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COVID-19: How the stress generated by the pandemic may affect work performance through the moderating role of emotional intelligence[★]

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ABSTRACT

This study aimed to assess the moderating effect of emotional intelligence (EI) in the direct impact of the stress generated by the pandemic on work performance and counterproductive work behaviors (CWB) in a multi-occupational sample of 1048 professionals (60.7% women). The participants filled the Wong and Law Emotional Intelligence Scale, the Impact of Event Scale 6 and the Individual Work Performance Questionnaire. The results proved a relationship between Covid stress, performance and EI, which has a moderating effect between the stress and both indicators of performance, even when sociodemographic variables were controlled. In essence, professionals with high levels of EI and low Covid stress showed the highest performance and the lowest CWB when compared to those who presented less emotional capabilities and higher stress. These results confirm the importance of EI in improving the effectiveness of work performance and reinforce the role of EI as a protective variable that can safeguard occupational health.

1. Introduction

The present study has put all its efforts to spread clarity especially in these pandemic times of uncertainty. Countless questions and insecurities arise daily in our volatile world; hence, this research endeavored to provide a solid answer as to whether this COVID-19 related stress affected job performance taking into account the hypothesized moderating role of EI within this impact. Occupational health has gained importance in the last decades and therefore the present research sought to demonstrate the relevance it acquires when individuals who do not have strong emotional skills may suffer from the absence of them to a greater extent, while those who do have acquired them may benefit from these inner emotional resources, both cases being reflected in their attitudes at work. The following sections will serve as constructs to build a solid evidence of the aforementioned unscrambling mission.

1.1. COVID-19 as the guiding thread to a post-traumatic stress disorder

Humanity is currently at the mercy of a novel form of a severe acute respiratory syndrome (SARS) specifically denominated as SARS-CoV-2

(Lake, 2020). Hence, in December 2019 after the first case from Wuhan (China) emerged the denomination of the currently well-known coronavirus disease (COVID-19), which represents a worldwide health emergency that is daily translated into all types of consequences upon population exacerbating the shared vulnerability of global interconnectedness (Lake, 2020; Moreno et al., 2020; Wiebers & Feigin, 2020).

Due to this bond, our ability to maintain inner equilibrium is threatened by these external factors and thus the short or long exposure to those may generate an internal condition known as stress, which in spite of serving as an adaptive function in circumstances of hardship, may culminate in inducing emotions like fear and anxiety when persisting during a prolonged period of time (Drigas & Chara, 2020; Moreno et al., 2020). Additionally, there is an abundant heterogeneity in every person's stress experience that is under the influence of individual characteristics (resources, weaknesses and previous experiences) and contextual ones (social environment, historical moment and geography) that consistently shape both our appraisal and coping behaviors (Alonazi, 2020; Volk et al., 2021; Whitehead, 2021). Such are the cases of the previous SARS and MERS coronavirus outbreaks, which nowadays serve as providers when identifying post-traumatic stress symptoms (PTSS) characterized by variations in awareness and temper due to indicators of

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intrusion, avoidance and reactivity to traumatic experiences (Boyraz & Legros, 2020; Kaseda & Levine, 2020).

On that line, public health strategies such as mandatory isolation through a process of quarantine, social distancing and lockdown may increase the probability of suffering mental implications as boredom and loneliness tempting us to acquire "rule-breaking" attitudes and thus promoting the spread of the virus (Boylan et al., 2020; Estes & Thompson, 2020; Giorgi et al., 2020; Volk et al., 2021). Complementarily, a magnified stress response has an impact both on mental and physical well-being ranging from risks of suffering any type of cardiovascular disease and lower levels of general health to mentally developing global distress, which in turn may anticipate depression and anxiety disorders registered as a heightened incidence of post-traumatic stress symptoms and disorders in SARS-CoV-2 survivors (Estes & Thompson, 2020; Forte et al., 2020; Kaseda & Levine, 2020).

At its core, such a strenuous stress phenomenon as COVID-19 may lead to an individual's post traumatic stress disorder (PTSD) that includes broad-ranging mental and physical health aftereffects, which are daily fueled by a sense of uncertainty that affects our subjective experience of everyday life through constant analyses about the pandemic both in the news and the social media that nourish this prolonged period of stress (Blekas et al., 2020; Boyraz & Legros, 2020; Droit-Volet et al., 2020; Estes & Thompson, 2020; Forte et al., 2020; Solomon et al., 2021; Whitehead, 2021).

1.2. Work performance in the current scenario

Today and more than ever before, professional categories are under the attack of a universal hazard that not only constitutes a "pandemic of mental health disorders", but a challenge for organizations to assure safety and thus proper work performance of their employees as well (Giorgi et al., 2020; Johnstone, 2020). So as for that, the concept of work performance shall be addressed by three interdependent levels, which are: (1) the individual and his/her behavior conceptualized under personal proficiency, proactivity and adaptability that contribute to the goals and values of the organization, (2) the group and its effectiveness understood through the quantity, quality and productivity inside an established target date in turn valued by one or more constituencies and (3) the company and its outcomes conceived on the one hand by revenue, profit and turnover; and being on mature consideration customer satisfaction, learning and growth indicators of forthcoming prosperity (Knight & Parker, 2021; Pradhan & Jena, 2017).

Deductively, as an organization is represented as a group of individuals who work together in an organized way for a shared purpose (Cambridge Dictionary, 2021), the current pandemic is urging us that mental health must be on the list of one of those purposes as the work environment and the behaviors related to it are determining characteristics that may unleash side-effects in employees' well-being (Giorgi et al., 2020; Wilkinson, 2020). What is more, workers may develop a battery of (a) behavioral, (b) physical and (c) psychological reactions that could deeply affect their inner stability translated into headaches, gastric disturbances, lower motivation, depressive thoughts or even isolation ultimately impacting their work performance (Giorgi et al., 2020; Pedrosa et al., 2020). Additionally, the subsequent pressure stemming from consecutive warnings, deadlines and targets on behalf of the higher positions in an organization may trigger a sense of unendurable stress that employees are prone to suffer causing in turn health issues and absenteeism at work (Bains & Chitrao, 2020; Wee et al., 2019). On top of that, stigma and discrimination by their peers and the possible emotional contagion of these in the workplace may affect individual self-efficacy causing emotional exhaustion, anxiety or even depressive symptoms that in the worst case-scenario may culminate in suicide (Barsade, 2002; Giorgi et al., 2020; Valenzano et al., 2020).

