Dwelling for Alzheimer's
The living organization between public and private spaces

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ABSTRACT

Alzheimer’s disease is a form of dementia, memory problems are the most characteristic symptom of Alzheimer’s disease. Their poor cognitive ability of the environment makes them more eager to get a sense of belonging. Alzheimer’s now affects 40 million people worldwide, today’s pharmacological research can’t provide treatment. It is necessary to improve the quality of life of patients with therapies acting on residual potential. In this sense, the interior design becomes an important part, because of a calibrated environment on the abilities to the sufferers, it attenuates the psychological and perceptual discomfort. Cognitive decline and behavioral disorders make it difficult to report to the others. To create a spontaneity public environment, it makes the patients as a social status relevant, and help the sick to stay active, favoring psychological well-being. In older to create a space for communication, it is important to find the connection between the public and private, filters from the inside to the outside, the patients require social contact with the community. The research will ring from interior design and space and individual and society, and design of making plans in order to find a way to put in contact with the Alzheimer’s world and contemporary society. In all of the above, I try to find a new relationship between the patients and their living environment, and this relation as the face of the home as a face to the public, in order to help the people with Alzheimer’s disease to engage in the social life and be part of society, and “producing” new relations.

Keywords:

Alzheimer, living, interior design, environment, communication, private, public, well-being
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1.1 Research topic selection

It's a great thing for me to study people's living space, also the healthcare projects are a wonderful challenge for designers. Alzheimer's now affects 40 million people worldwide. But only a small number of people is concern with this kind of problem, I hope more people can understand and help people with Alzheimer 's disease is one of the purposes of my research. As a designer, what should I do to help the people with Alzheimer 's disease? With this question, I would like to understand their living environment and their inner world. Each person with Alzheimer's disease is unique, they have their own individual tastes and preferences. But there's one thing they have in common, they are eager to contact with the world, they are afraid of forgetting and more afraid of being forgotten, afraid to face this strange world, if an environment makes them have a sense of being at home, perhaps the world will not be so strange for them.

At first, the thesis topic has been inspired from a book, the [Heidegger for Architects1], Heidegger has deep thought especially for space, spatiality, place, site, and dwelling and other related concepts of space. Heidegger mentioned in [Building Dwelling Thinking] 1. building is the real dwelling. 2.dwelling is a way of existence of the mortal man. 3.as dwelling building expanded to protect the growth of building. The old High German word “buan” meaning dwelling, which means "stay", "love “and "care”2.

1. Heidegger for Architects, Adam Sharr. 2007
2. Building Dwelling Thinking, Martin Hedegger, 1971a: 158.
This thought makes me think deeply, the relationship between people (AD patients) and their living space. There is a significant relationship between people and their living environment, “Dwelling”: namely implied the relationship to be established, for Alzheimer’s what is the relationship between them and their living space? Indubitability, it should be a safe environment, and it is open, it can guide people how to get in touch with each other, contact with the surrounding environment. The change of the relationship between people brings about the change of architectural space. I think the relationship between people and space is mutual, so the space and environment that people live is also mutual, that is a state of mutual penetration and fusion.

I want to spend more time trying to figure out a way to deal with the spatial relationship, the word “correlation” can be used as a guide to my design concept, its interpretation in the dictionary is “connection, linked relationship.”

In my design concept, it refers to the interrelationship between human and their living space, that makes people in which you can ignore the “sense of distance,” in the building space should give people more choices. It is not enough to pursue safe and comfortable space, in order to promote communication between people should have more “optional.” We cannot impose the function of the building on others, in the same space, some people need close together and some people want to keep the distance, at this moment space should have the “optional.” It becomes a kind of interactive space to accommodate and stimulate various possible behaviors, the development and accessibility of space should be strengthened to accommodate different functional requirements and to satisfy different behavioral needs.
1.2 Purpose of the research - research questions

Within the search for new kinds of living space for the dwelling of Alzheimer’s, the living space that is able to react to the changes in society, I investigate in what way the relationship between private and the public has to be redefined. The research will ring from interior design and space and individual and society, in all of the above, I try to find a new relation between the patients and their living environment, and this relation as the face of the home as a face to the public, in order to help the people with Alzheimer’s disease to engage in the social life and be part of society.

What kind of living space of innovation might be suitable for the dwelling of people with Alzheimer’s disease?

The living space for Alzheimer’s need sequences from inside to outside or need the closed cocoon?

Is the relationship between public and private of living space of the key to understanding and opening the interaction between patients and their environment?

How should the living space represent the dwelling to the public?

1.3 Thesis’ objectives

This paper starts with the relationship between people with Alzheimer’s disease, space, and society, from interior design space and sociological perspective, the relationship between public and private is the key to understanding and opening the interaction between people (patients, caregivers, local-residents) and the environment. Based on the openness of environment, according to the correlation between patients and their living space, the proposed project aims to establish a communication environment for patients with Alzheimer’s disease.
2. Background of this research

2.1 The proportion increase of Alzheimer’s disease population growth

After the end of World War II, some developed countries in Europe, North America, the issue of human rights has attracted much attention in the whole society, affect the field of architecture, architects began to realize their social responsibility to rethink the living environment and human health, behavior, psychological problem1. Also with Europe and the United States have entered the aging society, the elderly population has become an important object of environmental design and social services, coupled with the elderly dementia-related diseases have begun to attract the attention of the whole society, so after World War II, first in the Nordic countries and other developed countries in Europe, and then affect the United States, Australia, the special care facilities with dementia begin to develop. Experts and scholars from various countries began to criticize the traditional institutional space environment, instead emphasizing the family-style space environment for the elderly and their families, to explore the living environment for the elderly with dementia’s physical, behavior, psychological impact2.

There is no cure in sight and, despite the forecasted gravity of the situation, a mere 3% of the government’s medical research budget is being spent on dementia research, compared with the 25% being spent on cancer research (Alzheimer’s Research Trust, 2009). Government forecasts estimate the number of dementia cases will rise by 70% to approximately 1.2 million by 2028, increasing further to 1.71 million by 2051 as life expectancy increases. Professor Martin Knapp, from the London School of Economics, predicts a rise of 88% by 2031, when close to 400,000 will be in long-stay institutions (Donnelly, 2008). Despite this, nursing home places for elderly people with dementia have fallen by 9% over four years (Beckford, 2008).

The lack of resources stems from a more fundamental cause: a lack of awareness. Here’s what few people know but everyone should: Alzheimer’s is a disease, and we can cure it. To create exceptional caring environments, and to find solutions that better satisfy the needs of older frail adults, many of whom have Alzheimer’s disease. Think about the relationship between health and a healthy environment. In other words, the issue isn’t just indoor air quality, it’s also outdoor.

In reviewing the glorious history of Alzheimer’s disease, we also have to admit such an objective fact: More than 100 years of exploration and research to bring our rich achievements and resources is not enough to make people out of Alzheimer’s disease. Like the ends of the balance, one end is growing pressure and burden; the other end is a limited way out and measures. Alzheimer’s disease is one of the costliest chronic diseases to society. The growing Alzheimer’s crisis is helping to bankrupt Medicare. In 2016, total payments for health care, long-term care and hospice are estimated to be $236 billion for people with Alzheimer’s and other dementias, with just under half of the costs borne by Medicare. By 2050, the number of people age 65 and older with Alzheimer’s disease may nearly triple, from 5.2 million to a projected 13.8 million, barring the development of medical breakthroughs to prevent or cure the disease.

3. https://www.youtube.com/watch.Alzheimer’s Is Not Normal Aging And We Can Cure It/ Samuel Cohen/ TED
The proportion of Alzheimer’s disease population growth and the rate of increase of medical cost. (Copyright: from newsroom.ucla.edu.)
Architects began to rethink how to design the living environment.

Aging population causes Alzheimer's disease increase.

The change from the model of special care to the model of memory care.

1960: No specialized dementia care and maintenance space.


The Alzheimer's care environment development history.
Alzheimer's takes a devastating toll on caregivers. Nearly 60 percent of Alzheimer's and dementia caregivers rate the emotional stress of caregiving as high or very high; about 40 percent suffer from depression. One in five care contributors cut back on their own doctor visits because of their care responsibilities. And, among caregivers, 74 percent report they are "somewhat" to "very" concerned about maintaining their own health since becoming a caregiver. As a result, the economic burden and social problems caused by Alzheimer's disease are becoming more and more severe, which has become a great challenge for all humanity in the twenty-first Century.

Take the Europe and the United States as an example (Figure 1). Not specifically for the elderly with dementia care and maintenance of space before the 1960s, even for only minor physical problems of the elderly as a patient to take the same hospital model to live, in 1960-1980, the dementia special care units, began to appear in some long-term pension institutions. But this period is still developing weak and slow. From 1980 to the end of the 20th century, dementia care environment has been leaps and bounds, the number of disabled care units increases. The study of the environment for the care of the elderly has emerged, the space environment from the original institutional, therapeutic into home-style and rehabilitation, design strategy has undergone a fundamental change. In the study of environmental behavior psychology for the elderly with dementia, the concept of "Dementia-friendly" is gradually developed. In the study of environmental behavior psychology for the elderly with dementia, the concept of "dementia-friendly" is gradually developed. A "dementia-friendly" environment can be seen as a system, integrated everything that can make the people with dementia live in normal life and experience the environment. Current research on the environment of “dementia-friendly,” covering from the interior space to the outdoor landscape, from the building to the city, from the physiological to the behavioral psychology and other aspects. The design concept has changed from the traditional focus on institutional management to focus on human dignity and independent personality.

