A Review of Site Planning and Designing of Old Age Home

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Abstract
In this paper, the need of old age home was analyzed along with the proper utilization of land space and other available resources were discussed. The area programming, site planning and design were proposed in order to provide the overall comfortable atmosphere that are particularly important for older people for the perceptual, functional and social changes associated with the aging process.

Centre of old aged people is the physical form of one of the social aspects or problems of today’s modern society. Until now the view of looking towards the elderly people had been narrow minded. With the advancement seen in the medical science the increase in human average age is become touching the figure of 60. The social make-up of our society is consisting of children, youth, and senior citizens. This increased population of old age the people leads to various social and financial problems.

There are collective efforts from various governmental and non-governmental organizations to help those elderly people to secure their life and help in it.

Keywords
Site Plan and Design, Architectural Design, Old Age Home, Design Proposal

Introduction
Indian tradition demands that the elderly be respected and taken care of, but these days’ senior people often find themselves treated very differentially by the youngsters and left helpless in this cruel society there are many reasons are responsible for that. It is our responsibilities where they can forget their other cares. Therefore, such people need different kind of environment, where they can find their interest. The proposed senior citizen centre is thus intended to be place where the people can gather and spend time with each other, share their attitude, views and indulge in different activities which will include recreational and literary activities.

There are diversified reasons for which the elderly come out of their homes. Some of them can be enlisted below:

Space Problem: The cities are getting increased and the families at the same speed there is lessening per head space at the house, so the elderly come out of their house, to accommodate the young.

Generation Gap: In India in other developed or developing countries, the industrialization accompanied by urbanization, has resulted in social and economic condition which have greatly influenced the living pattern, change it radically. The increased space of development and problem of adaptability to such change in aged people develops the misunderstanding in the two generations, so arises the generation gap problem.

Nuclear Family Trend: The older, people with no productive work to-do, may become burden to their married children. The children are caught between their own self interest and a set of obligations which spring from the fading traditions.

Their Own Liking of Independent Living: Today’s elderly with a sufficient source of income of their own living, may like to continue their previous living conditions, independently.[2]

The activity theory of successful aging suggests that retired individuals prefer to remain productive and active. Contrast to the theory of disengagement this viewpoint suggests that the aged prefer to resists preoccupation with self and psychological distance from society. It is believed that old age offers numerous roles of this kind of exits that can prove to be psychologically devastating if no substitute activities are found. Thus [6] the greater the number of role resources within which individuals enter old age the better off they will be adjusting to the demoralizing effects of the role exits. A favorable attitude towards old age developed as a result of earlier pleasurable contacts with elderly people. This center will help in maintaining the kin relation. Usually, the problems in the family arise because of the unemployment of people and because of this leisure time such family problems affect their mental condition, so it becomes necessary to engage them in other activity which will give them full satisfaction. They can also find any solution for these problems through the activities in which they are engaged. This center also provides them opportunities to earn money through their interesting work.
Need of Centre

Economic Status of Aged

Financial security largely determines the range of alternatives that people have in adjusting to all stages of adulthood. That person with sufficient financial resources can for example afford to travel, entertain friends or seek the Bert of health care. Older individuals without sufficient money can afford to do none of these things. Sadly, a majority of the nation’s elderly fall into this latter category. It should also be recognized that older person is not only less well off than other families, but their chances of improving their economic status through personal initiative are extremely limited.

Thus, living on a fixed income makes the elderly more vulnerable to the effect of inflation, as a result, the aged are faced with poverty, perhaps for the first time in their lives.

Problems in Aged

The [5] main problem is physical helplessness, which necessitates dependency on others. Developing new activities to occupy increased leisure time. Becoming involved in community activities planned for the elderly. Establishing living conditions in accordance with changes in economic or physical conditions. Making new friends to replace those who have died or moved away or who are invalided.

