Anxiety and Its Determinants in Family Members of Unaccompanied Hospitalized Elderly Patients

Yun Li[1], Yuge Yan[2], Xueyi Huang[1], Jiaxin Duan[1], Hongmei Niu[1]*

[1]College of Health Management, Shanghai Jian Qiao University, Shanghai 200135, China
[2]Yuannan High School, Shanghai 200237, China

*Corresponding author: Hongmei Niu, 24214@gench.edu.cn

Abstract: The unaccompanied care model, an innovative approach to nursing management designed to address the challenges of population aging and optimize healthcare resources, is increasingly being implemented among elderly inpatients. While this model enhances management efficiency and reduces infection risks, it also presents challenges to the mental health of family members, particularly due to their limited involvement, with anxiety being a prominent concern. This review systematically examines the prevalence and multidimensional factors influencing anxiety among family members of elderly hospitalized patients under the unaccompanied care model. Existing literature indicates that this group experiences significant levels of anxiety. However, most research has been conducted in ICU or neonatal settings, with insufficient focus on geriatric care. Furthermore, there is a notable gap in systematic quantitative studies on this topic. This review summarizes the current body of research, identifies its limitations, and proposes future research directions. Ultimately, it aims to provide theoretical support for the development of more humane family support systems and encourage region-specific empirical studies.

Keywords: Unaccompanied care mode; Relatives of elderly patients; Anxiety; Analysis of influencing factors

1. The concept and background of unaccompanied care mode

The unaccompanied care model [1] is an innovative nursing management approach adopted by modern medical institutions to address the challenges posed by social development and evolving healthcare needs. The model centers on providing professional medical care and basic daily assistance through trained medical staff and caregivers, reducing reliance on family members during the patient's hospitalization. Family visits are restricted to fixed time slots each day, with limitations on the number of visitors and duration. To bridge the gap, communication technologies such as phone calls and video chats are encouraged to keep family members updated on the patient's condition. The emergence of this model is driven by China's rapidly aging population. In this review, "elderly patients" are defined as individuals aged 65 years or older, consistent with the standard

demographic and geriatric research criteria. According to data from the "World Development Indicators" [2], as of 2024, individuals aged 65 and above comprise 14.67% of China's total population, a trend that has significantly increased the prevalence of chronic diseases among elderly patients [3]. Over 80% of elderly people suffer from at least one chronic disease, with more than half affected by two or more. As a result, the number of elderly patients admitted to medical institutions has surged, placing additional strain on clinical care systems and family caregivers [4]. The traditional open-family caregiving model has several drawbacks, including a heightened risk of cross-infection and complications in ward management. Moreover, family members often experience increased psychological stress and overwhelm due to caregiving responsibilities, which can hinder patient recovery [5].

Therefore, the National Health Commission has launched the "National Pilot Program for No-Attendant Inpatient Care (2025)" [6] to promote medical institutions to explore and implement accompanying and visiting management, which provides policy guidance for the nationwide practice of unaccompanied care mode. The implementation of this model represents a necessary adaptation for the healthcare system to adapt to social structural changes and optimize resource allocation. While effectively reducing the caregiving burden on families [7], it has profoundly transformed their traditional roles in the patient care process. Family members have shifted from being direct and continuous caregivers to indirect participants and intermittent decision-making collaborators [8]. This sudden role transition can easily lead families to experience anxiety and other negative emotions due to uncertainty in accessing patient health information, limited decision-making participation, and the influence of traditional filial piety culture [9]. The mental health of family members is a crucial component of the patient's support system. Anxiety, as one of the most common negative emotions, not only impairs the family members' physical and mental well-being but also indirectly affects the patient's treatment compliance and rehabilitation process by influencing their decision-making ability and quality of support [10]. Therefore, paying attention to the anxiety of family members of elderly inpatients in the unaccompanied care model is of great practical significance for building harmonious nurse-patient relationships and improving overall care quality. This review will provide a theoretical basis for future research by sorting through relevant literature and commenting on the progress and limitations of current studies.

2. Analysis of family members' anxiety in unaccompanied care mode

In medical environments that implement the unaccompanied care model, family members are crucial stakeholders in the patient care system. Their mental health, particularly anxiety levels, has become a focal point for nursing researchers. Extensive studies indicate that anxiety among family members in such settings is both widespread and severe. For example, a survey conducted by Lu et al. [11] on family members of patients with advanced cancer found an anxiety detection rate of 67%. In pediatric care, research by Bogetz et al. has shown that family members of children in pediatric intensive care units (PICUs) experience significantly higher anxiety levels [12]. Similarly, Young et al. [13] conducted a survey among mothers of children in neonatal wards without accompanying care, and the results showed that the anxiety scores of this group were significantly higher than the average level of the general population. The more critical the child's condition, the more obvious the mother's anxiety became. These studies demonstrate that, in the unaccompanied care model, the transition from being constant caregivers to intermittent visitors creates significant anxiety in family members. Concerns about the patient's condition, role ambiguity, and uncertainty regarding medical information contribute to persistent anxiety, which manifests both psychologically (tension, fear, excessive worry) and physically (sleep disturbances, difficulty concentrating). If left

unaddressed, this anxiety not only diminishes the family members' quality of life but can also negatively influence the patient's treatment and recovery.

