

Assessing the Emotional State in Teachers and University Administrative Staff when Returning to Presential Work

Doris Pérez¹, Hugo Arias-Flores², and Jorge Guadalupe-Lanas³

¹Facultad de Ciencias Humanas y de la Salud, Universidad Tecnológica Indoamérica, Quito, 170103, Ecuador

²Centro de investigación en Mecatrónica y Sistemas Interactivos (MIST), Universidad Tecnológica Indoamérica, Quito, 170103, Ecuador

³Centro de investigación en empresa, sociedad y tecnología (ESTec), Facultad de Ciencias Administrativas, Universidad Tecnológica Indoamérica, Quito, 170103, Ecuador

ABSTRACT

Social distancing and security measures have contained the spread of the COVID-19 pandemic. Despite this, the return to face-to-face activities is necessary for specific companies, and some higher education institutions have already done so. The various disorders that this new reality could generate have motivated the present study, which aims to analyze the emotional state of teachers and administrative staff. The instrument used was the abbreviated depression, anxiety, and stress scale (DASS-21) with an internal consistency index of 0.87. The methodology was based on applying a survey to 202 participants from Quito, Ecuador. The sample consisted of 97 men, and 105 women, aged between 23 and 59 years. A quantitative and cross-sectional design was used in this research. The results show that 40.1% of the respondents presented anxiety, 36.63% depression, and 38.61% stress between mild and highly severe categories. Thus, returning to-face-to-face mode has affected the emotional state of many people, showing differences according to the job position, being anxiety as the highest self-identified incidence rate.

Keywords: Administrative staff, COVID-19, DASS-21, Face-to-face education, Teachers

INTRODUCTION

Since the beginning of the COVID-19 pandemic in the year 2020, changes in human life have consisted of social distancing, the use of face masks, and partial or total confinement of the population being the most useful (Talahua *et al.*, 2021). In addition, some systems had to adapt to the situation, as in the case of education, which transitioned to a virtual setting. Authorities worldwide decreed for students at all levels to incorporate remote education from home. As part of this new reality, teachers have had to incorporate technological tools that have raised stress levels in those who did not use multimedia tools regularly (Delgado-Gallegos *et al.*, 2021). Some higher education institutions still maintain this remote arrangement, while others have gradually reopened. Thus, students, faculty, and administrative staff have had to return

to in-person activities. However, the inherent risk of contagion using protective equipment and biosecurity measures generates physical, emotional, and psychological exhaustion (Alsalman *et al.*, 2020). Since the World Health Organization (WHO) states that having “health” includes the physical and mental well-being of the person, the constant assessment of their psychological and cognitive capacities should not be neglected (Varela-Aldás *et al.*, 2021). According to (Arias Gallegos, Huamani Cahua and Ceballos Canaza, 2019), university-level educators are the most affected by stress compared to lower levels of education, which could cause low performance, occupational illness, and absenteeism.

The changes produced by COVID-19 have had repercussions on human mental health, producing discomfort and mental disorders. This change has motivated studies to determine the influence of various factors in the development of virtual classes, as seen in (Jelińska and Paradowski, 2021). These conditions can generate anxiety, low productivity, and difficulty in communication and attention. In (Khan *et al.*, 2020) a study is conducted using DASS-21 and IES-R to evaluate the disorders generated in a sample of 505 university students. Similarly, in (Rosenthal *et al.*, 2021), the DASS-21 and IES-R instruments were applied to 222 nursing students, obtaining a high incidence of negative emotional states. Similar results were found in (Fawaz and Samaha, 2021) with a sample of 520 university students.

It is also essential to analyze these disruptions in the other actors of higher education institutions. The return to classes has gradually taken place, and negative feelings have been generated amongst the teaching staff. In (Ozamiz-Etxebarria, Dosil Santamaría, *et al.*, 2021), the different effects of face-to-face activities for Spanish teachers are analyzed using the DASS-21. Similarly, in (Ozamiz-Etxebarria, Berasategi Santxo, *et al.*, 2021), it is proposed to quantify the levels of depression, anxiety, and stress teachers suffer in a scenario of a face-to-face return to class.

