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The Relationship Between Family Anxiety Levels and Knowledge of Initial Patient Management in the Emergency Department

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ABSTRACT

Family anxiety in the Emergency Department (ED) commonly occurs due to uncertainty regarding the patient's condition and limited understanding of initial treatment procedures. This condition may influence the family's ability to receive information and support patient care. This study aimed to analyze the relationship between family anxiety levels and knowledge of initial patient management in the Emergency Department of RSUD M.M. Dunda Limboto. A quantitative correlational study with a cross-sectional design was conducted involving 91 respondents selected through accidental sampling. Anxiety levels were measured using the Hamilton Anxiety Rating Scale (HARS), while knowledge was assessed using a structured questionnaire on initial patient management. Data were analyzed using the Chi-Square test with a significance level of 0.05. The results showed that most respondents experienced mild anxiety (42.9%) and had low knowledge levels (36.3%). Statistical analysis revealed a significant relationship between family anxiety levels and knowledge of initial patient management ($p = 0.000$). These findings indicate that family anxiety is associated with their understanding of emergency care procedures. Strengthening health education and effective communication by healthcare professionals is necessary to reduce anxiety and improve family comprehension during emergency services.

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1. INTRODUCTION

The Emergency Department (ED) is a healthcare service unit that plays an important role in providing immediate treatment for patients with acute and life-threatening conditions. Services in the ED are required to be fast, accurate, and well-coordinated through the implementation of a triage system that prioritizes patients based on the level of clinical urgency. The increasing number of ED visits each year has resulted in service overcrowding, varying waiting times, and complex environmental dynamics. These conditions affect not only healthcare professionals and patients but also the families accompanying patients during the treatment process. (1) (2) (3)

Families serve as the primary support system for patients in emergency situations; however, they require clear information to maintain emotional stability (4). The uncertain and overcrowded ED environment has been shown to increase family anxiety (5). Perceptions regarding prolonged waiting times are also significantly associated with increased stress and dissatisfaction (6). The triage system, which prioritizes patients according to clinical severity, is often misunderstood as delayed treatment due to the public's limited understanding of emergency priority principles (7,8). Ineffective communication may worsen negative perceptions and trigger conflicts with healthcare providers (9).

Theoretically, anxiety is an emotional response to real or perceived threats and may affect an individual's cognitive functions, including attention and working memory (10,11). Increased anxiety levels can reduce rational thinking abilities and comprehension of complex information (12). In the context of ED services, family anxiety is often triggered by uncertainty regarding the patient's condition and limited information provided by healthcare personnel (13). This condition may hinder communication between healthcare providers and patients' families. In fact, effective communication plays an important role in improving understanding of clinical conditions, medical procedures, and treatment plans (14,15).

Knowledge regarding the initial management of patients in the ED includes an understanding of the triage process, rapid patient assessment, resuscitation procedures, and stabilization principles prior to further treatment (16). The triage system is designed to determine priorities based on clinical urgency rather than the order of patient arrival (17). Adequate understanding of this principle may help families rationally accept service priorities and reduce misconceptions regarding medical procedures (8). Conversely, insufficient knowledge has been associated with increased anxiety and negative perceptions of ED services (6,13).

Several studies have shown that health literacy is associated with the psychological responses of families in intensive care units and emergency departments (18,19). Adequate education has been proven to reduce anxiety and improve family coping abilities (20). However, the relationship between knowledge and anxiety is not always consistent, as it may be influenced by contextual factors such as previous experiences and the quality of communication from healthcare professionals (21,22). Therefore, understanding the relationship between these two variables is important as a basis for developing educational interventions and more effective communication strategies in the ED environment (23).

Based on the description above, an empirical study is needed to analyze the relationship between family anxiety levels and knowledge regarding the initial management of patients in the Emergency Department. This study aims to identify family anxiety levels, assess the level of knowledge regarding initial patient management, and analyze the relationship between these two variables using a cross-sectional approach.

