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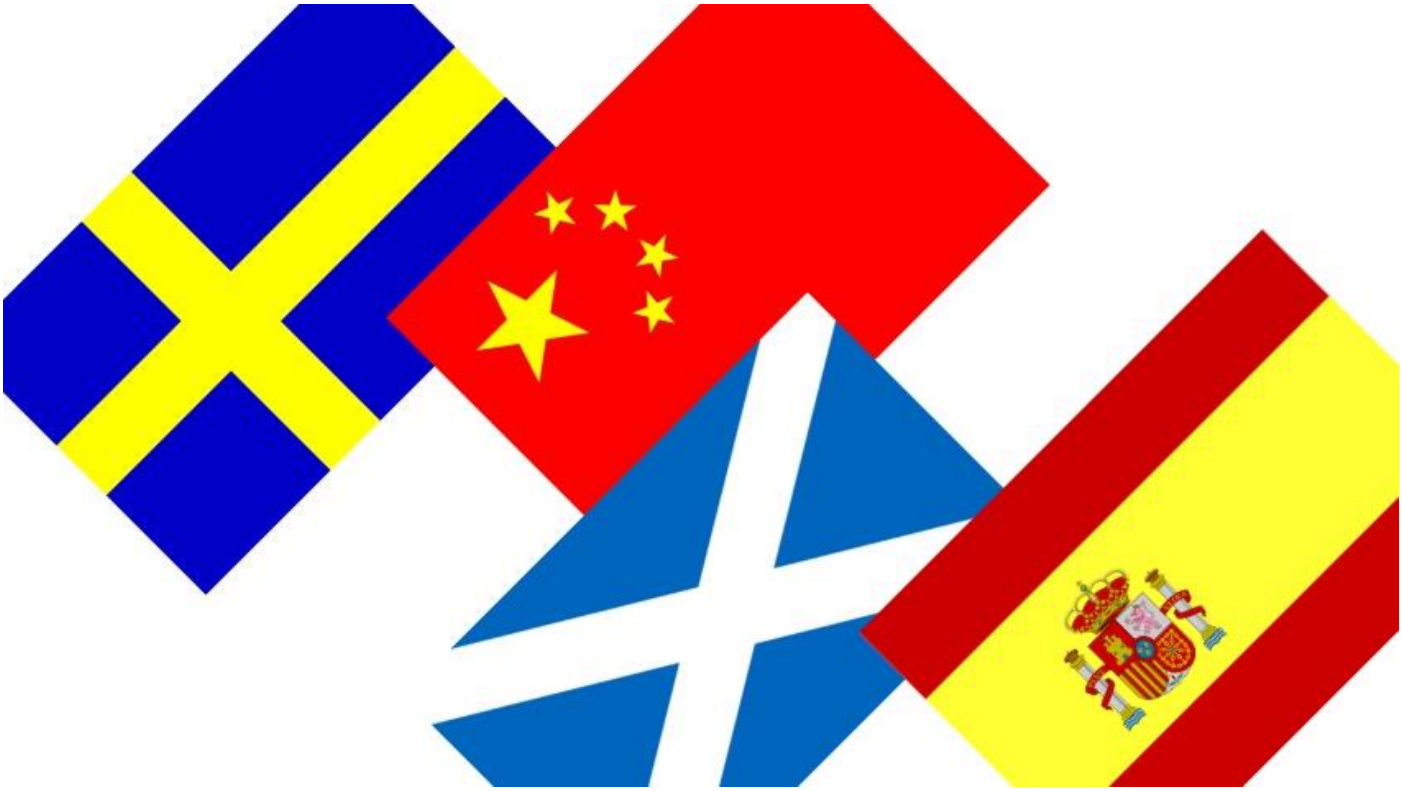
Comparative Study on Dementia Care between China and Europe



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Introduction

Dementia is a syndrome due to disease of the brain – usually of a chronic or progressive nature – in which there is disturbance of multiple higher cortical functions, including memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgment.

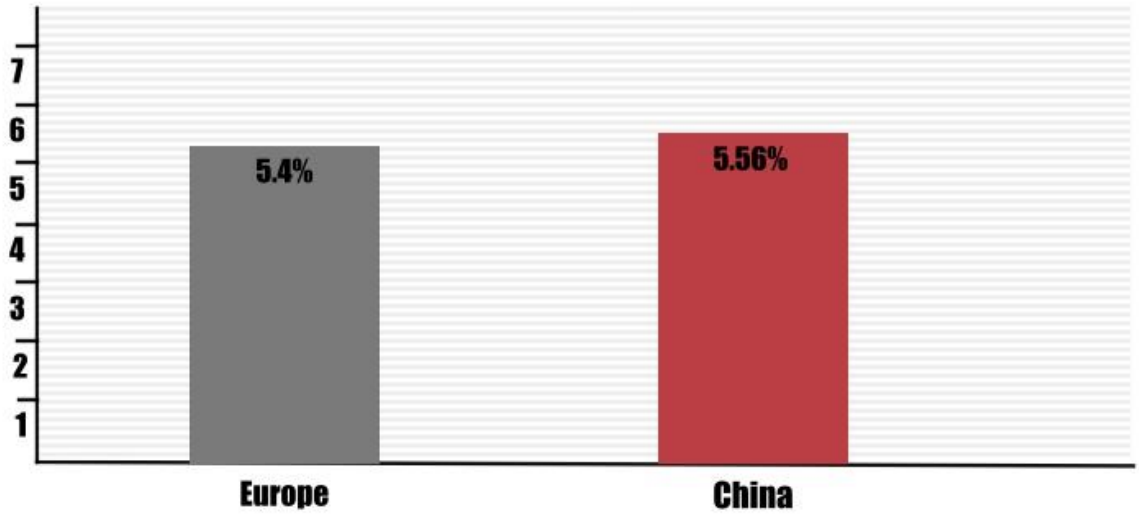
Globally there is a new case of dementia every four seconds, and by 2020 we will see nearly 70 million people living with the condition. The worldwide cost of dementia care is around $600 billion. If dementia care were a country, it would be the world's 18th largest economy, ranking between Turkey and Indonesia. If it were a company, it would be the biggest in the world by annual revenue, exceeding Wal-Mart (US$414 billion) and Exxon Mobil (US$311 billion). An estimated 28 million people with dementia worldwide haven't received a formal diagnosis, which explains the important of dementia care crisis.

