



The effect of architectural space in enhancing the quality of life of the elderly

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ABSTRACT

Addressing the issues of the elderly, according to the industrialization of societies and eco-cultural impact and moral, more than ever, must be considered. Also, according to the fact that number of elderly people is growing in our country, many facilities should be provided for them as possible and the needs of psychological, social and physical be answered. In this case, creating a quiet and relaxation space and stress can create psyche of elderly people. In this article it was attempted that at first by investigating psychological, emotional and characteristics of elderly people and by considering physical and body restrictions, recommendations provide for life environment adaptability that this space uses as a daily vacuity space and not only meets the needs for these people, but also effect on creating useful space, increasing life expectancy and promoting elderly people' morale. The elderly has authority in use of this space and has the needs such as suitable spaces for sport and recreation, and being with peers, maintaining their self-esteem and creating conditions for independence during their leisure time, arts and techniques needed for the life of the elderly, counseling and etc.

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1. Introduction

With regard to medical studies, mortality and birth rate decreasing in communities, increasing elderly population is a true fact. So, by encountering and by dealing with population growth in this segment, preparation and careful planning in various aspects should to be considered. Space of architecture and urbanization is one of the most important elements in association with elderly life. Attendance of the elderly in the home and community needs the initial response to the needs of the elderly. This response should include consideration of the limits of physical and mental condition of the elderly. For the maximum benefit for the elderly of the community and services, older people and their spiritual should be carefully analyzed. Physical and mental condition of the elderly needs and characteristics of this era are of the factors that make it possible to achieve this purpose (According to the human needs in each period cause people health and as a result the community). One of elderly people in the community that need the support is elderly people. Nursing home is the first and easiest way to be considered. Because of the distance of initial characteristics of this space from usual life of elderly and accepting of this fact that leads to increasing special depression

in this era, elderly village is a model that has been performed and designed for elderly in the west countries. In this model, houses have been designed for elderly that they can live alone or with their families. Basic services needed for the elderly are available close to and in the neighborhood of elderly housing; but according to the characteristics and moral of this group, defining a model that regardless of keeping the elderly by maintaining normal life, hopes and memories in the house and meeting physical and emotional needs are essential. The need for a new model based on the physical and psychological conditions in older space to be defined and can be substituted for the previous methods in order to improve the morale of elderly people is essential. To response to this need, various solutions have been suggested in west world, that have not been used in Iran and instead of it, daily residency can be defined that this space be used as daily residency for elderly, and not only meet the needs of such people, but also effect on the creating the sense of usefulness, increasing life expectancy and improving the morale of elderly people. The elderly have authority in the use of such space, and needs of the elderly such as suitable space for sport and recreation, and being with peers, maintaining their self-esteem and creating conditions for independence during their leisure time, arts and techniques needed for the life of the elderly, counseling and have been met. People in all ages experience needs, emotions, moods, powers and

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special tastes of that age. The elderly in the community after retirement instead of enjoying life, rest and recreation, become people who suffer from depression because of feelings of ineffectiveness and exclusion and it has great influence over their useful life and lead to low life expectancy in the life of society; such people because of lacking the sense of their family adoption and not having suitable commerce, spend their time in privacy or in parks beside the people who are not in suitable condition in comparison to themselves. Many elderly people are well able to do their own affairs and special entertainment that is appropriate to the age and understand each other. Since many seniors are able to do a lot of things, the need for daily temporary accommodation center to meet the needs of the elderly with use of recreational, sport uses are felt. Elderly need the spaces tailored to their body and spirit. If this space is not created for them and cannot receive a response tailored to their needs get depressed. However, many elderly have special dependence to their life environment and are not willing to destroy their home memories and want to keep them alive and more important of them because of psychological reasons it is better to live among the people and separating them even with giving the best facilities cannot be as important as living at home memories and pride of belonging to and feeling of governance is valuable. With all the possibilities that we consider, the isolated environment of the elderly give then the feeling of separation of families; considering the special needs of the elderly and not isolating of this people, the new definition of the problem has been given and it is creating a center that by aiming short time housing and recreational, refreshing the elderly people spirit, increases the life expectancy for attending in the society and make them spirituous and floriferous. Since people need healthy space to survive intact, perhaps it can be said that the history of this subject has great antiquity and researchers from different communities have investigated variables in line with this study. Several researches in title of elderly, spirit and sprightly and health and the impact of space on their health have been accomplished. Kevin Lynch by publishing the theory of the good shape of urban in 1981 introduced achieving the following five criteria proclaims:

1. Vitality
2. Compliant
3. Sense of meaning
4. Availability
5. Control

Two meta-criteria, efficiency and justice, make up the five dimensions. Ellen Jacobs and Danled Aplyard in 1987 in an article entitled "toward a statement of urban design", seven goals for the future of good urban environment have suggested that included (quoted by Home care, 2007):

1. The ability to life
2. identity and control
3. access to opportunities, imagination and joy
4. sense of originality and meaning

5. public and common life
6. Self-reliance
7. Urban environment for all (Home care, 2007)

Pakzad introduced ten quality criteria to measure of space as follows:

1. The response rate to the presence of special groups (elderly, children, etc.)
2. Vitality or the regular use at all hours of the day
3. Responding rate to the citizens personality
4. To create a sense of belonging to community and space
5. Possibility rate of using human different sense
6. Possibility rate of creating harmony with space in person or community
7. The provoking curiosity and exploring in the user
8. Efficiency rate of space and responsive to the needs and expectations of people
9. Facilitating the participation of people
10. Success rate in recalling of memories (Mashayekhi, 1998).

