UNIVERSITI TEKNOLOGI MARA

FACTORS ASSOCIATED WITH THE SEVERITY OF URINARY INCONTINENCE AMONG OLDER WOMEN AT THE GERIATRIC DAY CARE CLINIC, KUALA LUMPUR HOSPITAL

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ABSTRACT

Objective: This study examined differences in sociodemographic, clinical, anthropometric, body composition, and functional performance factors among older women according to the severity of urinary incontinence (UI), and determined which of these factors are associated with UI severity. Methods: This cross-sectional study recruited women aged ≥60 years of multiple ethnicities from the Geriatric Day Care Clinic at Kuala Lumpur Hospital. A comprehensive assessment was conducted for sociodemographic, clinical, anthropometric, body composition, and functional performance measures. Data were analysed using independent t-tests, chi-square tests, and multivariate logistic regression, adjusting for age, UI type, and both age and UI type. Four binary logistic regression models were developed: unadjusted, adjusted for age, adjusted for UI type, and adjusted for both age and UI type. Results: Among 209 participants (mean age = 67.6 ± 5.47 years), 77.5% (n = 162) had mild UI and 22.5% (n = 47) moderate UI. Significant differences were observed for age ($p = 0.005$), education ($p = 0.015$), marital status ($p < 0.001$), and occupation ($p = 0.001$). Binary logistic regression showed that history of falls, musculoskeletal disorders (MSD), and polypharmacy were significantly associated with lower UI severity. Conversely, women with a history of vaginal delivery were nearly three times more likely to experience severe UI. Higher BMI increased the odds of severe UI, while greater upper limb muscle strength, indicated by handgrip strength, was protective. Poorer balance performance, reflected by longer Timed Up and Go (TUG) test times, was strongly linked to greater UI severity. Conclusion: These findings provide valuable insights into UI among older women in geriatric day care settings by identifying key contributing factors and their clinical implications. They highlight the multifactorial nature of UI severity, influenced by physiological, functional, and obstetric factors, and emphasize the importance of addressing body composition, mobility, strength, and weight management in UI prevention and rehabilitation. The results also have implications for physiotherapy and allied health practices, supporting the development of targeted interventions to improve patient outcomes. Future longitudinal research is warranted to validate and expand on these findings, refining intervention strategies and strengthening evidence-based care for older adults with UI.

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May God continue to shower us all with His love and blessings

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INTRODUCTION

1.1 Background of the Study

Malaysia is undergoing a rapid demographic transition toward an ageing population. The proportion of individuals aged 65 and above increased from 7.2% in 2022 to 7.4% in 2023 equivalent to approximately 2.5 million people (Department of Statistics Malaysia, 2023). Projections indicate that by 2040, older individuals will comprise 14.5% of the population, nearing parity with the younger generation. Once the number of Malaysians aged 65 and above exceeds 6 million, the country will officially become an aged society (Department of Statistics Malaysia, 2023). Ageing is associated with physiological, psychological, and functional decline, making older persons more vulnerable to age-related conditions, such as urinary incontinence (UI).

UI is a significant health issue affecting the ageing population (Alshammari et al., 2020; Lenardt et al., 2020; Murukesu et al., 2019b; Najafi et al., 2022; Tai et al., 2021). UI is often perceived as a "women's health" concern (United Nations, Department of Economic and Social Affairs, 2020), and also established as one of the most prevalent geriatric syndromes (Kim et al., 2019). The International Continence Society (ICS) defines UI as any involuntary leakage of urine (D'Ancona et al., 2019). It is not a natural part of ageing but becomes more prevalent with age due to factors such as pelvic floor muscle weakening, neurological changes, and hormonal decline. UI severity ranges from occasional urine leakage with coughing or sneezing to frequent, heavy leakage requiring multiple pads daily. The severity is often categorized as mild, moderate, severe, or very severe, based on the frequency and amount of leakage.

UI can be categorized into three primary subtypes:

i. Stress Urinary Incontinence (SUI): Occurs due to increased intra-abdominal pressure (IAP) during activities like coughing, sneezing, or lifting (Najafi et al., 2022).
ii. Urgency Urinary Incontinence (UUI): Characterized by a sudden, intense urge to urinate, often due to bladder malfunction (Srisanam et al., 2022).
iii. Mixed Urinary Incontinence (MUI): A combination of symptoms of both SUI and UUI (Najafi et al., 2022).