

Marta Campos Ferreira Gomes

The traumatic impact of the Covid-19 pandemic on the psychological distress of Portuguese teachers: the mediating role of self-criticism and experiential avoidance

Tese no âmbito do Mestrado Integrado em Psicologia Clínica e da Saúde, Subárea de Especialização em Intervenções Cognitivo-Comportamentais nas Perturbações Psicológicas da Saúde orientada pela Professora Doutora Maria do Céu Salvador, pela Doutora Marcela Salomé Albuquerque Andrade Matos e pelo Professor Doutor Daniel Maria Bugalho Rijo e apresentada à Faculdade de Psicologia e de Ciências da Educação.

Julho de 2021

Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra

THE TRAUMATIC IMPACT OF THE COVID-19 PANDEMIC ON THE PSYCHOLOGICAL DISTRESS OF PORTUGUESE TEACHERS: THE MEDIATING ROLE OF SELF-CRITICISM AND EXPERIENTIAL AVOIDANCE

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"How much and how often does our fear of failure stop us in our tracks? Our fears prevent us from doing this in so many ways, don't they? Developing a compassionate attitude towards failure does not mean signing up to passive resignation but to cultivating a determination based on openness to learning and to being supportive and encouraging effort"

Paul Gilbert

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Abstract

The Covid-19 pandemic seems to be causing symptoms of psychological distress and an increase of mental health problems all over the world. Teachers have been particularly affected by this pandemic, for they had to adapt to several obstacles of distance learning settings. This cross-sectional study aimed to investigate the traumatic impact of the pandemic on teachers' personal and professional life, and on psychological distress (i.e., symptoms of anxiety, depression and burnout). We expected experiential avoidance and self-criticism to mediate the relationship between the traumatic impact of the pandemic and burnout, depression and anxiety, as both hypothesized mediating variables may constitute vulnerability factors to psychopathology. Therefore, three double mediation models were estimated. Portuguese teachers in public schools, from elementary to high school, (N = 355; mean age 52.67 [SD =6.572]) completed an online self-report questionnaire measuring the impact of the pandemic on personal and professional life, the traumatic impact of the pandemic, burnout, depression, anxiety, experiential avoidance and self-criticism. Results found that teachers reported the pandemic as having a negative impact on their personal and professional lives. Regarding our proposed models, self-criticism and experiential avoidance explained part of the impact of the traumatic impact of the pandemic on burnout and anxiety, but only self-criticism was found to be a significant mediator of this impact on depression. Considering these results, Compassion and Acceptance based approaches are suggested as possible interventions to prevent distress and increase well-being, by targeting self-criticism and promoting acceptance.

Keywords: Traumatic impact of the Covid-19 pandemic; Self-criticism; Experiential avoidance; Teachers; Burnout; Depression; Anxiety.

Resumo

A pandemia Covid-19 parece estar a causar sintomas de sofrimento psicológico e um aumento de problemas relacionados com a saúde mental. Os professores têm sido particularmente afetados pela pandemia, na medida em que esta levou à necessidade de adaptação perante vários obstáculos relacionados com as contingências do novo ensino à distância. Este estudo transversal pretendeu compreender o impacto traumático da pandemia na vida pessoal e profissional dos professores e no sofrimento psicológico (e.g. sintomas de ansiedade, depressão e burnout). Previa-se que o evitamento experiencial e o autocriticismo mediassem a relação entre o impacto traumático da pandemia e burnout, depressão e ansiedade, por ambas variáveis potencialmente mediadoras poderem constituir fatores de vulnerabilidade para o desenvolvimento de psicopatologia. Deste modo, foram testados três modelos de dupla mediação. Professores Portugueses a lecionar em escolas públicas, do ensino primário ao ensino secundário (N = 355; *Midade* = 52.67 [SD = 6.572]) responderam em formato *online* a instrumentos de auto-resposta que visavam avaliar o impacto da pandemia na vida pessoal e profissional, o impacto traumático da pandemia, burnout, depressão, ansiedade, evitamento experiencial e autocriticismo. Os resultados demonstram que os professores reportaram um impacto predominantemente negativo na sua vida pessoal e profissional devido à pandemia.

Relativamente aos modelos propostos, o autocriticismo e o evitamento experiencial explicaram parte da relação do impacto traumático da pandemia no burnout e na ansiedade, mas apenas o autocriticismo constituiu um mediador do impacto traumático na depressão.

Tendo em conta estes resultados, abordagens baseadas na Compaixão e Aceitação são sugeridas como possíveis intervenções de modo a prevenir sofrimento e aumentar o bem-estar psicológico, ao trabalhar o autocriticismo e a promoção de aceitação.

Palavras-chave: Impacto Traumático da Pandemia Covid-19; Autocriticismo; Evitamento experiencial; Professores; Burnout; Depressão; Ansiedade.

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Introduction

The Covid-19 pandemic has irrevocably changed our lives in a terrifying and unpredictable way, not only influencing public health but many other human life domains such as economy, industry, global market and health care (Kumar & Nayar, 2020). Although the priority has been the implementation of lockdown and safety measures in order to contain the virus and reduce infection numbers, the World Health Organization (2020) has already manifested its concern about the pandemic's consequences to mental and psychosocial health. The measures adopted by governments around the world to contain the spread of the virus (e.g., lockdown, self-isolation, quarantine) have drastically affected daily activities, routines, and livelihoods of people, and increased loneliness, anxiety, depression, insomnia, alcohol abuse and drug use, self-harm and suicidal behaviour (Wang et al., 2020; WHO, 2020). Despite being a very recent issue with yet no ending in sight, many studies all over the world have been conducted in order to understand the impact of the Covid-19 pandemic on mental health. High levels of psychological distress compared to pre-covid data have been found both in the US (McGinty et al., 2020) and in the UK (Pierce et al., 2020). In Wales, Gray and collaborators (2020) have found that around 50% of the population reported clinically significant levels of psychological distress, with around 20% showing severe effects over a 11-16-week lockdown period. Likewise, another study showed high rates of negative mental health outcomes in the Italian population over a three-week lockdown period (Rossi et al., 2020). Similarly, a global survey aiming to understand the impact of the coronavirus pandemic reported an increase in mental health difficulties, mental illness and decreased well-being due to health and financial worries and the disruption of work-life routines imposed by safety measures, which originated symptoms of anxiety, loneliness, fear, uncertainty, grief and anger (Ivbijaro et al., 2021). It is important to understand that these studies used different types of instruments, selected outcomes and samples. However, similarities between some findings led researchers to suggest that these patterns of deteriorating mental health will emerge in other countries (Gray et al., 2020), and the Instituto Nacional de Saúde Doutor Ricardo Jorge (INSA, 2020) claimed that international studies are unanimous when addressing important mental health problems related to this pandemic.

According to the INSA (2020), a Portuguese study showed moderate to severe symptoms of psychological distress, post-traumatic stress disorder, depression and burnout in the general population during this pandemic. Paulino and colleagues (2020) conducted an online survey to assess the immediate psychological impact of the Covid-19 pandemic in its

early stage, as well as anxiety, depression, and stress in the Portuguese general population, and the results showed that almost half of the participants (49,2%) reported moderate to severe psychological impact of the Covid-19 pandemic, with several participants reporting moderate to severe symptoms of depression, anxiety and stress levels. The same authors, stated that psychological symptoms were positively and significantly associated with the traumatic impact of this pandemic.

These times have been particularly challenging for teachers who, due to governmental measures, were forced to find alternatives and new teaching methods, either struggling with several obstacles in the educational settings through distance learning (e.g., workload, technology skills, students with any or poor internet resources, unhelpful parents, difficulties in reaching students with different learning difficulties, the possibility of learning gaps, balancing work and home lives) or returning to schools in a face-to-face teaching method where being in a classroom with a great amount of students could be perceived as a health risk, especially because schools could be seen as a site of infection and transmission. A study conducted by Anderson and collaborators (2021), exploring teachers' creativity and well-being during distance learning contingencies, demonstrated that Covid-19 increased their stress at work, with several teachers pointing the lack of direct connection with students in a physical environment and the lack of certainty as some of the most common reasons for this stress. Furthermore, several teachers reported an increased workload related to the new learning environments with the need to create new online materials (Anderson et al., 2021). In addition, Reich and colleagues (2020) sought to understand teachers challenges during schools' closure period, with many teachers reporting difficulties such as keeping students motivated, professional burnout, a sense of loss of connection with students and colleagues, and a loss of efficacy and professional identity, with 83% of the teachers reporting to have had a hard time doing their job during remote learning and 76% believing that students were falling behind. This transition to remote teaching has, therefore, increased anxiety and stress levels and compromised their motivation (Žižanović et al., 2021). As Pressley (2021) states, there are numerous stress factors that can be proximal to burnout, including Covid-19-related anxiety, teaching demands anxiety, parent communication and lack of administrative support. Another study (Beames et al., 2021) pointed out anxiety, depression, stress, post-traumatic stress symptoms, burnout, exhaustion, and sleep disturbance as problematic factors for teachers throughout this pandemic.

