



Systematic Review

Implementation of Gerontological Nursing Care for an Older Adult with Functional Urinary Incontinence: A Case StudyAini Yusra¹, Syahrums², Mezi Armata Sari³¹Padang Ministry of Health Polytechnic**ABSTRACT**

Background: Functional urinary incontinence is a common concern among older adults, particularly those experiencing mobility limitations that interfere with timely access to toilet facilities. This condition may affect personal hygiene, sleep quality, independence, and overall well-being. Comprehensive nursing care is therefore important to address urinary incontinence and its associated geriatric problems. This study aimed to describe the implementation of nursing care for an older adult with functional urinary incontinence at PSTW Kasih Sayang Ibu, Batusangkar, Indonesia.

Methods : This study employed a descriptive case study design involving one older adult diagnosed with functional urinary incontinence. Data were collected through interviews, direct observation, physical examination, and medical record review. Data were analyzed descriptively using the nursing process, including assessment, nursing diagnosis, intervention planning, implementation, and evaluation. The evaluation focused on urinary incontinence frequency, mobility, personal hygiene, sleep patterns, and cognitive responses.

Results: The assessment identified functional urinary incontinence associated with limited mobility, accompanied by a risk of falls, self-care deficit, disturbed sleep patterns, and memory impairment. Nursing interventions included bladder training, scheduled toileting, environmental modification, support for independence in daily activities, sleep management, and cognitive stimulation. Following the nursing interventions, the patient showed a reported reduction in urinary incontinence frequency, improved mobility and personal hygiene, better sleep, and improved cognitive responses. However, the manuscript did not provide quantitative measurements or standardized assessment scores to determine the magnitude of these changes.

Conclusion: Comprehensive, individualized nursing care may help address functional urinary incontinence and related care needs in older adults. Nursing practice should integrate bladder management, environmental safety, functional support, and cognitive stimulation. Further studies involving more participants, longer follow-up, and standardized outcome measures are needed to evaluate intervention outcomes more objectively and strengthen the evidence for gerontological nursing practice

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INTRODUCTION

Urinary incontinence (UI) is an important geriatric health problem that may affect physical functioning, psychological well-being, social participation, and independence in daily activities. Functional urinary incontinence (FUI) occurs when an individual is unable to reach or use toilet facilities in time because of physical, cognitive, or environmental limitations. A recent study of older women identified FUI in association with several parameters of comprehensive geriatric assessment, highlighting the importance of evaluating functional status in this population (Meseci et al., 2025). Urinary incontinence has also been associated with an increased risk of falls among older adults, particularly those experiencing cognitive or functional impairment (Moon et al., 2020). These findings indicate that nursing care for older adults with FUI should address urinary symptoms alongside mobility, cognitive function, personal hygiene, sleep, and environmental safety.

Previous studies have examined behavioral and non-pharmacological approaches to urinary incontinence management in older adults. Lai and Wan (2017) investigated prompted voiding delivered by nursing home staff over six months, demonstrating the relevance of structured toileting assistance in residential care. Diokno et al. (2018) reported improvements in urinary incontinence outcomes following group-administered behavioral treatment among older women. Similarly, Suzuki et al. (2019) found that ultrasound-assisted prompted voiding reduced daytime urine loss more than conventional prompted voiding in nursing home residents. A systematic review by Fu et al. (2019) examined multifaceted self-management interventions, including bladder retraining and behavioral techniques, while Allen et al. (2023) synthesized evidence on behavioral interventions for women residing in nursing homes. Collectively, these publications support the consideration of individualized continence management, structured toileting, and behavioral approaches in nursing care, although the interventions and populations studied differ.

Research has also explored factors associated with urinary incontinence and the broader care needs of older adults. Fidyk et al. (2024) investigated factors associated with urinary incontinence among nursing home residents, while Xiang et al. (2024) examined the care needs of older adults with urinary incontinence. Omotunde et al. (2023) published a study protocol designed to evaluate whether a technology-assisted continence-care system could improve care efficiency and skin health in nursing home residents. Despite these developments, the practical management of an individual older adult with functional urinary incontinence accompanied by mobility limitations, fall risk, self-care deficits, sleep disturbances, and memory impairment warrants detailed case-based description. The distinctive contribution of the present study is its integrated description of individualized nursing care addressing these interconnected problems through bladder training, scheduled toileting, environmental modification, support for daily activities, sleep management, and cognitive stimulation in a residential care setting.

