ACADEMIC HOSPITAL JOURNAL

Volume 7, No. 1, March 2025

ISSN 2615-6253 (ONLINE)
ISSN 2615-6245 (PRINT)

The Relationship between Online Visit and Family Satisfaction of ICU Patients at UGM Academic Hospital

***Muhammad Nur Hidayanto[1], Mutik Sri Pitajeng[2], Purwadi Sujalmo[1], Etika Ratnasari[1]**

[1]Universitas Gadjah Mada Academic Hospital
[2]Department of Nursing, Universitas Diponegoro
*Corresponding Author: muhammad.hidayanto@ugm.ac.id

Publish: March 2025

Abstract

Background: The visiting policy to the hospital changed following the pandemic situation. There was a restriction to ICU patients getting visits from their relatives or families during their admission. This policy aimed to prevent transmission and optimize care for patients. An online visit was implemented to provide a visit experience to patients and their families during ICU hospitalization. Visitation was associated with family satisfaction of ICU patients but an analysis of the relationships between online visits and family satisfaction in ICU has not been conducted. This study aimed to identify relationships between online visit and patient's family satisfaction with ICU

Materials and methods: An online survey of ICU patients' family members who were admitted to ICU Arjuna 5 RSA UGM in 2020-2022 was done.

Results: 34 of 36 family members of ICU patients completed the online survey questionnaire. Most participants experienced online visits (85.3%) and had high levels of satisfaction with the ICU (82.4%). The average score of their satisfaction with the ICU was (68.6±21,1). However, the Fisher test between online visit and the patient's family satisfaction with ICU resulted in p-value of=0.56. P value >0.05 meant no significant relationship between both variables.

Conclusion: there was no significant relationship between online visit and patient family satisfaction with the ICU. A high level of family satisfaction in the ICU might be influenced by other factors that are required to be studied.

Keywords: ICU, online visit, family satisfaction, intensive care unit

1. INTRODUCTION

After the coronavirus disease 19 (COVID-19) pandemic, patient visitation policies at hospitals changed based on World Health Organization (WHO) recommendations that the number of visitors and visiting times be strictly limited (1). Although this policy was considered necessary to prevent infection and maximize care, visiting restrictions have had a negative impact. Restrictions on family visits in the ICU have an impact on reducing the psychological status of patients and families as well as treatment outcomes (2). The impact of restrictions on family visits is also felt by staff in the ICU who may often face anger and family disappointment with the policy.

Gadjah Mada University Academic Hospital (RSA UGM) has an isolation ICU room located on the 5th floor of the Arjuna Building. Based on Inpatient Patient Register Data since 2020, 578 patients have been treated in the Arjuna 5 ICU. Online visits are an alternative to family visits. implemented in the Arjuna 5 ICU. Online visits are video call activities between families and patients

that are facilitated by hospital staff at Arjuna 5. The online visits that have been implemented in the Arjuna 5 ICU have never received an evaluation from the family perspective.

Family satisfaction of ICU patients is influenced by communication and information related to patient care, financial burden, family expectations, involvement in services, and visiting policies (3). Before the pandemic in Spain, an ICU with a policy of visiting twice a day at meal times had a higher level of satisfaction than an ICU with a policy of families being free to visit and accompany patients during the day after morning procedures (4). Information on the impact of online visits in the ICU and patient-family satisfaction is still limited. Online visits may influence the family satisfaction of ICU patients. Therefore, the relationship between online visits and family satisfaction of ICU patients needs to be studied further.

2. MATERIALS AND METHODS

This quantitative research uses a survey and a questionnaire to the families of RSA UGM ICU patients. The research was conducted at RSA UGM starting from the initial stage in January 2023 to the final stage in November 2023. A purposive sampling technique was used in this research. The inclusion criteria in this study were the families of patients who had been treated at the Arjuna 5 RSA UGM ICU in the period June 2020 to December 2022 with a minimum length of stay of 72 hours, the patient was no longer being treated at Arjuna 5, the family's contact number could be contacted via WhatsApp, willing to participate research and fill out the research questionnaire. The exclusion criteria for this study were that the patient's family did not reply to messages after being sent three times and the questionnaire was filled incompletedly.

Researchers used a questionnaire in the form of Family Satisfaction with Intensive Care Unit (FS-ICU) 24 R which had been tested for validity and reliability with Cronbach's α= 0.95 (5). Data collection was carried out after obtaining ethical clearance from the UGM FK-KMK ethics commission team with number KE-FK-0988-EC-2023. Researcher sent an invitation and link to the research questionnaire through online message from WhatsApp ICU Arjuna 5 application to the target research participants. The Skewness test was carried out to assess the normality of demographic data. Bivariate analysis was carried out using the R program on participant characteristic variables and patient family satisfaction levels, visit data, and ICU patient family satisfaction levels. The bivariate test uses the Fisher test with a confidence level of 95% because the data does not meet the requirements for a chi-square test.

