Original Article

Stress in University Teachers in the Framework of the Post-Pandemic Face-To-Face Academic Resumption

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ARTICLE INFO

ABSTRACT

Teachers in America returned to work in September 2020 to a climate of fear and uncertainty due to the country's first-ever government lockdown due to the Covid-19 pandemic. Since the outbreak of the epidemic, teachers around the world have been building up psychological symptoms due to various factors which have accompanied the pandemic, these factors have resulted in a significant amount of stress, depression, and anxiety, among the other factors in teachers and this study is done to determine that how these factors affect teachers especially after the pandemic. They had to use online teaching throughout the lockdown, and now that schools are reopening, they have exhibited a lot of anxiety about the new and the unprecedented teaching environment. According to the findings of the study, females had the highest stress response with a mean of 7.11 and a standard deviation of 4.414, while males had lower stress level with a mean of 4.99 and a standard deviation of 2.32. The results of t-test also revealed that there was a significant stress in teachers at 5 percent level of significance (p-value = 0.000, df = 1549, and t-test= 2.28). On work stability, many respondents chose NO with a mean of 8.79 and a standard deviation of 5.309 implying that after Covid-19, the work stability of teachers had been affected and adapting to the new normal was difficult and had not only for students, but also for the teachers. Anxiety was another variable that was taken into consideration in this study and further, females had the highest response with a mean of 7.01 and a standard deviation of 4.53, on the other hand, males had a lower response of 4.53, the study proved the significance of the test that teachers are affected by anxiety during this period at 5% level of significance and p-value of 2.28. Finally, depression as a variable was further determined to be significance (p-value = 0.000, df = 1549, and t-test = 2.28) by the study. Therefore, the study concluded that, having school-aged children, being a victim of Covid-19 or having a relative affected by the virus increases stress, depression, and anxiety levels in teachers especially in female teachers. Teachers who have children are more likely to be stressed out because they have to cope with a hefty workload and at the same time, the burden of caring for their families. These professionals had to deal with the twin whammy of returning to school for themselves and for their children. Family life may have contributed to the elevated anxiety levels during the pandemic, as raising a family during crisis times can include the additional challenges, such as managing finances, child care, and home education obligations.

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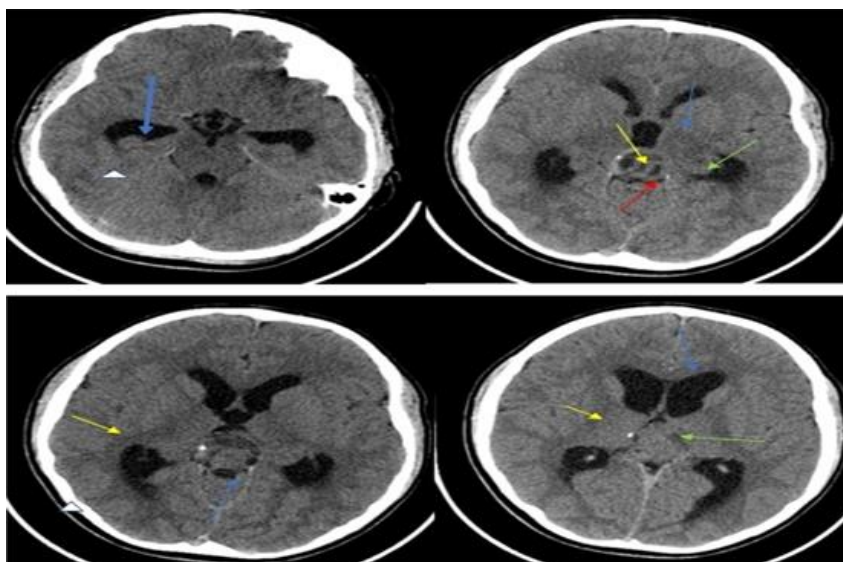
Introduction

There was a paradigm shift in how we think about the world when COVID-19 struck in 2019. Since the pandemic outbreak, many individuals have experienced emotions of isolation and loneliness due to the rigorous measures of the social distance and lockdown which have been implemented [1]. The fast spread of COVID-19 has had physiological, social, psychological, economic, and educational repercussions. Indeed, the school closure has been one of the most extensively employed ways to preserve the social separation and reduce the spread of infectious diseases [1].