After all, the public health response to the pandemic should not only reduce uncertainty by clear, concise and accurate data about measures, infection and death rates but also turn this crisis into an opportunity for improvement in mental health knowledge, which when extrapolated into any professional category help individuals face both tough circumstances and different types of people that at the end merely hinge on our capacity of effective management of emotions as part of our work aiming professional success (Moreno et al., 2020; Sanchez-Gomez et al., 2021).

1.3. Emotional intelligence as a moderator

Heretofore, a well-known and proved capacity that preserves mental health of individuals is defined as the ability of being emotionally intelligent. Thence, Emotional Intelligence (EI) is described as the faculty to perceive, facilitate, comprehend and manage own and other's emotions (Mayer et al., 2016). The lack of this competence in such a situation characterized by daily stress in which humanity is currently immersed may be translated into severe future consequences (Drigas & Chara, 2020; Moroń & Biolik-Moroń, 2021). According to the Job Demands-Resources Theory (JD-R) (Bakker & Demerouti, 2017), specific work characteristics (i.e. job demands and job resources) are associated with work outcomes (e.g. well-being, work performance). Therefore, from the *ability* approach, EI could be considered as a personal resource that may fulfill a similar function played by job resources (Côté, 2014; Schaufeli & Taris, 2014).

As a matter of fact, emotions have persuasive properties that tempt us to act on a way or another and thus when these are balanced the foundation on which they are built propels an effective manner of handling different sort of events (Baba, 2020; Van Kleef et al., 2015). In other words, individuals with high EQ (Emotional Quotient) are: (1) more capable of being aware of the emotions they experience during a certain situation and thus managing them without being seduced by acting on anxiety, (2) more supportive and helpful with other people impacted by stress and other negative feelings and thus (3) more adaptable not only towards stress, but to any kind of disruptive emotions (Alonazi, 2020; Baba, 2020; Druskat et al., 2005; Mishra & Mohapatra, 2010). Oppositely, individuals with less EQ tend not to be able to recognize and understand what they feel and consequently may present severe difficulties in labeling their emotional state seeking to handle it properly, which may result in a deteriorated ability to regulate their perceived stress and in consequence becoming more incapable of avoiding the wide-ranging consequences of it (Baba, 2020; Druskat et al., 2005; Mishra & Mohapatra, 2010). As can be reckoned, being more emotionally intelligent offers a mechanism through which this ability may act as a "stress buffer" by: (a) minimizing the stress of the circumstances perceived as demanding, (b) shutting off the "fight or flight" response after the stressor has disappeared and (c) measuring the extent of stress reactivity as an indicator of physiological and psychological capacity (Drigas & Chara, 2020; Lea et al., 2019; Mérida-López et al., 2019).

In essence, higher EI represents the advantage of identifying more easily stress sources and thus direct attention towards them by coping more appropriately achieving in turn an enhanced position when performing at work in comparison to those individuals that cannot count on this emotional asset (Alonazi, 2020; Rezvani et al., 2020; Sanchez-Gomez & Breso, 2020). Therefore, there is enough evidence to support the relationship between stressful situations and performance, as well as the moderating role of EI between work demands and work outcomes (Côté, 2014).

1.4. The present study

Fundamentally, research has demonstrated solid correlations between stress, work performance and EI and thus hypothetically through the stress generated by COVID-19 and the aforementioned variables. However, it shall be stated that this type of stress has not yet been tested to solidly affect work performance through the moderating effect of EI. Thus, this paper may help amplify the knowledge about the "buffer

effect" that EI may have through stress on performance (see Fig. 1). As described, professionals are threatened by an unstable and exhausting context, which has significant consequences on the occupational outcomes. Taking into account the JD-R theory (Bakker & Demerouti, 2017) and the EI ability approach proposed by Mayer et al. (2016), it seems that EI is an individual resource that could alter the relationship between the stress generated by the pandemic and work performance.

Therefore, the main aim of this study was to determine the effect of the stress generated by the current pandemic COVID-19 on work performance and the extent to which EI can act as a moderator within this impact. According to previous research, it was hypothesized that EI would moderate the relation between stress and performance, that is, those workers with low stress and high EI would report the highest performance when compared to those who presented higher stress and less EI. This hypothesis is represented in Fig. 1.

2. Materials and methods

2.1. Sample

By means of utilization of a cross-sectional design, the sample included 1048 people (39.3% were men). The mean age was 35 years (M = 36.31, SD = 13.3, range = 18–70 years), the overall work experience was 13 years, and the average organizational seniority was 7 years. As concerns to the educational level of the participants, 7.5% had primary school, 17.3% high school, 22.3% vocational education, 36.8% equal or >4 years of college and 16.1% >4 years of college. In relation to the marital status of the participants, 38.3% were married, 30.8% single, 27.1% in a relationship, 3.1% separated/divorced, and 0.7% widowed. Participants accounted for a variety of occupational sectors, such as education (22.3%), healthcare (18.2%), industry (20.1%), hospitality and tourism (17.5%), commerce (12.8%), and other sectors (9.1%). Table 1 shows the individual statistics of the participants in accordance with diverse significant variables.

2.2. Instruments

2.2.1. Stress generated by COVID-19

The Impact of Event Scale in its 6 items version (IES-6) was used to fathom the amount of stress generated by the pandemic COVID-19 (Thoresen et al., 2010). For this study, we used the corresponding Spanish-translated items and we instructed the respondents to answer them considering the COVID-19 pandemic as the potentially stressful

 Table 1

 Individual characteristics of the participants.

