



## Original Article

# COVID-19 patient relatives' communication with health professionals and the patient and the sufficiency of communication in addressing patient relatives' concerns: a cross-sectional study

Hatice Oksal,<sup>1</sup> Seçil Ekiz Erim,<sup>2</sup> Havva Sert<sup>3</sup>

<sup>1</sup>Child Advocacy Center, Sakarya Training and Research Hospital, Sakarya, Türkiye

<sup>2</sup>Institute of Health Science, Sakarya University, Sakarya, Türkiye

<sup>3</sup>Internal Medicine Nursing Department, Faculty of Medicine, Sakarya University, Sakarya, Türkiye

### Abstract

**Objectives:** It is known that relatives of patients diagnosed with COVID-19 are concerned about their patients due to the unpredictable process. In this study, it was aimed to determine the communication process of the relatives of the patient who was hospitalized due to COVID-19 with the patient and health professionals, to evaluate the level of concern of the patient's relatives and to evaluate the sufficiency of communication in overcoming their concerns.

**Methods:** The sample of this cross-sectional study was calculated as 384 people with the formula of unknown population and the study was completed with 234 people. "Personal Information Form" developed by the researchers was used for data collection, and "Visual Analog Scale (VAS)" was used to determine the level of concern of the relatives of the patients and the adequacy of the communication to eliminate their concerns. SPSS 25.0 was used to analyze the data.

**Results:** Due to restricted communication with their patients, 70.9% of the participants described themselves as "concerned". There is a significant difference ( $p < 0.05$ ) between the health professional with whom the patient's relatives communicate and the level of concern they report about their patients. Accordingly, it was found that those who communicated only with the patient's doctor were more concerned. Relatives of patients who did not receive sufficient information during communication, who met only with the doctor and whose patient was in the COVID-19 intensive care unit found the meeting with the health professional more inadequate in relieving their concerns ( $p < 0.05$ ).

**Conclusion:** Relatives of patients who could not communicate with health professionals and their patients had higher levels of concern. Relatives of the patients found the communication with the nurse/nurse and the doctor more effective in relieving their concerns. While doctors usually provide information about the patient's medical condition, nurses, who provide all the care of the patient, can provide more detailed information about the patient's general condition and activities of daily living. Among the relatives of patients who were concerned about their patients, those who communicate with nurses were both less concerned and found the communication more adequate in relieving their current concerns.

**Keywords:** COVID-19; communication; patient; relatives.

**Address for correspondence:** Hatice Oksal, Child Advocacy Center, Sakarya Training and Research Hospital, Sakarya, Türkiye

**Phone:** +90 264 255 21 06 **E-mail:** haticeoksal@gmail.com **ORCID:** 0000-0003-1685-4468

**Submitted Date:** August 23, 2022 **Revised Date:** January 06, 2023 **Accepted Date:** February 15, 2023 **Available Online Date:** June 15, 2023

©Copyright 2023 by Journal of Psychiatric Nursing - Available online at [www.phdergi.org](http://www.phdergi.org)



**What is presently known on this subject?**

- The way a patient's relative maintains communication with both the patient and the healthcare professional are affected by the isolation measures implemented due to COVID-19. And this situation causes anxiety in the relatives of the patients.

**What does this article add to the existing knowledge?**

- During the COVID-19 process, where face-to-face communication with the patient was restricted, it was observed that the patient's relative, who could maintain communication with both the patient and the healthcare professional, was less worried. The patient's relative, who could not communicate with the patient, to communicate with both the doctor and the nurse was more sufficient to reduce their anxiety. The relatives of the patients who communicated only with the doctor stated that their anxiety levels were higher.

**What are the implications for practice?**

- The results of this study have been reported that the importance of maintaining effective communication of the patient relatives with both their patient and the healthcare professionals in the restrictions imposed on patients and their relatives in possible epidemic situations. Also, innovative approaches suitable for these situations could be applied.