3. Multidimensional analysis of factors influencing family anxiety

Family members' anxiety is influenced by a combination of factors, rather than a single cause. These factors include the patient's condition, the family members' own characteristics, the medical system, and the level of social support available to them. A comprehensive analysis of these diverse influences is essential for developing effective psychological interventions.

3.1. Patient dimension analysis

The clinical condition of the patient is a primary factor influencing the anxiety levels of family members. Research consistently demonstrates a significant correlation between the severity of the illness and increased anxiety in family members. For instance, a study by Riegel *et al.* showed that family members of critically ill patients exhibited notably higher anxiety scores [14]. This finding suggests that when patients are in severe conditions, such as unconsciousness, the uncertainty surrounding the patient's prognosis significantly amplifies family members' psychological burden. In neonatal intensive care units (NICU), Yoshihiro *et al.* [15] found that whether a patient required ventilator support was an independent risk factor for family anxiety. Furthermore, prolonged hospital stays are another critical stressor for families. Research by Vlake *et al.* [16] found that extended hospitalization is strongly associated with higher anxiety levels, as it introduces both emotional strain and financial pressure. Sultanali [17] highlighted that high medical costs also contribute significantly to family members' anxiety. Obviously, the patient's critical condition, the complexity of treatment, and the financial strain of hospitalization collectively serve as substantial factors contributing to family members' anxiety. The severity of the patient's condition, particularly critical and prolonged illness, is a key factor contributing to family anxiety. Addressing these factors by improving patient prognosis communication and providing financial support could help mitigate family distress.

3.2. Family dimension analysis

Family members' demographic characteristics and personal experiences significantly influence their anxiety levels. Studies have shown that certain family members are more vulnerable to anxiety, particularly those who are female. Marshoudi *et al.* [18] noted that female caregivers are at a heightened risk of developing anxiety, which may be attributed to the disproportionate emotional labor and caregiving responsibilities typically shouldered by women in society. The emotional intensity of family members' anxiety is also shaped by their relationship with the patient. Lautrette *et al.* [19] found that spouses are more likely to experience anxiety compared to other family members. Similarly, Wu *et al.* [20] found that parents, particularly mothers, tend to report higher anxiety levels, likely due to the profound emotional and caregiving burden associated with their role. These findings indicate that the perceived burden, influenced by factors such as gender, relational closeness, and caregiving responsibilities, directly contributes to the intensity of anxiety experienced by family members. These factors influence how family members perceive their caregiving role, which in turn affects the intensity of their anxiety. Understanding these dynamics can help tailor interventions more effectively.

3.3. Family-hospital interaction dimension analysis

Family-hospital interaction, particularly the quality of communication and support between family members and medical staff, plays a pivotal role in alleviating anxiety among family members. However, real-world support from medical staff often leaves room for improvement. Kiwanuka *et al.* [21] evaluated the support provided to families in emergency care settings and found that nurses often fall short in encouraging families to reduce their caregiving burdens, with families reporting only moderate levels of perceived cognitive and emotional support. Similarly, Nimrod *et al.* [22] identified family dissatisfaction with ICU team communication as a key risk factor for the persistence of anxiety symptoms. In contrast, proactive and structured communication interventions have been shown to offer significant benefits. For instance, Xiang *et al.* [23] demonstrated that implementing the SBAR standardized communication model effectively reduced anxiety levels in the families of elderly patients. Additionally, Li *et al.* [24] highlighted the positive impact of grief counseling on reducing anxiety among families of terminal cancer patients. Furthermore, technology-assisted interventions, such as WeChat-based family support models, have been shown to significantly reduce family anxiety and enhance overall satisfaction [25]. Collectively, these studies underline the importance of improving family-hospital interaction, ensuring continuous and clear information flow, and providing consistent emotional support to mitigate family members' anxiety. Effective communication and emotional support from healthcare providers are essential in reducing family anxiety. Structured communication interventions and counseling can mitigate anxiety, suggesting that family-hospital interaction is a critical factor in managing family members' mental health.

3.4. Social support dimensional analysis

Social support refers to the emotional, informational, and practical assistance provided by social networks, including spouses, relatives, friends, and colleagues. This support plays a crucial role in alleviating the anxiety experienced by family members of patients in medical settings. Katarzyna *et al.* [26] emphasized the close relationship between caregiver burden and distress, and social support systems. A robust social support system plays a crucial role in alleviating anxiety among family members within the unaccompanied care model. By providing emotional reassurance, vital information, and practical assistance, it helps families navigate caregiving challenges more effectively. This support reduces feelings of isolation and helplessness, thereby lowering anxiety levels. Ultimately, a strong social support network enhances the psychological well-being and resilience of caregivers, enabling them to better manage caregiving stress and contribute to the patient's recovery. Social support is a vital resource for family members in the unaccompanied care model. By providing emotional reassurance and practical assistance, social networks play a key role in reducing anxiety and improving the caregiving experience.

