Collaborative Approach to Safety in Nursing Homes:
Perspectives of Caregivers and Nurses

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Abstract
Nursing care safety measures are important in nursing homes where medical and daily living care coexist. The purpose of this study was to identify the elements of safety behavior that allow nurses and caregivers to develop collaboratively, a culture of safety in nursing homes. Three nurses and four caregivers from four nursing homes were interviewed regarding their professional practice and their collaborative efforts to keep care recipients' safe. Categorical analysis was performed on the data. Seventy-eight codes across six categories for nurses and 83 codes across six categories for caregivers were extracted. The three categories common to both were "division of roles according to expertise," "smooth information sharing," and "open communication-promoting work environment." The other categories for nurses were "appreciation for individualized care innovations," and "welcome and immediate prompt feedback on findings." "Attempt to provide easy to understand explanations of medications and other information." The other categories for caregivers were "ability to check and report questions," "consultations with nurses for necessary care," and "augmenting knowledge of terminologies and sharing it with caregivers." Safety in nursing homes can arise from a work environment that facilitates easy discussion, and smooth information sharing that allows for expertise-based role-sharing. Additionally, the caregivers' awareness encourages consultation with nurses, and the nurses' prompt responses results in efforts to ensure user safety. We recommend that this mutual consultation creates a virtuous cycle that helps ensure the safety of care field.

Keywords: Nursing Home, Inter-professional Work, Safety Culture

Introduction

The proportion of elderly individuals aged ≥65 years in the total population of Japan has reached 29.1% (Ministry of Internal Affairs and Communications, 2022). Moreover, the future is expected to present challenges in securing nursing care personnel due to the ongoing decline in the working-age population. Japan aims to establish a society that integrates housing, medical care, nursing care, prevention, and lifestyle support into a community-based comprehensive care system (Ministry of Health, Labour and Welfare, 2016). Consequently, nursing care facilities will serve as essential bases within the future community-based comprehensive care system, supporting the return home and home care.

As Japan's population continues to age, an increasing number of elderly individuals are being admitted to long-term care facilities, often recovering from multiple illnesses. Nursing homes have become places where medical and daily life care are simultaneously provided. Nevertheless, nursing home residents face heightened vulnerability due to factors such as advanced age, cognitive impairment, complex comorbidities, and non-specific illness presentations (Bonner et al., 2008). Meeting the diverse needs of older adults with multiple illnesses and geriatric syndromes is essential for ensuring their well-being in their daily lives. Simultaneously, the escalating medical demands necessitate enhanced safety measures.

Patient safety culture (PSC) measurement tools have been developed and utilized in Western countries to assess safety in healthcare settings (Waterson et al., 2019). These PSC measures are being studied to help hospitals improve patient safety. Moreover, there have been notable advancements in measuring nursing home safety culture in recent years (Castle & Sonon, 2006; Castle et al., 2007; Engberg & Sonon, 2007; Lee & Wiig, 2019; Desmedt et al., 2021).

Castle and Sonon (2006) found that PSC scores in nursing homes were lower than those in hospitals, posing potential risks to nursing home residents because of patient safety errors. A study comparing hospitals and nursing homes revealed lower PSC scores for nursing homes across five dimensions of PSC, including non-punitive error responses, unit teamwork, communication openness, error feedback, and organizational learning (Handler et al., 2006). A systematic review by Braithwaite et al. (2017) reported that a positive workplace culture was linked to various desirable patient outcomes. These findings are consistent across multiple countries, settings, and studies involving elderly care facilities. Moreover, a study conducted in Norway highlighted the significance of open communication and recognition of staff ideas and suggestions as crucial aspects in cultivating a robust PSC(Ree& Wiig's, 2019). This underscores the importance of effective communication between healthcare professionals and caregivers, as well as the need for multidisciplinary collaboration in implementing safety measures.

Despite the limited number of reports on risk management in home nursing (Yoshimatsu & Nakatani, 2022) and studies investigating adverse events in home nursing stations (Morioka & Kashiwagi, 2021), research on safety in nursing homes in Japan remains scarce. Furthermore, although the significance of cultivating a safety culture in nursing homes has been acknowledged in numerous countries, it has not been thoroughly elucidated in Japan, primarily because of inadequate research on safety culture within these facilities. Moreover, there is a scarcity of learning opportunities for individuals to improve their safety competencies effectively through collaborative efforts aligned with the distinctive features of their respective professions.

It is imperative to elucidate specific behaviors and devise learning strategies that leverage the roles of nurses and caregivers to promote safety culture. Therefore, the present study aimed to identify collaboration skills related to safety initiatives from the perspectives of nurses and caregivers. Specifically, this study focused on caregiving practices that promote safety through collaboration among different professions.