3. RESULTS

The number of patient families who filled out the research questionnaire was 36 people, but 2 of them filled out the questionnaire incompletely and did not meet the criteria. The total number of participants in this study was 34 people. The averaga age of participant was (41.65 ± 11) years old. Participant were 58.8% female, 88.2% main family, 64.7% first experience of having family member treated in ICU, 76.5% lived with patient, and 76.5% not staying in hospital during ICU admission. About 55.9% of participant had their family member passed away in the ICU.

Table 1. Participant Visit Data

No	Characteristics	f	%
1	Participant Offline Visit Status		
	Never visit patients directly	19	55,9
	Have visited patients directly in the ICU	15	44,1
2	Participant Online Visit Status		
	Never	5	14,7
	Have ever made a video called A Patient	29	85,3
3	Video call initiator		
	Family request	14	41,2

	From a nurse or doctor	12	35,3
	Sometimes it is a request from the family and the nurse or doctor	8	23,5
4	Group video calls		
	Never group video calls	11	32,4
	Group video calls	23	67,6

Source: Primary Data, 2023

From Table 1, most of the participants in this study did not have the opportunity to visit patients directly in the ICU (55.9%), but had the opportunity to make online visits or video calls with patients assisted by ICU staff (85.3%), and had made group video calls (67.6%).

The average overall score of participant satisfaction with care in the ICU was 68.6 ± 21.1. The highest average score of participant satisfaction with the ICU was coordination among staff and the frequency of communication with doctors in the ICU namely 75.7 ± 26.5. The lowest satisfaction was the atmosphere in the ICU waiting room and the consistency of information conveyed by the ICU staff, 55.9 ± 35.9.

Participant characteristics and the average score of family satisfaction was presented in Table 2. Participants with experience of their family member passed away in the ICU showed the lowest average score of satisfaction with ICU care (59.4±19.7), ICU decision-making (58.0±19.7), and overal care in the ICU (58.9±19.5).

Table 2. Participant characteristic and satisfaction score

Participant characteristic (f (%)) (34(100))	The average satisfaction score (Mean±SD)		
	Satisfaction with ICU Care	Satisfaction with ICU Decision-Making	Satisfaction with Overall Care in the ICU
Gender			
Male (14(41.2))	59,5±22,0	58,4±22,2	59,1±22.0
Perempuan (20(58.8))	75,9±17,7	74,4±19,5	75,3±18,2
Relationship with patient			
Main family (30(88.2))	68,7±21,9	67,4±22,9	68,2±22,1
Extended family (4(11.8))	72,3±12,6	70,7±14,3	71,6±13,2
Previous experience of having family member treated in ICU			
Yes (12(35.3))	72,0±18,9	70,7±20,9	71,5±19,5
No (22(64.7))	67,5±22,1	66,3±22,7	67,0±22,3
Lived with patient			
Yes (26(76.5))	67,0±22,5	66,2±22,3	66,7±22,4
No (8(23.5))	68,2±20,2	68,4±20,6	68,3±20,3
Length of staf patient			
0-3 weeks (23(67.6))	71,7±19,6	71,3±20,0	71,6±20,0
More than 3 weeks (11(32.4))	63,6±23,4	60,5±24,7	62,4±23,7
Participant stayed in hospital			
Yes (8(23.5))	65,4±23,7	62,8±25,6	64,4±24,4
No(26(76.5))	70,3±20,3	69,3±20,9	69,9±20,4
Outcome of patient			
Discharge from ICU (19(55.9))	76,8±18,9	75,5±20,7	76,3±19,6
Passed in ICU (15(44.1))	59,4±19,7	58,0±19,7	58,9±19,5

Offline visit			
No (19(55.9))	71,6±22,6	70,6±28,9	71,2±22,9
Yes (15(44.1))	65,9±18,8	64,3±19,1	65,3±18,9
Online visit			
No (5(14.7))	79,1±12,9	77,5±14,2	78,5±13,3
Yes (29(85.3))	67.4±21,7	66,1±22,7	66,9±21,9

Source: Primary Data, 2023

Each participant's score was carried out in a score category of 0-50 including a low level of satisfaction, and a score of 51-100 including a high level of satisfaction. Most participants had a high level of satisfaction with ICU care (82.4%), ICU decision-making (73.5%), and overall patient care in the ICU (82.45%).

