The Effectiveness Of FLACC Pain Scale Assessment Education Through Zoom Media On The Assessment Skills Of ICU Nurses

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ARTICLE INFORMATION	ABSTRACT
	Pain assessment is a critical aspect of delivering quality care, particularly in intensive care units (ICU). Undetected and poorly managed pain can negatively impact patient recovery. One of the commonly used pain assessment methods for non-verbal patients is the FLACC scale (Face, Legs, Activity, Cry, Consolability). This study aims to evaluate the effectiveness of FLACC pain assessment education through Zoom media on the assessment skills of ICU nurses at Kapuas B RSUD Dr. Saiful Anwar, East Java Province. The research employs a quantitative approach with a pre-experimental design using the one-group pretest-posttest design. The sample consists of 27 ICU nurses selected through total sampling. The results showed that before the education intervention, most nurses (74.1%) were deemed incompetent in pain assessment skills. After the intervention, the majority of nurses (85.2%) were assessed as competent. Statistical analysis using the Wilcoxon test indicated a significant difference in assessment skills before and after the education intervention (Z = -4.000; Asymp. Sig. = 0.000). These findings demonstrate that providing education through Zoom is effective in improving the assessment skills of nurses in using the FLACC scale to evaluate patient pain in the ICU. Continuous education for healthcare professionals, particularly ICU nurses, is crucial to enhance pain assessment skills and support optimal patient care. Online education methods, such as via Zoom, prove to be an efficient alternative in certain circumstances.

Introduction

Pain is a common problem in ICU patients and inadequate management can increase the risk of complications and hinder the healing process. Many ICU nurses have difficulty assessing pain appropriately, which can have a negative impact on patient well-being. The Covid-19 pandemic is one of the obstacles that occurs in training and education in the ICU. Where training and education for health workers in the ICU, especially nurses, can be carried out using direct meeting methods cannot be done. And if training and education are not carried out, this can affect the understanding and skills of nurses. Evaluation of new learning approaches, especially the use of Zoom media, is important to improve nurses' ability to assess pain with the FLACC scale. More than 30% of ICU patients experience significant pain while resting, and more than 50% experience pain during routine care processes such as changing positions and wound care. (Nur Hidayati, Yani Erniyawati, 2017).

The main factors affecting nurses' standardized pain assessment of patients were poor compliance with pain assessment protocols (79.71%), followed by insufficient knowledge of pain education (68.19%) and pain assessment (65.43%). The lack of knowledge in pain assessment was mainly due to nurses' lack of clear standards for pain assessment (82.24%). A

study found that poor compliance with pain assessment protocols, insufficient knowledge of pain education, and lack of pain assessment skills were significant factors affecting standardized pain assessment practices. Some nurses may struggle to use pain assessment scales, particularly in non-verbal patients or those with cognitive impairments (Xiaofeng Xu, 2025)

Patients who receive ICU care and die in the ICU due to critical illnesses number 1.1 - 7.4 million (WHO, 2019). Each year, the number of critically ill patients treated in the ICU increases by 9.8 - 24.6%, and an estimated 1.1 - 7.4 million more people die from critical illnesses worldwide (Maryuni et al., 2023). The prevalence of critically ill patients and the need for ICUs worldwide has been stated to have doubled due to the COVID-19 pandemic (Bravata et al, 2021). Due to the spike in COVID-19 cases that occurred in almost every region of Indonesia in July 2021, the number of patients requiring intensive care unit services in hospitals increased (Ministry of Health of the Republic of Indonesia, 2021). In 2019, the incidence of critically ill patients in Indonesia was recorded at 33,148 people, while the mortality rate of intensive care unit patients was 36.5% (Ministry of Health of the Republic of Indonesia, 2019). Bed Occupation Rate (BOR) increased by 80% in 2020 (Ministry of Health of the Republic of Indonesia, 2020). The number of ICU units in Indonesia has reached 81,032 beds in 2,979 hospitals and 52,719 critical patients have been treated until 2021, meaning that the average ICU occupancy in Indonesia reached 64.83 percent in 2021. (Ministry of Health of the Republic of Indonesia, 2021).