4. Current research trends and value

In response to the widespread anxiety experienced by family members of hospitalized patients, researchers have explored a variety of intervention strategies. These primarily focus on improving communication, enhancing visitation opportunities, and providing professional psychological support. For instance, Lv *et al.* [27] implemented a family-centered nursing intervention for families of ICU patients, which demonstrated its effectiveness in reducing uncertainty about the patient's condition, anxiety, and caregiving burden. This highlights the psychological benefits of involving family members in the care process, ensuring they receive adequate respect, information, and support. Furthermore, optimizing communication processes, such as employing the SBAR (Situation, Background, Assessment, Recommendation) communication model, has been shown to significantly alleviate anxiety among

family members. In addition, technology-based interventions, including video visits, have proven effective in improving the psychological well-being of families, especially within the unaccompanied care model. These findings indicate the potential for innovative communication and support strategies to reduce anxiety and enhance family satisfaction in healthcare settings. To systematically present the interventions discussed in the literature, **Table 1** summarizes their primary targets, implementation methods, and core advantages based on existing studies.

Table 1. Summary of intervention strategies for alleviating family members' anxiety in unaccompanied care settings

Intervention category	Primary targets	Implementation methods	Core advantages
Structured communication models	Family members, healthcare staff	Implementing standardized communication protocols, such as the SBAR.	Enhances information transparency, reduces uncertainty, and improves trust.
Professional psychological support	Family members	Providing targeted grief counseling and psychological support sessions.	Alleviates psychological distress and mitigates negative emotions like anxiety.
Technology-assisted support	Family members	Utilizing digital platforms to establish family support models for information exchange and remote updates.	Significantly reduces family anxiety and increases overall satisfaction with care.
Family-centered nursing interventions	Family members	Involving family members in the care process, providing adequate respect, information, and support.	Reduces uncertainty about the patient's condition, alleviates anxiety, and lessens the caregiving burden.
Optimized visitation policies	Family members	Implementing non-contact visit programs or structured video visits.	Mitigates spatial limitations, strengthens emotional connection, and alleviates the sense of isolation.

Despite these promising advancements, current research in this field remains limited in several key areas. Most existing studies focus on family members' psychological experiences under participatory nursing care models, with a particular emphasis on intensive care units (ICUs), neonatal departments, or specialized rehabilitation wards. These contexts differ significantly from the unaccompanied care model, which is increasingly implemented in geriatric departments. The latter allows only fixed daily visiting hours, presenting unique challenges as family members transition from continuous involvement to intermittent participation within set time slots. Moreover, most studies on the unaccompanied care model still rely on qualitative research or cross-sectional descriptive interviews, which often fail to provide a comprehensive, systematic analysis of the psychological impact on family members. Few studies have conducted empirical investigations using standardized assessment tools to quantitatively evaluate the anxiety levels and influencing factors among families of elderly patients in unaccompanied care settings. Furthermore, existing research tends to focus on objective indicators such as patient safety, nursing service quality, and patient satisfaction, with limited attention given to family members as critical stakeholders in the care process. To address these gaps, future research should employ standardized assessment tools to systematically examine family members' psychological experiences, behavioral adaptation, and health outcomes in the unaccompanied care model. Such research would not only provide valuable insights into the psychological challenges faced by families but also support the development of more effective, humanized family-hospital communication and support systems, which are essential for enhancing both family well-being and patient recovery.

5. Conclusion

This review provides a comprehensive examination of the anxiety experienced by family members of elderly inpatients under the unaccompanied care model, highlighting the key factors that contribute to their emotional distress. It is evident that family members in such settings are at high risk for negative psychological outcomes, particularly anxiety. Their anxiety levels are influenced by multiple dimensions, including the patient's condition, personal characteristics, hospital-family interactions, and social support networks. Despite the growing body of research in this area, studies specifically addressing the experiences of families in geriatric wards under the unaccompanied care model remain scarce.

Future research should focus on refining the research context, particularly by exploring the psychological challenges faced by family members of elderly inpatients within this specific care model. To achieve this, cross-sectional studies utilizing well-established, standardized tools, such as the HADS-A scale for anxiety assessment, should be prioritized. Additionally, multivariate statistical models should be employed to quantitatively analyze anxiety levels and their associated factors within this population. Moreover, the mental health of family members should be incorporated as a core outcome indicator in the evaluation of medical services, shifting the focus from merely managing family involvement to actively supporting their emotional and psychological well-being. This shift would provide the foundation for developing a more compassionate and effective "hospital-family" communication and support system, ultimately contributing to the sustainable advancement of the unaccompanied care model and enhancing the overall quality of care.

Disclosure statement

The authors declare no conflict of interest.

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