Alzheimer’s disease becomes a challenge in the future of humanity in a changing world

Unlike other chronic diseases, Alzheimer patients need people’s care in the early stages of the disease, as the disease progresses, the dependence on the caregiver is gradually increased due to the gradual degradation of cognition, function, and behavior. In the early stages, the patient will become more forgetful, difficulty in making decisions and doing housework, caregivers need to always give emotional support, to remind patients about things and work, and to assist in the implementation of more complex transactions (such as financial management and shopping). In the middle stages, the symptoms will get worse, more difficult to communicate with people, the need to assist in personal care is even extended to personal hygiene, even with family or care assistance, to live alone is still a big challenge. There will be behavioral changes (including wandering, sticky, agitation or aggressive behavior). In the final stage, Alzheimer patients will not know the time and place, also can not recognize relatives, friends or familiar things, they cannot eat without help, their activities are limited even to bed.

Alzheimer’s takes a devastating toll not just on those with the disease, but on entire families. Alzheimer’s takes a devastating toll on caregivers. Nearly 60 percent of Alzheimer’s and dementia caregivers rate the emotional stress of caregiving as high or very high; about 40 percent suffer from depression. One in five care contributors cut back on their own doctor visits because of their care responsibilities. And, among caregivers, 74 percent report they are “somewhat” to “very” concerned about maintaining their own health since becoming a caregiver.  

**Long-term care options:**

Long-term care includes health care and social care services, health care services include long-term care, health services for home care, personal life care services (basic activities to assist in daily life), palliative care. And the social care services include parenting assistance (for example, family services), care assistance (assistance to instrumental daily activities), and other social services provided by life support facilities or living assistance housing. The boundaries of the two care systems are not very clear, the purpose of the allocation of funds and services is to integrate the contents of health and social care into a single structure, now it is a number of economic cooperation and development organizations (OECD) countries priority policy.
Family (non-professional) and paid (professional) care:

Non-paid care services provided by family, friends and community are often referred to as “non-professional” care. Paid caregivers can be directly employed by government, private (forbidden or nonprofit) care homes, social care institutions in the community, or family members of the patient. They often undergo little training and are faced with challenging and heavy works, but only modest pay; this creates a high turnover rate of care and quality of care. Family caregivers can also often engage in all “hands-on” care content provided by paid caregivers. But they also have an important role to advocate for their rights and interests of patients with Alzheimer, and planning the care of patients, even if they are in the distance. In a number of studies in the United States, Dominican Republic and China, compared to other caregivers, caregivers of Alzheimer’s patients must provide more intensive care, need more personal care assistance, and face greater stress. The maintenance facilities of patients with Alzheimer basically include: security facilities or life assistance housing, nursing home and Alzheimer’s special care unit. More than half of people over the age of 80 are taken care of at home, only one-third of the long-term caregivers are taken care by the conservation agencies. Studies have shown that the predictors of access to conservation agencies are primarily related to care needs (cognitive and dysfunctional). When caregivers are old people, and caregivers face psychological difficulties or stress, so need to live into the conservation institutions. In the long term, home care or care in the conservation agencies which can maintain the quality of life of patients with Alzheimer? Is a very important question and difficult to answer.

**PS:** This is a hotel in Milan for Alzheimer, from the picture we can clearly see the quality of its living environment. The building may not have considered too much about lighting design, as well as visual design, and the quality of living, and we can see that it does not seem to have the character of openness.

**Dark and poor**

I believe that those with dementia are considered a lost cause; a group of usually elderly and frail people who aren’t worth the investment needed for a medically focused service.
The photo shows an eating area with a timber floor. The floor is light natural timber in colour and has circles of lighter coloured timber inserted as a pattern. The circles of lighter timber are approximately 1.5 metres in diameter.

Circles may appear as piles of sand, pools of water or holes to people with dementia, and they may feel confused and discouraged from moving into an area with this kind of flooring.

Sadly this is still the predominant face of Alzheimer’s care homes in U.K.
2.2 Isolation is endemic among people with Alzheimer's disease

Alzheimer's living environment can be divided into two types: one is the reconstruction of the partial building, the other one is build a new environment, no matter reconstruction or new-build, in the space environment design, mostly start from the general sense of comfort, such as barrier-free design, home-style design, but lack of care for the physiological and psychological behavior of Alzheimer's patients. Mainly as follows:

1. Hospitalization, guesthouse monotonous unified spatial environment layout, lack of affinity.
2. Poor recognition of space, patients easily lost.
3. Lack of activity space, existing space cannot attract the patients, and low utilization.
4. Multi-person set, the space lack of privacy, less semi-private space and monotonous
5. Less outdoor space and poor interaction with the surrounding environment.

The quality of care and improvement:
The general process and outcome indicators may not be able to grasp the essence of good care quality. Take the British Alzheimer's disease Association as an example, they think three areas are closely related to the care quality of life: Environment, activities and interpersonal relationships, it can be pursued with four eternal principles: to understand the people with Alzheimer, focus on the quality of life rather than care quality, everyone has a leadership role and value-based care.
Quality of life as an indicator of quality of care:
The quality of life (including emotional, physical, social and environmental aspects) is an important indicator of achievement in health services research. Take the Alzheimer’s disease as an example, it will follow the overall clinical severity, cognitive, life function and abnormal behavior of the measurement to track the process of disease and assessment of efficacy. It is worth arguing that the maintenance and promotion of quality of life should be the basic and overall goal of taking care of patients with Alzheimer. TOM KITWOOD’s Early Research on Personality and Happiness, to understand the quality of life of patients with dementia have a significant impact. He presents four general stages of happiness: personal values, abilities, social confidence and hope. These conditions are particularly susceptible to the adverse effects of the patient’s physical and social care environment.

The quality of people with Alzheimer’s disease self-evaluation life seems not because of the progress of time or clinical disease to change, self-evaluation of the maintenance of quality of life is an encouraging sign, because it is related to the patient’s condition. However, our challenge is how to improve the quality life of these patients in order to achieve the best condition.

The quality of people with Alzheimer’s disease self-evaluation does not relate to social and demographic and clinical factors. But it is significantly affected by emotion, the more symptoms of melancholy or anxiety lead to a worse quality of life. The characteristics of the conservation agency may affect the quality of life of patients. 2015 Minnesota Nursing Home Resident Quality of Life and Consumer Satisfaction Survey: the quality of life of the residents was higher in the nursing home with more qualified nursing staff and the active Design. The findings conclude that when the organization has more such professionals, it will increase the sense of happiness of the residents. The cognitive impairment of the variables to be controlled, residents living in Alzheimer special care units also have better quality of life. Because such units will take into account the individual needs, and it will provide more design activities and special care to improve the quality of life and promote the rights of autonomy and choice.

9. Professor Thomas Kitwood: one of his major innovations was Dementia Care Mapping, an observational method for evaluating the quality of care in formal settings. http://www.independent.co.uk/arts-entertainment/obituary-professor-thomas-kitwood-10455269.html
persona-centered care:
The persona-centered care: Service user participation, consider the user's needs and ideas, take the user's mind to understand how demand is and how to be met, and provide flexible and responsible services. This method applies to the entire care process.

Value is a widespread belief that people pay attention to the degree of life, the preference is a specific choice based on their values. Both are influenced by personality traits and attitudes. To care for Alzheimer's values and preferences. It may involve family participation, the structure or flexibility of everyday life, the need for privacy, and whether freedom is more important than safety.

Therapy by Design: The case for a non-pharmacological approach

The challenging behavior associated with Alzheimer's Disease often becomes unmanageable at home, or a danger to the individual, and it is at this point that most dementia sufferers move to a care facility. Due to the high demand, this behavior puts on staff; antipsychotic drugs are often administered unnecessarily for their sedative effect. However, research at the University of California (2008) has revealed that stress hormones can rapidly increase cognitive decline in Alzheimer's disease, with scientists suggesting that stress management and reducing the use of some medications could significantly stave off the deterioration of patients (LaFerla, 2008). The design of supportive environments could play a key role in stress reduction and thus improve the quality of life. The Hearthstone Alzheimer's Family Foundation, founded in 1995, aims to focus on non-pharmacological approaches and supports research into the design of physical environment features to cue memories, support independence, improve way-finding, or produce positive emotions and the use of nature, gardens, plants, and animals as therapeutic milieu (The Hearthstone Foundation, 2008). Anne Kapf (2008) also describes the benefits of a sensual environment promoting seeing, hearing, touching and smelling. Design recommendations and criteria encountered throughout the research process were documented in sketch form, which led to one of the first products of this research; a booklet entitled 'Design for Dementia- A visual snapshot' (Figure 1).
Cover image of 'Design for Dementia- A visual snapshot' showing examples of thumbnail sketches used to visually document the research process.
2.3 Alzheimer’s disease as a chance to renew the approach to our design

This research revisits one of the most fundamental aspects of interior design and architecture—how to perceive space and motivated by a consideration of how we should build for people with Alzheimer’s disease. As the illness progresses, it causes those affected to feel increasingly lost. Until now, interior design and architecture have responded mostly by creating the special design that attempts to compensate for the deficits resulting from a sense of disorientation. The more elementary question of how spaces can afford a sense of safety and security that contributes to greater self-assurance and a better quality of life in only rarely addressed.
The people with Alzheimer’s also need connections related to the social environment:

Isolation is endemic among people with Alzheimer’s. This is an important emotional issue but also a significant risk factor for health. One Alzheimer’s patient said: “The general public do not see us … we want to be part of normal society.”

Care environments should proactively engage with volunteers, neighbors, and people of all ages in their local communities. For example, there is much anecdotal evidence to suggest that interaction with babies and children enriches the lives of people with Alzheimer’s – a hypothesis supported by a number of studies into intergenerational engagement. Sabina Brennan - a dementia expert, says: “We should care for our older adults in the same places that we care for our young children.”