Methods

Individual interviews were conducted as the primary data collection method to obtain information regarding the practices and collaborative efforts undertaken by professionals to ensure user safety.

Target facilities
This study was conducted at various nursing homes: one nursing home for the elderly, one special nursing home for the elderly, and two residential fee-based nursing homes for the elderly.

Participants
The study participants comprised three nurses and four caregivers working in the four nursing homes mentioned above. The participants were interviewed individually. Informed consent was obtained from the participants with assurance of anonymity. Ethical approval for this study was obtained from the Ethics Board of the Aichi Medical University, College of Nursing.

Analysis
The interviews were audio-recorded with the participants' permission, and verbatim transcripts were created. The researcher carefully read and analyzed the transcripts, focusing on identifying the participants' attitudes toward professional practices and collaborative efforts aimed at ensuring the safety of individual users.

Subsequently, relevant sections of the transcripts pertaining to the participants' perspectives on professional practices and collaborative efforts regarding the safety of individual users were identified and condensed into concise semantic units. These units were coded and organized into meaningful categories. The data were analyzed by occupational group, separating the nurses' responses from those of the caregivers. Once all the verbatim transcripts were coded, a list of codes was generated. Similar or interconnected units were then organized into categories or subcategories. Finally, to identify commonalities between nurses and caregivers, their respective categories were compared, and common categories were established based on similarities in category content. The co-researchers were involved in enhancing the credibility and validity of the analysis process by providing valuable input and feedback on the findings.

Results

Demographic information
The mean age of the participants was 44 3 years for nurses and 44 5 years for caregivers; the mean length of work experience of the nurses was 19 3 years and that of the caregivers was 11 25 years. The interviews lasted for an average of 35 minutes per participant. On average, each interview session lasted for 35 minutes.

Safety behavioral elements of collaborative efforts from the perspective of nurses

In total, 78 codes and 6 categories were extracted from the nurses' responses regarding their perspectives. The identified categories from the nurses' responses were as follows: anticipating risks and determining the division of roles between caregivers and nurses, organizing study sessions to ensure consistent care and information sharing, respecting the opinions of caregivers and emphasizing opportunities for discussion, appreciating individualized care innovations, welcome and immediate prompt feedback on findings, and Attempt to provide easy-to-understand explanations of medications and other information (Table 1).

Safety behavioral elements of collaborative efforts from the perspective of caregivers

In total, 83 codes and 6 categories were identified from the caregivers' responses: role sharing between physical and medical care that can be provided by caregivers, mutual work can proceed through smooth sharing of patient and family information, participation in the creation of rules and procedures in a comfortable relationship, ability to check and report questions, consultation with nurses for necessary care, augmenting the knowledge of terminology and sharing it with caregivers (Table 2).

Common categories shared by nursing and caregiving professions

The study identified three common categories shared by both professions: division of roles according to expertise, smooth information sharing, and open communication-promoting work environment (Table 3). The categories for nurses and caregivers and the responses for the common categories are shown in Figure 1.

Category	Subcategory
Anticipating risks and determining the division of roles between caregivers and nurses.	・Proactively supporting care workers in their practices. Communicating behavioral precautions to prevent falls due to medication effects. ・Educating on pressure ulcer prevention and encourage care practices. ・Educating and implementing care to prevent aspiration. ・Educating and implementing care practices for elimination problems. ・Valuing and respecting caseworkers' opinions. ・Fostering an environment for care workers to discuss their observations.
Organizing study sessions to ensure consistent care and information sharing.	・Determining role division between medical care and daily living assistance. ・Educating care workers on elder care practices.
Respecting the opinions of caregivers and emphasizing opportunities for discussion.	・Sharing specific care and rule-related information. ・Organizing educational sessions to enhance learning.
Appreciation for individualized care innovations.	・Detecting individualized efforts of caregivers in accordance with daily activities. ・Appreciation for notifying nurses and caregivers of changes in daily activities.

Welcome and immediate prompt feedback on findings.	・Evaluating and supporting caregivers' mental health and oversight. ・Providing prompt responses to caregivers' comments. ・Continuously verifying resident information.
Attempt to provide easy-to-understand explanations of medications and other information	・Clearly communicating and documenting medication effects. ・Providing clear explanations of medical condition changes when needed.

Table 1: Safety behavioral elements of collaborative efforts from the perspective of nurses

Category	Subcategory
Role sharing between physical and medical care that can be provided by caregivers.	・Practice in conjunction with physical care such as wound care. ・Sharing the role of medical care with nurses.
Mutual work can proceed through smooth sharing of patient and family information.	・Sharing information to facilitate mutual work ・Sharing information from family members.
Participation in the creation of rules and procedures in a comfortable relationship.	・Comfortable human relations. ・Participating in the creation of rules and procedures.
Ability to check and report questions.	・Observing, checking, and practicing care. ・Detecting unusual behavior. ・Reporting changes from daily routine.
Consultation with nurses for necessary care.	・Consulting with nurses according to care situations. ・Asking the nurses for necessary observer perspectives and care tips.
Augmenting the knowledge of terminologies and sharing it with caregivers.	・Involving everyone and supporting the foundation of the patient's life. ・Deepening knowledge by looking up technical terms independently.

