

ORIGINAL ARTICLE

Stress and Coping Mechanisms Among Families of Critically Ill Patients in the Intensive Care Unit.

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ARTICLE INFORMATION	ABSTRACT
<p>Article history Received: 2024-09-08 Revised : 2024-10-18 Accepted: 2024-10-29</p> <p>Keywords stress; coping mechanism; ICU; family caregiver; psychological support</p>	<p>Introduction: Families of critically ill patients often experience psychological stress due to the uncertainty and emotional burden of intensive care environments. Objectives: This study aimed to examine the relationship between stress levels and coping mechanisms among family members of patients admitted to the Intensive Care Unit (ICU). Methods: A quantitative analytic design with a cross-sectional approach was used, involving 30 respondents selected through quota sampling. Data were collected using structured questionnaires to measure stress levels and coping strategies, and analyzed using Spearman's rho correlation. Results: The results showed that 60.0% of respondents experienced high levels of stress (Level IV), and 70.0% employed maladaptive coping mechanisms. A moderate positive correlation was found between stress and coping ($r = 0.365, p = 0.024$), indicating that higher stress levels were associated with an increased use of maladaptive strategies. Conclusions: The study concludes that family members of ICU patients are prone to psychological distress and often lack effective coping mechanisms, highlighting the need for family-centered interventions to support emotional resilience and adaptive coping.</p>

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A. Introduction

The family plays a central role in the care and well-being of its members, especially during health crises such as critical illness. It functions as both a source of emotional support and a decision-making body when medical emergencies occur (Kaakinen et al., 2018). In such situations, families are often required to quickly adapt to unfamiliar environments like the ICU, which are characterized by strict protocols, high-stakes decisions, and emotional intensity (Davidson et al., 2017). The sudden shift in roles and responsibilities may create internal family strain, which can affect both the psychological health of the family and the quality of care provided to the patient. When families are not adequately supported, their distress may intensify, resulting in dysfunctional coping responses (McAndrew et al., 2012).

Critically ill patients in the ICU are often in life-threatening conditions, which triggers fear, anxiety, and psychological distress among family members. Research has shown that family members of ICU patients are at increased risk of experiencing stress-related symptoms such as anxiety, depression, and post-traumatic stress disorder (Azoulay et al., 2005; Pochard et al., 2001). These emotional reactions are commonly associated with uncertainty, lack of

information, and restricted access to the patient (Kentish-Barnes et al., 2009). Moreover, families may struggle with helplessness and guilt, especially if they feel excluded from decision-making processes. Prolonged exposure to these stressors may impair their mental health and resilience.

Several interrelated factors contribute to the psychological burden experienced by families in the ICU, including the complexity of medical procedures, communication barriers, financial concerns, and disruption of daily life routines (Wendlandt et al., 2019; Shaw et al., 2016). Financial difficulties, especially in lower-income families, may further amplify stress, especially when hospitalization is prolonged or requires out-of-pocket expenses. Additionally, cultural expectations and prior healthcare experiences influence how families perceive and cope with these challenges (Fumis et al., 2015). Therefore, understanding the family's psychosocial context is essential for developing effective support interventions. A lack of tailored support may result in deteriorated family functioning during and after hospitalization.

Coping mechanisms refer to the cognitive and behavioral strategies that individuals and families use to manage stress. These include problem-solving, emotional regulation, seeking social support, or, conversely, avoidance and denial (Folkman & Moskowitz, 2004). Research suggests that effective coping strategies can buffer the psychological impact of ICU-related stress and improve family outcomes (Minton et al., 2019). However, the effectiveness of coping strategies often depends on access to resources such as information, emotional support, and involvement in care decisions (Lautrette et al., 2007). Thus, healthcare providers play a pivotal role in enhancing family coping by facilitating open communication and emotional engagement.

Family-centered care in ICU settings emphasizes collaboration between healthcare providers and families, recognizing them as partners in the care process (Davidson et al., 2017). Unfortunately, families often report feeling excluded or inadequately informed, which leads to greater emotional burden and dissatisfaction with care (White et al., 2007). Transparent and compassionate communication has been shown to reduce anxiety and foster trust, thereby improving the family's capacity to cope (Curtis et al., 2016). This is particularly crucial during decision-making about life-sustaining treatments, where family involvement is ethically and emotionally significant (Torke et al., 2012). Institutional policies that support family presence and participation can mitigate these challenges.

Inadequate coping among family members may lead to physical symptoms such as insomnia, fatigue, and appetite disturbances, in addition to psychological outcomes like panic attacks or depressive episodes (van Beusekom et al., 2016). The accumulation of emotional stress without proper outlets or support mechanisms can impair the caregiver's ability to function and affect other family relationships. In severe cases, families may experience prolonged grief or trauma that persists even after the patient is discharged or deceased (Gries et al., 2010). Preventive psychological support and early identification of at-risk individuals are therefore essential. Healthcare providers must be trained to recognize signs of family distress and respond accordingly.

