

Development of Retirement Village in India

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Abstract - Ageing is a natural phenomenon with its own opportunities and challenges. This research paper aims to study the life of people after retirement and their needs from various aspects. This paper also analyses the effect of built environment on elderly people and the ecosystem in the community resulting to quality living of retired people. Government and real estate sector in India are helping to boost this concept with various schemes and policies over this past decade. As a result, a hike is seen in demand of retirement village in India. The introduction of retirement village within the neighborhood will affect the community from micro level to macro level.

Key Words: Retirement home, Senior Citizen Living, Built Environment, Independent Living, Assistant Living, Empty Nest Syndrome.

1. Introduction

Ageing comes with its own opportunities and challenges. According to Census 2011, India has 103.8 million older people (60+years); constituting 8.6% of total population (W.H.O.). Retirement village is also termed as retirement homes, retirement community or retirement township or retirement housing. Preference to the nuclear family system, urbanization, migration of the youth for jobs, has reduced the sense of social security, physical & psychological wellbeing of elderly people. The majority of the elderly populations are living on their own. The increasing age can be a barrier leading to increase of external support system. In India, with the growing income and changing lifestyle, the increasing numbers of retired people are ready to pay for the facilities and services related to their physical, medical and psychological needs. Retirement villages are a housing scheme that includes advance facilities for senior citizens to live comfortable and safer life. Advance healthcare facilities in and around the campus, high tech security system, assisted care living, recreational facilities especially designed for senior citizen are the key elements of retirement village. Changing lifestyle and high income contributes elderly people choose to reside in commercially developed and professionally managed facilities known as retirement homes / villages. ((MoHUA), 2019). This paper aims to find the needs of retirees and the factors that lead to the increasing demand of the retirement village. Role of the government is to secure a safe and secured retirement life financially. Government has implemented some rules and regulations to remove irregularities and malpractices assuring the secured environment of the

retirees. The increasing demand of retirement village has increased the interest of real estate developers in the construction market.

2. Background

Elderly population in India is expected to increase from 8.6 % in 2015 to 19% in 2025 and up to 34% by the end of this century of the total population of India as per The United Nations Population Fund (UNFPA) ((MoHUA), 2019). Demographic transition will be seen of current youth population to ageing population in coming decades. As per the earliest available information dated in 1830, in the UK states that English workhouses were established of 300 beds space for aged and sick, orphanage children, unemployed and people with disabilities. The 65 + aged population increased after 1851 and by 1945 (post World War II). These warehouses were then transformed to generic homes. While in India, a residential care home for elderly people was first documented in 1814 in Chennai for friend in need society comprising of British merchants and bankers started to accommodate Anglo Indian and domiciled Europeans in difficulties. And later in Kolkata in 1882, home for aged people was established by 'Little Sisters of the Poor' for Maltese Man Asphar (Vijaykumar Harbishettar, 2021).

In India, although there is an increasing acceptance of this retirement village, a lot need to be done. Social stigma is the largest hurdle in the growth of the retirement village. Affordability of homes post retirement is also a key issue to reduce the interest in the retirement village. Lack of trained staff such as generic doctors, paramedical staff, care workers and professionals who has experience in senior housing project is also one of the reasons to hamper the growth of the retirement village in India. Retirement village requires a holistic approach while designing the project and maintaining the village. This research paper focuses on the effect of built environment on the people and also understands the needs of the retirees to provide them social, psychological, physical & medical security and satisfaction. Retirement village is a lifestyle choice by those who are financially stable, well-travelled, socially connected, and have clear thoughts about how to live post-retirement. Quality living of the retirees must be satisfied for a successful retirement village model. The introduction of retirement village within the

neighborhood will affect the community from micro level to macro level.

3. Literature Review

The term 'retirement village' normally refers to a community, or complex, containing residential premises that are occupied predominately or exclusively by retired persons. In retirement village, facilities provided must form a supportive environment for the elderly citizens to opt the accommodation resulting in increasing demand (Xia, 2015).

Senior now considers life after retirement to spend time with family, to develop their hobbies, seek new interest and even start a new career. However their needs and requirements are not taken seriously. Independent living with required assistance round the clock every day and also with medical assistance is more preferred option by the retired person now days. There are various other factors leading to the preferences of elderly people to choose retirement homes/ village as an option for living (Nagarkar, 2017). The retirement village or housing should promote independent living, promote social interactions with the help of group activities, and allow individual choice opportunity to achieve the goal of maximum physical and mental working of the senior. A retirement home must provide facilities for senior citizens to ensure safer and comfortable environment. Provision of advanced medical facilities within the campus, high tech security system, and recreational spaces and other facilities especially designed for the elderly person are included in these communities. National Building Code (NBC) / Model Building Bylaws (MBBL) / Blended Guidelines and Space Standards for Barrier Free Built Environment for people with Disability and Senior Persons must be followed for standard design for age friendly design and independent living (Archana Chaturvedi, 2020). Retirement village is a flourishing sector for service providers and also directs to the various innovative lifestyle services and goods. The community life and housing requirements of the senior citizens must be understood before designing the project. With the help of architecture, technology and advance medical facilities, the village should convey the feeling of warmth, companionship, freedom, health assurance and culture. Various architectural layouts need to be studied for successful retirement village model. This retirement village is at the new threshold of exploration in India after seen and studying global successful models of retirement village or homes (Nagarkar, 2017).

The definition of retirement housing or retirement village is not specified. The differentiating factor of senior housing societies after retirement should be specified. Built environment is only seen as factor of the development of retirement village model. The built environment on senior citizen cannot be the only factor for the satisfactory living of retirees people. There are

some other factors that led to the development of the retirement village in India. There are some other factors for the successful retirement village. *Model guideline for development and regulation of retirement homes by MoHUA* is the latest publication that guides the necessary framework to design retirement homes which is developed after studying NBC, MBBL, etc ((MoHUA), 2019). These are the measure shortcomings that one needs to study and highlight. Quality of the retirement village must define the quantity or expansion of retirement village in India.

