Evacuation characteristics of visually impaired people - DTU Orbit (13/12/2018)

Evacuation characteristics of visually impaired people: a qualitative and quantitative study
Evacuation characteristics for blind and visually impaired people are presented in the current study. The study was carried out in 2011 and engaged 40 participants in the age from 10 to 69 years. The participants had impairments for all of the four Danish categories for visual impairments (A-D). The mean free walking speed descending stairs for category C and D were found to be comparable with values found in Danish and Swedish guidelines. The walking speed of people with visible impairments was not affected by an increasing density on stairs to the same extent as the walking speed of able-bodied adults. It was found that people with visual impairments were able to uphold a higher walking speed descending stairs than able-bodied adults for increasing person density. The initial walking speed on horizontal planes is lower than the value suggested by the N&M-model. The horizontal mean free walking speed depends on the degree of vision loss. The design of the building environment is important for the ability to orientation for people with reduced sight. Walls and handrails are important for the orientation possibilities for people with visual impairments. Furthermore, obstacles placed in the egress path were identified problematic for this group of people.

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