

Psychological impact of the COVID-19 pandemic on nursing students in the first wave: A cross-sectional survey

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Abstract

Aim: The aim of the study was to evaluate the psychological impact on nursing students at the end of period of confinement during the first wave of the COVID-19 outbreak in Spain.

Design: A cross-sectional study reported in line with the STROBE guidelines.

Methods: Nursing students were invited to complete an online questionnaire at the end of the 2019–2020 academic year using convenience sampling. The questionnaire collected data on sociodemographic factors, work, and life experiences in relation to COVID-19, habits and lifestyle using the World Health Organization Five *Well-Being* Index (*WHO-5*) and the Generalized Anxiety disorder-7 scale. Variables related to anxiety were analysed using multiple lineal regression analysis,

Results: The prevalence of low psychological well-being in the 203 students was 44.3% and of anxiety 55.7%. In the multivariate analysis the variables associated with anxiety were having worked in the pandemic, having had symptoms of COVID-19 and having been afraid of getting infected.

Conclusions: The levels of anxiety due to the COVID-19 pandemic in nursing students have been high, and levels of psychological well-being have been low. The fact of having worked during the pandemic, having had symptoms compatible with COVID-19 or being afraid of getting infected are associated with the highest scores for anxiety.

Relevance to clinical practice: This study gives more evidence on the psychological impact on nursing students during the first wave of the pandemic in Spain. This can be used to design anxiety management programmes for inclusion into teaching syllabuses. It also gives arguments for the setting up of psychological and emotional support services for these students and other healthcare professionals working during the pandemic.

KEYWORDS

anxiety, COVID-19, nursing students, well-being

1 | INTRODUCTION

The new coronavirus disease 2019 (COVID-19) is an international public health emergency and was declared a pandemic by the World Health Organization (WHO) on 11 March 2020. (WHO, 2020). It has spread around the world and is currently affecting most countries and millions of people and has caused many deaths European Centre for Disease Prevention and Control (ECDC) (ECDC, 2020). In Spain, the State of Emergency was declared on 14 March 2020 (BOE.es - Sumario del día14/03/, 2020, n.d.), and confinement on a national level was established with the paralysis of most sectors excepting essential services with health care, security forces and the food supply chains being amongst the most important. The confinement started on 14 March and ended on 20 June with different phases of relaxation as the epidemiological situation in the country improved. The population had to remain at home and could go out only for particular tasks such as shopping or walking the dog in a radius of 300 metres from their home.

This pandemic not only had a large impact on healthcare professionals, who were in the front line attending affected patients, but it also affected nursing and medical students as many of them had to join the healthcare workforce suddenly to help and reinforce the professionals in the battle against the coronavirus (BOE.es - Documento BOE-A-, 2020-3700, n.d.).

2 | BACKGROUND

Many studies evaluating the psychological impact of the similar situations, such as the outbreak of Severe Acute Respiratory Syndrome (SARS) of 2003 on healthcare workers working during the epidemic, have been published (Chua et al., 2004; Maunder et al., 2006; McAlonan et al., 2007). In these studies, the workers exposed showed symptoms such as loss of appetite, insomnia, fatigue, frustration, anxiety and depression. A recent study in China showed that nurses caring for patients with COVID-19 have a high risk of anxiety and depression (Lai et al., 2020). The authors' explanation is that these symptoms are probably due to healthcare professionals having to cope with the death of colleagues, feelings of loss of control and vulnerability, working excessive hours and being witness to the collapse of the health system; all while fearing for their own health and safety, not to mention dealing with family responsibilities and other stressful aspects of life that continued, or were worsened during the situation of emergency. There are currently several studies that have evaluated the impact of the COVID-19 pandemic on healthcare professionals (Nie et al., 2020; Rana et al., 2020; Tan et al., 2020) and also on the general population (Mukhtar, 2020; Restubog et al., 2020; Shigemura et al., 2020). All of these have shown high levels of anxiety and depression, above all in healthcare workers who were exposed to patients diagnosed with COVID-19. A study carried out on a sample of the Spanish population to evaluate the impact on mental health caused by the pandemic and the measures adopted during the first weeks of confinement showed that being female, young or feeling lonely were the most important risk factors

What does this paper contribute to the wider global clinical community?

