Prospect of dementia care in Taiwan

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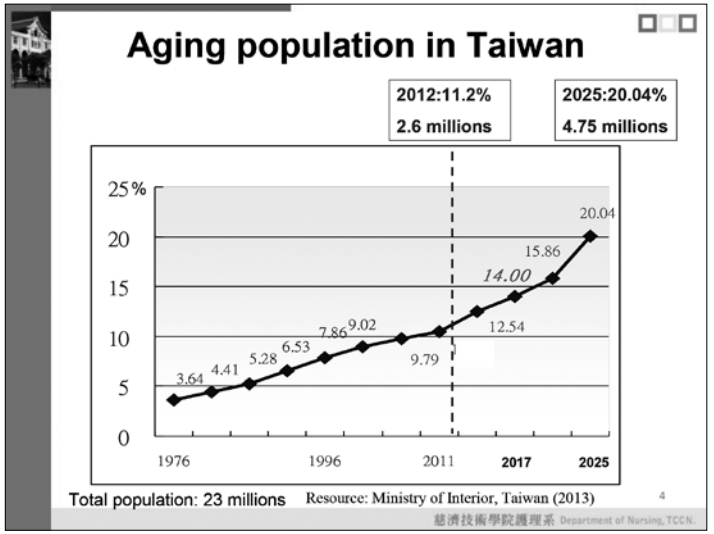
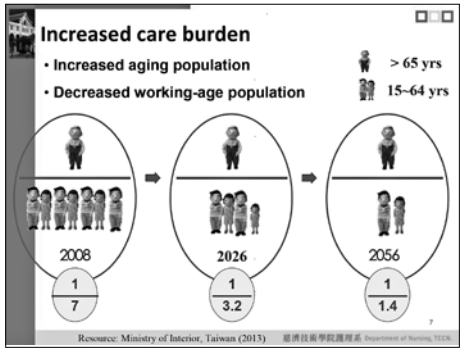
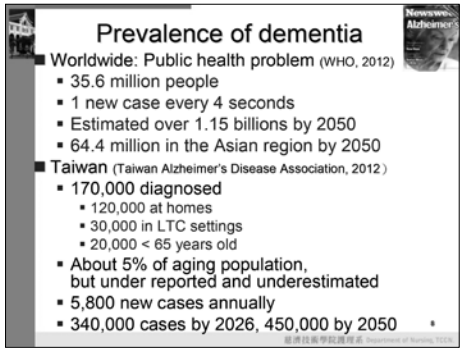
The population in Taiwan is aging rapidly. The elders comprised one-tenth (11.2%, 2.6 millions) of Taiwan total population in 2012. This percentage is expected to rise to more than 20% in 2025, and by that time Taiwan will meet the definition of a "super-aged society". Taiwan is aging faster than most European nations and at a speed second only to Japan. With the decrease of birth rate and dramatic increase of aging population, our aging population is expected to reach 45% in 50 years (Ministry of Interior, Taiwan, 2013).

The increase of aging population and decrease of working-age population result in increased care burden for the elderly on our younger







generation in Taiwan. Currently, it is about 7 working-age persons care for 1 elder, but in 50 years from now, only less than 2 young persons need to share the care burden for 1 elder (Ministry of Interior, Taiwan, 2013). This can place a tremendous amount of care and financial burden on the younger generation. With the increased numbers of those diagnosed with dementia, the care burden can become even greater for a lot of adult children.

Dementia is a severe public health problem affecting over 35 million people worldwide. With the patient numbers doubling every 20 years, we can expect a global population of dementia patients of 1.15 billions, and there will be about 64.4 million in the Asian region by 2050 (World Health Organization, 2012).

In Taiwan, approximately 4.8% of community-dwelling elders are diagnosed with Alzheimer's disease and related dementia, and over 10,000 new cases are being identified each year (Taiwan Alzheimer's Disease Association, 2012). There are 170,000 people diagnosed with dementia, and the majority are taken care at homes, and about 30,000 residing in long-term care facilities (Chen et al, 2007). The published report on prevalence of dementia in Taiwan was about 5%. The prevalence is suggested to be underestimated due to the stigma of being diagnosed with dementia in Taiwanese population and hesitance to seek medical advice and treatments. The numbers of dementia population will likely grow to 340,000 in 10 years, and to 450,000 by 2050 (Taiwan Alzheimer's Disease Association, 2012).