The analysis of relationship between visits and the level of satisfaction with the ICU are shown in Table 3. For both types of visits, the p-value is >0.05, so there is no relationship between participants' offline visits and their level of satisfaction with the ICU and there is no relationship between participants' online visits and their level of satisfaction with the ICU. The initial hypothesis in this study stated that there was a relationship between online visits and the level of satisfaction with the ICU was rejected or not proven because the p-value was> 0.05 (p = 0.56). Bivariate analysis between participant characteristics and level of satisfaction also resulted in p-value>0.05 which meant no relationship significantly.

Table 3. Relationship between visits and level of satisfaction with the ICU

Type of Visit	Level of Satisfaction with the ICU				*p-value*
	Low		High		
	f	%	f	%	
Participant Offline Visits					
Never visit patients directly	4	11,8	17	50,0	0.16
Have you ever directly visited a patient in the ICU	2	5,9	11	32,4	
Participant Online Visit					
Never	0	0,0	5	14,7	0.56
Have you ever video-called a patient	6	17,6	23	67,6	

4. DISCUSSION

The results of this study showed that 82.4% of the total participants had a high level of satisfaction toward overall care in the ICU with the average satisfaction score being (68.6 ± 21.1). Two items having highest satisfaction score were coordination among staffs and frequency of communication with doctors in the ICU. Two items with lowest average satisfaction score were consistency of information conveyed by ICU staff and the atmosphere in the ICU waiting room. Patien'st family satisfaction in the ICU was influenced by communication among health workers and patients and their families (6). In ICU Arjuna 5, communication between health workers and patient families is carried out directly and uses communication technology tools, both telephone and electronic short messages. Daily communication about the patient's condition is carried out by the nurse on duty via electronic short messages and when there are special conditions, the patient's family will be contacted by the doctor on duty. On certain occasions, families can consult with the in charge specialist doctor for patient care. This may have increased

participant satisfaction scores on the staff communication and coordination items. A low score on the item consistency of information conveyed by ICU staff could be due to the unstable condition of ICU patients so that the information that reaches the family changes quickly. Other factors that influence patient family satisfaction in the ICU are the environment, visiting policies, decision-making, and emotional support (6). Low satisfaction scores from participants regarding the atmosphere in the ICU waiting room can be an input for hospital management to provide a waiting room for patient families.

Participants' satisfaction with the experience of their family members who died in the ICU in this study showed the lowest score compared to other groups. In a Korean population study, DNR decisions and ICU deaths were associated with low family satisfaction (7). Korean population were Asian people, so did this study. The cultural factor in Asia is that discussing death is taboo so families need more time to accept the patient's poor prognosis (7). The absence of the family when a patient is dying causes complicated grief and prolonged psychological trauma among the family which can affect the level of ICU satisfaction (8). These results indicate that families need to be more involved in direct care for end-of-life patients and in decision making. When ICU patients are at the end-of-life stage, the proportion of care will be more in palliative care where the family must play a direct role in care and be collaborative in critical illness patients because apart from being able to reduce the patient's suffering, it also reduces the family's suffering. The main interventions of palliative care include family meetings with the ICU team, increasing education and support for family members of ICU patients, and communicating effectively with families of critically ill patients (9). With effective communication and involving families more in end-of-life care, it is hoped that satisfaction with services, decision-making, and overall care in the ICU can increase.

The results of the research conducted showed that the demographic characteristics of participants did not have a significant relationship with the level of family satisfaction with the ICU. These results are different from a study at other hospitals which stated that participant characteristics including age, gender, education level, and occupation influenced the level of satisfaction (10). This research explains that the age of the participants influences the level of satisfaction; the older a person gets, the more satisfaction they will get; the younger a person or those of productive age tend to be more demanding, think more critically, and have more expectations for basic health services. Gender influences the level of satisfaction where men are more objective in assessing to protect or intervene, as well as providing a sense of security for their family and also tends to influence women more in providing opinions or considerations for doing something. Low levels of education are more likely to feel satisfied when compared to those with higher education who tend to demand more and ask more questions. Participants who work tend to be more demanding or critical of the services provided, compared to those who are not working or unemployed.