Ways of Retirement

- Some persons, particularly those engaged in physically taxing kind of work, as in industry; tend to anticipate with eagerness the time of retirement.
- For the self-employed, the independent craftsman or the businessman or professional person, retirement is not something imposed upon him when he reaches some mandatory retirement age.
- For persons in the more sedentary type of work like positions in the academic field, retirement is generally something to be delayed as long as possible and an event for which they are often unprepared when it comes.

Aims and Objectives

The aim of old age centre is to provide comfortable living with recreation to engage leisure time of elderly people & to design home with friendly and peaceful atmosphere for senior people due to which they can’t disturb with their past. It will create avenues for the potential people for display their talents and use those for the benefits of the centre and will also provide the opportunity to get more information and knowledge by advance technology through computer. It will also create an environment which delivers them the peace of mind both physically and spiritually at their last stage and will also provide them with library which will provide them with a variety of looks related to science, technology, politics, novels etc. A small existing temple on the site has been developed as place of worship which is interesting activity among the elders. The centre intends to give them the recreational facilities in the firm of indoor games. The centre also wishes to provide them the entertainment activities like video games parlor.

Assumptions

While deciding the scope of the project and the transformation into architectural design and environment, certain ideas have to be considered as a background of planning. These are included in the part of behavioral science in architecture. These aspects i.e., Hypothesis, may be specific to the type of the community i.e., region wise, caste wise and living typology wise so the social class which designing for may like certain type and standards of living.[3]

The people generally have passed their life in the earning money and to raise the family etc. Now, they want to pursue their own hobbies and recreation. They have lived the life for themselves and at such elderly are of the life, they may want to help for the social cause of different types. Also, they may like to teach their values and experiences to the younger generation. The segregation of the older people at one place makes them depressed; through they like to like to live with people of their own generation.[4]

Scope and Limitations

Many old age homes have well equipped and well-developed campuses though not one of them is architecturally designed. Also, there are mainly charitable old age home for poor and disable elderly people. But it is restricted to the social class.

- Who are independent in money matters?
- Who are well educated and from good background?
- Who have led their life with some principles and aims?

The satisfaction level of these elderly, during their previous life is good to better. These people have come out of their houses mainly by the other causes, than any of the serious reason of generation gap or nuclear family trend etc. The campus or the institute primarily will have the residential units of two / three types.

- Separate Cottages.
- Cluster System.
- Health Care Nursing Unit.
Besides this, the campus will have the dining unit, primary health care unit and Dispensary, the Recreational space, meditation areas, small shopping enclave and even a small restaurant to cater few people. The clear and comfortable planning and the emphasis on the diversified planning and construction details for the elderly.

**Limitations**
The estimation of cost will not be taken into consideration and the service part is not dealt in details. The consideration for barrier free environment is limited up to the provision of minimum step as all the structures are on the ground floor.

**Methodology**
The considered assumptions have to evaluated and justified on some practical basis. This is decided in the methodology of the project. The objectives of the methodology are realistic approach and need for availability of statistical data. The user of the building is to be involved in the design process. The references to the worldwide design and personal observation and perception were considered. [1]

These objectives are achieved by differ at components of the study. All of them, enlisted below, contribute for the completion of the background of the design i.e., model building programmer. These components are,

- Data Collection.
- Case Studies.
- Post Occupancy Evaluation.

**Case Studies**

**Case 1: Pitashree – Old Age Home at Pune**

**Location**
S. no.55, bhagyodaya nagger, kondhwa chord, Pune. Site is situated on hill and this old age home is under trust of Dado Seth Hallway Agnate at Pune.

**Establishment**
After starting Ganeshotsav by Seth Hallway at Pune the popularity of Dado Seth Agnate become more and form this trust will established and to do work for poor and elder people the old age was started whose name is Pitashree. This old age home was established in 24may 2003.

**General Description**
Total campus is spread over 2 acres. Near about half of the area is used for landscape and greenery purpose. One ambulance of the trust is always present for emergency service. The limitation of this old age home is, only for mentally and physically fit people above 60 years are allowed here for admission and handicapped people is not allowed here. A temple with detail carving is present in this campus with peaceful atmosphere in sabhamandapa. Here both children and old people placed in same building hence they interact with each other and people can’t have any time for negative thinking. The neighborhood relationship is good in this campus because two different age group are placed together.

