

Universidade do Minho
Escola de Psicologia

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Short-term psychological impact of the confinement due to COVID-19: the role of personality and emotional regulation



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University of Minho, 4th of September of 2020

Ana Daniela Duarte Costa

Mãe, Pai, Mary, Francisco, Alexandra, Ana, Pinta, Rita, Edu, Pato, Carla, Cris, Filipa, Magda, Sara,
Rute, Daniela, Bia, família (padrinho), this wasn't possible without you.

UMinho (colleagues, teachers and my wise supervisors) it was a pleasure to trace my path here!

STATEMENT OF INTEGRITY

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University of Minho, 4th of September of 2020

Ana Daniela Duarte Costa

Impacto psicológico a curto-prazo do confinamento devido à COVID-19: o papel da personalidade e regulação emocional

Resumo

Portugal vive, desde março, assolado com o aparecimento dos primeiros casos de COVID-19 e com o consequente confinamento social imposto até ao mês de maio. A pandemia e as respetivas medidas de proteção, acarretam um impacto económico, social e psicológico enorme. Este último tem sido reportado em diversos estudos, nos quais se verificou que as características de personalidade e competências de regulação emocional dos indivíduos, poderão influenciar a resposta psicológica ao confinamento pela COVID-19. Neste sentido, este estudo visa avaliar o impacto da pandemia na saúde mental da população portuguesa ao longo do tempo, e verificar a relação entre as características disposicionais dos sujeitos e a emergência de consequências nefastas a nível psicológico nos diferentes momentos desta. Cento e vinte e nove participantes residentes em Portugal, com idades compreendidas entre os 18 e os 77 anos participaram na investigação. O impacto psicológico foi avaliado ao longo de três momentos com base nos sintomas de depressão, ansiedade e stress (EADS-21): durante o estado de emergência nacional (33 dias após o seu início); no primeiro dia de desconfinamento; e um mês após o fim do confinamento. Os resultados demonstram a existência de diferenças estatisticamente significativas na sintomatologia avaliada pela EADS-21 ao longo do tempo, traduzidas num decréscimo da primeira avaliação para o seguimento de um mês. Adicionalmente, níveis elevados de neuroticismo e de dificuldades de regulação emocional surgem associadas a um maior impacto ao nível psicológico e, contrariamente, o uso de reavaliação cognitiva parece estar associado a uma atenuação desse mesmo. É importante salientar também a influência que a extroversão e conscienciosidade parecem exercer indiretamente sobre a saúde mental (i.e., através da adesão a comportamentos de saúde pública). Desta forma, este estudo evidencia a capacidade de adaptação dos participantes à pandemia e contribui para a confirmação do papel da personalidade e da regulação emocional na resposta a esta.

Palavras-chave: confinamento, COVID-19, saúde mental, personalidade, regulação emocional

Short-term psychological impact of the confinement due to COVID-19: the role of personality and emotional regulation

Abstract

Since March, Portugal has been devastated by the appearance of the first cases of COVID-19 and the consequent social confinement imposed until the month of May. The pandemic and its protective measures entail a huge economic, social and psychological burden. The latter has been reported in several studies, in which there was evidence that the personality traits and emotional regulation skills of the subjects may influence the psychological response to the confinement by COVID-19. In this sense, this study aims to evaluate the impact of the pandemic on the mental health of the Portuguese population over time, and to examine the relationship between the dispositional characteristics of the subjects and the emergence of harmful psychological consequences in its different moments. One hundred and twenty-nine residents of Portugal, aged between 18 and 77, participated in the research. The psychological impact was assessed over three moments based on the symptoms of depression, anxiety and stress (DASS-21): during the national state of emergency (33 days after its onset); in the first day of deconfinement; and one month after the end of lockdown. The results show statistically significant differences in the symptoms evaluated by DASS-21 over time, translated into a decrease from the first evaluation to the one-month follow-up. Additionally, high levels of neuroticism and emotional regulation difficulties are associated with a greater psychological impact and, conversely, the use of cognitive reappraisal seems to be associated with an attenuation of it. It is also important to emphasize that extroversion and conscientiousness seem to indirectly influence mental health (i.e., through adherence to public health behaviours). Thus, this study highlights the capacity of participants to adapt to the pandemic and contributes to the confirmation of the role of personality and emotional regulation in the response to COVID-19.

Keywords: confinement, COVID-19, mental health, personality, emotional regulation

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Short-term psychological impact of the confinement due to COVID-19: the role of personality and emotional regulation

The world is experiencing a new public health crisis since December of 2019 – the COVID-19 outbreak. First appeared in China and rapidly spread around the world, the new coronavirus lead to a state of pandemic and public health emergency as declared by the World Health Organization (Zhang, Wu, Zhao, & Zhang, 2020). By the 29th of June 2020, there were 10,327,275 confirmed cases of COVID-19 and 505,956 fatalities worldwide (WHO, 2020). In Portugal, the first case of COVID-19 was reported in March of 2020, and by the end of June, the updated epidemiological situation evidenced 41,912 reported cases and 1,568 deaths related to COVID-19 (DGH, 2020).

The virus, known as SARS-CoV-2, can be transmitted through contact with fluids of infected people, thus being recommended the social distancing and self-protection of people worldwide (Chan et al., 2020; Chen et al., 2020; Luo et al., 2020). Furthermore, its contagious nature, coupling with the unavailability of vaccine (Bavel et al., 2020) and the threat of death (Chen et al., 2020), obligated many countries to impose the state of mass containment (Zheng, Yao, & Narayanan, 2020). Inserted within the national state of emergency, it consists of a temporary restriction of the civilian rights, expressed in terms of mandatory confinement at their homes and with very few justifications to leave (i.e., only ensuring basic needs; Wilder-Smith & Freedman, 2020). In Portugal, this measure was declared on the 18th of March and ended on the 3rd of May 2020 (DGH, 2020).

Despite the effectiveness of public health measures adopted to reduce the spreading of contagious virus, they negatively impact people's lives at a biopsychosocial and economical level (Brooks et al., 2020). Because they are forced to stay home, restrict their face-to-face contact with those who live there, modify their work modality, or suspend it completely, people must adapt. This challenging situation potentially increases the level of anxiety and distress conveyed naturally by changes (Hossain, Sultana, & Purohit, 2020), therefore being crucial to address the impact of the COVID-19 at people's psychological health in order to help them cope with this odd situation.

Psychosocial Impact of past and present public health crises

During the experience of confinement, regardless of its nature (i.e., isolation, quarantine or mass containment), isolation ends up being inherent and its effects evidenced in the form of boredom, stigma, and increased interpersonal distance (Cava, Fay, Beanlands, McCay, & Wignall, 2005; DiGiovanni, Conley, Chiu, & Zaborski, 2004). Unquestionably, the normal pattern of interpersonal relationships of people is negatively disrupted, leading to separation from family and friends and the emergence of conflict. Whether it's within families or in hospital settings, people seem to display tension in their

interpersonal transactions (Hall, Norwood, Fullerton, Gifford, & Ursano, 2008; Maunder et al., 2003). All of the above contribute to the loss of social support, the decrease of the feeling of belongingness, and loneliness (DiGiovanni et al., 2004; Hawryluck et al., 2004; Holloway, Norwood, Fullerton, Engel, & Ursano, 1997; Maunder et al., 2003).