Dementia mainly affects older people. Population ageing is a key social problem both in China and European countries. Particularly rapidly increase in the numbers and proportions of older people in China. As the size and proportion of the Chinese population age 65 and older continue to increase, the number of Chinese with dementias will grow. Both China and European countries have presented a positive strategy, policy or guideline to address the facing growing dementia challenge. Although there is a significant difference among the economic development, culture diversity, lifestyle and diet between China and Europe. So it will be much mutual beneficial for improving dementia care outcome if China and European countries could realize their respective highlight and share effective measures in the field. In this work which has been funded by Erasmus project Memory Media, a comparative study has been done between China and European countries and region representative of Spain, Sweden and Scotland, with a view to improve the potential current health care service standards and guidelines for dementia care crisis.

Prevalence Rate

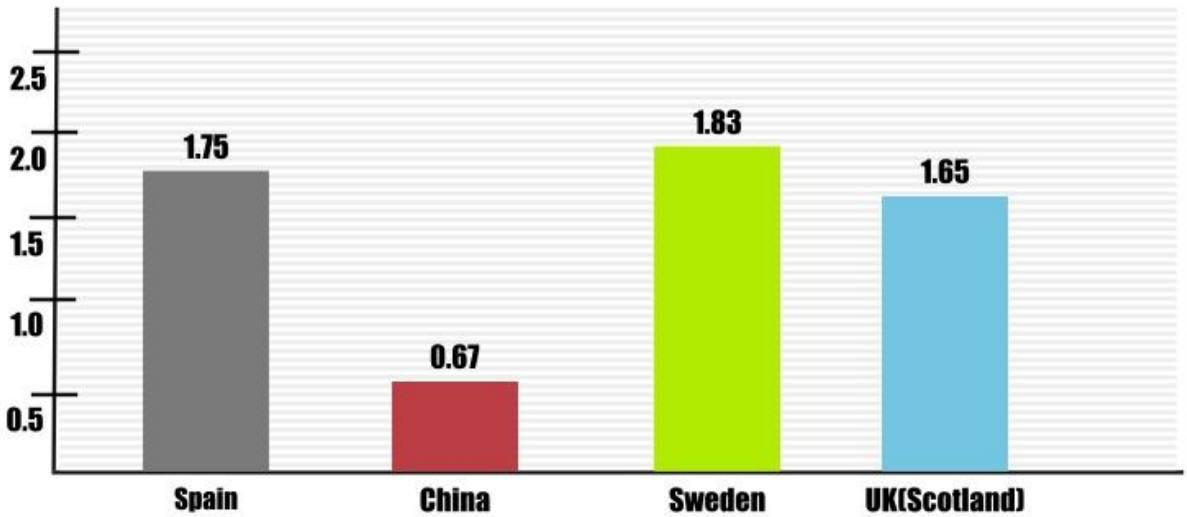
According to National Health and Family Planning Commission of the People's Republic China, the prevalence rate of dementia with people over 65 years old in China is 5.56% in 2017. Similarly, according to European journal of neurology 2010, 17:1236-1248 (EFNS guidelines/CME article) dementia affects 5.4% of the over 65years and its prevalence further increases with age. On comparing the prevalence rate of dementia between China and European countries are almost similar in occurrence. Figure – 1.1 will illustrate the similar occurrence of dementia between China and European countries.

Fig - 1.1 Prevalence rate of dementia with people over 65 years old



The comparison of prevalence rate between China and European countries like Spain, Sweden and UK (Scotland) have showed a low prevalence rate in China around 0.67% and a average prevalence rate of around 1.6 to 1.8% in Spain, Sweden and Scotland(UK). Figure - 1.2 illustrate the prevalence rate between China and European countries.

