The Association Between Nurses' Response Time and Patients' Anxiety Levels in the Emergency Department at Murni Teguh Ciledug Hospital

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Abstract

Response time is the time needed by patients to get help that is appropriate to the emergency of their illness since entering the Emergency Department. Delayed nurse response time is often associated with increased patient anxiety. This study sought to ascertain if the anxiety levels of patients in the Emergency Department (ED) at Murni Teguh Ciledug Hospital were significantly correlated with the nurses' response times. This kind of study design is cross-sectional and quantitative in nature. The study's sample size was 100 respondents, and the sampling strategy used was accidental sampling. The Spearman Rho test was employed for data analysis. Response time and patient anxiety levels in the emergency department at Murni Teguh Ciledug Hospital were found to be related in this study using the Spearman Rho test with a p-value = 0.033 (α<0.05). It is recommended to conduct further research with more samples and add variables of environmental conditions, types of diseases and previous experiences.

Keywords: Anxiety Level, Emergency Room, Nurse, Patient, Response Time

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Introduction

Patients who come to the Emergency Department (ED) need fast and precise assistance, so standards are needed in emergency services that are in accordance with competency and ability, the services provided to patients in the ED is expected to be better than other service units both in the availability of medical personnel, and the availability of other supporters and the availability of medicines, accuracy, politeness, and friendliness in providing services in the ED, and being responsible (Gobel, Wahidin, & Muttaqin, 2018; Sitepu & Tambunan, 2024; Tumanggor, Tambunan & Sagala, 2024). This aims to ensure that patients receive high-quality and timely care services. In order to ensure emergency care with a quick reaction time and appropriate management, the speed and accuracy of the help given to patients who arrive at the emergency department must meet requirements that are in line with their competence and capacities. This can quickly improve the facilities, infrastructure, human resources, and management of the Hospital's ED according to standards. Response Time is a service standard that must be owned by the Emergency Department (Naser, Mulyadi & Malara, 2019).

According to Ministry of Health of the Republic of Indonesia, the speed and accuracy of assistance given to the ED patients must be in accordance with service standards, namely under 5 minutes (Kementerian Kesehatan Republik Indonesia (Kemenkes RI) 2017). Patient satisfaction is influenced by health services and ED nurse's services, which are fast, polite, friendly, with the best service. Maximum patient service is very important because it is part of the hospital's performance, therefore hospital services must be oriented to retaining customers or patients. The quality of health services is very important because it is one of the benchmarks of hospital performance (Munijaya, 2016).

Previous research on response time in the ED at Aminah Hospital, Tangerang City. The majority of patients were Very Satisfied as many as 43 people (47.8%), researchers discovered that most ER patients were satisfied with the care they received from physicians and nurses. They said that the examination time was relatively fast, the patient waiting room was comfortable, the nurses were friendly and the doctors who examined them, this is what makes patients in the emergency room feel satisfied (Yurnalis, & Mendrofa, 2021). But no one has studied the level of patient anxiety in the ED at Murni Teguh Hospital until now.

Prior studies in the emergency department of Muhammadiyah Hospital in Kebumen Regency revealed that nurses had a 60% fast reaction time (less than five minutes) and a 40% slow response time (more than five minutes) of 12 patients. Another study that was carried out in the emergency departments of Pancaran Kasih Hospital and Robert Wolter Monginsidi Hospital Class III Manado revealed that the surgical case handling accuracy of the 8-minute reaction time in the ED was 32.1% unsuitable and 67.9% on time. The ED's non-surgical case was 17.9% unsuitable and 82.1% appropriate (Abdul, Rottie & Karundeng, 2016). Based on the discussion above and the results of a preliminary survey conducted on 10 patients who came in the ED on patient' anxiety levels, it was found that there was a significant influence of the right response time on patient' anxiety level to be higher. Then the researcher is interested in conducting a study on, "The Association Between Nurses' Response Time and Patient' Anxiety Levels in the Emergency Department at Murni Teguh Ciledug Hospital.

METHOD

It is a cross-sectional study design that is quantitative in nature (Simanullang & Tambunan, 2023; Judijanto et al., 2024; Basiroen et al., 2025). The study's sample size was 100 respondents, and the sampling strategy used was accidental sampling. In July and August of 2024, this study was carried out. The responders are older than eighteen. A questionnaire with seven items on anxiety level that was taken from the Hospital Anxiety and Depression Scale (HADS) served as the study's instrument (Stern, 2014; Zigmond & Snaith, 1983) and response time is Not up to standard >5 minutes and up to standard <5 minutes. Anxiety level category is Mild (0-7), Moderate (8-14) and Severe (11-21). The data was not distributed normally with p-value <0.000 (α<0.05) and the bivariate data analysis used the Spearman Rho test (Puspitasari et al., 2025) and data analysis used Statistical Package for Social Sciences (SPSS) Software.