A person can take care of himself up to certain age. The dependency for day to day activities increases as age increases and requires external support. The senior citizen undergoes a drastic change after retirement and moving to retirement village / homes can also be challenging (Aryansh Gupta, 2022). The requirement of space, the environment, the best suitable climate for senior citizen must be studied to form the best retirement village model. Becoming comfortable and habitual to the environment should be emphasis while designing the interior of the space. The design consideration of exterior spaces is as important as designing for interior (Archana Chaturvedi, 2020). Nature has amazing things to offer for healing purpose. A therapeutically environment helps elderly keep their physical and mental health intact. Outdoor spaces have ability to comfort the body resulting improving sleeping levels, improving cortisol levels and minimises respiratory infections. The environment of the retirement village should be homely rather than feeling of social isolation (Aryansh Gupta, 2022)

The retirement village in India is opted as last resort for the elderly people. The concept of retirement village is widely accepted in abroad but it's a big challenge in India. Measures must be taken to abolish the concept of retirement village as a social stigma. There are limited resources available on the retirement village in India. Types of senior citizens especially retirees and their reason for moving in retirement housing must be specified. There are different types of models of retirement village or homes that make the homes feasible for buying, investing and reselling. Built environment for the satisfactorily living can be the catalyst for the development of the retirement village but the other factors such a role of government in generating awareness of the government policies and schemes for the retirees for the affordability issue must be addressed. The role of the real estate companies in making the homes affordable are few other factors that needs to be studied for the expansion of the retirement village concept and nationwide acceptance. The need of the trained staff and helpers are some of the factors for the contribution of the same. There are some cases where senior citizens living in retirement homes faced harassment and infringement of contract and basic rights by developers. In 2019, Ministry of Housing and Urban

Affairs (MoHUA) has published 'Model guideline for development and regulation of retirement homes' for the rights of the senior citizen and laid out framework to regulate the functioning of the retirement homes. 'Retirement Homes' comes under the category of real estate project and are subject to the provisions of the Real Estate (Regulation & Development) Act, 2016 ((MoHUA), 2019). The study analyzes the shortcoming and work towards the improvement of the retirement village in India as per the demand to ensure physical, mental and financial satisfaction of the retired people in Indian context.

4. Statistics of Ageing Population in India

Demographic shift to the elderly population is seen globally. This is due to less mortality along with less fertility rate (Chart 01). Globally, the 60+ and above population is expected to exceed the population of children under the age 14 by 2047 (INDIA, 2020). The elderly population share is projected to be 21.3 % by 2050 from 13.4% by 2020. Elderly population is expected to exceed the population of children under the age of 10 till 2030 (UN World Population Ageing, 2013 & 2017). One third of the global elderly population is living in developing countries (INDIA, 2020). Some countries are starting to plan for ageing population and societies. There is an urgent need to provide awareness of the significance of ageing populations and impact on the societies (INDIA, 2020).

India is expected to be most populous country by 2025. It is estimated to roughly 136 million populations in 2019 (INDIA, 2020). According to the 2011 census, elderly population in India is 103.8 million, which is 8.6% of the total population of India. The elderly population in India is projected to be 136 million i.e. 19.6% by 2050 (INDIA, 2020). The working age population in India in 2000 was 58.4% and is anticipated to hike up to 62% by 2050 (INDIA, 2020).

Longitudinal Ageing Study in India (LASI) is an importance source of statistical information for the international comparable national survey data of ageing (INDIA, 2020). It covers the complete range of topics like health, economic, social, and psychological aspects of the ageing population. The old age dependency ratio which is number of persons above 60 years and above for every 100 person in the age category of 16- 59 years was 11.7 in 2000 and is contemplated to be 17.6 by 2025 and 31.5 till 2050 (INDIA, 2020). India has 84% of male and 69% of female literacy rate. The literacy rate is highest in states like Kerala, Mizoram and Lakshadweep. The literacy rate is higher in urban than in rural area (INDIA, 2020). Chart 02 shows the percentage statistics of working status of elderly population. In organised sector of employment, 7% of the elderly people (60+ and above) are officially retired.

Of these retired people, 6% of official retired people currently receive pensions (INDIA, 2020). Chart 02 shows the percentage distribution of adults regarding work status as per the age group. This is divided into 5 types of working adult population namely current working and official retired, currently working and nor officially retired, currently not working and officially retired, currently not working and not officially retired and never work (INDIA, 2020). According to LASI survey conducted in 2017 -18, the population of India is divided in 3 age groups. 0 - 15 years also known as children age is 27%; the working population of age group between 16- 59 years is 61% and elderly population age group above 60 years is 13%. The urban working age population is 65% as compared to 59% in rural areas in India (INDIA, 2020). According to 2011 census, 52% of family lives as nuclear family; of which 54 % resides in metro / urban cities while 51 % resides in rural areas (INDIA, 2020).