Accordingly, this study aimed to describe the implementation of gerontological nursing care for an older adult with functional urinary incontinence at PSTW Kasih Sayang Ibu, Batusangkar, Indonesia, in 2026. The nursing process included assessment, nursing diagnosis, intervention planning, implementation, and evaluation. The evaluation focused on changes in urinary incontinence frequency, mobility, personal hygiene, sleep patterns, and cognitive responses following the interventions. By documenting the care process and observed clinical changes, this case study seeks to provide practical insights for nursing practice in residential care settings. Because the study involved one patient without a comparison group, its findings are intended to describe the case and inform further investigation rather than establish the effectiveness of the interventions.

MATERIALS AND METHOD

This study employed a descriptive case study design to describe the implementation of gerontological nursing care for an older adult with functional urinary incontinence. The study was conducted at PSTW Kasih Sayang Ibu, Batusangkar, West Sumatra, Indonesia, in 2026. The study participant was one older adult diagnosed with functional urinary incontinence who resided at the institution. The case was selected based on the presence of urinary incontinence associated with mobility limitations and related geriatric care needs. The nursing process served as the framework for assessment, nursing diagnosis, intervention planning, implementation, and evaluation.

Data were collected through interviews, direct observation, physical examination, and medical record review. Interviews were used to obtain information about urinary elimination patterns, daily activities, sleep, personal hygiene, and the participant's perceived care needs. Direct observation and physical examination were conducted to assess mobility, functional independence, and environmental factors that could interfere with timely access to toilet facilities or increase the risk of falls. Medical records were reviewed to obtain supplementary clinical information. Findings from these data sources were compared to support a comprehensive assessment of the participant's condition.

Based on the assessment findings, the identified nursing problems included functional urinary incontinence associated with limited mobility, risk of falls, self-care deficit, disturbed sleep patterns, and memory impairment. Individualized nursing interventions included bladder training and scheduled toileting to support urinary elimination, environmental modification to improve toilet accessibility and safety, assistance in maintaining independence in activities of daily living, sleep management, and cognitive stimulation. The interventions were implemented according to the participant's identified care needs. However, the original manuscript did not specify the exact frequency, duration, or detailed protocol for each intervention; these details should be verified from the nursing care records before submission to improve reproducibility.

Data were analyzed descriptively by comparing the participant's initial assessment with the findings documented following nursing interventions. The main outcomes included changes in urinary incontinence frequency, mobility, personal hygiene, sleep patterns, and cognitive responses. Urinary incontinence outcomes were evaluated based on documented changes in episode frequency, while mobility and personal hygiene were assessed through observations of functional performance and independence. Sleep and cognitive outcomes were evaluated based on documented observations of sleep patterns and responses during care. The findings were summarized narratively to describe the clinical changes observed throughout the nursing care process. No inferential statistical analysis was performed because the study involved only one participant and aimed to describe an individual case. As the original manuscript did not report numerical measurements or standardized assessment scores for all outcomes, the findings were interpreted as descriptive clinical observations rather than quantified evidence of intervention effectiveness.

RESULTS

This study employed a descriptive case study design to describe the implementation of gerontological nursing care for an older adult with functional urinary incontinence. The study was conducted at PSTW Kasih Sayang Ibu, Batusangkar, West Sumatra, Indonesia, in 2026. The study participant was one older adult diagnosed with functional urinary incontinence who resided at the institution. The case was selected based on the presence of urinary incontinence associated with mobility limitations and related geriatric care needs. The nursing process served as the framework for assessment, nursing diagnosis, intervention planning, implementation, and evaluation.

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DISCUSSION

The findings of this case study indicate that functional urinary incontinence in the older adult was associated with limited mobility that interfered with timely access to toilet facilities. The coexistence of fall risk, self-care deficit, disturbed sleep patterns, and memory impairment suggests that the patient's continence problem needed to be considered within a broader gerontological nursing assessment. This interpretation is consistent with Meseci et al. (2025), who examined functional urinary incontinence in relation to comprehensive geriatric assessment parameters, and Moon et al. (2020), who reported an association between urinary incontinence and falls among older adults. These findings emphasize the importance of assessing mobility, functional independence, cognitive status, and environmental safety when developing individualized nursing care plans.