Being a teacher comes with many challenges and several studies have explored teachers' well-being, levels of stress and burnout, for their list of difficulties can be quite vast and alarming even before Covid-19. Among these stressors, we can underline overcrowded

classrooms, time pressure, student apathy and low motivation, disciplinary problems and student disruptive behaviour, excessive paperwork, inadequate salaries and low status, interpersonal conflicts with colleagues or parents, and lack of administrative support (Frenet et al., 2012; Russell et al., 1987). According to Kyriacou (1987), teacher stress may be defined as "the experience by a teacher of unpleasant emotions, such as tension, frustration, anxiety, anger and depression, resulting from aspects of his work as a teacher" (.146), resulting from the perception that job demands are threatening and they might not be capable to meet these demands, whether they are imposed by others or self-imposed. Keeping all of this in mind, it is not surprising that teachers' stress might have a multilevel impact, for instance in depression, absenteeism, early retirement, insomnia or generate conflicts within family life (Anderson et al., 1999; Randhawa, 2009). A study conducted by the Educational Support Partnership (ESP, 2018) in the UK showed that 67% of educational professionals considered themselves as stressed by their work. Furthermore, 43% and 37% of their symptoms could be signs of anxiety or depression, respectively (ESP, 2018). Similarly, in Portugal, a recent report on teachers' life and work conditions, showed high levels of emotional exhaustion, high levels of burnout and resignation from the profession, with 57% of teachers reporting high levels of work stress (Varela et al., 2018).

Burnout can be understood as including three components: emotional exhaustion, depersonalization and reduced personal accomplishment, with individuals usually showing signs of physical fatigue, low energy at work, feelings of reduced mental agility and less energy for being empathic to others at work due to exposure to chronic job stress (Armon et al., 2012; Halbesleben & Buckley, 2004). Mounting research over the past years has investigated burnout in the educational field due to its great prevalence among teachers (Friedman, 1993; Zadok-Gurman et al., 2021), including in Portugal (INSA, 2020; Varela, 2018).

It is, however, important to underline the existence of psychological factors that can increase vulnerability towards psychological distress, such as experiential avoidance or selfcriticism. According to Hayes and collaborators (1996), experiential avoidance is "the phenomenon that occurs when a person is unwilling to remain in contact with particular private emotions, thoughts, behavioural experiences (e.g., bodily sensations, memories, predispositions) and takes steps to alter the form or frequency of these events and the contexts that occasion them" (p. 1154). Although EA might seem helpful and produce short-term relief, it is not a long-term healthy strategy, and it can endure psychological inflexibility, considered to be a "pattern in which behaviour is excessively controlled by one's thoughts, feelings and other internal experiences, or to avoid these experiences at the expense of more effective and meaningful actions" (Levin et al., 2014, p. 1-2). As claimed by these authors, both psychological inflexibility and EA contribute to the development and maintenance of a vast range of psychological problems such as anxiety and depressive disorders. Experiential avoidance seems to play a key role in the relationship between teachers' stress and psychological well-being with experiential avoidance being positively associated with depression and burnout, and negatively associated with personal accomplishment (Hinds et al., 2015).

Self-criticism is one of the most pervasive problems in mental health, and it can be analysed from a Compassion-Focused Therapy (CFT) point of view. CFT defends the idea of three major affect regulation systems, composed by threat and self-protection, incentive and resource-seeking, and soothing and contentment (Gilbert, 2005). Self-criticism is a punishmentfocused response that stimulates the threat system (Gilbert, 2009, 2014) through a hostile internal relationship with the self, contributing to sources of stress (Gilbert, 2009). Negative early experiences such as critical parents, shameful events or rejection seem to be at the core of self-criticism development (Gilbert, 2009). Although some individuals might try to use selfcriticism as a corrective way for improvement, it can also be used as a way of self-attack for individuals who perceive themselves as inferior or inadequate in social comparisons. This selfto-self relationship can be activated when experiencing obstacles, setbacks or a sense of failure or inadequacy (Gilbert, 2009). This transdiagnostic process has been consistently associated with psychopathology (Gilbert et al., 2006; Castilho et al., 2016) and researchers have suggested self-compassion as an alternative process, in order to generate a warmer and kinder attitude towards the self, as opposed to being hostile and critical, allowing individuals to face stressful events with less reactivity and distress (Gilbert, 2009; Gilbert et al., 2006; Leary et al., 2007). Neff (2003) states that a self-compassionate attitude should be negatively associated with depression, anxiety, neurotic perfectionism and, therefore, positively associated with greater life satisfaction, by promoting behaviours to enhance well-being. Furthermore, a metaanalysis of 14 studies conducted by MacBeth and Gumley (2012) presented a relationship between compassion and common expressions of psychopathology such as depression, anxiety and stress, where higher levels of compassion were found to be associated with lower levels of mental health symptoms. Self-criticism is known to be associated with fears of compassion, as self-critical individuals might feel unworthy of receiving compassion from others (or from themselves), and perceive it as an unreliable act, or view compassion as a weakness (Gilbert, 2009). A recent study conducted by Matos et al. (2021) showed that fears of compassion had a magnifying effect on the impact of Covid-19 pandemic on mental health indicators (i.e.,

depression, anxiety, stress, social safeness) and, as the literature shows, fears of selfcompassion and receiving compassion from others, increased psychological distress vulnerability, and are positively associated with self-criticism (Kirby et al., 2019). To the best of our knowledge, the role of self-criticism and experiential avoidance in increasing teachers' vulnerability to psychological distress in the context of the current Covid-19 pandemic had not yet been explored.

The current study sought out to investigate the impact of the pandemic on teachers' overall, personal, professional and social life, and on psychological distress (i.e., symptoms of anxiety, depression and burnout). Furthermore, it aimed to explore the mediating role of self-criticism and experiential avoidance on the relationship between the traumatic impact of the Covid-19 pandemic and psychological distress symptoms. Considering the theoretical and empirical literature reviewed above, we hypothesized that the traumatic impact of the Covid-19, anxiety, depression, burnout, experiential avoidance and self-criticism would be positively and significantly associated (H1). In addition, we expected the traumatic impact of the Covid-19 to be a significant predictor of burnout, depression and anxiety (H2) and that EA and self-criticism would mediate this relationship (H3).

Method

Participants

Considering the aim of this study, our sample comprised 355 participants, all teachers in Portuguese public schools, from elementary school (1st-4th grade), middle school (5th to 9th grade), and secondary school (10th-12th grade). The sample was composed of 285 women (80.3 %) and 70 men (19.7 %), with a mean age of 52.67 (SD = 6.572), with a range from 30 to 65 years old. Participants reported a mean of 26.83 (SD = 8.395) years of working as a teacher. The majority of our sample (74.6 %) was from the center region of Portugal. There were no statistical significant gender differences in terms of age ($t_{(352)} = -1.545$, p = .123) and years of service ($t_{(353)} = -.502$, p = .616).

Procedure

This study was approved by the Ethics Committee of the Faculty of Psychology and Educational Sciences of the University of Coimbra (CEDI; 17th February 2021), and participants were recruited between February and May of 2021 in several public schools from

the north and central region of Portugal. Inclusion criteria to participate in the study were: being a teacher from the 1st to 12th grade in Portugal. An online questionnaire was created and shared with several School Boards via e-mail and advertised on social networks in order to disseminate the study among teachers. Schools involved in the Compassionate Schools project were also invited to complete the survey. The nature and aim of the study, as well as its procedures, including the voluntary and confidential nature of the participation, were explained to teachers prior to the completion of the survey, and informed consent was obtained from all participants. The online protocol was only completed by the teachers who gave their informed consent.

Materials

Self-report measures

A sociodemographic questionnaire asking about age, gender, marital status, nationality, occupation and years of education was initially administrated, followed by questions assessing professional information, such as years of working as a teacher, teaching group and professional status. Furthermore, participants were asked whether they had participated in the Compassionate Schools Project within the past three years.

A set of questions related to the COVID-19 pandemic aimed to understand participants social distancing (where options were "self-isolation in a specific part of the house", "social isolation with limited access outside the house to buy food or medicine", "social distancing from other people outside the house" or "None of the above, I don't usually practice social distancing") and how long they have been doing it. It was also asked whether they, or someone close, were considered at risk population, and if either them or someone close had been infected with covid-19 (a 4-option list: "yes", "no", "I don't know" or "I'd rather not answer"). Using a Likert scale from 1 = "not at all" to 10 = "extremely", participants were asked to rate their social support throughout the pandemic. Furthermore, additional questions assessed the impact of COVID-19 on several dimensions of participants' personal lives (life in general, professional, familiar, social, psychological well-being and physical health), as well as professional lives (work satisfaction, relationship with students and with colleagues, the amount of work accomplished and its quality, students learning); these answers were rated on a Likert Scale from 1 ("extremely negative impact") to 10 ("extremely positive impact").