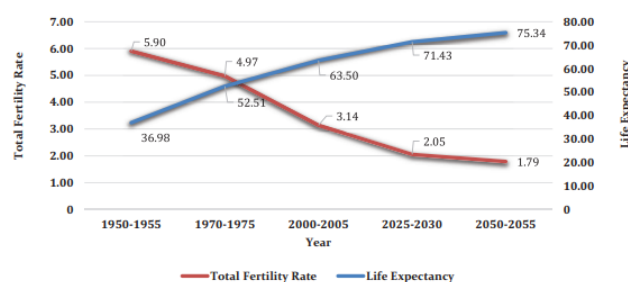


Chart 01: Life Expectancy and Total Fertility

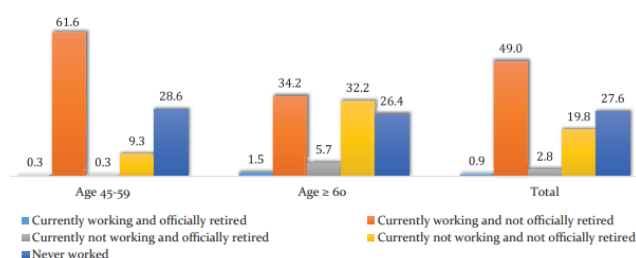


Chart 02: Percentage distribution of older adults by work status as per age, India, LASI Wave 1, 2017-18

5. Need of Retirees

The need of retired people defines the function of retirement village in India. For successful retirement village / home, one must understand the needs of the retired people.

i. Practical Need

The need arises because of the increase rate of crimes against senior citizens living alone. They have difficulty in doing day to day chores (Nagarkar, 2017). They also face problem of travel. Retired people do not require assistant living in initial phase. As their age grows, the need of assistant living arises. In some cases, retired people want to live a leisure life, so they ask for

assistance on call duty (Nagarkar, 2017). In some cases elderly are not acquainted or hesitate with the e- bill facilities; preferring to pay bills physical. As the person starts ageing he has mobility issues; leading to the demand of assistant living. There is a person or group of people to help with the support living system (Nagarkar, 2017).

ii. Psychological / emotional Need

After retirement, there is sudden shift of phase of life. Retired citizens needs time to adjust to the change (INDIA, 2020). They need to pass plenty of unproductive time. 5% of the world's senior population is suffering from dementia and 7% of the world's senior population is suffering from depression (INDIA, 2020). In some case, seniors are left alone while their children are studying abroad or migrating and opting for foreign career opportunities. This might lead to the psychological problem called 'Empty Nest Syndrome' affecting their physical health (INDIA, 2020). The word 'Empty Nest' itself describes the meaning feeling of empty nest for the senior citizen due to their children migrating to other country or state living them alone. The most common symptoms include depression, sadness, frustration, anxiety, loneliness, resentments, guilt, and somatic syndrome (INDIA, 2020). They may also face issue of being lonely, due to lack of partner or like-minded people around. Senior citizens are deprived from the sense of security and reliability due to increase crime rate. They require someone to share their thoughts for their emotional wellbeing (Xia, 2015).

iii. Healthcare Need

With the increasing age, the health of senior citizen is deteriorating. They face mobility issue, dementia, loosing of senses, muscle weakness and requires constant care (Nagarkar, 2017). Elderly people are vulnerable to contract diseases than the younger population. Dementia is the most common issues in senior citizens. The risk of high blood pressure, cardiac arrest or heart attack is also seen in senior citizens living alone. Regular checkup and medication of senior citizens must be taken seriously (Nagarkar, 2017).

6. Characteristics and Features of Retirement Village

The campus and the building should be wheel chair friendly and doesn't require any external help for mobility. The material used should be non-slippery surfaces (Archana Chaturvedi, 2020). There should be visual cues to direct the senior citizen around the campus. It can be color indication or plantations or graphics (Archana Chaturvedi, 2020). These are required to promote independence of the senior citizens. This will help to uplift their self-esteem (Archana Chaturvedi, 2020). Interactions are reduced due to lesser

social contacts after retirement or sickness or sickness of the partner or less interaction with the family members. In order to overcome these, informal interaction outdoor space and meeting spaces must be created (Archana Chaturvedi, 2020). Activity center must be provided for the people to stay socially active. These outdoor informal spaces and activity center creates opportunities for social interaction (Archana Chaturvedi, 2020).

The residents can continue their job after retirement in retirement village. For example, doctors can provide help resident's physical wellbeing and provide immediate service for the resident in health trouble (Archana Chaturvedi, 2020). They can also provide service outside the campus for which on demand transportation facilities are provided. This will help to discontinue the feeling of loneliness and social disconnection and motivate communication amongst the group (Archana Chaturvedi, 2020).

The building should not be massy. There should be minimum binding on the resident (Archana Chaturvedi, 2020). Every occupant should enjoy leadership lifestyle. The housing should be well equipped with modern amenities (Archana Chaturvedi, 2020). The occupant must have choice to dine in the house or dine in dining hall. Primary health care facility must be available in the campus (Archana Chaturvedi, 2020). The size and the future development must not make the campus cluttered. This will reduce institutional feeling of the campus and reduce dependency behavior (Archana Chaturvedi, 2020).

There should be various unit options available for residents to choose according to their comfort and affordability. There should be a variety range of optional services (Archana Chaturvedi, 2020). The indoor facilities can be easily understood, available and easy to control. By considering these factors, the village provides wide range of choices for the individual and maintains physical and mental wellbeing of the resident (Archana Chaturvedi, 2020).

The sense of security is most important to the occupant. The emergency crises call system must be install in every unit in the house and around the campus (Archana Chaturvedi, 2020). The village must not be places near low income group societies to reduce the crime. Secure environment will increase social interactions level and reduce the crime against senior citizens (Archana Chaturvedi, 2020).

Specific needs and requirement are there for every age group. Senior citizen while growing old requires special attention (Archana Chaturvedi, 2020). Ageing can be major transition and also can be very sensitive. Ageing may cause visual, hearing, tactical, walking hindrance (Archana Chaturvedi, 2020). The village should be considered while designing these aging challenges. A

good built environment is necessary for such conscience age group (Archana Chaturvedi, 2020).