Theory of universal design or inclusive that has been considered at the international level therefore has more emphasis. Universal design is the design in which the needs of all users are taken into account. Universal design is based on without hindrance design. It means to create spaces that are accessible to all in each age with ability; the main goal of this theory is an attempt to satisfy the majority of users' needs internationally. There is limited information on the space condition and its impact on health. The first report was in relation to World Health Organization meeting in 2000, in Paris, by health experts in Europe.

2. Methods and materials

This study was collected by research, review of literature, performed similar samples and research that has already been done and by reading books, cases available from the impact of space in the spirit of elderly people and the descriptive study, analysis of documents and theories was given.

3. Results

3.1. Pinel elderly village

The project was built by the architect of Kodamadysinow with Larry in 2001 and got the winner of the composition of elderly life, a daily center for the elderly, people with Alzheimer's and dementia. A shape had a similarity to the great English houses to create a sense of home. This village was built on two surfaces, the higher surface for day center users and lower surface including elderly people with Alzheimer's disease and dementia. It's area was 52,000 square feet on 3 floors and included faceplates, central kitchen, landscaping, parking, alarm system, door opening and closing and special lighting trails.

3.2. Elderly health service center of Binwaver

This project was created by architecture MC chromic in El Paso. This center includes modernization in order to new programs such as all services, facilities for the elderly by the regulated daily center and daily technical service unit. Also, it has a clinic, pharmacy, education of preservation of mental health, physical, professional, work, speech therapy, diet orders and access to social services.

3.3. Wellness and beneficence center of Saban

The project was established in forested hills of California and was created by the architect Smith. The project was a part of an ongoing service retirement that the appearance of a building consisting of a Center on Philanthropy, water center and the community room in the open space as well. This place is an initiative program and includes consensus of dry and water lands, physiotherapy and fitness which are designed to improve the quality of life. This project included services inside open spaces to a place for entertainment for the elderly.

3.4. ACD Jewish home from the garden

This house is of architectural group works of Kerstak. The design of the building includes a courtyard with a Chinese wonderful fence that encouraged the movement of people and circulation space in a secure and equipped environment. Some spaces have been designed in the vicinity of the yard that included space of main activities and has a central location for each of the applicants of private services. The important sector of the service space is a health space that has been designed based on the dignity of registrants. Other spaces include a lobby, reception, administrative, physical therapy, occupational therapy, and support and registration sections.

3.5. Definition of aging

In Iran the age of 65-70 has been determined as the starting of aging (Rafizadeh, 2001) but it cannot mentioned a distinct old age. As some feel aging, at the age of 45 years but the others adapt themselves in more than 65 years old and keep their relations with the family and society. Aging is the loss of mental and physical forces that occur over time.

Definition of aging in different countries according to European conditions is different. In other words, there is no aging in its actual meaning, and the sense of aging is an internal and emotional feeling that is different in various people. During this period, the elderly can be divided as follows:

1. Elderly people who can think, but have lost their mental faculties.
2. Elderly people who have lost both the physical and mental abilities.
3. Elderly people who have active body and mind (Shamloo, 1985).

Knowing the characteristics of the elderly; in this section we examine the characteristics of elderly people and these features are divided into two categories:

1. The physical and mental properties of the elderly
2. The physical characteristics of the elderly

3.6. Psychological characteristics

Adaptability of elderly with their environment is performed hard because of some reasons. They encounter with special pschyco-emotional problems, the sense of loneliness, tending to acquiring paying attention of others and sense of belonging, so, to show them and decreasing the psychological pressure, it is possible to control the environment and force the others to obedience of themselves. The internal changes made in the elderly include changes in emotions, thoughts and the self-concept (Rafizadeh, 2001). Some of the common sentiments of the elderly include:

1. The feeling of sadness because of lack of attention of children and relatives.
2. Sense of loneliness because of the rejection.
3. The sense of despair, and hopeless especially in elderly people who have financial problems.
4. Feelings of anxiety and worry.
5. Sense of being waste and weedy feeling.
6. Feeling of being burden.

3.7. Physical characteristics of the elderly

According to statistics, 50 percent of physiological activity was due to environmental factors in people between 30 and 70 years. Therefore, the design of the physical environment of older people should be congruent with their physical and body condition, and at least not feel the need to anyone. Also, specific changes and characteristics of elderly people vary from person to person, simultaneously (quoted by Mashayekhi, 1998).