**Topography**
The site is situated on hilly portion of Kondhwa chord, but total land is leveled and good landscaped. Entrance portion of site is surrounded with proper design consideration.

**Vegetation**
One third portion of total site is good landscaped and surrounded with large trees. On the remaining portion building is situated and in front of building central fountain is present and shrubs are present to surrounds that fountain. The remaining portion is surrounding with lawn and at outer periphery of that large trees are present.
Dining Hall
Dining hall is present at ground floor and children get food together. Total capacity of dining hall is near about 100 people at a time. The Hall is providing with recreational accessories like television and music system.

About Building
The building is four story structures. Ground floor is given to the children and above three floors is for senior people. In this building no provision of ramp is present here. Because handicapped person is not allowed here. The building is design in such a way that the building is full of light and air. The temple is of traditional type with lots of carvings on it. Halogen lamp is used for light purpose in night.

Transportation
Transportation facility to reach the site is not sufficient because the site is at outer periphery of city and due to hilly area local transport is enough and at height it becomes rare. For private purpose of old age home, the ambulance is available which carry food and emergency of patient at old age home.

Corridor
Total width of corridor at outer position is 8’ 0”. At flooring of corridor glazed tiles is used sleeping of legs.

Lift and Stair
Ramp is not present here but replacing there is provision of lift. Staircase is having very low riser in steps.

Width- 6’0”
Riser- 12cm
Tread- 1 ft.

Recreational Facility
Arrangement of well interior library was available and T.V. and music centre was used as a dominating entertainment facility here. At each floor one common room was present which was full of T.V. and music system. At every corridor there was a speaker on ceiling. Temple was placed beside the residential unit and hence spiritual people more recreate there. At every Saturday and Sunday meditation movie was played for people.

Case 2: Rajput Foundation Charitable Home for aged at Mumbai

Location

Two site of old age home under this foundation, distinguish in such that one is mans head office is at centre of city and another is at periphery of city.
Establishment
The foundation was started at October 1999 for social work purpose to help old and mentally restarted patient and provide economical treatment to the local people. The branch office at kudus for senior people was started at year 2004.

General Description
The head office is situated in centre of city and hence the campus area is small which is 2800 sq. ft. The branch office is at periphery of city and this is 40 km. away form head office so the campus is spread over 5 acres. The branch office is placed in surrounding of nature to separate their lifestyle from normal life and to express their hobbies. Visiting hours to visit senior people is form 10am to 5pm.

Topography
Both site lands are leveled and branch office land is at greenery. The site is at Bombay in crowded area hence importance of space is important.

Vegetation
The head office for old people is not with any greenery in campus; greenery is maintained in branch office. Here choices will be available for people to choose their accommodation where they want to live in city or closer to the nature.

Health
The main motto of foundation is to provide medical facility to the old people economically. Foundation has two ambulance of own and the 24 hours doctor facility is available in both the campus.

Dining Hall
In both campus the food is provide to the people to their beds. There is no provision of dining hall. In branch office outdoor eating facility will provide once in a week.

About Building
The building of each campus is single storey structure and with simple in structure. Head office is with strong brick wall and asbestos sheet is used for roofing.

Lift and Stair
Here total land of main office is developed in same leveled and no level change they’re hence the stair are avoided. In branch office plinth level is of 2 ft. and riser of that is of 6 inches. The old age home is for weak people hence the rise platform is avoided.

Corridor
Corridor in main office building the width is less and the provision of light is not present there. The width is 4 ft. 6inch. In branch office large corridor is used and width of it is become 8ft.

Place of Worship/ Recreational
Here in main office no place of worship and for recreation purpose only T.V. available and tour after every 6months period. In branch office two large temples in surrounding of campus, lords Ganesh and lord Mahadeva temple. In branch office two large temples in surrounding of nature, for spiritual people this is the most recreational place among the whole campus.