RESULTS

1. Respondent Characteristics (Nurses)

Table 2. Respondent Characteristics (Nurses)

Respondent Characteristics (Nurses)	Frequency (f)	Percentage (%)
Gender:		
Male	56	56%
Female	44	44%
Age:		
22-30 Years	83	83%
31-40 Years	17	17%
Education:		
Diploma 3	15	15%
Bachelor Degree	46	46%
Nurse Profession	39	39%
Master Degree	0	0%
Length of Work Experience in the ED:		
1-3 Years	68	68%
4-7 Years	24	24%
8-10 Years	8	8%
Length of Work Experience in the other unit:		
1-3 Years	84	84%
4-7 Years	16	16%
Emergency Room Training:		
BTLCS	46	46%
No Training Attended	54	54%
TOTAL	**100**	**100%**

Table 1 above demonstrates that 56 nurses, or 56% of the total, are men. Eighty-three percent of nurses are between the ages of 22 and 30. 46 respondents, or 46% of the total, have a bachelor's degree. 68 nurses, or 68% of the total, have worked in the emergency department for one to three years. Most nurses (84, or 84%) have worked in other units for one to three years, and most nurses (54, or 54%) have not received BTLCS training.

2. Respondent Characteristics (Patients)

Table 2. Respondent Characteristics (Patients)

Respondent Characteristics (Patients)	Frequency (f)	Percentage (%)
Gender:		
Male	39	39%
Female	61	61%
Age:		
18-35 Years	20	20%
36-45Years	53	53%
46-55 Years	27	27%
Education:		
Elementary School	0	0%
Junior High School	9	9%
Senior High School	67	67%
Diploma 3	8	8%
Bachelor Degree	16	16%

Previous Experience in the ED:		
Have Been	73	73%
Have Not Been	27	27%
Occupation:		
Civil Servants	69	69%
Indonesian National Army/Police	24	24%
Private Employees	7	7%
Self-Employed	0	0%
Students	0	0%
Not Working	0	0%
TOTAL	**100**	100%

As can be seen from table 2 above, the majority of respondents—61 individuals, or 61%—are female. 53 responders, or 53% of the total, are between the ages of 36 and 45. Sixty-seven percent of the respondents, or 67 people, have completed high school. Up to 73 persons, or 73% of the responders, have received treatment in the emergency department. As many as 69 responders, or 69% of the total, are civil personnel.

3. Nurses' Response Tim e Frequency Distribution

Table 3. Nurses' Response Time Frequency Distribution

Nurses' Response Time	Frequency (f)	Percentage (%)
Up to standard <5 minutes	94	94%
Not up to standard >5 minutes	6	6%
TOTAL	**100**	**100%**

The frequency distribution of the majority of nurses' reaction times falls into the proper group, with 94 individuals (94%), as indicated by table 3 above.

4. Frequency Distribution of Patients' Anxiety Levels

Table 4. Frequency Distribution of Patients' Anxiety Levels

Patients' Anxiety Levels	Frequency (f)	Percentage (%)
Mild	26	26%
Moderate	74	74%
Severe	0	0%
TOTAL	**100**	**100%**

The frequency distribution of the anxiety level of the majority of patients, or 74 individuals (74%), falls into the moderate category, as indicated by table 4 above.

5. Relationship between Nurses' Response Time and Patient Anxiety Level in the ED

Table 5. Spearman Correlation Test: The Association between Nurses' Response Time and Patient's Anxiety Levels in the Emergency Department

Spearman Rho Test		Nurses' Response Time	Patients' Anxiety Levels
Nurses' Response Time	Correlation Coefficient	1.000	-.213
	Sig.(2-tailed)	.	.033
	N	100	100
Patients' Anxiety Level	Correlation Coefficient	-.213	1.000
	Sig.(2-tailed)	.033	.
	N	100	100

Based on table 5 above, it shows that there is a significant relationship between nurse response time and patient anxiety in the ED with a p-value = 0.033 (<0.05), in addition, a correlation coefficient of -0.213 was obtained, which means that there is a weak negative correlation between nurses' response time and patients' anxiety levels in the ED.

DISCUSSION

1. Respondent Characteristics

According to earlier studies, the majority of respondents—33, or 55% of the total—were female, while 27, or 45%, were male. Twenty respondents (33.3%) were between the ages of 26 and 35, eight (13.3%) were between the ages of 18 and 25, fifteen (25%), twelve (20%) were between the ages of 46 and 55, and five (8.3%) were between the ages of 56 and 65. Thirty-two (53.3%) of the respondents were high school graduates, making up the majority. Additionally, the plurality of responders—22 individuals, or 36.7%—were housewives (Harahap, Syarif & Amni, 2022).