Pain in the ICU has been recognized as one of the critical issues in patient care. Uncontrolled pain in ICU patients not only results in prolonged suffering but also increases the risk of serious medical complications. Continued suffering can interfere with the patient's healing process, worsen their health condition, and prolong the stay in the intensive care unit. This situation is no different in Indonesia, where lack of attention to pain assessment and management in the ICU can have an impact on decreasing the quality of care and patient well-being. To overcome this problem, an effective and structured learning approach for ICU nurses is essential (Harniyatun, 2023).

Pain assessment in children requires a special approach because children often have difficulty expressing pain verbally. The FLACC scale, first published in 1997 by Sandra Merkel and Terri Voepel-Lewis, is a useful tool in assessing pain in children. This scale evaluates five behaviors: face, legs, activity, crying, and calm, with a maximum score of 10. Each behavior is scored from 0 to 2, creating a range of scores that reflect the intensity of pain. Initial instructions for use of this scale suggest observing the child for 1-5 minutes to obtain an accurate assessment. The FLACC scale provides a systematic and objective framework for assessing pain in children, especially those who have difficulty communicating verbally (Surya, 2021).

According to Dianne et al (2015) in the study "Systematic Review of the FLACC scale for assessing pain in infants and children" in children aged 0-18 years, the results obtained showed the extent to which the FLACC scale was easy to understand, namely 50%, fast by 34.5% and easy to apply by 46.2%. Pain measurement using the FLACC scale, which includes aspects of the face, legs, activity, crying, and comfort level, is often considered the most appropriate method for assessing pain in nonverbal patients in the ICU. However, there is often inaccuracy in its use by ICU nurses. This can be caused by a lack of understanding of this scale by nurses or a lack of consistency in assessing pain. The impact is suboptimal pain management, which can worsen the patient's condition, reduce their quality of life, and increase the risk of serious medical complications. The pain variables felt by children can be described in the form of physical and behavioral responses such as grimacing in pain, clenching teeth or lips, opening eyes wide, shaking, acting aggressively such as biting, kicking, hitting and running away (Wong, 2017).

A preliminary study in the ICU Room of Kapuas B, Dr. Saiful Anwar Hospital, East Java Province, April 2024, highlighted the need to improve nurses' ability to use the FLACC scale to measure pain. Of the 10 nurses studied, only 6 were proficient in using the scale, 3 nurses admitted that they did not understand and 1 respondent could not use the FLACC scale at all. These findings indicate the need to improve nurses' understanding and skills, as this lack of ability can interfere with optimal pain management, which has an impact on the quality of care and patient well-being. Training and education measures, including the use of Zoom media, are recommended to ensure that all nurses have adequate skills in measuring pain accurately using the FLACC scale. This is expected to improve pain management and the overall quality of patient care in the ICU.

One solution that can be done is to utilize Zoom media as a means of education. Through this platform, ICU nurses can take interactive and direct training from experts in pain assessment and the use of the FLACC scale. It is hoped that with this approach, ICU nurses can improve their understanding and skills in assessing pain more accurately and effectively. Along with that, it is hoped that pain management in patients in the ICU can be significantly improved, improving the quality of care and overall patient well-being. From the background above, the researcher wants to research "The effectiveness of providing FLACC pain assessment education through zoom media on the level of assessment skills of ICU nurses in Kapuas B, Dr. Saiful Anwar Hospital, East Java Province."

Methods

This research is a research quantitative with pre-experimental design which design uses the one group pretest-posttest design, where this study reveals a causal relationship by involving a group of subjects. The sample used in this study were ICU nurses Kapuas B RSUD DR. Saiful Anwar East Java Province A total of 27 respondents with a total sampling technique. The instrument used for the dependent variable is the ICU nurse's ability questionnaire in assessing FLACC pain, while the independent variable uses Zoom media as an educational tool. Researcher take measurements about the ability of ICU nurses in assessing flacc pain before and after education via zoom media using a questionnaire. This Bivariate Analysis aims to explain the influence before and after the treatment in the form of education through zoom media that held twice and 30 – 45 minutes duration each meeting about the Flacc scale assessment. This analysis was carried out using the Tparied-Test statistical test if the normality test of the data obtained was normal, if the data obtained was not normal then using the Wilcoxon test. This hypothesis testing uses the help of the SPSS program and the p value ≤ ά 0.05 is obtained then Ho is rejected, which is statistically interpreted as a significant relationship.

The researcher submitted a request for permission to the Director of Dr Saiful Anwar Regional Hospital, East Java Province to obtain approval with Number: 400/338/K.3/102.7/2024.