The school closures caused by COVID-19 resulted in the loss of 90 percent of the world's enrolled pupils, according to the UNESCO cited by Sarmento et al. [2] that was derived from the United Nations Educational, Scientific, and Cultural estimates Organization. There were still 851,870,246 pupils eight months later, starting the 2020–2021 academic year (48.7 percent of those enrolled). This epidemic has worsened the situation for 264 million children and adolescents who are not in school [3]. Many teachers decided to teach on online platforms, instead, when schools, colleges, and universities were forced to shut down for an indeterminate period due to the COVID-19 epidemic [4]. Therefore, we should overhaul, rethink, and reinvent our education system in light of the current crisis.

Additionally, both informal and non-formal educations are further profoundly impacted by the global pandemic. However, it is widely accepted that no educational techniques be replaced by the indirect connection between instructor and student (E-learning platforms). The non-formal education methods of e-learning and mail courses were previously considered non-formal. However, after the COVID-19 issue, the online education became a pedagogical movement from the conventional technique to the new teaching-learning approach from classroom to Zoom, from personal to virtual, and seminars to webinars. Yet, if the current trends continue, the formal education system will be progressively replaced. Thus, this study determines the stress of the university teachers during post-pandemic face-to-face learning.

How teachers responded during the Covid-19 pandemic period

Not just university students who have been impacted by the pandemic, as revealed in the study by Song et al. [3], but instructors (i.e. the university teachers) have also seen a significant increase in stress levels since the outbreak of the crisis. The stress levels of the teachers are higher during lockdowns, according to the recent research, because of the need to adapt to online classrooms at record speed [4]. As a result of the increased burden which comes from homeschooling, many parents and students experience symptoms of anxiety, depression, and sleep disturbances.

During the epidemic, little research was completed to quantify teachers' stress, anxiety,

and depression symptoms. Yet, the studies show that they experience psychological symptoms, which underscores the need to reopen schools and institutions. The Arab researchers found that instructors have been affected by a wide range of common mental health issues in a pandemic situation. These include anxiety, depression, domestic violence, marital difficulties, and divorce [5]. According to the findings, 13.67 percent of instructors were nervous in three Chinese cities during the pandemic, with women being more apprehensive than males and the elderly being more symptomatic, based on the findings [6]. According to a separate survey done in March, teachers in China were 9.1% more likely than the general population to suffer from stress-related symptoms. The Spanish teachers further observed stress and weariness during the beginning of the pandemic. Using ICT to work from home has been linked to increased stress, anxiety, fatigue, and a drop in job satisfaction in the prior research, yet teachers have little choice to use this technology in a pandemic [7].

According to UNESCO in 2020, as cited by Du et al. [8], the school closures could cause confusion and stress among the instructors due to their abruptness, uncertainty about their duration, and a lack of experience with online education. Education professionals, policymakers, and academics have long been concerned about the negative work-related feelings connected with the depletion of psychological resources [9]. The long-term problems can lead to tiredness and a loss of faith in their abilities, making it more challenging to maintain control of student's performance.

Teachers have always been under a lot of stress because of the heavy workloads, the interpersonal communication issues, insufficient training, and a lack of job security. According to studies conducted in different nations, many teachers have died due to burnout, anxiety, and despair. Indeed, psychological symptomology has been investigated in elementary [10] and secondary educators as well as the university professors [11]. Even while the secondary school teachers have been found to have higher psychiatric symptoms than primary school

teachers, the other variables, such as remuneration, interactions with pupils, and relationships with peers, are just as essential. The health of teachers may suffer due to this stress, leading to the increased sick leave, absenteeism, and poor performance at work. A recent study by Croucher and Locke [12] found that the interaction between instructors and students is stressful for the students. The teacher's performance affects their emotional well-being and dedication, as the essential variables in decreasing their stress levels.

The academic year 2020–2021 is fast approaching, but no decisions have been made on how it will be structured in this climate of apprehension [13]. The absence of guidance from the federal government and the uncertainty surrounding the start of the new academic year has been a source of anxiety for families, students, instructors, and educational institutions since the end of August. The Spanish authorities and autonomous regions met on August 27 to discuss the major actions to get students back in the classroom [14]. According to a study released on August 28 by the Basque government's civil protection monitoring commission, in the upcoming 2020–2021 [14]. However, only one week before the start of the school year on September 7, implementing these procedures with the resources available to the schools was surfaced as a significant problem and the subject of anxiety. While classes resumed in September, instructors and education centers expressed dissatisfaction with the rules they were expected to obey. Furthermore, each school, high school, and the university were responsible for implementing its health policies. Instructors in the Autonomous Community of the Basque Country launched a walkout on September 15 in response to this scenario and the sense of anxiety it caused, with between 50–70 percent of teachers participating [15].

Study aim

The academic research indicates that reducing mental health problems and supporting vulnerable populations should be the urgent focus of the scientific community during this unusual period. As a result, the COVID-19

pandemic may have the long-term effects on educators and classroom activities, potentially spreading to students and adolescents [16].