Characteristics	
Age (Mean, SD)	36.31, 13.3
Gender	(%)
Men	39.3
Women	60.7
Marital status	(%)
Married	38.3
Single	30.8
In a relationship	27.1
Separated/divorced	3.1
Widowed	0.7
Educational level	(%)
Primary school	7.5
High school	17.3
Vocational education	22.3
University ≤4 years	36.8
University <4 years	16.1
Occupational sector	(%)
Education	22.3
Industry	20.1
Healthcare	18.2
Hospitality and tourism	17.5
Administration and commerce	12.8
Other sectors	9.1
Work experience (Mean, SD)	12.84, 3.83
Organizational seniority (Mean, SD)	7.02, 1.94

Note: N = 1048.

event, as follows: "Since the beginning of the COVID-19 emergency, I have felt nervous and alarmed". The IES-6 includes two items for each of the dimensions of posttraumatic stress: intrusion, avoidance, and hyperarousal. This tool is an abbreviated version of the original IES-R (Weiss, 2004), a 22-item screening instrument for the evaluation of posttraumatic stress disorder (PTSD). Participants state how distressed or bothered they have been over the last 7 days due to symptoms related to a specific trauma. This measure consists of a 4-item Likert type scale ranging from: "not at all" (item score 0), "a little bit" (score, 1), "moderately" (score, 2), "quite a bit" (score, 3), to "extremely" (score, 4).

2.2.2. Emotional intelligence

The Wong and Law Emotional Intelligence Scale (WLEIS) in its Spanish version was employed to assess the perceived EI (Wong & Law, 2002). This conversion has proved admissible psychometric traits (Pacheco et al., 2019). The WLEIS is a self-report evaluation that consists

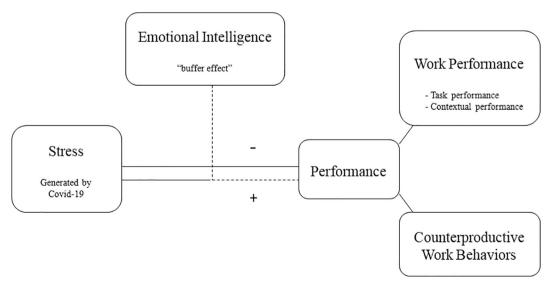


Fig. 1. Proposed model to empirically test the associations between the Stress generated by COVID-19, Performance and Emotional Intelligence as a "buffer effect".

of 16 items with a 5-point Likert scale. Investigations on its factorial configuration have encountered four factors composed by four items each: Evaluation of one's own emotions (SEA; "I always know whether or not I am happy."), evaluation of the emotions of others (OEA; "I have good understanding of the emotions of people around me"), use of emotions or assimilation (UOE; "I would always encourage myself to try my best"), and regulation of emotions (ROE; "I am able to control my temper and handle difficulties rationally"). The internal consistency of each of these branches was satisfactory: SEA (0.90), OEA (0.93), UOE (0.89), ROE (0.88).

2.2.3. Work performance

The Individual Work Performance Questionnaire (IWPQ) in its Spanish adaptation (Ramos Villagrasa et al., 2019) was applied to estimate the work performance (Koopmans et al., 2014). It is made of an 18-item scale conceived to rate the three principal pillars of job performance: Task performance ("I was able to perform my work well with minimal time and effort"), contextual performance ("I worked at keeping my job knowledge up-to-date"), and counterproductive work behavior (CWB; "I spoke with colleagues about the negative aspects of my work"). Every item was responded preceding a five-point Likert scale (0 = seldom to 4 = always for task and contextual performance; and 0 = never to 4 = often for CWB). In order to grasp the full concept of performance at work, it was decided to analyze both the positive and negative indicators of it. Thus, task and contextual performance were merged and referred to as 'work performance' (WP), while CWB remained unchanged.

2.2.4. Control variables

Apart from the major research variables, further queries were added to collect sociodemographic data (i.e., age, gender, marital status, educational level, professional sector, work experience and organizational seniority).

2.3. Procedure

Firstly, the data collection was designed. In accordance with previous researches, the sample was obtained with the help of degree students who had knowledge about questionnaires administration. All this procedure was developed taking into account the guidelines provided by Wheeler et al. (2014) to apply this type of sampling technique. The questionnaire was administered online using the Google Forms platform during December 2020 and February 2021. Following the researchers' instructions, the students contacted various companies from different sectors asking human resources managers about the possibility to collaborate. Moreover, an invitation to the experiment was sent per email using a database from our research lab to 1522 people, 272 of whom responded (response rate = 17.8%). Before starting their participation, participants indicated to be 18 or older and they were informed about the voluntary collaboration and the confidentiality of the data. In order to assure their privacy, a statement alleging anonymity and their results to be treated only with research purposes was provided through the administered questionnaires. All the information was stored in a safe database controlled by the main researcher, who performed the statistical analysis. It is important to note that this research followed the ethical guidelines mentioned in the Declaration of Helsinki and was approved by the Ethics Committee of this article's corresponding entity.

2.4. Data analysis

Initially, preliminary analysis consisted of descriptive statistics and bivariate Pearson's correlations to examine the associations between Covid stress (independent variable), EI (moderator), and work performance (dependent variable). Secondly, the SPSS macro PROCESS 3.3 (Hayes, 2017) was used to test the proposed associations regarding the moderation model (Fig. 1). Then, a standard procedure was followed

using a 10,000 bootstrap sample, which produced 95% bias-corrected confidence intervals. Finally, the effect size (f^2) was calculated in order to determine the size of the interaction terms (Aguinis et al., 2005). Kenny's (2016) criteria were followed to determine whether the interaction generated small $(f^2 = 0.005)$, medium $(f^2 = 0.01)$ or large effects $(f^2 = 0.025)$. The analyses were performed through the SPSS 25.0 software (Armonk, NY: IBM Corp).

3. Results

3.1. Descriptive analyses

Table 2 shows descriptive statistics (i.e. means and standard deviations) and bivariate correlations among the study variables. As expected, Covid stress correlated negatively with EI (r=-0.21) and work performance (task and contextual performance: r=-0.17), but positively with CWB (r=0.35). Ultimately, EI correlated positively with work performance, but negatively to CWB. The results revealed a positive reliability of the study variables (between 0.73 and 0.91).