7. Architectural Design Requirements of Retirement Village

The retirement village is a concept designed specifically for senior citizen. The design should be hassle free and ensure supportive living environment (Nagarkar, 2017). Retired senior design should be age friendly and support independent living with freedom and dignity (Nagarkar, 2017). Senior housing should encourage maximum physical and mental working for seniors [6]. Retirement village / homes should follow 'National Building Code' (NBC), 'Model Building Bye Laws' (MBBL) and 'Harmonized Guidelines and Space Standards for Barrier Free Built Environment for persons with Disability and Elderly Persons' (Harmonized Guidelines) for guideline for age friendly infrastructure development. State / union territory government should ensure that the project is made following these norms, terms and conditions (Archana Chaturvedi, 2020). According to first LASI report, two in every 3 people suffers due to reluctances towards health issues (Archana Chaturvedi, 2020). Amenities with thoughtful details play an important role in designing of retirement village (Nagarkar, 2017). These amenities provide residents wide range of activities resulting in active living, interacting with the other residents and opportunity to interact with like-minded people (Nagarkar, 2017).

The spaces should be design in such a way that senior citizen feels warm and comfortable (Archana Chaturvedi, 2020). Outdoor space needs to be designed very well for gathering and enjoying nature. Plantation and local vegetation plays an important role in reducing heat and act as a windshield in winter and reduces pollution for retirement village (Archana Chaturvedi, 2020). Therapeutic design must be incorporated for physiological and psychological wellbeing of the elderly citizen. The usage of natural elements in designing plays a pivotal role in therapeutic designs (Archana Chaturvedi, 2020). The design of the campus should be simple to understand for senior citizens. Long walk should be cut short and provided with resting space at regular distance (Archana Chaturvedi, 2020). Legibility is a signs and symbols used to direct the senior citizen. All the means of audio or tactical designs must be used (Archana Chaturvedi, 2020).

Circulation plays an important role in the building. The residents should feel homely rather than new place to stay (Archana Chaturvedi, 2020). Indoor spaces should blends with the outdoor spaces. The opening sizes of the door and windows should be wide enough for wheelchair access (Archana Chaturvedi, 2020). The opening of the door should be minimum 900 mm. Door

knobs shall have easy grip (Archana Chaturvedi, 2020). Lever door knobs are preferable. The openings of doors and windows should be easily operated. Sliding windows are preferable (Archana Chaturvedi, 2020). Furniture must be light in weight, sturdy and without pointed edges. There should be grip bars in washrooms with anti-skid tiles (Archana Chaturvedi, 2020). Toilets must have one emergency button. This emergency button should also be available in the center of house (Archana Chaturvedi, 2020). This emergency button should be easily approachable and operated. Power backup must be compulsory for each housing unit, at least for kitchen, toilets and lifts (Archana Chaturvedi, 2020). Smoke detection system must be mandatorily installed in every household kitchen. The door of the toilets should open outwards for the wheel chair to access (Archana Chaturvedi, 2020). Provision of lifts should be compulsory for the building having more than one floor. Furniture design should be age friendly (Archana Chaturvedi, 2020). Staircase should be 1500 mm. wide with rounded handrails on both sides. There should not be more than 12 steps in one flight (Archana Chaturvedi, 2020). Introducing Illuminated/ florescent/ radium strips on stairs will guide the seniors. Winding staircase must be avoided as it can be dodged easily (Archana Chaturvedi, 2020). One must avoid introducing steps in corridor for level difference. Contrary to that, one can provide ramp to match the level difference (Archana Chaturvedi, 2020). Anti - slippery handrails must be provided on either side of the corridors. For light and ventilation of each part of the building, design should be according to NBC and MBBL. Rooms, corridors and staircase must be well lit with natural day light for proper visuals (Archana Chaturvedi, 2020). The chapter 10 and 14 norms of model building by – laws, 2016 must be followed ((MoHUA), 2019). In order reduce the pollution exposure of senior citizen; the village should utilize maximum renewable and non-pollutant resources ((MoHUA), 2019).

Materials and surfaces also play an important role in designing the retirement homes. Use of contrast colors can help visually impaired people to find directions (Archana Chaturvedi, 2020). Instead of using warm and cool color, light and dark colors must be used for visually impaired people. Long distance corridor must be avoided while designing for senior citizen suffering from dementia, and memory loss problem (Archana Chaturvedi, 2020). These residents find it difficult to locate their residence. The choice of the interior elements must fulfill the requirement of the interior space of the residential units (Archana Chaturvedi, 2020).

8. Facilities and Services in Retirement Village

Housing being an important part of retirement village, facilities and services also play an important role in the development of retirement village (Moogoor, 2020). The service provider or retirement home officer should be deployed to look after the maintenance and smooth functioning of all facilities and services in the village ((MoHUA), 2019).

Facilities

Facilities can be classified into activity center, food courts, health room, recreational activities (indoor and outdoor) (Moogoor, 2020).

Activity center is a place where residents invest their time in their hobbies, leisure activities, workshops and also houses administration office (Moogoor, 2020). It includes gym, library, spa room, music room, board game room, badminton court, tennis hall, salon and parlor, swimming pool, etc. Food court is essential for the residents to opted for dine out option (Moogoor, 2020). Health room with adequate medical equipment like oxygen cylinder must be set up for primary health care facilities. There should be facility for drug storage (Moogoor, 2020). Health room must facilitate first aids with well trained nurses and physiotherapist. The doctors of the health room can be doctors from residents. For recreational activities, Spaces for outdoor recreational spaces are inclusive of jogging tracks, yoga and meditation pavilion, etc. (Moogoor, 2020). Mental exercise zone must be created for people suffering from dementia, Alzheimer, etc. (Moogoor, 2020). Brain storming exercises and zones needs to be designed for residents suffering from dementia, Alzheimer, etc. (Moogoor, 2020). E- Carts should be provided for transportation and mobility within the campus. Transportation services must be provided for resident to visit nearby vicinity ((MoHUA), 2019). All these activities help the residents to be active, feel less lonely and social active (Archana Chaturvedi, 2020).

Services

Services can be divided into two parts basic service and customized / optional services.