Demands placed on families in ICU situations are not only emotional but also logistical. Daily responsibilities such as employment, childcare, and transportation are often disrupted, placing additional pressure on family systems (Seaman et al., 2017). When these disruptions go unaddressed, they may lead to financial strain, job loss, or conflict within the family. Institutional responses such as social work referrals, flexible visiting hours, and family accommodations can help ease this burden (Wendlandt et al., 2019). This underscores the importance of interdisciplinary support teams in the ICU setting.

In a study of family experiences in critical care, it was found that families who receive timely and empathetic information are more likely to engage in adaptive coping strategies (Back et al., 2014). Moreover, involvement in care planning promotes a sense of control and reduces feelings of helplessness (Kentish-Barnes et al., 2015). These factors collectively influence the psychological trajectory of family members during and after ICU hospitalization. Failure to meet these informational and emotional needs often leads to frustration and psychological withdrawal. This makes structured family support programs a critical component of ICU services.

In Indonesia, where extended families play a prominent role in caregiving, the psychological impact of ICU admission may affect multiple generations. However, research on family stress and coping in critical care contexts within Indonesian healthcare settings remains limited. Preliminary reports from Dr. H. Koesnadi General Hospital in Bondowoso indicated a high incidence of critical cases and mortality, highlighting the potential for emotional distress among family members. From 2014 to 2015, the ICU recorded over 1,000 critical admissions, with more than 280 mortalities, suggesting a significant emotional toll. Understanding the local context is essential for tailoring interventions that meet cultural and systemic needs.

Given the complexity of ICU care and its impact on families, it is essential to examine how stress relates to coping mechanisms among family members of critically ill patients. This study aims to contribute evidence-based insights to guide healthcare professionals in delivering more effective, compassionate, and culturally appropriate support. By identifying stressors and coping patterns, interventions can be designed to enhance family resilience and optimize patient outcomes. Ultimately, recognizing and responding to family needs is not just a matter of empathy—it is a matter of quality care.

B. Methods

This study utilized a correlational analytic design with a cross-sectional approach, which allows for simultaneous measurement of the independent and dependent variables at a single point in time. The objective of this design is to identify potential associations between stress levels and coping mechanisms among families of critically ill patients without any follow-up. This method is widely used in healthcare research when exploring relational dynamics in clinical environments. By employing this approach, the researcher aims to evaluate patterns of coping as they naturally occur during the hospitalization of a family member in the ICU. The design enables timely data collection while minimizing external variables that may affect the results.

The study population included all family members of critically ill patients admitted to the ICU at Dr. H. Koesnadi General Hospital in Bondowoso. A total of 30 respondents were selected using non-probability sampling, specifically quota sampling, which allows researchers to obtain data from a population subset that meets certain characteristics without random selection. Inclusion criteria consisted of families with patients currently in ICU care who were willing to participate and capable of reading and writing. Exclusion criteria included family members who were uncooperative or illiterate. This sampling method was deemed appropriate for practical access to eligible participants within the hospital environment.

The independent variable in this study was the stress level experienced by family members, while the dependent variable was the coping mechanism employed in response to the stressor. Data collection was conducted using two main instruments: an observation checklist to assess stress symptoms and a Likert-scale questionnaire to evaluate coping strategies. The stress

checklist was adapted from established psychological indicators such as fatigue, anxiety, muscle tension, and emotional disturbances, while the coping questionnaire covered dimensions such as reasoning, empathy, objectivity, and emotional regulation. The combination of observational and self-reported data provided a comprehensive understanding of each respondent's stress-coping profile.

For data analysis, the study employed descriptive statistics to present respondent demographics and variable distributions, as well as Spearman's Rho test to examine the correlation between stress and coping levels. Statistical analysis was performed using SPSS version 17, with a significance level set at $p < 0.05$ to determine the presence of statistically meaningful relationships. Ethical approval was obtained from relevant institutional authorities, and respondents were given informed consent forms ensuring confidentiality and voluntary participation. The research followed ethical standards including anonymity and data protection to ensure participant safety and integrity of results.

C. Results and Discussion

This study aimed to analyze the relationship between stress levels and coping mechanisms among families of critically ill patients in the Intensive Care Unit (ICU). A total of 30 respondents participated, and the following results and analyses were obtained.

Respondent Characteristics

Most of the participants were female (73.3%), and a significant portion had a low educational background, with 33.3% completing only elementary school and 26.7% having no formal education. Additionally, 63.3% of the respondents were housewives, which may reflect their caregiving roles within the family (Table 1). Previous research indicates that these demographic factors are associated with increased psychological vulnerability in high-stress healthcare environments (Nolen-Hoeksema, 2001; Paasche-Orlow & Wolf, 2007).