Afterwards, participants were asked to complete a set of self-report instruments described below.

The Impact of Event Scale - Revised (IES-R; Weiss & Marmar, 1997; Portuguese version: Matos et al., 2011) is a COVID-19 adaptation of the IES-R (Matos, 2020), that assesses the subjective distress generated by specific life events, i.e., the pandemic, through a 22 item questionnaire by measuring three symptoms associated with trauma (intrusion, avoidance and hyperarousal). Rated in a 5 points Likert Scale (0 = "not at all", 4 = "extremely"), its original version shows Cronbach's alphas ranging from .79 to .92 while the IES-R Portuguese version shows high internal consistency with a .96 Cronbach's alpha as well as good test-retest reliability for a four-week period (r = .82, p < .010). For this protocol, a COVID-19 adaptation of the IES-R Portuguese version was administrated and used to assess the traumatic impact of the covid-19 pandemic. In this study, the IES-R showed an excellent internal consistency with a .97 Cronbach's alpha.

The *Teachers Acceptance and Action Questionnaire* (TAAQ-PT; Hinds, et al., 2015; Portuguese version: Galhardo et al., 2017) assesses teachers' experiential avoidance in their professional context. Through a 7-point Likert Scale, ranging from 1 ("never or rarely true") to 7 ("very often or always true"), it intends to understand how teachers use emotional and behavioral control, the tendency to avoid negative thoughts and emotions and the obstacles towards action. The TAAQ-PT shows good internal consistency and high item-total correlations, both in the original study and the Portuguese version ($\alpha = .87$ and $\alpha = .92$, respectively). In this study, show great internal consistency with a $\alpha = .89$.

The *Shirom-Melamed Burnout Measure* (SMBM; Melamed et al., 2006; Portuguese version: Gomes, 2012) is a 14-item instrument that understands burnout within three subscales (emotional exhaustion, physical fatigue, cognitive weariness) through a 7-point Likert scale ranging from 1 ("almost never") to 7 ("almost always") where participants were asked about how they felt in their work place in the last month. Therefore, higher scores will consequently indicate higher levels of burnout. Its original version shows a good reliability coefficient (α = .91) and a good construct validity. In this study, excellent internal consistency was obtained with a α = .95.

The *Forms of Self-Criticizing and Reassuring Scale* (FSCRS; Gilbert et al., 2004; Portuguese version: Castilho & Pinto-Gouveia, 2011) intends to assess how self-critical or self-reassuring people treat themselves in situations of failure. It comprises 22 items distributed by three subscales (Inadequate self, Hated self and Reassured self), rated on a 5-point Likert Scale, ranging from 0 ("I'm not like that at all") to 4 ("I'm extremely like that"). The original study and the Portuguese version showed good internal consistency (.90, .86, .86 for Inadequate Self, Hated Self and Reassured Self, respectively, for the original version; and .87, .89 and .72, for

Inadequate Self, Hated Self and Reassured Self. The Portuguese version also presented good test-rest reliability ranging from r = .65 to r = .78 (four weeks). In the present study, only the 14 items from the Inadequate and Hated Self were used as a measure of self-criticism (Castilho & Pinto-Gouveia, 2011). The Cronbach alpha found was .93.

The *Depression, Anxiety and Stress Scale* (DASS; Lovibond & Lovibond, 1995; Portuguese version: Pais-Ribeiro et al., 2004) is a 4-point Likert scale comprising 21 items, allocated within three dimensions – Depression, Anxiety and Stress – whose scores range from 0 ("Didn't apply to me at all") to 3 ("Applied to me most of the times"). Participants are asked to answer how they felt in the previous week. Both studies proved the good internal consistency of this scale, with the alpha coefficients ranging from .84 to .91 in the original study and from .74 to .85 in the Portuguese version. For the current study, only the 14 items from the depression and anxiety dimensions were used, with Cronbach's alphas of .89 and .86, respectively.

Data Analysis

Data were exported from the web to the SPSS (Statistical Package for Social Sciences, 25.0, IBM; Chicago, IL) in order to conduct descriptive statistics (means, standard deviations, frequencies). Normality assumptions were evaluated through the examination of skewness and kurtosis of each variable, considering skewness values < 3 and kurtosis values between 7 and 10 (Kline, 2005). T-test for independent samples were conducted in order to check significant differences between gender on variables under study and eta-squared values were calculated using Cohen's guidelines (1998) considering .01 as small effects, .06 as moderate effects and .14 as large effects.

Internal consistency was calculated for every instrument through Cronbach's alphas whereas coefficient values > 0.90 are considered excellent, values around .80 are very good, and values around .70 are considered adequate (Kline, 2011). Pearson coefficient correlations were conducted in order to analyze associations between variables in our study, considering values ranging from .70 to .89 as reliable and values over .90 to be nearly perfect, according to Cohen and colleagues' guidelines (2003). Multicollinearity was assessed by considering the variance inflation factor (*VIF*) < 5 (Kline, 2005).

To examine whether the traumatic impact of Covid-19 would be associated with burnout, depression and anxiety, through self-criticism and experiential avoidance, three mediation models were estimated with model 6 of PROCESS (Hayes, 2018). Therefore, traumatic impact of the pandemic was used as independent variable, self-criticism and experiential avoidance as mediators, and burnout, depression and anxiety as dependent variables. Mediation effects were assessed using a boostrapping procedure of 10.000 resamples with a 95% bias-corrected and accelerated confidence intervals, whose p values are considered significant if zero is not contained within the lower and upper bounds of the confidence intervals. The double mediation models are represented in the diagrams below (Fig 1, Fig 2, Fig 3).

Fig 1. Conceptual diagram of the proposed mediation model, with Burnout as a dependent variable (*Process Model 6*)

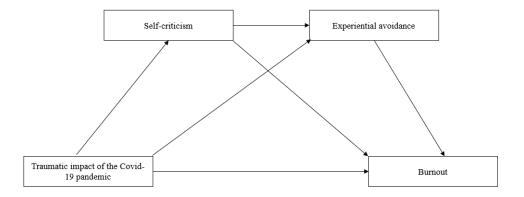


Fig 2. Conceptual diagram of the proposed mediation model, with Depression as a dependent variable (Process Model 6).

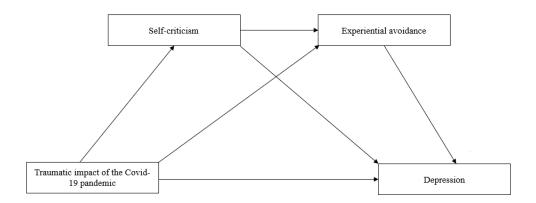
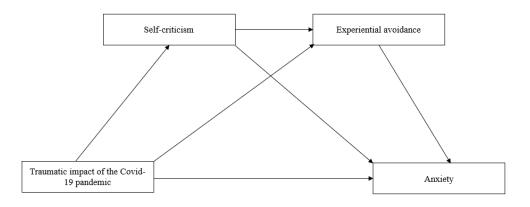


Fig 3. *Conceptual diagram of the proposed mediation model, with Anxiety as a dependent variable* (*Process Model 6*)



Results

Preliminary results

There were statistical significant gender differences in the Burnout score ($t_{(353)} = 2.4$, p = .017), and in the IES-R score ($t_{(353)} = 3.018$, p = .003), but the magnitude of the effects of these differences was small (Burnout_eta squared = .016; IES-R _eta squared = .025). Given the small magnitude of these effects, gender differences were not controlled for, according to Cohen's guidelines (1998). No severe violations to the normal distribution of the variables were found, with values of kurtosis and skewness considered to be normal (ranging from -.65 to 6.43). VIF values were also considered to be good for every value was < 2, evidencing no multicollinearity problems.

Covid associated features

In regard to the COVID-19 pandemic related variables, 6.2 % (n = 22) of the participants claimed to have had Covid-19 and 36.6 % (n = 130) had someone close who has had Covid-19. Only 11.8 % (n = 42) identified themselves as at-risk population. Participants presented a 7.78 mean (SD = 2.166) of perceived social support during this pandemic, with the majority of participants reporting family (91.8%), friends (39.4%) or colleagues (24.2%) as their major support groups.

