

The other side of the pandemic: psychosocial perspective of patients hospitalized by covid-19

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Abstract

Objective: To assess the psychosocial suffering produced by isolation in hospitalized patients due to COVID-19. **Methods:** A descriptive prospective study using the ISOLA-15 scale was conducted to assess the psychosocial impact on COVID-19 patients that were isolated in the Public Hospital of Monforte de Lemos. **Results:** The most affected factor was the "relationship with others", followed by the "relationship with oneself" and the "distress caused by isolation". A lower level of education presented a greater overall impact on the scale. Not having a roommate increased the "isolation-related suffering" factor and living with more than one person affected the "relationship with others". No links were found in the "relationship with oneself" aspect. **Conclusions:** Participants showed a medium-high psychosocial impact. Easily modifiable factors to induce benefits in patients and in the health system have been detected.

Keywords: Psychosocial impact. Coronavirus Infections. Patient Isolation. Hospitalization.

Introduction

New coronavirus disease (COVID-19) is caused by SARS-CoV-2 which, similarly to other types of coronaviruses, can affect the respiratory, gastrointestinal, and neurological systems. Most frequent symptoms associated to this pathology are fever, cough, dyspnoea, muscle ache, headache, odynophagia, diarrhoea, anosmia and ageusia. Most common route of transmission is by contact, or inhalation of droplets and aerosols expelled by an infected person when coughing, sneezing, or shouting, and which can remain suspended in the air or contaminate surfaces.¹⁻³

One of the preventive measures against COVID-19 transmission is isolation, meaning the separation of infected people, both at a hospital and domiciliary level. Hospitalized COVID-19 patients are preferably allocated in single rooms or, if not possible, with patients with the same diagnosis, maintaining strict hygiene and ventilation measures. Entry to this room is limited, healthcare professionals must wear an individual protection equipment and visits are generally not allowed. In the same manners, social interactions are altered and communication with the usual environment is mainly through new technologies, such as smartphones.^{4,5}

During the pandemic situation, and due to the abrupt progression of the organic symptoms of COVID-19 hospitalized

patients, there was an urgent need for an effective clinical treatment, leaving aside the possible psychosocial effects, perhaps because they are not so palpable or because of the novelty of the disease.⁶

The fact of being isolated in a strange environment can affect the patient's coping skills, consequently increasing the risk of suffering mental disorders such as acute stress, anxiety, depression, or feeling of loneliness.⁵ Previous qualitative studies showed that hospital isolation in COVID-19 patients involved both positive and negative experiences. Regarding the positive aspects of isolation, confidence and safety must be noted. However, negative aspects were predominant, being noteworthy the lack of social interaction or limited mobility.^{5,7}

As we can observe, physical health influences mental health, and vice versa. Acute psychological stress induces activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis, leading to increased heart rate and blood pressure, among others. Acute anxiety episodes are as well associated with a transient increase in cardiac risk.⁸⁻¹⁰

The psychological impact due to hospital isolation has been studied in the context of multiple risk diseases.^{11,12} Several scales used at the European level are also available to support the objective evaluation of this impact. On the other hand, there are currently no tools adapted for the Spanish population. With them, it could be possible to establish protocols of action

lead to prevent and reduce loneliness, discomfort, and improve interpersonal relationships through times of isolation in COVID-19 as well as other similar diseases.^{13,14}

The main objective of this study was to evaluate the psychosocial impact due to isolation in hospitalized COVID-19 patients in the Public Hospital of Monforte de Lemos. The specific objective was to perform a sociodemographic analysis in order to elucidate which characteristics show a stronger association with being more likely to suffer a psychosocial affection.

Methods

Study design and population

A prospective cross-sectional descriptive study was conducted in which the target population consisted of patients admitted to hospital in isolation conditions due to SARS-CoV2 infection in the Public Hospital of Monforte de Lemos, from December 2020 to July 2021.

The Hospital Público of Monforte de Lemos is the first-level reference hospital in the southern area of province of Lugo (Galicia), which provides service to approximately 45.000 inhabitants.¹⁵

A non-probabilistic convenience sampling was conducted. Inclusion criteria included: (1) being 18 years of age or older, (2) having COVID-19 and (3) being hospitalized in isolation due to this infection. Patients manifesting difficulties to understand the aim of the study or not wanting to participate were excluded.

Instrument

Data was obtained using the ISOLA-15 scale, validated for the Italian population and translated to Spanish, hetero-administered and pseudonymized.¹⁶

It consists of 14 items that are evaluated through a Likert-type scale in which "never" corresponds to 1 point and "always" corresponds to 5 points, except for 4 items in which it is scored inversely. The score range that an individual can obtain in this test is between 14 and 70, meaning a higher psychosocial affection in higher scores.

This scale assesses three different dimensions or psychosocial factors: the "isolation-related suffering" dimension (F1) evaluates the desire to leave the room, tediousness, fear, feeling isolated from the world and imprisoned. The score range is between 9 and 45. With "relationship with oneself" dimension (F2) is intended to evaluate the ability of the subject to calm down and feel secure, take on new perspectives, and think about oneself. In this factor, the score obtained could be between 3 and 15. Lastly, the "relationship with others" dimension (F3) evaluates the longing for contact with the outside world and their loved ones or the preference for being alone. The score range is between 2 and 10. As in the global score of the scale, higher scores indicate more psychosocial involvement.