Basic services

Basic services are essential common service required in a village for all residents ((MoHUA), 2019). 24 / 7 electricity supply, water supply and backup of electricity is necessary when faces power cut issues. 1 KV power back up for each housing unit must be provided ((MoHUA), 2019). Adequate security must be provided within the campus. Housekeeping service should is also essential ((MoHUA), 2019). The caregiving service is provided when residents sought for special care.

Helpdesk for social welfare department and urban local body which is easily approachable should be provided ((MoHUA), 2019). Ambulance service 24/ 7 must be available. First aid services along with nurses and physiotherapy must be facilitated ((MoHUA), 2019). Tie up with specialist hospital must be mandatory. Regular medical checkup and follow up must be compulsory ((MoHUA), 2019). Collaboration with pharmaceutical centers for door step delivery of medicines must be provided. Provision of wheel chair for each unit is essential ((MoHUA), 2019).

For safety and security purpose, the village should install alarm system / emergency button in bathroom, on entry doors, bedroom and kitchen and in common areas ((MoHUA), 2019). Adequate safety features from all electronic devices and equipment should be taken. Free intercom service with single digit dial number for medical, ambulance and security, police station and firefighting services must be facilitating ((MoHUA), 2019). Very well trained security guards must be deployed to all the necessary locations especially the entry and exit gates. The visitors must enter to the village with the help of pass system ((MoHUA), 2019). Surveillance of the CCTV camera must be duly checked by the security guard. Mock drills for emergencies must be conducted with the interval of time ((MoHUA), 2019).

Customized / optional services

These services can be referred to as leisure services. Internet service in the house should be provided if demanded by the resident ((MoHUA), 2019). Laundry, special meal service, personal care service, psychologist must be provided on demand. Wearable advance devices must be used that integrates GPS tracking, high or low blood pressure monitoring facility, heart monitoring facility, etc. ((MoHUA), 2019). Expert must be deployed for legal services like property resale, property tax assessment, legal document work and management ((MoHUA), 2019). For all these services, village needs to collaborate with various agencies. These agency employees hired must go through the police verification and submit it to retirement home officer along with the copy to the resident council ((MoHUA), 2019).

9. Funding for Sustainability of Retirement Village

Funding is necessary for regular operation of facilities and services and maintenance of the retirement village. The service provider or retirement home officer must collect the funds from the residents ((MoHUA), 2019). The funding can be collected in two folds; interest free maintenance security (IFMS) and maintenance charges ((MoHUA), 2019).

Interest Free Maintenance Security (IFMS)

Interest Free Maintenance Security (IFMS) is a refundable model and to be collected from the residents at the time of purchase or lease of the unit ((MoHUA), 2019). Half of IFMS deposit is fixed deposited in the bank and the interest received can be utilized for maintenance and repairs work of retirement village ((MoHUA), 2019). The other half can be invested in government bonds / securities and the interest can be used for the maintenance and repair work of the village. Once the resident decides to opt out of the village, IFMS shall be refunded to them three months after their refund application ((MoHUA), 2019). In case the resident passed away, the IFMS shall be refunded to the legal heir 3 months after the heir apply for refund along with some necessary documents ((MoHUA), 2019).

Maintenance Charges

These charges can be collected periodically, once or twice in a year, quarterly or every month under mutual commercial agreement between both the parties ((MoHUA), 2019). Maintenance charges can be revised only once in the financial years after by service provider or retirement home officer. This can be consulted first to resident council ((MoHUA), 2019). This revision must be duly notified to the residents and also specify the reason of the revision. This revision is an amendment imposed on the residents to the agreed service contracts and shall be mutually agreed charges ((MoHUA), 2019). This money can be utilized for providing facilities, basic common services, amenities etc. and is mutually agreed by the residents and developer or service provider or retirement home officer ((MoHUA), 2019). This revision of maintenance charges needs to be displayed every time of the revision on notice board in retirement village / homes ((MoHUA), 2019).

10. Scenario of Retirement Village in India

COVID - 19 pandemic has now made seniors realise the need of assistant living and increase the demand of senior citizen living (INDIA, 2020). With this increasing demand, government has declared scheme of Atal Vayo Abhyuday Yojana (AVYAY) for the financial year 2021- 22 (INDIA, 2020). South Indian regions complies the most of the senior housing projects. The cities like Bengaluru, Chennai, Coimbatore, Pondicherry, and Hyderabad are the desired places of settlement after retirement. In north regions, Delhi NCR, Chandigarh and Dehradun are the preferable places for settlement after retirement. In west regions, Pune, Mumbai, Panaji, Ahmedabad, Surat are the most preferred project locations (Archana Chaturvedi, 2020). About 70% of the retirement village / home projects are in the south (Archana Chaturvedi, 2020). The factors that flourished

the growth of retirement destinations are the familiar climate, native place, better connectivity, and better future for children, etc. (Archana Chaturvedi, 2020).

11. Role of Government in the Development of Retirement Village

According to Article 41 of Indian constitution "The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want." State and central government is responsible for social justice ((MoHUA), 2019). Government of India has formed 'Maintenance and Welfare of Parents and Senior Citizens Act' ('MWPSA') in 2007 to make sure that the legal heirs should take care of their parents of 60 + years and above. The ministry of Housing and Urban Planning (MoHUA) in 2016 recognised the 'retirement homes' category as real estate project and are subjected to Real Estate Regulation and Development Act ((MoHUA), 2019). MoHUA ensures that the State Government and Union Territories take adequate measures in their respective Acts and Regulations for retired a senior citizen who resides in retirement homes. It also decrees to form policies, fair practices in this sector, infrastructure and services ((MoHUA), 2019). MoHUA also studies 'National Building Code' (NBC), 'Model Building Bye Laws' (MBBL) and 'Harmonized Guidelines and Space Standards for Barrier Free Built Environment for persons with Disability and Elderly Persons' (Harmonized Guidelines) for principal designing norms. It provide checklist for the developers regarding physical standards and specification of infrastructure of retirement homes or village project ((MoHUA), 2019). Provisions of basic services are also mentioned in the building norms. This includes provision of water supply, electricity, electricity backup on 24/7 basis, proper sanitation, disposal of waste, hygiene maintenance of the campus, age related indoor and outdoor recreational activities, adequate security and housekeeping, yoga, physiotherapy and counselling room, care giving facilities, provision of electric vehicle or e -cart for transportation around the campus, care giving, etc. The services can be customising according to the demand ((MoHUA), 2019).