Making sense of our environment is paramount to health and quality of life. For people with cognitive impairments such as people with Alzheimer’s disease, impaired memory and a reduced ability to reason contribute to confusion, anxiety and a reduced quality of life. Well considered interior design can help reduce this anxiety by providing cues to help people make sense of their surroundings. Research from the residential care industry, for example, shows clear evidence that good design is particularly beneficial to the wellbeing of people with cognitive impairments and visual impairment.

The interior design has grown to become a key consideration in the design of health and care environments; especially interiors intended for people with dementia. An appreciation for the enabling and health-promoting qualities of good design is now filtering into wider society.
where Alzheimer's design principles are being considered across a wide range of public environments, such as theaters, libraries, and supermarkets. Moving forwards, the aim for interior designers must now be to create public interior spaces which are truly accessible for not only those with Alzheimer's and impaired vision but for those with other forms of cognitive and neurological impairments.

Design interventions are now being considered as a treatment for Alzheimer's disease, increasingly, as the initial line of treatment before pharmaceutical medications are prescribed. There has also been a notable reduction in the use of anti-psychotics and need for sedation. High-quality Alzheimer's-enabling design can be achieved through simple design decisions and basic moves making it possible for people with Alzheimer's disease to live more independently allowing a fuller, more enjoyable life. If all design in care homes are friendly, that does not only improve the lives of the majority of residents but we also reduce the additional stress confusion and anxiety caused by current practices of moving residents from one area to another as their condition eventually deteriorates.
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3. Alzheimer's disease

3.1 Aging and Alzheimer's Disease
Aging

Since ancient times, people have been pursuing the continuation of life, but people always will be getting old. Aging can make your skin saggy, your pants bulge, your joints hurt, your blood pressure rises, and your risk of disease increases, it’s just for beginners. Because older people are often portrayed as unavoidable, the physical and mental safety of the descent, Perhaps the greatest fear comes with having another birthday is the terror of dementia—everyone’s shared nightmare about massive cognitive failure and the eventual loss of self-identity. But contrary to public perception, fully 60 percent of people over 80 years old age live independently in the community.1

Meanwhile, neural apoptosis model shows constant apoptosis of nerve is the cause of the aging brain, Cause of decline in aging and the brain function is apoptosis of nerve growth nerve is dominant, Alzheimer’s disease, Parkinson’s syndrome, high blood pressure and diabetes are common diseases of old age.

Some studies also show that diseases have a very close relationship with pressure. Therefore, to improve the living environment, and get rid of some bad habits, get regular physical activity, maintain a good state of mind, very helpful for us to maintain youthful vitality, longevity.

Demographics and Global aging

Global aging is also occurring at a rate never seen before. The world’s population age 65 and older is growing by an unprecedented 800,000 people a month. At least a sixty-fifth birthday. By 2030, Italy and Japan are predicted to have the greatest percentage of older people, 28 percent, and they are on target to have more citizens over 80 than under 20 in the next 50 years. Italy has replaced Sweden as the world’s oldest countries, with 18% of Italians having celebrated at least a 65th birthday. The number of older persons is growing faster than any other age group in the population. In 2015, has 48% more people aged 60 years or over than 2000 years, and around the world in 2050, the number of older adults is expected to have 2000 has increased by three times in a year. And this is, at the global level, ten years old and adolescents and youth will change little in the number of children under the age of 10-24: children and teenagers and young adults in 2050, the projected figures in 2000, an increase of 11%. 25-59 the number of adults in the world grew faster than some children, but not rapid population age 60 Age or older. In 2015, has more people than in 2000, 29% and forecasts show that by 2050 there will be more 62% than in 2000.

As more and more people over the age of 65, but who will provide the elderly and more professional care for the elderly? And more and more people are finding themselves in the role of caring for their parents for most caregivers. Providing care for older family members is only one aspect of a busy life. Elderly care depends on many different factors; these include cultural and contextual factors, the individual characteristics of parents and children, family structures and state welfare provisions. Empirical analyses show that inter-generational care is most common in southern and central European countries where state support is available for children to care for their parents. Also, in countries such as Greece, Italy, and Spain, care for the elderly has traditionally been a matter for the family.

3. survey of health, aging and retirement in Europe.
Age-related Memory Loss & Memory Problems

Remembering and forgetting is an entirely normal part of everyday life. To retain our lifetime access to every bit of information is overwhelming and inefficient, even if we call the brain’s Supercomputing, so forgetting may be almost as important as remembering. Classification is not yet clear how the brain into long-term memory and what not recorded. However, the likely impact of this process is affected by many things, including our emotional state, our stress levels, the environment around us, old memories, prejudices, and perceptions. We know that with age we are more likely to forget, but we may need more time to learn; people have declarative memory difficulties, can consciously recall and record memories. A substantial number of 80-year-olds perform as well as people in their thirties on tough memory tests⁴.

Between the ages of 30 and 70, the brain produces about 15% to 20% neurotransmitters, which transmit information between neurons. This combination will bring the normal memory loss, such as “misplaced handbag,” memory by hypertension, chronic stress, further deterioration of heart disease and stroke. The latter two may lead to significant and sometimes permanent cognitive problems. For most of us, age-related memory loss is most evident in working memory. The most often-cited lapse? The “where did I put the car keys?” phenomenon. Happily, “Some types of memory, especially procedural memory, are often unaffected by aging,” notes Laura L. Carstensen, Ph.D., professor of psychology at Stanford University, in Palo Alto, CA. Once you find those keys, your ability to drive remains intact. To manage working memory hitches, always keep important items in the same place—such as keys on a key rack. Perhaps the glitch adults complain about most is forgetting a word or name you know well.³
What is Alzheimer’s disease?

Alzheimer’s disease (AD), also known as just Alzheimer’s, is a chronic neurodegenerative disease that usually starts slowly and gets worse over time. It is the cause of 60% to 70% of cases of dementia. The most common early symptom is difficulty in remembering recent events (short-term memory loss). As the disease advances, symptoms can include problems with language, disorientation (including easily getting lost), mood swings, loss of motivation, not managing self-care, and behavioral issues. As a person’s condition declines, they often withdraw from family and society. Gradually, bodily functions are lost, ultimately leading to death. Although the speed of progression can vary, the average life expectancy following diagnosis is three to nine years.\(^6\)

In the mild to moderate stage of Alzheimer’s disease, the brain responsible for memory, thinking and planning for the region to form more plaques and nerve fiber tangles, leading to significant deterioration of memory or thinking, seriously interfere with daily life and work. In dealing with money, self-expression and logic of thinking, often feel confused and difficult. The majority of patients with Alzheimer’s disease was diagnosed at this stage of the course of the disease.

In the stage of severe Alzheimer’s disease, most of the cerebral cortex was severely damaged, also due to a large number of brain cell death, brain atrophy, so patients lose communication, identify family and self-care ability.

\(^6\) [https://en.wikipedia.org/wiki/Alzheimer%27s_disease](https://en.wikipedia.org/wiki/Alzheimer%27s_disease)
Now, we know that Alzheimer's disease is a chronic neurodegenerative disease that usually starts slowly and worsens over time, it will lead to memory, thinking and behavioral dysfunction. Alzheimer's disease is an abnormal aging degenerative disease, not a mental illness. Alzheimer's disease is the most common cause of dementia, a general descriptive term for memory loss and even other intellectual problems that are severe enough to interfere with everyday life.

As the daily life of Alzheimer's patients is severely disturbed by the disease, influenced by the disease is not only the patients themselves, the physical and psychological well-being of caregivers are also affected. Taking care of people with Alzheimer's disease is a very difficult job, many family members or friends who care for their patients will eventually develop high levels of emotional stress and even depression.
Alzheimer’s disease can worsen over time and eventually lead to death, although everyone’s condition and symptoms are not the same, but most of the first difficult problem for the patients is amnesia, that makes them in the family life and work, as well as to participate in the usual interests and hobbies and other activities, feel powerless. Other symptoms of the disease include confusion, getting lost in familiar places, putting things in the wrong place, even having difficulty in speaking and writing.

The development of Alzheimer’s disease will be different due to different factors lead to a different course. In general, the average life expectancy of patients is about 8 years, but there are patients survived for twenty years. In the early stages, degradation of the brain may have already occurred, to the course of mild to moderate stage, the majority of patients with Alzheimer’s disease can only survive 2 to 10 years, while the majority of patients with severe Alzheimer’s disease only have 1 to 5 lifespans. However, we have to face such a reality: on the one hand, the prevalence, morbidity, and mortality of Alzheimer’s disease increase rapidly as global aging and life expectancy increase; on the other hand, relying on the existing technical means, Alzheimer’s disease is still no cure, even rare drugs can block the course of its development. As a result, the economic burden of disease and social problems have become increasingly severe, not only related to Alzheimer’s disease patients and their families, but also to the whole society and even the country’s development has brought immeasurable impact. Therefore, it is of great social significance to raise people’s awareness of early warning signals, to obtain early diagnosis and treatment, to provide reasonable care, to improve the quality of life of patients and prolong life.

3.2 Alzheimer’s as a mode of being: The living environment and everyday competency

Alzheimer’s affects every fourth person over 65 years of age and the average duration of the illness is around ten years, at the same time, the disease can last two times, during which about 2/3 of Alzheimer’s patients live at home and are cared by their relatives. Patients with the early stage of the lack of consciousness to the development of the disease and their surrounding environment changes have a mutual effect. Everyone has a specific relationship to their immediate environments which is influenced by the congruence or fit between one’s personal wishes and needs and the conditions and demands of the environment. A key criterion is the ability of the person to feel independent and safe. Even people with mild cognitive impairment (so-called MCI patients) exhibit a change in their interaction with their environment. These cognitive impairments lead to a person’s memory dislocation, they may feel ashamed and inadequate, do not know where they are, can’t find the right way to conduct their daily lives, these difficulties will lead them to slowly out of touch with society. The home and immediate surroundings of Alzheimer’s sufferer may on the one hand become a corset, and on the other provide compensatory elements as, according to ecological psychology, people are influenced in their experience, thoughts and actions by their environment and where they live. This means that people and their behavior inextricably linked to the surrounding environment, in fact, applicable to healthy people or people with impaired memory. In order to better understand the behavior of Alzheimer’s patients, to better adapt to their living environment, so that they can live independently.

