

Abstract

Whilst the rate of increase in the number of elderly people and high-rise buildings are very high up, currently no standard in building design and residential fire safety for the elderly people in Thailand. It is obvious that when the building is on fire, elderly mortality rates tend to be the highest owing to an inconsistency between physical change in elder and building standard. Hence, this research is aimed to study three purposes: (1) To research on the fire safety standard in living quarters for the present elders. (2) To study elder's behavior in residential space related to the physical components for fire safety, and (3) To propose the building design guidelines for elderly people safety in the case of fire.

For conducting the research, this research collected data from a sample selection of two parts. (1) three residential buildings in order to investigate the physical design by using check list and survey method. These three residential buildings are both public and private buildings. (2) elders (aged above 60 years) who reside in these three residential buildings by using interviewing technique. Ten elders were purposely selected for one public and one private residential building.

Regarding to the findings, the comparative analysis was employed by analyzing a range of fire safety standards, and universal design for elders. It is found that fire safety standards are not comprehensive for universal design for elders, and vice versa. In particular, the design guideline concerning the height of the stair landing, the clear design of the floor plan, and the installation of the fire alarm system.

Referring to the space using behavior, it is found that elders require a better design of physical components, especially the width and the handrail of fire escape stair, the helipad, the floor plan, the signage, and the fire alarm system. The result from this research will lead to construction renovation fire safety guidelines in public residential buildings for elderly people.