RERA is also applicable for retirement home. RERA looks after the framework of real estate projects. The real estate regulation authority is formed under RERA of respective state / territory to ensure fair practise of retirement village / homes. This deals with the 'Functions and Duties of the Promoter' and Chapter IV dealing with the 'Rights and Duties of the Allottees.' However some more specific provisions are required for the 'Agreement to Sale' and other documents.

There is no transparency and accountability of the money transaction by the builder / developer. There is poor quality of services against high maintenance cost. When resident faces the issues of exploitation, breach of their rights and mistreatments, they have no choice but to file civil law case ((MoHUA), 2019). (AVYAY, 21 - 22). During COVID – 19 pandemic, senior citizen realize the importance of assistant living in India resulting in increasing demand of the projects (AVYAY, 21 - 22). The demand of the projects is doubled after the second wave of pandemic. This market has bounced back after the second wave pandemic (AVYAY, 21 - 22). In financial year 2021-2022, government has introduced Atal Vayo Abhyuday Yojana (AVYAY) for welfare of senior citizens. Government is invested about 530 crore rupees in AVYAY scheme (AVYAY, 21 - 22). Out of which 300 crore rupees are utilized in senior living, under Shelter and Health for Senior Citizen Scheme that involves Integrated Program for Senior Citizens (IPSrC) and State Action Plan for Senior Citizens (SAPSrC) program (AVYAY, 21 - 22). Around 180 projects are approved in AVYAY scheme which will benefit 1,75,800 senior citizens programs and projects (AVYAY, 21 - 22).

12. Role of Builder/Developer in the Development of Retirement Village

To make the retirement village affordable and sustainable, builders/ developers has come up with different type of financial model as stated below:

Ownership Model

The model directly transfers the title to the end users from builder/ developer ((MoHUA), 2019). Title is transfer through sale deed or transfer deed. When the allottee demise, the legal heir can use/ sale/ rent/ lease the residential unit. This model is most acceptable by the owners ((MoHUA), 2019).

Reverse Mortgage Model

The property can be mortgage to financial institute ((MoHUA), 2019). This financial institute then pays lump sum amount or pay on monthly basis for a specific period of time as per mutual terms and conditions between allottee and financial institute. After the demise of the allottee or mortgage term completion, the property is liable to preclude as per mutual agreement ((MoHUA), 2019).

Lease/ deposit model

In this model, tenants are allowed to take up the unit by paying deposit for certain agreed period of time under mutual terms and conditions ((MoHUA), 2019). The

maintenance fees can be added or charged separately on mutual agreement ((MoHUA), 2019).

13. Case Studies

a. Suvidha Retirement Village Bengaluru, Karnataka, India

A group of doctors in Bengaluru noticed that the senior citizens suffer from empty nest syndrome and lack of safety at home (Moogoor, 2020). This gave the birth to the concept of Suvidha Retirement Village in 2004. Suvidha retirement village is public limited company called Sushruta Vishranthi Dhama, Ltd. It houses single storied 200 cottages and retired people are eligible for the retirement village purchase. Ar. Jaisim (Jaisim Founderhead) has designed the village. This project is located in Kanakapura road, Bengaluru near Banergatta National Park in Bengaluru.



Fig 01: Google Map of Site

The site is located outskirts of the city away from pollution, traffic and crime, etc. (Moogoor, 2020). Initially, the site was agricultural land which was declared unfit for the agriculture. The land was then converted to non-agricultural land and granted permission by the government for construction to be completed in 2 years (Moogoor, 2020). The government imposed the rule of not selling the units due to public company limited. The company values the cottages in terms of share [(Moogoor, 2020). The residents become the shareholder of the company [(Moogoor, 2020). One can own only 2 cottages in the villa, as it may fear the maximum share holder and will gain the power to dominate the village. Initially, founders purchased the share to the company due to hesitance of the people to accept the concept (Moogoor, 2020).



Fig 02: Areal View of Suvidha Retirement Village

The site is spread over 30 acres of land. Since the site is located in the green zone, construction is limited to 20% of the area of the site (Moogoor, 2020). Any structures cannot exceed more than 2 floors. Considering site unique geographic locations, the site is designed without disturbing the natural site conditions and elements (About Suvidha, 2014). The site is access by electric buggies. A lake in the site was created around 3 acres at the south west area (lowest part of the site) of the site. This helps induce social activities like bird watching, fishing, concerts, etc. around 10 acres of land is used for landscape. Moderate height trees and bushes and climbers are planted and watered with the help of sprinkler system. Water purification plant is located to the north - west corner (highest point) of the site. The site also accommodates R. O. plant, water softening plant (Annual Report , 21-22). The campus is maintained through the monthly maintenance charges collected form each resident of the village.



Fig 03: View of Cottages near Lake

The site is wheelchair friendly with proper signage that allows independent movement throughout the campus. The site is well secured and security personnel are available at entrance and at various locations within the campus. Kitchen garden is located opposite to badminton court for resident to have fresh, organic vegetables for the kitchen in the food court. Surplus harvested vegetables are then supplied to residents (Annual Report , 21-22). The medicine garden space with collaboration with Sri. Sri. Sattva is being developed this year. The overall yield of this garden will

be utilised by Sri. Sri. Sattva to make herbal medicines (Annual Report , 21-22).