In addition to the scale, a self-made questionnaire was administered in which the participant's personal information and their episode of hospital admission were collected.

Procedure

Patients who participated in the study were recruited from December 2020 to July 2021. One of the investigators, previously trained, was in charge of collecting patients' answers to the ISOLA-15 scale and their sociodemographic characteristics, after informing about the aim of the study and obtaining consent. Considering the objectives of the study and the items assessed by the scale, it was determined that the ideal moment to conduct the questionnaire was at hospital discharge or once the isolation concluded.

Data analysis

Using the statistic package "Statistical Package for the Social Sciences (SPSS) 25.0" a descriptive analysis of all variables was conducted via a mean and standard deviation (ST) calculus for quantitative variables and relative and absolute frequencies for qualitative variables.

From the global score of ISOLA-15 scale and the 3 factors were obtained mean score and standard deviation. Given the fact that our sample fits a normal distribution, the association between sociodemographic data and ISOLA-15 scale was demonstrated using t-Student in 2 category variables and ANOVA in multiple category variables considering significant differences with a value of $p \leq 0.05$.

Ethical considerations

The study protocol was approved by the Galician Clinical Research Ethics Committee (registration code 2020/445) and by the Lugo, A Mariña and Monforte de Lemos Health Area Management. Participants completed a written informed consent form. Data processing was performed anonymously in accordance with current personal data protection regulation.

Results

Sociodemographic characteristics

A total of 55 patients agreed to participate in the study. The mean age of the participants was 63.8 ± 16.7 years. The predominant profile was that of men, with no or low education level, independent for activities of daily living, who performed physical activity, lived in rural areas with more than one person and not in charge of dependents (table 1).

Hospitalization related characteristics

Regarding the characteristics of admission, 81.8 % of the respondents affirmed that it was the first time they were hospitalized in isolation conditions. The vast majority stayed in the hospital for 1-10 days, without a roommate and only two of the participants were allowed to receive visits. Despite this, 51 of the participants used their technological devices to communicate with their loved ones (table 2).

ISOLA-15 scale and perception of isolation

The mean punctuation of the ISOLA-15 scale was 40 ± 10.4 , being 19 the lowest punctuation observed and 62 the highest. The evaluation of the three specific dimensions of the scale is shown in Table 3.

Table 1. Sociodemographic data (n=55)

Variables	n (%)
Gender	
Female	22 (40.0)
Male	33 (60.0)
Education Level	
Uneducated/primary education	35 (63.6)
Secondary education/superior	18 (32.8)
Dependency level	
Dependant to perform daily activities	1 (1.8)
Dependant to perform instrumental daily activities	1 (1.8)
Independent	53 (96.4)
Physical activity	
No	11 (20.0)
1 or 2 days/week	6 (10.9)
3 or 4 days/week	10 (18.2)
5 or more days/week	28 (50.9)
Place of living	
Countryside	35 (63.6)
Urban	20 (36.4)
Cohabiting nucleus	
Alone	5 (9.1)
With 1 person	13 (23.6)
With more than one person	37 (67.3)
Dependents under their responsibility	
Yes	7 (12.7)
No	48 (87.3)

Table 2. Hospitalization related data (n=55)

Variables	n (%)
First time hospitalized in isolation conditions	
Yes	45 (81.8)
No	10 (18.2)
Days of hospitalization	
0 to 10 days	44 (80.0)
11 to 20 days	11 (20.0)
More than 20 days	0 (0.0)
Roommate	
Yes	18 (32.7)
No	37 (67.3)
Visits	
Yes	2 (3.6)
No	53 (96.4)
Use of new technologies	
Yes	51 (92.7)
No	4 (7.3)

Table 3. Mean score and standard deviation (SD) of the dimensions of the ISOLA-15 questionnaire

Dimensions of the ISOLA-15 questionnaire	Mean score (SD)
Isolation-related suffering	25.1 (8.6)
Relationship with oneself	8.4 (2.9)
Relationship with others	6.4 (2.6)

Association between ISOLA-15 and independent variables

Level of education, sharing a room and nucleus of cohabiting showed a significant association with at least one of the dimensions of the scale (table 4).

An association between the sociodemographic data and the “relationship with oneself” dimension was not found.