As this epidemic continues, we can better understand how teachers are coping with returning to school and the necessary support mechanisms, as well [17]. Consequently, the effect of the COVID-19 epidemic on teachers' mental well-being is a serious issue which should be addressed, in a general sense, by the educational community and society. There has not been any research conducted yet in Spain on the effects of this pandemic on teachers, despite being witness of an increase in symptoms across society and specific professions like healthcare. Therefore, this study's primary goal is to examine the emotional states of the teachers when they return to work following a six-month vacation to avoid the spread of COVID-19.

The study aims to examine the levels of depression, anxiety, and stress experienced by teachers at the start of the 2020–2021 school year and how the sector in which they work (university education) and their job security influenced this symptomatology. Gender, age, and whether or not they have school-age children will be considered while examining the differences in symptoms. Being infected with COVID-19 when answering the questionnaire or if someone close to them had been infected with COVID-19 was further investigated. The additional expectations include the significant levels of symptomatology, particularly among women and those under 35. Researchers predicted that those with the most symptoms in the workplace would also be those with the greatest levels of instability in their jobs.

Methods

The study carried out the designed data collection and sent to participants via an email address. The respondents from the study were 1552 teachers from university institutions in Peru both private and public institutions, from the selected sample size, 76.3% (n = 1189) were female participants, only 23.6% of the sample size were male participants representing a total of 363 of the participants. On the age distribution, the mean age of the participants used in this study was 43.7 years with a standard deviation of 7.88. The coded data was then analyzed using IBM SPSS Statistics for Windows, Version 26.0. Before completing the corresponding analysis, two assumptions of normality and homogeneity of variations were proved to determine whether parametric or non-parametric tests were applied. Data distribution for group differences analysis was examined using the Kolmogorov–Smirnov statistic at a *p 0.05* critical threshold.

The cut-off scores of the test were used to establish the various degrees of depression, anxiety, and stress (mild, moderate, severe, and extremely severe). The socio-demographic characteristics were first characterized in terms of frequency and percentage, and then a series of tests were conducted. The t-test was utilized for variables with two groups. In contrast, an ANOVA was applied to examine the differences among the dependent variables when an independent variable was spread across three groups. Both (age, work stability, and teaching subject). Bonferroni's tests were applied for the difference between groups.

Results and Discussion

The statistics on the prevalence of depression, stress and anxiety among university teachers are reported in this part and the conclusion was drawn from them. The study further compared results with past studies on the stress on university or teachers, in general, and the conclusion drown below. According to the results of this study, the survey respondents reported they were experiencing stress, with 4.5 percent expressing extremely severe stress and 14.1% suffering from moderate to the extreme levels. Anxiety was reported by 39.44% of the instructors who took part in the study, 9.91% had extremely severe symptoms, and 17.5% had severe symptoms. Finally, 45.2% of instructors argued that they were depressed, with 4.0% reporting extremely severe symptoms and 5.2% reporting severe symptoms.

The comparative tests were carried out using t-students and ANOVAs to see if levels of sadness and stress were connected to the gender, the age, being infected, locked up, or infection by near relatives, parental status, and the duration of contract and education sector. Being infected

with COVID-19 or locked down and having a close family who had been sick with COVID-19 were the only things that did not matter. The descriptive statistics was used for the statistically significant variables and relationships (see the tables below).

Table 1: Stress descriptive statistic

Stress						
Gender	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Male	4.99	2.32	360	2.28	1549	0.000***
Female	7.11	4.414	1180			
Age	*m*	*Standard deviation*	*n*	*f test*	*df*	*p-Value*
23-35	5.33	3.55	300	5.33	3	0.196
36-40	7.9	2.89	600			
41-45	8.9	4.699	549			
46 >	4.4	2.31	103			
Children	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Yes	9.1	4.452	1002	2.89	1551	0.023**
No	5.91	3.1	551			
Work stability	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Yes	4.31	2.311	341	6.231	1551	0.021*
No	8.791	5.309	1211			

It indicates that there are gender disparities in the levels of anxiety and stress, with men reporting the lower levels of anxiety (M=4.53), pressure (M=4.99), and depression (M=4.53). On the other hand, females had (M=7.11 – stress, M= 7.01 – anxiety, and M=3.91 on depression) and implied that they experienced the higher level of these factors, as compared to males.