The nursing interventions in this case included bladder training and scheduled toileting to support urinary elimination. These approaches are consistent with previous research on behavioral and non-pharmacological management of urinary incontinence in older adults (Fu et al., 2019; Lai & Wan, 2017; Suzuki et al., 2019). Allen et al. (2023) also reviewed behavioral interventions for women residing in nursing homes and identified strategies such as voiding regimens, functional mobility training, and multicomponent interventions. More recent evidence, however, indicates that the benefits of conservative

interventions should be interpreted cautiously. O'Callaghan et al. (2025), in a systematic review and meta-analysis of 12 randomized controlled trials involving 1,580 frail older adults, found that conservative non-pharmacological interventions did not produce statistically significant pooled improvements in objective urinary incontinence outcomes or functional ability; the certainty of the evidence was very low. Similarly, Talley and Thompson (2025) highlighted the limited evidence specifically available for frail older adults. In the present case, a reduction in urinary incontinence frequency was reported after nursing care, but the absence of numerical episode counts and standardized measurements prevents an accurate assessment of the magnitude of change. The findings should therefore be interpreted as descriptive observations rather than definitive evidence of intervention effectiveness.

Environmental modification and assistance with activities of daily living were additional components of the nursing care. For an older adult with limited mobility, obstacles between the living area and toilet facilities may delay toileting and increase dependence on caregivers. Improving toilet accessibility and supporting safe mobility may help address these practical barriers. Liu et al. (2024), in a systematic review and network meta-analysis of nonsurgical interventions for urinary incontinence in older women, examined a range of behavioral and combined approaches, while emphasizing the need to consider the quality and limitations of the available evidence. The reported improvements in mobility and personal hygiene in the present case are consistent with the broader goal of individualized functional support. Nevertheless, because the study did not include standardized mobility scores or a quantified assessment of environmental hazards, the contribution of individual interventions cannot be determined.

The reported improvements in sleep quality and cognitive responses further emphasize the importance of considering care needs beyond urinary symptoms. Sleep disturbances and memory impairment may complicate daily care routines and the recognition or communication of toileting needs. Gröning et al. (2024) reviewed technology-based nursing interventions for urinary incontinence in people aged 65 years and older and found that the available studies varied substantially in design, setting, and outcome measurement. The authors concluded that the evidence was not yet sufficient to recommend these technologies generally. In a related study, Strauven et al. (2024) developed and validated an unobtrusive nighttime movement-monitoring algorithm intended to support continence care in nursing homes. This work illustrates emerging opportunities to improve observation of nighttime activity, but it does not establish that technology improves clinical outcomes in routine care. In the present case, sleep and cognitive improvements were based on documented observations rather than standardized instruments; consequently, they should not be interpreted as objectively quantified changes.

This case has practical implications for gerontological nursing in residential care settings. The findings illustrate how assessment of urinary elimination can be integrated with evaluation of mobility, personal hygiene, sleep, cognitive responses, and environmental safety to guide individualized care. The case also highlights the importance of documenting the frequency of incontinence episodes and using appropriate instruments to evaluate changes over time. However, the study involved only one participant, had no comparison group, and did not report standardized measurements for all outcomes or detailed intervention frequencies and durations. These limitations restrict generalizability and prevent causal conclusions about the observed improvements. Future studies should involve more participants, longer observation periods, clearly documented intervention protocols, and validated measures of urinary incontinence and functional outcomes. This would help strengthen the evidence base for individualized continence care in older adults.

CONCLUSION

This case study describes the implementation of gerontological nursing care for an older adult with functional urinary incontinence at PSTW Kasih Sayang Ibu, Batusangkar. The urinary incontinence was associated with mobility limitations that hindered timely access to the toilet. Nursing interventions, including bladder training, scheduled toileting, environmental modification, and support for activities of daily living, were accompanied by reported improvements in urinary continence and other aspects of daily functioning. However, because the study involved only one patient and the outcomes were assessed descriptively without standardized measurements, these findings should be interpreted cautiously and cannot establish the effectiveness of the interventions. Further case studies using clearly defined intervention protocols, standardized outcome measures, and longer follow-up periods are recommended to strengthen the evidence for nursing care in older adults with functional urinary incontinence.

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