2. RESEARCH METHODS

This study employed an analytical observational design with a cross-sectional approach and quantitative method. The study population consisted of family members accompanying patients in the Emergency Department of RSUD M.M. Dunda Limboto. A total of 91 respondents were selected using an accidental sampling technique. The inclusion criteria were family members aged ≥18 years and willing to participate as respondents, while the exclusion criteria were respondents who did not complete the questionnaire. The independent variable was the family anxiety level, while the dependent variable was knowledge regarding the initial management of patients in the Emergency Department. Anxiety levels were measured using the Hamilton Anxiety Rating Scale (HARS), whereas knowledge was assessed using a structured knowledge questionnaire. Data analysis was conducted using the Chi-Square test with a significance level of 0.05. This study obtained ethical approval from the Health Research Ethics Committee of the Faculty of Health Sciences, Universitas Muhammadiyah Gorontalo.

3. RESULTS AND DISCUSSION

Tabel 1. Respondent Characteristics

Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	32	35.2
Female	59	64.8
Age		
18–25 years	21	23.1
26–35 years	20	22.0
36–45 years	21	23.1
46–75 years	29	31.9
Occupation		
Housewife	60	65.9
Employee	21	23.1
Laborer/Farmer/Fisherman	10	11.0
Education		

No formal education	12	13.2
Elementary School	7	7.7
Junior High School	30	33.0
Senior High School	29	31.9
Bachelor's Degree	13	14.3

Based on Table 1, the majority of respondents were female, totaling 59 individuals (64.8%). The largest age group was 46–75 years, with 29 respondents (31.9%). Based on occupation, most respondents were housewives (65.9%). In terms of education, the highest proportion of respondents had a junior high school education (33.0%), followed by senior high school education (31.9%). Overall, the respondents were predominantly female, in the late adulthood age group, and had a middle-level educational background.

Tabel 2. Distribution of Respondents' Anxiety Levels and Knowledge

Variable	Category	Frequency (n)	Percentage (%)
Anxiety Level	Not anxious	16	17.6
	Mild	39	42.9
	Moderate	36	39.6
Knowledge Level	Good	27	29.7
	Fair	31	34.1
	Poor	33	36.3

Based on Table 2, most respondents experienced mild anxiety, totaling 39 individuals (42.9%), followed by moderate anxiety in 36 respondents (39.6%), and no anxiety in 16 respondents (17.6%). Regarding the knowledge variable, the majority of respondents had poor knowledge levels, totaling 33 individuals (36.3%), followed by fair knowledge in 31 respondents (34.1%) and good knowledge in 27 respondents (29.7%).

Tabel 3. Relationship Between Anxiety Level and Knowledge

Anxiety Level	**Knowledge**				**p-value**
	Good n (%)	Fair n (%)	Poor n (%)	Total n (%)	
Not anxious	14 (87,5)	2 (12,5)	0 (0,0)	16 (100)	
Mild	11 (28,2)	20 (51,3)	8 (20,5)	39 (100)	
Moderate	2 (5,6)	9 (25,0)	25 (69,4)	36 (100)	
Total	27 (29,7)	31 (34,1)	33 (36,3)	91 (100)	**0,000**

Based on Table 3, respondents who did not experience anxiety mostly had good knowledge levels (87.5%), and none had poor knowledge. In the mild anxiety category, the majority of respondents had fair knowledge (51.3%), followed by good knowledge (28.2%) and poor knowledge (20.5%). Meanwhile, in the moderate anxiety category, most respondents had poor knowledge (69.4%), and only a small proportion had good knowledge (5.6%).

The results of the Chi-Square test showed a p-value of 0.000 ($p < 0.05$), indicating a significant relationship between family anxiety levels and knowledge regarding the initial management of patients in the Emergency Department.

4. DISCUSSION

Respondent Characteristics

The results of this study showed that the majority of respondents were female. This finding indicates that women are more likely to act as patient companions in the Emergency Department. Socially and culturally, women, especially mothers or core family members, tend to have a dominant role in providing emotional support

and care when a family member is ill. This role makes women more directly involved in emergency situations, thereby increasing their vulnerability to emotional responses such as anxiety (24,25).

Based on age, most respondents were in the adult to late adulthood age group. Individuals in this age category generally have greater family responsibilities and play an important role in healthcare-related decision-making. However, in late adulthood, responses to stress may increase due to biological and psychological factors. This condition may influence how individuals respond to crisis situations such as treatment in the Emergency Department (26).

In terms of occupation, the majority of respondents were housewives. This status allows for more intensive involvement in accompanying sick family members. However, economic dependence on other family members and limited access to health information may affect their level of understanding regarding medical procedures in the Emergency Department. Socioeconomic conditions are often associated with an individual's level of health literacy (27).