In this context, it should be recognized that face-to-face academic activities symbolize an uncomfortable situation for the entire university ecosystem. Given that most research focuses on students and a few on teachers, this paper aims to evaluate the subject by focusing on teachers and administrative staff. It is proposed to determine the levels of depression, anxiety, and stress they suffer using the DASS-21 instrument. As a starting hypothesis, it has been proposed that administrative workers will present different depression, anxiety, and stress levels compared to teachers since they perform other types of activities.

METHODOLOGY

Participants

This study has a total sample of 110 university professors and 92 administrative workers from the Metropolitan District of Quito. Table 1 summarizes the information of the participants chosen in search of numerical gender equality and who voluntarily decided to be part of this research. The age range is

Table 1. Percentage distribution of participants according to sex, age and job position.

Sex	Position	< 30 (%)	30 to 39 (%)	40 to 49 (%)	> 50 (%)	Total (%)
Man	Administrative	29.17	13.10	12.28	29.73	17.82
	Teacher	4.17	28.57	40.35	35.14	30.20
Woman	Administrative	54.17	32.14	19.30	13.51	27.72
	Teacher	12.50	26.19	28.07	21.62	24.26

between 23 and 59 years, where 48.02% are men, of which 17.82% are administrative, and 30.20% are teachers. In contrast, women represent 51.98%, 27.72% are administrative, and 24.26% are teachers.

A distinction by age range shows a high number of female administrative personnel (54.17%) and a low number of male teachers (4.17%) in the category of less than 30-years-old. Besides, in the age range between 40 to 49 years, male teachers correspond (40.35%), and a small number of female administrative personnel are (19.30%). For the 30 to 39 and over 50 age ranges, similar values are maintained in distribution.

Measures, Instruments and Data Analysis

A brief online questionnaire was designed and shared with potential participants to determine their primary demographic data (sex and age). In addition, the questionnaire asked whether they were carrying out face-to-face or remote activities, with an exclusion criterion for those who were not attending their institution.

For the research development, the Spanish version of the Depression Anxiety and Stress Scale-21 (DASS-21) was applied (Ruiz et al., 2017), whose internal consistency index is 0.87. This questionnaire has 21 statements with a rating scale from 0 to 4, where 3 indicates more likely to occur and 0 indicates a non-likely to occur. This instrument makes it possible to identify a tendency to certain conditions associated with psychological and physical changes in human beings. Seven items have been assigned equally to depression, anxiety, and stress, respectively. The statistical software IBM SPSS Statistics version 22 analyzed the information obtained. Finally, to interpret a tendency towards one of the disorders, the levels described above were evaluated according to sex, areas of work, and age ranges.

EXPERIMENTAL RESULTS

Contact with potential participants was made in some cases verbally and in others by e-mail. After applying the exclusion criteria, a link was sent so that they could access the initial online questionnaire. They were also informed about the discreet treatment of the data collected to protect confidential information. Subsequently, the applied instrument was socialized, explaining its main characteristics and executing an example. Besides, the table 2 shows the number of people who suffer from these disorders concerning the defined socio-demographic variables.

Table 2. Relationship between age, sex, position variables and the presence of disorders.

Socio-Demographic Variables		Depression (n)		Anxiety (n)		Stress (n)	
		Yes	No	Yes	No	Yes	No
Age ranges	<= 30	10	14	7	17	8	16
	30 – 39	35	49	38	46	38	46
	40 – 49	19	38	25	32	21	36
	> = 50	10	27	11	26	11	26
	Total	74	128	81	121	78	124
Sex	Man	37	60	37	60	39	58
	Woman	37	68	44	61	39	66
	Total	74	128	81	121	78	124
Position	Administrative	28	64	27	65	24	68
	Teacher	46	64	54	56	54	56
	Total	74	128	81	121	78	124

When analyzing the results by age range, there is a 36.6% of participants who fall into the depression subscale. The age group between 30 and 39 years is the one that stands out the most with 17.3%, while those over 50 years of age have the lowest values. Additionally, in the anxiety subscale out of the 40.1% of cases, the 30 to 39 years age group is the most affected with 18.8%. This trend keeps in the stress subscale where the 30 to 39 years age group represents 18.8% of the total, 10.4% corresponds to the 40 to 49 years age group, and the rest of the cases have lower values according to this data.