Regarding the Covid-19 pandemic impact on personal and professional life, we decided to analyze participants' answers considering 1-2 as an extremely negative impact, 3-4 as a negative impact, 5-6 as neutral, 7-8 as a positive impact and 9-10 extremely positive impact. Results showed an evident negative impact on every life dimension, with more than half of the participants reporting negative and extremely negative impact of the Covid-19 pandemic on their lives. The impact on social life was pointed as the most affected area, with 77.7% of teachers reporting a negative or very negative impact. Furthermore, we underline the high negative impact for life in general (66.7%), professional life (68.7%) and psychological wellbeing (61.4%). Full results are represented in Table 1. The same pattern of negative responses is represented is specific aspects of teachers' professional life, with more than half of the participants reporting negative and extremely negative results for almost every dimension. The most negative area was balance between personal and professional life (65.6%). Moreover, a high percentage of participants also reported a negative or extremely negative impact on workload (63.7%), satisfaction with professional life (61.7%) and the quality of students' learning (63.9%). Full results are represented on Table 2.

	Extremely negative	Negative	Neutral	Positive	Extremely positive
Life in general	27%	39.7%	26.8%	5.4%	1.1%
Professional life	26.4%	42.3%	24.8%	5.3%	1.2%
Family life	22.3%	28.4%	35.2%	11%	3.1%
Social life	47%	30.7%	16.4%	4.2%	1.7%
Psychological well- being	25.1%	36.3%	28.7%	7.6%	2.3%
Physical Health	18.3%	31%	38%	9.6%	3.1%

Table 1. Frequencies of the Covid-19 pandemic impact on teachers' personal life

	Extremely negative	Negative	Neutral	Positive	Extremely positive
Satisfaction with professional life	22.8%	38.9%	30.4%	6.2%	1.7%
Relationship with students	18.3%	35.2%	30.2%	11.5%	4.8%
Relationship with colleagues	16.1%	33.2%	33.5%	11.3%	5.9%
Workload	36.1%	27.6%	23.1%	9.3%	3.9%
Work quality	19.4%	32.1%	31.9%	12.1%	4.5%
Quality of Students' learning	23.9%	40%	27.4%	7.9%	.8%
Balance between personal and professional life	25.6%	40%	26.8%	6.5%	1.1%

 Table 2. Frequencies of the Covid-19 pandemic impact on teachers' professional life

Correlations between the variables under study

Descriptive statistics and correlations between the variables under study can be found in Table 3. The traumatic impact of the Covid-19 pandemic was positively and significantly associated with depression, anxiety and burnout, as well as with self-criticism and experiential avoidance, and negatively associated with the impact on professional and general life. We underline the positive, significant and moderate associations of both self-criticism and experiential avoidance with depression, anxiety and burnout, as well as the positive and significant association between self-criticism and experiential avoidance.

Table 3. Means, standard deviation and matrix of inter-correlations among study variables (Total Sample N = 355)

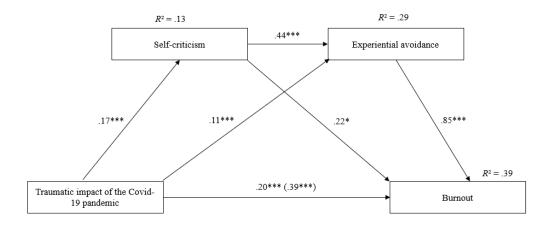
Variable	M(SD)	1	2	3	4	5	6
1 IES-R	30.73 (18.59)						
2 DASSD	2.73 (3.35)	.42**					
3 DASSA	2.54 (3.24)	.49**	.65**				
4 FSCRS	8.26 (8.82)	.36**	.64**	.44**			
5 MBMS	50.23 (17.56)	.42**	.46**	.43**	.41**		
6 TAAQ	28.83 (9.24)	.37**	.41**	.38**	.49**	.58**	

Note: IES-R = Impact of Event Scale – Revised; DASSD = Depression; DASSA = Anxiety; FSCRS = Forms of Self-Criticizing and Reassuring Scale; MBMS = Shirom-Melamed Burnout Measure; TAAQ = Teachers Acceptance and Action Questionnaire; *p < .05; **p < .01

The Mediating Role of Self-criticism and Experiential Avoidance in the Relationship between the Traumatic Impact of the Covid-19 Pandemic and Burnout

Considering the significant associations between variables found in the intercorrelations above, and in order to test our second and third hypotheses, a double mediation model was estimated to examine whether the traumatic impact of the pandemic would predict burnout symptoms through the mediator effects of self-criticism and experiential avoidance. The conceptual diagram of this mediation model is presented in Fig. 1. The traumatic impact of the Covid-19 pandemic was positively and significantly associated with self-criticism, explaining 13% of its variance. The traumatic impact of the pandemic and self-criticism were also positively and significantly associated with experiential avoidance, explaining 29% of its variance. All three indirect effects represented significant associations between the traumatic impact and burnout, whether this relationship was mediated through self-criticism or experiential avoidance. The model altogether was found to be significant with the double mediation model explaining 39.28% of burnout variance. All total, direct and indirect effects were significant and are represented in Table 4 and the path model is represented in Fig 4.

Fig 4. Path model examining the associations between the traumatic impact of Covid-19 pandemic and Burnout through Self-criticism and Experiential Avoidance



Note. Path values represented unstandardized regression coefficients. Values inside parenthesis represented the total effect of traumatic impact on burnout. *p < .05; ***p < .001.

Direct effects	b	SE	t	р	95% CI
Traumatic Impact \rightarrow Self-Criticism	.17	.02	7.17	<.001	.13/.22
Traumatic Impact \rightarrow Experiential Avoidance	.11	.02	4.53	<.001	.06/.15
Traumatic Impact \rightarrow Burnout	.20	.04	9.05	<.001	.11/.28
Self-Criticism \rightarrow Experiential Avoidance	.44	.05	8.65	<.001	.33/.53
Self-Criticism \rightarrow Burnout	.22	.09	2.28	< .05	.03/.41
Experiential Avoidance \rightarrow Burnout	.85	.09	9.05	<0.01	.66/1.03
Indirect effects	b	SE	t	р	95% CI
Traumatic Impact \rightarrow Self- Criticism \rightarrow Burnout	.002	.001	-	-	.0002/.004
Traumatic Impact \rightarrow EA \rightarrow Burnout	.09	.02	-	-	.05/.14
Traumatic Impact \rightarrow Self- Criticism \rightarrow EA \rightarrow Burnout	.06	.01	-	-	.04/.09
Total Effect	b	SE	t	р	95% CI
Traumatic Impact \rightarrow Burnout	.39	.05	8.62	<.001	.30/.48

Table 4. Summary of direct, indirect and total effects

Note. EA = Experiential Avoidance; b = unstandardized regression coefficient; SE = standard error; p = statistical significance; CI = confidence interval

The mediating role of self-criticism and experiential avoidance in the relationship between the traumatic impact of the Covid-19 pandemic and depression

As inter-correlations showed positive and significant associations between the variables, a double mediation model was estimated to examine whether the traumatic impact of the pandemic was associated with depression through self-criticism and experiential avoidance, thus testing our second and third hypotheses. The conceptual diagram of this mediation model is presented in Fig. 2. A positive and significant association was found between the traumatic impact of the pandemic and self-criticism, explaining 13% of self-criticism's variance, as well as a positive and significant association of the traumatic impact of the pandemic and self-

criticism with experiential avoidance, explaining 29% of experiential avoidance's variance. Although the double mediation wasn't significant, variables explained 46% of the variance for depression, and there was still a mediation through self-criticism. Path analysis is represented in Fig. 5 and all total, direct and indirect effects are represented in Table 5.

Fig 5. Path model examining the associations between the traumatic impact of the Covid-19 pandemic and depression through self-criticism and experiential avoidance

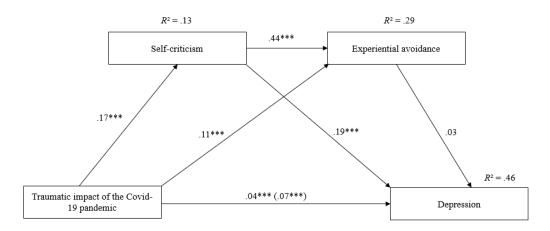


Table 5. Summary of direct, indirect and total effects

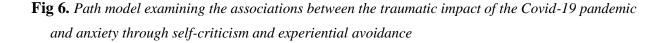
Direct effects	b	SE	t	р	95% CI
Traumatic Impact \rightarrow Self-Criticism	.17	.02	7.17	<.001	.12/.21
Traumatic Impact \rightarrow Experiential Avoidance	.11	.02	4.53	<.001	.06/.15
Traumatic Impact \rightarrow Depression	.04	.008	4.75	<.001	.02/.05
Self-Criticism \rightarrow Experiential Avoidance	.44	.05	8.65	<.001	.33/.53
Self-Criticism \rightarrow Depression	.19	.02	11.26	<.001	.16/.23
Experiental Avoidance \rightarrow Depression	.03	.02	1.64	.10	005/.06
Indirect effects	b	SE	t	р	95% CI
TraumaticImpact \rightarrow Self-Criticism \rightarrow Depression	.03	.002	-	-	.008/.05
Traumatic Impact \rightarrow EA \rightarrow Depression	.0009	.0006	-	-	0001/.002