- There has been a high prevalence of anxiety in nursing students during the confinement for the COVID-19 pandemic.
- Having worked during the pandemic, having symptoms compatible with COVID-19 and fear of getting infected are factors associated with the anxiety.
- Psychological support must be given for these students, and anxiety management programmes designed for the syllabuses.

for depression and anxiety and post-traumatic stress (González-Sanguino et al., 2020).

Health Science students present high levels of anxiety and depression under normal circumstances (Quek et al., 2019; Tung et al., 2018). Factors identified are workload; the student's dedication to their work; close human contact; emotional engagement; the continual changes in clinical practice and caring for patients with long-term disease or during their last days of life. Additionally, in situations of epidemic and pandemic nursing students are exposed to other added factors such as the fear of contagion or infecting other people in their closest circles (Elrggal et al., 2018; Wong et al., 2004).

For all of the reasons mentioned above reasons, it is also to be supposed that the pandemic has affected student healthcare professionals.

It is important to know this impact in order to propose strategies directed at improving the psychological well-being of future nursing professionals. For this reason, the objective of this study was to evaluate the psychological impact on nursing students at the end of the period of lockdown during the first wave in Spain.

This study took place before vaccinations were available to healthcare workers.

3 | METHODS

3.1 | Design

A cross-sectional study carried out during the first two weeks of June 2020 at the Sant Joan de Déu Teaching Campus University Nursing School affiliated to the University of Barcelona, Spain. A STROBE checklist was completed and included as a supplementary file (Supplementary File S1).

3.2 | Sample

The study population included 650 nursing students. Sample size was calculated based on an estimated prevalence of anxiety of 25%

(González-Sanguino et al., 2020) with an accuracy of 5% and an alpha risk of 5%. Accordingly, it was estimated that the minimum sample size necessary was 200 nursing students. Non-probability convenience sampling was used; nursing degree students who wanted to participate were included until the sample size was reached.

3.3 | Procedure and data collection

The information technology department generated a database of nursing students registered during the 2019–2020 academic year which included name, email and a unique anonymized code for each student. Using the Exchange server located on the campus and a mail merge a personalized email was sent to each student including information on informed consent and the corresponding unique anonymized code that allowed completion of the questionnaire while avoiding duplications. When the student responded to the mail (providing the scanned signed informed consent) they received an automatic email with the instructions and a link to access and complete the questionnaire. The www.encuestafacil.com platform used to create the online questionnaire this platform is completely General Data Protection Regulation (GDPR) compliant.

The study period coincided with the end of the period of confinement in Spain and the end of the 2019–2020 academic year.

3.4 | Variables and measures

The well-being index was measured using the Spanish version of the World Health Organization Five Well-Being Index (WHO-5) (Campo-Arias et al., 2015; Lucas-Carrasco, 2012), and anxiety was measured using the Generalized Anxiety disorder-7 Scale (GAD-7) (Spitzer et al., 2006) adapted to Spanish by García-Campayo et al. (2010).

The Spanish version of the WHO-5 Well-Being Index consists of five positively written items that reflect the presence or absence of well-being. Participants are asked to report the presence of these positive feelings in the previous two weeks on a scale of six points from 0 (never) to 5 (all the time). Total scores go from 0 to 25, where a higher score indicates better well-being. Scores under 13 are considered indicative of poor well-being (WHO, 1998). This scale, validated in Spanish (Lucas-Carrasco, 2012), presented adequate psychometric properties. The Cronbach's alpha coefficient was 0.86. Exploratory factor analysis showed a one-factor solution which accounted for 66% of the total variance of WHO-5.

The Generalized Anxiety disorder-7 scale (GAD-7) is used to screen for generalized anxiety. It consists of seven items (symptoms). Participants are asked to report on the frequency with which each symptom has bothered them during the previous two weeks. The reply options are not at all; several days; more than half the days and nearly every day, scored as 0, 1, 2 and 3 respectively. The total score is obtained from the total sum of the scores of all the items, it can oscillate between 0 and 21. A higher score indicates greater anxiety. In the original version the authors propose a cut-off at equal to or

greater than 10 to define moderate anxiety and a cut-off at equal to or greater than 15 for severe anxiety (Spitzer et al., 2006). The psychometric properties of the Spanish validation were excellent. The Cronbach's alpha coefficient was 0.93 and the confirmatory factor solution obtained produced a good fit.

