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Designing interactive spaces for orphanage combined with elders' home

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Article Info

Abstract

We live in a society where care for young and old is increasingly segregated. There is very limited opportunity for both age groups to connect. For elders, the interaction is expected to compensate for age-related deficits. In case of the young ones, an enhancing of growth and development is expected e.g., social behavior, communion goals. Social interaction and purposeful activities promote the physical and psychological state of children and older adults. The development of social interaction is closely related to physical and social context that complement the curative needs of elderly people and the progressive needs of young children. Elderly people often face difficulties to find people to communicate with. To deal with this loneliness of the elderly, it's been suggested to create more opportunities for children and elderly people to participate in various collaborative activities. The research investigates that how an architect can create platform for social activities that can ease communication between the generations by creating a mutually enjoyable environment. This will connect intergenerational perceptions and communication, and eventually contribute to improving the well-being and relieving the loneliness experienced by many elderly people and children in a combined orphanage and old age home. It is possible for an architect to improvise the social context of space along with the improvised physical ambience.

Keywords: activities, interaction, perception, orphan

Introduction

Childhood is a delicate stage in a human being's life. Caring, loving and nurturing them is so important in order to have a rich set of values and morals in them. The required care, love and nurture are generally provided to us by the elders in our families. Now, talking about the elders. Many people end up abandoning their parents at old age homes who took care of them all their lives. Also, lot of peoples lose houses and families in their old age, lose their jobs, and eventually are left alone.

Considering both cases we could conclude that they both lack a mutual feeling and that is deep affection, warmth, attachment and love. Orphans always lack parental or elderly love and abandoned parents always lack the love gained from children. The research investigates that how an architect can create platform for social activities that can ease communication between the generations by creating a mutually enjoyable environment.

Objectives
- The main objective of this research is to design a better common interaction spaces for elderly and children.
- Background Research and Literature Review
- Understanding viewpoints and daily activities of two groups: orphans and elders by questionnaire survey and observation.
- Case Study analysis and comparison
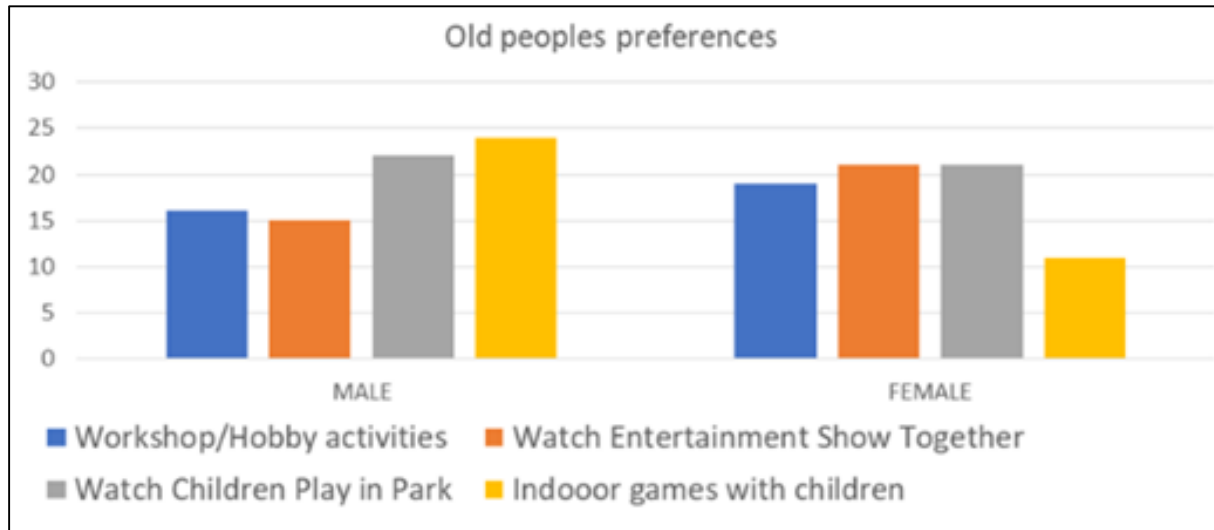- Proposing a well-designed project with interacting spaces.