The new coronavirus disease 2019 (COVID-19) has quickly become an epidemic affecting the world in a very short time due to its rapid spread and severe clinical chart.<sup>[1]</sup> Governments and public health institutions all around the world prepared social distancing instructions to fight with COVID-19 pandemic.<sup>[2]</sup> When isolation and the need to preserve social distance are considered, the COVID-19 pandemic has led a global health crisis that deeply impacts the way of establishing relationship with health care professionals, patients and patients' relatives in all COVID-19 care environments.<sup>[3]</sup> Being a patient's relative is as difficult as being a patient because of isolation. In addition, family members of the patient with a COVID-19 diagnosis could experience severe stress and anxiety in this process full of unknown.<sup>[1]</sup>

Hospitals over the world have limited visitors in wards and intensive care units (ICU) where patients were treated for COVID-19.<sup>[4,5]</sup> That's why communication has been performed through phones or videos instead of face-to-face or bedside interviews in many COVID-19 clinics and ICUs.<sup>[4]</sup> Patients' relatives get anxious and live emotional and mental problems because they can't see the patient, video call is limited, patient information can be obtained only through the telephone and prognosis can't be predicted.<sup>[6,7]</sup> In addition to mental changes observed in patients' relatives, patients also could live feelings of longing, guilt, rage and hopelessness because their families are in quarantine and the possibility that they may infect their families.<sup>[6,8]</sup> Changes in the modes of communication also cause anxiety in patients' relatives.<sup>[8]</sup> Moreover, the presence of COVID-19 positive patients' relatives, curfew and travel restrictions are other causes of anxiety.<sup>[6,9]</sup>

The quarantine and physical distance strategies implemented to control and prevent the spread of COVID-19 infection have been implemented in every part of society. In particular, the operation of hospitals has been affected by this situation. While visitor restrictions were imposed in other clinics, complete restrictions were imposed in inpatient units that provide

services due to COVID-19.<sup>[10,11,12]</sup> In Turkey, visitors were completely restricted in COVID-19 services and ICUs. However, in all services other than COVID-19 services, the family accompanied patient care, but there were restrictions on visitors. In Turkish culture, having a family member accompanying the patient and daily patient visits by relatives are very important for the patient. However, relatives of patients who could not be with their patients due to restrictions during the COVID-19 process experienced stress and anxiety due to this situation<sup>[1]</sup>

Studies have reported that many institutions develop alternative methods (such as telehealth, telemedicine, video conferencing, telephone, tablet, webcam, etc.) that are far from traditional visits and communication,<sup>[13,14,15,16]</sup> and that patients and their relatives cannot communicate with each other in some ICUs and COVID services.<sup>[8,17,18]</sup> In the institution where this study was conducted, the communication of the patient's relatives with the healthcare professional during the process of the patient receiving COVID-19 treatment was carried out by a professional team (psychologist, child development and social workers) formed in the hospital by informing them regularly over the phone. The patient's relative could communicate with the patient treated in COVID-19 services by the institution's phone or the patient's individual phone. In COVID-19 ICUs, information was given by the doctor via phone. However, in this process, not much information could be obtained about what the relatives of the patients experienced. Therefore, the purpose of our study was to determine the communication processes of patients' relatives of patients who were admitted to the hospital for COVID-19 during visitor restrictions with patients and healthcare professionals, and examine the ability of patients' relatives to lower their anxiety and relieve their communication anxieties.

**Study Questions**

- Is there any difference between patients' relatives' level of anxiety about their patients because of COVID-19 concerning their communication with healthcare professionals and patients?
- Does the communication of patients' relatives with healthcare professionals make any difference in relieving the anxiety about their patients?

**Materials and Method****Study Design**

This quantitative study is cross-sectional type.

**Study population and sample**

The population of the study consisted of the first-degree relatives of patients admitted to the COVID-19 inpatient services and intensive care units of a training and research hospital. The study's sample size was determined with  $n = p \cdot q \cdot t^2 / d^2$  formula by using the calculation of a sample with an unknown universe. After the calculation, it was understood that the

sample should contain 384 individuals. Because 150 people were not reached by phone or did not give consent for the study, the study was conducted with 234 people. The patients' relatives who were over 18 years of age, who did not have any communication disorder and who were Turkish speakers included in the study. The patients' relatives who had communication disorders, who could not speak Turkish, who were discharged while study data were collected and who lost their patients during the study were not included.