Fig - 1.2 Prevalence rate of dementia



Expected Prevalence Rate in 2030/2050

Over the time, the overall mortality rate declined steadily, with resulting in a steady increase in life expectancy of overall people around the world. This demographic trend results in population ageing the number of people with dementia. Importantly, the pace of population ageing is much faster in China than many other high-income or low- and middle-income countries. In the next 25 years, the percentage of people in China aged 60 years or over is expected to more than double, from 12.4% (168 million people) in 2010 to 28% (402 million) in 2040 (UN DESA, 2013a). In contrast, it took France 115 years, Sweden 85 years and the United States of America 69 years for the proportion of the population aged over 60 years to double from 7% to 14%. Moreover, in the near future, a person who reaches age 60 in China can expect to live longer than his or her ancestors. With population ageing increases dramatically, the number of people with dementia are estimated to increase substantially and double every 20 years. The considerable population with dementia in mainland of China is expected to reach 20 million by 2030 and exceed 40 million by 2050, figure - 1.3 demonstrates the expected prevalence rate of dementia in China (mainland).
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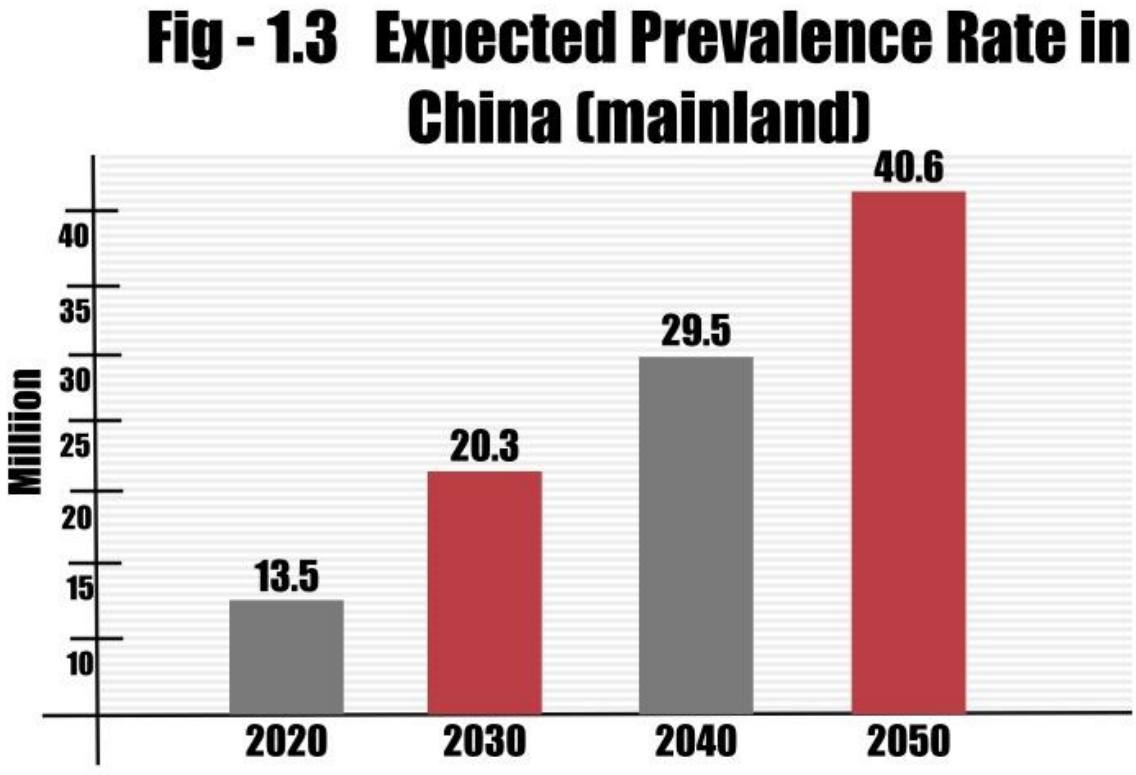
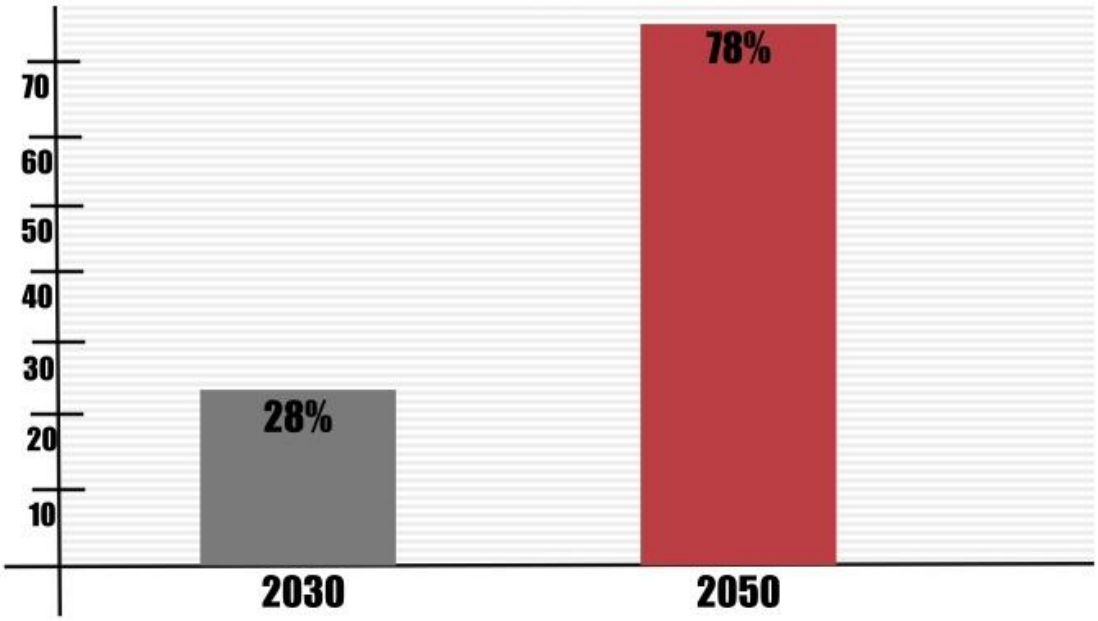


The expected proportional increase in the prevalence rate of dementia in Spain by 2030 is 28%, which is expected to double in the prevalence rate with proportional increase by 2050 about 78% (Figure - 1.4). Hence on comparing the expected prevalence rate between China and European countries, the prevalence rate of dementia is expected to double in every 20 years and expected to increase steadily with increasing elder population.