3.2. Moderation analyses

The moderation analysis was conducted in order to examine whether EI moderated the relationship between Covid stress and work performance (see Table 3). Considering previous studies, the potential confounding effects of several sociodemographic variables such as age, gender, marital status, educational level, occupational sector, work experience and organizational seniority were controlled.

Regarding work performance, the full prediction model for the moderating variable EI was significant (F(10,1037)=14.32, p<0.01) and explained the 31% of variance. Among covariables, only organizational seniority showed a significant effect. The interaction between EI and Covid stress contributed to explain task performance ($\Delta R^2=0.026, p<0.01$). According to Aguinis et al. (2005), the strength of this interaction level with task performance could be described as large ($f^2=0.026$).

Fig. 2 represents the relationship of EI and stress for predicting task performance. Conditional effects were estimated to test the relationship between Covid stress and work performance for low (i.e., M < 1SD) vs high (i.e., M > 1SD) EI scores. As can be appreciated, the association between stress and task performance at low levels of EI was significant (b=-4.24, $t_{(1037)}=8.01$, p<0.01). Further, this relation is stronger inasmuch as levels of Covid stress increased. Oppositely, at high levels of EI, the relationship between Covid stress and task performance was not significant (b=-0.23, $t_{(1037)}=1.97$, p=0.08). In addition, post hoc analyses indicated that the slopes of the two lines were significantly different (t=3.21, p<0.01).

Regarding CWB, the second model could explain the 24% of variance in this variable (F (10,1037) = 19.48, p < 0.01). This time, both work experience and organizational seniority showed a significant effect as covariables. The interaction between EI and Covid stress was significant enough to understand the variance in CWB (ΔR^2 = 0.017, p < 0.01). The interaction accounted for a medium (f^2 = 0.017) amount of variance. As shown graphically (see Fig. 3), the association between Covid stress and CWB at low levels of EI was significant (b = 3.22, $t_{(1037)}$ = 2.32, p < 0.01). However, at high levels of EI, the relationship between stress and CWB was not significant (b = 1.03, $t_{(1037)}$ = 0.88, p = 0.14). Post hoc analysis showed a significant difference between the slope of the two lines (t = 3.09, p < 0.01) (Fig. 3).

4. Discussion

This investigation attempted to uncover the moderating role of EI in the relationship between the stress generated by COVID-19 characterized as an emotional disorder with its symptoms and work performance of employees. To begin with, previous research and thus the present

Table 2 Mean, standard deviation and correlations between the study variables.

	1	2	3	4	5	6	7
1. Covid stress	1						
2. Intrusion	0.84**	1					
3. Hyperarousal	0.89**	0.63**	1				
4. Avoidance	0.81**	0.49**	0.65**	1			
5. Emotional intelligence	-0.21**	-0.12*	-0.22*	-0.17*	1		
6. Work performance	-0.17**	-0.11*	-0.18*	-0.14*	0.42**	1	
7. CWB	0.35*	0.27**	0.39**	0.32**	-0.23**	-0.31**	1
Mean	17.42	6.74	5.15	5.92	5.50	3.21	2.28
Standard deviation	5.96	2.43	2.02	2.09	0.83	0.60	0.84
Cronbach's alpha	0.87	0.84	0.79	0.73	0.91	0.82	0.80

Note: N = 1048; CWB = counterproductive work behaviors.

Table 3 Moderated regression analyses for work performance and CWB as outcomes.

	Model 1: work performance				Model 2: counterproductive work behavior			
	b	SE b	R ²	95% CI	b	SE b	\mathbb{R}^2	95% CI
Constant	4.24**	0.55	0.31**	4.05 to 5.98	-4.07**	0.49	0.24	−5.04 to −2.87
Age	0.09	0.11		-0.15 to 0.11	0.07	0.02		-0.12 to 0.09
Gender	0.04	0.04		-0.14 to 0.09	0.05	0.01		-0.04 to 0.14
Marital status	-0.02	0.01		-0.12 to 0.07	0.03	0.02		-0.01 to 0.10
Education	0.11	0.10		-0.21 to 0.13	0.09	0.03		-0.04 to 0.18
Occupation	0.06	0.05		-0.04 to 0.08	0.11	0.05		-0.03 to 0.19
Work experience	0.10	0.02		-0.04 to 0.15	-0.13*	0.02		-0.24 to -0.01
Organizational seniority	0.13*	0.05		0.04 to 0.28	-0.14*	0.06		-0.26 to -0.02
Covid stress	-0.17**	0.09		-0.34 to -0.01	0.23**	0.08		0.02 to 0.36
EI	3.14**	0.53		2.96 to 4.15	-2.97**	0.42		-4.57 to -2.35
EI x Covid stress	1.38**	0.35		0.89 to 1.62	-1.29**	0.36		-3.22 to -0.31

Note: b = unstandardized beta; SE b = standard error of beta; CI = confidence interval.

p < 0.01.

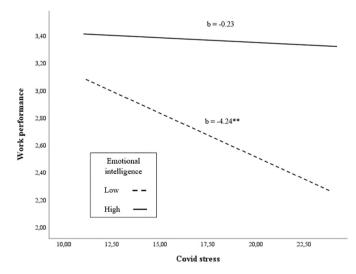


Fig. 2. Relation between Covid stress and EI for predicting work performance. Note: **p < 0.01.

study have treated the pandemic's stress as a PTSD and the effect of it on the performance in the workplace through the prevalence of its symptoms known as PTSS (Blekas et al., 2020; Droit-Volet et al., 2020; Estes & Thompson, 2020; Forte et al., 2020; Whitehead, 2021). Our data were in line with previous studies, suggesting a direct impact of Covid stress over performance. Further, the present paper provides a new insight into the role of EI as a "buffer" in the interaction between the stress generated by the pandemic and work performance (Drigas & Chara, 2020; Lea

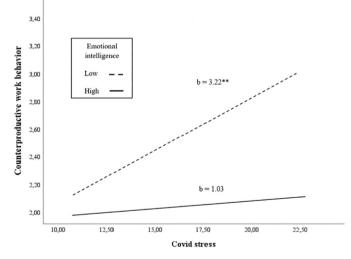


Fig. 3. Relation between Covid stress and EI for predicting counterproductive work behaviors. Note: **p < 0.01.

et al., 2019; Mérida-López et al., 2019).

