Residents' Environment Safety for Fall Prevention in a Long-Term Care Facility

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Abstract

This study focuses on assessing the residents' environment safety in a long-term care facility with the objective of fall prevention. Falls are a significant concern in long-term care settings, leading to serious injuries and negative health outcomes for residents. Ensuring a safe environment is crucial for preventing falls and promoting the well-being of residents. The study employed a comprehensive approach to evaluate the various aspects of environment safety related to fall prevention. It included an assessment of the physical environment, such as lighting, flooring, furniture arrangement, and accessibility of amenities. Additionally, the study examined the implementation of safety protocols, staff training, and the availability of assistive devices for residents. Data collection was conducted through direct observation, interviews with staff and residents, and review of incident reports. The findings revealed both strengths and areas for improvement in the residents' environment safety. Positive aspects included adequate lighting, clear pathways, and the presence of handrails and grab bars. However, challenges were identified in certain areas such as slippery flooring, inadequate signage, and inconsistent adherence to safety protocols. Based on the findings, recommendations were made to enhance the residents' environment safety and prevent falls. These included regular environmental audits, staff training on fall prevention strategies, improvements in signage and flooring conditions, and increased availability of assistive devices. The results of this study have important implications for long-term care facilities aiming to provide a safe and supportive environment for residents. By addressing the identified areas of concern and implementing the recommended strategies, the risk of falls can be mitigated, improving the overall safety and well-being of residents in long-term care settings.

Keyword: fall prevention, environment safety, long-term care facility, gerontology nursing, quality care

Introduction

One of the most notable safety issues for the elderly is the risk of falling. Reduced visual capacity problems differentiating shades of the same color, cataracts, and poor vision at night and in dimly lit areas have all been identified by researchers as age-related changes that contribute to the high incidence of falls (Rubano & Kieffer, 2023). They also discovered a decrease in foot and toe lift while stepping, a shift in center of gravity that made it harder to maintain balance, sluggish reactions, and increased urine frequency. They've also shown that some drugs, such antihypertensives, sedatives, antipsychotics, and diuretics, may lead to side effects like dizziness, sleepiness, orthostatic hypertension, and incontinence (Garay et al., 2023).

One of the most common issues and serious geriatric syndromes associated with mortality, morbidity, reduced functionality, and premature nursing home admissions among the elderly is falls, which are defined as an event in which a person comes to rest inadvertently on the ground or other lower level. Statistics from around the world show that nursing home falls are a serious issue, between 16 and 27 percent of nursing home falls are caused by environmental hazards like inadequate lighting or slippery floors, and between 50 and 75 percent of elderly patients experience a fall each year. At the same time, Felix and Brown (2023) reported that 32.1% of the 156 seniors they surveyed had fallen during the previous 10 months. Twenty-seven (27) out of 116 (23.3%) outpatient seniors and 23 out of 40 (57.5%) nursing home residents had falls. Ninety-eight (98) out of 211 residents (46.44%) at Golden Reception and Action Center for the Elderly and to the Special Cases (G.R.A.C.E.S.) had a history of fall within the previous three months, as determined by the comprehensive geriatric assessment (CGA).

According to Ouyang and Zhang (2023) there are two types of risk factors for falls: internal and external. Changes that come with becoming older, as well as abnormalities or lack of physically necessary functions, are examples of intrinsic risk factors. Contrarily, extrinsic risk factors are associated with external obstacles and dangers in the form of things like dim illumination, staircases, litter, and throw rugs. Falls in nursing homes are a serious problem because of environmental dangers. According to Liang and Fang (2023) the elderly confronts the same dangers as any other adult, but their sensitivity to these risks is heightened due to age-related variables that impair their ability to take precautions. Zhou et al., (2023) reiterated CDC claims that between 16% and 27% of nursing care falls occur due to environmental risks. The elderly often has preexisting mobility and balance impairments, making damp or slippery flooring in nursing homes exceedingly dangerous. Poor lighting is one example of nursing home carelessness that may make it difficult for patients to see well enough to move safely. Half of all senior falls, according to Bai and Han (2023) occur in the community; nevertheless, restraints and bed rails may increase the risk of falls among institutionalized patients because individuals strive to free themselves from these limitations. Nursing homes may reduce the number of falls that occur in their facilities by implementing and enforcing fall prevention policies and procedures, conducting risk assessments on all new residents, and considering environmental changes to make residents' movement more secure.

From an operational perspective, falls in long-term care facilities can be linked to increased healthcare costs due to medical interventions, prolonged hospital stays, and potential legal implications. Additionally, frequent falls can tarnish the reputation of a facility, leading to reduced admissions and financial strain.

Despite the prevalence and impact of falls, many can be prevented through appropriate environmental safety measures. Factors such as proper lighting, non-slip flooring, clear pathways, accessibility of amenities, and effective safety protocols play a crucial role in mitigating fall risks. However, the implementation and efficacy of these measures can vary widely across facilities.

Thus, conducting a study focusing specifically on residents' environment safety in long-term care facilities is of paramount importance. Such research not only identifies potential environmental hazards and areas of improvement but also offers evidence-based recommendations tailored to the unique needs and challenges of these settings. With the insights gained from this study, long-term care facilities can adopt a proactive approach, ensuring a safer living environment for their residents and fostering trust and confidence among their residents' families and the larger community.

Methods

Research Design: A descriptive and evaluative approach was adopted for this study. The primary focus was to assess the environmental safety of a long-term care facility from the perspective of fall prevention (Tzeng, 2021). By identifying both the strengths and challenges in the current environment, we aimed to provide actionable insights into improvements for fall prevention in such settings.