### Data Collection

In the hospital where the study was conducted, following the patient admission to COVID-19 units, a relative was selected to inform about the current situation of the patient in line with the relative's request and communication data was recorded. With the necessary permissions, communication information of those who had their patients in COVID-19 units and selected for communication was reached through heads of clinics 2 times a week (Monday and Thursday). Researchers called patients' relatives by phone, data were collected and

recorded. Data collection was performed between January–June 2021 and every interview took an average of 20 minutes.

### Data Collection Tool

In the study, "Personal Information Form" consisting of a total of 22 questions, including the demographic data of the patients and their relatives, their COVID-19 knowledge levels, their communication with patients and healthcare professionals, and their evaluations about the communication process, which were developed by the researchers in line with the literature, was used as a data collection tool.<sup>[14,18,19]</sup> Patients' relatives were asked to self-evaluate their level of anxiety with a visual analogue scale (VAS) (1 minimum, 10 maximum) about their patients because of COVID-19 and if their communication with healthcare professionals were enough to relieve anxiety about their patients. According to the VAS score of the patient's relative's anxiety level; 1 indicates minimum and 10 indicates maximum anxiety. In addition, according to the VAS score of the level of adequacy of communication of patients' relatives with healthcare professionals to relieve anxiety, 1 in-

**Table 1. Descriptive characteristics of the patient relative**

Descriptive Properties		n	%
Age of patient relative	Mean±SD		
	Age range (min-max)		
Gender	Female	100	42,7
	Male	134	57,3
Education Level	Primary Education	96	41
	High School	83	35,5
	University	44	18,8
	Master's Degree/Doctorate	11	4,7
Marital status	Married	196	83,8
	Bachelor	38	16,2
Employment Status	Employed	132	53
	Unemployed	102	47
Relative's Relation to the Patient	Parent (mother/father)	7	3
	Son/Daughter	118	50,4
	Husband	60	25,6
	Sibling	9	3,8
Status of evaluating the information of the patient relative about COVID-19	Next of kin	40	17,1
	Insufficiently-informed	14	6,0
	Moderately-informed	56	23,9
Information Resource about COVID-19	Well-informed	164	70,1
	Family members, spouses, friends, neighbors, etc.	14	6,0
	Internet search engines, social media, scientific publications	73	31,2
	All	147	62,8
The patient's relatives' opinion about the communication process performed	Will to communicate face-to-face	5	2,1
	Being anxious about the patient	166	70,9
	Not thinking anything negative	63	26,9
Total		234	100

**Table 2. Evaluation of the differences in the level of concern of the patient's relatives in terms of communication with the health professional and the patient \*/\*\***

Characteristics of communication with the healthcare professional and the patient	n	%	Median	25 <sup>th</sup> per –75 <sup>th</sup> per	p
Communicated Healthcare Professional					
Doctor (1)	104	44,4	9.00	7.00-10.00	0,002 <sup>a</sup>
Nurse (2)	77	32,9	8.00	6.00-8.50	
Doctor and Nurse (3)	43	18,4	8.00	6.00-9.00	
Unable to communicate (4)	10	4,3	9.50	5.00-10.00	
Method of Communication with the healthcare professional					
Phone calls	188	80,3	8.00	6.00-9.00	
Face-to-face communication	14	6,0	8.00	3.75-9.00	0,190 <sup>*</sup>
Phone calls and face-to-face communication	22	9,4	9.00	8.00-9.00	
Unable to communicate	10	4,3	9.50	5.00-10.00	
Communication with patient					
Unable to meet because the patient was in the intensive care unit (1)	105	44,9	9.00	7.00-10.00	
Able to make voice and video calls by phone (2)	70	29,9	7.50	6.00-9.00	p<0,001 <sup>a,b</sup>
Only voice calls via phone (3)	45	19,2	7.00	6.00-9.00	
Face-to-face communication and accompanying person (4)	14	6,0	9.00	6.50-9.00	
The Department where the Patient is Treated					
COVID service	129	55,1	7.00	6.00-9.00	p<0,001 <sup>**</sup>
COVID ICU	105	44,9	9.00	7.00-10.00	
Total	234	100			

\*Kruskal Wallis H test, \*\*Mann Whitney U test, a: 1-2, b: 1-3, c: 1-4, d: 2-3, e: 2-4, f: 3-4; COVID-19: Coronavirus disease, ICU: intensive care unit

icates minimum and 10 indicates maximum relief.