Table 2: Safety behavioral elements of collaborative efforts from
the perspective of caregivers

Category	Subcategory
Division of roles according to expertise.	・Anticipating risks and determining the division of roles between caregivers and nursing staff (nurses). ・Role sharing between physical and medical care that can be provided by caregivers (caregivers).
Smooth information sharing	・Organizing study sessions for unified care and information sharing (nurses). ・Mutual work can proceed through smooth sharing of patient and family information (caregivers).
Open communication-promoting work environment	・Respecting the opinions of caregivers and emphasizing opportunities for discussion (nurses). ・Participation in the creation of rules and procedures in a comfortable relationships (caregivers).

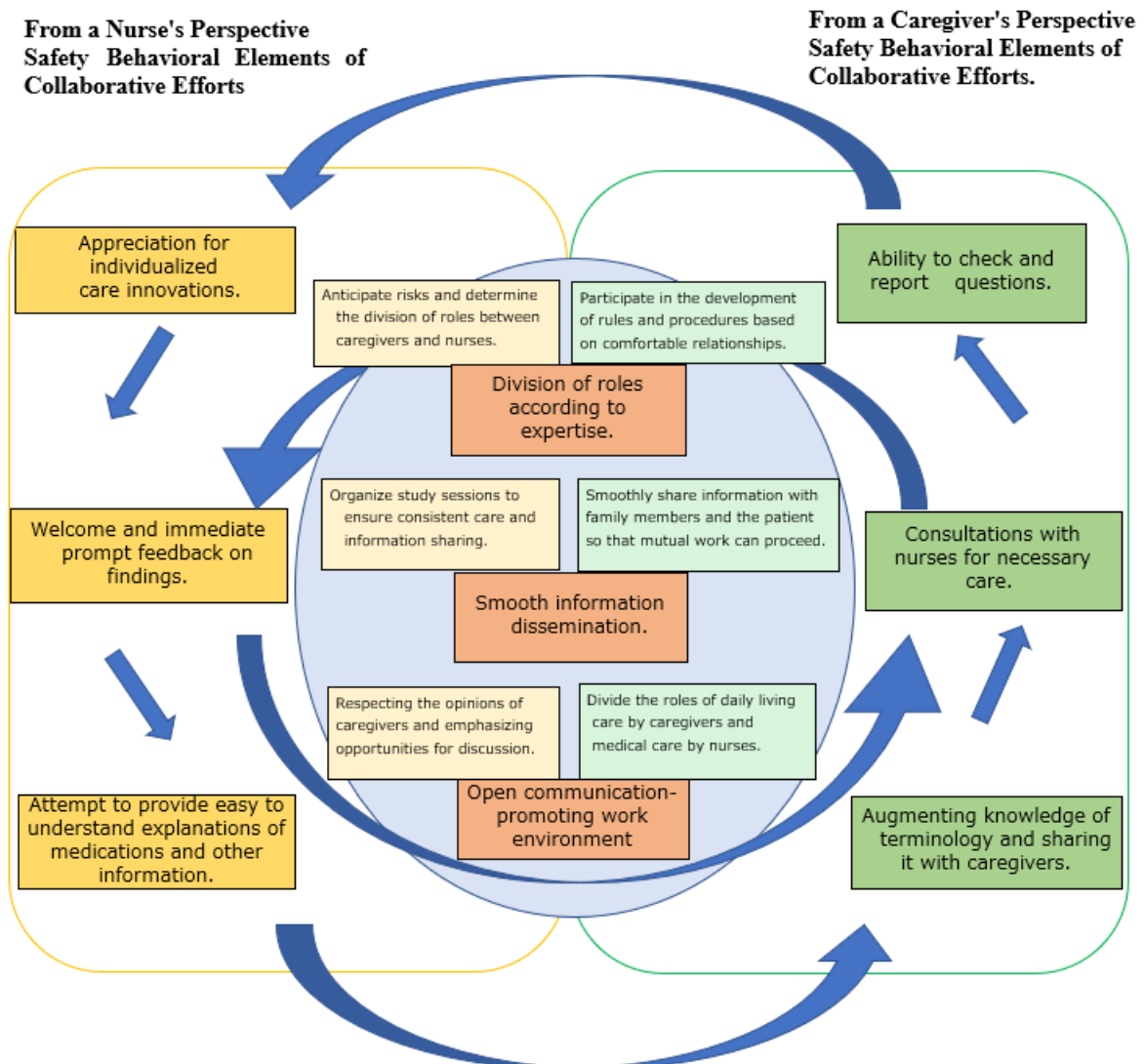Table 3: Common categories shared by nursing and caregiving professions

Figure 1: Safety behavioral elements for nurses and caregivers to collaborate

Conclusions

This study aimed to identify the collaborative factors contributing to safety initiatives in nursing homes from the perspectives of nurses and caregivers, with a focus on building a safety culture. The findings revealed two key components of collaborative power in fostering a safety culture: the establishment of an infrastructure for mutual information sharing and the creation of a virtuous cycle for utilizing shared information in nursing care.