Several studies reported that the social impact by itself increases the chances of developing mood and anxiety disorders (C. Xiao, 2020) and exacerbates the levels of symptomatology previously existent (H. Xiao, Zhang, Kong, Li, & Yang, 2020). Indeed, most of the people that ever faced past epidemics display some of the following: persistent low mood, irritability (Lee, Chan, Chau, Kwok, & Kleinman, 2005), anxiety (Jeong et al., 2016), depression (Catalano et al., 2003; Davies & Rees, 2000; Gammon, 1998), anger (Jeong et al., 2016; Kennedy & Hamilton, 1997), or any kind of distress and emotional problems (DiGiovanni et al., 2004). Further persistence of the symptomatology can lead to more severe outcomes, as diagnoses of stress acute disorder (Bai et al., 2004), post-traumatic stress (PTSD), adjustment disorder, and grief (Sprang & Silman, 2013).

Past research helps to illustrate all the mentioned impact at the psychosocial level. From Severe Acute Respiratory Syndrome (SARS; Reynolds et al., 2008), to influenza A (H1N1; Sprang & Silman, 2013) or even Middle East Respiratory Syndrome (MERS; Kim, Yoo, Lee, Lee, & Shin, 2018), it is possible to understand the damaging effects of being quarantined or simply facing an epidemic since the great majority of people exhibit psychological and/or social consequences (Hawryluck et al., 2004; Jeong et al., 2016) that could even manifest in the form of psychotic symptoms (Kim et al., 2018; Maunder et al., 2003).

Recent studies about the COVID-19 evidenced similar findings (e.g. Mazza et al., 2020; Moghanibashi-Mansourieh, 2020; Wang, Pan, Wan, Tan, Xu, McIntyre, et al., 2020). For example, Wang and colleagues (2020) addressed the immediate impact of the outbreak in China and found out that 50% of the respondents reported moderate to severe impact. Similarly, Qui and others (2020) in China, and González-Sanguino (2020) in Spain, screened people in terms of indexes of distress and found out that almost 35% of the respondents in the first, and more than 16% in the latter exhibited them. Moreover, Liu and colleagues (2020) in China, and Ramírez, Arriaga, Hernández-Gonzalez and De la Roca-Chiapas (2020) in Mexico, demonstrated the emergence posttraumatic stress symptoms after the outbreak in 7% and 28% of the people, respectively.

Although most of these responses are normative (Hossain et al., 2020), it is important to evaluate the impact that they have in people's lives throughout different moments of the pandemic, and to

understand the mechanisms underlying their coping or the establishment of more rigid patterns of malfunctioning. (Serafini et al., 2020).

The effect of personality traits and emotional regulation strategies

Personality is defined as the dispositional nature of humans that accounts for a complete set of their reactions to a specific situation (i.e., cognitive, behavioural and emotional; McCrae & Costa, 1995). These individual traits are developed across time in the exchanges with the prevailing culture and they become relatively crystalized in adulthood. The Big Five (Big 5) theory of personality states that five main traits can describe a human's personality (Goldberg, 1990): Neuroticism (vs emotional stability), the overall tendency to experience negative emotions and to exhibit a maladaptive adjustment; Extraversion (vs introversion), the ability to be people-oriented, to demonstrate positive emotions and to be active; Openness (vs conservatism), the adaptability, curiosity, and interest for the exploration of the unknown; Conscientiousness (vs disorganization), the tendency to be goal-oriented and employ a great amount of method and persistence in that; and Agreeableness (vs antagonism), the capacity to be transparent and passionate in the interpersonal transactions. Within these traits, high neuroticism seems to be highlighted as having the biggest weight over the emergence of psychopathology, but also low conscientiousness and introversion are referred to as having an association with mental disorders (Walton & Pavlos, 2015).

The association between personality and the psychological impact of COVID-19 has been explored in several studies (e.g. Carvalho, Pianowski, & Gonçalves, 2020). Neurotic traits have been mentioned as posing an additional burden in the response to major health crises such as the case of COVID-19 (Kroencke, Geukes, Utesch, Kuper, & Back, 2020). It seems that the tendency to feel negative affect on a daily basis and the excessive attention paid to information regarding threat exacerbates the negative outcomes of the mentioned health emergency (Kroencke et al., 2020). For instance, Somma and colleagues (2020) discovered that emotional problems resultant of the first month of social distancing in Italy were best predicted by negative affectivity (i.e., an important dimension of neuroticism). Similarly, Flesia, Fietta, Colicino, Segatto, and Monaro (2020), and Michinov's (2020) explored the experience of lockdown in Italy and France, respectively, and discovered that emotional stability was a protective factor against the development of negative outcomes, being acute stress in the first and anxiety, loneliness and stress in the latter. Moccia and colleagues (2020) also explored the influence of dysfunctional traits over the psychological distress due to COVID-19 and showed the association of depressive and cyclothymic temperaments in the emergence of severe outcomes. As a matter of fact, the previous study allowed to understand the negative effect of two dimensions of the neurotic personality: the tendency to centre

oneself in the negative aspects (i.e., in the depressive temperament) and the disruptive nature of the emotional instability (i.e., in the cyclothymic).

Other dimensions of the Big 5 seem to be indirectly associated with the psychological consequences of the pandemic since they have the power to influence compliance with public health measures. In fact, extroverts tend to obtain meaning and self-value through their interpersonal connections, therefore influencing their difficulty in accepting social distancing (Carvalho et al., 2020). By contrast, conscientious persons are extremely oriented by rules and social norms, making it personally relevant for them to follow health measures that could protect themselves and the others around them (Jonason & Sherman, 2020).

On the other side, considering the centrality of emotionality in human's life, being capable of altering the flow of an emotion in terms of duration, intensity and valence (Young, Sandman, & Craske, 2019) is crucial and adaptive. Besides, emotional regulation has the power to equip humans with greater flexibility and ends up being protective of their mental health (Kalsch, 2009). In this line, emotional regulation not only allows people to adequate their emotional expression to the context (Appelhans & Luecken, 2006; Gross, 1998) but also to mitigate the impact of negative emotion, either by selecting an optimal response within a broader repertoire or by simply ceasing its expression.

The literature points out the protective role of the employment of adaptative strategies (Schimmenti, Billieux, & Starcevic, 2020) and the reverse effect posed by dysfunctional practices (Jungmann & Witthöft, 2020). Cognitive reappraisal (i.e., alteration of the meaning attributed to the emotional experience; Webb, Miles, & Sheeran, 2012), problem-solving (i.e., active coping to change or remove the source of distress), and acceptance are consistently grouped based on their protective role in mental health, given their ability to either alter the whole emotional trajectory or to properly respond to it. By contrast, suppression (i.e., blockage of the behavioural manifestation), rumination (i.e., intrusive and repetitive thoughts focused on the emotional experience; Nolen-Hoeksema, 1991), and avoidance (i.e., disregard of the emotional states) are widely considered risk factors for the emergence of psychopathology considering their incapacity to cease the emotional state or even enhance it (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Gross & John, 2003).