The results presented in the current paper have suggested meaningful correlations as per the evidence derived towards exploring the direct impact of the stress generated by the pandemic being categorized as a PTSD and the correspondent symptoms of it and their consequent effect on the work performance of employees. Essentially, the moderating analyses showed that Covid as a PTSD and its variables are significantly related to WP and CWB. As previous investigations have

p < 0.05.

p < 0.0.

p < 0.05.

posited, the consequential push aroused from great levels of job demands translated into repetitive reminders, schedules and goals set by the top managers in a company may provoke a feeling of an unbearable stress in the working personnel (Bains & Chitrao, 2020; Wee et al., 2019). As a consequence, individuals that could be in potential danger of suffering from it may in turn and unavoidably adopt more counterproductive behaviors at work. Eventually, these disruptive attitudes through the consequences of the aforementioned stress diminish employees' well-being at the workplace tempting them not perform to their full potential inducing a deteriorated WP (Giorgi et al., 2020; Pedrosa et al., 2020).

Regarding EI, prior studies have alleged that the ability of perceiving, understanding, using and managing emotions can also function as a "buffer" when individuals are confronting stressful situations and the personal emotionally-acquired capabilities of whom shall allow them to cope with adversities and thus adapt more efficiently to the current professional positions (Alonazi, 2020; Drigas & Chara, 2020; Lea et al., 2019; Mérida-López et al., 2019). Taking into account the results of this study, EI could be a core individual skill needed to protect job performance in a situation in which maintaining the quality of it constitutes a real challenge (Fouquereau et al., 2019; Samanta & Kallou, 2020). According to Côté (2014), those professional with high EI may use their emotional abilities to identify feelings and emotions related to the pandemic (e.g., fear, distress or insecurity), which may facilitate the use of emotional strategies to reduce its impact and do their best. Thus, EI provides a vital factor in explaining workers' results in terms of comparing between those with less EI and those with more of it being both groups impacted by the same stress generated by the current pandemic and their work performance thereupon. These statements are in consistency with similar earlier evidence of the moderating effect of EI between menaces such as acute stress and its consequences on work performance (Alonazi, 2020; Rezvani et al., 2020; Sanchez-Gomez & Breso, 2020). As such, greater rates of EI assist professionals with minimizing their stress generated because of the circumstances of the COVID-19 by acting as a protective agent against its harmful consequences and along the progression contributing to stabilize and maintain the quality of individuals' performance at work.

On this line, the variable WP was divided into task and contextual performance merged as one and represented the positive side of this variable, while being CWB the negative one of it. Having stipulated this distinction, the present findings showed that workers whose EI was higher proved to be less influenced by CWB and exhibited an enhanced WP. Precisely, this fact has been underscored in previous research claiming that EI is negatively related to any sort of disruptive emotions in the workplace (Baba, 2020; Druskat et al., 2005; Mishra & Mohapatra, 2010). Workers with higher EI seem to be less affected by the negative consequences associated with the stress generated by the pandemic and its symptoms (i.e., intrusion, hyperarousal and avoidance) along with contributing triggers regarding their negative workplace behaviors and thereby allowing them to record greater performance ratings. In essence, being more emotionally intelligent helped WP to be higher with lower levels of accumulated stress generated by the pandemic and less CWB. Conversely, those individuals that displayed less emotional capabilities proved to be more stressed with an increased CWB and poorer WP at work.

In brief, COVID-19 has proved its credentials so as to be solidly referred to as a PTSD inasmuch as the detected symptoms during the current global pandemic emergency have been identified as PTSS. Thus, the present study has been in accordance with that reasoning in its attempt to translate the pandemic into a possible psychological category. After this conceptualization, it can be concluded that all the observed correlations during the moderating analyses have shown enough reliability to state that the presented results shall bridge a new path to a perspective in which further investigations shall be conducted in order to reinforce the knowledge and per se the literature that has been presented in this paper. Essentially, those employees that have

reported higher levels of stress because of COVID-19 share both increased CWB and consequent lower WP in comparison with those workers whose emotional capabilities ranked higher. This, in turn, allowed them to enjoy a greater level of WP through less CWB with the ultimate objective of maintaining economical stability in times of uncertainty.

4.1. Limitations and future research

A number of weaknesses indicate potential lines of investigation for this study in the times to come. First of all, it is crucial to point out that the use of cross-sectional data complicated the exercise of discerning the nature of the interactions between the variables and the direction of their connections. However, the outcomes of the present study are supported by broad and rigorous scientific evidence. Still, the replication of these findings with longitudinal methods could shed more light on the influence of the current pandemic's stress on individual work performance.

A second limiting aspect is derived from the method employed to assess EI. That is, since willing to use the advantage in terms of faster administration and thus selecting the WLEIS, it should be noted that this as a self-report questionnaire and it is advisable to utilize both self-reports and performance testing when to assess EI (Levitats & Vigoda-Gador, 2017; Wong, 2015). What is more, in accordance with previous research that examined incremental and predictive viability (Law et al., 2004), aptitude EI tests such as MSCEIT (Mayer et al., 2002) or MEIT (Sanchez-Gomez & Breso, 2019) should be more appropriate to adopt despite the fact of being WLEIS one of the most popular to apply basing its evaluation on the construct of the original model of EI (Mayer et al., 2016).

Another limitation is the lack of monitoring the influence of IQ and individual personality traits on the results obtained in this study. The fact of considering the differences in personality characteristics would have been beneficial, especially since it has been demonstrated in earlier investigations that these can have an effect on the consequent outcomes at work (Li et al., 2020).