Memory loss as a threat to identity and everyday life
In the first few years of Alzheimer's disease, memory loss and loss of orientation are the main symptoms. More complex challenges in daily life, such as financial arrangements, organizing and maintaining appointments, finding new places and coping with road traffic are paramount questions. Patients have barriers to new places and traffic. They do not think they are sick, still believe they can solve these problems. However, as time goes by, frequent occurrence of the situation, the patient in dealing with daily operations encountered more difficulties, thus causing uncertainty and worry. Uncertainty leads in turn to loss of confidence and vitality, which may eventually result in retreat to and interaction with the person. These shortcomings make it more difficult for patients to accept the conditions of daily life. Social contacts with friends and acquaintances suddenly become unpleasant, and the communication and interaction with their different environments begin to decrease and is then completely avoided. The overall pattern is an increased exit caused by an inappropriate subjective feeling. Little by little, they start to lose control over their lives.

In many cases people with cognitive impairments lose interest in activities and hobbies that were previously important them and gradually withdraw from actively and emotionally shaping their direct surroundings. The everyday world of people in the early stages of Alzheimer's is characterized by a loss of confidence in their own self efficacy. Because they encounter difficulties that they can't control, then they lose confidence in their ability and ability to deal with things. Doubt about self-efficacy increase stress and worry. They have less and less subjective feeling about their surroundings. This loss of self-confidence and daily activities of the growing loss of ability is usually closely linked to the person's gradual withdrawal. In such situations, changes to the person's everyday life and environment feel most threatening. Helpless feeling exacerbated its self-confidence problem so that they begin to doubt themselves, “am I still the person I once was, what can I still do, what comes next?”

**Bidding farewell to the familiar environment**

Under the influence of environmental pressure, the interaction between the patients and the environment is more and more restricted. In the daily activities, the adaptive ability of the body instinct begins to weaken. These subjective responses to disease symptoms often result in clashes with relatives, partners, family and relatives. The people around them rarely understand patients’ behaviors, and their social context has a particularly significant effect on their self-esteem. Caregivers need an in-depth understanding of the patient’s background in order to better communicate with the patient. During this phase, it’s hard for a family to adapt to the inner world of an Alzheimer’s patients, particularly as their behavior follows no logical pattern. It is difficult for them to accept and understand the mistrust, aggression and anxiety that they may be confronted with. For the family, they have to face is a familiar people slowly become unfamiliar, because of their memory of the missing, they no longer remember, for patients, the family and people are beginning to become unfamiliar, they are mutual had to face the familiar farewell.
3.3 Alzheimer's behaviors determine the nature of their living space

Alzheimer's related challenging behaviors

Psychological and behavioral abnormalities
- Anxiety and depression

Cognitive impairment
- Memory loss
- Poor self-care ability

Provide a homely atmosphere

Small scale home style spatial structure

Strengthen the cognitive of environment and sense of direction

Opening public space
- reduce visual impairment

Provide appropriate sensory stimulation

Close to the natural

Promote independent ability and contact with the outside world

Consider the city and neighborhoods

Personalized private living space

Privacy and security
Design for Alzheimer is rethinking the relationship between living environment and human body, behavior, and psychological issues, covering from indoor space to outdoor landscape, from architecture and interior design to city, from physical to behavioral psychology and other aspects and levels. The design concept has been from the traditional concerned about the institutional change to focus on human dignity and independent personality.

“Alzheimer” - a vocabulary covered dominate thinking, emotional and behavioral aspects of brain function decline and absence. Alzheimer patients have different degrees of perceived impairment, cognitive impairment and decreased physical abilities. From the perspective of architectural space design, the most relevant is cognitive impairment. Patients with Alzheimer will experience cognitive decline, accompanied by a decline in time and space perception, judgment ability weakened, memory loss, language expression and hearing loss or even emotional or behavioral changes, Personality changes and so on. Confusing the season and time, get lost, social activities difficult, anxious, no purpose of walking and so on.
For the people with Alzheimer, living environment rehabilitation and pharmacological effects, behavioral interventions combined to the most effective to enhance physical and mental health and quality of life. Europe and the United States in the past 30 years based on the construction environment and the carelessness of the elderly behavior, emotional, safety research between the indoor and outdoor environment on the health and behavior of the elderly have made significant progress.

The ability of the Alzheimer’s to perceive and deal with environmental information is getting weaker, the difficulty of completing daily activities in unfamiliar environments is increasing, and personality and social barriers are followed. As the disease factors, patients will face greater challenges to adapt to the new environment. Then create a suitable scale, home-like environment for rehabilitation is very useful. For the living environment of the Alzheimer’s, the rehabilitation goal is that the environment can help the patients to maximize the time and space perception and positioning, to maintain good health and environmental familiarity, and to encourage more social interaction. Therefore, the open space based on safety and privacy has a positive impact on the physical and mental health of Alzheimer patients, go outside and enjoy the natural rehabilitation for the patients has many positive effects, it has become the consensus of the academic circles.

Most of the patients with Alzheimer are in limited contact with others and the outside world. The emotional and mental state of the patient is often in a passive state, although they have cognitive impairment, but do not affect their desire for pleasure. According to each person different backgrounds and different cognitive abilities, emotional cognition is very personal, so how to define the concept of happiness is very difficult. In most studies of patients with Alzheimer, the “happiness” of people with Alzheimer is defined as having a positive impact on their psychological and physical health at the same time.
Think Happy Thoughts

Dr. Funshine, aka Caroline Meeks, leads a laughter therapy session along with a group of seniors in San Diego, California. Her prescription: Frequent doses of “laughter yoga,” a mind-body exercise that Meeks and others believe is good medicine for everybody from cancer patients to people with dementia and depression.
Stay Active

A woman balances the "Yue Ya Chan" (Crescent Moon Spade), a traditional Chinese pole weapon, on her head as she exercises in a park in Xi’an, Shaanxi province.
Hungarian-born Pianist Charles Brunner plays the piano to recapture the Guinness World Record for longest keyboard playing. Brunner broke the record of 103 hours and eight seconds.
Alzheimer’s living space design strategy

For the people with Alzheimer, living environment rehabilitation and pharmacological effects, behavioral interventions combined to the most effective to enhance physical and mental health and quality of life. Europe and the United States in the past 30 years based on the construction environment and the carelessness of the elderly behavior, emotional, safety research between the indoor and outdoor environment on the health and behavior of the elderly have made significant progress.

Strengthening communities: the build environment plays an important role in strengthening and connecting communities by facilitating social interaction in public spaces—gardens, town squares, parks and lively streets. Such spaces need to be safe, inviting and meaningful for local communities. Specific ways that built environments can strengthen and connect communities include providing streets and public spaces that are safe, clean and attractive; encouraging residential development that is integrated, yet private; and enabling community empowerment through meaningful participation in land use and design decisions.

The spatial scale and the environment:

As the disease factors, patients will face greater challenges to adapt to the new environment. Then create a suitable scale, home-like environment for rehabilitation is very useful. For the living environment of the Alzheimer’s, the rehabilitation goal is that the environment can help the patients to maximize the time and space perception and positioning, to maintain good health and environmental familiarity, and to encourage more social interaction.

Based on this, summarize the environmental space design of several points:11

1. Building scale to make the patient have a sense of control, avoid excessive environmental interference and choice.

2. Space layout and spatial scale to avoid the cause of crowded factors, to avoid the elderly feel too much stimulation.

3. Avoid long corridor space layout.

4. Set up small scale, family reception hall and social space.

5. Use a single room to reduce mutual interference at night.

case study

Nursing home/ Solingen, Germany/ Monse + Molnar
The project houses 20 young people between the ages of 18 and 60 who need regular care and is divided into three residential groups on three stories. Colorful patterned wallpaper in the corridors and modern lamps in the communal areas create a fresh and lively atmosphere, and large and inviting dining tables evoke the community spirit of student shard housing. Residents can immerse themselves in the atmosphere of the bathroom, which has a freestanding bathtub, atmospheric lighting and a music system for listening to their favorite music while soaking. All these reflect the very different needs of young people whether with respect to food preferences, to the structure of the day and means of communication.

The architect's design concept aims to reflect the diverse character of society as the multi-generation building houses a broad age range of inhabitants. The age of the resident is, however, not the foremost concern; the concept provides room for different ways of life that can exist in parallel regardless of age. This approach could also be promising for facilities for people with dementia as they experience different phases of their own biography during the course of the illness, but their attitude towards life remains constant.
Strengthen the orientation of the spatial layout and organization

Professor ANN NETTEN\textsuperscript{12} of the University of Kent, UK, conducted a survey of 104 patients in 13 nursing homes, trying to find out the relationship between the identity of the elderly and the architectural design of the elderly, and indeed got a valuable discovery.

**Use a small scale, simple plane form**

GESINE MARQARDT and PETER SCHMIEG from the Dresden University of Technology in Germany reported that: straight circulation; L-shape circulation system; continuous path around on inside courtyard, these three typical groups of forms strengthen the patients' identification ability is descending order\textsuperscript{13}. In the study, the impact of the characteristics of the floor plan typology of a nursing home on a resident's wayfinding abilities was measured by assessing which destinations (he common room/kitchen, the resident's individual bedroom, and the bathroom) they were able to reach independently. Results showed that the number of residents and the size of the living area constitute the most significant factors of a resident's orientation: wayfinding results were best in small units with 8 to 10 resident.