Sociodemographic data on the students were also collected such as age in years; sex; academic course and working conditions: working during the pandemic, working in the healthcare sector and years of work experience. They were also asked about symptoms compatible with the coronavirus, whether they had been diagnosed with COVID-19, whether they lived with people diagnosed with COVID-19, fear of family members getting infected and death of family members or close contacts. Data was also collected on lifestyle and habits during the confinement period: consumption of coffee, tobacco, alcohol, sugary drinks, fast food, anxiolytics and the use of the television and social media.

3.5 | Ethical considerations

The study was approved by the Clinical Investigation Ethics Committee (CEIC) of the Sant Joan de Déu Foundation under the code CEIC PIC-94-20.

3.6 | Statistical analysis

Before evaluating the level of anxiety and psychological well-being the normal distribution of the data was checked using the Kolmogorov-Smirnov test. Non-parametric tests were used as the data were not distributed normally. Frequency and percentage were calculated for each of the categorical variables and for quantitative variables the median and inter-quartile range was calculated. The prevalence of psychological well-being and anxiety was also calculated according to the cut-off points with confidence intervals of 95%.

The univariate comparative analysis was calculated with the Kruskal-Wallis test and the Spearman correlation coefficient.

A multiple linear regression analysis was used to analyse variables related to the scores for total anxiety. Variables with a p less than 0.10 were included in the age and sex model.

The statistical analyses were run using the SPSS V 22.0 statistical package (SPSS Inc.). A bilateral $p < .05$ was accepted to detect statistically significant differences.

4 | RESULTS

4.1 | Description of the sample

A total of 203 nursing students participated. Table 1 shows their sociodemographic characteristics and work and life experiences about COVID-19. The mean age was 24.7 (SD 6.6) and 87% were

women. 77% lived with their families. Of the students who declared they had been working during the pandemic 63.5% worked in the healthcare sector. Of 25.2% who stated they had symptoms compatible with COVID-19, only 7.4% had been diagnosed. In relation to fear of contagion 52.2% stated that they had been frightened of getting infected, but 93.1% were frightened of a family member getting infected. 27.7% said a family member or close contact had died.

Table 2 shows the data on lifestyle and habits during confinement. It is notable that there was a lower consumption of stimulating drinks (12.3%), alcohol (27.6%) and fast food (37.4%) reported, in contrast there was an increase in the consumption of anxiolytics (6.4%); the use of television (38.4%); social media (69%) and WhatsApp (59.1%); and reading (40.4%).

About their state of mind, 44.3% of the students presented low psychological well-being (95% CI 37.6–51.2), with 22.2% presenting severe anxiety (95% CI 16.8–28.2).

4.2 | Relationship between the index of well-being, anxiety, the work environment and participants' sociodemographic and professional characteristics

The median of the total score on the WHO-5 was 13 (range 5–25) and on the GAD-7 it was 11 (range 0–21). The scores on the well-being scale were lower in students who had had symptoms compatible with COVID-19 ($p = .025$). The students who stated that their consumption of fast food had increased also had lower scores for well-being, although the differences were not statistically significant (Tables 3 and 4).

Scores for anxiety were higher for students who stated that they had worked during the pandemic ($p = .025$); that they had worked in the healthcare sector ($p = .041$); that they had had symptoms compatible with COVID-19 ($p = .039$); or that they had been scared of getting infected ($p = .0001$). Scores for anxiety were also higher for students who stated they had consumed more coffee ($p = .001$); stimulating drinks ($p = .035$); or sugary drinks ($p = .014$). The students who stated that they had read less ($p = .034$), watched less television ($p = .05$) and used WhatsApp more ($p = .05$) were those who had the highest scores for anxiety (Tables 3 and 4).

In the multivariate analysis, the final model was statistically significant ($F(6.876) = 6.564, p < .001$). The variables associated with anxiety were having worked during the pandemic ($p = .021$), having presented COVID-19 symptoms ($p = .044$) and being afraid of getting infected ($p < .0001$) (Table 5).