3.8. Limitations in physical-motor

The more aged the people, the reduction of their mobility. problems related to mobility can be associated with other traits that is effective in designing, such as claudication, tending to look down while walking with a cane, the need to break the trajectory of the space to another space, or an inability to bend and the need to stretch their legs can be associated with the lack of significance of moving between space and fear of falling. Physical changes that led to the specific needs and impact on the design details include:

- A: shorter long than normal and shorten the horizon.
- B: undermine the powers of motion and rapid movements
- C: slow speed of reactions
- D: Increased sensitivity to high or low temperatures
- E: The weakening of the powers of sight, hearing and smell

F: Decrease of control over bladder and bowel function

G: Residential and recreational therapy centers for the elderly

These centers can provide social health needs, education, cultural- educational for the elderly with appropriate services in the local community regarding to understand in location and how to change these demographic patterns. When the title of daily services are used in connection with elderly people, a wide range of services in various fields, ranging from social clubs to senior centers and home-based care, day care and day hospital are covered. In connection with the main objective of this study, the title of "daily care services" refers to cares that in a particular set of characteristics have the following characteristics:

- Be grouped
- Be outside of individual home
- Be open for at least 4 hours a day
- Run by caregivers volunteer or employment

The main functions of these centers are daily care services. These centers according to the various needs of the elderly can be divided in different parts:

1. Daily community centers: makes basis social activities possible.
2. Daily care centers: In addition to social activities provide personal activities.
3. Rehabilitation center: provides rehabilitation therapy and incorporate the limited medical care.
4. Daily hospitals for the elderly: providing care for older people with mental health problems.
5. Daily centers with various responsibilities: not only are able to provide care for elderly people who suffer from mental problems, but for those who have physical disabilities, are also suitable.

3.9. Normal activities of daily complexes of the elderly

Generally, activities and services that are provided in the daily complexes can be divided as follows:

1. Consultation and promotion of quality of life
2. Personal Care
3. Evaluation and rehabilitation treatment
4. Nursing care and physician availability
5. Administrative and employee activities
6. Location of temporary accommodation for cities applicants
7. Open spaces for recreation and exercise equipment
8. Appropriate facilities for indoor sports and recreation
9. Self-employment centers including greenhouses, workshops, crafts and painting workshop.
10. Cooking in Indoor and outdoor restaurants
11. Cultural and religious activities
12. Educational classes
13. Centers for the elderly, such as hairdressers and shopping centers for the elderly

3.10. Recommendations for green space designing for seniors

Daily centers with various responsibilities: not only are able to provide care for elderly people who suffer from mental problems, but for those who have physical disabilities, are also suitable. After investigating the characteristics of the elderly, guidelines for the design of green spaces for the elderly are offered that with respect in space design for the elderly, it can be possible to prepare the pleasant environment created for them. These are as follows:

1. Intervals and length of access routes should be lower than normal, for example, the number and location of health services shall be in a way that elderly people in shortest time, and the most appropriate possible route could access to it. No long or bump barrier should not be existed in the road of elderly movement.

2. It is attempted to use as possible of the route with less steep and if have to use sloping paths, it is necessary to as much as possible along paths and roads used to arrest the elderly.

3. It is necessary to trigger the senses of sight, touch and smell in the design of open space to enjoy the environment and perception to be done properly.

4. Very important tactile clues and include changes in floor texture sidewalks and stairs area is before the site of the route. This change can be brought about by a change in flooring materials.

5. Due to the fact that older people are tired sooner than others, appropriate benches should be designed at specified intervals for these people.

6. It is better to consider specific spaces for calisthenics and stretching sports for the elderly. For example, the walking is the interest to many seniors in high age, therefore, we can design varied walking paths that respond to their need.

7. One of the older people is talking with each other and designing spaces for gathering the elderly and talking to each other on the outside of routes can be very convenient traffic pathways.

4. Conclusions

This site can be set with the service of seniors in the center every morning to bring their age-appropriate entertainment. The short time settlement for town applicant and designing spaces for daily resting in quite space beside water and green zones away from traffic sounds and appropriate local urban stress create talking and conversing spaces for elderly people close to various spaces. This center must have a very high quality conditions that can be regarded as a recreational accommodation center for the elderly and those with intelligible designed to attract their attention and this issue leads to designing. Raising life expectancy by creating fresh and health in temporary residence that in terms of recreation, sports, health, the elderly and should be in the highest quality and is the

purpose of this design. When elderly retired from their work, they have no duties and responsibilities. Because of depression of the main objectives of these training areas, creating an environment for older persons is growing. Seniors need to talk, converse and listen. This issue could be exploited for the benefit for older people and strengthen the spirit of them. The lack of using appropriate standards for the elderly, create a sense of loss and make doubly inefficient. Elderly people need to attend in the society and entertainment specific to their age and have spaces for educational classes. It is necessary to establish spaces with recreational facilities for elderly who are living according to the standards of the elderly. Beside these spaces it should be establish caring and medical spaces should care and medical areas due to the particular circumstances of such cases. Services offered in this set should receive government subsidies and offer at reasonable prices. Generally, an atmosphere that creates all the daily needs of the elderly, such as exercise, religious,

shopping, entertainment and happiness and the elderly can exploit such space as a separate environment beside their families and personal spaces, is necessary.

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