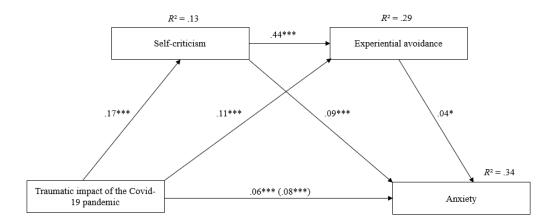
Traumatic Impact \rightarrow Self- Criticism \rightarrow EA \rightarrow Depression	.0006	.0004	-	-	0001/.0001
Total Effect	b	SE	t	р	95% CI
Traumatic Impact \rightarrow Depression	.07	.008	8.74	<.001	.06/.09

Note. EA = Experiential Avoidance; b = unstandardized regression coefficient; SE = standard error; p = statistical significance; CI = confidence interval

The mediating role of self-criticism and experiential avoidance in the relationship between the traumatic impact of the Covid-19 pandemic and anxiety

Still aiming to test our second and third hypotheses, a double mediation model was estimated to examine the mediating role of self-criticism and experiential avoidance on the relationship between the traumatic impact of the pandemic and anxiety. The conceptual diagram of this mediation model is presented in Fig. 3. A positive and significant association was found between the traumatic impact of the pandemic and self-criticism, explaining 13% of its variance. The relationship between the traumatic impact of the positive and significant, explaining 29% of the variance of experiential avoidance. The total and direct effects of the traumatic impact on anxiety were both significant. All three indirect effects represented significant associations between the traumatic impact and anxiety, whether this relationship was mediated through self-criticism or mediated through experiential avoidance, with the double mediation model altogether explained 34% of the variance of anxiety. Total, direct and indirect effects were significant and are represented in Table 6.





Direct effects	b	SE	t	р	95% CI
Traumatic Impact \rightarrow Self-Criticism	.17	.02	7.17	<.001	.12/.21
Traumatic Impact \rightarrow Experiential Avoidance	.11	.02	4.53	<.001	.06/.15
Traumatic Impact \rightarrow Anxiety	.06	.008	7.5	<.001	.05/.08
Self-Criticism \rightarrow Experiential Avoidance	.44	.05	8.65	<.001	.33/.53
Self-Criticism \rightarrow Anxiety	.09	.02	5.01	<.001	.06/.13
Experiental Avoidance \rightarrow Anxiety	.04	.02	2.28	<.005	.006/.077
Indirect effects	b	SE	t	р	95% CI
TraumaticImpact \rightarrow Self-CriticismAnxiety	.005	.002	-	-	.002/.009
Traumatic Impact \rightarrow EA \rightarrow Anxiety	.001	.0007	-	-	.0002/.003
Traumatic Impact \rightarrow Self- Criticism \rightarrow EA \rightarrow Anxiety	.0009	.0004	-	-	.0001/.002
Total Effect	b	SE	t	р	95% CI
Traumatic Impact \rightarrow Anxiety	.08	.008	10.71	<.001	.07/.10

 Table 6. Summary of direct, indirect and total effects

Note. EA = Experiential Avoidance; b = unstandardized regression coefficient; SE = standard error; p = statistical significance; CI = confidence interval

Discussion

Many studies have emerged in order to understand the impact of the Covid-19 pandemic on psychological distress, with several studies reporting an increase in symptoms of depression, anxiety, post-traumatic stress, burnout and sleep problems in the general population (INSA, 2020; Paulino et al., 2020; Wang et al., 2020). Research on teachers' psychological distress during this pandemic has also began to arise with previous literature showing that, before the pandemic, this population had already alarming signs of depression, anxiety, stress and burnout (Anderson et al., 1999; ESP, 2018; Kyriacou, 1987; Varela et al., 2018). However, to the best of our knowledge, the role of self-criticism and experiential avoidance in increasing teachers' vulnerability to psychological distress in the context of the current Covid-19 pandemic had not yet been explored. Therefore, this study aimed, not only to investigate the impact of the pandemic on teachers' personal and professional life on psychological distress (i.e., symptoms of anxiety, depression, burnout), but also to examine the role of self-criticism and experiential avoidance on the relationship of the traumatic impact of the Covid-19 pandemic with burnout, depression and anxiety, in teachers.

Regarding Covid-19 associated features, our participants presented a high mean of perceived social support, which may be considered a protective factor, since a high perceived social support could be a buffer against psychological distress during this aversive event (Serafini et al., 2020). When considering the impact of the pandemic on personal and professional lives, the majority of participants reported a negative or extremely negative impact of the pandemic in every dimension, with social life arising as the most affected area. Although our participants did feel supported during this pandemic, they still recognized social life in general as a affected area. This might be related with the also high negative impact of the pandemic reported on their relationship with students and colleagues, once contact with students and colleagues was impaired due to quarantine and lockdown measures. In addition, we underline the fact that more than half of our participants have reported negative impact of the pandemic on their professional life, satisfaction with professional life, workload, quality of work and quality of students learning. Our results seem to be congruent with recent research on teachers' well-being and teaching adaptation during the pandemic, with several studies reporting a loss of connection with students and colleagues, an increased workload, difficulties in doing their job and a belief that students were falling behind as possible stress factors (Anderson et al., 2021; Reich et al., 2020). In another study, currently being developed using the same instruments but assessing university professors, Carvalho and collaborators (2021) showed that a significant percentage of university professors have also reported a negative impact of the pandemic on their professional and personal life dimensions, with social life also considered the most affected area. However, compared to our population, a smaller percentage of university professors reported a negative impact of the pandemic on areas such as satisfaction with professional life, workload, work quality or quality of students' learning. A few possible interpretations for these results can be outlined. University professors might be more used to provide digital content to their students, rather than teachers who still had to adapt to technologies and create new digital materials that would be creative enough to stimulate and motivate children's attention. In addition, young students still have regular homework tasks, which creates extra work for teachers to correct. Moreover, due to their age and maturity, university students may present less difficult to manage in-class behaviors and are more autonomous in their studies than other students. This fact may impose greater challenges on teachers of lower school levels, who may have to manage in-class children and adolescents' disruptive behaviors, to keep their attention and to stimulate their study. This requires an extra amount of work, as they may also need to communicate with parents in order to understand what difficulties are arising with each student. Communication with parents can constitute another stress factor by itself, because parents are not always willing to collaborate, what can be quite critical for teachers' efforts.

Regarding our main study aims, and as hypothesized (H1), the traumatic impact of the pandemic, depression, anxiety, burnout, self-criticism and experiential avoidance were positively and significantly associated with each other. These results are in line with previous studies that link the traumatic impact of the pandemic with psychological symptoms of depression, anxiety and stress for the Portuguese general population (Paulino et al., 2020), as well as with studies reporting the presence of symptoms of anxiety, depression, burnout, exhaustion and post-traumatic stress in teachers during the pandemic (Beames et al., 2021).

Regarding self-criticism, our results found positive, moderate and significant associations with burnout, anxiety, and, especially, with depression. Indeed, literature points self-criticism as contributing to sources of stress and anxiety (Gilbert, 2009), and consistently associated with psychopathology (Gilbert et al., 2006; Castilho et al., 2004). Previous research has established the significant relationship between self-criticism and depression (Gilbert et al., 2001, 2006), as self-critical individuals might have difficulties in generating warm and supportive thoughts and feelings, alongside an easiness in accessing critical and hostile images, which contributes to depressive symptoms (Gilbert et al., 2006).

Concerning experiential avoidance, our results showed positive, moderate and significant association with burnout, depression and anxiety, with burnout presenting the strongest association with experiential avoidance. Our results seems to be congruent with early literature that stated that the control agenda of trying to suppress or eliminate unpleasant thoughts, feelings or memories, with which we refuse to stay in touch with, maintains and reinforces symptoms of anxiety (Eifert & Forsyth, 2005), contributes to develop and maintain psychological distress including as anxiety and depressive disorders (Levin et al., 2014), and plays an important role on teachers' stress and psychological well-being, being positively associated with depression and burnout (Hinds et al., 2015).

As hypothesized (H2), the traumatic impact of the pandemic was a predictor of burnout, depression and anxiety, confirming our findings from the correlational study. This association seems plausible, as recent literature on the Covid-19 pandemic has been unanimous when considering the psychological impact of the pandemic on the increase of mental health difficulties and a decreased well-being, suggesting a generalized pattern of deteriorating mental health for the general population (Gray et al., 2020; INSA, 2020).