Fig 04: Exterior View of Old Cottages

There are 3 types of cottages: 171 numbers of 1 BHK and 2 BHK cottages for residents, 8 numbers of 3 BHK villas for committee members and 1 villa for architect. All the cottages and villas have slopping roof with Mangalore tiles. The cottages are twin bungalow type concept for the resident to not feel lonely. The cottages have basic porch, living room, kitchenette and bedrooms. Resident can opt for 1 BHK and 2 BHK cottages (Moogoor, 2020). Each cottage has unobstructed view of nature from every part of the room. The owner cannot alter the exterior of the cottage (Moogoor, 2020). The residential unit can be purchases on shareholder basis for long stay or weekend homes or for few months of the year due to favourable climate or NRI visit in India or lease the unit by the owner. Services are as per convenience of the residents. It may be on call service or round the clock service as desired by the resident.



Fig 05: Exterior View of New Cottages

Club house is the largest structure in the campus (Fig 06 & Fig 07). This building is B+G+1 supported by mushroom columns. The building is wheelchair friendly with ramps to meet the level difference. Building is planned along the natural elements and is a part of interior. The club house houses administration office, meeting room, food court, library, gym, unisex parlour, board game play area, badminton court, etc. Some of the

building parts are vacant and has a scope for future requirements. (Moogoor, 2020).



Fig 06: Exterior View of Club House



Fig 07: Interior View of Club House Ramp

There is 7 bedded health care center located near club house. This center is well equipped with emergency equipment and first aid service. Health center is operational 24/7 with well trained nurses available on the working hours on the working days (About Suvidha, 2014). The health center is planning to be shifted in the club house this year with the approval of the residential members voting (About Suvidha, 2014). The residents who are doctor by profession can volunteer for this work (Moogoor, 2020). They have collaborated with Religare Company for medicines and sample testing service at door step (About Suvidha, 2014).

Phase 2 of development took place in 2017 and is designed by Y.U. Architects. The phase consist cottages, gazebo, open air theatre, viewing deck (Fig 08 & Fig 09) (Y. U. Architects - Official Website). The cottages were designed with minimal disruption of existing rock. Gazebo is designed on an existing rock and is located in between the cottages and act as a social gathering space (Y. U. Architects - Official Website).



Fig 8: View of Phase 2 Cottages



Fig 9: View of Gazebo

The residents and the management committee member show zeal in the social activities and gatherings (Moogoor, 2020). They celebrate festival together, enjoy movie nights, enjoy cultural programme, participate in yoga and meditation activities, health aware programme, etc. People with similar interest form groups like yoga & mediation group, book reading group, singing group, dance group, etc. (Moogoor, 2020). Residents prefer to walking in the morning and evening and have informal talks in the green pocket spaces created. This is help with social bonding of the residents and sense of hominess (Moogoor, 2020).

A management committee has been formed to look after the administration of the village and maintenance of the property (Moogoor, 2020). There are different committees allotted for different type of works in the village (Annual Report , 21-22). The committees are Audit, nomination and remuneration, internal, maintenance, technical, revenue generation, land matter, legal, housekeeping, kitchen, landscaping, office, rental, finance, security, members, health and wellbeing, medical, cultural and staff welfare. Every financial year, annual report about the works and expenditure of the retirement village is published on their official website (About Suvidha, 2014).

Suvidha is the first retirement village in India. This village is eco-friendly, self-sufficient, and zero waste project. The site is away from the hassle of the city catering pollution free environment. The site being the remote area and presence of water body fears the presence of wild animals entering into the site despite of

tall fortified compound walls. The residents are now use to their presence. This site is isolated with no neighbourhood around making it little insecure and have to spent hours travelling to city centre. The village site is well segregated into private; semi private and public zones making it undisturbed and secured campus. The maintenance of the campus is well maintained. This village operates on the funding received from the maintenance fees. This results into non-profit project. This village has full control of who will be the occupants. This structure has no scope for the future development as it is restricted to G +1 only. This village has set example for other retirement projects in India.

Ashiana Utsav (Active Senior Living), Lavasa (Pune), Maharashtra, India. Ashiana Housing Group is one of the leading developers in the senior age living. It has senior living projects in Delhi – NCR, Jaipur, Bhiwandi, Chennai, Lavasa (Pune). Ashiana Utsav project is located in 141, Portofino street 11 Dasve Circle Dasve village, Lavasa. It is constructed in the year 2008. There are various housing options available i.e. 1 BHK and 2 BHK apartment flats and 1 BHK, 2 BHK and 3 BHK villa. The price range of this residents starts from 49 lakhs Rupees to 71.75 lakhs Rupees It is constructed in four phases. As per 2021 June reports, phase 1, 2 & 3 are ready to move (Ashiana Housing - Official Website).



Fig 10: Master Plan

The site is 31 acres vast site with permissible built up area up to 30%. There is no defined entry point or compound wall to define the boundary to the project as Lavasa is consider as one unit. The site is at the foothills of the mountains. The wall along the mountain foothills, stack wall is constructed. The site is along the contours and buildings are planned accordingly.

The site is well segregated by different types of villas, apartments. Lawn is central place of the project. There is scope of future expansion. Phase 4 is yet to be built (Ashiana Housing - Official Website). Security personnel are deployed 24/ 7 at places and provision of CCTV cameras makes the campus secure.



Fig 11: Arial View of Site



Fig. 12: Entrance to Site

There are six types of residential units available as per the preference of the buyer.