Results

Table 1.Respondent Age Frequency

Age	Frequency	Percentage (%)
26-35 years	19	70.4
36-45 years	7	25.9
46-55 years	1	3.7
Total	**27**	**100.0**

Employee data of ICU KAPUAS B, 2024

Based on the data in Table 1, most of the respondents in the ICU Kapuas B RSUD Dr. SaifulAnwar East Java Province is in the age range of 26-35 years, with a total of 19 respondents or 70.4% of the total respondents.

Table 2. Frequency of Respondents' Gender

Gender	Frequency	Percentage (%)
Man	9	33.3
Woman	18	66.7
Total	27	100.0

Employee data of ICU KAPUAS B, 2024

Based on the data in Table 2, most of the respondents in the ICU Kapuas B RSUD Dr. SaifulAnwar East Java Province is female, namely 18 respondents or 66.7% of the total respondents.

Table 3. Frequency of Respondents' Education

Education	Frequency	Percentage (%)
D3	18	66.7
D4	1	3.7
S1	8	29.6
Total	27	100.0

Employee data of ICU KAPUAS B, 2024

Based on the data in Table 3, most of the respondents in the ICU Kapuas B, Dr. Saiful Anwar Regional Hospital, East Java Province have a D3 education level, namely 18 respondents or 66.7% of the total respondents.

Table 4. Frequency of Respondents' Length of Work

Length of working	Frequency	Percentage (%)
<5 years	16	59.3
>5 years	11	40.7
Total	27	100.0

Employee data of ICU KAPUAS B, 2024

Based on the data in Table 4, most of the respondents in the ICU Kapuas B RSUD Dr. SaifulAnwar East Java Province has a working period of less than 5 years, namely 16 respondents or 59.3% of the total respondents.

ICU nurse assessment skills before providing education	Frequency	Percentage (%)
Competent	7	25.9
Incompetent	20	74.1

Total	27	100.0

Table 5. Frequency of ICU Nurses' Assessment Skills Before Providing Education

Based on the data in Table 5, the majority of nurses in the ICU Kapuas B, Dr. Saiful Anwar Regional Hospital, East Java Province were considered incompetent in their assessment skills before providing education, namely 20 respondents or 74.1% of the total respondents.

Table 6. Frequency of ICU Nurses' Assessment Skills After Providing Education

Assessment skills of ICU Kapuas B nurses after providing education	Frequency	Percentage (%)
Competent	23	85.2
Incompetent	4	14.8
Total	27	100.0

Based on the data in Table 6, after providing education, most of the nurses in the ICU Kapuas B, Dr. Saiful Anwar Regional Hospital, East Java Province were considered competent in assessment skills, namely 23 respondents or 85.2% of the total respondents.

Cross Table 7. Identification of the Level of Assessment Ability of ICU Nurses Before and After Providing Education

Assessment skillsICU nurse Kapuas B before providing education	Assessment skills of ICU Kapuas B nurses after providing education		Total
	Competent	Incompetent	
Competent	7 25.9%	0 0.0%	7 25.9%
Incompetent	16 59.3%	4 14.8%	20 74.1%
	23	4	27
Total	85.2%	14.8%	100.0%

Based on the data in Table 7, there was a significant change in the level of nurses' assessment skills in the ICU Kapuas B, Dr. Saiful Anwar Hospital, East Java Province before and after providing education on FLACC pain assessment via Zoom media. Before education, only 7 nurses (25.9%) were considered competent, while 16 nurses (25.9%) were considered competent. (59.3%) were considered incompetent. After education, competent nurses increased significantly to 23 people (85.2%), while incompetent nurses decreased to only 4 people (14.8%). In detail, all nurses who were previously considered competent remained competent after education (7 nurses, 25.9%), and 16 nurses who were previously incompetent managed to improve their abilities to become competent after education. However, there were still 4 nurses (14.8%) who remained in the incompetent category despite having received education.

