



Original Article

Therapeutic Communication as a Key Predictor of Anxiety in Triage Yellow Patients at Ciremai Hospital

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ABSTRACT

Triage is a critical process in prioritizing patient care, particularly for P2 (yellow label) patients in the emergency department who are at risk of clinical deterioration. This study aimed to quantitatively and multivariately analyze the factors influencing anxiety levels among P2 triage patients at the Emergency Department of RSUD Ciremai. This analytical quantitative study employed a cross-sectional design. A total of 96 P2 triage patients were selected using purposive sampling. The variables examined included response time, therapeutic communication, and family support. Data were analyzed using chi-square tests for bivariate analysis and multiple logistic regression for multivariate analysis. Bivariate analysis revealed significant associations between anxiety levels and response time ($p = 0.002$), therapeutic communication ($p = 0.001$), and family support ($p = 0.004$). Multivariate analysis showed that delayed response time (OR = 3.46; 95% CI: 1.52–7.89), ineffective therapeutic communication (OR = 4.20; 95% CI: 1.85–9.52), and low family support (OR = 3.10; 95% CI: 1.38–6.95) significantly increased the risk of severe anxiety. Among these factors, ineffective therapeutic communication emerged as the most dominant, with the highest odds ratio. Response time, therapeutic communication quality, and family support are key factors associated with anxiety in P2 triage patients. Emergency nursing interventions should focus on enhancing communication skills through targeted staff training, implementing rapid response protocols to reduce delays, and actively involving family members in the care process to help reduce patient anxiety and improve psychological outcomes.



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INTRODUCTION

The Emergency Department (ED) is a critical component of the healthcare system, serving as the first point of contact for patients with acute or urgent conditions. In Indonesia, ED utilization continues to rise annually, reflecting the public's increasing reliance on its services. In West Java Province alone, over 10 million ED visits were recorded in 2023, encompassing both life-threatening and non-critical cases. This growing demand underscores the ED's central role in critical cases.¹ This growing demand underscores the ED's central role in emergency healthcare but also reveals substantial challenges in maintaining quality, speed, and patient-centered care amid resource limitations.

The high-pressure environment of the ED characterized by crowding, noise, and rapid medical decision-making—can create substantial psychological strain, not only for patients but

also for their families.² To manage patient flow, EDs implement triage systems that classify cases into four levels of urgency: P1 (life-threatening), P2 (urgent but not immediately life-threatening), P3 (non-urgent), and P0 (deceased on arrival). Patients categorized as P2 (yellow) require timely intervention, typically within 10 to 15 minutes, once P1 cases are stabilized.³ Although not in critical condition, these patients face significant risks if care is delayed.

The psychological burden is particularly evident in P2 patients and their families. Families often perceive delays in treatment as neglect or mismanagement, which contributes to heightened anxiety, emotional distress, and diminished trust in the healthcare system.⁴ This is exacerbated by ineffective communication, insufficient updates on patient status, and ED settings that offer limited psychological comfort.⁵ Such emotional distress can disrupt therapeutic communication, reduce patients' receptivity to care, and hinder effective nursing interventions.

Stress and coping theory provides a relevant psychological framework for understanding these reactions.^{6,7} According to this model, individuals appraise stressful situations such as delayed treatment in the ED as either a threat or a challenge. When viewed as a threat and when coping resources (such as communication, social support, or information clarity) are insufficient, anxiety and distress intensify.⁸ The stress-buffering hypothesis further posits that social support, especially from family and healthcare providers, can moderate this stress response, helping patients and families cope more effectively.⁹

Despite known challenges the growing body of research on ED experiences, few studies in Indonesia have applied multivariate approaches to comprehensively identify and analyze the factors contributing to anxiety among P2 triage patients, especially in Type C (mid level) hospitals.¹⁰ Most existing studies are descriptive or focus narrowly on communication or response time. This creates a knowledge gap, particularly in hospital settings like RSU Ciremai, where resources and personnel are more limited than in larger urban hospitals.

This study addresses that gap by employing a quantitative multivariate analysis to explore the determinants of anxiety among P2 triage patients. By integrating psychological frameworks and examining multiple contributing factors including patient demographics, communication quality, family involvement, and ED environmental stressors his research aims to generate evidence-based recommendations for improving nursing practices in Indonesian EDs, particularly in under-resourced hospitals. The use of multivariate analysis offers a significant methodological advancement over the predominantly descriptive studies in this field, enabling a more nuanced understanding of how multiple factors interact to affect patient anxiety.

