**SHORT COMMUNICATION**

# Integrating the Protection Motivation Theory Scale Among Older Adults: Insights for Fall Prevention Behaviour

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## ABSTRACT

This commentary examines the application of the Protection Motivation Theory (PMT) scale to evaluate older adults' threat and coping appraisals, fear, and protective behaviours in reducing fall risks. The findings highlighted the impact of fear, threat and coping appraisals on older adults' intentions to adopt protection motivation to reduce fall risk. Mediating effects are found in coping appraisal for protective behaviour, fear for perceived cost, and threat appraisal for protection motivation. This study has also emphasised the implications of adopting the PMT scale among older adults in Sarawak, Malaysia.

## INTRODUCTION

Falls have become a leading health concern with the growing proportion of older populations globally, often resulting in serious physical, psychological, and economic consequences (WHO, 2023). Older adults often shield their fall experiences due to misconceptions about the normalisation or stigmatisation of falls (Loganathan, Ng, & Low, 2016; Loganathan, Ng, Tan, & Low, 2015). Meanwhile, it has been reported that inadequate fall management is also linked to insufficient fall prevention policies or training opportunities for healthcare providers (Loganathan et al., 2015). Furthermore, several existing fall prevention programmes are implemented without a theoretical framework (Kiegaldie & Farlie, 2019). The Health Belief

Model (HBM) and Protection Motivation Theory (PMT) share similar concepts regarding protective behaviour, both involving cost-benefit analyses (Maddux & Rogers, 1983). However, the HBM does not fully explain the extent to which its components influence the preventive measures individuals adopt, unlike the PMT, which offers a more detailed account of motivation by considering both threat and coping appraisals (Floyd, Prentice-Dunn, & Rogers, 2000; Maddux & Rogers, 1983).

Therefore, an alternative PMT framework may enhance positive behavioural change among older adults and promote their independent living. (Kiegaldie & Farlie, 2019).
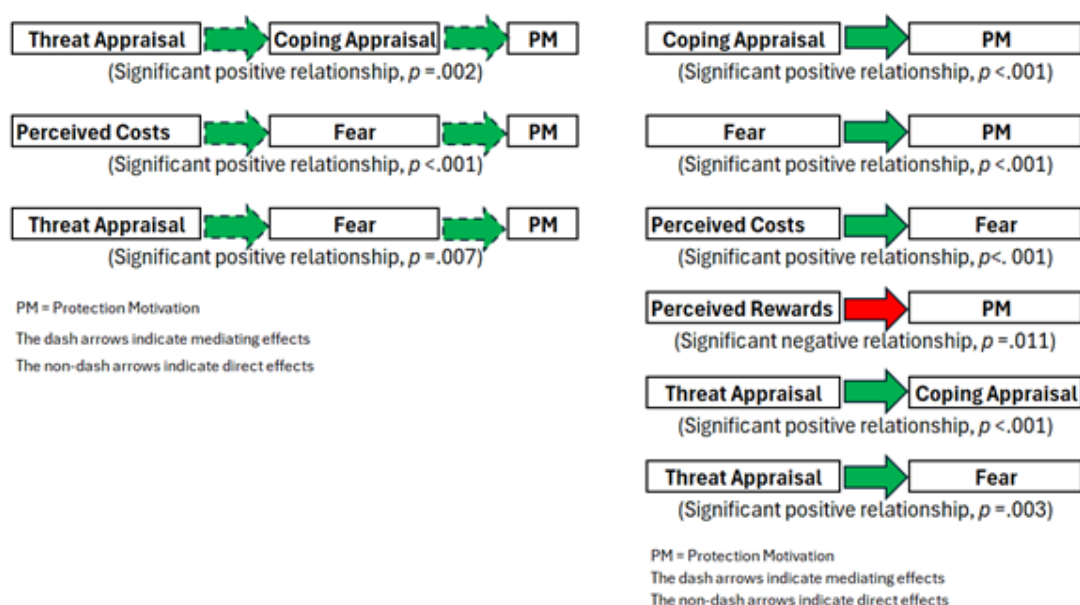
**Findings**
Figure 1 presents the results of the scale's reliability and validity, which indicate the path coefficients of the PMT components. A few of the PMT components act as mediators in the intention for protective behaviour among older individuals, such as coping appraisal, which was considered a mediator for protection motivation. Meanwhile, fear mediates each perceived cost and threat appraisal for protective behaviour. Therefore, coping appraisal and fear were identified

as key mediators influencing protection motivation and intention to adopt fall-preventive behaviours.

**Implications**
The scale for this PMT could be further enhanced to suit the older communities in a respective country, especially if the study's participants were from low-education backgrounds, which may affect their options or perceptions of the PMT's components. Conversely, several implications follow the assessment of older adults' intentions to adopt fall protective behaviour:

• Threat appraisal (including perceived severity, vulnerability and rewards): Interventions aimed at fostering older adults' independent living by educating and improving their fall risk awareness (Institute for Public Health, National Institutes of Health, & Ministry of Health Malaysia, 2019). By considering the contributing factors to the stigmatisation of falls, interventions to reduce non-preventive behaviours among older adults may promote their greater engagement in protective behaviours.

• Fear: Assessing older individuals' fear of



**Figure 1:** Summary findings from the structural model assessment of the PMT components

falling in their intention for fall protective behaviour (Montero-Odasso et al., 2022; Popova, 2011).

- Coping appraisal (including self-efficacy, response efficacy and perceived costs): Efforts from policymakers to improve the communications between healthcare providers and older adults on fall risk reductions and prevention strategies, improve health promotion programmes and information dissemination among rural communities and alternative preventive measures for falls. In addition, efforts from policymakers should include culturally sensitive communication strategies tailored to older adults' socioeconomic realities (Montero-Odasso et al., 2022).

## CONCLUSION

Applying the PMT scale among older adults in Malaysia enabled assessment of the extent to which older adults intend to engage in fall-prevention behaviours. It could also assist healthcare providers in identifying the most prominent factors among older adults that encourage the adoption of preventive behaviours to minimise their risk for falls. Additionally, further refinement and testing of the scale could also confirm these outcomes.

## AVAILABILITY OF DATA AND MATERIALS

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

## CONFLICT OF INTEREST

The authors declare that they have no competing interests.

## ACKNOWLEDGEMENT

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