Area Programming

<table>
<thead>
<tr>
<th>Administrative Block</th>
<th>Area (Sq. Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting and Reception</td>
<td>25 –30</td>
</tr>
<tr>
<td>Directors Cabin</td>
<td>15</td>
</tr>
<tr>
<td>Manager Cabin</td>
<td>15</td>
</tr>
<tr>
<td>Supervisor Cabin</td>
<td>15</td>
</tr>
<tr>
<td>Conference Room</td>
<td>25</td>
</tr>
<tr>
<td>Store Room</td>
<td>10</td>
</tr>
<tr>
<td>Office Working Space</td>
<td>30</td>
</tr>
<tr>
<td>Gents Toilet</td>
<td>15</td>
</tr>
</tbody>
</table>
Ladies Toilet 15
TOTAL 170

**Residential Unit (for 2 Persons)**
- Dormitories 210 -220
- Cottages 25

**Dining Hall (for 120 person approx.)**
- Dining Hall 350 - 370
- Kitchen and Pantry 60 -70
- Store 15
- Washing Area 6
- Toilets 12
- Refrigerator Store 15
TOTAL 480 -490

**Services (Transformer Room, Generator Room, Meter Room)**
- 300

**Recreational Facility**
- Card Room 75
- Carom Room 75
- Billiards Room 70
- Tennis Table 100
- Computer Room 90
- Badminton 160

**Primary Health Unit**
- Social Unit 100
- Doctors Cabin 15
- Toilets (Gents and Ladies) each 20

**Others**
- Staff Quarter (Each) 24 - 40
- Library for 60 people 150 -200
- Laundry 80
- Shopping Area
- Swimming Pool
- Jogging Track
- View Deck
- Temple
- Yoga & Gym Centre
- Rooms or Dormitories

**Proposed Site**

**Site information**
The site is situated in tajbagh road 2.5km away form main city the Climatic, Geographic, Topographic information is below.

**Geography and Situation**
Deg. 21’north attitude and 78 deg. 4’east to 79 deg. 15’ east longitudes on the northeastern side of the state total area of the district are 6309 sq. km.

**Physical Features**
Population -- 12, 30,640 density of population (person /sq. km.) --135 men –6, 35,751 women –5, 94,889 total rural popes. –9, 05,695 total urban population --3, 24,945 %of scheduled caste –14.04%and % of scheduled tribe –15. 68%. Sex ratio (females /1000 male) –936 this detailed is according to the census 2001. The % which is below poverty level is 11.39%. Total number of sub district in Wareham is 8. And the major river in district is Wareham, Yehuda, Vienna, and Bali. The major crops in this district are wheat, power (millet), gram, bananas, and oranges. Literacy rate is 80.50%.
Building Material
In and around the Nagpur city more amount of manufacturing of clay brick are seen. Only Nagpur is the place where low-cost brick means Wardha tiles are available and making of it seen. For the modern material for the modern material availability the nearer advanced district is Nagpur.

Climate and Season
The climate of Wardha is characterized by a hot summer, well distributed rainfall and dryness, except in the rainy season. The cold season lasts from December to February and is followed by summer from March to May. The climate is variable.

Maximum temp ---47.9 deg. Minimum temp ---10.2 deg. C

Humidity
The summer is the driest part of the year, when the relative humidity goes down to 20% or particularly in the afternoons. Except during the monsoon season, when the humidity is light, the air is generally dry.

Rainfall
There is an average of 45 days in year at Wardha. The average rainfall is 1100 mm. southwest monsoon reaches 2nd week of June, with July being the month of maximum rainfall.