1. Tulsi- duplex villa (3BHK twin bungalow)
2. Manjari – lower villa simplex & upper villa simplex (2BHK twin bungalow)
3. Vrinda -1 (1BHK apartment)
4. Manjari -1 (2BHK apartment)
5. Vrinda -2 (1BHK apartment)
6. Manjari -2 (2BHK apartment)

The architectural design is inspired by European architectural style (Ashiana Housing - Official Website). Each villa has it's define boundary walls for safety purpose. The roof of the villas has sloping roof with shingles. Every villa has its own parking space. The apartment has allotted stilt floor parking for all residents in the apartment (Fig 13). The residential units are designed considering aged group occupancy. The common features of the residential units are smooth edged walls, single lever handles for all doors, usage matt finished surfaces; grab bars in toilets, night lamps in master bedrooms, and bigger switch boards at 7 feet convenient height, emergency button. Risers in the stairs are 100 mm. and stretcher lifts are provided for apartment buildings for easy wheel chair movements.



Fig 13: Types of Residential Units

The activity center is placed at the entrance of the site. Activity center consist of clinic, gym, administration department, departmental store, home theatre, music room, media hall, card room, kitchen and dining, reading room, table tennis room, badminton court, indoor play area, steam room, swimming pool with lukewarm water, yoga room, multipurpose hall (Fig 14). These various options ensure active participation of the senior citizens and helps in socializing.

Well educated doctors and nurses are available on call in the campus with essential first aid service. Ashiana Utsav has tied up with Apollo Hospital which is adjacent to the campus for benefits with the special package for the residents, ambulances, emergencies, care at home, etc. (Ashiana Housing - Official Website).

The site being very vast, golf cart are used for internal transportation. There are also provisions of playground for grandchildren during their visit or stay. Green pockets with pavilion and seating arrangements at various intervals are created for informal interaction of



Fig 14: Exterior View of Activity Center

the residents. Regular gatherings are planned for the residents in the lawn area for functions and celebration.

The Interest Free Maintenance Security (IFMS) is collected at 100 rupees per square feet along with GST on super built up (Ashiana Housing - Official Website). It will be valid after 10 years and to be paid one month prior of the possession (Ashiana Housing - Official Website). The maintenance fees are annually charged and need to be paid one month before the possession. This maintenance charges covers services and facilities like security, horticulture, housekeeping, AMCs, temple, repairs and maintenance of common facilities and individual units, administrative activities, medical services, floating cost and capital charges (Ashiana Housing - Official Website).

Ashiana Utsav is the most practical, modern senior living. This project is a commercially developed project by Ashiana housing group. It is a profit making project. It has various residential options to choose from as per their affordability, security and comfort. This project strive emphasis on the active living of senior citizens. The built environment is developed in such a way that it doesn't give the sense of senior citizen community.

14. Analysis

Retirement village is the paid community living for senior retired citizen serving all their needs and requirement through facilities and basic services and on demand services. This enhances the perspective of independent living with security and dignity. But this concept is not easily accepted in India due to some old rooted thoughts. This retirement living concept needs to

be penetrated as a new modern lifestyle option after retirement. Aggressive promotion by government and creative marketing by developer via print media and digital media is must to normalize and accept the concept of retirement village.

Retirement village is considered as a luxurious lifestyle option. Retirement village is very expensive living for retired people who has limited source of income after retirement. Only upper class people with higher income level can afford this village. Majority of population lives in lower and middle class lifestyle with moderate income. The village should focus on catering middle class senior citizen population also. Making it affordable housing project is the key solution. Purchase of the residential unit and maintenance charges can burn a hole pocket of the buyer. Efforts must be taken to lower down the price through schemes. Although there is a scheme called Atal Vayo Abhyuday Yojana (AVYAY) for welfare of senior citizens introduced in financial year 2021-22, very few people are aware of it and take benefit of this. There must be proper and easy to understand documents and articles available. Awareness must be made by the government about the policies and schemes for the affordability of the retirement living. Government and developers must also look at cost cutting part and make it affordable for common person. Thus, making retirement village affordable caters both middle class and upper class senior retired citizens.

In this research paper we have studies two case studies having polar difference approach towards this project. The case studies help to chalk down the merits and demerits of the projects. It is horizontal spread versus vertical expansions. Horizontal spread means single storied bungalow with no scope of future expansion. Contrary to that, is the vertical expanded which means residential units which include simplex and duplex villas and four storied apartments with ample scope of future expansion. Horizontal planning means the place must have ample of space in acres. In this case, the site is located at the outskirts of the city making it isolated from the society. Thus losing main aim of the retirement village. For the village to be included in the neighborhood, acres of open land is difficult to find and results in the increase in the market price of the property. Horizontal spread cannot fulfill the increasing demand of residential units in future. Vertical expansion is recommended with age friendly design for senior citizens.

The retirement village is exclusive community designed for retired people. This make excluded from the society and have less contact with neighborhood outside the village. This makes resident feel insecure and lonely. Planning of retirement village/ homes as a part of group housing project can be experimented. This experiment is being done in foreign countries. One of the examples of

this type of project is Armstrong Place Senior Housing in San Francisco, Florida, U.S. constructed in 2011 by David Parker and Partners (ArchDaily). This project aims to prevent sense of living in isolation for senior citizen. If this is experimented in India, the residents may feel inclusive in the society and near to the families (ArchDaily).

15. Conclusion

India is known as the second populous country in the world. The majority of population consists of youth. The decrease birth rate and decrease in mortality result in increase in senior citizens in coming decades. Literacy rates and job opportunities are also increasing in India. This is research focus on the needs and requirements of the retired people. It also studies and analyzes the factors and fundamentals for the sustainability of retirement village in India. This research paper also studies the effect of built environment for senior citizen physical & Psychological wellbeing. The elderly have drastic change in lifestyle after retirement and moving to retirement village can be difficult to adjust. The retirement village takes efforts in understanding the needs of the retirees and fulfilling them and making sure they live satisfactorily, active, independent, secured and dignified life. Although there are many hindrances in the acceptance of the concept, the demand is seen to be increase after COVID – 19 pandemic. It is consider as silver economy to India. Retirement village will be the most demanding and profitable business model for buyers and builder and government in the near future in India.

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