Considering the COVID-19 pandemic, a study by Jiang, Nan, Lv, and Yang (2020), explored the emergence of posttraumatic stress symptoms among Chinese people and demonstrated that, regardless of the severity of the symptoms, they were positively associated with emotional suppression and negatively with cognitive reappraisal. Similarly, Garcia-Batista and collaborators (2020) demonstrated that the contact of health care workers with patients infected increased the use of emotional suppression, but as

the contact by itself didn't affect the perception of stress, it seems that emotional suppression is influencing stress, whereas cognitive reappraisal posited the opposite effect. Hamidein, Hatami, and Rezapour (2020) demonstrated that when facing negative emotions due to exposure to the news of the pandemic, people exhibit greater resilience when they were more flexible and used multiple emotional regulation strategies than when they relied on one single strategy. The strategies mainly used were problem-solving and reappraisal, which goes in line with the discovery of Jungmann and Witthöft (2020), who found out that higher adaptative emotional regulation leads to less anxiety regarding the virus. The mentioned studies help to consolidate the idea that difficulties in regulating emotions are a major threat to human's health and well-being (Görge, Hiller, & Witthöft, 2014).

To conclude, both personality and emotional regulation abilities seem to fulfil an important role regarding humans' reactions to events (Jonason & Sherman, 2020) and influence their propensity to exhibit psychopathology and maladaptive outcomes, which highlights the relevance of addressing it in the context of the current pandemic (Schimmenti et al., 2020; Somma et al., 2020).

Aims and Hypothesis

Recent published studies highlighted the clinical symptoms of patients infected with COVID-19 and how this disease has been spreading all over the world. However, only a few studies have reported the impact of the COVID-19 pandemic on mental health and the role of personality traits and emotional regulation strategies.

The current pandemic set an unprecedented scenario for most people worldwide, especially in Portugal, which didn't face any health crisis in the past century. Therefore, this study assessed the impact of the COVID-19 confinement in a cohort of Portuguese adults, according to the levels of anxiety, depression and stress reported in three temporal moments: during the national state of emergency (33 days after its beginning); in the first day of deconfinement (15 days after the previous assessment); and one month after the end of lockdown.

As the reality of the pandemic lived in Portugal was only assessed regarding the immediate outcomes and external conditions (e.g. living conditions, practice of physical exercise, ...) that could influence the population adaption to the stressful event (in Moreira et al., 2020), this project aims to go a step further and understand the internal predisposition (i.e., in terms of personality and emotional regulation skills) to develop an adverse reaction to COVID-19 and explore its unfolding across different temporal moments (i.e., during and after the national state of emergency).

In sum, it is expected that the COVID-19 outbreak will negatively impact the psychological health of the participants (Brooks et al., 2020; Hossain et al., 2020), evidenced in terms of the levels of anxiety,

stress and depression. However, that effect is thought to be worst during the confinement period, especially at the time of the second evaluation (due to the cumulative burden of such restrictive measures; Reynolds et al., 2008), and that one month after deconfining, people are expected to show the better outcomes. Furthermore, these main effects at psychological level are hypothesized to be positively associated with neuroticism and difficulties in emotional regulation (i.e., worst symptomatology will be related to higher neuroticism and more prevalence of difficulties), in opposition to other personality profiles and adequate strategies to cope with the emotions.

Method

General description

This dissertation report is part of the result of a larger project entitled “The impact of the COVID-19 pandemic on physical, mental, social health and the feeling of personal security: a longitudinal study”, approved by the Ethics Committee for Social and Human Sciences of the University of Minho (CEICSH 036/2020). The study was designed to evaluate the effects of the COVID-19 pandemic in a cohort of Portuguese people, in two distinct phases (Confinement and Post-Confinement):

Phase C. Assessment of the impact of the pandemic during the national state of emergency for a period of 15 consecutive days (20th of April to 4th of May). Twice a day during this phase, two short questionnaires were filled, the Self-Assessment Manikin (SAM) and the Visual and Analogue Scale (VAS), accounting for morning and afternoon assessments (C1 to C30). The SAM (Portuguese translation of Carvalho & Leite, 2015) and VAS (experimental version adapted by Carvalho, 2020) are both visual analogue scales, the first used to assess the emotional state of the respondents according to valence, arousal and dominance, and the latter created for this project to monitor possible sources of discomfort, pain and restlessness of the participants, at physical and mental level. The first and last assessments (C1 and C30) were more extensive in order to have a better characterisation of each participant and are the only ones considered for the purposes of this dissertation;

Phase PC. Follow-up assessment of the outcomes the pandemic up until one year after the Phase C. This phase aims to address the long-term effects of the COVID-19 outbreak in Portugal, especially in terms of psychological health as seen by the emergence or maintenance of mood and post-traumatic stress disorders. During this stage, follow-ups will take place one (PC1), six (PC6) and 12 (PC12) months after the mass confinement period. In this dissertation results are only reported up to one month follow up (i.e., PC1).

Figure 1 presents a schematic representation of the study, highlighting in bold and with an asterisk the moments explored for the purposes of this master thesis.