Methodology
The paper is based on literature review from scholarly journals to set a background study and importance of this research. A questionnaire survey was carried out at the old age homes having sample size 56 (target was 50) to understand their views regarding space, activities and interaction. It was necessary to interview the aged people for appropriate finding and designing spaces. However were not interviewed in the orphanage, instead site observation was done for appropriate findings. To propose a good design of outdoor spaces, it was necessary to analyse case studies. Thus, two case studies are analysed in detail in terms of architectural planning and all necessary aspects.

Questionnaire survey
Analysis based on the questionnaire survey with total sample size 56 done at;
1) Matoshree Vruddhashram, Satara (29 people)
2) Samata Old age home, Satara (27 people)

Fig 1: Analysis of Questionnaire Survey

- Most of the old people preferred to watch children play around them in a park during their free time.
- Few old men preferred interactive activity was indoor games as they loved playing board games like carrom and wished to play with kids. Also, women least preferred playing indoor games as they didn't know how to play.
- Most of the old ladies preferred to watch entertainment show with the children as compared to men.

Observations at the Orphanage
Children tend to attract natural elements and colourful objects. They always spend most of their time in the outdoors. Children have the tendency to move from place to place without spending much time in one place. As per observations, it is seen that children spend most of their time in the open spaces. By interviewing the caretakers it was observed that children are most joyful at daytime, during colourful festivals and nearby natural surroundings. They play with animals and plants nearby. This helps them improve their mental health.
- Psychological effectiveness of open spaces in children
- Through such spaces a child develops socialization skills
- Gains knowledge of natural elements and surrounding environment
- Physical skills develop

Case Studies and Analysis
1. Case 1 - Maher Ashram (Orphanage) and Old Age Home, Satara at Maharashtra, India
Maher trust aims to build the orphanage (ashram) in Satara to accommodate street children especially girls. The projects aims to provide shelter, education and basic needs to improve their quality of life. Apart from girls, old women who don't have home stay here and contribute to the organisation by helping in daily works like cooking and cleaning.

Fig 2: Zoning diagram, and views of Maher Ashram

Architectural Aspects

Form & volume - very simple form but the courtyard inside is very proportionate & creates a feel of openness to the nature & surrounding. Pergolas at different levels perform distinct roles. Materials -Exposed brick work for full length of wall gives a monumental look to the building. Interesting use of primary & bright colours adds very playful and joyful look towards

2. Case 2 - Ayudham Society for Old and Infant, Satara

The spaces of this building has a symbiotic relation between children and senior citizens. Children have an opportunity to interact with elders and learn a lot of things. At the same time children's fill the elders' life with joy and affection.
Architectural Aspects:

Form & volume: Inter-relation & matrix of open, semi-open & covered spaces
Materials: Exposed brick

Fig 3: Designed Spaces in the Ayudham Society

Comparative Analysis

<p align="center">Table 1</p>

	Maher Orphanage and Old Age Home	Ayudham Society for Old and Infirm
Tangible spaces	▪ Offices (admin wing) ▪ Health care centre ▪ Dining hall ▪ Kitchen ▪ Dormitories and bedrooms ▪ Multipurpose area ▪ Aanganwadi / prayer area ▪ Mother care room	▪ Offices (admin wing) ▪ Outpatient department ▪ Meditation hall with library ▪ Dining hall & kitchen ▪ Bedroom ▪ Multipurpose hall ▪ Living room ▪ Toddlers' area ▪ Computer lab
Intangible spaces	▪ Central courtyard as Bindu ▪ Terrace covered by pergolas -very interesting shadow pattern and is used for festivals.	▪ Sthall - used as outdoor dine for children ▪ Meditation hall - used as library ▪ Lawn- used as assembly area as stage ▪ Entrance pathway- used as evening walkway
Types of Accommodation	▪ Separate rooms of 10 sq.m with attached toilet for old ladies also for mentally disabled women ▪ Separate dormitory of 30 sq.m with attached toilet for girls (16 girls)	▪ Separate room of 35 sq.m with attached toilet ▪ Separate room of 25 sq.m with attached toilet ▪ Room of 16 sq,m

Need of Recreational spaces for elderly
▪ To avoid daily tension and have privacy.
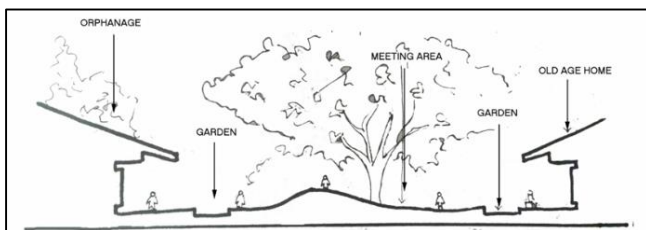▪ Exercise has psychological and beneficial value.(open air gym)

Fig 4: Play area for children designed in between elders home and orphanage

For a natural proper physical growth, experiences gained in the orphanage are important as well as experiences gained in social open spaces are important. Children define spaces differently according to their gathering with people and past experiences.