Table 1. Characteristics of Respondents (n = 30)

Variable	Category	Frequency (%)
Gender	Female	73.3
	Male	26.7
Education	Elementary school or less	60.0
Occupation	Housewife	63.3

These sociodemographic profiles are relevant to stress perception and coping behavior, as lower education levels and traditional caregiving roles may limit access to health-related information and support systems (Folkman & Moskowitz, 2004).

Stress Levels and Coping Mechanisms

The majority of respondents (60.0%) experienced **Level IV stress**, indicating a high degree of psychological burden, while 26.7% experienced Level V and 13.3% were at Level III. This finding is consistent with studies showing that family members of ICU patients are susceptible to severe emotional distress due to the uncertainty of the patient's condition, unfamiliar medical environment, and limited participation in care decisions (Azoulay et al., 2005; Davidson et al., 2017).

Regarding coping strategies, 70.0% of respondents employed maladaptive mechanisms, such as avoidance and emotional disengagement. Only 30.0% demonstrated adaptive strategies,

including reasoning, emotional control, and problem-solving. The prevalence of maladaptive coping suggests a lack of psychological preparedness or access to coping resources during the crisis. This supports previous research that links elevated stress levels with the increased use of non-constructive coping responses (Lazarus & Folkman, 1984).

Correlation Between Stress and Coping Mechanisms

The Spearman rho test revealed a **moderate positive correlation ($r = 0.365$, $p = 0.024$)** between stress level and coping type. This indicates that higher stress levels are associated with greater use of maladaptive coping strategies. These results reinforce theoretical frameworks suggesting that excessive psychological stress impairs problem-solving abilities and promotes emotional reactivity (Fumis et al., 2015). Moreover, individuals with lower education may lack the cognitive tools needed for adaptive coping, further compounding stress responses (Paasche-Orlow & Wolf, 2007).

The intersection of stress and coping is also influenced by gender dynamics. Studies have shown that women are more prone to internalizing disorders, including anxiety and depression, which can manifest as ineffective or passive coping styles (Myers, 2009). In this study, the predominance of female respondents may have influenced the overall coping patterns observed.

Implications and Interpretation

The high prevalence of maladaptive coping among family members indicates a critical need for psychological support interventions in ICU settings. Hospitals should prioritize family-centered care approaches that include regular communication, educational materials, and counseling services (Curtis et al., 2016). Training healthcare providers to engage empathetically with families can improve understanding, reduce uncertainty, and encourage adaptive coping.

The integration of structured psychosocial support systems can significantly enhance family resilience, particularly for those with low health literacy or limited formal education. Programs such as ICU diaries, family meetings, and peer support groups have demonstrated positive outcomes in reducing caregiver burden and improving psychological well-being (Back et al., 2014; Davidson et al., 2017).

Implications of the ICU Environment

The ICU is an inherently stressful setting, characterized by unfamiliar technologies, medical jargon, and life-sustaining interventions. Families are often excluded from decision-making processes or are only partially informed, further heightening their sense of powerlessness (Davidson et al., 2017). Research has shown that restricted visitation, unclear communication, and sudden changes in patient condition are among the top stressors for family members (Kentish-Barnes et al., 2009). Without clear, empathetic, and consistent communication from healthcare teams, families are left to manage distress without adequate guidance.

The Need for Family-Centered Interventions

Given the high level of stress and prevalence of maladaptive coping mechanisms observed, it is imperative to integrate family-centered care practices into ICU protocols. This includes structured family meetings, counseling services, and the use of ICU diaries or written updates, which have been shown to alleviate anxiety and foster a sense of inclusion (Back et al., 2014; Curtis et al., 2016). Emotional support should be tailored to each family's literacy level and cultural context to ensure effective communication and engagement.

Moreover, training healthcare providers in trauma-informed care and empathetic communication is essential. Nurses and physicians often serve as the primary point of contact for families and are well-positioned to deliver psychosocial support. Implementing brief mental health screenings or stress assessments during ICU stays may also help identify families at risk and allow for early intervention (Davidson et al., 2017).

Broader Implications and Recommendations

Beyond the hospital setting, these findings have implications for public health and mental health systems. Community-based education on coping strategies, emotional literacy, and psychological first aid could help prepare families for high-stress health situations. Additionally, integrating mental health services into general hospital systems—particularly in regions with low access—would ensure continuity of care and long-term support for affected families.

Finally, future research should investigate the long-term psychological impact of ICU caregiving and examine whether certain interventions reduce the risk of chronic stress-related disorders such as PTSD or prolonged grief. Comparative studies across different cultural or healthcare settings could also offer insights into which strategies are most effective for various populations.

D. Conclusion

In summary, this study highlights a significant relationship between stress levels and coping strategies among families of critically ill patients in the ICU. The predominance of maladaptive coping responses underscores the need for structured psychological and nursing interventions. Enhancing family involvement, improving communication, and providing targeted emotional support are crucial steps toward mitigating the psychological burden of critical illness on family caregivers. These measures are not only ethically important but also vital to holistic patient and family care.

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