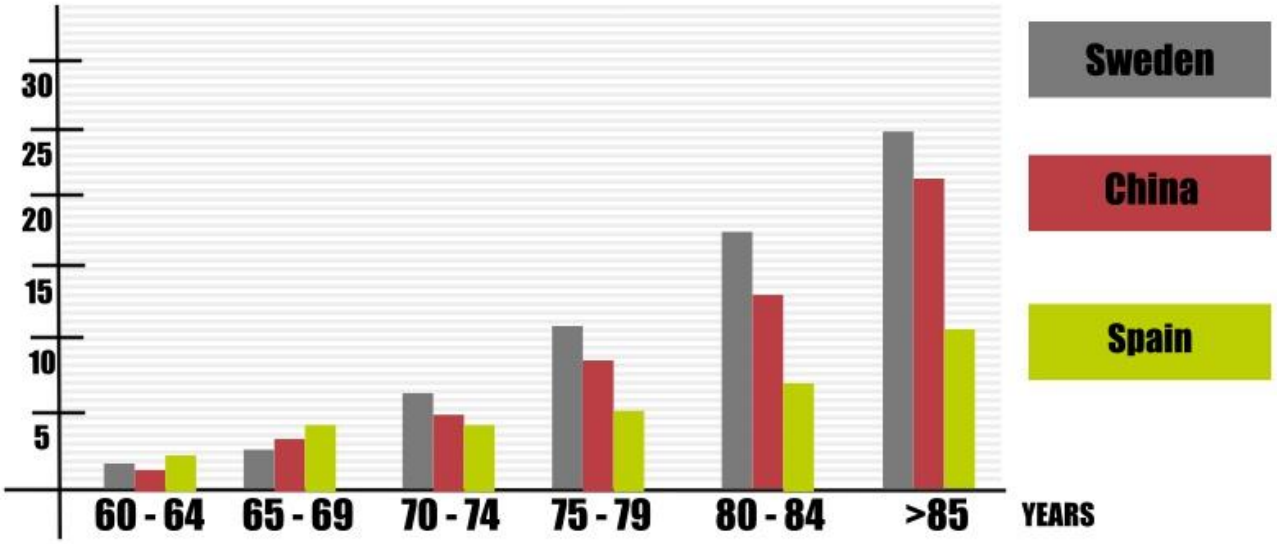
Fig - 1.4 Expected proportion of Prevalence Rate in Spain



Prevalence Rate – Based on AGE

The prevalence of dementia increases with age and is predicted to increase in China and European countries. There is a steadily increase in the prevalence rate as ages - many meta analyses showed prevalence of dementia is more between 79 to 89years. Figure - 1.5, illustrate the prevalence rate of dementia based on the age between China, Spain and Sweden. It also demonstrates that the prevalence of dementia increases between the age group of 79 to 89 years. On comparing the China and European countries it clearly shows that the prevalence rate of dementia is much higher in between the group of 79 to 89 years which explain the age group which needs more intense care between 79 to 89 years and preventing measures should be taken with people below 60 years.

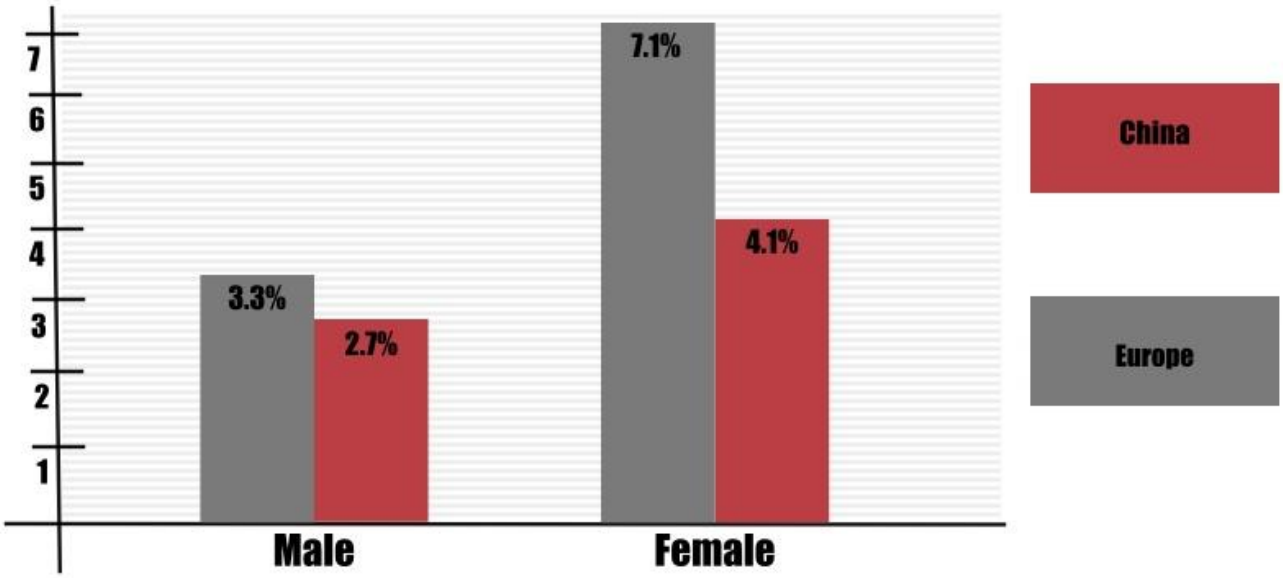
Fig - 1.5 Prevalence Rate of dementia based on AGE