According to similar studies, the majority of respondents were between the ages of 17 and 25 (24, or 51.1%), male (31, or 66%), had a bachelor's degree (19, or 40.4%), and were self-employed (15, or 31.9%) (Sutriningsih, Ardiyani & Ariyanti, 2024). According to a different study, 12 (31.6%) of the respondents were between the ages of 46 and 55; 15 (39.5%) had completed high school; 7 (18.4%) were employed as civil servants; and 20 (52.6%) were female (Daud, Julianto, Aprilia & Nasyir, 2023).

2. Nurses' Response Time

In line with previous research showed that the majority of nurses' response times were correct as many as 21 people (51%) and the nurses' response times were incorrect as many as 20 people (49%) (Khotimah, Yudiantono & Sumbara, 2020). In contrast, (Tumbuan, Kumaat & Malara, 2015) showed that the majority of nurses' response times were inappropriate as many as 44 people (57.1%) and the nurses' response times were correct as many as 33 people (42.9%) (Tumbuan, Kumaat & Malara, 2015). Another study showed that the majority of nurses' response times were fast (<5 minutes) as many as 71 people (94.6%) and the nurses' response times were slow (>5 minutes) as many as 4 people (5.4%) (Mulyanto, Apriliyani & Sumarni, 2022).

As a nurse administers care to patients, the precision of the nurse's response time must match the time established by triage. The process of choosing or classifying patients according to their level of emergency is known as triage. Triage is the selection or grouping of patients based on their level of emergency. Response time is an important indicator in handling emergency patients, especially red triage patients, namely patients who need immediate treatment, and if not handled properly and quickly, the patient will die (Harahap, Syarif & Amni, 2022).

3. Patients' Anxiety Levels

In line with previous research showed that the majority of respondents experienced moderate anxiety as many as 42 people (43.8%), respondents with low anxiety 19 people (19.8%), respondents with severe anxiety as many as 6 people (6.3%) and respondents who were not anxious as many as 29 (30.2%) (Anggraini & Febrianti, 2020). Similar research showed that the majority of respondents experienced mild anxiety as many as 43 people (78.2%) and respondents with moderate anxiety as many as 12 people (21.8%) (Suparyani, Suangga & Natalia, 2023). Previous research showed the majority of respondents with severe anxiety levels were 18 people (56.3%), respondents with mild anxiety as many as 1 person (3.1%), respondents with moderate anxiety as many as 8 people (25%), and respondents with very severe anxiety levels as many as 5 people (15.6%) (Hidayati & Lailatul, 2021).

Anxiety can be an unpleasant emotional form and is a vague experience (Marbun & Tambunan, 2023; Sidauruk & Tambunan, 2023). Anxiety can cause discomfort and helplessness (Perdana & Tambunan, 2023). An anxious person will be seen from his physical condition (Tambunan, Silaen & Sansuwito, 2024). A person's physical condition can indicate the level of anxiety he feels (Tambunan & Marbun, 2023). Changes in breathing rate, increased heart rate and changes in blood pressure can indicate that the individual is experiencing anxiety (Sutejo, 2017).

4. The Association between Nurses' Response Time and Patients' Anxiety Levels in the ED at Murni Teguh Ciledug Hospital

According to the study, response time and ED patient anxiety levels are significantly correlated (p-value = 0.018, <0.05); additionally, a correlation coefficient of 0.358 was found, indicating a weakly positive correlation (Daud, Aprilia, Julianto & Nasyir, 2023). According to similar studies, response time and patient anxiety are significantly correlated, with a p-value of 0.005 (<0.05) (Mulyanto, Apriliyani & Sumarni, 2022). According to another study, there is a strong positive correlation between response time and patient anxiety levels in the emergency department (ED), with a correlation coefficient of 0.747 and a p-value of 0.000 (<0.05) indicating a significant relationship between the two variables (Hidayati & Lailatul, 2021).

Response time and ED patient anxiety levels are significantly correlated, according to prior research (p-value = 0.032 (<0.05). Mild to moderate anxiety was the most common reaction time for respondents (Khotimah, Yudiantono & Sumbara, 2020). The patient's worry will rise in proportion to the response time they receive (Suparyani, Suangga & Natalia, 2023). In addition to leading the emergency installation, nurses play a critical role in lowering patient anxiety levels in the emergency department by providing prompt, accurate services and delivering nursing care, particularly for patients who suffer from anxiety. Improvements in infrastructure, services, procedures, human resources, and other technical areas are also necessary to raise the ED's service quality (Hidayati & Lailatul, 2021).

CONCLUSION

In the emergency room at Murni Teguh Ciledug, most nurses had response times that fall into the normal range (94%) and patients' anxiety levels that fall into the moderate range (74%). With a p-value of 0.033 ($\alpha<0.05$), it is determined that there is a significant correlation between the nurses' reaction time and the anxiety levels of the patients in the Murni Teguh Ciledug emergency department. The two variables in the negative category have a weak coefficient connection (r = -0.213). Future researchers are advised to include environmental factors, disease types, and prior experiences with additional samples.

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