

E. Karol, M. Giles. *Theory and practice: The response of people with neurodegenerative disorders to home design in Western Australia*. *Gerontechnology* 2008; 7(2):137. People with neurodegenerative disorders (NDD) such as Multiple Sclerosis (MS), Motor Neurone Disease (MND), Parkinson's Disease (PD) and Huntington's Disease (HD), want to remain in their own home as their disorder progresses. However, for most of this group of people, their existing housing falls short of 'lifetime homes' standards¹. Whilst this is not a problem in the early stages of their disorder, when their mobility and ability to undertake activities of daily living are not compromised, most individuals experience difficulties at home at later stages of their disorder. If people with NDD wish to remain living in their own homes as their condition deteriorates, often they must modify their home or move to a different home. This paper examines the home environment as experienced by people with NDD, in terms of Lawton's² model of the relationship between environment and capacity to cope, using data from a 2007 postal survey in Western Australia. Although Lawton's theoretical approach to assessing satisfaction with the home environment was primarily for the aged it is appropriate to any group that may not be fit and healthy. The model puts forward a direct relationship between 'personal competence' and 'environmental press'. That is, people whose personal competence is low require an environment that does not expect much of them, whereas more competent people would be less challenged by, and therefore more responsive to, higher demands from their environment. **Methods** In March 2007, Giles and Lewin³ conducted a postal survey of people with MS, MND, PD and HD based on member lists from home care support agencies. The survey response rate was about 54 percent (n=1,095). The survey asked wide-ranging questions related to the individual's well-being. We look at responses related to mobility and other difficulties as well as responses regarding whether or not the respondent had modified their home, what the modification was and whether or not they had moved to a different home, and why. The data was used to disaggregate respondents into three categories (mobility, dependency and specific difficulties) that could be related to the risks faced due to home design and various housing interventions that were or could be carried out to reduce 'environmental press' for the person with NDD. **Results and discussion** Less than half of respondents had modified their home (n=470) and about twenty percent had moved house (n=199). Some respondents had both moved into a different home and made some modifications to it (n=115). In total, more than half the respondents (54%) had modified and/or moved to a different home. Using Lawton's² model, the results related to home modifications and moving house was reinterpreted to show an inverse relationship between higher mobility and the average number of home modifications. In other words, as mobility deteriorates (this being one measure of 'personal competence' deteriorating), current home designs increase the 'environmental press'. The paper concludes that house design is clearly one of the factors involved in enabling people with NDD, and indeed frail people in general, to manage their physical difficulties and remain in their homes.

References

1. Office of Deputy Prime Minister. Building Regulations Approved Document M, TSO, UK; 2003
2. Scheidt R, Windley P, editors. New York: Haworth Press; 2006
3. Giles M, Lewin G. An investigation into the home support needs of adults living with Multiple Sclerosis, Huntington's, Parkinson's and Motor Neurone diseases: Survey results: draft report. Osborne Park: Silver Chain; 2007

Keywords: Ageing-in-Place, neurodegenerative disorders, home design, Lawton's model

Address: Curtin University of Technology, Perth, Australia; E: ekarol@arch.curtin.edu.au