Lastly, the level of unstable feelings in those pandemic times might have changed the perception of individuals and consequently impacted their self-image in relation to EI and WP. In other words, these days could represent a time full of less precise outcomes if we hypothesize the publication of studies such as the present one during periods of standardized daily living such as the ones before the pandemic occurred and prior to placing people's emotions on edge (Al-Laith & Alenezi, 2021; Gerhold, 2020).

4.2. Theoretical and practical implications

From a theoretical approach and as far as we are concerned, the present article is the first one to examine the buffering effect of EI on work performance and counterproductive work behaviors in such a hazardous scenario characterized by the COVID-19 and its consequent generated stress. In this regard, our findings suggest that self-reported EI must be taken into account in upcoming research, since it has demonstrated to bear a significant role when it comes to understanding work performance in emotionally demanding contexts such as the current one we are witnessing. What is more, this research has extended the little previous literature about COVID-19 as a potential precursor of PTSD in turn offering more scientific support to comprehend its consequences over employees' outcomes—particularly fathomed through work performance and CWB.

From an applied perspective, even considering the previous limitations, this research brings forward empirical evidence about the major preventive role of EI in times when pandemic stress poses a threat to all professional sectors and the work performance of the employees those are occupied by. What is more, building on their labor and abilities turns workers into the most important capital for businesses to preserve and

improve their position in the market (Riaz et al., 2018). Visioning the chance under the current global situation, enhancing emotional capabilities and learning opportunities for the working personnel shall be translated into increased emotional abilities that will help them prevent the problems of acute stress, which will also promote their individual outcomes ultimately inducing less disruptive attitudes (Lopes, 2016; Ward, 2017). This strategy could lead to a better coping with emotions by mitigating the severe strain generated by the pandemic, reducing the counterproductive work behaviors of workers and facilitating the maintenance of the quality of their performance at work (Moroń & Biolik-Moroń, 2021).

5. Conclusions

Overall, these findings confirm the significant role of EI in the direct impact of the stress of the pandemic on work performance, which when lower may anticipate more counterproductive work behaviors and poorer work performance levels on a multioccupational sampling of Spanish workers. So as to declare, those with higher EI dispose of suitable tools to cope with the requirements of the job and therefore minimize the influence of the current epidemiological situation by displaying less disruptive behaviors at work and enhanced work performance levels. These discoveries prove the significance of COVID-19 understood as PTSD with its corresponding symptoms when interpreting the consequent job performance and stress the role of EI as a preventive measure. Hence, the current situation urges us to begin with the development and implementation of EI promoting intervention programs to foster it and promote healthier working environments. Ultimately, these atmospheres could prevent the progression of stress in employees helping them reach their top performance or at least not losing their job while unemployment rates are skyrocketing worldwide.

CRediT authorship contribution statement

Max Sadovyy: Conceptualization, Writing – original draft, Writing – review & editing. **Martín Sánchez-Gómez:** Conceptualization, Data curation, Formal analysis, Writing – original draft. **Edgar Bresó:** Conceptualization, Writing – review & editing.

Declaration of competing interest

None.

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References

- Aguinis, H., Beaty, J. C., Boik, R. J., & Pierce, C. A. (2005). Effect size and power in assessing moderating effects of categorical variables using multiple regression: A 30year review. *Journal of Applied Psychology*, 90(1), 94–107. https://doi.org/10.1037/ 0021-9010.90.1.94.
- Al-Laith, A., & Alenezi, M. (2021). Monitoring people's emotions and symptoms from Arabic tweets during the COVID-19 pandemic. *Information*, 12(2), 86. https://doi. org/10.3390/info12020086.
- Alonazi, W. B. (2020). The impact of emotional intelligence on job performance during COVID-19 crisis: A cross-sectional analysis. Psychology Research and Behavior Management, 13, 749. doi:10.2147%2FPRBM.S263656.
- Baba, M. M. (2020). Navigating COVID-19 with emotional intelligence. International Journal of Social Psychiatry, 66(8), 810-820. doi:10.1177%2F0020764020934519.
- Bains, S., & Chitrao, P. V. (2020). Stress as a factor of employee absenteeism at workplace in IT sector, India. *International Journal of Modern Agriculture*, 9(3), 1531–1548.
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. https://doi.org/10.1037/ocp0000056.

- Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. Administrative Science Quarterly, 47(4), 644–675. doi:10.2307% 2F3094912.
- Blekas, A., Voitsidis, P., Athanasiadou, M., Parlapani, E., Chatzigeorgiou, A. F., Skoupra, M., ... Diakogiannis, I. (2020). COVID-19: PTSD symptoms in Greek health care professionals. Psychological Trauma Theory Research Practice and Policy. https:// doi.org/10.1037/tra0000914.
- Boylan, J., Seli, P., Scholer, A. A., & Danckert, J. (2020). Boredom in the COVID-19 pandemic: Trait boredom proneness, the desire to act, and rule-breaking. *Personality and Individual Differences*, 171, Article 110387. https://doi.org/10.1016/j.paid/2020.110387
- Boyraz, G., & Legros, D. N. (2020). Coronavirus disease (COVID-19) and traumatic stress: Probable risk factors and correlates of posttraumatic stress disorder. *Journal of Loss and Trauma*, 25(6–7), 503–522. https://doi.org/10.1080/15325024.2020.1763556. Cambridge Dictionary. (2021). Cambridge University Press.
- Côté, S. (2014). Emotional intelligence in organizations. Annual Review of Organizational Psychology and Organizational Behavior, 1(1), 459–488. https://doi.org/10.1146/ annurev-orgpsych-031413-091233.
- Drigas, A., & Chara, P. (2020). The need for emotional intelligence training education in critical and stressful situations: The case of Covid-19. *International Journal of Recent Contributions from Engineering, Science & IT (iJES)*, 8, 20–35. https://doi.org/ 10.3991/ijes.v8i3.17235.
- Droit-Volet, S., Gil, S., Martinelli, N., Andant, N., Clinchamps, M., Parreira, L., ... Dutheil, F. (2020). Time and Covid-19 stress in the lockdown situation: Time free, "dying" of boredom and sadness. *Plos One*, 15(8), Article e0236465. https://doi.org/ 10.1371/journal.pone.0236465.
- Druskat, V. U., Mount, G., & Sala, F. (Eds.). (2005). Linking emotional intelligence and performance at work: Current research evidence with individuals and groups. Mahwah, NJ: Lawrence Erlbaum.
- Estes, K. D., & Thompson, R. R. (2020). Preparing for the aftermath of COVID-19: Shifting risk and downstream health consequences. Psychological Trauma Theory Research Practice and Policy, 12(S1), 31–32. https://doi.org/10.1037/tra0000853
- Forte, G., Favieri, F., Tambelli, R., & Casagrande, M. (2020). COVID-19 pandemic in the Italian population: Validation of a post-traumatic stress disorder questionnaire and prevalence of PTSD symptomatology. *International Journal of Environmental Research* and Public Health. 17(11). 4151. https://doi.org/10.3390/ijerph17114151.
- Fouquereau, E., Morin, A. J., Lapointe, É., Mokounkolo, R., & Gillet, N. (2019). Emotional labour profiles: Associations with key predictors and outcomes. Work & Stress, 33(3), 268–294. https://doi.org/10.1080/02678373.2018.1502835.
- Gerhold, L. (2020). COVID-19: risk perception and coping strategies. PsyArXiv. doi:10 .31234/osf.jo/xmpk4.
- Giorgi, G., Lecca, L. I., Alessio, F., Finstad, G. L., Bondanini, G., Lulli, L. G., ... & Mucci, N. (2020). COVID-19-related mental health effects in the workplace: A narrative review. International Journal of Environmental Research and Public Health, 17(21), 7857. doi:10.3390%2Fijerph17217857.
- Hayes, A. F. (2017). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (2nd ed.). Guilford Publications.
- Johnstone, L. (2020). Does COVID-19 pose a challenge to the diagnoses of anxiety and depression? A psychologist's view. BJPsych Bulletin, 1–4. https://doi.org/10.1192/ bjb.2020.101.
- Kaseda, E. T., & Levine, A. J. (2020). Post-traumatic stress disorder: A differential diagnostic consideration for COVID-19 survivors. *The Clinical Neuropsychologist*, 34 (7–8), 1498–1514. https://doi.org/10.1080/13854046.2020.1811894.
- Kenny, D. A. (2016). Moderation. http://davidakenny.net/cm/moderation.htm.
- Knight, C., & Parker, S. K. (2021). How work redesign interventions affect performance: An evidence-based model from a systematic review. Human Relations, 74(1), 69–104. doi:10.1177%2F0018726719865604.
- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., De Vet, H. C., & Van der Beek, A. J. (2014). Construct validity of the individual work performance questionnaire. *Journal of Occupational and Environmental Medicine*, 56(3), 331–337. https://doi.org/ 10.1097/JOM.0000000000000113.
- Lake, M. A. (2020). What we know so far: COVID-19 current clinical knowledge and research. Clinical Medicine, 20(2), 124. https://doi.org/10.7861/clinmed.2019coron.
- Law, K. S., Wong, C.-S., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89(3), 483–496. https://psycnet.apa.org/doi/10.1037/0021-90 10.89.3.483.
- Lea, R. G., Davis, S. K., Mahoney, B., & Qualter, P. (2019). Does emotional intelligence buffer the effects of acute stress? A systematic review. Frontiers in Psychology, 10, 810. https://doi.org/10.3389/fpsyg.2019.00810.
- Levitats, Z., & Vigoda-Gadot, E. (2017). Yours emotionally: How emotional intelligence infuses public service motivation and affects the job outcomes of public personnel. *Public Administration*, 95(3), 759–775. https://doi.org/10.1111/padm.12342.
- Li, H., Jin, H., & Chen, T. (2020). Linking proactive personality to creative performance: The role of job crafting and high-involvement work systems. *The Journal of Creative Behavior*, 54(1), 196–210. https://doi.org/10.1002/jocb.355.
- Lopes, P. N. (2016). Emotional intelligence in organizations: Bridging research and practice. Emotion Review, 8(4), 316–321. doi:10.1177%2F1754073916650496.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). Mayer-Salovey-Caruso Emotiona Intelligence Test (MSCEIT). Multi-Health Systems: Toronto, ON, Canada.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, 8(4), 290–300. https://doi.org/ 10.1177/1754073016639667
- Mérida-López, S., Bakker, A. B., & Extremera, N. (2019). How does emotional intelligence help teachers to stay engaged? Cross-validation of a moderated

