Dementia

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 Dementia

Dementia refers to a syndrome that is characterized by a physical change in the brain which results in impairment and changes particularly in behaviors, thinking, memory, and the ability to perform daily routine tasks. Dementia is progressive and commonly found in aged people. Providing care to people with cognitive impairment and dementia is a significant challenge, globally. Most of the people with dementia require increasing support and for long term care, move to Aged Care Facility. Worldwide, 47.8 million people are living with dementia and by 2050, this number is projected to rise to 137 million. It is very important to formulate different strategies that support people with dementia in carrying out their daily activities and to decrease the carers’ burden. People living with dementia can be supported to perform everyday activities such as cognitive training, social support, and behavioral therapy. Evidence has shown that people with dementia usually show competence decline and maladaptive behavior which makes it difficult for them to perform their daily routine tasks. This paper will present an overview of the environment of an aged care facility and some recommendations from evidence-based research to improve the care of people with dementia.

## Physical and Cognitive Changes

According to Powel Lawton's theory of modification, the physical environment can help people with dementia to perform their tasks and maintain their quality of life. People with dementia make a significant portion of the population in aged care facilities (Fleming et al., 2016). Several studies have shown that dementia is a condition that develops with time however, it has been observed that environmental factors also have an impact on the development of the disease. The environment plays a very important role in providing quality care to people with dementia. The environment is composed of social, physical, and cultural facets. The different spiritual, religious, socioeconomic, and cultural circumstances need to be considered in creating a friendly environment for people with dementia.

Patient-centered care is essential for patients suffering from dementia as every patient has specific needs (Sjögren et al., 2017). Certain studies have shown that patients with dementia often have different reactions to different circumstances occurring in the environment. Therefore, the illness, symptoms, and needs of the patients vary. Understanding the important elements of the environment equip care providers with the necessary knowledge to meet the needs of people with dementia in an aged care facility. Environments are continually being modified and manipulated to maximize person productivity, development, and comfort. The physical environment for people with dementia helps them to avoid any disability and achieve their full potential (Chaudhury et al., 2017).

The aged care facility is often viewed as an environment for the provision of safe care. In hospitals, the emotional state of people is often neglected. Aged care facility provides an environment to people with dementia where they express their feelings to make choices. In literature, physical environment refers to a built environment and has a significant impact on people with dementia. A dementia-friendly environment is a cohesive system of support that recognizes a person's experiences and provides assistance to remain engaged in everyday activities in a meaningful way.

The main focus of the physical environment in an aged care facility is to provide opportunities to people with dementia to continue living with their familiar lifestyle (Chau et al., 2018). The physical environment for people with dementia should be designed in a way that attempts to reduce the odor, glare risk and noise, and promote a sense of calm. Better surface and appropriate use of texture and pattern are factors that improve the environment of aged care facility and create a homelike environment (*Module-8-Creating-dementia-friendly-environments.pdf*, n.d.). Colors have a great impact on people, both emotionally and physically. It is reported in different studies that colors have great therapeutic benefits for people with dementia. In any aged care facility, an effective color contrast has great importance in supporting aging senses which in turn enhances the vision of older people. Lighting also plays an important role and has great impact on the success of an aged care facility. Therefore, appropriate lighting should be present in an aged care facility.

According to different studies, insufficient and inappropriate lighting is considered as one of the major issues in aged care facilities. In recent years, interest in outside spaces and gardens has increased to a great extent by recognizing the importance of these spaces in the life of people with dementia (Marsh et al., 2018). Technology advances are also an important part of aged care facilities as they assist people with dementia. Physical environment elements that must be considered in an aged care facility to support people with dementia include fitting and fixtures, texture and pattern, interior surfaces, furnishing and furniture, outside spaces and garden, lighting, and color.

# Recommendations and Evidence-Based Literature

The physical environment should be secure and safe and should provide a range of communal and social interaction.

In an aged care facility, people with dementia are usually exposed to a considerably low level of lightning and spend most of their time in dim light that affects their wellbeing in a negative manner. Therefore, improved exposure or lighting is needed to uplift their mood and disruptive and agitated behaviors.

Studies have found that people with dementia exhibit less aggressive and agitated behavior if they spent more time in outdoor spaces or gardens. It is also demonstrated in different studies that people with dementia who spent more time participating in outdoor activities exhibit improve sleep duration and efficiency. One of the issues in accessing the physical environment is that most of the aged care facilities are designed like medical institutions instead of homes for the elderly. Previous studies have confirmed that color contributes greatly to creating inspiring and interesting environments. As the aging process leads to a decline in the vision of humans, people living with dementia usually have a vision problem that is related to dementia and not aging. The factors include altered perception of color, impaired perception of depth, reduced ability to notice contrast and spatial disorientation (Chaudhury et al., 2017). Like many old people, people with dementia also experience vision impairment such as retinopathy, cataracts, macular degeneration, glaucoma, and color blindness. The most common effects of this impairment include losing both peripheral and central vision, and blurred vision. Therefore, colors have a very positive effect on the lives of people with dementia. Using the contrast of effective colors in an aged care facility environment will help people with dementia to see more clearly in their environment. This will enhance visibility and increase greater confidence in walking, minimizing agitation and confusion, and finding a destination. As compared to younger people, older people need three times as much contrast to find different objects in the surrounding.

Studies have shown that people with dementia have additional issues with the perception of colors. Therefore, in aged care facility, colors should be selected that contrast significantly. The most effective contrast includes the combination of colors from the center of the spectrum such as green or yellow with dark colors from the end of the spectrum such as blue or red.

 Brawley, in his study, showed that low light has a negative impact on the ability of a person to perform daily life activities and is responsible for a great proportion of falls among older people with dementia in an aged care facility (Chaudhury et al., 2017). It is also demonstrated in studies that limited access to natural light has a great impact on a person's sleep cycle, synthesis of vitamin D, calcium absorption by tissues, and general wellbeing. According to different studies, sufficient and light involves a combination of balancing artificial light and natural light, raising light levels, and eliminating glare.

A surface finish that is selected for floors and walls usually influences the ambiance and warmth of spaces. The use of pattern and color through stencils and wallpapers can provide stimulation and interest for a particular space and also standards for orientation. People with dementia are usually overstimulated by many patterns and designs in one area. Some particular patterns also trigger delusion in some older people with dementia. A large pattern can be confusing and distracting as a large pattern of motifs on the floor creates the illusion of steps and holes. Surface glare and slippery surfaces also influence significantly the mobility and also increase the risk of falls for older people with dementia. Soft surface flooring should be present in an aged care facility to minimize fall injury and to reduce noise (Tropea et al., 2017). Soft furnishing should be present as they absorb sound and reduce the noise level in an environment. Texture is also one of the most important elements and stimulates responsiveness and thinking which helps to recall memories. The pattern on the floor can assist people with dementia in finding ways as it assists in orientation (Chaudhury et al., 2017).

Outside spaces in aged care facilities provide places of privacy and solitude which is very important for older people living with dementia. Outer spaces also provide stimulating and active environment for those with an early stage of dementia by giving them a wide range of physical activities such as walking and gardening, and opportunity for a pace change. In aged care facility, people with dementia can be supported by appropriately designed walking paths, furniture and greenery, and plants. In conclusion, adaptation to the effective physical environment can have a positive effect on the behavior, quality of life, and daily life activities of people with dementia. Short corridors, common room uniqueness, and orientation have a great impact on the lives of people with dementia.

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