Prevalence Rate – Based on GENDER

Comparing the prevalence of dementia based on gender between China and European countries has showed a higher prevalence in female in both China and European countries. Figure - 1.6 illustrate the higher prevalence rate in female with China with 4.1% and Europe(Spain) with 7.1% and male with prevalence rate of 2.7% and 3.3% in China and Europe(Spain) respectively. Similarly, in Sweden the female has a higher prevalence (No exact data available in figure) and in Scotland, 61,000 dementia patient are female among 93,000 (65%). Though several prevalence rate in several countries showed higher prevalence rate of dementia in female, few studies showed that gender is not a risk factor (when gender is considered as independent factor) which demonstrated the women have a hazard ratio (95% CI) were around 1.0 and P value of 0.989, based on the data from the Neurological Disorders in Central Spain (NEDICES), a population-based survey of elderly participants.

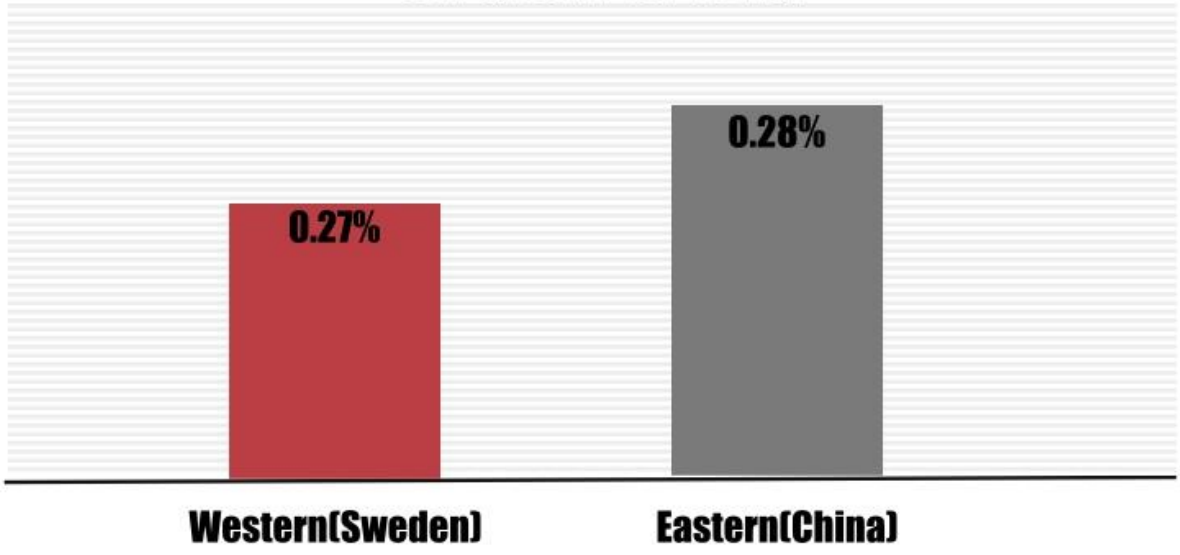
Fig - 1.6 Prevalence Rate of dementia based on GENDER



Incidence Rate

The incidence rate of dementia per annual seems to be approximately same between China and European countries, figure - 1.7 demonstrate the annual average incidence rate of dementia of China and European countries is 0.28% and 0.27% respectively.

Fig - 1.7 Annual average Incidence rate of dementia



Spain - (Incidence rate in Europe) which is around 15.08 per 1000 person per year. Age was a significant risk for the incidence of dementia with estimated rates increasing steeply with age. It is still unclear whether dementia is an age or aging-related syndrome and whether the exponential increase with age continues after the age of 85. Results from a meta-analysis indicate that the escalation of incidence rates slows down with increasing age, although the incidence rates themselves do not decline. This supports the hypothesis that dementia is age related rather than age dependent.