\textsuperscript{12} Ann Netten. The effect of design of residential homes in creating dependency among confused elderly residents: a study of elderly demented residents and their ability to find their way around homes for the elderly [J]. International Journal of Geriatric Psychiatry, 1989.

\textsuperscript{13} environments that facilitate wayfinding in nursing homes [J]. American Journal of Alzheimer's Disease & Other Dementias, 2009.
Straight circulation system

L-shaped circulation system with a change in direction

Continuous path around an inside courtyard
The functional spaces such as kitchens, restaurants and activity rooms to be adjacent or similar to each other, and have a direct line of sight to provide clear tips for patients.

The location of daily life and activity space should be kept constant, or the location of the living space group and the activity space group is permanent. Individual multi-function rooms can be variable to satisfy the needs of different activities.

Provide the active path of the loop and minimize path direction changes.

The space to be used directly by the patient should be on the same floor.
case study

Vialonga Elderly Day Care Center/ Miguel Arruda Arquitectos Associados/ Vialonga, Portugal/ Community Center
The elderly day care center is located in a peripheral area of Lisbon, inserted in an urban context with the common debility characteristics of the suburban clusters near the big cities. The population is essentially divided in to two distinctive groups. The first comprises the working population, the other group are non-working elderly people who divide their time between being with their families and meeting friends, neighbors and acquaintances in the coffee shops of the neighborhood and in the few available green areas, here they visit with each other, debate politics or play cards.

The day care center urges as a response from local autarchy to help create a space for this second group - the elder population, offering them a place to interact between each other with all the comfort needs such as a cantina for meals, a space for health care needs, a barber shop. Formally and conceptually, our intentions were to create a singular architectural object. In this social, cultural and urban context, the day care center appears as a reference, enhancing itself from the surrounding buildings through form and scale.
Beginning with a pure box, the architects gave each limit of that box a different height that consequently defined in its interior a variable ceiling depending on each programmatic function. On the exterior, they achieved a formal dimension that is characterized by nonorthogonal facades, and consequently create a “traditional” roof with two slopes. In the center of the building, creating a larger interaction with almost all the interior spaces, as well as natural lighting and ventilation. The walls of the north elevation are inflected towards the interior in order to allow covered access to those who arrive by vehicle, which is often the case with elderly persons. This generous space makes the building’s main entrance and provides welcome protection in case of adverse weather conditions.
"wandering" translate into the line organization of "walk."

The people with Alzheimer's disease have a bad sensory ability of direction and location. Often happen Unconscious wandering. Empirical studies show that a suitable physical environment can convert an unconscious walk to a meaningful walk. In ensuring the safety of the premise, for the patients with the sense and the activity in the walking path and provide some excitement and challenge. So as to strengthen the positioning and perception of space and time. For this rehabilitation goal, the following design points are presented:

1. Continuous walking path
2. Clear and easy to walk path. Professor John Zeisel of Harvard University also suggested that the fork should be set at 90 degrees to facilitate a clearer distinction.
3. Activity space pitch point, walk along the way need to set up some activities for the patients to provide chat, rest, reading, to avoid meaningless physical exercise.
4. The outdoor walks can be combined with courtyards, gardens, and plantations.

Close to nature has a positive effect on the recovery of patients, it can also improve the patient's problem of distraction and ease the tension, accepting sun exposure can also improve the body's physiological rhythm.

Case study

Garden with View/ Government + Health Aging Facility / Mabire Reich Architectes/ Couëron, France

This project Located in the heights of Couëron. The extension is the new Alzheimer wing of the establishment. Located on the south of the plot, it supports bedrooms and the common area in continuity with the ground floor of the residence, and also covers a parking lot on the plot ground. The extension is also a retaining wall that extends and flattens to make the garden accessible for the elderly.

As the built volume closes the garden space, the bay windows open it visually through the generous new terrace, with a view of the remarkable pines and the center of the town’s skyline, marked by the emergence of the church steeple. In addition to the attractiveness of the views and the flood of light and sun, the frames constitute familiar benchmarks for disoriented residents. This chain of spaces including the existent building, garden, extension, and terrace, ultimately take advantage of the high location of the site to offer a panoramic view.
The program is also organized around a core that allows circular wandering practiced by persons suffering from Alzheimer’s syndrome. A curtain of strings, lit by a band of LED lights, reduces the volume presence and creates a game of filters. The hairdressing salon located on the front of the core takes advantage of the subdued views, both in the common area and in the exterior.

The indoor areas reflect the domestic approach of the program and this calming ambience is echoed in the materials, colors, and patterns. Materials used include a wooden frame, waxed concrete, and the PVC protections offer a set of patterns and colors which constitute benchmarks and stimulation for the inhabitants.

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4.1 The value of the environment

For people with Alzheimer's disease, the sensory experience plays a central role. This applies especially to our experience. As people's cognitive faculties start to decline and the memory of recent events fades away, what remains are direct sensations. As the disease progresses, these becoming more and more important. When designing an environment for people with Alzheimer's disease, it is necessary to take a step back, how our space is fundamental and where we start thinking more than ourselves.
Learning space

I think my sense of space is something I have learnt, I still remember the life when I was a child I live in a simple house with my family, that was the concrete wall without any decoration, it felt cold and mingled with the earthy smell. That make me a very strong memory to remember the sense of my living environment. I believe that this applies to everyone. Because so many senses are involved, this is a complicated process. As a designer, it is not surprising that one is endowed with a particularly keen sense of space or acquires this kind of sensitivity over the years.

As we learn from two legs, our perspective is very different from the situation we crawl on the floor. We can cross a room more quickly. That still changes our perspective of space as well as our physical experience of ourselves in that space. Our sense of space is a projection into each of our minds, for this the impression that the room differs from person to person. Therefore, the design of a room, however simple and archaic it may be, will never be experienced in the same way by everyone.

Remembering space

If we assume that the gradual loss of senses in old age, for example as the sequence of Alzheimer’s disease, proceeds in an inverse pattern to be development of the senses in infancy, we must first carefully observe our feelings in the development of early childhood. We know today that our sense of taste and touch develops earlier than our sense of sight and hearing. Every experience we make leaves a trace in the brain as it grows and in turn determines how future sensations will be experience. Our sense of sight by contract develops slowly. Shortly after birth, newborn babies can only make shades of contrast. But even at this stage, babies are able to perceive their mother’s face and difference of other people. This is closely related to the sense of smell, which is responsible for some of the most powerful memories of early childhood: In the first few months, the baby has refused to smell the unpleasant food. A child’s sense of hearing has been formed, while still in the womb, but only starts developing after birth. It has been shown that children who grow up with music around them develop more extensive synapses for sensing sound in the brain. However, in the brain, these sensory experiences are first woven into the actual impression and feel.
Our perception of space develops similarly. While our first experience of space beings with our bed, the blanket, the edge of the bed and the mobile dangling over our heads, but a year later our perceptual ability had developed to the room where we were able to measure the distance and gradually occupied our residence. The same applies to the first time we encountered steps and height changes, as well as the room’s light and dark areas and windows and doors between the different feeling.

**Feeling space**

A feeling of comfort and security arises in protective environments in which we feel able to live and move in as we please. Only when we are comfortable and protected from the hostile sentiments, we fully surrender to sleep. The feeling of comfort is, however, a state of mind that wider depends on many factors, including space is just one. The same can be said of the desire for social contact and interaction. When people go looking for conversation and friendship, they venture outside their familiar space and open to others, in the process of being vulnerable, but also happy to have stepped out of their isolation.

The degree to which space can contribute to a general well-being, therefore, depends on the person’s state of mind at a given point in time. But for a room to evoke a particular feeling requires the orchestration of a whole collection of specific sensory impressions, for example, the pleasant scent of flowers, relaxing music or a nice place to sit and relax. The trend towards a more sustainable architecture with ecologically friendly and healthy building materials and an indoor air climate naturally regulated have much more possibilities to create such conditions on technically controlled environments in decades. The design of these environments is pragmatic and low-tech, and focuses on fundamental sensory qualities of architecture.
Learning, remember, feeling—these three aspects are what makes a successful space. Design for people with Alzheimer’s disease are simultaneously an opportunity of shift our focus back to the fundamental sensory experience of architecture. In my role as a designer, it’s not for me to determine the desired sensation, but to create opportunities for people to decide where you would like to be. This applies to the relationship between interior and exterior as is the case for the light and dark areas, for a loud and peaceful room, hard and soft surfaces, natural and artificial materials and ultimately also for whether people would prefer to be alone or part of the community.

For people with Alzheimer’s disease, the availability of dual options is particularly valuable, enabling people to calm down and become themselves. A variety of spaces gives people the freedom to live their lives in harmony with others and creates a basis from which people can get to know each other. Every resident had previously led another life, each of them has different memories, and each of them feels something special. It’s necessary to create spaces in which people can find can live how they have learned to live, in which memories can find a home and in which feeling find an echo. This is how I can do justice to people—even if they are not suffering from Alzheimer’s disease.
4.2 The Non-pharmacological therapies

The Treatment interventions are a very important treatment for Alzheimer patients. From the point of view of care, as there is no cure for Alzheimer’s, the goal to be pursued is to try to alleviate the disorders that the illness involves, thus improving the quality of life of both the sick and the assisted.

In the past, it was used to use antidepressant or calming drugs to suppress aggressive behavior, anxiety or wandering. However, these drugs may have a negative effect on health and can’t, however, act on cognitive disorders, and are likely to reduce the disease to apathy.

For this reason, in addition to pharmacological research, a therapeutic approach has been developed that does not involve the use of medicines, consisting of a series of interventions that act on residual potentials to slow the progression of disease defects. The aim of these therapies is to stimulate and maintain as long as possible the not completely deteriorated intellectual functions, optimize the physiological state and better manage behavioral disorders associated with brain decay. Overall, they try to reduce the level of disability of the sufferer and to ensure his psychological and emotional well-being.
They also have a beneficial secondary effect on family members and caregivers who learn how to deal with the alterations of the patients’ behavior and succeed in establishing a more serene relationship with them, facing the situation with less discomfort.