- mediation model. *Personality and Individual Differences*, 151, Article 109393. https://doi.org/10.1016/j.paid.2019.04.048.
- Mishra, P. S., & Mohapatra, A. D. (2010). Relevance of emotional intelligence for effective job performance: An empirical study. Vikalpa, 35(1), 53–62. doi:10.1177% 2F0256090920100104.
- Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., ... Arango, C. (2020). How mental health care should change as a consequence of the COVID-19 pandemic. *The Lancet Psychiatry*, 7(9), 813–824. https://doi.org/10.1016/S2215-0366(20)30307-2.
- Moroń, M., & Biolik-Moroń, M. (2021). Trait emotional intelligence and emotional experiences during the COVID-19 pandemic outbreak in Poland: A daily diary study. Personality and Individual Differences, 168, Article 110348. https://doi.org/10.1016/ i.paid.2020.110348.
- Pacheco, N. E., Rey, L., & Sánchez-Álvarez, N. (2019). Validation of the Spanish version of the Wong Law emotional intelligence scale (WLEIS-S). *Psicothema*, 31(1), 94–100. https://doi.org/10.7334/psicothema2018.147.
- Pedrosa, A. L., Bitencourt, L., Fróes, A. C. F., Cazumbá, M. L. B., Campos, R. G. B., de Brito, S. B. C. S., & e Silva, A. C. S. (2020). Emotional, behavioral, and psychological impact of the COVID-19 pandemic. Frontiers in Psychology, 11, 566212. doi: 10.3389%2Ffpsyg.2020.566212.
- Pradhan, R. K., & Jena, L. K. (2017). Employee performance at workplace: Conceptual model and empirical validation. Business Perspectives and Research, 5(1), 69–85. doi:10.1177%2F2278533716671630.
- Ramos Villagrasa, P. J., Barrada, J. R., Fernández del Río, E., & Koopmans, L. (2019).
 Assessing job performance using brief self-report scales: The case of the individual work performance questionnaire. *Journal of Work and Organizational Psychology*, 35 (3), 195–205. https://doi.org/10.5093/jwop2019a21.
- Rezvani, A., Ashkanasy, N., & Knosravi, P. (2020). Key attitudes: Unlocking the relationships between emotional intelligence and performance in construction projects. *Journal of Construction Engineering and Management*, 146(4), Article 04020025. https://doi.org/10.1061/(ASCE)CO.1943-7862.0001803.
- Riaz, F., Naeem, S., Khanzada, B., & Butt, K. (2018). Impact of emotional intelligence on turnover intention, job performance and organizational citizenship behavior with mediating role of political skill. *Journal of Health Education Research & Development*, 6 (2), 250. https://doi.org/10.4172/2380-5439.1000250.
- Samanta, I., & Kallou, S. (2020). The role of emotional intelligence in counterproductive work behavior. European Business & Management, 6(2), 20. doi:10.11648/j.ebm.20 200602.11.
- Sanchez-Gomez, M., & Breso, E. (2019). The Mobile Emotional Intelligence Test (MEIT): An ability test to assess emotional intelligence at work. Sustainability, 11(3), Article 827. https://doi.org/10.3390/su11030827.
- Sanchez-Gomez, M., & Breso, E. (2020). In pursuit of work performance: Testing the contribution of emotional intelligence and burnout. *International Journal of Environmental Research and Public Health*, 17(5), Article 5373. https://doi.org/ 10.3390/ijerph17155373.
- Sanchez-Gomez, M., Breso, E., & Giorgi, G. (2021). Could emotional intelligence ability predict salary? A cross-sectional study in a multioccupational sample. *International Journal of Environmental Research and Public Health*, 18(3), Article 1322. https://doi. org/10.3390/ijerph18031322.

- Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. In G. F. Bauer, & O. Hämmig (Eds.), Bridging occupational, organizational and public health: A transdisciplinary approach (pp. 43–68). Dordrecht: Springer. https://doi.org/10.1007/978-94-007-5640-3.4
- Solomon, Z., Ginzburg, K., Ohry, A., & Mikulincer, M. (2021). Overwhelmed by the news: A longitudinal study of prior trauma, posttraumatic stress disorder trajectories, and news watching during the COVID-19 pandemic. Social Science & Medicine., Article 113956. https://doi.org/10.1016/j.socscimed.2021.113956.
- Thoresen, S., Tambs, K., Hussain, A., Heir, T., Johansen, V. A., & Bisson, J. I. (2010). Brief measure of posttraumatic stress reactions: Impact of Event Scale-6. Social Psychiatry and Psychiatric Epidemiology, 45(3), 405–412. https://doi.org/10.1007/s00127-009-0073-x
- Valenzano, A., Scarinci, A., Monda, V., Sessa, F., Messina, A., Monda, M., ... Cibelli, G. (2020). The social brain and emotional contagion: COVID-19 effects. *Medicina*, 56 (12), Article 640. https://doi.org/10.3390/medicina56120640.
- Van Kleef, G. A., van den Berg, H., & Heerdink, M. W. (2015). The persuasive power of emotions: Effects of emotional expressions on attitude formation and change. *Journal* of *Applied Psychology*, 100(4), 1124–1142. https://psycnet.apa.org/doi/10.1037/a pl000003
- Volk, A. A., Brazil, K. J., Franklin-Luther, P., Dane, A. V., & Vaillancourt, T. (2021). The influence of demographics and personality on COVID-19 coping in young adults. *Personality and Individual Differences*, 168, Article 110398. https://doi.org/10.1016/ i.paid.2020.110398.
- Ward, P. R. (2017). Improving access to, use of, and outcomes from public health programs: The importance of building and maintaining trust with patients/clients. Frontiers in Public Health, 5, Article 22. https://doi.org/10.3389/fpubh.2017.00022.
- Wee, L. H., Yeap, L. L. L., Chan, C. M. H., Wong, J. E., Jamil, N. A., Nantha, Y. S., & Siau, C. S. (2019). Anteceding factors predicting absenteeism and presenteeism in urban area in Malaysia. BMC Public Health, 19(4), 1–12. https://doi.org/10.1186/s12889-019-6860-8.
- Weiss, D. S. (2004). The Impact of Event Scale-revised. In J. P. Wilson, & T. M. Keane (Eds.), Assessing psychological trauma and PTSD (2nd ed.). New York: Guilford.
- Wheeler, A. R., Shanine, K. K., Leon, M. R., & Whitman, M. V. (2014). Student-recruited samples in organizational research: A review, analysis, and guidelines for future research. *Journal of Occupational and Organizational Psychology*, 87(1), 1–26. https:// doi.org/10.1111/joop.12042.
- Whitehead, B. R. (2021). COVID-19 as a stressor: Pandemic expectations, perceived stress, and negative affect in older adults. *The Journals of Gerontology: Series B*, 76(2), e59–e64. https://doi.org/10.1093/geronb/gbaa153.
- Wiebers, D. O., & Feigin, V. L. (2020). What the COVID-19 crisis is telling humanity. Neuroepidemiology, 1, 1–4. https://doi.org/10.1159/000508654.
- Wilkinson, E. (2020). How mental health services are adapting to provide care in the pandemic. BMJ, 369, Article m2106. https://doi.org/10.1136/bmj.m2106.
- Wong, C. S. (2015). Emotional intelligence at work: 18-year journey of a researcher. New York, NY, USA: Routledge.
- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly*, 13(3), 243–274. https://doi.org/10.1016/S1048-9843(02)00099-1.