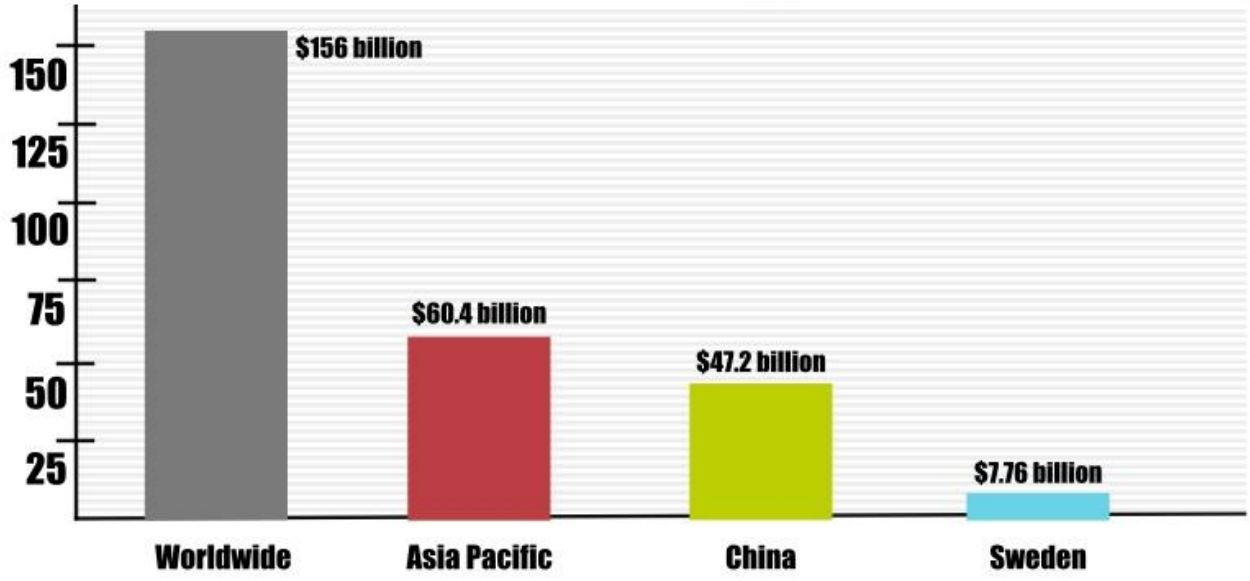
Average Mortality Rate

On comparing the several studies between China and European countries showed severe dementia frequently causes complications such as immobility, swallowing disorders and malnutrition that can significantly increase the risk of other serious conditions that can cause death. One such condition is pneumonia, which is the most commonly identified cause of death among elderly people with dementia. Elderly subjects with dementia face approximately double the risk of dying than those without dementia.

Economic Impact of Dementia

The worldwide direct cost of dementia is estimated at around US$156 billion, based on a worldwide prevalence estimate of 27.7 million people with dementia, For the Asia Pacific region, the estimated the cost of $60.4 billion for an estimated 12.6 million people with dementia. Figure - 1.8 illustrate the estimated cost around the worldwide, Asia Pacific, China and Sweden.

Fig - 1.8 Annual estimated cost on dementia

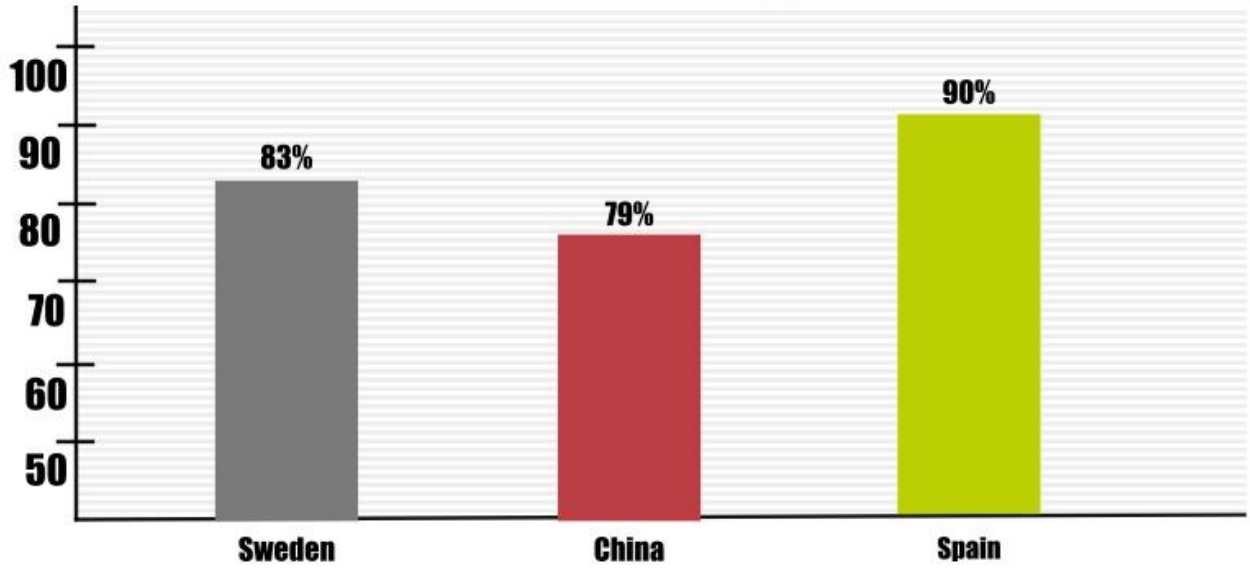


The cost of dementia in China is estimated at around $47.2 billions (the mean annual costs of formal and informal care for dementia), in Spain it is estimated that the total cost associated with dementia would be around 32.372 million euros, which amounts to $36.206 million (The currency rate used here is 1 USD=0.894 EURO).This quantity includes the average spend by family and the expenditure paid by the public agencies (Social Welfare, associations, etc.). In Sweden, the costs for dementia-related care was estimated to be 63 billion SEK, which amounts to $7.76 billion (The currency rate used here is 1 USD=8.12 SEK).

Caregiving

Dementia is associated with complex needs , especially in the later stages, high levels of dependency and morbidity. These care needs, which include identification, diagnosis and symptom management as well as long-term support, often challenge the skills and capacity of the workforce and services. In addition, a substantial proportion of dementia care takes place outside formal health care settings and is provided by family members. To improve the quality of life of people with dementia and their caregivers, it is essential that the care provided by health and social care services is coordinated and integrated and can be adapted to the changes that occur throughout the course of the disease. Caregiving refers to attending to another individual's health needs. On comparing the caregivers in China and European countries showed clearly that majority of caregivers for dementia patient as well for elderly people are female in China, Spain and Sweden. Figure - 1.9 illustrate the percentage of female caregivers in China, Spain and Sweden.

Fig - 1.9 Percentage of female caregiver



Treatment and Preventing Measure

The various aspect of therapy used in dementia management between China and European countries are compared and are entitled below.

