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Psychological Impact of COVID-19 in Spain: early data report.

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Declaration of Interests

The authors declare no conflict of interests.

Ethics Committee approval

The study was approved by the ethics committee at the first and second authors' universities.

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The COVID-19 pandemic is a global health threat. According to official data, by April 19th 2020, there were over 2.2 million cases worldwide and nearly 160,000 deaths. Spain is the second country in confirmed cases (191,726) and the third in deaths (20,043; European Centre for Disease Prevention and Control, 2020). This situation puts tremendous pressure on the Spanish health system, which is overwhelmed, with shortages of hospitals space, health equipment, personal protective equipment (PPE) and health professionals. Due to the state of alarm declared in Spain on March 14th, and in order to reduce the spread of the virus, the population remains in home confinement, with few exceptions (e.g., purchase of essential items such as food, attend health centers to receive medical attention).

Spanish citizens' life has dramatically changed in all areas (e.g., daily routines, work situation, family income, family dynamics, leisure options, social life), leading to high levels of fear and concern. Some recent studies on the psychological impact of COVID-19 outbreak in China showed that over half the population (53.8%) experienced a moderate or severe psychological impact (Wang et al., 2020). Moreover, 4.6% of the Chinese population experienced posttraumatic stress symptoms one month after the COVID-19 outbreak (Sun et al., 2020), while this percentage raised to 7% when only the most affected areas were considered (Liu et al., 2020). The most vulnerable collectives, according to such studies, were women and young individuals. Due to the high psychological impact of the pandemic, some warnings have been issued about the need to take care of the population's mental health (Duan & Zhu, 2020; Xiang et al., 2020). However, data on Spanish residents are still non-existent.

This commentary provides an initial picture of the psychological impact of the COVID-19 outbreak during its initial stage in Spain. The study was approved by the institutional review board at the first two authors' Universities. Data were collected over a week (March 17th-24th 2020) using an online forms platform. Participant recruitment was achieved following a snowball approach through social media by the authors and their institutions. Participants provided information regarding sociodemographic data and completed the Spanish version of the Impact of Event Scale-Revised (IES-R; Baguena et al., 2001; Weiss & Marmar, 1996), which assesses psychological distress caused by a traumatic life event in terms of three symptomatic responses (avoidance, intrusion, and hyperarousal). The instructions and items of the scale were adapted to refer to the current

COVID-19 crisis. The IES-R scores have shown to be reliable and valid in previous studies with Spanish populations (Baguena et al., 2001; Gil-Moncayo & Costa Requena, 2007), and internal consistency was good in the current sample ($\alpha > .87$ for the scale and subscales).

Reports of 3055 adults currently living in Spain were obtained (75.1% women; age $M = 32.15$ years, $SD = 12.95$, range 18–88). Data analyses were conducted to obtain the proportion of participants showing psychological distress, for which the suggested IES-R cutoff score of 33 (Creamer et al. 2003) was used to make our data comparable to those of Wang et al. (2020) on Chinese population. The score on the IES-R subscales was also obtained (possible range 1-4). Gender differences in the global scale score and subscale scores between men and women were explored via t -tests and correlations with age were also computed. A regression analysis was performed with psychological distress as the criterion and gender and age as predictors.

Results revealed that 36.6% of participants showed psychological distress due to the COVID-19 pandemic. As Table 1 shows, avoidance was the most prevalent symptom in the total sample and for all genders studied. Moreover, the global psychological impact and the three symptomatic responses showed significant gender differences and correlations with age — impact was consistently higher for women compared to men and for young people. A significant regression equation was found ($F_{[2,3034]} = 113.8, p < .001$) which explained 7% of the variance in psychological distress (both R^2 and adjusted $R^2 = .07$). Both age ($\beta = .18$) and female gender ($\beta = .17$) were significant predictors ($p < .001$ for both).

Table 1. *Psychological impact mean scores by gender and correlation with age.*

	Total	Women	Men	Gender differences <i>t</i> -test	Age <i>r</i>
	Mean (<i>SD</i>)	Mean (<i>SD</i>)	Mean (<i>SD</i>)	<i>t</i>	<i>r</i>
Hyperarousal	1.14 (.96)	1.23 (.99)	.85 (.82)	10.27***	-.19***
Avoidance	1.39 (.94)	1.50 (.95)	1.05 (.84)	12.28***	-.25***
Intrusion	1.27 (.94)	1.35 (.95)	.99 (.86)	9.76***	-.13***
Total scale	27.95 (19.21)	30.10 (19.42)	21.35 (17.04)	11.75***	-.21***

Note. *** $p < .001$ (two-tailed). *SD* = Standard deviation. *t* = Student's test for mean differences statistic. *r* = Pearson's correlation coefficient. Hyperarousal, avoidance, and intrusion subscales were computed as the mean response to items and range 0–4. Participants who selected a non-binary gender ($n = 18$) were excluded from the gender analysis performed.