Proposed Design for Orphanage and Elders' home in Satara

Fig 5: proposed designed orphanage with elders home in satara with given common interactive play area and gardens for interaction

The proposed design consists of a combined orphanage and elders' home. As per the analysis done in case studies and questionnaire survey, it is preferable to have a combined home for the both age groups. The project includes recreational spaces, rooms, common spaces, educational spaces, services and landscaping. The spaces are designed in consideration of both age groups as well as universal design principles.

Universal Design Guidelines
Access shall be provided from a prominent point or points on the plot boundary, which is commonly used by the public or to a point directly adjacent to one entrance.
Requirements for Access Route
▪ The access route is designed to have sufficient width, thus single way is given 1200mm and two way is designed as 1800 mm for ease of traffic.
▪ Access are free from barriers such as steps, kerbs, doorways, interrupted lighting or objects and steep ramps.
▪ The surface of the access rout is designed in brick paving with grass spacing for percolation of water.
▪ The ramp has low gradient for wheelchair access as well as old people is designed (1 in 12 and 1 in 15) and width is 2000mm
▪ Landing of minimum 2000 x 2000mm is given at every start and end of ramp.
▪ Ramp kerbs are designed 150 mm high to prevent falling down and metal rail is given above the kerb with height 600mm for wheelchair and disabled people to use.
▪ The floor of ramps is painted in bright colors having much saturation. In the proposed design, blue, orange and purple colors have been used to highlight circulation pathways and ramps for vision.
▪ Where there is a change in level, the provision of a ramp is an effective method to ensure largely independent accessibility for persons with a disability and the elderly.

Dropped Kerbs
General Provision: Changes in level at kerbs shall be by a dropped kerb Dropped kerb shall be provided at pedestrian crossing and at each end of the footpath of a private street or

access road. Kerb separating footpath or ramp from vehicular area shall also be a dropped kerb.

Requirements: Dropped kerb shall be constructed as follows
- Not less than 1200 mm in length and 1200 mm in width;
- With a clearance of at least 800 mm long at the back of the footway;
- Ramped at a gradient not steeper than 1:12;
- With a level difference of not more than 15 mm with the vehicular areas;
- Provided with a tactile warning strip at 300mm from the vehicular areas;
- Provided with a tactile warning strip of the nominal width of 600 mm at the ramp.

Design guidelines for children people for a garden design: Social interaction is basic to playing and learning. Well-designed seating and gathering areas provide settings in which children can broaden and strengthen their social relationships with each other and with the adults around them. On educational sites, small and comfortable gathering places are required where students and teachers can meet and work together. Forms include benches, decks, patios, verandas, gazebos and siting circles. Defined and separated areas for continuousness of playground's safety according to design

Parameters to be considered while designing combined orphanage and elders' home
1. Security
2. Safety
3. Defined field of circulation between spaces
4. Adults should have space safer from playground but still visible
5. Social interaction
6. Diversity of equipment
7. Natural Environment
8. Landscaping
9. Universal Design
10. Signage boards and suitable for all disabled types
11. Audio instructions in risky places such as lifts, mechanical equipment
12. Adequate lighting in outdoor and indoor

Conclusion
The purpose of this research was to understand the both age groups and the set the guidelines to design a better common interaction space for elderly and children from combined orphanage and elders' home i.e., a garden which is decided on the basis of survey where maximum elderly people felt to spend their free time with children in a garden watching them play and enjoy along with them. It is possible for an architect to provide a social platform among intergeneration people for certain building typologies like residential and associated building typologies (e.g., Hostels, old age homes, orphanages, building societies, rehabilitation centres etc.). Although it is not compulsory or in any regulation to combine these areas, the project benefits elders and children who would like to interact with each other and find an intergenerational human connection. This research study aims in highlighting the importance of designing such sensitive spaces with care and consideration.

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