Non-pharmacological therapies can work on a specific aspect to maintain certain functions (physical, cognitive, sensory) or reduce some disorders; Some of these can be rehabilitated, such as those aimed at physical health (mobilization, walking) or communication problems (hearing, language). Other, such as employment, relating to daily life activities, act simultaneously on various aspects, from maintaining cognitive and practical skills to improving mood and the psychological state.

The interventions can be individual, more targeted and reassuring, or group, to stimulate confrontation, interaction and contact with others.

In Alzheimer’s, the rate of progression of the disease also depends on the assistance; The sufferer is very sensitive to both relationships and environments, so behaviors as well, are informally part of the therapy, directly influencing his clinical situation.

**Below are some of the non-pharmacological therapies for Alzheimer's**

**ROT (Reality Orientation Therapy)**

It is revealed to reorient the patient from himself, to his story and to the environment, through stimuli of different nature (visual, written, musical, auditory). The goal is to strengthen basic knowledge, reducing isolation and disadvantageous behaviors. It can be done formally with a therapist, who informally with family members. It gives positive results to patients with mild cognitive decline, without the sensory deficit and no behavioral disturbances.
Music Therapy for Alzheimer’s

Music is therapy for everyone, not just people who have Alzheimer’s disease. I think that each of us has experienced, if not euphoria, at least a certain reverie while listening to an especially enjoyable piece of music. Whether your tastes are for the classics, jazz, or rock-and-roll; or if you prefer listening to soul, country music, show tunes, or whatever; you will admit that music has the power to move you. This emotional attachment that we, as human beings, have for music, is the basis for music therapy, the reason it works so well. It is why we are so passionate about music therapy for Alzheimer’s and all other forms of dementia.

Music therapy for Alzheimer’s doesn’t differ substantially from music therapy for anyone else. It is the desired effect that changes with circumstances. For someone with a physical injury, a broken bone, for example, it might improve and quicken healing. An individual with chronic pain might derive relief from that pain through the therapy of music. Music may help a person with dementia better communicate, to remember, even to function at a higher cognitive level.

According to the American Music Therapy Association, “Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship.” They go on to say that music therapy can be used to:
- Promote Wellness
- Manage Stress
- Alleviate Pain
- Express Feelings
- Enhance Memory
- Improve Communication
- Promote Physical Rehabilitation

For example: witness the profound change in Henry brought on by music. Henry has been in a care facility for about ten years and has become non-responsive and uncommunicative as the result of dementia. His apathy is obvious when his daughter asks him a few simple questions at the beginning of the video. After listening to music for a few minutes, Henry becomes...

A man with Alzheimer’s disease listening the music
**Remembrance Therapy**
Reminiscing and reminiscence therapy involve reaching the memories that reside in these still viable regions of the brain. There are many ways to encourage these memories, and you should. They can be comforting, even therapeutic. Using the reminder of distant events to stimulate music functions. It encourages the natural tendency of the elder to recall his past, even with the help of objects or photographers, to recover emotionally pleasing experiences. Therefore, the patients keep the awareness of his own life and personality longer.

**Validation Therapy**
Through an empathic approach that accepts and legitimizes the feelings of the patient, it aims to bring out the vision of the patient’s reality and the hidden emotional needs that can be the basis of certain behaviors. The aim is to improve communication, avoid isolation, help resolve any conflict, reduce emotional tension and behavioral disorders, and increase self-esteem.

**Art Therapy**
Art therapy may focus on the creative art-making process itself, as therapy, or on the analysis of expression gained through an exchange of patient and therapist interaction. This approach employs the transference process between the therapist and the client who makes art. Reconciling emotional conflicts, fostering self-awareness, and personal growth.

**Pet therapy**
It is based on the therapeutic value of animals, through as a social support can reduce the sense of loneliness and depression. The interaction with animals not only stimulates curiosity and instinct to take care of others but also stimulates the feeling through the smell or tactile feel. It can improve behavioral disorders and socialization skills.

**Train Therapy**
It is a sensory space that reproduces the wagon of a train, with furnishings, sounds and, instead of windows, screens that project landscapes on the move. In this way, you want to recreate the circumstance of a journey with the aim of limiting anxious ailments or desire to escape.
A model train carriage on the size of 2.5 x 2.5 meters. The prototype of the device, designed by Alessandro Biamonti the Politecnico di Milano with the therapist Ivo Cilesi and architect Lapo Lani, collects the result of several years of experimentation. Just the train ride was identified by Alzheimer’s experts as the perfect setting for therapies against the “escape from” anxiety that is gripping many sick because it is the experience that most of all can bring together the past of people belonging to different socio-cultural environments².

The therapy of reducing drug to become a concern when the patient’s seat in the railway carriage, the journey may apply to one individual or groups of patients that under the supervision of properly trained operators. the patients can relax, can read, can in fact fully enter

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² http://www.dipartimentodesign.polimi.it/en/a-biamonti-therapeutic-habitat
4.3 A design environment to create more spontaneous independence possibilities

The hospital is frightening, to a large extent, because everything in the hospital happens on time. Drugs arrive on time, the sheets are replaced on time, the doctor shifts on time, and even the urine is collected in a bag marked with a scale. People who take care of the patients also can receive this spontaneous to wear. The spontaneity of life, once into the refrigerator is over. We can't tolerate that we were stuffed into the kind of equipment as a piece of meat to get a good care from the refrigerator.

-The laws of medicine
As we all know that Alzheimer disease is a cognitive disorder disease, as the disease advances, symptoms can include problems with language, disorientation (including easily getting lost), mood swings, loss of motivation, not managing self-care, as a person’s condition declines, they often withdraw from family and society. The particularity of Alzheimer’s patients makes their requirements for the environment more special. Alzheimer’s residence behavior is sometimes affected by the condition, but to some extent, the freedom of the patient’s behavior can give them more opportunities to contact with the outside world to reduce the loneliness of the state. A healthy living environment should be free, both for the Alzheimer patients’ environment. At the same time, how patients should spontaneously interact with their environment is a question worth thinking about.

To a certain extent, spontaneous construction stems from life, is a change in the life of their own behavior and structure of the building. Rapoport³ said this feature: based on the open results of life. The other side of the spontaneous connection is openness, this may contain the openness of the design and an open mind design thinking. We may create ten thousand possibilities in order to better provide a good environment and life for the patients, but the idea must be based on that the patient can be independent of the natural acceptance of the environment, can better get along with their environment.

Case study

An amazing village designed just for people with dementia

Centuries after Shakespeare wrote about King Lear’s symptoms, there’s still no perfect way to care for sufferers of dementia and Alzheimer’s. In the Netherlands, however, a radical idea is being tested: Self-contained “villages” where people with dementia shop, cook, and live together-safely.

In the small town of Weesp, in Holland—that bastion of social progressivism—at a dementia-focused living center called De Hogeweyk⁴ aka Dementiavillage, the relationship between patients and their care is serving as a model for the rest of the world.

Hogeweyk, from a certain perspective, seems like a fortress: A solid podium of apartments and buildings, closed to the outside world with gates and security fences. But, inside, it is its own self-contained world: Restaurants, cafes, a supermarket, gardens, a pedestrian boulevard, and more. The idea, explains Hogeweyk’s creators, is to design a world that maintains as much a resemblance to normal life as possible—without endangering the patients.

At Hogeweyk, the interior of the security perimeter is its own little village—which means that patients can move about as they wish without being in danger. Each apartment hosts six to eight people, including caretakers—who wear street clothes—and the relationship between the two is unique. Residents help with everything from cooking to cleaning. They can buy whatever they want from the grocery. They can get their hair done or go to a restaurant. It’s those basic routines and rituals that can help residents maintain a better quality of living.

Hogeweyk was designed by Dutch architects Molenaar&Bol&VanDillen, but it was the brainchild of Yvonne van Amerongen, a caregiver who has worked with memory patients for decades. Starting in the early 1990s, van Amerongen and a group of like-minded caregivers began researching and designing a type of home where residents would participate in life, the same way they did before they entered a dementia care unit.
One of the most frustrating things that can happen when eating out is ordering one dish but receiving another. Surprisingly, one restaurant is offering just that. The Restaurant of Order Mistakes (a clever spin on a book called The Restaurant of Many Orders) popped up in Tokyo’s Toyosu district, and its mission was to hire waiters with dementia.