**Statistical Analysis**

Data were analyzed using IBM SPSS 25.0 package program (IBM Corp., Armonk, NY, USA). Continuous variables were submitted as mean ± standard deviation and median (25 percentile-75 percentile) and nominal variables were submitted as number of cases and percentage (%). Kolmogorov-Smirnov test was used to test whether data conform to a normal distribution. Because intergroup differences didn't conform to normal distribution, Mann-Whitney U test, Kruskal Wallis H test and Dunn multiple comparison test were used. The significance for two-sided tests was set at p<0.05.

**Ethics Committee Approval**

Firstly, institutional approval was obtained for the research, then ethical approval was obtained from Sakarya University Faculty of Medicine Non-Interventional Ethics Committee (28.12.2020/E.11605). In the interview made with patients' relatives who were communicated by the researcher by phone, they were informed about the study, and verbal consent was obtained.

Institution Approval Number: 2020-12-17T11\_43\_32

**Results**

234 patient relatives who had patients in the service and ICU

due to COVID-19 participated in the study. The age range was 18-77 years, 57.3% (n=134) were male and 50.4% (n=118) of the patients' relatives were children of the patient. The descriptive characteristics of the participants are given in Table 1. It was found that 44% of the patient relatives talked to their doctors to get information about their patients, and 80.3%(n=188) of these communication were in the form of phone calls. The relationship between healthcare professionals who patients' relatives communicated with and VAS scores indicating the level of anxiety about their patients (1 minimum 10 maximum) was significant (p=0.002). On paired comparisons, there were differences between interviews with physicians (n; median; Q1-Q3=104;9;7-10) and nurses (n; median; Q1-Q3=77;8;6-8,5), and those who made communication only with physician had higher levels of anxiety. (Table 2). When the communication of patient relatives with their patients was examined, it was determined that 44.9%(n=105) of them could not communicate with their patients. According to the types of communication with the patient, there was a statistically significant difference in terms of anxiety levels reported by patients' relatives (p<0.001). Those who had no communication because their patients were in ICU (n; median; Q1-Q3=105;9;7-10) had higher level of anxiety compared to those who had visual and verbal telephone communication (n; median; Q1-Q3=70;7,5;6-9)(p<0,001a), and who had verbal telephone communication (n; median; Q1-Q3=45;7;6-9)

**Table 3. Evaluation of the differences in terms of the adequacy of the communication of the patient's relatives with the health professional in alleviating their concerns \*/\*\***

Characteristics of communication with the healthcare professional	n	%	Median	25 <sup>th</sup> per –75 <sup>th</sup> per	p
Status of receiving information from Healthcare Professionals					
Those who find the information they receive sufficiently	171	73,1	8.00	7.00-9.00	p<0,001**
Those who want more detailed information	63	26,9	6.00	5.00-8.00	p<0,001*,a, b, c, e, f,
Communicated Healthcare Professional					
Doctor (1)	104	44,4	7.00	6.00-8.00	
Nurse (2)	77	32,9	8.00	7.00-9.00	
Doctor and Nurse (3)	43	18,4	9.00	7.00-9.00	
Unable to communicate (4)	10	4,3	.00	.00-.00	p<0,001*,c, e, f
Method of Communication with the healthcare professional					
Telephone call (1)	188	80,3	8.00	6.00-9.00	p<0,001**
Face-to-face communication (2)	14	6,0	9.00	7.75-9.00	
Phone call and face-to-face communication (3)	22	9,4	7.00	7.00-9.25	
Unable to communicate (4)	10	4,3	.00	.00-.00	
The Department where the Patient is Treated					
COVID service	129	55,1	8.00	7.00-9.00	
COVID ICU	105	44,9	7.00	6.00-8.00	
Total	234	100			

\*Kruskal Wallis H test, \*\*Mann Whitney U test, a: 1-2, b: 1-3, c: 1-4, d: 2-3, e: 2-4, f: 3-4; COVID-19: Coronavirus disease; ICU: intensive care unit.

(p<0,05 b). Those who had patients treated in ICU had higher level of anxiety compared to those who had patients treated in wards (p<0.001) (Table 2).

