Reflections about design principles of environments for elderly people living with dementia M. B. Dario, C. S. S. Castro

Purpose Dementia is a progressive disease that affects elderly people, and may develop loss of functional capacity, loss of physical, and cognitive abilities and neuropsychiatric symptoms. The treatment with nonpharmacological interventions is being increasingly recognized and studied globally, given its lower risks when compared to drug treatment. The Fleming – Bennett Design Principles for People with Dementia describe items for the purpose of designing environments to support people with dementia and their families in reaching their full potential as human beings. Building structured environments can positively impact significant activities, functionality, safety, socialization and quality of life for those who reside there. This paper intend to describe the home environments of people with dementia and the perception of family members regarding the environmental design principles proposed by Fleming - Bennett. Method It was a descriptive, exploratory study, qualitative, with a convenience sample. Eight family's members of elderly people with dementia at different stages of staging were interviewed. The data collection included two structured online interviews, a sociodemographic questionnaire and a characterization of the functional capacity of the family and the environment based on Fleming - Bennett principles. The content analysis method was used as a strategy to identify empirical categories from the interview records. Results and Discussion It was observed as thematic categories: Security; Stimulation; Socialization; Familiarity and Difficulties in the care of the elderly with dementia. It is observed that the safety aspects are the most noticed in the adaptations of the environment. As for the environment to provide stimulation to the resident, they mention items available in the house such as furniture and objects of memory and affection such as photos, paintings, trophies, etc. They refer to the difficulty in the engagement of the elderly with the environment, as well as the management of visits and external exits of the house for severe stages of dementia. Most of the family members carry out environmental changes according to their perceptions, without the help of specialized professionals. Many items of the Fleming - Bennett principles are not covered in the elderly-s home, however they recognize that they could make the environment more functional, stimulating, and comfortable, once they have come into contact with this knowledge. Conclusion: Environmental changes need to be designed with a focus on the needs of people living with dementia and their families. The Fleming – Bennett principles have great importance as a guideline for public policies aimed at supporting the lives of people and their families living in this condition. Guiding aging in the right place for people living with dementia should be concern of all public policy which involves various sectors of society such as health, housing, social assistance and protection, services, and others.

References

- Bettini, C., Brdiczka, O., Henricksen, K., Indulska, J., Nicklas, D., Ranganathan, A. and Riboni, D. (2010). A survey of context modelling and reasoning techniques. *Pervasive and Mobile Computing*, *6*(2), 161-180. https://doi.org/10.1016/j.pmcj.2009.06.002
- Lee, J.W. Helal S. (2022). Modeling and Reasoning of Contexts in Smart Spaces Based on Stochastic Analysis of Sensor Data, *Applied Science*, 12(5), 2452. https://doi.org/10.3390/app12052452
- Lee, J.W., Cho S, Liu S., Cho K., and Helal S. (2015). Persim 3D: Context-Driven Simulation and Modeling of Human Activities in Smart Spaces. *IEEE Transaction on Automation Science and Engineering* 12(4), 1243-1256. https://doi.org/10.1109/tase.2015.2467353

Keywords: design. dementia. Fleming – Bennett principles. Gerontechnology **Address**: Interunit Postgraduate Program in Bioengineering of University of Sao Paulo, Brazil **Email:** Carla.santana@fmrp.usp.br