SHORT-TERM PSYCHOLOGICAL IMPACT OF THE CONFINEMENT DUE TO COVID-19

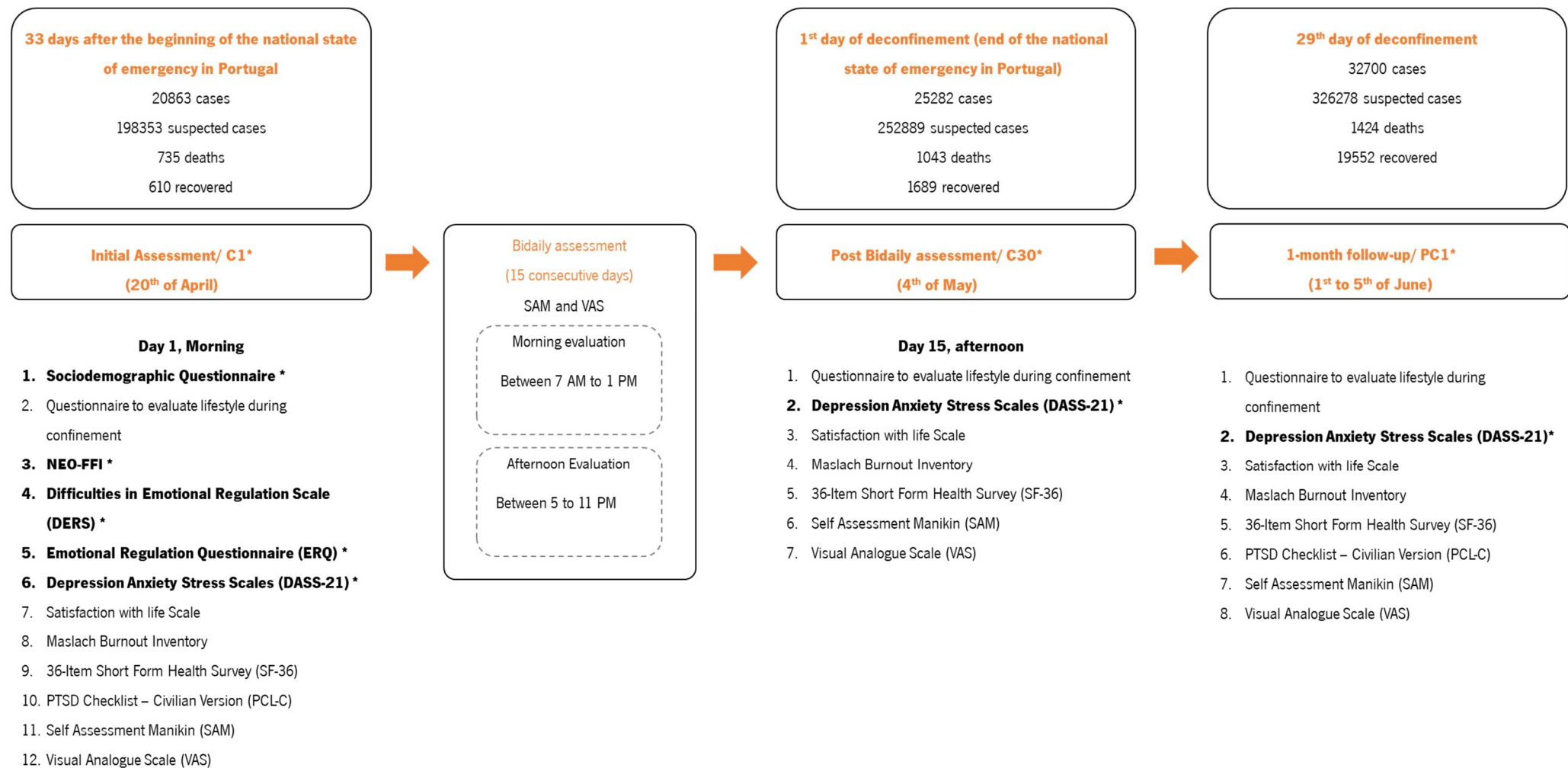


Figure 1. Schematic representation of “The impact of the COVID-19 pandemic on physical, mental, social health and the feeling of personal security: a longitudinal study”.

The moments (C1, C30 and PC1) and questionnaires in bold and with an * were selected to report in this dissertation. Only DASS-21 was considered as a repetitive measure.

Participants

A total of one hundred and twenty-nine Portuguese participants, living in Portugal at the time of COVID-19 outbreak, and aged between 18 and 77 years old ($M = 29.84$, $SD = 14.49$) participated in the present study.

The sample was mostly constituted by female participants (69.8%), living in the north of the country (83.7%), region represented by the cities of Braga, Bragança, Oporto, Viana do Castelo and Vila Real. The mean number of family members was 3.37 ($SD = 1.22$) and the mean number of descendants and ascendants directly dependent on the respondents was 0.47 ($SD = 0.89$) and 0.35 ($SD = 0.89$), respectively. Moreover, 71.3% of the participants were single and half of them (54.3%) still had their studies as a full-time occupation. Indeed, the present sample was highly educated, having only 7.7% with a degree inferior to secondary school. Due to COVID-19, 86 participants (66.7%) were studying or performing their jobs from home. To conclude, the generality of the sample (80.6%) was perfectly healthy, without any history of medical or psychiatric diseases. Further information regarding the sociodemographic characteristics of the participants is available on Table 1.

Table 1.

Sociodemographic variables distribution

	<i>n</i>	%
Sex		
Female	90	69.8
Male	39	30.2
Residency		
North	108	83.7
Centre (Aveiro, Castelo Branco, Leiria, Lisbon, Santarém)	17	13.2
South (Setubal)	2	1.6
Islands (Azores and Madeira)	2	1.6
Marital status		
Single	92	71.3
Married	26	20.2
Consensual Union	1	0.8
Divorced	9	7.0
Widowed	1	0.8

SHORT-TERM PSYCHOLOGICAL IMPACT OF THE CONFINEMENT DUE TO COVID-19

Academic degree		
Inferior to 9 th grade	7	5.4
9 th grade	3	2.3
Secondary School (12 th grade)	57	44.2
Bachelor's degree	41	31.8
Pre-Bologna bachelor's degree	4	3.1
Master	16	12.4
PhD	1	0.8
Occupation		
Student	70	54.3
Working student	5	3.9
Employed	46	35.7
Unemployed	4	3.1
Retired	4	3.1
Work Modality		
Presential work/classes	16	12.4
Tele work/classes	86	66.7
Suspended/unemployed	27	21.0
Medical History		
Without history	104	80.6
Psychiatric illnesses	10	7.8
Neurologic illnesses	2	1.6
Other medical condition	13	10.1
<i>N</i>	129	100

Instruments

This section will describe in detail only the instruments used for the purposes of this dissertation. The initial evaluation (C1) happened 33 days after the imposition of the national state of emergency in Portugal and comprised the following five questionnaires.

Sociodemographic questionnaire (experimental version of Carvalho, 2020). A 15-item questionnaire of direct or multiple-choice answers, that has as primary goal the demographical, medical and academic or professional characterisation of the participants. It takes only three minutes to

fill in and includes questions about age, gender, nationality, marital status, number of dependents, educational degree, professional activity and changes in work regime during the mandatory confinement.

NEO-FFI (Portuguese version of Magalhães et al., 2014). The shorter version of the NEO-PI-R takes 15 minutes to complete and has 60 items rated in a five-point Likert scale, ranging from zero (completely disagree) to four (completely agree). This scale aims to characterise the cognitions, behaviours and emotions of the participants regarding five personality dimensions: openness to experience (Cronbach's alpha, $\alpha = 0.71$), conscientiousness ($\alpha = 0.81$), extroversion ($\alpha = 0.75$), agreeableness ($\alpha = 0.72$) and neuroticism ($\alpha = 0.81$). Higher scores represent a greater presence of the given facet in a person's personality and lower scores indicate the opposite.

Difficulties of Emotion Regulation Scale (DERS; Portuguese version of Coutinho, Ribeiro, Ferreira, & Dias, 2010). The 36-items scale assesses in a five-point Likert scale the main difficulties exhibited in terms of emotional regulation (each subscale with $\alpha > 0.75$). The facet of difficulties in Clarity evidences a state of confusion and lack of understanding of the current feelings and their meaning (e.g. "I have no idea how I am feeling"), whereas the difficulties in Awareness captures the attentional resources and interest allocated in the understanding the emotional states (e.g. "I pay attention to how I feel"). The Non-acceptance subscale accounts for the difficulties in reacting positively to the current feelings, therefore exhibiting anger, guilt or embarrassment (e.g. "When I'm upset, I feel guilty for feeling that way"). The dimension of Goals describes the inability to abstain from the emotional state and accomplish other tasks (e.g. "When I'm upset, I have difficulty focusing on other things"), while the Impulses entail the overwhelming experience of the emotions and lack of control over the own behaviour (e.g. "When I'm upset, I become out of control"). To conclude, difficulties in Strategies represent a total resignation and incapacity to see and act in order to obtain a better outcome of the present emotional situation (e.g. "When I'm upset, I believe that wallowing in it is all I can do"). The overall score of DERS ($\alpha = 0.92$) can be calculated through the sum of all the items and it represents the general difficulties exhibited in emotional regulation, being higher scores representative of worst adjustment.