It was determined that the majority of the patient relatives (n=171, 73.1%) found the information they received sufficiently in their communication with the healthcare professional. The relatives of the patients who did not find the information they received sufficient (26.9% n=63) wanted to receive more detailed information about whether their patients met their care needs, whether they received respiratory support, and whether they responded to treatment (not shown in the Table). There was a significant difference in the level of anxiety of those who felt relieved after obtaining sufficient information about their patients after communication with healthcare professionals (n; median; Q1-Q3=171;8;7-9) (p<0.001) (Table 3).

A significant difference was found between the communicated healthcare professional and the levels of patient relatives' reduced anxiety about their patients (p<0.001). According to pairwise comparisons, it was determined that the communication established only with the doctor (n; median; Q1-Q3=104; 7; 6-8) was less sufficient to relieve anxiety. The communication with only the nurse (n; median; Q1-Q3=77; 8; 7-9) and both healthcare professionals (doctor and nurse) (n; median; Q1-Q3=43; 9; 7-9) were found to be more effective than communication with only the doctor in relieving the concerns of the patient's relatives (p=0.001 a, b)(Table 3).

The method of communication with healthcare profession-

als was found to be effective to eliminate the anxiety of patients' relatives and the difference in pairwise comparisons was due to those who could not make communication (n=10) (p<0,001c,e,f). The communication of the relatives with the healthcare professional whose patients were treated in the ward (n; median; Q1-Q3=129; 7; 6-9) was found to be more effective in relieving their concerns (p<0.001) (Table 3).

### Discussion

It is becoming increasingly common for patients to be accompanied by a person such as family, friends, and neighbors from the time of hospitalization to the time of discharge and for this person to be included in the patient's care plan.<sup>[20,21]</sup> This practice increases the quality of care and forms the basis of the patient-centered health care system. In addition to supporting patient recovery, the family member admitted to the patient can also perform the end-of-life care of the person with a terminal illness.<sup>[22]</sup> Patient relatives who are separated from the person they love due to the restrictions during the pandemic process, who are unable to communicate with their patient, are suffering from intense anxiety due to the inability to fully know the prognosis of COVID-19 and uncertainty about the health conditions of patients.<sup>[6,23]</sup> In order to address these concerns, it is important to maintain the communication of patient relatives with patients and health professional. Therefore, the present study aimed to examine the communication of patient relatives with their patients and healthcare

professionals during COVID-19 visitor restrictions, the level of concern of the patient's relatives and the sufficiency of communication in relieving their concerns.

In the study, it was determined that most of the patient's relatives (95.7% n=224) could communicate with healthcare professionals, and mostly used phone calls as a communication method. When the status of communication of participants with patients was examined, 55.1% (n=129) communicated well with patients, the majority were found to make voice and video communication or voice communication by phone. The literature states that during the COVID-19 pandemic, patient relatives continue communicating with their patients via phone (voice/video) in many countries of the world.<sup>[24,25]</sup> In previous studies, it has been reported that majority of healthcare professionals make voice telephone communication with family members.<sup>[24,25]</sup> Similarly, Rahul et al.<sup>[26]</sup> reported in their study that in cases where face-to-face communication between patient relatives, doctors, and families is not possible, they would prefer to communicate primarily via voice call. The prevalence of the method of the telephone communication and its safety during pandemic process are the reasons why it is preferred in the first place.

Limited communication for patients may cause the feeling of lack of family support. Although remote communication is provided with an electronic device for most patients, this prevents people who do not have access to the device or have difficulty using it, especially the families of those hospitalized in the intensive care unit, from establishing healthy communication.<sup>[27]</sup> The present study found that 70.9% (n=166) of the patient relatives were concerned about limited communication with their patients. A review of the effects of visitation restrictions reported that family members' not being physically present with the patient caused anxiety and sadness. It has been determined that this situation negatively affects the psychosocial well-being of family members.<sup>[10]</sup> Similarly, in study, restrictions and limited communication due to the COVID-19 pandemic caused the majority (%70,9 n=166'unun) of the patient relatives' anxiety.