General Information
Nagpur is named after the nag river, which flows through the region. Wardha itself is said to be a corruption of area,’ which means boar and is one of the ten incarnation of lord Vishnu. Nagpur was annexed by the British form the Marathas is 1854, and was part of Nagpur district till 1862. In 1866, palakwadi village was made the district headquarters and the new district was named Wardha. The district was part of Berar and the central provinces, that later came to be known as Madhya Pradesh. In 1956, with the reorganization of states, Berar district were transferred to Bombay state. And in 1960 with the creation of Maharashatra, Wardha became a district of that state. Wardha, which falls in the Vidarbha region of Maharashatra, comes under the Amravati division.

The two main fairs held in the district are the Mahashivratri fair at Dhaka village in Arvin tehsil during February/March; and the Manage Maharaja fair at Kaposi village in Hinging tehsil. Other minor fairs are held at Gored (Wardha tehsil), Mendon, Gird, Hinganghatand Kwela Farad Baba’s us at Gird village. Primarily Marathi and some Hindi are the languages speak in this region. People generally vegetarian and prefer chapattis over rice.

Hospital Facilities
11 government hospitals, 4 private hospitals; ambulances –6 the district has a network of government –run health facilities consisting of the district hospital offering tertiary –level care with rural hospitals at the secondary level and 41primary health centers, sub—centers and dispensaries providing basic healthcare to the rural population. Nearly 24. 84 of the villages have primary health facilities (19910), covering nearly 52% of the rural population. The district has 2. 10 beds per 1, 000 populations in the medical institutions in urban areas (1991). The blood bank facility is 4 (government), 1 (private).

Postal
Nearly 21.20% of the villages, covering 52.41% of the rural population has postal facilities.

Transportation Facilities
Nearest airport is at Nagpur (74kms). Nagpur airport is nearer airport of Wardha. Well known big railway station is available here with broad gauge line. From Wardha pine is 686 and Mumbai is 817 mms away. State highways and roads from the district headquarter at Wardha link all 8 tehsils and major towns. National highway no.7 is passes through the district and 2 mms away from site. Of the total 967 inhabited villages, 549 (56.77%), covering the 80.50% of the rural population, have access to some transport service. All towns, except Deli and 40 villages, have railway connections. Important stations are Wardha, Sort, Seagram, Dharma, Hinganghat etc.

Design Parameters
Easy and direct access to on and of site, allows the natural flow of movement. The layout of pedestrian, vehicular circulation system should, established a pattern that, like the overall site plan, is easy to recognize and identify.

Site Entry - Site entry should be according to the users. Two entries from two roads will help in dividing the traffic flow of private zone and public zone. This also helps in avoiding the confusion in way finding and help to provide security to the central area.

Easy Site Access - Orientation of the site entry towards Minor Street offers security of elderly, while Major Street offers ease of reorganization.

Entry Drive Way - An entry drive way alignment that favors faster moving inbound traffic and requires fewer is safest, and least confusing.

Pathway Pattern - Pathway developed as a feeder system collecting people from private walkways to central area which maximizes opportunities for social interaction. This pattern provides sense of community within larger space and easy way finding.
Ease of Access, Transition - Comfortable and easy access between indoor and outdoor areas and between different types of outdoor areas. This transition offers:

1) Views to and from indoors
2) Easy and direct access
3) Protection from weather
4) Comfortable seating
5) Sense of enclosure and human scale.

Design Concept
Behavior is the result of complex interaction between two main sets of variables. The first is the environment that surrounds and affects the individual. The second is the inner condition of the individual which has two parts physiological, related to the body, biological mechanism and psychological related to the cultural background, motives and experience of the individual and his basic needs. Therefore, the design concept will contribute the following points.

1) Site Zoning
   - **Private, semi private:** Complete separation of the activities and its position will result in easy identification and use of space.
   - **Noisy- Silent:** Within private zone, segregation of noisy and silent areas for undisturbed and comfortable use of the space.
   - **Common facility:** Common facilities should be located in the center of two zone i.e., private and semi private for easy use and identification.

2) Orientation and Way Findings
Axial and Radial arrangement is easily identified promoting orientation and way finding.
   - Access routes are smaller than linear arrangement.
   - Small areas easily identified from central area.
   - Access is identified by directional clues.

