey was also aggravating factor for teachers' mental health. Other research has also shown that the teaching work has increased intensely in the realization of pedagogical practice at a distance, to the extent that the schedules have been excessively extended by the conditions of technological access and/or family support (Santos et al., 2020). However, there was no strategic plan in Brazil to organize classes online, because, according to the opinion of the Ministry of Education, "the management of the calendar and the form of organization, realization or replacement of academic and school activities is the responsibility of the systems and networks or educational institutions" (Brasil, 2020, p. 5). This information coincides with the data collected by the present study about the increased demand for teaching work, the difficulty in adapting to remote models and the mental health problems of the participants.

Leão et al. (2021), Silva et al, (2022) and Bessa (2021), also evidenced the lack of resources for teaching work during the migration to remote teaching, the formative helplessness to exercise such a teaching modality, the increased workload and the physical and emotional overload.

As can be seen in the present study, stress, anxiety and depression showed rates of worsening during the pandemic period. It was found that the disorder that was most accentuated was anxiety, with a strong relationship between higher rates of disorders with low remuneration of professionals, having contracted COVID-19 and/or having lost a loved one during the pandemic. In consonance, the study conducted by Leão et al. (2022) with 15,641 teachers from 795 municipalities in Minas Gerais, pointed out that approximately 80% of the participants were not satisfied with their teaching work during the

pandemic. This "dissatisfaction" is related to the intensification of assignments related to teaching and the changes caused in the educational system in the face of the COVID-19 pandemic.

Despite the adverse conditions, the difficulty in adapting to the new and the increase in working hours, the data obtained prevail moderate levels of stress and depression, which refer to another objective of this research: to analyze the socio-emotional skills of the participants and verify if they were useful tools for coping with the adversities of the pandemic context. In convergence with findings from other studies, the data obtained indicated a negative association between the indices of social-emotional skills and the indices of severity for stress, anxiety and depression. Therefore, the higher the presence of socio-emotional skills, the lower the rates of behavioral disorders assessed (Marques et al., 2019; Nakano et al., 2021).

Thus, it can be inferred that social-emotional skills were important factors for better coping with adversity during the pandemic. It is worth remembering that skills are acquired through initial and continuous training and can be learned or improved intentionally, increasing the internal resources of the provider to exercise teaching (Marques et al, 2019).

4 CONCLUSION

Considering the analysis of the data obtained by the research, it can be considered that the previously established objectives were achieved. It was possible to evaluate the socio-emotional skills of the participating education professionals, the levels of anxiety, depression and stress, as well as to establish the relationships between the items evaluated.

It was also possible to validate the hypotheses indicated (1) the COVID-19 pandemic altered the routine of education professionals; and (2) educators with better indices of social-emotional skills presented lower indexes of stress, anxiety and depression. As observed, the routine was changed, but the increase in behavioral disorders was observed in participants with lower incomes and also among those who lost a family member or close person to the disease.

The present study may inspire future research on the importance of social-emotional skills and behavioral disorders in the teaching career with a target in larger samples and different contexts. It is expected that such data can also subsidize public policies for the valorization of the teaching career and strategies for the promotion of health and professional well-being.

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