METHODS

Research Design

This study employed a descriptive-analytic design with a cross-sectional approach. This method allows the researcher to observe the relationship between several independent variables and a dependent variable simultaneously within a specific time frame.¹¹ The study was conducted in the Emergency Department (ED) of RSU Ciremai, Cirebon City, West Java, a Type C referral hospital with a high volume of ED visits. The research was carried out over three months, from January to March 2025.

Population and Sample

The study population comprised all adult patients visiting the ED of RSU Ciremai and categorized under the P2 yellow triage label. The total sample consisted of 96 respondents, selected using purposive sampling. The sample size was determined based on a minimum requirement for multivariate analysis (10 subjects per variable), considering the five independent variables used, and an additional margin for potential data loss.¹²

Participants were recruited based on specific inclusion and exclusion criteria to ensure the appropriateness and reliability of the data collected. Individuals were eligible to participate if they were aged over 17 years, fully conscious and oriented, able and willing to communicate verbally, and had provided written informed consent.

Exclusion criteria applied to individuals with severe psychiatric disorders, speech or hearing

impairments, or those who declined to participate in the study. These criteria were established to minimize confounding factors that could affect communication ability and the reliability of self-reported data.

Purposive sampling was employed, selecting participants based on specific characteristics that align with the study objectives, such as triage category (P2), communication ability, and level of consciousness.¹³

Research Instruments

Data were collected using the following instruments: Demographic Questionnaire assessing age, gender, education, occupation, and previous ED visits. Therapeutic Communication Scale – adapted from Stuart's theory,⁷ comprising 20 items rated on a 4-point Likert scale (1 = never to 4 = always), with total scores ranging from 20 to 80. Higher scores indicated more effective communication. Internal consistency: Cronbach's $\alpha = 0.81$. Family Support Scale modified from House (1981), covering emotional, informational, and instrumental support, using a 4-point Likert scale. Total scores were categorized into three levels: low (≤ 45), moderate (46–60), and high (> 60) support. This scale showed a high level of internal consistency, with a Cronbach's alpha of 0.84.

Nurse response time was determined through direct observation and review of ED service logs, documenting the time (in minutes) from triage to the initial nurse-patient interaction. To assess participants' emotional state, the State Anxiety Inventory (SAI) was utilized. This standardized instrument comprised 20 items, with total scores classified into three categories: mild anxiety (20–39), moderate anxiety (40–59), and severe anxiety (60–80). The Indonesian version of the SAI used in this study had been pilot-tested on 20 participants, resulting in a Cronbach's alpha of 0.89, indicating high internal consistency.

Data Collection Techniques

Data were collected through structured interviews using the questionnaires and through direct observation of nurses' response times. Interviews were conducted by trained researchers, ensuring clarity of questions. Respondents were given time and assistance when needed to complete the SAI form accurately.

Data Analysis Techniques

Data were analyzed in three phases Univariate Analysis: Descriptive statistics to summarize demographic characteristics and scale scores. Bivariate Analysis: Chi-square test was used to examine associations between independent variables and anxiety level. Multivariate Analysis: Multiple logistic regression was used to identify the most influential factors on anxiety. Variables with $p < 0.25$ in the bivariate analysis were included in the model.

Assumption Testing for Logistic Regression: Multicollinearity was assessed using Variance Inflation Factor (VIF), with $VIF < 10$ considered acceptable. Goodness of fit was checked using Hosmer-Lemeshow test ($p > 0.05$ indicating good fit). Categorical variables were dummy-coded (e.g., sex: male = 0, female = 1).

Research Ethics

This study received ethical clearance from the Ethics Committee of Mahardika Health Institute.

RESULTS

A total of 96 respondents participated in this study. The analysis began by examining the sociodemographic and clinical characteristics of the participants, as well as key study variables, including nurse response time, therapeutic communication, family support, and anxiety levels. Table 1 presents the frequency and percentage distribution of these characteristics.