During pandemics, the consequences on the psychosocial wellbeing are sometimes largely overlooked (Zhang et al., 2020). Our data confirm the great psychological toll that the COVID-19 crisis is taking on the Spanish general population. Also, in accordance with the results found in China (Wang et al., 2020), women and young people appear to be the most vulnerable. Given that over 36% of the participants showed significant psychological distress due to the current health crisis, there is an urgent need for psychosocial interventions aimed at mitigating the impact of both the pandemic and the necessary, but distressing measures taken to control the virus spread (Duan & Zhu, 2020; Wang et al., 2020; Xiang et al., 2020).

In the aftermath of crises and disasters, negative psychological outcomes are common (Duan & Zhu, 2020), including posttraumatic stress disorder (PTSD), acute stress disorder, major depressive disorder, generalized anxiety disorder, and substance abuse disorder (Boscarino, 2015; Mazumder, 2015). If not prevented, we can expect these problems to emerge in a still unknown percentage of the Spanish general population over the next few months. This is why a psychological crisis intervention should be implemented to address the COVID-19 crisis in two moments (Zhang et al., 2020): 1) early intervention during the outbreak to foster adaptation and lower the risk of future psychopathology (Carvalho et al., 2020), and 2) later rehabilitation of people who have developed mental health issues.

Early interventions should include providing Spaniards with some specific guidelines to follow during the lockdown (e.g. indications about how to deal with information overload or how to control anxiety through an abdominal breathing relaxation method) so that they can take care of their mental health (Zhang et al., 2020). For people feeling unable to cope with the negative psychological symptoms derived from the current health crisis, remote psychotherapy via APPs, telephone or videocall can be a good option (Abbott et al., 2007; Wang et al., 2020; Zhang et al., 2020). In any case, such psychological crisis intervention should be adapted over time to suit different stages of the pandemic (Zhang et al., 2020).

Finally, our sample was mostly composed of young women, which was also the case in Wang et al.'s report on Chinese population (2020). This fact precludes from extending our conclusions to the entire Spanish population. We also still do not know how the participants' symptoms progress over time. A prospective study on the same group of participants would shed some light on the severity of their psychological symptoms after the health crisis.

References

- Abbott, J., Lein, B., and Ciechomski, L. (2008). Best practices in online therapy. *Journal of Technology in Human Services, 26*(2-4), 360–375.
- Baguena, M. J., Villarroya, E., Belena, Á., Díaz, A., Roldan, C., & Reig, R. (2001). Propiedades psicométricas de la versión española de la Escala Revisada de Impacto del Estresor (EIE-R) [Psychometric properties of the Spanish version of the Impact of Event Scale-Revised (IES-R)]. *Análisis y Modificación de Conducta, 27*(114), 581–604.
- Boscarino, J. A. (2015). Community disasters, psychological trauma, and crisis intervention. *International Journal of Emergency Mental Health, 17*(1), 369–371.
- Carvalho, P. M. de M., Moreira, M. M., de Oliveira, M. N. A., Landim, J. M. M., & Neto, M. L. R. (2020). The psychiatric impact of the novel coronavirus outbreak. *Psychiatry Research, 286*, 112902. <https://doi.org/10.1016/j.psychres.2020.112902>
- Duan, L., & Zhu, G. (2020). Psychological interventions for people affected by the COVID-19 epidemic. *The Lancet Psychiatry, 7*(4), 300–302. [https://doi.org/10.1016/S2215-0366\(20\)30073-0](https://doi.org/10.1016/S2215-0366(20)30073-0)
- European Centre for Disease Prevention and Control. (2020). *COVID-19. Situation update worldwide, as of 19 April 2020*. <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases>
- Liu, N., Zhang, F., Wei, C., Jia, Y., Shang, Z., Sun, L., Wu, L., Sun, Z., Zhou, Y., Wang, Y., & Liu, W. (2020). Prevalence and predictors of PTSS during COVID-19 Outbreak in China Hardest-hit Areas: Gender differences matter. *Psychiatry Research, Advance online publication*. <https://doi.org/10.1016/j.psychres.2020.112921>
- Mazumder, A. H. (2015). Disaster mental health and crisis interventions. *International Journal of Emergency Mental Health and Human Resilience, 17*(1), 368–368.
- Sun, L., Sun, Z., Wu, L., Zhu, Z., Zhang, F., Shang, Z., Jia, Y., Gu, J., Zhou, Y., Wang, Y., Liu, N., & Liu, W. (2020). Prevalence and Risk Factors of Acute Posttraumatic

Stress Symptoms during the COVID-19 Outbreak in Wuhan, China. *MedRxiv Preprint*. <https://doi.org/10.1101/2020.03.06.20032425>

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. *International Journal of Environmental Research and Public Health*, *17*(5), 1729. <https://doi.org/10.3390/ijerph17051729>

Weiss, D. S., & Marmar, C. R. (1996). The Impact of Event Scale - Revised. In J. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399–411). Guilford.

Zhang, J., Wu, W., Zhao, X., & Zhang, W. (2020). Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: a model of West China Hospital. *Precision Clinical Medicine*, *3*(1), 3–8. <https://doi.org/10.1093/pcmedi/pbaa006>