

## **Development and Evaluation of a Community-based Fall Prevention Program for Elderly Thais**

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**Abstract:** This action research was conducted to develop a community-based fall prevention program for elderly Thais, living in an urban Bangkok community, and to evaluate the program's effectiveness. Qualitative and quantitative data were collected via a four-phase plan that included: situation analysis of falls; program development; program implementation; and, program evaluation. The community-based fall prevention program was based on community participation and a PRECEDE-PROCEED framework, as a multi-factorial intervention, that consisted of: a fall campaign; multi-factorial risk assessment; fall education; a balance/exercise program; home visits for medication review and home hazard management; and, a fall management system.

All qualitative data were evaluated via content analysis. Effectiveness of the fall prevention program (quantitative data) was evaluated in terms of: changes in the incidence of elderly falls; changes in elders' fall prevention behaviors; changes in elders' physical performance; modification of environmental hazards; community stakeholders' participation; and, elders' and community stakeholders' satisfaction with the program. A paired t-test was used to examine the difference in mean scores of fall prevention behaviors, while the Wilcoxon Signed Rank Test was used to examine differences in physical performance. Descriptive statistics were used to examine: changes in fall incidence; modifications of environmental hazards; level of community stakeholders' participation; and, elders' and community stakeholders' satisfaction with the program.

After implementation of the fall prevention program, elders' fall incidence was reduced 24.86%. In addition, within the same time frame, the elders' fall prevention behaviors improved, as did their physical performance. Modifications made to home environmental hazards included: use of anti-slip mats in the bathroom; spraying different colors on steps and doorsills to enhance their presence; and, changing the style of toilet. Modifications made to community environmental hazards included: posting warning signs around hazardous areas; and, notifying the organizations responsible for making corrections to hazardous areas within the community. The level of stakeholders' participation with each other was found to be consistent. The elders and the community stakeholders were highly satisfied with the fall prevention program. Thus, the findings suggested the community-based fall prevention program was an effective intervention.

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**Keywords:** Community-based fall prevention program; Elderly Thais; Urban community; Action research

### **Background**

Falls, because of their prevalence and impact, have become a worldwide public health problem among older adults. Approximately 28-35% of individuals 65 years of age and over fall at least once a year, with 32% to 42% of those over 70 years of age falling yearly.<sup>1</sup> Similarly, 18.5% of Thais over 60 years of age have been found to fall every six

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