Art Therapy as a psychosocial therapy that combines art and human elements was beginning to find application in the field of dementia research in European countries and some parts of China. In art therapy, through stimulating cognition with lines and colors, the patients are provided with a non-verbal channel of communication and are able to overcome inadequacies of self-expression due to impaired language ability and can vent negative emotions, thereby making significant achievements in improving attention and reducing behavioral and psychological symptoms; patient quality of life and social skills are also improved.

Music Therapy is a target-oriented and purposeful activity in which therapists work with individuals or groups, using musical expression and the memories, feelings, and sensations it evokes. It has been found to be particularly beneficial for older adults with various types of dementia and are currently used in both China and European countries. Music Therapy is used with older adults to maintain or increase their levels of physical, mental, social, and emotional functioning. Music used as a sensory and intellectual stimulation can help maintain a person's quality of life or even improve it.

Massage Therapy is a commonly used technique in physiotherapy in both China and European countries, and is defined as the methodical manual or mechanical manipulations of the entire body or a part thereof in order to mobilize superficial soft tissues with therapeutic outcomes. Indeed, there is strong evidence that massage therapy can decrease anxiety levels and agitation, and improve somnolence, in children and elderly subjects with dementia. According to clinical studies done by journal of traditional chinese medicine, found that relaxing massage could improve the behavioral alterations of elderly dementia patients, including drowsiness, participation in occupational activities of the center, and participation during eating. These improvements were gradual, with better results in the third month, after two months of treatment, while the behavior alterations worsened once the massage therapy treatment was withdrawn.

Ear Acupuncture of the pinna is also a commonly used treatment for various symptoms of different conditions such as anxiety, pain, and depression in China and seldom used in European countries. This technique improves well-being and the quality of life of patients and their caregivers. Nevertheless, the majority of studies of auricular acupuncture were performed on subjects without dementia. Further, after performing a systematic review, to our knowledge there are no studies comparing ear acupuncture in subjects with dementia to improve their behavior. Thus, the aim of the present study was to assess the effects of ear acupuncture on conductive behavior and ADLs in dementia patients. In the last decade, there has been increasing use of chinese therapies through auricular acupuncture.

Cognitive Intervention (CI) may provide a viable option for improving cognition in healthy aging, as well as in mild cognitive impairment and dementia, which are widely used in European countries. The conceptual framework introduced by Clare will be adopted in the

following section. The framework consists of 3 main approaches in CI: cognitive training (computer- based or paper-and-pencil cognitive exercises); cognitive stimulation (cognitive and social group activities); and cognitive rehabilitation (individualized interventions addressing patients' key difficulties and goals). Although many research on aging and dementia in general is a dynamic and a rapidly changing field, the CI subfield of this research is still in its infancy and in spite of the growing evidence of its effectiveness, is still lacking recognition among health professionals as well as caregivers.

A Line Dance is a choreographed dance with a repeated sequence of steps in which a group of people dance in one or more lines or rows, all facing either each other or in the same direction, and executing the steps at the same time. Recently Line dancing is practiced and learned among elderly chinese people. A large study has been confirmed that physical exercise through line dance is both economy and effectiveness intervention as promoting physical and mental health. Line dance has become one of the popular sports in elderly people. Line dance is a one of aerobic exercises, which dancers stand in a row or multiple rows, accompanied by international pop music or songs, dance repetitive steps and dance in a certain order. In virtue of its variety, easy to learn and practice, and less space limitation, line dance is more likely to be accepted by people.

Reminiscence Therapy is defined by the American Psychological Association (APA) as 'the use of life histories – written, oral, or both – to improve psychological well-being and which is widely used in European countries and China. The therapy is often used with older people'. This form of therapeutic intervention respects the life and experiences of the individual with the aim to help the patient maintain good mental health. The majority of research on reminiscence therapy has been done with the elderly community. Reminiscence therapy makes use of life events by having participants vocally recall episodic memories from their past. It helps provide people with a sense of continuity in terms of their life events. Reminiscence therapy may take place in a group setting, individually, or in pairs depending on the aim of the treatment.

Various Caregiving Task on Dementia Patient

Caregiving often includes assistance with one or more activities of daily living (ADLs), such as bathing and dressing, as well as multiple instrumental activities of daily living (IADLs), such as paying bills, shopping and transportation. On comparing the various caregiving task on dementia patient between China and European countries are more or same and all the actives are mentioned below.

- Assisting with personal activities of daily living, such as bathing, dressing, grooming, feeding and helping the person walk, transfer from bed to chair, use the toilet and manage incontinence. (China - 70% and Spain - 50%)
- Help with instrumental activities of daily living, such as household chores, shopping, preparing meals, providing transportation, arranging for doctor's appointments, managing finances and legal affairs and answering the telephone. (China - 20% and Spain - 28%)

- Helping the person take medications correctly, either via reminders or direct administration of medications.
- Helping the person adhere to treatment recommendations for dementia or other medical conditions.
- Managing behavioral symptoms of the disease such as aggressive behavior, wandering, depressive mood, agitation, anxiety, repetitive activity and nighttime disturbances.

Caregiving Burden

After comparing the caregiving burden between China and European countries, It is relatively well established that informal caregivers report poorer psychological and physical health. There is no concrete data available between China and European countries to show which countries caregiver suffers more from psychological and physical health burden. Though the overall burden is enlisted below.