5 | DISCUSSION

This study measured the level of anxiety and psychological well-being in nursing students at the end of the confinement that took place during the COVID-19 pandemic. It also analysed the relation

TABLE 1 Sociodemographic characteristics, labour and experiences in relation to COVID-19 of the study sample ($n = 203$)

	N	%
Age in years (SD)	24.7 (SD 6.6)	
Sex		
Woman	177	87.2
Man	26	12.8
Cohabitation		
With family	158	77.8
With partner	25	12.3
Other	15	7.4
Alone	5	2.5
Course		
First	34	16.7
Second	55	27.1
Third	40	19.7
Fourth	74	36.5
Worked during the pandemic		
Yes	138	68.0
No	65	32.0
Worked in health care		
Yes	129	63.5
No	74	36.5
Had symptoms compatible with coronavirus		
Yes	52	25.2
No	151	74.4
Diagnosed with coronavirus		
Yes	15	7.4
No	188	92.6
People you are living with were diagnosed with COVID-19		
Yes	17	8.4
No	186	91.6
Was frightened of catching COVID-19		
Yes	106	52.2
No	97	47.8
Was frightened of a family member catching COVID-19		
Yes	189	93.1
No	14	6.9
Someone close (family member/friend) died of COVID-19		
Yes	46	27.7
No	157	77.3

Abbreviation: SD, Standard deviation.

between demographic characteristics and experiences of living with the disease and the impact that this might have had on habits and lifestyle during confinement.

The results of this study show that half of the students reported having anxiety, with a quarter of them presenting high levels. These are slightly lower levels than those found in a study carried out in

TABLE 2 Lifestyle and habits of the study sample during the period of confinement

	No consumption		Less consumption		Same consumption		More consumption	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Coffee	70	34.5	34	16.7	68	33.5	31	15.3
Stimulating drinks	105	51.7	25	12.3	53	26.1	20	9.9
Tobacco	165	81.3	11	5.4	14	6.9	13	6.4
Alcohol	114	56.2	56	27.6	22	10.8	11	5.4
Sugary drinks	86	42.4	40	19.7	57	28.1	20	9.9
Fast food	67	33.0	76	37.4	41	20.2	19	9.4
Anxiolytics	181	89.2	3	1.5	6	3.0	13	6.4
Use of television	26	12.8	39	19.2	60	29.6	78	38.4
Social networks	1	0.5	14	6.9	48	23.6	140	69.0
WhatsApp	0	0	10	4.9	73	36.0	120	59.1
Reading	25	12.3	28	13.8	68	33.5	82	40.4

Israel in the third week of confinement (Savitsky et al., 2020), in which 42.8% of nursing students presented moderate anxiety and 13.1% severe anxiety. In contrast, the results are very similar to another study carried out in nursing students in California, USA (Kim et al., 2021).

At the start of the pandemic, a study of the general population in Spain showed lower levels of anxiety (González-Sanguino et al., 2020). Other studies carried out under normal circumstances show that anxiety is higher in female students (Lun et al., 2018; Mirón et al., 2019; Quek et al., 2019; Sanad, 2019), and the prevalence of anxiety is generally higher in females (Haro et al., 2006). The fact that most of the population in the present study is female could partially explain the prevalence of anxiety amongst the students. Other studies carried out in the general population have also shown higher scores for anxiety in young people (González-Sanguino et al., 2020; Ozamiz-Etxebarria et al., 2020), which again might explain the higher anxiety in the students.

The variables associated with higher scores for anxiety were having worked during the pandemic, fear of contagion and having symptoms compatible with COVID-19. The fear of contagion is consistent with other studies carried out in other epidemics such as SARS or MERS (Middle East Respiratory Syndrome) (Elrggal et al., 2018; Wong et al., 2004). In these studies, the nursing students related perceiving a higher risk of contagion and not wanting to work in centres in conditions inadequate for the prevention and control of infection.

The study carried out in Israel (Savitsky et al., 2020) in this pandemic also showed a positive association between scores of anxiety and the level of fear of contagion. Similar findings have been found in another qualitative study carried out in final year nursing and medical students (Collado-Boira et al., 2020). These students were asked about their perceptions as a consequence of their volunteering and immediate incorporation into the workforce driven by the Spanish Government as an exceptional measure during the COVID-19 pandemic. An important fear reported was that of the opportunity of passing the disease to their families. This fear has also been found in healthcare professionals who worked in hospitals during the COVID-19 pandemic (Liang et al., 2020).