In order to test our H3, three double mediation models with self-criticism and experiential avoidance as mediators on the relationship between the traumatic impact of the pandemic and psychopathology were estimated. Results partially confirmed this hypothesis, as self-criticism emerged as a significant mediator in all three models, unlike experiential avoidance. Specifically, results revealed self-criticism and experiential avoidance to explain part of the effect of the traumatic impact of the pandemic on burnout and (with a lower effect) on anxiety (according to H3), but only self-criticism was found to be a significant mediator of this impact on depression (thus infirming H3).

The highest mediating effect of experiential avoidance in the relationship between the traumatic impact of the pandemic and burnout seems to be congruent with the study of Hinds and collaborators (2015) that found a negative association of experiential avoidance and teachers' personal accomplishment. Other research found associations between experiential avoidance and burnout, where the more the experiential avoidance PhD students engaged in to mitigate stress and burnout, the higher their perceived stress and burnout levels (Connor, 2020), or the significant relationship between experiential avoidance and all burnout subscales on Spanish critical care nurses (Eglesias et al., 2010). Our results are in line with literature suggesting that the attempts to alter and suppress negative experiences can, paradoxically, increase them (Hayes, 1996), given that avoidance can reinforce negative emotions (Connor, 2020). A high effect of experiential avoidance on burnout seems to confirm the idea that the degree to which individuals avoid their own negative experiences can, not only affect their wellbeing, but also influence how they perceive their work, as higher levels of acceptance reflect a sense of having more job control (Bond & Bunce, 2003). Experiential avoidance seems to be more important than self-criticism on the relationship between the traumatic impact of the pandemic and burnout, as an increase of job demands, allied to this pandemic, might generate feelings of exhaustion and symptoms of burnout syndrome. Teachers should be willing to experience and accept increasing job demands, instead of engaging in withdrawal and avoidance that can generate a sense of loss of control over their job and their own ability to cope effectively with the job stressors that may arise.

Although both mediators were significant in the anxiety model, their effect was lower when compared to the effect on burnout. Furthermore, when comparing the three models altogether, total effects of the traumatic impact of the pandemic on anxiety and depression were also lower than the total effect presented for burnout. Moreover, the relationship between the traumatic impact of Covid-19 pandemic and burnout seems to be in line with other studies reporting associations between post-traumatic stress disorder symptoms and burnout on fire service workers, where stressors that impacted on burnout were not only post-traumatic stress disorder related, but also general job chronic stressors (Mitani et al., 2006). This total effect of the traumatic impact of the Covid-19 pandemic on burnout, in a population with high levels of chronic stressors such as teachers, is congruent with Ilias and colleagues' (2021) findings that chronic stress and emotional exhaustion in the workplace can affect how people manage stress imposed by the pandemic and, consequently, the occurrence of post-traumatic stress disorder. According to the same authors (Ilias et al., 2021) the pandemic, by itself, is not the only reason to generate burnout, but also the existence of chronic work stress and workplace conditions, that could impact the effect of stress on post-traumatic stress disorder, which could be a possible justification for the higher total effect for burnout when compared to anxiety and depression.

Self-criticism seemed to have a more consistent role as a mediator, as this variable had positive (and higher) associations for all three models, and being the only significant mediator on the relationship between the traumatic impact of the pandemic and depression. We believe this might be due to the fact that self-criticism, as an on-going process that keeps activating the threat system, might magnify distress symptoms in a context where a pandemic is already an aversive and threatening event in itself. Although self-criticism is an internal process, it does respond and activate similar brain pathways usually activated to respond to external threat signals (Gilbert et al., 2006). It is possible that both the internal self-criticism process, as well as the external traumatic impact of a stressful event as a pandemic, could be causing a hyperarousal of the threat system, contributing to psychological symptoms such as depression, anxiety or burnout, since feelings of fear, anxiety and anger may arise. Additionally, selfcriticism and psychopathology have been associated with external shame (Castilho et al., 2016) and rumination (Cavalcanti et al., 2021), which might contribute to explain our results. Furthermore, depression has been consistently associated with self-criticism (Gilbert, 2006) and rumination (Cavalcanti et al., 2021). One possible interpretation for a higher effect of selfcriticism on both burnout and depression may be related to the fact that self-criticism is activated in situations of perceived setbacks and failures (Gilbert, 2009). As mentioned above, teachers have reported the pandemic to have had a negative impact on several dimensions of their personal and professional life, which could be activating hostile and critical interpretations, such as failing in life and not being able to manage the stressful circumstances. With teacher's demands increasing during this pandemic, self-criticism activation might contribute to an increased sense of failure and fear of being ashamed and negatively judged by others. Perceived failure could be generating a critical belief of low personal accomplishment and a loss of efficacy, contributing to repetitive negative thoughts about their teaching skills as they might ruminate on their incapacity to overcome these demands, reinforcing a sense of hopelessness, helplessness and negative self-evaluative thoughts. This could generate high levels of distress, especially as self-critical individuals have reduced capacities to be compassionate towards themselves when feeling that they are personally or socially under threat (Cavalcanti et al., 2021). It is the perceived power of self-criticism that leads individuals to submit to their own self-attacks and self-devaluations that generates depressive symptoms (Gilbert et al., 2001; Gilbert et al., 2006).

In addition, our results seem to be congruent with Matos and collaborators (2021) recent study that found that fears of compassion were associated with depression, anxiety and stress during the Covid-19 pandemic, and fears of self-compassion are known to be positively associated with self-criticism (Kirby et al., 2019).

Implications

Although the pandemic is far from over, its mental health prognostic sounds alarming and prevention seems crucial when considering its harmful effect on teachers. Gilbert (2009) suggests that cultivating compassion can be quite helpful in the face of adversities and tragedies, for being kind and friendly towards oneself (opposing to being critical and hostile) can influence how we cope with difficult life events, strong emotions, conflicts with other people and generate a sense of wellbeing. Similarly, Leary and colleagues (2007) suggests that self-compassion may act as a psychological buffer when facing negative life events by allowing people to perceive themselves and their experiences in a more accurate way and showing less reactivity towards stressful situations. Furthermore, a meta-analysis of 14 studies conducted by MacBeth and Gumley (2012) presents a relationship between compassion and common expressions of psychopathology such as depression, anxiety and stress, where higher levels of compassion were associated with lower levels of psychopathology symptoms.

Inspired by CFT, Compassionate Mind Training is based on developing compassion for oneself and others, involving practices based on psychoeducation, grounding and compassionate imagery, and can be applied in group settings (Gilbert et al., 2020). Maratos and

colleagues (2019) have conducted a study using a six-module CMT program with school staff in the UK to improve well-being, whose results show that practices were associated with significant increases in self-compassion and decreases in self-criticism, with some of the participants reporting that CMT helped them to respond to children's distress, to understand students negative behaviours and to be more able to express emotions with colleagues, suggesting benefits in applying CMT in educational settings. Indeed, staff has reported positively on their experiences of the curriculum and practises, with the majority reporting that they would recommend this training to others. In Portugal, a revised version of the CMT for teachers was implemented in schools in the central region of Portugal (Matos et al., 2021). Findings from this randomised controlled study showed that teachers who underwent the CMT-T revealed decreased levels of threat-related emotions at work and decreased symptoms of burnout, depression and anxiety in comparison to the control group. Post-intervention results on CMT for teachers (CMT-T) showed that teachers have decreased levels of depression and stress, improved their motivation to engage with life's difficulties and distress, by increasing their levels of self-compassion and hence developing a more compassionate and supportive attitude towards themselves instead of engaging in withdrawal, denial or avoidance when facing distress. These teachers also revealed an increase in levels of compassion to others and a reduction in fears of being compassionate to others (Matos et al., 2021). Implementing CMT intervention programs for teachers may be particularly useful during this pandemic context in order to diminish self-criticism levels by promoting self-compassion competencies.

Although a compassionate and tolerant attitude towards suffering can create a sense of motivation and willingness in engaging in life's setbacks, we suggest Acceptance and Commitment Therapy (ACT) approaches to reframe the concept of control and promote acceptance by choosing to actively engage in flexible patterns of behaviour, instead of trying to avoid or supress distress, in order to commit to more valued life directions. Flexible patterns of behaviours would arise from focusing on several processes such as defusion, values, acceptance, self-as-context, mindfulness and a committed action, which would increase psychological flexibility (Harris, 2019). Authors such as Tirch and collaborators (2014), have proposed the integration of ACT and CFT approaches, as both focus not only on the reduction of suffering but also on promoting well-being, due to the rising idea that compassion can be helpful to promote psychological flexibility. Considering the potential increased efficacy of combining CFT and ACT processes led these researchers to suggest a Compassionate-Focused ACT approach. Promoting a compassionate attitude and enhancing acceptance towards stressful events could have beneficial effects for teachers when leading with the pandemic demands.