These include psychological distress, a reduction in social support, loss of self-identity, physical strain and exhaustion, conflict between caregiving activities and other responsibilities such as work and parenting, financial burden and a change in the nature of the caregiver- care recipient relationship, particularly when caring for someone with dementia.

The association between caregiving and health is also likely to be modified by the intensity of caregiving engagement. For instance, there is evidence from the ONS Longitudinal Study that caregivers providing more than twenty hours of caregiving per week have worse health outcomes than caregivers providing 'light caregiving'

Intervention Designed to Assist the Caregivers

On comparing the intervention designed to assist the caregiver between China and European countries are similar in many aspect and the digested form of all intervention designed to assist the caregiver is listed below.

- There exists a "break" programs for caregivers and familiars in Spain.
- In China and Spain, information, assessment and social support associations for affected and familiars, social services, legal services, support/consultation phones for caregivers, social entities that provide services for elders and disabled persons, mutual help groups and psychological support, conferences and workshops for familiars and caregivers. Programs which aim is to support the caregivers, webs and other information materials.
- Social resources and services are also available in China and Spain (day care centers, nursing homes, psychology services for supporting the caregiver).

- Benefits and economical helps (dependence law and other helps, depending on each autonomous community) are designed to assist caregivers in China and Spain.
- In Spain, home support services (home support service, telephone support, catering service.) are available.
- In Spain, technical help and adaptation of the environment (social welfare's economical help for material and resources, technical help banks, companies that work assessing on how to overcome architectonical barriers, parking card for people with reduced mobility.
- Different associations and institutions that provide information or training to the caregivers are mostly available in Sweden.
- Assistive Living Technologies is intervention designed to assist the caregivers in Scotland. Providing technologies like reminder messages, clocks, medication management, GPS location & tracking device, picture phones, home care robots, smart carpets and smart homes

Education and Training

The China and European countries have the same system in education and training. The overall education and training is mentioned below.

- Strengthening health education for caregivers.
- Mental health education for family members of dementia patients.
- Emotional support for families with dementia.

Intermediate Level

- Technician in assistance to people in need of care (Spain)

Higher education Level

- Higher technician in social integration (Spain)
- Higher technician in socio cultural and tourist animation(Spain)
- Geriatric nursing (China)

Undergraduate Level

- Social education (Spain)
- Sociology (China)
- Psychology (China and Spain)

Postgraduate Level

- Dementia and cognitive impairment(Spain)
- Neuropsychology and dementia(Spain)
- Dementia and Alzheimer (Spain)

- Dementia care (Sweden)
- Geriatric Medicine (China)

Voluntary Education Training –

- Social Health attention training for people in dependence situation (Sweden and Spain)
- Nursery assistant training (Sweden and China)

Nursing Training for Senile Dementia (China)

Policy and Guideline

On comparing the China and European countries policy and guideline for dementia care and related issues with dementia are formed in the main key aspect which are highlighted below-

- The Plan for Healthy China 2030 (China)
- The Combined Medical and Elderly Care Service Policy (China)
- Health and Social Care Delivery Plan
- Integration of Health and Social Care and Primary Care Transformation
- National Clinical Strategy
- Caregiver Strategy and Act
- Self-Directed Support
- Palliative and End of Life Care Strategic Framework

Proposals

Obviously, there is a growing dementia challenge globally as elderly people is increasing. To meet the challenge and build a harmony society, no matter China or European countries, all stakeholder need to work together and contribute to more for dementia people and their caregivers. Here is some our proposals as follow.

- Making further improvements in dementia diagnosis rates and in the quality and consistency of post-diagnostic support.
- Working collaboratively with the new Integrated Joint Boards to support locality planning and re-design of dementia services.
- Prioritizing policy around dementia palliative and end of life care.
- Implementing a further Promoting Excellence dementia health and social services training and education plan for the next several years.
- Continuing the national focus on improvement in dementia mental health settings.
- Continuing to identify and promote the specific issues and needs of the dementia client group as part of the process of implementing the recommendations of the Task Force for the Future of Residential Care.

- Continuing to work with service user and carers groups.
- Continuing to support research through funding Dementia Clinical Research Network and maximize the impact of and funding opportunities for research capacity every place.
- Recommendation dementia prevention recipe of Chinese medicine and socialized culture life and activities.

After comparing the caregiving system, hospital system and other local body that works on dementia care between China and European countries similar outcome, so the steps required to improve the above mentioned system is highlighted below.

Steps Need to Be Taken to Improve Carers

- Have recognition of the unique experience of caring for someone with dementia.
- Are recognised as essential partners in care – valuing their knowledge and the support they provide to enable the person with dementia to live well.
- Have access to expertise in dementia care for personalized information, advice, support and co-ordination of care for the person with dementia.
- Have assessments and support to identify the on-going and changing needs to maintain their own health and wellbeing.
- Able to access good quality care, support and respite services that are flexible, culturally appropriate, timely and provided by skilled staff for both the carers and the person for whom they care.

Steps Need to Be Taken to Improve the Hospital

We would like to see all hospitals commit to being dementia friendly so that greater improvements can be made in the

- Environment in which care is given.
- Knowledge, skills and attitudes of the workforce.
- Ability to identify and assess cognitive impairment.
- Ability to support people with dementia to be discharged back home.
- Use of a person centered care plan, which involves families and carers.

Steps Need to Be Taken on Public

We want the public to change how it thinks and feels about dementia and to understand how to help people with the condition. This means having the confidence to engage with people who have dementia and the skills to interact in a way that is both useful and welcome.

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