In the present study, when the anxiety levels of the patient's relatives about their patients were compared according to how they communicate with the patient, it was seen that those who could not communicate with the patient had high levels of anxiety about the patient. In particular, it was determined that the participants' anxiety levels with patients in the ICU were significantly higher. The unpredictability of the course of COVID-19 disease, the survival status of the patient, and the fact that the ICU is a foreign environment may affect the psychological state of the relatives (e.g., anxiety, stress, depression, sleep disorders).<sup>[28]</sup> Studies conducted with patient relatives with intensive care experience reported that family members experienced high-stress levels.<sup>[29,30]</sup> It has been emphasized that family stress findings continue even after discharge.<sup>[28]</sup> It was reported that the symptoms of anxiety and depression were significantly higher in the first 72 hours of the

patient's admission to the intensive care unit and decreased after discharge /death.<sup>[19,23]</sup> In our study, it was thought that factors such as not knowing the course of the disease in addition to the intensive care experiences of the patient relatives, inability to communicate with the patient by voice or video and not being able to meet the patient face to face might cause them to worry more.

In the study, determined that almost half of the patient's relatives (%44,4 n=104 contacted the doctor for information. As a result of the evaluation of the patient's relatives with the VAS score, it was seen that those who communicated only with the doctor were both more worried and this communication was not sufficient to address their current concerns. The anxiety levels of those who communicated with both their doctors and nurses were found to be lower. While working in COVID-19 services, the transmission of non-verbal clues (eye contact, body movements, facial expressions, handshake, etc.) that constitute an integral part of effective communication between doctors and patients' family members became insufficient due to the wearing of cumbersome, uncomfortable and stressful personal protective equipment and the application of isolation methods. This situation negatively affected the exchange of information about the status of patients during the pandemic.<sup>[8,26]</sup> In Turkish culture, the patient's ability to eat, good breathing, the patient's saying his/her own will, etc., are accepted as important indicators of improvement in addition to the patient's medical condition. Providing information about these issues also makes the patient relatives feel more comfortable. Doctors only give information about the course of the patient's health condition, while nurses give more detailed information about the patient's eating, drinking, sleeping, and breathing. Therefore in the study, the patient relatives who communicated with the nurse or both the nurse and the doctor may have been more effective in relieving their patients' concerns.

In the study, while the type of communication with the healthcare professional did not affect the anxiety levels of the relatives of the patients, a difference was found due to those who could not communicate at the level of eliminating their concerns. In the present study, very few patients' relatives had the opportunity to meet face-to-face with healthcare professionals, and no one could make video communication with healthcare professionals. Because the majority of participants (80.3%, n=188) made telephone interview, the method of interview did not change the level of anxiety; those who received detailed information about their patient's interview found communication adequate to relieve their anxiety. During communication, those who required more detailed information about their patients had higher levels of anxiety. Inability to receive timely, understandable and accurate information about their patients is one of the primary concerns of patients' relatives.<sup>[31]</sup> In the study of Jones et al.,<sup>[11]</sup> it was reported that those who could not get detailed information from healthcare professionals were more concerned. As stated in the literature, it is expected that the concerns of those who cannot commu-

nicate with the patient are high.

In our study, through communication with healthcare professionals, those who had patients treated in ICU had higher levels of anxiety compared to those who had patients treated in wards. It might be difficult to establish a trusting relationship with the intensive care team, due to the restrictions of face-to-face communication in the ICU during the COVID-19 pandemic.<sup>[32]</sup> Visit restrictions and increased workload between ICU employees further limit the ability to provide adequate communication and information with patient relatives.<sup>[33]</sup> Therefore, not being able to allocate enough time and providing more limited information may not be sufficient to relieve the concerns of the patient relatives.

## Conclusion

According to the results of this study, when face-to-face communication with the patient relatives and healthcare professionals is not possible in isolation conditions, voice and video communication via phone is an acceptable option. The anxiety level of patients' relative about their patients was high when they couldn't communicate with healthcare professionals. Patients' relatives reported that they received more sufficient information through interview not only with the nurse but also with the physicians, and by the way they experienced less anxiety and eliminate the current anxiety.

It is thought that preparing videos explaining the practices in the hospital during the COVID-19 outbreak and providing information to the patient relatives may be effective in reducing their concerns and trust in care. In addition, regular daily phone calls can be made by the nurse about the patient's condition and daily care at predetermined times in cooperation with the patient relatives. Using a video phone in an environment suitable for communication outside the COVID-19 service and the ICU can enable the healthcare professional to understand the concerns of patient relatives and to address them appropriately. For this reason, when the condition of the patients and the clinic is appropriate, video calls can be made with their relatives. Innovation studies can be carried out, including new industry collaborations, so that the patient relatives can maintain effective communication between their patient and the healthcare professional.