Test Statistics	
	Post - Pre
Z	-4,000b
Asymp. Sig. (2-tailed)	,000

Table 8. Analysis of the Effectiveness of Providing Flacc Pain Assessment Education Through Zoom Media on the Level of Assessment Ability of ICU Nurses

Based on the data in Table 8, the analysis of the effectiveness of providing FLACC pain assessment education through Zoom media on the level of assessment ability of nurses in the Kapuas B ICU, Dr. Saiful Anwar Hospital, East Java Province showed significant results. The results of the statistical test using the Wilcoxon test showed a Z value = -4.000 with Asymp. Sig. (2-tailed) = 0.000. The Asymp. Sig. (2-tailed) value = 0.000 which is smaller than the significance level of 0.05 indicates that the difference between the nurses' assessment abilities before and after education is provided is significant. This means that providing education through Zoom media has a positive effect on improving nurses' assessment abilities for pain using the FLACC scale in the Kapuas B ICU, Dr. Saiful Anwar Hospital, East Java Province.

Discussion

Identification of Assessment Ability Levels Nurse ICU Kapuas B Before Providing Flacc Pain Assessment Education Through Zoom Media, Dr. Saiful Anwar Regional Hospital, East Java Province.

Based on the data in Table 5, the majority of nurses in the ICU Kapuas B, Dr. Saiful Anwar Regional Hospital, East Java Province, were deemed incompetent. inassessment   capability before providing education, which is 20 respondents or 74.1% of the total respondents. Meanwhile, only a small portion of the respondents, namely 7 respondents or 25.9%, were considered competent, where most of the respondents were those who had a work period of less than 5 years. This appraisal based on 2 criteria, competent if the value is 80% - 100% and incompetent if the value is <80% (Pratiwi, 2022).

Pain assessment is an important aspect of patient care in the ICU unit, especially for patients who are in critical condition or unable to express their pain verbally. The FLACC (Face, Legs, Activity, Cry, Consolability) scale is a tool used to assess pain in patients who cannot speak, such as children or sedated or unconscious adults. In this context, the incompetence of nurses in conducting FLACC pain assessments can have a direct impact on the quality of care provided, because pain that is not detected and treated properly can increase patient discomfort and worsen the prognosis (Nur Hidayati, Yani Erniyawati, 2017).

It is important to note that pain assessment in ICU patients is not only related to technical skills, but also related to the nurse's understanding of the patient's clinical condition and specific needs. This incompetence may be due to a lack of training or understanding of the

importance of accurate pain assessment. In addition, it could also be related to limited time and resources in the ICU, where nurses are often faced with a high workload and a large number of patients who need to be treated. On the other hand, this low level of competence can be an important indicator for intervention in the form of further training or education for nurses. Providing education on the use of the FLACC scale via Zoom, as was done in this study, aims to improve nurses' knowledge and skills in conducting better pain assessments. By improving nurses' abilities in pain assessment, it is hoped that the quality of patient care in the ICU can improve, especially in providing more effective and timely pain management (Harniyatun, 2023).

The researcher argues that the level of assessment ability of ICU nurses at Kapuas B Dr. Saiful Anwar Hospital before providing education on FLACC pain assessment via Zoom media showed quite low results. Based on the data obtained, most nurses, around 74.1% (20 people), were considered incompetent in assessing pain using the FLACC scale. Only 25.9% (7 people) of nurses were considered competent. This reflects that there are still many nurses who may not understand or are not yet skilled in assessing pain in patients, especially patients who cannot communicate their pain clearly, such as patients in the ICU. Overall, these results indicate that there is still room to improve the competence of ICU nurses at Kapuas B in assessing pain, especially in patients who cannot express their pain directly. Ongoing education and training programs are essential to ensure that nurses can assess pain accurately and provide better care to patients. Educational interventions carried out using Zoom media are a positive step that can improve pain assessment skills and in turn can improve the quality of ICU patient care.

Identification Level of Assessment Ability of ICU Nurses in Kapuas B After Providing Flacc Pain Assessment Education Through Zoom Media at Dr. Saiful Anwar Regional Hospital, East Java Province.

Based on the data in Table 6, after providing education, most nurses in the ICU Kapuas B Dr. Saiful Anwar Hospital, East Java Province were considered competent in assessment skills, namely 23 respondents or 85.2% of the total respondents. Meanwhile, only a small portion of the respondents, namely 4 respondents or 14.8%, were still considered incompetent.
This increase in ability shows that education provided through Zoom media is very effective in improving the knowledge and skills of Kapuas B ICU nurses. Zoom media as an educational platform allows nurses to receive information in a more flexible way, especially in the midst of their busy schedules. Through this remote approach, education about the FLACC scale can be carried out efficiently, so that nurses have the opportunity to learn and practice the correct way to assess pain according to applicable standards (Wong, 2017).