From the educational aspect, most respondents had a middle-level educational background (junior and senior high school). Educational level plays an important role in an individual's ability to receive, understand, and interpret medical information. Individuals with higher education generally have better health literacy skills, making it easier for them to understand the triage system and initial management procedures in the Emergency Department. Conversely, limited education may influence perceptions of healthcare services and increase anxiety due to a lack of understanding regarding the patient's condition and medical treatment processes (28).

Overall, the characteristics of respondents in this study indicate that demographic factors such as gender, age, occupation, and education may influence emotional responses and family knowledge levels in emergency situations.

Relationship Between Anxiety Levels and Knowledge

The results of this study showed a significant relationship between family anxiety levels and knowledge regarding the initial management of patients in the Emergency Department (p-value = 0.000 < 0.05). Among respondents who were not anxious, the majority had good knowledge levels (87.5%), and no respondents were found to have poor knowledge. In contrast, among respondents with moderate anxiety, most had poor knowledge levels (69.4%), while only a small proportion had good knowledge. These findings demonstrate a consistent pattern in which lower levels of knowledge are associated with higher levels of anxiety experienced by patients' families.

Conceptually, anxiety is an emotional response to perceived threats and uncertainty. In the context of the Emergency Department, families are confronted with crisis situations involving patient safety risks, rapid medical decisions, and triage procedures that may not be fully understood. When individuals do not have adequate knowledge regarding the triage system and service flow, they tend to interpret the situation as an uncontrollable threat, thereby increasing anxiety responses.

The findings of this study are consistent with the study conducted by Meilyana et al. (29) which explained that the level of family knowledge and attitudes regarding triage is associated with anxiety levels in the Emergency Department. Bernadeta emphasized that a lack of understanding regarding service prioritization mechanisms causes families to misinterpret patient management processes, resulting in feelings of worry, impatience, and even distrust toward healthcare providers. This finding strengthens the assumption that family health literacy plays an important role in maintaining emotional stability during emergency situations.

A study by Adeliani et al. (30) also found that knowledge regarding triage is associated with the anxiety levels of patients' families in the Emergency Department. It was explained that families with better understanding are more able to accept the clinical rationale behind treatment prioritization and are therefore better able to control their emotional responses. This condition indicates that understanding the principle of triage (based on the level of emergency rather than the order of arrival) is a key factor in reducing perceptual distortions.

In addition, Norfita et al. (31) and Lasman et al. (32) stated that perceptions regarding the patient's emergency level are associated with the psychological responses of families. Families facing patients with high emergency severity tend to experience greater anxiety, especially when not supported by clear information and effective communication. This situation indicates that anxiety is influenced not only by the patient's clinical condition but also by the family's ability to understand and interpret the situation.

Theoretically, in the cognitive approach to anxiety, individuals experience increased anxiety when there is a mismatch between situational demands and their coping abilities. Knowledge functions as a cognitive resource that helps individuals conduct more rational appraisals of situations. When knowledge is adequate, families are able to understand that the triage process is a standard procedure aimed at saving patients according to clinical priorities, rather than a form of neglect in service delivery. Conversely, a lack of knowledge reinforces negative perceptions and increases emotional tension.

The results of this study also showed that most respondents experienced mild to moderate anxiety, with knowledge levels predominantly categorized as fair and poor. This condition indicates the need for educational interventions in the Emergency Department. Brief education regarding the triage system, service flow, and estimated treatment times may serve as preventive strategies to reduce family anxiety.

Therefore, this study strengthens previous findings that knowledge is closely related to family anxiety in the Emergency Department. The better the knowledge possessed, the more adaptive the emotional responses demonstrated. Consequently, therapeutic communication and health education should become integral components of emergency nursing practice in supporting the psychological well-being of patients' families.

5. CONCLUSION

The conclusion of this study indicates that family anxiety levels are significantly associated with knowledge regarding the initial management of patients in the Emergency Department. Families with better knowledge tended to experience lower levels of anxiety, whereas limited knowledge was associated with higher anxiety levels. These findings emphasize the importance of health education and effective communication in improving family understanding of triage systems and emergency care procedures. Educational interventions and therapeutic communication provided by healthcare professionals are expected to reduce family anxiety and support psychological well-being during emergency care situations.

6. SUGGESTION

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