Therefore, CMT and ACT based interventions could be useful approaches to implement with teachers in Portuguese schools, not only to increase teachers' well-being but also to prevent and buffer possible psychological distress symptoms in the context of the covid-19 pandemic, through the targeting of self-criticism and experiential avoidance.

Limitations

The current study holds some limitations. Due to the fact that it is not a longitudinal study, interpretations can only be addressed as associations instead of predictions. Therefore, it would be interesting to replicate the same study using a longitudinal design, especially since the pandemic is yet far from over, in order to understand if our teachers' answers would change over time, and to analyze its evolution in line with governmental and educational measures as the pandemic progresses. A longitudinal study would allow us to investigate cause-effect relationship between our variables. Moreover, future studies could add measures of protective factors such as self-compassion, social safeness or resilience towards adversity, as well as risk factors as shame experiences or rumination. These new variables would allow a better insight on the association between our variables, and understand in which extent protective factors may buffer against psychological damages during this stressful event. Another limitation relates to the exclusive use of self-response instruments, which are based on individual's subjective perception and therefore participants' answers need to be interpreted with caution. And finally, due to the great number of responses in the central region of Portugal, it would also be interesting to extend this study towards more schools involving other regions of the country, in order to promote the diversity in the study sample and allow the generalization of the results.

Conclusion

The Covid-19 pandemic has caused major disruptive changes in our lives, contributing to the rise of many mental health difficulties. Due to governmental measures, teachers had to adapt to new methods of teaching and new ways to address their workload, their relationship with students and creative ways of balancing work and personal lives, on top of having to deal with the contingencies of fear and uncertainty of the pandemic. The traumatic impact of the pandemic was positively and significantly associated with anxiety, depression, burnout, selfcriticism and experiential avoidance. Self-criticism and experiential avoidance were found to partially mediate the relationship between the traumatic impact of the pandemic and burnout and anxiety, and self-criticism (but not experiential avoidance) mediating the relationship between traumatic impact and depression. Considering these results, CMT and ACT approaches are suggested as possible interventions to prevent distress and increase well-being in a population that already had alarming rates psychopathological symptoms before the onset of the Covid-19 pandemic.

References

Anderson, R. C., Bousselot, T., Katz-Buoincontro, J., & Todd, J. (2021). Generating buoyancy in a sea of uncertainty: Teachers creativity and well-being during the COVID-19 pandemic. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.614774

Anderson, V. L., Levinson, E. M., Barker, W., & Kiewra, K. R. (1999). The effects of meditation on teacher perceived occupational stress, state and trait anxiety, and burnout. *School Psychology Quarterly*, *14*(1), 3-25. https://doi.org/10.1037/h0088995

Beames, J. R., Christensen, H., & Werner-Seidler, A. (2021). School teachers: the forgotten frontline workers of Covid-19. *Australasian Psychiatry*. https://doi.org/10.1177/10398562211006145

Bond, F. W., & Bunce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology*, 88(6), 1057-1067. https://doi.org/10.1037/0021-9010.88.6.1057

Carvalho, C. (2021). The traumatic impact of the Covid-19 pandemic on the psychological distress of university students and professors: the mediating role of self-criticism and experiential avoidance [Unpublished master's thesis]. Universidade de Coimbra.

Castilho, P., & Pinto-Gouveia, J. (2011). Self-criticism: validation of the Portuguese version of the Forms of Self-criticizing/attacking and Self-reassuring Scale Self-criticizing/attacking (FSCRS) and the Functions of Scale (FSCS). Psychologica, (54), 63-86. doi:10.14195/1647-8606_54_3

Castilho, P., Pinto-Gouveia, J., & Duarte, J. (2016). Two forms of self-criticism mediate differently the shame-psychopathological symptoms link. *Psychology and Psychotherapy: Theory, Research and Practice*, *90*(1), 44-54. https://doi.org/10.1111/papt.12094

Cavalcanti, L. G., Steindl, S. R., Matos, M., & Boschen, M. J. (2021). Fears of compassion magnify the effects of rumination and worry on the relationship between self-criticism and depression. *Current Psychology*. https://doi.org/10.1007/s12144-021-01510-3

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Connor, K. M. (2020). *Stress, Burnout, and Experiential Avoidance in Clinical Psychology Doctoral Students* [Doctoral dissertation]. https://repository.lib.fit.edu/handle/11141/3254 Eglesias, M. E., Vallejo, R. B., & Fuentes, P. S. (2010). The relationship between experiential avoidance and burnout syndrome in critical care nurses: A cross-sectional questionnaire survey. *International Journal of Nursing Studies*, 47, 30-37. https://doi.org/10.1016/j.ijnurstu.2009.06.014

Eifert, G. H., & Forsyth, J. P. (2005). Acceptance and Commitment Therapy for Anxiety Disorders: A Practitioner's Treatment Guide to Using Mindfulness, Acceptance, and Values-

Based Behavior Change Strategies. New Harbinger Publications.

ESP. (2018). Teacher well-being index. Education Support Partnership. Retrieved from: https://www.educationsupportpartnership.org.uk/sites/default/files/teachers_wellbeing_index_2018.pdf

Fernet, C., Guay, F., Senécal, C., & Austin, S. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and Teacher Education*, 28(4), 514-525. https://doi.org/10.1016/j.tate.2011.11.013

Friedman, I. A. (1993). Burnout in teachers: The concept and its unique core meaning. *Educational and Psychological Measurement*, 53(4),1035-1044. https://doi.org/10.1177/0013164493053004016

Galhardo, A., Carvalho, B., Massano-Cardoso, I., & Cunha, M. (2020). Assessing teacherrelated experiential avoidance: Factor structure and psychometric properties of the teachers acceptance and action questionnaire (TAAQ-PT). *International Journal of School & Educational Psychology*, 1-10. https://doi.org/10.1080/21683603.2020.1760978

Gray, N. S., O'Connor, C., Knowles, J., Pink, J., Simkiss, N. J., Williams, S. D., & Snowden, R. J. (2020). The influence of the COVID-19 pandemic on mental well-being and psychological distress: Impact upon a single country. *Frontiers in Psychiatry*, *11*. https://doi.org/10.3389/fpsyt.2020.594115

Gilbert, P. (2009). *The compassionate mind: A new approach to life's challenges*. New Harbinger Publications.

Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53(1), 6-41. https://doi.org/10.1111/bjc.12043

Gilbert, P., Birdchwood, M., Gilbert, J., Trowper, P., Hay, J., Murray, B., Meaden, A., Olsen, K., & Miles, J. N. (2001). An exploration of evolved mental mechanisms for dominant

and subordinate behaviour in relation to auditory hallucinations in schizophrenia and criticalthoughtsindepression. PsychologicalMedicine, 31(6),1127. https://doi.org/10.1017/s0033291701004093

Gilbert, P., Baldwin, M. W., Irons, C., Baccus, J. R., & Palmer, M. (2006). Self-criticism and self-warmth: An imagery study exploring their relation to depression. *Journal of Cognitive Psychotherapy*, 20(2), 183-200. https://doi.org/10.1891/jcop.20.2.183

Gilbert, P., Clarke, M., Hempel, S., Miles, J., & Irons, C. (2004). Criticizing and reassuring oneself: An exploration of forms, styles and reasons in female students. *British Journal of Clinical Psychology*, *43*(1), 31-50. https://doi.org/10.1348/014466504772812959

Gilbert, P., Matos, M., Wood, W. & Maratos, F. (2020). The Compassionate Mind and the Conflicts between Competing and Caring: Implications for Educating Young Minds. In M.I. Coles with B. Gent (Eds) *Education For Survival: The Pedagogy of Compassion* (pp. 44-76). London: Trentham Books, UCL IOE Press.

Harris, R. (2019). *ACT made simple: An easy-to-Read primer on acceptance and commitment therapy*. New Harbinger Publications.

Hayes, A. F. (2018). Introduction to Mediation, Moderation, and Conditional Process Analysis, Second Edition: A Regression-Based Approach. New York, NY: Guilford Publications

Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, *64*(6), 1152-1168. https://doi.org/10.1037/0022-006x.64.6.1152

Hinds, E., Jones, L. B., Gau, J. M., Forrester, K. K., & Biglan, A. (2015). Teacher distress and the role of experiential avoidance. *Psychology in the Schools*, 52(3), 284-297. https://doi.org/10.1002/pits.21821

Ilias, I., Mantziou, V., Vamvakas, E., Kampisiouli, E., Theodorakopoulou, M., Vrettou, C., Douka, E., Vassiliou, A. G., Orfanos, S., Kotanidou, A., & Dimopoulou, I. (2021). Post-Traumatic Stress Disorder and Burnout in Healthcare Professionals During the SARSCoV- 2 Pandemic: A Cross-Sectional Study. *The Journal of Critical Care Medicine*, *7*(1), 14-20. DOI: 10.2478/jccm-2020-0042

Instituto Nacional de Saúde Doutor Ricardo Jorge. (2020). Relatório final: SM-COVID19 -

Saúde mental em tempos de pandemia.