Emotional Regulation Questionnaire (ERQ; Portuguese version of Vaz, Martins, & Martins, 2008). The ERQ is a self-report measure and comprises 10 items that reflect the tendency of the participants to employ two emotional regulation strategies: cognitive reappraisal (e.g. "I control my emotions by changing the way I think about the situation I'm in") and emotional suppression (e.g. "I control my emotions by not expressing them"). The first subscale has six items with an alpha of Cronbach of 0.76, whereas the latter has four items with an alpha of Cronbach of 0.65, all rated from one (totally disagree) to eight (totally agree). The complete scale can be filled in in about two minutes.

Depression, Anxiety and Stress Scales (DASS-21; Portuguese version of Pais-Ribeiro, Honrado, & Leal, 2004). This scale is subdivided in three, namely: Depression ($\alpha = 0.85$), Anxiety ($\alpha = 0.74$) and Stress ($\alpha = 0.81$), each of them constituted by seven items. The items of the corresponding subscale describe emotionally negative symptoms that are rated according to the degree of appliance to the participant, being zero “not applied at all” and three “applied to me most of the times”. The anxiogenic symptomatology (e.g. “I experienced breathing difficulty in the absence of physical exertion”) is considered within normal ranges if it is below four, the depressive (e.g. “I couldn’t seem to experience any positive feeling at all”) if it’s below five and the stress (e.g. “I found it difficult to relax”) if it is below eight. In contrast anxiety scores over ten, depressive scores over fourteen and stress indexes higher than seventeen were labelled as extremely severe symptomatology.

The three evaluations (on C1, C30 and PC1) comprised as methodological setting of this study are very similar to one another. The C30 survey was presented in the last day of phase C (also first day of deconfinement in Portugal) and comprised all the questionnaires of C1 but the Sociodemographic, the NEO-FFI, DERS and ERQ (removed due to the stable nature of the constructs assessed). The PC1 (i.e., one-month of deconfinement) only differed from C30 in one scale (PCL-C), but for the matter of this study, the DASS-21 was the only scale considered in all the evaluations.

Procedure

The project consisted in a web-based survey developed in the platform Google forms and divulgated within the contact network of the researchers involved. Interested adult volunteers were only eligible if they were Portuguese living in Portugal, if they were able to read, understand and manifest consent, and if they were capable to complete the study autonomously.

The study started on the morning of the 20th of April of 2020, with the sending of the first participation link (C1) to the participants who agreed to be included beforehand. The informed consent with the conditions and procedure of the present study, as well as the participants’ rights, was then presented. If the subjects agreed to start their unrewarded participation, they would proceed with the completion of the C1 questionnaire, which took about thirty minutes to fill in. This assessment aimed to characterize the participants at the sociodemographic level, their lifestyle during the COVID-19 epidemic, their physical and mental health, and the overall perceived impact on their sense of security.

As the phase C mainly consisted of bidaily assessments (C1 to C30), in the first assessment participants were asked to provide their e-mail or phone number in order to receive reminders to complete the questionnaires in the designated time. Moreover, this was also the mean of communication used to send the link to the last questionnaire of phase C (C30) on the 4th of May, and the one-month follow-up

(PC1) on the first week of June. From C1 (20th of April) to C30 (4th of May), the assessments coincided with the national state of emergency in Portugal and at one-month follow-up (1st to 5th of June), Portugal was already facing deconfinement for at least 29 days.

All the study procedures here described followed the ethical requirements for human research in accordance with the Code of Ethical Principles for Medical Research Involving Humans Subjects outlined in the Declaration of Helsinki.

Data analysis

To analyse the data addressed in the present dissertation, it was used the Statistical Package for the Social Science (SPSS), version 26.0. Descriptive analyses were performed to characterize the sample, withdrawing the mean and standard deviation of their age, number of household members, number of dependents and scores in the DASS-21, DERS and ERQ questionnaires. Frequency representations of the sample were addressed regarding sex, place of residency, marital status, academic degree, job, professional status and scores in NEO-FFI, DERS and ERQ.

Repeated measures analysis of variance (ANOVA) were performed to DASS-21 subscales (i.e., three in total) according to the different time stamps to see if they changed throughout evaluations. Post hoc analysis were done to understand the specific variations of the symptomatology from C1 to follow-up (PC1), passing by post bidaily assessment (C30) as well.

Pearson correlations were employed to understand the relationship between intrinsic characteristics of the participants (i.e., emotional regulation and personality) and the three main psychological outcomes. It was considered the relationships within all symptoms to understand which traits represent an overall predisposition to psychopathology, but also associations within each subscale to withdraw which features are responsible for the variations across time.

Results

Anxiety, depression, and stress across time

More than half of the participants presented symptomatology (i.e., depression, anxiety and stress) within normal ranges ("Black Dog Institute - Mental Health Research for the Whole Community," n.d.) and the overall severity seems to attenuate with the passage of time, as seen by less prevalence of severe and extremely severe symptoms on the follow-up than in the previous moments. At the beginning of the study, 20.2% of the participants had extreme levels of anxiogenic symptomatology (i.e., severe or extremely severe), which become 10.9% one-month post confinement. On the other side, acute depressive symptoms ranged from 15.5% to 8.5%, when considering the same timepoints. Moreover, high indexes

of stress varied from 17% (i.e., first evaluation) to 11.7% (i.e., last evaluation). The specific distributions of the symptoms across time are available on Table 2.

Table 2.

Severity of the psychological symptoms throughout time

<i>N</i> = 129	C1		C30		PC1	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Anxiety						
Normal	74	57.4	86	66.7	93	72.1
Mild	22	17.1	18	14.0	13	10.1
Moderate	7	5.4	13	10.1	9	7.0
Severe	9	7.0	4	3.1	6	4.7
Extremely severe	17	13.2	8	6.1	8	6.2
Depression						
Normal	76	58.8	74	57.4	82	63.6
Mild	17	13.2	22	17.1	10	7.8
Moderate	16	12.4	19	14.7	26	20.2
Severe	8	6.2	7	5.4	7	5.4
Extremely severe	12	9.3	7	5.4	4	3.1
Stress						
Normal	72	55.8	73	56.6	85	65.9
Mild	13	10.1	15	11.6	14	10.9
Moderate	22	17.1	23	17.8	15	11.6
Severe	15	11.6	15	11.6	10	7.8
Extremely severe	7	5.4	3	2.3	5	3.9

The mean anxiety at the beginning was 4.14 ($SD = 4.79$), at post 15 days (C30) it was 2.96 ($SD = 3.52$) and at follow-up it was 2.64 ($SD = 3.39$). Considering depression, at C1 the mean score was 5.12 ($SD = 4.88$), at C30 it was 4.50 ($SD = 4.24$) and at PC1 it was 3.98 ($SD = 4.19$). Addressing the stress in the three moments, at C1 the mean score was 7.51 ($SD = 4.92$), at C30 it was 6.86 ($SD = 5.11$) and at PC1 it was 6.06 ($SD = 4.99$). To test if psychological outcomes differed significantly across time, it was performed three repeated measures ANOVA (i.e., one for each symptom) with time as a

within subject's variable. As sphericity of the data wasn't ensured ($p < .05$), a Greenhouse Geisser correction was made to account for the variance of the differences, and a Bonferroni correction was also applied to pairwise comparisons, adjusting the corresponding p values.