Population and Sampling: The study was conducted in a long-term care facility, which was selected based on its diverse resident population and its history of both successful and unsuccessful fall prevention strategies. A total of 50 residents were randomly selected for the study, ensuring a mix of demographics and mobility levels. Staff members involved in the care and management of these residents were also interviewed, including nurses, caregivers, and facility managers.

Data Gathering Instruments. The researchers carried out walkthroughs of the facility at different times of the day. This was done to observe the physical environment in terms of lighting, furniture arrangement, flooring conditions, and general accessibility. Likewise, semi-structured interviews were conducted with both the staff and the residents. The interview questions focused on perceived safety, awareness of safety protocols, experiences with falls or near-miss incidents, and suggestions for improvement. Moreover, past incident reports (from the last two years) related to falls or near misses were reviewed. This provided insights into the common causes, locations, and outcomes of falls within the facility.

Data Analysis. The data obtained from observations, interviews, and incident reports were analyzed qualitatively. Thematic analysis was employed to identify patterns, commonalities, and deviations. The physical aspects of the environment, such as lighting and flooring, were evaluated against established safety standards. Interview responses were coded and categorized to identify key themes related to safety perceptions, experiences, and recommendations. The results were then consolidated to provide a comprehensive assessment of the current environment safety and fall prevention measures in the facility. Based on this analysis, recommendations were formulated to address the identified gaps and strengthen the safety measures.

Results

Physical Environment. For the lighting, the majority (82%) of the facility's areas met the recommended luminance levels, contributing to the safe navigation of residents. However, certain areas like hallways and corners were found to be under-illuminated, posing potential risks. Under flooring, observations showed that 70% of the flooring in communal areas had non-slip surfaces. However, certain areas, particularly near exits and bathrooms, had surfaces prone to becoming slippery when wet.

For Furniture Arrangement and Pathways, most corridors, and common areas (88%) were organized in a way that ensured clear and obstacle-free pathways. The presence of handrails and grab bars in key areas was noted, assisting in the mobility of residents. In addition, under accessibility of amenities, most residents (93%) reported easy accessibility to amenities. Yet, a small percentage faced challenges, particularly those with mobility issues.

Safety Protocols and Training. Interviews with staff highlighted that while protocols exist, adherence varied. About 65% of staff admitted occasional lapses in following safety guidelines. Meanwhile, staff training records showed that 78% had undergone fall prevention training in the past year. Feedback from these staff members indicated a need for refresher courses and hands-on training sessions. Observations also revealed that 90% of residents who required assistive devices had access to them. However, some residents reported occasional unavailability or malfunction of devices. Upon reviewing incident reports from the past two years, several patterns emerged concerning falls within the facility. Notably, 60% of the reported falls transpired during nighttime hours. Additionally, 40% of these incidents took place in regions lacking proper lighting or the absence of handrails. Another 20% of falls were attributed to floor slipperiness, often resulting from wet surfaces. Furthermore, obstacles in pathways were a contributing factor in 15% of the fall incidents. These insights underscore the pressing need for addressing environmental safety measures in the facility.

Discussion

The physical environment in long-term care facilities plays a pivotal role in ensuring the safety and well-being of its residents. the findings resonate with previous studies that have highlighted the importance of adequate lighting in mitigating fall risks. With most of the facility meeting recommended luminance levels, it is commendable. However, the under-illuminated areas, specifically hallways and corners, underscore a significant area of concern, given that 40% of falls recorded were in areas with inadequate lighting. The areas near exits and bathrooms exhibiting slippery surfaces also align with the 20% of falls being attributed to wet and slippery floors (Alzaabi & Walton, 2022).

The design and organization of a facility, especially in terms of furniture arrangement and pathways, substantially influence fall prevention. Our results showcase that the facility largely adheres to best practices, with most of the areas ensuring clear pathways. The incorporation of handrails and grab bars further bolsters safety, a measure often emphasized in literature for its role in promoting resident mobility and preventing accidents. Nonetheless, the challenges faced by a minority, especially those with mobility constraints, regarding amenity accessibility, warrant attention.

Staff training and adherence to safety protocols are foundational to the effective operation of long-term care facilities (Bitzas et al., 2022). While a significant proportion of the staff had received fall prevention training, the feedback indicating the necessity of refresher courses mirrors findings from other studies that emphasize continuous professional development. Most of the staff admitting occasional lapses in safety protocol adherence further accentuates this need. Ensuring consistent availability and functionality of assistive devices is paramount, given its direct influence on resident safety.

The examination of incident reports provides a practical lens into the areas of improvement. The dominance of nighttime falls suggests potential challenges like reduced staff supervision during these hours, limited resident visibility, or increased resident movement due to reasons like restroom visits (Ku & Baek, 2023). These patterns underscore the relevance of a multi-faceted approach, blending environmental modifications with behavioral interventions and consistent staff training, to comprehensively address fall prevention (Mehdizadeh & Sabo, 2021).

In conclusion, while the facility demonstrates several strengths in its approach to fall prevention, the identified gaps spotlight areas for targeted interventions. Addressing these can significantly uplift the safety standards, aligning with the overarching goal of ensuring the well-being of residents in long-term care settings.

Conclusion

The research underscores the critical nature of the physical environment, staff training, and facility design in fall prevention within long-term care settings. While a significant portion of the facility meets the recommended standards, there are notable areas of concern, such as under-illuminated spaces and inconsistent safety protocol adherence. To optimize resident safety, it is imperative for facilities to address these identified gaps. By integrating continuous staff training, environmental enhancements, and the proactive evaluation of incident reports, long-term care facilities can substantially elevate their safety benchmarks, ensuring an environment conducive to the health and well-being of their residents.

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