## Limitations of the Research

One of the limitations of the study was that the sample contains patients' relatives who had communication information. Data can't be generalized to the universe because they were collected from patients' relatives whose patients were treated for COVID-19 in only one hospital. Our sampling strategy aimed to reach participants who had unique views about communication by telephone instead of providing demographic balance, so its generalizability is limited. These interviews might not represent the experiences of all family members as participants made interviews with only patient relatives.

**Conflict of interest:** There are no relevant conflicts of interest to disclose.

**Peer-review:** Externally peer-reviewed.

**Authorship contributions:** Concept – H.O., S.E.E., H.S.; Design – H.O., S.E.E., H.S.; Supervision – H.O., S.E.E., H.S.; Fundings - H.O., S.E.E., H.S.; Materials – H.O., S.E.E., H.S.; Data collection &/or processing – H.O., S.E.E., H.S.; Analysis and/or interpretation – H.O., S.E.E., H.S.; Literature search – H.O., S.E.E., H.S.; Writing – H.O., S.E.E., H.S.; Critical review – S.E.E., H.S.

## References

1. Ayakdaş Dağlı D, Büyükbayram A, Baysan Arabacı L. A psychosocial approach on patients diagnosed with COVID-19 and their families. İzmir Katip Çelebi Üniv Sağlık Bil Fak Derg [Article in Turkish] 2020;5:191–5.
2. World Health Organization. Coronavirus disease (COVID-19) advice for the public. 2020. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>. Accessed Jun 12, 2023.
3. Kotfis K, Williams Roberson S, Wilson JE, Dabrowski W, Pun BT, Ely EW. COVID-19: ICU delirium management during SARS-CoV-2 pandemic. *Crit Care* 2020;24:176.
4. Centers for Disease Control and Prevention. Interim infection prevention and control recommendations for healthcare personnel during the coronavirus disease 2019 (COVID-19) pandemic. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html>. Accessed Jun 12, 2023.
5. Lee VJ, Chiew CJ, Khong WX. Interrupting transmission of COVID-19: Lessons from containment efforts in Singapore. *J Travel Med* 2020;27:taaa039.
6. Çelik F, Gündüz N. Grief in COVID-19 pandemic. *J Clin Psy [Article in Turkish]* 2020;23:99–102.
7. Life Lines Team comprising. Restricted family visiting in intensive care during COVID-19. *Intensive Crit Care Nurs* 2020;60:102896.
8. Marra A, Buonanno P, Vargas M, Iacovazzo C, Ely EW, Servillo G. How COVID-19 pandemic changed our communication with families: Losing nonverbal cues. *Crit Care* 2020;24:297.
9. Sun N, Wei L, Wang H, Wang X, Gao M, Hu X, et al. Qualitative study of the psychological experience of COVID-19 patients during hospitalization. *J Affect Disord* 2021;278:15–22.
10. Hugelius K, Harada N, Marutani M. Consequences of visiting restrictions during the COVID-19 pandemic: An integrative review. *Int J Nurs Stud* 2021;121:104000.
11. Jones W, Woolson K, Thomson G. COVID-19 visiting restrictions-Improving communication with relatives. *Int J Clin Pract* 2021;75:e14456.
12. Moolla MS, Broadhurst A, Parker MA, Parker A, Mowlana A. Implementing a video call visit system in a coronavirus disease 2019 unit. *Afr J Prim Health Care Fam Med* 2020;12:e1–3.
13. Hollander JE, Carr BG. Virtually perfect? telemedicine for Covid-19. *N Engl J Med* 2020;382:1679–81.
14. Kennedy NR, Steinberg A, Arnold RM, Doshi AA, White DB,