Several factors affect the care burden for our elders with dementia. Traditional Chinese social values provide the moral basis for family-centered

caregiving, so adult children are expected to care for their sick parents at homes. On top of this, our health policy focused on aging in place and community care. Another reason for caring the sick elders at home is the family financial burden, and it costs more for the family if the sick elder is relocated and cared in the institutions. These factors can all lead to the majority of Taiwanese elders with dementia being cared by family caregivers at homes.

In Taiwan, the caregivers for those with dementia at home mainly are sick female spouses, daughters and daughters-in-laws (DILs). DILs comprise the largest group of caregiving for those with dementia at home. Untrained foreign home caregivers are also another increased population of care providers for those with dementia at home and have caused many care problems due to their quality of care and communication barriers.

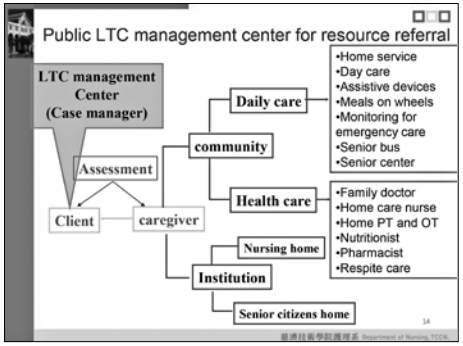
Another factor that increase the care burden for family caregivers is that stigmatization of mental illness in Taiwanese culture may keep caregivers from reporting dementia and behavioral problems unless or until caregivers require assistance with behavioral management. Therefore, elders with dementia are often not properly assessed and treated.

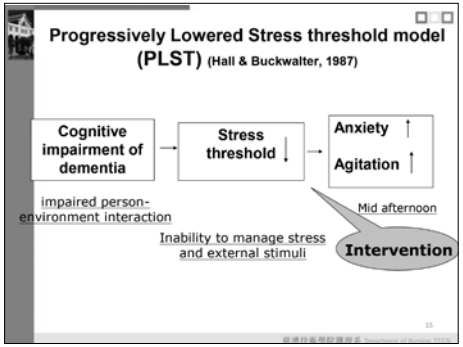
In the past decade, Taiwanese government has made great efforts and provide many care resources to care for the sick and aging population. Many medical centers host memory or dementia clinics conducted by multidisciplinary health teams for early screening of those with Mild Cognitive impairment or dementia by providing various examinations, consultation, nursing patient education, and care resource referral. As the government advocated that homes were the best places for optimal care for those with dementia, long-term care resources, telecare and gerontechnology have been developed and provided to keep the elders at home in Taiwan. Day care services and respite care are available to care for those with dementia and help the family caregivers take rests and have some relief from daily caregiving burden. For families who are unable to take care of their relatives with dementia, 24-hour institutional care, such as dementia nursing homes and group homes, are available to take care of

elders with dementia.

Taiwan national health insurances cover 90% of our medical expenses. The government also provides financial aids for families who are from low-income households to care for relatives with dementia at home.

In Taiwan, there is a public long-term care (LTC) management center in each city and county acting as a single stop for patients and families for LTC resource consultations and referrals. The case managers will first conduct assessment for those who may be eligible for LTC resources and then provide suitable resource referral for the patients and the families. The government will cover 30%-100% of LTC costs according to the income status of the patients.