Table 4. Global mean score and each of the three factors that measure the psychosocial impact of isolation according to sociodemographic variables (n=55)

Variables	ISOLA- 15		F1		F2		F3	
	Mean punctuation	p	Mean punctuation	p	Mean punctuation	p	Mean punctuation	p
Education level								
Uneducated/Primary education	3.03 (0.69)	0.015*	2.98 (0.91)	0.051	3.00 (0.93)	0.091	3.34 (1.33)	0.315
Secondary education/ Superior	2.54 (0.72)		2.45 (0.97)		2.51 (0.95)		2.97 (1.33)	
Cohabiting nucleus								
Alon	37.2 (11.1)	0.304	2.84 (1.17)	0.836	2.66 (1.02)	0.531	1.80 (0.44)	0.033*
With 1 person	38.1 (11.8)		2.65 (1.04)		2.71 (0.71)		3.07 (1.38)	
With more than 1 person	41.0 (9.8)		2.83 (0.93)		2.88 (1.04)		3.44 (1.29)	
Roommate								
Yes	36.3 (9.0)	0.066	2.42 (0.76)	0.049*	2.68 (0.99)	0.460	3.22 (1.33)	0.956
No	41.7 (10.6)		2.96 (1.01)		2.89 (0.95)		3.20 (1.35)	

Note. p < 0.05 was considered statistically significant

Discussion

Since the beginning of the COVID-19 pandemic, studies regarding this disease became much more relevant. When it comes to the psychosocial impact due to this disease, several investigations were conducted at all levels. It has been observed that people who were isolated due to this infection showed sequels, whether it was treated at home or in the hospital. Emotions such as fear, sadness or rage, guiltiness feelings and symptoms of nervousness, anxiety and depression were the most manifested at a psychological level.¹⁷⁻¹⁹

Attending the sociodemographic characteristics of our sample, the average patient profile is consistent with other studies’ results. Males were the most frequently hospitalized during the pandemic with a mean age of 60 years.²⁰⁻²⁴

In its original version, the ISOLA-15 scale was validated for the Italian population admitted to hospital in protective isolation. Since then, this scale has been used with oncology patients, among whom the psychosocial impact deriving from protective isolation and quarantine due to COVID-19 was assessed.^{13,16,25} For the first time, the ISOLA-15 scale is being used in a different cultural environment and under similar conditions of isolation.

The studies conducted using this scale showed that the most affected psychosocial dimension in isolated patients was “relationship with oneself”, followed by “relationship with others” and “isolation-related suffering”. Other studies have shown the correlation between isolation and the psychosocial impact in hospitalized COVID-19 patients.²⁴ This is not far from the results obtained in this study, in which it was found that in F1

and F2 the impact of isolation was medium and medium-high in F3.

In our study, patients with a higher education level reported less psychosocial sequels due to COVID-19 hospitalization. Biagioli *et al.* found that there was a correlation between the academic level and some of the factors represented in the scale.¹³ Similar associations were previously established in relation to the period of quarantine, in which people with a lower education level and jobs derived from it showed a greater psychosocial impact than those with higher qualifications.^{26,27} These findings suggest that a higher education level could be a protector factor when it comes to suffering psychosocial sequels, this may be due to a most frequent use of adaptation and coping strategies.

Patients who lived in their own showed a less altered “relationship with others” dimension than those who lived with others. This concurs again with the results of Italian authors.¹³ Moreover, in our study, the more people were part of the cohabitation nucleus, the greater the effect. Going from living in companion to being isolated in a hospital room implies a greater change in their daily routine that could influence their perception of suffering. This scenario could be explained by the feeling of missing contact with their loved ones plus being exposed to a situation of vulnerability they must deal with in their own. Social support from family members and peers as well as a stable family structure are beneficial to the health of individuals. In contrast, physical distance and communication barriers are a major stress factor.^{26, 27}

Conditions derived from hospitalization also had a great psychosocial impact. It has been observed that isolation-related suffering can be reduced if patients count with a roommate, in contrast to Biagioli *et al.* who did not find this association, but rather the opposite one.¹³ This could be due to the fact that, in contrast to the Italian population, most of our patients did not receive any visits, the only way to communicate with their loved ones was through new technologies and they only had personal contact with the health professionals, so being in a shared room could reduce this feeling of loneliness. Having a roommate brings additional benefits such as: reduction of days of hospitalization and of healthcare costs.²⁸ With a view to improving the quality of healthcare assistance, this is a point to be taken into account since it is a factor that can be easily modified.

Up to date, this is the first study that analyses the psychosocial impact due to hospital isolation related to COVID-19 in

Spain. Future research lines should be focused in analysing the psychometrics properties of the scale and validating it in our local population, so it can become an objective and practical tool.

Given the findings of the present investigation, the need to study the psychosocial aspects that are altered in the hospital environment becomes evident. A holistic assessment and care of patients would result in multiple benefits for health and the health system itself. It is necessary to develop and implement prevention strategies at all levels to reduce the impact of hospital admissions on people's lives, especially those involving isolation.²⁹

Limitations

This study has several limitations. This is a single-centre study, sample size is reduced, and the questionnaire used for data collection has not been validated for Spanish population although it has been validated for the Italian population, whose sociocultural characteristics are similar.³⁰

Conclusions

Having a tool to assess the perception of the psychosocial impact related to isolation, such as COVID-19, can help health professionals to develop specific strategies for patients to improve their coping with this situation. The patients surveyed showed a medium-high level of psychosocial impact. The variable that was related to greater psychosocial distress was educational level. Greater suffering related to isolation was associated with spending the admission in a single room. Those patients who lived with more than one person had more psychosocial impact in relation to others. No significant relevance was found between the “relationship with oneself” and the independent variables.

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