- DeLair W, et al. Perspectives on telephone and video communication in the intensive care unit during COVID-19. *Ann Am Thorac Soc* 2021;18:838–47.
15. Negro A, Mucci M, Beccaria P, Borghi G, Capocasa T, Cardinali M, et al. Introducing the video call to facilitate the communication between health care providers and families of patients in the intensive care unit during COVID-19 pandemic. *Intensive Crit Care Nurs* 2020;60:102893.
  16. Maffoni M, Torlaschi V, Pierobon A, Zanatta F, Grasso R, Bagliani S, et al. Video calls during the COVID-19 pandemic: A bridge for patients, families, and respiratory therapists. *Fam Syst Health* 2021;39:650–8.
  17. Lissoni B, Del Negro S, Brioschi P, Casella G, Fontana I, Bruni C, et al. Promoting resilience in the acute phase of the COVID-19 pandemic: Psychological interventions for intensive care unit (ICU) clinicians and family members. *Psychol Trauma* 2020;12:S105–7.
  18. Kebapçı A, Türkmen E. The effect of structured virtual patient visits (sVPVs) on COVID-19 patients and relatives' anxiety levels in intensive care unit. *J Clin Nurs* 2022;31:2900–9.
  19. Cattelan J, Castellano S, Merdji H, Audusseau J, Claude B, Feuillassier L, et al. Psychological effects of remote-only communication among reference persons of ICU patients during COVID-19 pandemic. *J Intensive Care* 2021;9:5.
  20. Hart J, Summer A, Yadav KN, Peace S, Hong D, Konu M, et al. Content and communication of inpatient family visitation policies during the COVID-19 pandemic: Sequential mixed methods study. *J Med Internet Res* 2021;23:e28897.
  21. Hart JL, Turnbull AE, Oppenheim IM, Courtright KR. Family-centered care during the COVID-19 era. *J Pain Symptom Manage* 2020;60:e93–7.
  22. Frampton S, Agrawal S, Guastello S. Guidelines for family presence policies during the COVID-19 pandemic. *JAMA Health Forum* 2020;1:e200807.
  23. Dorman-Ilan S, Hertz-Palmor N, Brand-Gothelf A, Hasson-Ohayon I, Matalon N, Gross R, et al. Anxiety and depression symptoms in COVID-19 isolated patients and in their Relatives. *Front Psychiatry* 2020;11:581598.
  24. Piscitello GM, Fukushima CM, Saulitis AK, Tian KT, Hwang J, Gupta S, et al. Family meetings in the intensive care unit during the coronavirus disease 2019 pandemic. *Am J Hosp Palliat Care* 2021;38:305–12.
  25. Valley TS, Schutz A, Nagle MT, Miles LJ, Lipman K, Ketcham SW, et al. Changes to visitation policies and communication practices in michigan ICUs during the COVID-19 pandemic. *Am J Respir Crit Care Med* 2020;202:883–5.
  26. Rahul, Kumar A, Verma A, Sanjeev OP, Singh RK, Ghatak T, et al. A questionnaire-based study on quality and adequacy of clinical communication between physician and family members of admitted Covid-19 patients. *Patient Educ Couns* 2022;105:304–10.
  27. Freeman-Sanderson A, Rose L, Brodsky MB. Coronavirus disease 2019 (COVID-19) cuts ties with patients' outside world. *Aust Crit Care* 2020;33:397–8.
  28. Hoffmann M, Jeitziner MM, Riedl R, Eller P, Amrein K; ICU-Families Study Group. Psychological symptoms in relatives of critically ill patients (ICU families): A prospective multicenter study. *Intensive Care Med* 2020;46:1060–2.
  29. Alfheim HB, Hofsvø K, Småstuen MC, Tøien K, Rosseland LA, Rustøen T. Post-traumatic stress symptoms in family caregivers of intensive care unit patients: A longitudinal study. *Intensive Crit Care Nurs* 2019;50:5–10.
  30. Fumis RR, Ranzani OT, Martins PS, Schettino G. Emotional disorders in pairs of patients and their family members during and after ICU stay. *PLoS One* 2015;10:e0115332.
  31. Jennerich AL, Hobler MR, Sharma RK, Engelberg RA, Curtis JR. Unplanned admission to the ICU: A qualitative study examining family member experiences. *Chest* 2020;158:1482–9.
  32. Zante B, Camenisch S, Jeitziner MM, Jenni-Moser B, Schefold JC. Fighting a family tragedy: Family-centred care in times of the COVID-19 pandemic. *Anaesthesiol Intensive Ther* 2020;52:336–8.
  33. Zante B, Schefold JC. Ave CAESAR: At the end of life in the intensive care unit. *Intensive Care Med* 2016;42:1651–2.