In a study carried out in a sample of nursing students in Spain and Portugal higher levels of stress were found with the presence of family members diagnosed with COVID-19 in the home (Laranjeira et al., 2021). Another study carried out in Turkey also showed a statistically significant correlation between having anxiety and having COVID-19-positive family members at home (Kuru Alici & Ozturk Copur, 2022). In this study, significant differences between anxiety levels and living with a person positive for COVID-19 were not found. An association between higher anxiety and the fact of presenting symptoms compatible with COVID-19 has also been found in another study at population level (González-Sanguino et al., 2020).

About habits and lifestyle, a lower consumption of alcohol, stimulating drinks and fast food was found. This could be due to confinement, when young students did not have access to consumption in leisure time. By contrast, and also due to confinement, reading and use of the television and social media also increased. An interesting find is the relation between less reading and television consumption in students with higher scores for anxiety. This could be due to a lack of concentration brought on by the anxiety itself.

Consumption of fast food and sugary drinks was associated with low psychological well-being or higher levels of anxiety. They could be strategies to reduce levels of anxiety, although they could also be associated with confinement at home. Another study has shown an association between the consumption of sugary and carbonated drinks and fast food, and sleeping disorders due to anxiety in adolescents (Khan & Uddin, 2020). Laranjeira et al. (2021) also shown an association between psychological impact and excess consumption of junk food. However, the association between increased anxiety and the consumption of coffee and stimulating drinks could just be a consequence of this consumption.

This study has several limitations which should be taken into account. Firstly, the inherent limitation of all cross-sectional studies that make it difficult to make causal associations. Secondly, all the students participating in the study did so voluntarily and this could have produced selection bias. Thirdly, no questionnaires

	WHO			Anxiety		
	Median	Range inter	<i>p</i>	Median	Range inter	<i>p</i>
Age in years	Rho = 0.012		.149	Rho = 0.077		.275
Sex						
Woman	13	11-17	.766	10	7-14	.996
Man	14	9.7-17.2		11	7-14.2	
Cohabitation						
With family	14	11-17	.437	10	7-14	.755
With partner	12	10-14.5		12	8-15	
Other	12	10-18		9	6-16	
Alone	14	8-17.5		15	4-17	
Course						
First	13.5	10-17	.159	10.5	7-14	.123
Second	12	9-16		13	8-16	
Third	14	12-17.7		10	6.2-14	
Fourth	14	10.7-17		9	5-14	
Worked during the pandemic						
Yes	13	10-17	.372	12	7-15	.025
No	14	11-17		9	5-13.5	
Worked in health care						
Yes	13	10-17	.570	12	7-15	.041
No	14	11-17		10	6-13.2	
Had symptoms of coronavirus						
Yes	12	10-14	.025	12.5	7-15	.039
No	14	11-17		10	6-14	
Diagnosed with coronavirus						
Yes	13	9-17	.812	14	6-15	.458
No	13	11-17		10.5	7-14	
Cohabitants diagnosed with COVID-19						
Yes	14	9.5-18	.988	8	5-14.5	.633
No	13	11-17		11	7-14	
Fear of catching COVID-19						
Yes	13	10.7-16	.433	12.5	8-15	<.001
No	13	10.5-17		8	5-13.5	
Fear of family member catching COVID-19						
Yes	13	10.5-17	.377	11	7-14	.076
No	14.5	10.5-20		7	3.5-13.2	
Person close (family or friend) died of COVID-19						
Yes	12.5	10-16	.263	13	7-14.2	.268
No	13	11-17		10	7-14	

TABLE 3 Variables related to the well-being and anxiety indexes

Univariate analysis.

were used to evaluate psychological distress; future studies should use these instruments as well. Lastly, the study was only carried out in one nursing school, and this should be borne in mind when generalizing the results. However, the profile of the students in the sample is similar to that of students in the rest in our environment.