The premise of the pop-up restaurant, which was in a trial period from June 2 – June 4, 2017, was that the staff who have dementia may get your order wrong. But if you go in knowing this up front, it changes your perception about those who suffer from brain disease. The experience makes you realize that with a little bit of understanding on our part dementia patients can be functioning members of society.
Food blogger Mizuho Kudo visited The Restaurant of Order Mistakes and had a blast. She originally ordered a hamburger but ended up having gyoza dumplings instead, but everything turned out to be unexpectedly delicious. Kudo also claimed that the waiters were full of smiles and seemed to be having tons of fun.
Bibliography, web references

5. State of the art investigation on environment, living, communication

5.1 Consider the city

Barriers to navigation isolate people. Lesley [Lesley Palmer is Chief Architect at the Dementia, Services Development Centre] explains: “Consider the cityscape, or our entire landscape: where do older people live, and where should they live? Our model would be a cityscape that allows people to stay at home.” We must enable people with Alzheimer’s disease to engage with the city. On our streets, as in building interiors, we should prioritize clarity of signage and routes. Buildings themselves with distinct identities may act as landmarks.
Case Study of Conceptual:
Elderly Housing/Location Mouslecoomb, Brighton, UK/ Type Elderly Housing + Mixed Use Amenities/2011
A Housing project for elderly citizens that takes the shape of a dense mat-building. The project centers on the social and pragmatic needs of its elderly inhabitants, bringing in the rich urban diversity of the city whilst maintaining a comfortable habitat for dwelling. Density and a variety of functions are used to generate a diverse spatial and urban experience for the elderly inhabitants and the surrounding suburb.
The “in-between” living space
In the city, the house exists as the form of object, so that many people will be slightly doubt. Separated from the street by only one wall, suddenly will enter a house. Is not that a fantastic thing? Between the house and the city is not just a wall separated. There must be some domain levels in each other. We get into the residential but just get gradually from the city into a similar residential space. And with the level of change gradually get into its internal. And in the life of the house, but also must be aware the existence of a variety of distance between their own places and the city, then select the style of this measure to carry out a variety of activities.
In fact, the “in-between” living space can be said that a variety of unrelated and related things to achieve the state of coexistence of a transparent framework. We can imagine the house slowly extending to the distance. The scope of the house melt into a variety of forms, with the inadvertently spread out. At different times, different distances, different people coexist harmoniously. When we talk about the “in-between” of the city and the house, the city is not a city, the house is no longer a house. Cities and houses merge with each other to form new places. In this framework, people, objects, landscapes, and activities, all of which coexist in the form of the other.
The so-called ideal building is also the seemingly internal reality for the external space, or vice versa seemingly external but internal reality. Between the internal and external to create a rich connotation of the place. It does not make the same between inside and outside, but the pursuit of the diversity of gray areas.
The so-called internal and external space definitely is not separated by a wall. Just like the color produce blooming, from external gradually change into the internal. The outside street may also gradually become a part of the home, then expand the courtyard.

The household life built in the whole gradation of domain, the life in this house like living in the clouds. In the field of the gradual change to replace the original architecture of the particular realm. In heavily clad nested structure, that the internal and external always show the relative relationship, the internal still has internal space, and the external still has the external space, this house is trying to create a building that does not have a traditional form of space, and try to express the richness between the house, the street, and the city.
The house itself is comprised of three shells of progressive size nested inside one another. The outermost shell covers the entire premises, creating a covered, semi-indoor garden. Second shell encloses a limited space inside the covered outdoor space. Third shell creates a smaller interior space. Residents build their life inside this gradation of domain.

Streets and houses being separated by a single wall, a gradation of rich domain accompanied by various senses of distance between streets and houses might be a possibility, such as: a place inside the house that is fairly near the street; a place that is a bit far from the street, and a place far off the street, in secure privacy.

A distinct boundary is nowhere to be found, except for a gradual change in the domain. One might say that an ideal architecture is an outdoor space that feels like the indoors and an indoor space that feels like the outdoors. In a nested structure, the inside is invariably the outside, and vice versa. My intention was to make an architecture that is not about space nor about form, but simply about expressing the riches of what are “between” houses and streets.

Three nested shells eventually mean infinite nesting because the whole world is made up of infinite nesting. And here are only three of them that are given barely visible shape. I imagined that the city and the house are no different from one another in the essence, but are just different approaches to a continuum of a single subject, or different expressions of the same thing— an undulation of a primordial space where humans dwell.

This is a presentation of an ultimate house in which everything from the origins of the world to a specific house is conceived together under a single method.
5.2 living public organization; social interaction

People with Alzheimer’s disease may lose the ability to participate in tasks that others in society take for granted. This can lead to frustration, all too often accompanied by an auto-imposed avoidance strategy, resulting from a fear of failure and further intimidation. People with Alzheimer’s disease to retreat from public life and become socially isolated, which further reinforces their fear, so that the design proposal is trying to help the people with Alzheimer’s disease to engage in the social life and be part of the society.

For patients, participate in social activities in daily life is an important rule to keep healthy, to isolate from life and social interaction will reduce self-perception and sense of being. Providing social platforms and opportunities for Alzheimer patients to improve patients’ communication with friends, families, and caregivers.

Long-term patients living in nursing institutions have a strong desire to protect privacy and autonomy, but eager to participate in social interactions. The goal of rehabilitation in space design should be respected, give the privacy of the patients, at the same time create the communication with other people and social.

1. In the planning layout, the conservation units dedicated to the patients should be integrated with other living units or the whole community, rather than being completely isolated.
2. It’s better to build a form of “bridge” to enable Alzheimer patients to communicate and connect with others in the community.
3. Arrange a variety forms of space for patients to choose. Both indoors and outdoors provide space to satisfy the needs of solitude, private conversation or group activities.
4. To combine the social space with kitchen, dining room, and other living space.
5. “Transition space” is an important element in Care Environment: including indoor and outdoor transition, private and public transition, the transition space to guide the elderly from indoor to outdoor, from alone to communicate with other people.
6. Provide children’s activities or facilities to create more opportunities for children to visit. Children in the living environment can improve the happiness of the elderly.

7. Provide the environment and feeding sites for pets. Pets have an important positive effect on the rehabilitation of the Alzheimer.

**social interaction:**

Common spaces with varying degrees of privacy. Evidence and guidance suggest that social interaction is important for maintaining physical and cognitive function, as well as personal well-being. Some care models move all residents into one central room in order to facilitate efficiency. However, this is not something which should be imposed, as too much activity and interaction can be overstimulating for some residents. Instead, the building should offer residents opportunities for adapting their position in relation to others. For example, they should have the opportunity to withdraw completely or to sit back and watch without actively participating. A range of common and more private spaces is therefore provided throughout the building, in order to provide opportunities for varying degrees of social interaction and mutual awareness.

The biggest feature of community space is to actively promote the possibility of communication. JAN GEHL in his book “Life Between Buildings: Using Public Space,” that is conducive to the residents living space should meet the following three requirements: First: the living space social structure and environmental structure should be consistent; Second: to provide privacy at all levels (such as private, semi-private, semi-public level of public space), and there should be a smooth transition between the various levels; Third: to cause appropriate sense of the field at all levels, thus, to form a sense of identity. The key factor is to provide opportunities for community residents. To provide the opportunity to communicate is in the planning and design based on social characteristics and individual psychological characteristics of the rational organization of public resources.
Based on the design of Alzheimer’s living space, the design of space should focus on the importance of daily communication. And consider the behavioral characteristics of the patient’s. And in various ways to improve the patients connect with the outside world. Setting up a diverse public space to improve the patient’s interest in activities. After the adoption of the study that the patient’s daily communication to satisfy the following conditions: First: There should be enough, diverse public, semi-public space as a carrier of communication; Second: the public space and semi-public space should be more variety and adaptability; Third: the shaping of public space should be homogeneous, emphasize the equality and mutual respect of space participants; Fourth, openness is not only open space but also refers to the behavior, management, participation in the public.

**Living public organization:**

“Great public spaces are where celebrations are held, social and economic exchanges take place, friends run into each other, and cultures mix. They are the “front porches” of our public institutions libraries, field houses, neighborhood schools where we interact with each other and government. When the spaces work well, they serve as a stage for our public lives.”

The diagram (As shown in Figure 3), adapted from their website, shows that a place is felt through its qualities of sociability this describes the social relationship and experiences that can be had in the space, and how friendly or welcoming the space is perceived to be.

Use & Activity how can space be used? And how well does space accommodate for the way that people need or wish to use it?

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4. [http://www.pps.org/reference/grplacefeat/]
sociability

Access & Linkage

use & Activities

Comfort & Image

Figure 3
Comfort & Image  this relates to the physical conditions and safety of the space, as well as how beautiful people believe the space to be, if a space is more enjoyable to be in, the people will wish to spend more time there.
Access & Linkage  that is its connection to the other spaces and places around it, and also its ability to easily accessed by all members of the community.
These four criteria outline key conditions are similar to what has previously been discussed  human scale, activity hubs, connection, and protection from environment  however, this also bring the look and feel, as well as the social dynamics of the space, into the discussion of its fulfillment of Place.
All of those are important discussions around the creation of public environments, which should be able to create desirable environments for social interaction between the whole of the community, in order to remove feelings of isolation, danger, fear or discrimination, and to enhance the well being of the society.

In order to do this, the tools of socially responsible design must be expanded to consider the needs of the people with Alzheimer’s. That’s why these qualities of safety, social inclusion, functionality, activity, cleanliness, accessibility, connection as well as beauty and the physical character must be considered in the design of public places.
5.3 Break the closed state of solitude, create a “we live” lifestyle to communicate

It is interesting to think about the meaning of living space from the perspective of Alzheimer’s patients. A living environment based on rehabilitation, should be a safety environment, at the same time in order to increase the chance of contact with the outside world, between people, between people and society is indispensable. So the living space should be open at the same time, but the openness of the opposite is privacy and security, how is the relationship between the three to complement each other? It may reflect a mutual trust and freedom of residence. While the opening of residential space is not to eliminate people’s privacy, but have the opportunity to choose to open. The open nature is the increase communication between people, between people and society, between people and the environment.
Sometimes they need help:
The care for people with Alzheimer’s have three components—professional care, care within the family, and care from the community—all guided by ‘the principle of shared responsibility’. Some patients with Alzheimer’s disease responded that: “we have Alzheimer’s disease, sometimes we like to be independent, but sometimes we need help”. We can all provide this help. In smaller towns, neighbors may assist neighbors with Alzheimer’s disease by noticing if they have wandered far from home or by responding sensibly to agitated behavior. In cities, if the person behind the till in the supermarket or the ticket inspector on the bus could be trained to recognize signs of confusion and to react accordingly, the individual with dementia could be empowered to continue to participate as an active member of society.

As a special way of communicating with people, the most typical aesthetic language in the artwork often breaks the language to convey the general order of probability. This methodology reflects the essential characteristics of contemporary art: openness.