Table 2: Anxiety descriptive statistics

Anxiety						
Gender	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Male	4.53	3.332	360	2.28	1549	0.000***
Female	7.01	4.53	1180			
Age	*Mean*	*Standard deviation*	*n*	*f stat*	*df*	*p-Value*
23-35	4.3	3.91	607	4.71	3	0.196
36-40	3.12	2.78	485			
41-45	5.31	5.01	351			
46 >	2.76	1.91	109			
Children	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Yes	2.331	1.02	362	2.11	1549	0.002***
No	4.31	3.33	1190			
Work stability	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Yes	4.49	2.14	299	3.21	1549	0.009***
No	5.21	3.19	1253			

As demonstrated in the results, teachers with children who have been affected or have a relative affected with Covid-19 reported the highest level of stress compared to the others. Although the impact size was minor, those without children still said some levels of stress, depression, and anxiety, especially those between the age of 23 years to 40, at this point, teachers have several responsibilities posts a significant amount of stress on the teachers, [F (3, 1549): 2.68, P = 0.196, and 2 = 2.11] compared to those without children.

Table 3: Descriptive statistics on depression

Depression						
Gender	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Male	2.11	3.332	360	2.28	1549	0.000***
Female	3.91	2.11	1180			
Age	*Mean*	*Standard deviation*	*n*	*f stat*	*df*	*p-Value*
23-35	4.01	3.12	450	1.65	3	0.196
36-40	2.12	2.01	547			
41-45	7.11	3.901	450			
46 >	1.221	0.12	105			
Children	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Yes	7.1	4.422	1002	2.67	1551	0.023**
No	2.71	3.1	551			
Work stability	*Mean*	*Standard deviation*	*n*	*t-test*	*df*	*p-Value*
Yes	4.31	2.311	341	6.231	1551	0.021*
No	6.771	2.307	1211			

The lowest scores on depression [$F_{(3, 1549)}$ = 23.53, p = 0.196, and 2 = 0.241], anxiety (F (3, 1549) = 1.65, p = 0.000, and 2 = 0.196], and stress [F (3, 1549) = 1.65, p = 0.048, and 2 = 0.081] were observed among individuals with job contracts lasting less than three months.

When the schools and colleges reopened, a significant number of instructors reported symptoms of anxiety, stress, and sadness. These symptomatology rates are higher than those found in previous research on the general population in the same region of Spain during the pandemic (Ozamiz-Etxebarria et al., 2020). This is consistent with the other research indicating that teachers are experiencing stress, anxiety, and other psychological and physical symptoms during lockdown [16] for the pandemic. On the other hand, this study demonstrates that this symptomatology is not limited to times of lockdown. Those teachers restricted or not, were found to have the similar outcomes in this study.

This study further discovered numerous elements that directly impact the symptomatology in question. Some of these concerns are private, while others are more professional. This study reveals that women have higher stress and anxiety levels than males, at least in terms of their personal characteristics. According to the general population research conducted before the epidemic, anxiety and stress symptoms are more common in women [17]. According to research performed by medical experts, more women have had symptoms than males during the pandemic [18]. Since most teachers in Spain are women (79.7 percent of the participants in this survey were women), this emotional component is also a hallmark of the profession. As a result, it is important to consider whether a gendered profession like a nurse would be more vulnerable to the epidemic. The function of the caregiver (professional and personal) has been linked to an increase in this symptomatology [19].

Furthermore, having children of school age significantly influences one's sentiments of stress, according to the findings. Teachers who have children are more likely to be stressed out because they have to cope with a hefty workload and, at the same time, the burden of caring for their families. These professionals had to deal with the twin whammy of returning to school for themselves and their children. When the pandemic occurred, having a family may have increased stress, as maintaining a family in crisis times may carry with it extra concerns, such as financial problems, parenting responsibilities, and the added obligations and demands of home education [20].

Conclusion

At the start of the 2020–2021 academic year, teachers felt a sense of psychological uneasiness. These symptoms have been found more

prevalent in women than males, while elderly adults and instructors of the infant and primary school were indicated to have a greater prevalence. Unsurprisingly, people with a history of employment insecurity have had the most severe psychological effects. According to these studies, teachers' mental health is critical to the well-being of pupils and high-quality teaching. As a result, those teachers who are most sensitive to the effects of the pandemic should be provided an additional psychological attention to better cope with the crisis and perform desirably in their teaching roles. To sum up, it should be kept in mind that the education which is provided for the youth in the recent era will influence the future community. As a consequence, in order to provide a high-quality instruction, we have to safeguard the mental health of those who deliver it.

Authors' contributions

All authors contributed toward data analysis, drafting and revising the paper and agreed to responsible for all the aspects of this work.

Conflict of Interest

We have no conflicts of interest to disclose.

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