Furthermore, they were found differences regarding anxiety, $F(1.80, 230.27) = 15.23$, $p < .001$, $\eta p^2 = .106$, depression, $F(1.83, 234.40) = 6.63$, $p = .002$, $\eta p^2 = .049$, and stress, $F(1.89, 241.45) = 7.89$, $p = .001$, $\eta p^2 = .058$, across time. Considering the pairwise comparison, in Figure 2 it is possible to see that initial anxiety is significantly higher than in C30 ($p < .001$) and in follow-up ($p < .001$), and that there's no significant differences between C30 and PC1 ($p = .508$). By other hand, depression at C1 was also significantly higher than follow-up ($p = .004$), but there were no differences regarding C1-C30 ($p = .181$) and C30-PC1 ($p = .147$). To conclude, stress score at PC1 was significantly lower than C1 ($p = .001$) and C30 ($p = .042$), but no difference was found between C1 and post 15 days ($p = .252$).

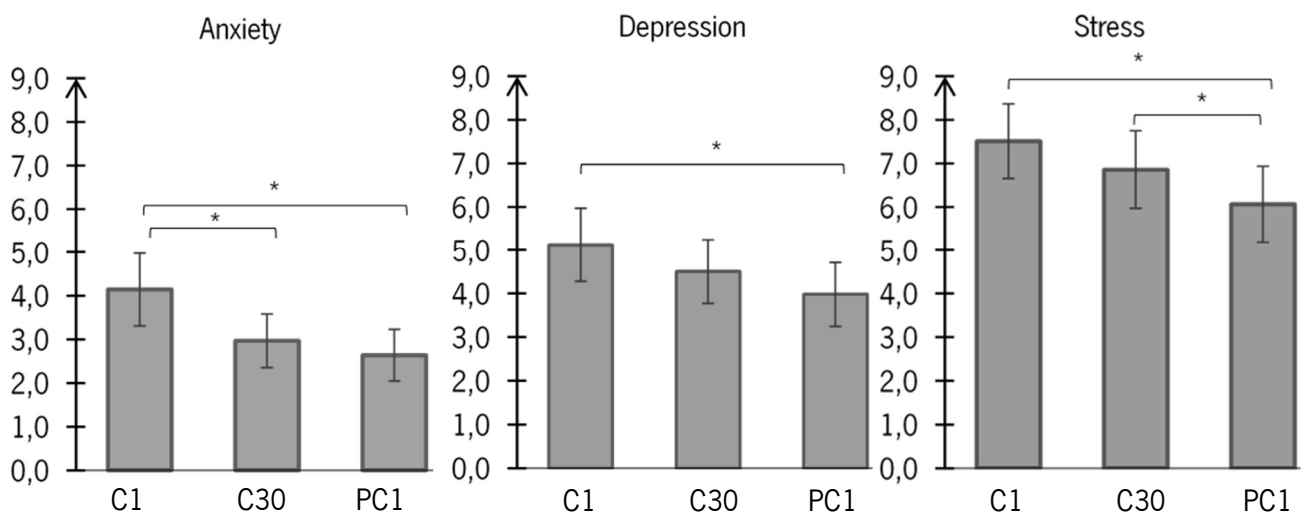


Figure 2. Symptomatology levels differences according to moments of evaluation.

Note. The confidence intervals are represented in the error bars and the asterisk represents the statistically significant differences.

Personality and emotional regulation skills

Regarding personality traits, in Table 3 is showed that Extraversion, Openness, Agreeableness and Conscientiousness are highly prevalent among participants within medium levels, whereas Neuroticism achieves the biggest concentration of subjects in the top label (i.e., very high). Considering difficulties in emotional regulation (DERS), more than 60% of the participants presented low indexes of difficulties in all dimensions, except for goals, where 76.7% of the subjects evidenced struggling. In terms

of the emotional regulation strategies typically used by the participants (ERQ), it seems that both cognitive reappraisal (89.9%) and emotional suppression (62.8%) are highly used by the participants. Further information about the dispositional characteristics of the participants are available in the table below.

Table 3.

Personality and emotional regulation characteristics of the participants

<i>N</i> = 129	<i>n</i>	%
Openness		
Very low (<18)	7	5.4
Low (18-22)	18	14.0
Medium (23-30)	58	45.0
High (31-36)	43	33.3
Very high (> 36)	3	2.3
Conscientiousness		
Very low (<25)	16	12.4
Low (25-29)	16	12.4
Medium (30-37)	64	49.6
High (38-43)	22	17.1
Very high (> 43)	11	8.5
Extraversion		
Very low (<18)	6	4.7
Low (18-23)	17	13.2
Medium (24-30)	52	40.3
High (31-36)	41	31.8
Very high (> 36)	13	10.1
Agreeableness		
Very low (<24)	9	7.0
Low (24-28)	23	17.8
Medium (29-35)	55	42.6
High (36-40)	32	24.8
Very high (> 40)	10	7.8
Neuroticism		

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Very low (<6)	1	0.8
Low (6-12)	7	5.4
Medium (13-21)	30	23.3
High (22-29)	41	31.8
Very high (> 29)	50	38.8
	<i>Mean (SD)</i>	Total score of the scale
Openness	27.40 (5.57)	48
Conscientiousness	33.24 (7.13)	48
Extraversion	29.16 (5.95)	48
Agreeableness	32.26 (5.79)	48
Neuroticism	26.21 (8.75)	48
Awareness (DERS)	6.55 (2.49)	15
Clarity (DERS)	6.91 (2.87)	15
Goals (DERS)	10.15 (3.34)	15
Impulses (DERS)	6.22 (3.07)	15
Non-acceptance (DERS)	6.80 (3.25)	15
Strategies (DERS)	6.96 (3.53)	15
DERS total	43.59 (12.86)	45
Cognitive reappraisal	28.76 (6.55)	42
Emotional Suppression	14.82 (4.99)	28

Psychological symptoms, personality traits and emotional regulation skills

To understand the relationship of the three main outcomes (i.e., anxiety, depression and stress) assessed with personality traits and emotional regulation skills, Pearson correlations were performed. In the table below (Table 4) it's possible to see that anxiety, depression and stress, regardless of the time of evaluation were positively associated with Neuroticism ($p < .001$) and with the overall difficulties in emotional regulation ($p < .001$; i.e., DERS total, translated in a specific association also with difficulties in clarity, goals, impulses, non-acceptance and strategies) and they were negatively associated with cognitive reappraisal ($p < .05$).

The three symptoms differed in terms of their association with extraversion, conscientiousness and emotional suppression. Anxiety and depression in all the three moments were negatively associated with extraversion, whereas stress only evidenced that connexion by follow-up. Conscientiousness was

negatively associated with depression in C1, C30 and PC1, with anxiety only at follow-up and not at all with stress. Emotional suppression wasn't associated with anxiety, but it related negatively with stress at follow-up and with depression at both C1 and follow-up.