The initial hypothesis in this study which stated that there was a relationship between online visits and the level of satisfaction with the ICU was rejected or not proven because the p-value was> 0.05 ($p = 0.56$). Online visits did not have statistically significant relationship to satisfaction level of participants in this study with overall care in the ICU. The time limits for patient family visits in the ICU which are implemented in many hospitals are carried out to improve intensive services for patients and ensure the health and safety of patient families from the transmission of germs. Restriction visits during pandemic have caused patient isolation, feelings of helplessness, anxiety among family members, and moral pressure on the medical team (8). Direct (offline) family visits to the Arjuna 5 ICU are facilitated twice a week, making ICU staff innovate to facilitate online family visits by assisting with video calls between families and patients. In this way, it is hoped that it can fulfill the family's desire to know directly about the condition of their family being cared for at any time without violating the established visiting time restrictions.

The highest average score in the classification of satisfaction with ICU care, satisfaction with ICU decision-making making, and

satisfaction with overall care in the ICU was obtained from participants who never made an online visit. Patient family satisfaction with ICU services is more influenced by factors such as attention, care and management of patients, meeting information needs, family participation in decision-making, emotional support, frequency of communication, and the atmosphere in the patient waiting room (11). Apart from the factors above, the higher the quality of nursing services in the ICU, the higher the level of satisfaction of the patient's family. It is known that the duration or length of time also influences the level of satisfaction, the longer the duration of the direct visit, the higher the family satisfaction will be (4).

Although there is no significant relationship between online visits and satisfaction levels, the results of this study show that families who had online visits when their family members were treated in the ICU have a high level of satisfaction with the ICU (67.6%). Online visits, which are one of the innovations in limiting visits in the ICU need to be studied more. Online or virtual visits in general can reduce patient psychological stress, increase staff morale, and re-orient delirium patients (10,12). Research on families of ICU patients in the United Kingdom during the COVID-19 pandemic stated that the level of distress and prevalence of family distress decreased after at least one online visit (12). Online visits can be useful for connecting ICU patients with family members who are vulnerable to illness, live long distances, cannot travel to meet patients in person, or families who have commitments to work or education that cannot be abandoned.

5. CONCLUSION

This study shows that there is no significant correlation between participant characteristics and satisfaction levels, nor between the type of family visits, both online and offline, and satisfaction levels. The high level of family satisfaction in the ICU in this research might be influenced by other factors. The online visit needs further study. This visitation method might have correlation to physiological response of patients and their family.

6. ACKNOWLEDGEMENTS

This research was funded by RKAT funds from the UGM Academic Hospital.

REFERENCES

1. WHO. Maintaining essential health services: operational guidance for the COVID-19 context. World Health Organization 2020;1(June).
2. Hugelius K, Harada N, Marutani M. Consequences of visiting restrictions during the COVID-19 pandemic: An integrative review. Int J Nurs Stud. 2021;121.
3. Garg SK. Patients' Family Satisfaction in Intensive Care Unit: A Leap Forward. Indian Journal of Critical Care Medicine. 2022;26
4. Rodriguez-Ruiz E, Campelo-Izquierdo M, Estany-Gestal A, Rodríguez-Núñez A, Latour JM. Impact of different visiting policies on family satisfaction in two Spanish ICUs before and during COVID-19. Intensive Care Med. 2021;47(10
5. Tajarernmuang P, Chittawatanarat K, Dodek P, et al. Validity and reliability of a thai version of family satisfaction with care in the intensive care unit survey. Indian Journal of Critical Care Medicine 2020;24(10).
6. Rosa RG, Falavigna M, Silva DB da, et al. Effect of Flexible Family Visitation on Delirium Among Patients in the Intensive Care Unit. JAMA 2019;322(3).
7. Min J, Kim Y, Lee JK, et al. Survey of family satisfaction with intensive care units A prospective multicenter study. Medicine (United States). 2018;97(32).
8. Honarmand K, Mehta S. Consequences of visitor restriction policies in the intensive care unit during the COVID-19 pandemic. Canadian Journal of Anesthesia. 2021;68(10):1465–1470.
9. Pan H, Shi W, Zhou Q, Chen G, Pan P. Palliative Care in the Intensive Care Unit: Not Just End-of-life Care. Intensive Care Research 2022;3(1):77–82.
10. Xyrichis A, Pattison N, Ramsay P, et al. Virtual visiting in intensive care during the COVID-19 pandemic: a qualitative descriptive study with ICU clinicians and non-ICU family team liaison members. BMJ Open 2022;12(4).

11. Sudaryanto Y, Suroso J. The relationship between visit time management and patient's family satisfaction in the intensive care unit. Proceedings Series on Health & Medical Sciences 2020;1:104–107.
12. Rose L, Yu L, Casey J, et al. Communication and virtual visiting for families of patients in intensive care during the COVID-19 pandemic: A UK national survey. Ann Am Thorac Soc 2021;18(10).