

# **RESIDENTIAL INTERIOR ENVIRONMENTS OF RETIRED GOVERNMENT EMPLOYEES IN THAILAND**

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The increase of the aging population is a universal trend in most countries in the world including Thailand. These demographic factors will certainly affect the type and quality of housing that will be demanded in the future. Most older adults in Thailand age in place, and after retirement they spend more time in the home than ever before; therefore, residential interior environments play a significant role in supporting senior life. The purpose of this study was to explain the safety and usability problems in the residential interior environments of Thai older adults. The objectives of this study were: (1) to describe the demographics, housing characteristics, and health conditions of Thai older adults, (2) to describe the interior environmental features in the home that create safety and usability problems for older adults in Thailand, (3) to investigate the relationship of age and the activity level of Thai older adults with interior environment features, and (4) to make recommendations for safety and usability in the Thai older adults interior home environment. A sample of 264 retired government employees who live in Bangkok was asked to complete a self-administered questionnaire.

The respondents consisted of 85 males and 78 females. Their age ranged from 60 to 93 years with the mean age being 68.1 years. Around one third of the respondents were 60 - 64 years of age. Most of the Thai older adults had lived with their family in their own two-story detached houses for more than ten years. Almost half of the respondents occupied three-bedroom dwellings. Only one fourth of the older adults had their own bedroom located on the first floor of the dwellings. The majority of the respondents had vision problems, and almost one third of the respondents had back pain and difficulty bending and kneeling. The majority of the respondents received help in doing activities of daily living from their spouses, their children, or housekeepers. Respondents were asked to rate their capabilities to do each of the activities of daily living. Almost all respondents could easily perform basic activities of daily living by themselves, and half of them could easily perform instrumental activities of daily living by themselves. More respondents experienced difficulty climbing stairs than with other basic activities of daily living. Around half of the respondents experienced difficulties or had caregivers doing instrumental activities of daily living for them (housecleaning, laundry, or preparing meals). More respondents experienced difficulties with housecleaning than with doing laundry and preparing meals.

To describe the interior environmental features in the home that create safety and usability problems for older adults in Thailand, the degree of difficulty with each feature was rated on a five-point Likert scale by each respondent. The

respondents identified the following five items as the most difficult features in their homes: presence of insects, no seating area in the kitchen, not enough kitchen counter space, noise affecting sleep patterns, and furniture arrangements.

Some respondents had already improved their homes to fit their needs; therefore, partial closed-ended questions were used to determine what modifications the respondents had done in their homes and what modifications were intended. Almost half of the respondents had changed their mattresses and removed furniture that restricted their movements. Also, the modifications respondents intended to make were: installation of an air-conditioning unit, installation of grab bars, increased kitchen space, and improved air ventilation.

To investigate the relationships of age and the activity level of Thai older adults with interior environment features, one-way analyses of variance were used to test three research hypotheses. The first hypothesis was: there is a difference among age groups in the degree of difficulty with safety and usability features in : (a) entrance and stairs, (b) bedroom, (c) bathroom, (d) kitchen, and (e) other interior features. Significant differences between age groups were found in one item related to the bedroom and one item related to other interior features. The 75-year-old and over group had more difficulty with the softness of the mattress than the 60 - 64 year old group. The 60 - 64 year old group had less difficulty with throw rugs than the 65 - 69 year old group.

The second hypothesis was: there is a difference in degree of difficulty with safety and usability features in (a) entrance and stairs, (b) bedroom, (c) bathroom, (d) kitchen, and (e) other interior features among activity levels. Significant differences between levels of basic activities of daily living were found in one item in the entrance and stair section, one item in the kitchen section, and five items in the other interior feature section. The findings indicated that older adults who could not perform any one of the basic activities of daily living well had more difficulty with windows, throw rugs, furniture with sharp edges, no seating area in the kitchen, steep stairs, furniture arrangements, and presence of insects. Significant differences between levels of instrumental activities of daily living were found in three items of other interior features. The findings revealed that older adults who could not perform any one of the instrumental activities of daily living well had more difficulty with natural light, throw rugs, and windows. When the homes were broken down to five categories: entrance and stairs, bedroom, bathroom, kitchen, and other interior features of the house, it was these other interior features that seemed to present the most problems in safety and usability. The kitchen had the most problems in safety and usability when compared to other rooms.

Safety and usability problems that Thai older adults had can be solved by making modifications; for example, move the bedroom from the second floor to

the first floor, change floor materials, or add a seating area in the kitchen. Design recommendations for Thai housing were developed. The design recommendations consist of two parts: recommendations for new houses and recommendations for improving existing houses.