Considering anxiogenic symptomatology, it only differed across time in follow-up, where it was registered a negative association with conscientiousness ($r = -.20, p = .022$). Depression, by the other hand, achieved a positive relationship with emotional suppression at C1 ($r = .20, p = .020$) and follow-up ($r = .25, p = .004$) that wasn't significant at post 15 days. The latter, stress, registered differences in one-month follow-up, where it was negatively associated with extroversion ($r = -.23, p = .007$) and positively associated with emotional suppression ($r = .19, p = .033$).

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Table 4.

Pearson correlations between psychological outcomes, personality and emotional regulation skills

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
1. Anx. C1	-																						
2. Anx. C30	.703**	-																					
3. Anx. PC1	.658**	.701**	-																				
4. Dep. C1	.746**	.537**	.524**	-																			
5. Dep. C30	.450**	.655**	.465**	.676**	-																		
6. Dep. C1	.372**	.505**	.598**	.630**	.744**	-																	
7. Str. C1	.768**	.609**	.554**	.740**	.563**	.499**	-																
8. Str. C30	.432**	.671**	.511**	.454**	.722**	.560**	.642**	-															
9. Str. PC1	.421**	.551**	.682**	.529**	.603**	.774**	.584**	.740**	-														
10. N	.533**	.501**	.502**	.599**	.596**	.529**	.592**	.548**	.519**	-													
11. E	-.184*	-.228**	-.204*	-.395**	-.378**	-.383**	-.167	-.143	-.234**	-.411**	-												
12. O	.055	.001	.050	-.008	-.061	-.045	.002	-.029	.019	-.087	.178*	-											
13. A	-.109	-.001	-.097	-.068	-.020	-.016	-.063	.066	.038	-.082	.144	.079	-										
14. C	-.127	-.100	-.202*	-.338**	-.287**	-.332**	-.134	.010	-.150	-.301**	.336**	-.082	.153	-									
15. Awareness	.126	.058	.116	.139	.089	.100	-.003	-.040	.076	.007	-.190*	-.182*	-.158	-.238**	-								
16. Clarity	.495**	.393**	.413**	.537**	.446**	.412**	.397**	.308**	.371**	.528**	-.290**	.094	-.175*	-.307**	.215*	-							
17. Goals	.342**	.354**	.350**	.495**	.466**	.471**	.369**	.314**	.368**	.593**	-.223*	.080	-.039	-.338**	-.067	.420**	-						
18. Impulse	.500**	.465**	.407**	.468**	.382**	.338**	.575**	.404**	.371**	.431**	-.150	.045	-.157	-.086	-.024	.375**	.452**	-					
19. Nonacceptance	.508**	.490**	.394**	.482**	.422**	.330**	.470**	.409**	.386**	.531**	-.172	.166	-.031	-.130	-.116	.372**	.535**	.620**	-				
20. Strategies	.463**	.476**	.416**	.612**	.628**	.555**	.524**	.469**	.510**	.646**	-.302**	-.010	-.047	-.297**	.006	.484**	.635**	.568**	.670**	-			
21. DERS Total	.599**	.557**	.517**	.677**	.608**	.550**	.584**	.471**	.520**	.688**	-.322**	.056	-.138	-.337**	.191*	.691**	.758**	.748**	.785**	.854**	-		
22. CR	-.255**	-.190*	-.205*	-.377**	-.293**	-.248**	-.307**	-.195*	-.278**	-.321**	.200*	.048	-.025	.174*	-.150	-.207*	-.084	-.133	-.107	-.295**	-.237**	-	
23. ES	.096	.013	.167	.204*	.150	.254**	.121	.039	.188*	.103	-.287**	-.064	-.259**	-.095	.172	.143	.204*	.184*	.173	.243**	.273**	.027	-

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Note. Anx. = Anxiety; Dep. = Depression; Str. = Stress; N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness; CR = Cognitive reappraisal; ES = Emotional Suppression.

* $p < .05$; ** $p < .01$

Discussion

The present project was developed during the outbreak of the COVID-19 in Portugal with the main goal of understanding the short-term effects of the pandemic in the levels of reported anxiety, stress and depression as assessed by DASS-21: one month after the declaration of the social confinement, 15 days after, which coincided with the first day of deconfinement, and by one month follow-up. Additionally, this project intended to evaluate the potential relations between the personality traits and emotional regulation strategies of the participants, and the psychological impact reported during these three moments.

As stated in the literature, the experience of confinement, or contact with such contagious diseases, makes people adapt rapidly to the circumstances in order to endure, but not without some scratches (Brooks et al., 2020). The levels of reported symptomatology here achieved are in line with the general panorama of the world. About 20% of the study participants displayed severe to extremely severe indexes of depression, anxiety and stress during the confinement period. In a study by Moghanibashi-Mansourieh (2020), 19% of an Iranian sample evidenced the same results regarding anxiety; in Italy, 18.7% or more demonstrated the same impact in the DASS-21 subscales (Mazza et al., 2020); in Mexico, 27.7% of the participants showed symptoms of PTSD (Ramírez et al., 2020); and about 15.8% or more of a Spanish cohort evidenced depressive, anxiogenic and PTSD symptomology above the cut-off point (González-Sanguino et al., 2020). This contrasts with initial findings in China, where only 4.3% of the participants gathered the same results in depression, 8.4% in anxiety and 2.6% in stress (Wang, Pan, Wan, Tan, Xu, Ho, et al., 2020). The latter discovery can be explained regarding the overall panic caused by the spreading and constant news about this novel threat, a situation that China ended up not living in antecedence as the remaining countries.

Anxiety, depression and stress across time

However, the psychological outcomes differed significantly across time. In fact, there was a significant decrease from the confinement assessment (C1) to the following ones (post 15 days - C30, and one-month follow-up – PC1), suggesting a general adaptation to the stressful situation. The higher values registered at the beginning of the study, conducts to the rejection of the hypothesis number one that accounted for worst answers 15 days after the first evaluation. It seems that the cumulative effect usually exerted by longer durations of confinement (Reynolds et al., 2008) was automatically relished in the first day of the end of lockdown. It seems that the results in DASS-21 are in line with the situation in Portugal. At C1, people were facing confinement for about 33 days, having accumulated boredom and frustration, which, coupled with the uncertainty about the end of this measure, lead to higher levels of anxiety, depression and stress (Brooks et al., 2020). Moreover, in the second evaluation, the country was

facing the first day of deconfinement, therefore having more liberty and embracing the situation more positively (i.e., if it was possible to be unrestricted, then the virus should be more controlled than before). One month after, the contextual characteristics didn't change much from the previous evaluation, but as this new reality (e.g. wearing masks and social distancing) was faced for more time, it became the new normal, which might explain the lower scores of symptomatology at this moment. Similar evidence was found in China, where four weeks after an initial assessment, no change in the levels of the DASS-21 symptoms was found, explained by the persistence of the lockdown measures (Wang, Pan, Wan, Tan, Xu, McIntyre, et al., 2020).