This competency improvement process is certainly inseparable from well-designed educational efforts. Education via Zoom allows nurses to more easily access learning materials, listen to explanations from instructors, and ask questions if there are things that are unclear. This gives nurses the opportunity to further explore how to use the FLACC scale in real clinical situations, thereby increasing their understanding of the importance of pain assessment in ICU patient care. However, although most nurses were competent after education, there were still some nurses who had not fully succeeded in improving their competency. Four nurses (14.8%) were still considered incompetent even though they had attended education. This shows that although education via Zoom media is effective, some nurses may still need additional time or training to truly master the pain assessment technique using FLACC. This can be caused by various factors, such as different levels of understanding between nurses or limitations in practical application in the field (Chandra, 2019).

Researchers argue that after providing education on pain assessment using the FLACC

scale via Zoom, there was a significant increase in the assessment skills of nurses in the Kapuas B ICU, Dr. Saiful Anwar Hospital. Based on the available data, nurses who were previously considered incompetent experienced positive changes, where 16 out of 20 previously incompetent nurses managed to improve their abilities to become competent after education. Overall, 85.2% of nurses (23 people) are now considered competent in conducting FLACC pain assessments, while only 14.8% (4 people) are still in the incompetent category. Overall, providing education via Zoom has been shown to improve the assessment skills of nurses in the Kapuas B ICU, Dr. Saiful Anwar Hospital, East Java Province in using the FLACC scale to assess pain in patients. These results indicate that a technology-based education approach can be an effective alternative in improving nurse competence, especially in situations where time and resources are limited. However, to ensure maximum results, further evaluation and advanced training need to be carried out to address nurses who are still less competent and ensure that all nurses are able to provide appropriate and accurate pain assessments.

Effectiveness of Providing Flacc Pain Assessment Education Through Zoom Media on the Level of Assessment Ability of ICU Nurses Kapuas B Dr. Saiful Anwar Hospital, East Java Province.

Based on the data in Table 8, the analysis of the effectiveness of providing FLACC pain assessment education through Zoom media on the level of assessment ability of nurses in the Kapuas B ICU, Dr. Saiful Anwar Hospital, East Java Province showed significant results. The results of the statistical test using the Wilcoxon test showed a Z value = -4.000 with Asymp. Sig. (2-tailed) = 0.000. The Asymp. Sig. (2-tailed) value = 0.000 which is smaller than the significance level of 0.05 indicates that the difference between the nurses' assessment abilities before and after providing education is significant. This means that providing education through Zoom media has a positive effect on improving nurses' assessment abilities for pain using the FLACC scale in the Kapuas B ICU, Dr. Saiful Anwar Hospital. Based on the data in Table 5.7, there was a significant change in the level of assessment ability of nurses in the Kapuas B ICU, Dr. Saiful Anwar Hospital, East Java Province before and after providing education on FLACC pain assessment through Zoom media. Before education, only 7 nurses (25.9%) were considered competent, while 16 nurses (59.3%) were considered incompetent. After education, competent nurses increased significantly to 23 (85.2%), while incompetent nurses decreased to only 4 (14.8%). In detail, all nurses who were previously considered competent remained competent after education (7 nurses, 25.9%), and 16 nurses who were previously incompetent managed to improve their abilities to become competent after education. However, there were still 4 nurses (14.8%) who remained in the incompetent category despite having received education.

Providing education through Zoom media provides high flexibility for nurses to learn and deepen the material on FLACC pain assessment. This distance learning process allows nurses to take training according to a more flexible schedule and access the materials provided at any time. In addition, Zoom media allows for direct interaction between instructors and nurses, which facilitates questions and answers and clarification on difficult-to-understand concepts. These advantages contribute to improving nurses' knowledge and skills in pain assessment (Chandra, 2019).

Providing FLACC pain assessment education via Zoom provides nurses with the flexibility to attend training without disrupting their busy work schedules. Through this platform, nurses can access educational materials anytime and anywhere, allowing them to learn more conveniently and according to their own free time. This is especially important in the hospital

context, where nurses are often caught up in clinical tasks that cannot be left behind.