3) Accessibility
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*Ease of Access, Transition* - Comfortable and easy access between indoor and outdoor areas and between different types of outdoor areas. This transition offers views to and from indoors. Easy and direct access and protection from weather. Comfortable and direct seating arrangement and sense of enclosure and human scale.

*Covered Pathway* - Covered pathways provide comfortable walking and provide protection from sun and rain. It also acts as directional clue to the space.

Aged people like small and intimate spaces, as they feel lost in big spaces. Grouping of smaller sub areas to form larger continuous area for group activity and also help in socializing, intimacy and claiming. Physical protection provided by a building edge or cluster of units offers a needed sense of security and security.

4) Interaction with Nature
Creating niches, and offsets within built-up area, we can bring nature inside. Providing activity areas near large windows also helps in communicating with nature. Courtyard planning, it can be said that the difference between a meaningful space i.e., positive space and residual space i.e., negative space has been established. Small sitting areas can be located off the beater path or separated from circular routes. The provision off choice in any environmental situation clearly allows the person to express individuality and identity. Provision of gardening areas likes a vegetable forms, gardens which is one of the pleasurable activities of the elders. For landscape architecture, another interesting theory about the interaction of the people with the physical surrounding concerns. The aesthetic satisfaction has been suggested that the requirements for the visual perception itself rose to a higher degree.

Design Proposal
Site Planning: - Site has 24 m wide road on south side at a distance of 90 m. and 12 m road on east side on which will be the safe entry for elderly.
Zoning

There are three zones categorized for users’ study: Private zone, Semi-Private Zone and Public Zone.

Private Zone

Private zone consists mainly of residential units’ re-cottages and dormitories along with dining hall, which are at walkable distance from each other. On site the cottages and dormitories planned in a way that they create an enveloping space which gives a falling of safe and secure environment. The central enveloping space consists of a small temple which already exist on site and small O. A. T. which will acts as common gathering space and also space for celebrating small events, function which will be only use by the residents. This central space thus will act as a strong interaction space. All the spaces are linked with pathway or walkways the material used for this is a non-slip - non glare walking surface which are safe for walking even for there with a walking stick.

Pavement type and texture are provided for walkways which will help to guide the walkers without any fear.

Semi-Private Zone

It consists of Hobby center, Recreational unit, Cafeteria, Swimming pool. These zone concerts of hobby center where elderly staff member will guide the students for different hobbies like art and craft class, drawing and painting class sew pare, personality development classes etc. for children. This also consists of recreational unit for the senior universe which consists of carom room, cards room, billiards, net café, library where they can spend their afternoon and evening time. Small children’s play area along with swimming pool is provided where in the evening children’s will come along with their parents and they can easily eternal with the senior citizen as the elders prefer watching others just by seating rather than performing any activity.

All activities in the semi-private zone are connected by pedestrian pathways and the orientation of activities according to the circulation system the pedestrian ways.

Public Zone

This zone is separated by wider pathways from private and semiprivate zone. It is located on the site just by the highway side and repeated by buffer zone of parking area. This zone consists of multipurpose hall, administrative block, yoga centre, and Gym which will be used by the resident as well as outsiders through which the funds can be gathered for running the centre.

Parking

Parking for two wheelers as well as four wheelers are provided near the entrance of each blocks which will be used by children.

Conclusion

When an elderly person comes and resides in this centre the only thing that he is looking for are not the physical components of the building, his need is more psychological than physical. He needs privacy as well as companionship of other residents at various times. To bring about this atmosphere, the following aspects are considered to achieve through architectural process, a residential scale for the units with no cell flank like corridor, dining room, a common facility for group living. The opportunity to be alone or in various groups. Unit clusters are arranged to provide opportunities for meeting others in the cluster while maintaining the unit privacy and identity. The focus is on these issues and recommendation that are particularly important for older people for the perceptual, functional and social changes associated with the aging process. To bring about this environment which is at once quite isolated detached and open, warm, friendly at the same time is the most important factor governing the design of the structure.

References

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