Influence of personality traits and emotional regulation skills

Not only the pandemic state in Portugal but also the inherent characteristics of the participants might explain their psychological answers thorough time. In general, psychological symptoms exhibited a moderate positive association with neuroticism, a small to moderate positive relationship with difficulties in emotional regulation, and a small negative association was found between the mental health outcomes and cognitive reappraisal (i.e., confirming the second hypothesis). It seems that neuroticism, within the Big Five repertoire of traits, is indeed the biggest threat to the emergence of negative outcomes in response to a health crisis such as the case of COVID-19 (Kroencke et al., 2020). Similarly, difficulties in handling emotions, from the process of figuring out the feeling (i.e., clarity) to the strategy employed to respond (i.e., non-acceptance, impulsivity, goals and strategies), also exerted a damaging impact at mental health, effect that was contrary to the one of employing adaptive emotional regulation strategies such as cognitive reappraisal (Aldao et al., 2010). Furthermore, extraversion, conscientiousness and emotional suppression didn't express the same pattern across all symptoms, which can be indirectly affecting people's reactions to the pandemic (e.g. compliance) and consequently explaining the adaption to the outbreak across time. During lockdown periods, the ability to follow rules and comply with police makers' orders is essential and personality exerts its power over it.

Conscious people tend to strictly follow rules, which given the uncertainty lived may have been overwhelming (Reynolds et al., 2008). Not only is their life purpose put on hold, but it also is completely directed towards health policies (Jonason & Sherman, 2020). This can explain the emergence of a negative association between anxiety and conscientiousness only by follow-up. It seems that a protective effect of conscientiousness over anxiety only becomes relevant after individuals regain some control over their lives, which happened one month after the exit of lockdown (i.e., although the decrease from the initial evaluation to the second was also significant the correlation only emerged in follow-up).

By contrast, extroverts seek out comfort in their social relationships and within health policies that rely on interpersonal distance, they express especial vulnerability in either complying or satisfying their needs (i.e., being and expressing themselves; Carvalho et al., 2020). The stress levels mirror that effect: PC1 registered the lower indexes of stress, being significantly different from the other two previous moments. Therefore, it seems that 29 days after returning to the outside, people were finally able to connect with others and thus adapt properly to the new requirements of the pandemic. In fact, the negative relationship between extraversion and stress that emerged at that moment even dimmed the aversive effect of emotional suppression over the same outcome.

In this line, the tendency to suppress emotions typically exhibited by introverts (Goldberg, 1990) also seemed to influence the depressive states of the participants. Although the decrease in depressive states was only significant from C1 to follow-up, it is by C30 that differences in the correlations are registered. Only on the first day of deconfinement were people able to cease the positive link between suppression and depressive states observed in the other moments. The disappearance of that relationship might mean that the possibility of going out allowed people to handle their emotions in their raw state, thus reducing not only the behavioural expression but also the feeling itself (Gross & John, 2003). That coupled with the behavioural activation and possibility to experience more pleasurable feelings, set the stage for improvement in mood that was continuously felt until follow-up, when it was finally possible to see a significant effect over the negative mood installed since the lockdown.

Limitations and future directions

In conclusion, this study, despite being a precursor in addressing the psychological answers of Portuguese participants to the pandemic, has some limitations.

The initial assessment, as mentioned, is measured already during the context of lockdown, thus lacking an appropriate baseline of the usual levels of symptomatology of this Portuguese sample. In that line, it's only possible to state the decrease from the beginning to follow-up, but not capture whether the last assessment corresponds to the normal pattern or not.

Moreover, the sample used in this study may not be representative of the whole country and consequently limit the generalization of this results. As a matter of fact, most of the participants were female students living in the north of the country, which can be explained by the recruitment centred in the University of Minho. It is important in the future to address the role of sociodemographic variables such as age, gender, occupation, place of residency and level of education given its direct or indirect influence over the psychological impact (Jiang et al., 2020; Somma et al., 2020).

Finally, these results are only preliminary and insufficient to capture the complete experience of Portugal during the pandemic. The correlations found between the psychological indexes and the trait measures are elucidative, but they don't have a predictive value, therefore being relevant to develop some regression analysis in prospective investigations in order to correctly obtain meaning of the findings and use it to educate the community about proper ways to cope.

Additionally, this dissertation aims to be continued. This work is inserted within a bigger project, representing only a part of the data collected. In the future, other indicatives of the psychological and physical health of the participants will be addressed, as well as a bidaily monitoring of their affect and discomfort throughout the last 15 days of lockdown in Portugal. When facing health crisis, even maintaining a healthy routine seems to be a challenge, so the possibility to monitor closely the routines and lifestyle of people will be extremely enriching. Moreover, although the ending of such idiosyncratic experiences portrays relief, the returning to normality doesn't happen without behavioural change. The longitudinal approach of the project will enable an immersive representation of the responses to COVID-19 pandemic and therefore to inform and tailor intervention programs according to the emergent needs (Duan & Zhu, 2020).

It is extremely important to educate the community about the virus (Lemyre, Johnson, & Corneil, 2010) and help them master coping skills, which could mitigate the impact felt at biopsychosocial level. The choice for online forms of therapy have become especially relevant (Li et al., 2020) and Mindfulness based and Cognitive-behavioural therapies have been mentioned as crucial for the development of key skills (Ho, Chee, & Ho, 2020; Zheng et al., 2020) that could be developed to improve resilience and social support (Serafini et al., 2020).

To conclude, a lesson must be taken from this experience and a crisis intervention programme should be established to deal with further outbreaks of the coronavirus disease or even future epidemics. Zhang and colleagues (2020) presented an hypothesis of programme that could be used to guide a prospective implementation in the National Health Service of Portugal.

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Universidade do Minho

Conselho de Ética

Comissão de Ética para a Investigação em Ciências Sociais e Humanas

Identificação do documento: CEICSH 036/2020

Relatores: Emanuel Pedro Viana Barbas Albuquerque e Marlene Alexandra Veloso Matos

Título do projeto: *The impact of the COVID-19 pandemic on physical, mental, social health and the feeling of personal security: a longitudinal study (Acronym: BPSS-COVID-19 Study)*

Equipa de Investigação: Sandra Carvalho (IR), Laboratório de Neurociência Psicológica, Centro de Investigação em Psicologia (CIPsi), Escola de Psicologia, Universidade do Minho; Jorge Leite, Universidade Portucalense (Porto), Instituto de desenvolvimento humano Portucalense (INPP); Henrique Sequeira, Universidade de Lille – França; Ana Daniela Costa, Mestrado integrado em Psicologia da Universidade do Minho, orientadores Sandra Carvalho e Henrique Coelho

PARECER

A Comissão de Ética para a Investigação em Ciências Sociais e Humanas (CEICSH) analisou o processo relativo ao projeto de investigação acima identificado, intitulado *The impact of the COVID-19 pandemic on physical, mental, social health and the feeling of personal security: a longitudinal study*.

Os documentos apresentados revelam que o projeto obedece aos requisitos exigidos para as boas práticas na investigação com humanos, em conformidade com as normas nacionais e internacionais que regulam a investigação em Ciências Sociais e Humanas.

Face ao exposto, a Comissão de Ética para a Investigação em Ciências Sociais e Humanas (CEICSH) nada tem a opor à realização do projeto, emitindo o seu parecer favorável, que foi aprovado por unanimidade pelos seus membros.

Braga, 21 de abril de 2020.

O Presidente da CEICSH

(Acílio Estanqueiro Rocha)

Anexo: Formulário de identificação e caracterização do projeto