

Predictors of fall protection motivation among older adults in rural communities in a middle-income country: A cross-sectional study using the Protection Motivation Theory

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Abstract

Aims: To evaluate factors associated with fall protection motivation to engage in fall preventive behaviour among rural community-dwelling older adults aged 55 and above using the protection motivation theory scale.

Design: A cross-sectional study.

Methods: The study was conducted in a healthcare clinic in Malaysia, using multistage random sampling from November 2021 to January 2022. Three hundred seventy-five older adults aged 55 and older were included in the final analysis. There were 31 items in the final PMT scale. The analysis was performed within the whole population and grouped into 'faller' and 'non-faller', employing IBM SPSS version 26.0 for descriptive, independent t-test, chi-square, bivariate correlation and linear regressions.

Results: A total of 375 older participants were included in the study. Fallers ($n=82$) and non-fallers ($n=293$) show statistically significant differences in the characteristics of ethnicity, assistive device users, self-rating of intention and participation in previous fall prevention programmes. The multiple linear regression model revealed fear, coping appraisal and an interaction effect of fear with coping appraisal predicting fall protection motivation among older adults in rural communities.

Conclusion: Findings from this study demonstrated that coping appraisal and fear predict the protection motivation of older adults in rural communities. Older adults without a history of falls and attaining higher education had better responses in coping appraisal, contributing to a reduction in perceived rewards and improving protection motivation. Conversely, older adults from lower education backgrounds tend to have higher non-preventive behaviours, leading to a decline in fall protection motivation.

Implications for the profession and/or patient care: These results contribute important information to nurses working with older adults with inadequate health literacy in rural communities, especially when planning and designing fall prevention interventions. The findings would benefit all nurses, healthcare providers, researchers and academicians who provide care for older adults.

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Patient or Public Contribution: Participants were briefed about the study, and their consent was obtained. They were only required to answer the questionnaire through interviews. Older individuals aged fifty-five and above in rural communities at the healthcare clinic who could read, write or understand Malay or English were included. Those who were suffering from mental health problems and refused to participate in the study were excluded from the study. Their personal information remained classified and not recorded in the database during the data entry or analysis.

KEYWORDS

accidental fall, cross-sectional studies, elderly, falls, motivation, nursing, older adult, rural communities, rural population, slip and fall

1 | INTRODUCTION

Falls are often linked with an ageing population, which leads to an increasing worldwide concern due to their association with comorbidities (Montero-Odasso et al., 2022; WHO, 2021b). About 60 per cent of fall causal deaths among older adults occurred in low- and middle-income countries (LMICs), specifically in Southeast Asia and the Western Pacific regions (WHO, 2023). The consequences of fatal and non-fatal falls incur a financial burden to the LMICs or those individuals involved in the falls (CDC, 2020). An economic gap exists in LMICs which involves the cumulative wealth in comparison with the spending cost for the provision of healthcare expenditures in fall-related treatment (Sudharsanan et al., 2018). The expenses involved for fatal and non-fatal fall injuries alone have incurred countries' debt for more than millions on medical costs (CDC, 2020; Florence et al., 2018; Haddad et al., 2019).

Falls associated with most of the costs involve hospitalization and nursing home care, healthcare providers' services, rehabilitation, community-based services and the use of medical equipment (Haddad et al., 2019). Families or individuals also suffer from spending expenses (Sudharsanan et al., 2018) and further expenditure is anticipated because falls are inevitable among older people (Montero-Odasso et al., 2022). The pre-existing comorbidities with advanced age among older adults make them more vulnerable to fall risk (WHO, 2023). Fall prevention strategies may improve the quality of life among older adults by reducing their fall risk and decreasing families' and the country's financial burden (WHO, 2021b, 2023).

2 | BACKGROUND

There are considerable differences that exist in fall management when comparing LMICs and high-income countries in hospital settings (International Bank for Reconstruction and Development & The World Bank, 2021; WHO, 2021b). Given the numerous cross-cultural variations among populations in LMICs, local cultural practices and available resources have play essential roles in fall prevention planning and decision-making (Montero-Odasso et al., 2022). Fall management is highly recommended in LMICs, such as

the use of non-educationally and culturally biased tools that have been appraised locally in assessing cognitive impairments of older adults in the multifactorial fall risk assessments (Montero-Odasso et al., 2022). Additionally, review and educational interventions for fall prevention strategies should deliberate on the various cultural practices, such as footwear and environmental safety in the countries (Montero-Odasso et al., 2022).

The international guidelines for fall prevention have been proposed and implemented for many years. However, the applicability of these guidelines is still challenging due to the differences in older adults and contributing risk factors for falls in LMICs (Romli et al., 2017). The high prevalence of cognitive impairments, obesity and diabetes is significant causative fall risk factors that might differ between older adults in LMICs and those in high-income countries (Montero-Odasso et al., 2022). In addition, the healthcare priority in LMICs focuses on delivering essential services, such as internal medicine, emergency medicine and intensive care, compared to fall management, adding to their lack of fall prevention designs and interventions (Obermeyer et al., 2015; WHO, 2021b). Furthermore, the inadequate investment in quality improvement causes LMICs to have insufficient resources to improve patient safety (WHO, 2021b). WHO, OECD and The World Bank (2018) reported that the quality of care in most LMICs was still suboptimal and one barrier to low-quality care is the lack of resources to maintain the standard of care.

Health literacy requires individuals to search, comprehend, evaluate and use health information when making choices to reduce and prevent the risk of harm to their health (Adams et al., 2013; Meherali et al., 2020). Inadequate or low health literacy has drawn great attention to healthcare providers due to its significant implications on individuals and the healthcare system (Wong et al., 2022). People with low health literacy are associated with a lack of health knowledge and use of health resources, which leads to unfavourable lifestyles and behaviours, such as avoidance of participating in disease prevention, non-compliance with medications and deprivation of understanding the information from healthcare providers (IPH, 2015; WHO, 2013; Wong et al., 2022). Additionally, ineffective communication with healthcare professionals or limitations in their ability to access health information, especially if it is not in their preferred language, will impede their access and understanding of health information (IPH, 2015; WHO, 2013;