6 | CONCLUSIONS

This study shows that levels of anxiety in nursing students due to the outbreak of COVID-19 have been high and that levels of psychological well-being have been low. The fact of having worked during the pandemic, having presented symptoms compatible with COVID-19

TABLE 4 Relation between habits and lifestyle and well-being and anxiety indexes

Variables	WHO			Anxiety		
	Median	Range inter	<i>p</i>	Median	Range inter	<i>p</i>
Coffee						
Less consumption	12.5	10–17.2	.296	12.5	5–15	.001
Same consumption	14	10.2–17		9	5–13	
More consumption	11	10–15		14	11–16	
Stimulating drinks						
Less consumption	11	8–17	.213	8	5–14.5	.035
Same consumption	12	11–17		11	7–14	
More consumption	13.5	12–16		14.5	9.5–17.7	
Tobacco						
Less consumption	13	9–18	.834	14	5–17	.479
Same consumption	12	9–15.2		13	6.5–14	
More consumption	11	11–19		14	8–16.5	
Alcohol						
Less consumption	13.5	10.2–16	.529	10.5	6.2–14	.648
Same consumption	12.5	9.7–19		9	5.7–14.2	
More consumption	15	11–20		14	7–17	
Sugary drinks						
Less consumption	12	9.2–15	.496	9	7–14	.014
Same consumption	13	10.5–16		11	7–14	
More consumption	12	9.2–14.7		14	12–17.5	
Fast Food						
Less consumption	13	11–16	.087	12	7–14	.089
Same consumption	12	10–15		10	7–14	
More consumption	11	9–14		14	10–16	
Anxiolytics						
Less consumption	8	5–21	.659	14	11–21	.689
Same consumption	9.5	6–13		17	11.7–19.5	
More consumption	10	8.5–14.5		1	13.5–16.5	
Use of television						
Less consumption	12	11–16	.117	12	8–15	.051
Same consumption	14.5	11–17		8	7–13	
More consumption	13	10–16		11.5	7–14	
Social Media						
Less consumption	12.5	11.7–17.2	.915	9.5	7.7–14.2	.923
Same consumption	13.5	9.2–17		10.5	5.2–14	
More consumption	13	11–16.7		11	7–14	
WhatsApp						
Less consumption	14	12–19.25	.219	9	6.25–14	.050
Same consumption	14	9.5–17		8	5–14	
More consumption	12.5	11–16		11	7–15	
Reading						
Less consumption	13	9–17.5	.380	13	8–16	.034
Same consumption	13	11–16		11	7–14	
More consumption	14	11–17		9	5–13	

Univariate analysis.

	Model (Adj R ² = 0.142)		
	B	SE	p-value
Age (years)	-0.073	0.054	.181
Gender (female)	0.144	1.022	.888
Worked during pandemic	1.770	0.761	.021
COVID-19 symptoms	1.573	0.775	.044
Fear of contagion	3.446	0.683	<.0001
Fear of contagion of family member	1.369	1.343	.309

TABLE 5 Relation between habits and lifestyle and well-being and anxiety indexes

Abbreviation: SE, Standard error.
Multivariate analysis.

and having a fear of contagion have been associated with the highest scores for anxiety. Particular habits and lifestyles have also been found to be associated with higher scores for anxiety and lower scores for psychological well-being.

7 | RELEVANCE FOR CLINICAL PRACTICE

Despite the limitations listed above, this study gives more evidence that the first wave of the COVID-19 had a considerable psychological impact on nursing students in Spain. Many of them were suddenly incorporated into the healthcare workforce in unusually complex and challenging conditions. Such actions may be repeated and could become more frequent in the future. It is highly recommended to design anxiety management programmes specifically for nursing students and other trainee healthcare professionals and to incorporate them into the syllabuses for these courses. Identifying the specific factors that increase anxiety is useful to design of such programmes so that they help students manage these factors and increase their resilience when working in stressful conditions. It also gives information for healthcare providers for setting up psychological support services for healthcare workers. These measures will not only benefit the well-being of individual healthcare professionals but also strengthen the mental resilience of the workforce as a whole and improve the management of healthcare teams in general.

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CONFLICT OF INTEREST

The authors report no current or potential conflicts of interest. The article is original, and it is not submitted anywhere other than your journal. We would of course be ready to give further information about the data and methods you so desire.

AUTHOR CONTRIBUTIONS

The authors of the paper directly participated in the planning, analysis and writing of the paper, have approved the final version

submitted and will take public responsibility for the content of the paper.

ETHICAL APPROVAL

The study was approved by the Clinical Investigation Ethics Committee of the San Joan de Déu Foundation with the assigned code CEIC PIC-94-20.

The participants were informed about the authorship and purpose of the investigation and were ensured that all the data obtained would remain anonymous and confidential.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available upon reasonable request from the corresponding author. The data are not publicly available due to privacy and ethical restrictions. The data were taken from our own study.

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