Table 1. Frequency Distribution of Respondents' Characteristics (n = 96)

Variables	n	%
Age		
18–35 years	28	29.2
36–55 years	58	60.4
>55 years	10	10.4
Gender		
Male	38	39.6
Female	58	60.4
Education		
< High School	22	22.9
High School	60	62.5
> High School	14	14.6
Response Time		
Fast (≤ 5 minutes)	40	41.7
Slow (> 5 minutes)	56	58.3
Therapeutic Communication		
Effective	35	36.5
Ineffective	61	63.5
Family Support		
High	41	42.7
Low	55	57.3
Anxiety Level		
Mild	20	20.8
Moderate	51	53.1
Severe	25	26.1

The majority of respondents were aged 36–55 years (60.4%) and predominantly female (60.4%). Most had a high school education (62.5%), and over half responded slowly (> 5 minutes) to questions (58.3%). A significant portion reported ineffective therapeutic communication (63.5%) and low family support (57.3%). In terms of anxiety levels, moderate anxiety was most common (53.1%), followed by severe (26.1%) and mild anxiety (20.8%), with no respondents experiencing panic-level anxiety.

Table 2. Bivariate Analysis Between Anxiety Levels and Independent Variables

Independent Variables	Mild (n)	%	Moderate (n)	%	Severe (n)	%	p-value
Gender							
Male	12	31.6	19	50.0	7	18.4	0.321
Female	8	13.8	32	55.2	18	31.0	
Response Time							
Fast (≤ 5 minutes)	14	35.0	20	50.0	6	15.0	0.011
Slow (> 5 minutes)	6	10.7	31	55.4	19	33.9	
Therapeutic Communication							
Effective	10	28.6	18	51.4	7	20.0	0.037
Ineffective	10	16.4	33	54.1	18	29.5	
Family Support							
High	13	31.7	21	51.2	7	17.1	0.009
Low	7	12.7	30	54.6	18	32.7	

Table 2 shows that gender was not significantly associated with anxiety levels ($p = 0.321$), indicating similar distributions of mild, moderate, and severe anxiety between males and females.

However, response time was significantly associated with anxiety levels ($p = 0.011$), where participants who responded slowly were more likely to experience moderate and severe anxiety. Therapeutic communication also showed a significant association ($p = 0.037$); ineffective communication was linked to higher levels of anxiety. Similarly, family support was significantly

associated with anxiety levels ($p = 0.009$), with low family support corresponding to greater severity of anxiety symptoms.

Table 3. Multinomial Logistic Regression Analysis of Factors Associated with Anxiety (Reference: Mild Anxiety)

Variables	Category	Moderate (AOR [95% CI])	<i>p</i> -value	Severe (AOR [95% CI])	<i>p</i> -value
Gender	Female vs Male	1.55 (0.68–3.50)	0.290	2.32 (0.85–6.33)	0.102
Response Time	Slow vs Fast	2.21 (1.02–4.80)	0.045*	3.94 (1.32–11.76)	0.014*
Therapeutic Communication	Ineffective vs Effective	1.75 (0.81–3.80)	0.150	2.88 (1.02–8.14)	0.046*
Family Support	Low vs High	2.02 (0.93–4.40)	0.075	3.67 (1.29–10.42)	0.015*

Multivariate analysis revealed that slower response time was significantly associated with higher odds of both moderate (AOR = 2.21; 95% CI: 1.02–4.80; $p = 0.045$) and severe anxiety (AOR = 3.94; 95% CI: 1.32–11.76; $p = 0.014$). Ineffective therapeutic communication significantly increased the odds of severe anxiety (AOR = 2.88; 95% CI: 1.02–8.14; $p = 0.046$), but not moderate anxiety. Similarly, low family support was significantly associated with severe anxiety (AOR = 3.67; 95% CI: 1.29–10.42; $p = 0.015$), though its association with moderate anxiety did not reach statistical significance. Gender was not a significant predictor of anxiety levels in this model.

DISCUSSION

The multivariate analysis revealed that delayed response time, ineffective therapeutic communication, and low family support were significantly associated with elevated anxiety levels among triage P2 (yellow label) patients in the Emergency Department (ED) of Ciremai General Hospital ($p < 0.05$). These findings align with existing literature indicating that delays in emergency medical care are linked to increased anxiety, especially in high-uncertainty contexts like the ED. Theoretically, prolonged waiting times in emergency settings heighten uncertainty and trigger sympathetic nervous system activation manifested by symptoms such as palpitations and tremors.¹⁴ From the perspective of the “time is life” principle in emergency medicine,¹⁵ the timely delivery of care serves as both a physiological and psychological buffer against escalating distress.¹⁶

