

## Socio-Sensorial Assessment of Nursing Homes in Singapore: Towards Integrated Enabling Design

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**Abstract :** Within the context of rapidly ageing population in Singapore and the pressing demands on both caregivers and care providers, an integrated approach to ageing-friendly and ability-sensitive enabling environment becomes an imperative. This particularly applies to nursing home environments and their immediate surroundings, as they are becoming one of the main available options of long-term care for many senior adults who are unable to age at home. Yet, despite the considerable efforts to break the still predominant clinical approach to eldercare and to introduce more home-like design and person-centric care model, nursing homes keep being stigmatised and perceived as not so desirable environments to grow old in. The challenges are further emphasised by the associated physical, sensorial, psychological and cognitive declines that are the common consequences of ageing. Such declines have an immense impact on almost all aspects of older adults' daily functioning, including problems with mobility and spatial orientation, difficulties in communication, withdrawal from social interaction, higher level of depression and decreased sense of independence and autonomy. However, typical nursing home designs tend to neglect the full capacities of balanced and carefully integrated multisensory stimuli as active component of care and ability building. This paper outlines part of a larger multi-disciplinary study of six nursing homes in Singapore, with overarching objectives to create new models of supportive nursing home environments that go beyond the clinical care model and encourage community integration with the nursing home settings. The paper focuses on the largely neglected aspects of sensorial comfort and multi-sensorial properties of nursing homes, including both indoor and immediate outdoor spaces (boundaries). The objective was to investigate the sensory rhythms and explore their role in nursing home users' daily routine and therapeutic capacities. Socio-sensory rhythms were captured and analysed through a combination of on-site sensory recordings of "objective" quantitative sensory data (air temperature and humidity, sound level and luminance) using multi-function environment meter, perceived experienced data, spatial mapping, first-person observations of nursing home users' activity patterns, and interviews. This was done in addition to employment of available assessment tools, such as Wisconsin Person Directed Care assessment tool, Dementia Quality of Life [DQoL] instrument, and Resident Environment Impact Scale [REIS], as these tools address the issues of sensorial experience insufficiently and selectively. Key findings indicate varied levels of sensory comfort, as well as diversity, intensity, and customisation of multi-sensory conditions within different nursing home spaces. Sensory stimulation is typically concentrated in communal living areas of the nursing homes or in the areas that often provide controlled or limited access, including specifically designed sensory rooms and outdoor green spaces (gardens and terraces). Opportunities for sensory stimulation are particularly limited for bed-bound senior residents and within more functional areas, such as corridors. This suggests that the capacities of nursing home designs to provide more diverse and better integrated pleasant sensory conditions as integrated "therapeutic devices" to build nursing home residents' physical and mental abilities, encourage activity and improve wellbeing are far from exhausted.

**Keywords :** ageing-supportive environment, enabling design, multi-sensory assessment, nursing home environment

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