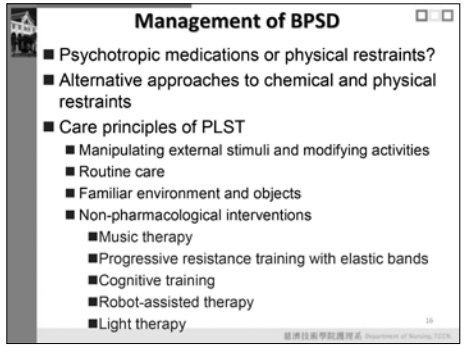




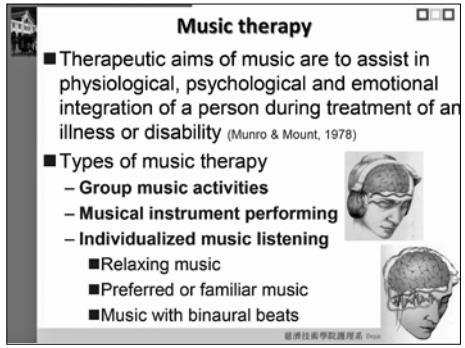
Despite of the LTC resources available to help families and caregivers caring for elders with dementia, we also need to provide suitable care by understanding the possible mechanism of how BPSD occur and how to manage it. According to the Progressively Lowered Stress threshold model (PLST model) (Hall & Buckwalter, 1987), people with cognitive impairment caused by dementia have a lowered stress threshold related to impaired person-environment interaction and therefore are less able to manage stress and process external stimuli. This disability may result in a decline in their stress threshold level. In a typical day for a person with dementia, stressors may accumulate throughout the day, and by mid afternoon the stress threshold may be exceeded, resulting in anxiety and more agitated behaviours if no intervention is introduced. Therefore, the PLST suggests that before patients with dementia reach to the stress threshold and become anxious and agitated, we should provide suitable interventions to prevent or decrease the occurrence of BPSD.

People with PBSD have traditionally been managed with psychotropic medications or physical restraints, but these treatments may cause negative and unwanted effects. Physicians and researchers have suggested that we need to be cautious when use of psychotropic medications for those with dementia (Ames et al, 2005).

According to the care principles proposed by PLST model (Hall & Buckwalter, 1987), caregivers can facilitate more adaptive behaviours by manipulating external stimuli and modifying activities to prevent or reduce anxiety and agitation in those with dementia. Maintaining stable care routines and providing familiar environment or objects can also prevent anxiety and agitation. Several non-pharmacological interventions have been suggested to manage PBSD, such as music therapy using preferred or familiar music to improve relaxation and decrease BPSD (Gerdner, 2000; Sung, Chang, & Abbey, 2006), progressive resistance exercise to improve physical function and cognition (Cassilhas et al, 2007), and robot-assisted therapy to improve mental health of those with dementia (Shibata & Wada, 2011).



One of common non-pharmacological interventions is use of music for elders with dementia. Music therapy has been researched and suggested frequently to manage BPSD of those with dementia. Therapeutic aims of music are to assist physiological, psychological and emotional integration of a person during treatment of an illness or disability (Munro & Mount, 1978). According to the best available evidence by current systematic reviews (Nilsson, 2008), musical elements for relaxation should include a slow and stable tempo, low volume level and soft dynamics, absence of percussive and accented rhythms, simple harmonic or chord progressions, no lyrics, 20-30 minutes long, and music preferences.



Music therapy can be delivered in several forms, such as group music activities, musical instrument performing, or individualized music listening. For example, for Taiwanese elders with dementia, they prefer to listen to Taiwanese or Chinese songs from 1930-1950 or older Japanese songs.

The presence of familiar music can introduce the sense of familiarity into a new environment and can be used as environmental modifier to mask unpleasant noises and stimuli, which can reduce stress and induce relaxation (Gerdner, 2000). It can further improve elders' functional abilities. For elders with dementia, listening to familiar music can help them recall memories. Music that recall positive memories from the past will have a soothing effect and induce relaxation. Providing music which the elders are familiar with is a mean of providing care which is tailored to patients' needs. Therefore, listening to preferred music may be able to reduce stress and induce pleasant feelings and relaxation in people with dementia, and their anxiety and agitated behaviours may further be reduced or prevented.

Familiar music listening can be an effective and cost-effective approach to reduce BPSD of those with dementia and to alleviate the burden of caregivers. Music listening is easy for caregivers to learn to implement for those with dementia at homes or in residential care facilities and has the potential to improve the psychological well-being of elders with dementia.

In conclusion, early diagnosis of dementia is essential in initiating proper treatment. Recognition and appropriate management of BPSD, such as use of non-pharmacological interventions, are important factors in improving the quality of care of elders with dementia. More education and community resources regarding dementia are needed to assist caregivers to continue taking care of elders with dementia at homes.

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