Delayed Response Time

Delay in nursing response creates a perception of neglect and threat in the minds of patients, exacerbating feelings of helplessness and psychological distress.¹⁷ This study supports prior findings that prolonged waiting times are positively correlated with anxiety scores ($p = 0.024$). The cognitive appraisal model of stress explains that patients interpret delayed care as a potential threat to personal safety, heightening anxiety responses.^{18,19} Although numerous studies have reported similar outcomes, the contribution of this study lies in emphasizing response time as an actionable indicator for ED performance improvement. Rather than focusing solely on satisfaction metrics, EDs should develop fast-track protocols and triage algorithms that optimize response for moderate priority patients (e.g., P2 yellow triage), especially given their vulnerability to uncertainty induced stress.²⁰

Therapeutic Communication

Therapeutic communication plays a crucial role in mitigating anxiety by fostering trust, information clarity, and emotional safety. This study reaffirms that patients who received open, empathetic communication were less likely to report anxiety symptoms. The interactional theory of communication explains that two-way, respectful communication builds cognitive control over stressful events.²¹ Recent studies show that structured communication protocols such as nurse-led explanation routines and reassurance techniques significantly decrease anxiety in emergency and perioperative settings. In contrast, ineffective communication often exacerbates distress, as it

leaves patients uninformed about diagnostic procedures, waiting times, and outcomes.²² The findings imply that improving communication competencies through simulation training and reflective practice should be integrated into emergency nursing curricula and hospital accreditation standards.²³

Family Support

Consistent with the stress buffering hypothesis, family presence in the ED substantially lowers anxiety levels by providing emotional reassurance and contextual clarity.²⁴ The study's results showed a significant association between low family support and increased patient anxiety, emphasizing the role of social environment in acute stress regulation. This resonates with Indonesia's cultural norm that prioritizes familial closeness and collective caregiving.²⁵ In line with recent family-centered care models, the incorporation of structured visitation policies and family involvement in decision making has been found to improve psychological outcomes for patients in emergency and critical care units.³ Therefore, ED protocols should institutionalize family-inclusive communication strategies, especially for patients at moderate triage levels who may experience longer wait times and diagnostic ambiguity.

Study Limitations

This study has several limitations. First, the use of non-random sampling may introduce selection bias, limiting generalizability. Second, the single-hospital setting may not reflect the broader patient population or institutional practices in other regions. Third, the cross-sectional design restricts causal inference, making it difficult to determine the directionality of observed relationships. Furthermore, reliance on self-reported anxiety measures may introduce recall or social desirability bias. Future research should consider longitudinal designs and multi-center collaboration to strengthen the evidence base and better inform national emergency care standards.

Implications for Practice and Policy

The findings of this study offer valuable insights for clinical nursing practice and health policy.²⁶ First, response time metrics should be integrated into ED performance dashboards to ensure accountability and enable real-time monitoring.²⁷ Second, therapeutic communication training should be mandated for all frontline ED staff, emphasizing active listening, clarity, and reassurance strategies. Third, family involvement should be systematically promoted through visitation rights, informed consent practices, and psychosocial support roles. At the policy level, hospital accreditation bodies may revise emergency care guidelines to incorporate these psychosocial dimensions as indicators of quality. Additionally, targeted interventions such as anxiety screening tools during triage can help identify vulnerable patients early, enabling tailored nursing care plans.²⁸

CONCLUSION

This study reveals a significant relationship between response time, therapeutic communication, and family support with the anxiety levels of triage P2 (yellow label) patients in the Emergency Department (ED) of Ciremai General Hospital. Multivariate analysis identified these three factors as independent predictors of patient anxiety. Delayed response time, ineffective therapeutic communication, and low family support significantly increase the risk of anxiety in patients. These findings highlight the need for a holistic approach to emergency care that integrates timely services, high-quality nurse-patient communication, and active family involvement to reduce anxiety and improve patient comfort.

To address these issues, emergency departments could implement nurse communication training programs, establish a fast-track triage protocol for P2 patients, and adopt family-centered emergency care strategies. Additionally, staffing adjustments to ensure optimal nurse-to-patient ratios may enhance response efficiency. Future research should explore the long-term impacts of

such interventions on patient psychological outcomes and evaluate the scalability of holistic care models across various hospital settings.

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