The study identified three core elements shared by both professions: division of roles according to expertise, smooth information sharing, and open communication-promoting work environment. It was evident that both nurses and caregivers actively worked towards creating an environment that facilitated open communication and information sharing, which, in turn, enabled effective role sharing based on their respective expertise. This finding aligns with the notion emphasized by Ree and Wiig (2019) that valuing staff ideas and suggestions is crucial for fostering a safety culture. The data from this study, along with those from previous research, consistently support this observation.

First, as core elements, common elements were extracted, including open communication-promoting work environment, smooth information sharing, and role sharing based on expertise. Both nurses and caregivers consciously strived to create an environment that facilitates open communication and effective information sharing, enabling collaborative role sharing. The nurses respected the caregivers' opinions and prioritized discussions. They organized study sessions to promote unified care and information sharing, allowing them to anticipate potential risks to the elderly and determine role divisions with caregivers. By valuing the caregivers' input and providing a platform for their voices to be heard, the nurses encouraged suggestions and generated a collaborative environment. This aligns with Ree and Wiig's (2019) assertion that valuing staff's ideas and suggestions is essential for building a safety culture.

Moreover, when caregivers felt respected by nurses, their relationships become more comfortable, enabling active participation in the development of care procedures and rules. Caregivers effectively communicated information obtained directly from patients and their families to nurses. Additionally, as new medical procedures arise during hospital visits, caregivers were able to share the roles of physical and medical care that they can provide, contributing to enhanced safety. These processes form the foundation for facilitating role sharing. Edmondson (2018) found that teams characterized by psychological safety, where staff feel comfortable expressing their ideas and concerns, reported better outcomes than those with lower psychological safety. Thus, perception of psychological safety among nurses and caregivers perceives psychological safety promotes smooth information sharing and enables effective role sharing.

Second, the study demonstrated the power of collaboration in fostering a virtuous cycle of information sharing in nursing care as an approach to building a safety culture. When a foundation for smooth information sharing is established through psychological safety, caregivers become more aware and initiate consultations with nurses, enabling them to take proactive actions such as observing and reporting slight changes in the patient's condition. The nurses valued the caregivers' detailed observations and suggestions for caregiving improvements, which further promoted their efforts to protect patient safety. When nurses responded promptly to the caregivers' observations and suggestions, they encouraged a safety culture. Additionally, nurses' efforts to provide clear explanations encouraged caregivers to

share their knowledge with colleagues, fostering autonomy and deepening their knowledge, thereby creating a cycle of continuous improvement through consultation with caregivers.

Previous studies have highlighted the importance of open communication as a predictor of patient safety (Ree & Wiig, 2019). Furthermore, a recent review article on patient safety in nursing homes emphasized the significance of PSC in ensuring resident safety. Strengthening organizational elements such as staff education systems and appropriate staffing has been identified as crucial for building and nurturing PSC in nursing homes (Kim et al., 2022). However, specific details regarding the staff education system have not been clearly indicated. Developing educational programs and organizational interventions based on the elements extracted through the collaborative power identified in the present study could be beneficial for fostering PSC in nursing homes.

This study suggests that the development of an infrastructure for information sharing and the demonstration of collaborative skills are crucial for building a safety culture in nursing homes. However, it is important to acknowledge that individual efforts alone may have limitations and that the role of administrators is significant. Transformational leadership has been identified as a key factor in creating and maintaining PSC in nursing homes. Seljemo et al. (2020) highlighted the importance of promoting a favorable work environment with an optimal balance between job demands and resources, which can have a positive impact on PSC. Although this study did not directly examine the leadership of administrators, it provides valuable insights from the staff's perspective on developing an infrastructure for information sharing and utilizing information sharing in a virtuous cycle. These findings can serve as a reference for managers in their efforts to build a safety culture.

The limitations of this study include the small number of target facilities, which restricts the generalizability of the results. It is necessary to conduct interviews with managers to explore factors that contribute to the establishment of a virtuous cycle. Additionally, this study highlighted the importance of appreciation and provision of easy-to-understand explanations by staff members, suggesting the need for future development of educational programs to enhance these skills.

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