Ivbijaro, G., Brooks, C., Kolkiewicz, L., Sunkel, C., & Long, A. (2020). Psychological impact and psychosocial consequences of the COVID 19 pandemic. Resilience, mental well-being, and the coronavirus pandemic. *Indian Journal of Psychiatry*, *62*(9), 395.

https://doi.org/10.4103/psychiatry.indianjpsychiatry_1031_20

Leary, M. R., Tate, E. B., Adams, C. E., Batts Allen, A., & Hancock, J. (2007). Selfcompassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology*, 92(5), 887-904. https://doi.org/10.1037/0022-3514.92.5.887

Levin, M. E., Maclane, C., Daflos, S., Seeley, J. R., Hayes, S. C. Biglan, A., & Pistorello, J. (2014). Examining psychological inflexibility as a transdiagnostic process across psychological disorders. Journal of Contextual Behavioral science, 3(3), 155-163. https://doi.org/10.1016/j.jcbs.2014.06.003

Lovibond, P., & Lovibond, S. (1995). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, *33*(3), 335-343. https://doi.org/10.1016/0005-7967(94)00075-u

Kirby, J. N., Day, J., & Sagar, V. (2019). The 'Flow' of compassion: A meta-analysis of the fears of compassion scales and psychological functioning. *Clinical Psychology Review*, *70*, 26-39. https://doi.org/10.1016/j.cpr.2019.03.001

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.

Kline, R. B. (2005), *Principles and Practice of Structural Equation Modeling* (2nd Edition ed.). New York: The Guilford Press

Kyriacou, C. (1987). Teacher stress and burnout: An international review. *Educational Research*, 29(2), 146-152. https://doi.org/10.1080/0013188870290207

Kumar, A., & Nayar, K. R. (2020). COVID 19 and its mental health consequences. *Journal of Mental Health*, 30(1), 1-2. https://doi.org/10.1080/09638237.2020.1757052

MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review*, *32*(6), 545-552. https://doi.org/10.1016/j.cpr.2012.06.003

Maratos, F. A., Montague, J., Ashra, H., Welford, M., Wood, W., Barnes, C., Sheffield, D., & Gilbert, P. (2019). Evaluation of a compassionate mind training intervention with school teachers and support staff. *Mindfulness*, *10*(11), 2245-2258. https://doi.org/10.1007/s12671-019-01185-9

Matos, M., McEwan, K., Kanovský, M., Halamová, J., Steindl, S. R., Ferreira, N., Linharelhos,
M., Rijo, D., Asano, K., Gregório, S., Márquez, M. G., Vilas, S. P., Brito-Pons, G., Lucena-Santos, P., Silva Oliveira, M., Souza, E. L., Llobenes, L., Gumiy, N., Costa, M. I., . . . Gilbert,
P. (2021). Fears of compassion magnify the harmful effects of threat of COVID-19 on mental health and social safeness across 21 countries. *Clinical Psychology & Psychotherapy*.
Published. https://doi.org/10.1002/cpp.2601

Matos, M., Palmeira, L., Albuquerque, I., Cunha, M., Lima, M.P., Galhardo, A., McEwan, K., Petrocchi, N., Maratos, F., & Gilbert, P. (2021). *Nurturing Compassionate Schools: A randomised controlled study of the efficacy of a compassion mind training program for teachers.* Manuscrito submetido para publicação

Matos, M., Pinto-Gouveia, J., & Martins, S. (2011). O Impacto traumático de experiências de vergonha: Estudo das propriedades psicométricas da versão portuguesa da impact of event scale - Revised. *Psychologica*, (54), 413-438. https://doi.org/10.14195/1647-8606_54_16

Melamed, S., Shirom, A., Toker, S., Berliner, S., & Shapira, I. (2006). Burnout and risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions. *Psychological Bulletin*, *132*(3), 327-353. https://doi.org/10.1037/0033-2909.132.3.327

McGinty E.E., Presskreischer R., Han H., Barry C.L. Psychological distress and loneliness reported by US Adults in 2018 and April (2020). *JAMA*. (2020) 324:93–4. doi: 10.1001/jama.2020.9740

Mitani, S., Fujita, M., Nakata, K., & Shirakawa, T. (2006). Impact of post-traumatic stress disorder and job-related stress on burnout: A study of fire service workers. *The Journal of Emergency Medicine*, *31*(1), 7-11. https://doi.org/10.1016/j.jemermed.2005.08.008

Neff, K. (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2(2), 85-101. https://doi.org/10.1080/15298860309032

Pais-Ribeiro, J. L., Honrado, A., & Leal, I. (2004). Contribuição para o estudo da adaptação portuguesa das escalas de ansiedade, depressão e stress (EADS) de 21 itens de Lovibond e Lovibond. *Psicologia, saúde & doenças, 5*(2), 229-239.

Paulino, M., Dumas-Diniz, R., Brissos, S., Brites, R., Alho, L., Simões, M. R., & Silva, C. F. (2020). COVID-19 in Portugal: Exploring the immediate psychological impact on the general population. *Psychology, Health & Medicine, 26*(1), 44-55. https://doi.org/10.1080/13548506.2020.1808236

Pierce, M. Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., Kontopantelis, E., Webb, R., Wessely, S. McManus, S., & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. *The Lancet Psychiatry*, *7*(10), 883–892. https://doi.org/10.1016/s2215-0366(20)30308-4

Pressley, T. (2021). Factors contributing to teacher burnout during COVID-19. *Educational Researcher*, 50(5), 325-327. https://doi.org/10.3102/0013189x211004138

Randhawa, G. (2009). teachers stress: search for the right vision. *NICE Journal of Business*, 4(1), 81-88

Reich, J. Buttimer, C. J., Coleman, D., Coldwell, R., Farugi, F., & Larke, L. R. (2020, July). What's Lost, What's Left, What's Next: Lessons Learned From The lived Experience Of teachers During The Pandemic. Retrieved from https://edarxiv.org/8exp9

Rossi R., Socci V., Talevi D., Mensi S., Niolu C., Pacitti F., Di Marco A., Rossi A., Siracusano A. & Di Lorenzo G. (2020) COVID-19 Pandemic and lockdown measures impact on mental health among the general population in Italy.*Front. Psychiatry* 11:790. doi: 10.3389/fpsyt.2020.00790

Russell, D. W., Altmaier, E., & Van Velzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. *Journal of Applied Psychology*, 72(2), 269-274. https://doi.org/10.1037/0021-9010.72.2.269

Serafini, G., Parmigiani, B., Amerio, A., Aguglia, A., Sher, L., & Amore, M. (2020). The psychological impact of COVID-19 on the mental health in the general population. *QJM: An International Journal of Medicine*, *113*(8), 531–537. https://doi.org/10.1093/qjmed/hcaa201 Tirch, D., Schoendorff, B., & Silberstein, L. R. (2014). *The ACT practitioner's guide to the*

science of compassion: Tools for fostering psychological flexibility. New Harbinger

Publications.

Varela, R. C., Santa, R., Silveira, H., de Matos, C., Rolo, D., Areosa, J., & Leher, R. (2018).
Inquérito nacional sobre as condições de vida e trabalho na educação em Portugal (INCVTE)
– Preliminary report. FENPROF. Retrieved from

https://www.fenprof.pt/Download/FENPROF/M_Html/Mid_332/Anexos/JF_INCVTE_20182 .pdf

Weiss, D. S., & Marmar, C. R. (1997). The Impact of Event Scale-Revised. In J. P. Wilson and T. M. Keane (Eds.), Assessing psychological trauma and PTSD (pp. 399-411). New York: The Guilford Press.

Wang, S., Zhang, Y., Ding, W., Meng, Y., Hu, H., Liu, Z., Zeng, X., & Wang, M. (2020). Psychological distress and sleep problems when people are under interpersonal isolation during an epidemic: A nationwide multicenter cross-sectional study. European Psychiatry, 63(1). https://doi.org/10.1192/j.eurpsy.2020.78

World Health Organization. (WHO) (2020). Mental health and COVID-19. https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/publications-and-technical-guidance/noncommunicable-diseases/mental-health-and-covid-19

Zadok-Gurman, T., Jakobovich, R., Dvash, E.; Zafrani, K, Rolnik, B.; Ganz, A.B., Lev-Ari,
S. (2021) Effect of Inquiry-Based Stress Reduction (IBSR) Intervention on Well-Being,
Resilience and Burnout of Teachers during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health*, *18*, 3689.

Žižanović, S., Pranjić, S. S., & Radovanović, M. (2021). Educational challenges of emergency remote teaching and learning during the coronavirus crisis. In *INTCESS 2021 8th International Conference on Education and Education of Social Sciences*.