The emotional affectation by sex shows that in the depression subscale, 36.6% of the personnel with symptomatology, there is an equal number of men and women with 18.3%. In the anxiety subscale of 40.1% with symptoms, women represent 21.8% compared to men with 18.3%. In the stress subscale of 38.6% of those affected, men and women present a similar 19.3%.

According to the work area, 36.6% of the sample suffers from depression, with 22.8% corresponding to teachers and 13.9% administrative personnel. In the anxiety subtest with symptoms, shows 40.1%, 26.7% corresponding to teachers, and 13.4% to administrative staff. Finally, in the stress subscale of 38.6% with symptoms, 26.7% are teachers and 11.9% administrative personnel, showing that the group of teachers is the most affected due to the demands of the position.

Furthermore, statistical analysis was conducted using the chi-square test, where a strong relationship was found in only two cases, as shown in Table 3. First, between the variables work position and anxiety, a value of 8.13 was observed with a significance level < 0.01 , marking a statistically significant difference. Similarly, in the relationship between work position and stress, a value of 11.86 was observed with a significance level < 0.01 . Although there is a difference between their indicators concerning the other variables, no significance is evident.

Table 3. Significance levels according to the chi-square statistic in the relationship between variables.

Relationship Between Variables	Chi-Square Value	Asymptotic Significance Level	Magnitude of Significance (Cramer's V)
Age – Depression	2,91	,405	,120
Age – Anxiety	4,11	,250	,143
Age – Stress	3,14	,370	,125
Sex – Depression	,18	0,67	-,030
Sex – Anxiety	,29	0,59	0,038
Sex – Stress	,20	0,66	-,031
Position – Depression	2,79	0,094	0,118
Position – Anxiety	8,13	0,004	0,201
Position - Stress	11,18	0,001	0,24

DISCUSSIONS AND CONCLUSION

The change in human life caused by the COVID-19 pandemic has been the cause of deaths due to chronic pulmonary conditions. However, mental illnesses also appear simultaneously, which could have severe consequences if not identified and diagnosed on time. Despite this, the commercial and economic problems that have been generated have forced workers to return to face-to-face activities. For this reason, the affectation degree presented in teachers and administrative staff was evaluated in this research as a sample taken from the most populated city in Ecuador. The results suggest that the indices of depressive, anxiety and stress symptoms are evident, so it is appropriate to detect whether there are significant changes in the levels of intensity and thus avoid possible disorders that could become chronic in the long term.

The bibliography presented showed there are already studies where it is proposed to know the levels of anxiety, depression, and stress to which the actors of the educational ecosystem are exposed. Although most studies have focused on the analysis of students, it can be seen that the values obtained are very similar to those of this study. In (Khan et al., 2020) have 33.3% anxiety, 46.92% depression, and 28.5% stress, which coincides with the estimated levels (Fawaz and Samaha, 2021). Similarly, in (Rosenthal et al., 2021) 25% of the students showed moderate to extreme negative feelings when applying the DASS-21 instrument. Analyzing the mental health status of teachers, in the paper by (Ozamiz-Etxebarria, Dosil Santamaría, et al., 2021) it has been estimated that 32.2% presented symptoms of depression, 49.4% of anxiety, and 50.6% of stress. Results that agree with those presented by (Ozamiz-Etxebarria, Berasategi Santxo, et al., 2021) and in this study.

All of these studies show a trend, and although this instrument has been applied to different samples and geographical sites, the mentioned trend is kept in research. Therefore, this study evaluates teachers and the administrative staff where the emotional affectation by sex in the three subscales highlights equality in values for both men and women, indicating that this

variable does not significantly influence the generation of a mental disorder. In the age analysis, it can be seen that the middle-aged are exposed to high demand due to the constitution of the family responsibilities of their professional training, which is evidenced in the high percentages presented.

The statistical analysis showed a relationship between the socio-demographic variable job position and anxiety-stress variables. When analyzing the activities performed by the administrative personnel, it showed that they require less investment of concentration and time. In contrast, teachers must prepare their classes, grade evaluations, design activities, and invest time in tutoring and support in developing degree projects. This result shows a greater demand and pressure in one group than the other, corroborating the initial hypothesis.

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