The overall trend in contemporary literary and artistic design is an open system that emphasizes the special autonomy of the audience, requiring the audience to reconstruct the material provided by the artist. This process will be a single, inevitable context into a variety of probability of the composition of the field so that everyone can make a different interpretation of each time. Any artwork is not essentially “closed,” and the possibility of reading it is infinite.
Why does open design make people happy? It controls the three dimensions that make us happy: The first is the perception level, corresponding to the experience. In the long evolutionary process, our brains are evolved and have many common features of breastfeeding and primates. We do not like bitterness, do not like noise, do not like the voice of blame, do not like frowned face like symmetrical face, like the bright colors and so on. The open design is that we can grasp the emotions of these emotions. The second is the behavior level, that is, guidance. Behavioral and intuitive levels are subconscious, when we speak and do something are control by emotional, and emotions have an impact on behavior. The essence of the behavioral design is to make the user feel that everything is in control - this is where the power of the guide, to provide action to promote the possible mechanism so that people get emotional care of the sense of security. The third is the level of reflection, I think this should be the corresponding designer's position, a position of thinking. The ultimate direction of openness is the openness of ideology, that is values and worldviews. The open architectural values concerned about the construction of "concrete humanity," that is the experiential intuition and subjective consciousness. The architectural space itself becomes the background of the user's life, it is the real meaning of the open space.
The basic characteristics of the concept “we live.”

An ideal open community of “we live” should be:

1. openness
2. energetic
3. sustainable
4. have a unique temperament
5. fill with friendly
6. full of life
7. have a sense of belonging

(1.2.3.) They are the basic summary of the above analysis is the basic goal of open community planning. (4) It is the personality characteristics of the community, each community should have a different regional cultural atmosphere, according to their own conditions to form unique personality and temperament. (5.6.7.) They are the focus of the community’s emotional space, is the accumulation of daily life, is the combination of form space and social space, but also an essential community space with very high requirements. The modern community construction theory emphasizes the ultimate concern for people, pay attention to “daily life,” the comfort of living and the creation of spiritual home mentioned a very high level.

For the people with Alzheimer’s disease, an openness living environment can act on the patient’s behavior and cognition. The space that can reduce the patient’s dialogue with loneliness, the open living space creates the possibility of sharing opportunities. The lifestyle of “we live” reflects the reflection of the relationship between people in nowadays society. The people with Alzheimer’s disease need the spirit to accompany and an opportunity to connect with the society.
Bibliography, web references


4. [http://www.pps.org/reference/grplacefeat/]
6. The project site

6.1 Site investigation, analysis

The site is located in Milano, Italy, Bovisa. Via Giuseppe Candiani. The zone of Bovisa, located north of the city center, in the Zone 9. The district is now experiencing an upturn, thanks to the many activities which relocated in the zone. Among them, the Politecnico di Milano, with its Bovisa campus, played a major role. [1] The campus features the schools of Design, Architecture and Industrial Engineering. The area has since gained notoriety as a design and art "melting pot".
6.2 The structure and servant areas

The building was originally a cafe factory, nestled in a row of buildings, with a very rich neighborhood. The original structure of the building is only one layer, surrounded a courtyard. And there is a tower. It is a very nice building.

If you look from the whole street, you can clearly see the surrounding environment near the building, and you can see it has a very rich neighborhood relationship. The restaurant, the cafe, the hotel, the train and bus station, even the campus and pharmacy.
7. The target, needs, new function

7.1 The target

The design aim to establish an open living environment for the Alzheimer’s people, to help the people with Alzheimer’s disease to engage in the social life and be part of the society.

What kind of wellness community refers to as a healing space? I think maybe a wellness community refers to as a healing space that it is centered around a combination of support which people can tailor to their own needs. A center for anyone who walks free of charge: information communication psychological emotional and emotional support and practical advice. Crucially all these elements are offered within an environment that is designed to nurture a community and help people to feel well.
The provision of local everyday public spaces creates opportunities for people (patients, caregivers, local-residents) to connect. Pedestrian-oriented development is correlated with a sense of community, strongly related to opportunities for social interaction.

To connect with natural, green or landscape qualities have been widely associated with a range of health benefits. To create the public spaces that brought people (patients, caregivers, local-residents) together and where friendships and support networks were made and maintained were key to a general sense of well-being.

The key qualities include:
Location
Places
Adaptability
Homeliness
Pleasantness
Specialness
location

neighborhood level

more social contacts
neighborhood help
greater acceptance

in the city or near the city (base on the house community concept)

Care Concept

mixed = normality

+ more extensive social contacts

- stress as a result of “misunderstandings”
Model Type

semi-autonomous

Alzheimer's care group + different residential forms

spatially independent, varying degrees of organizational relationship to other residential forms

a harmonious sharing living space between public and privacy, a cozy living space to communicate with the surrounding

key words

sounds, art, colors, open, nature, sun, communication, living, imagination, understanding, perception
7.2 The concept

The formulation of the concept relies on the target and needs and on the identification of problems to be solved at different levels (physical, local, social)

Bring the communication to the AD patients’ living environment, to establish a link between the interior to the exterior.

According to so long research, I have seen a lot of articles, videos, and even documentary, to understand the world of Alzheimer, there is a saying makes me most touched is:
"You will forget me, but as long as I remember you"

We all know while memory problems are the most characteristic symptom of Alzheimer’s disease, many AD patients also mostly experience communication deficits. The communication abilities in AD is declining progressively. So sometimes is very difficult for them to get out from their living to the outside world and the society. As an interior designer, with this situation make me think deeply to the concept is that "Since you can’t come out and communicate with the world, then I will bring ‘it’ into your world”.

Although the starting point of this concept is emotional, but the logic of this conceptual analysis is still rational.
Physical level

**Daily life for AD patients:** living with safety environment; easy understanding; nature; sense of belonging; more extensive social contacts

**For caregivers and receivers:** relaxed working atmosphere; pressure less; increase caregiver satisfaction

**For local residential and visitors:** participate in an openness environment; bring the opportunity to communicate

Local level

A mutual trust and freedom of residence

Encounter and exchange between patients, locals, residents and visitors

Social cohesion and citizen participation

Social level

Social interaction focus on the importance of daily communication

Consider the behavioral characteristics of the patient’s

In various ways to improve the patients connect with the outside world

Emphasize the equality and mutual respect of space participants
Active Brainstorming

- sharing
- giving
- relaxing
- enjoying
- learning
- experiencing
- meeting
- interacting
- playing
- creating
- participating
- giving
- sharing
- relaxing
- experiencing
- meeting
- interacting
- playing
- creating
- participating
Active Brainstorming Conceptual Imagination Map
The possible users performing those actions have been identified. For main typologies of users can be mentioned: AD patients, caregivers and receivers, local residential and visitors. Each category has been expanded, specifying either the typology of user or the reasons for which they would make use of the spaces and opportunities offered by the proposed solution.

To build the dialogue between the AD patients with different people out coming. Different users make the composition of space more inclined to an openness.

more extensive understanding
more extensive social contacts
respect

mutual trust
freedom
sense of belonging

compassion
safety

Encounter and Exchange
7.3 Design strategy
restaurant

social amenities

cultural amenities

views of city life

private

exhibition
Activities Bring Pleasure to People with Alzheimer’s

Keeping aging loved ones active in hobbies and interests that gave them pleasure in the past is important after a disease diagnosis. These stimulating activities for Alzheimer’s help:

- Stir memories
- Foster emotional connections with others
- Encourage self-expression
- Lessen the anxiety and irritability that Alzheimer’s may bring
- Make people with Alzheimer’s feel more engaged with life

Needs:

- think happy thoughts
- work the brain
- stay active
- encourage joining
- physical and social life experiences
Activities Bring Pleasure to People with Alzheimer's

Keeping aging loved ones active in hobbies and interests that gave them pleasure in the past is important after a disease diagnosis. These stimulating activities for Alzheimer's help:

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- Foster emotional connections with others
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- Lessen the anxiety and irritability that Alzheimer's may bring
- Make people with Alzheimer's feel more engaged with life

Activities map

1. Activities relate to the AD patient needs (therapy level);
2. Think happy thoughts
3. Stay active
4. Work the brain
5. Sing songs or play music
6. Art and craft
7. Household work

Recreational activities:
1. Outdoor activities:
   - Tending a garden
   - Planting bulbs
2. Indoor activities:
   - Watching movies
   - Cook together
   - Read
   - Play cards
   - Play games

Needs:
1. Tending a garden
2. Planting bulbs
3. Taking a walk
4. Photo & scrapbooking activities
5. Entrance (clockwise)
   - Do yoga
   - Play with kids
   - Do exercise
   - Meeting
   - Cafe
   - Reading
   - Workshop
   - Planting bulbs
   - Roof garden community
   - Memory corridor
   - Photo & scrapbooking
   - Living private
   - Private garden
   - Sleeping
7.3 The master plan

- Female
data room
- Male
- locker
- Doctor room
- Mental healing room
- Yoga room
- Reception
- Playroom
- Kids
- Lounge
- Meeting family zone
- Rotating protection board
- Stair seat
- Wooden grille screen
- Cushion
- Cushion
- Steps seat
- Sensing system
- Control room
- Exhibition hall
- Public library
- Cafe
- Kitchen
- Refridgerated pantry
- DBL sink
- Dish drawers
- Range hood
- Oven
- Open shelves
- Pullout trash
- Airinson cupboard
- Retractable drying poles
- Fold down ironing board
- Washer/dryer, stacked
- Washer folding doors
- Dining movable table with wheels
- Tree house in modular furniture with wheels
- Reading cushion
- 'Softball' seats
- 'Soft' seats
- Treadmills
- Recumbent cycle
- Stepper
- Seated row machine
- 2-tier horizontal dumbbell rack
- Playing furniture

GROUND FLOOR