The main advantage of Zoom education is the ease of access and openness in the learning process. With this technology, busy nurses can participate in training sessions without having to leave their workplace or rearrange their schedules. The learning videos and materials provided can also be re-accessed if there are parts that are unclear or need further understanding. This allows nurses to explore the educational materials more independently, thereby increasing their understanding of the FLACC scale and how to accurately assess pain. In addition, Zoom education allows direct interaction between instructors and nurses. The Q&A feature allows nurses to clarify doubts or problems they face in practicing FLACC pain assessment. This interaction makes the learning process more dynamic and can be adjusted to the needs of the learners. Thus, nurses feel more supported in understanding the material, even though they have limited time (Birawa, 2019).

Distance learning can also be an efficient long-term solution to improve nurses' skills, without having to involve too much time for face-to-face training. This is especially useful in large hospitals, such as Dr. Saiful Anwar Hospital, where the need to continuously update nurses' skills is very high, while the time available for training is very limited. With Zoom-based education, hospitals can organize regular training sessions without disrupting hospital operations or reducing the quality of service to patients (Maulana, 2018).

Researchers argue that providing education on pain assessment using the FLACC scale via Zoom media in the ICU Kapuas B, Dr. Saiful Anwar Hospital, East Java Province showed very significant results in improving nurses' abilities. Based on the data analysis shown in Table 5.8, the statistical test produced a Z value = -4.000 with Asymp. Sig. (2-tailed) = 0.000. The Asymp. Sig. value which is smaller than the significance level of 0.05 indicates that there is a significant difference between the nurses' assessment abilities before and after education. Thus, it can be concluded that providing education via Zoom media has a positive effect on improving nurses' assessment abilities for pain using the FLACC scale in the ICU Kapuas B. Before education was provided, only around 25.9% of nurses were considered competent in assessing pain using the FLACC scale, while 59.3% of other nurses were considered incompetent. After being given education, there was a significant change where 85.2% of nurses were now considered competent. This shows that the education provided has succeeded in improving nurses' skills and understanding of the correct way to assess pain, especially in using the FLACC scale. With the increasing number of competent nurses, it can be concluded that education through Zoom media is effective in transferring knowledge and skills. However, although the majority of nurses showed positive improvements, there were still 4 nurses (14.8%) who remained incompetent despite having attended the education. This may be due to several factors, such as differences in nurses' understanding of the material or limitations in implementing the FLACC scale in the field. However, the proportion of incompetent nurses after this education was much lower than before the education. This shows that overall, the education provided succeeded in influencing most nurses to improve their competence.

Overall, these results indicate that providing FLACC pain assessment education via Zoom media is very effective in improving the competence of nurses in the ICU Kapuas B RSUD Dr. Saiful Anwar. Although there are still a number of nurses who are not fully competent, the significant increase in the number of competent nurses shows that technology-based education can be an effective tool in professional training in the health sector. It is hoped that in the future, further evaluation and additional training can be provided to nurses who have not reached the competent level so that all nurses can carry out pain assessments accurately and precisely.

Conclusion

Based on the results of the study, the level of assessment ability of ICU nurses in Kapuas B, Dr. Saiful Anwar Hospital, East Java Province regarding FLACC pain assessment before providing education was considered incompetent in assessment ability, namely 20 respondents or 74.1% of the total respondents (most of the respondents). Based on the results of the study, the level of assessment ability of ICU nurses in Kapuas B, Dr. Saiful Anwar Hospital, East Java Province regarding FLACC pain assessment after providing education was considered competent in assessment ability, namely 23 respondents or 85.2% of the total respondents (almost all of the respondents). There is effectiveness in providing FLACC pain assessment education through Zoom media on the level of assessment ability of ICU nurses in Kapuas B, Dr. Saiful Anwar Hospital, East Java Province with the results showing that the difference between the nurses' assessment ability before and after providing education is significant. It is hoped that nurses involved in this study can continue to improve their pain assessment skills using the FLACC scale. Although there has been an increase in competence after education via Zoom, nurses are expected to maintain and improve their knowledge and skills by participating in relevant training or further education to deepen their understanding and application in daily clinical practice.

Ethics approval and consent to participate

The researcher submitted a request for permission to the Director of Dr Saiful Anwar Regional Hospital, East Java Province to obtain approval with Number: 400/338/K.3/102.7/2024.

Acknowledgments

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