

Active Living Architecture: An Approach Towards a Healthier Lifestyle

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Abstract: This study explores the influence of the physical environment and architectural features which affects the health and physical activity of people living in the neighborhood. The main aim of the study is to create an environment which affects the regular lifestyle of people in terms of health and to encourage the expenditure of calories on a daily basis and promote healthier eating. This practice is followed in countries like New York and soon will make its way to India. Currently, analyzing the need in the Indian society this study focuses on the use of active living architecture for the country, also comparing rural and urban lifestyle standards.

Keywords: Active living architecture, Health, Physical fitness, Lifestyle and architecture.

1. Introduction

Obesity is a condition where a person has accumulated abnormal or excessive body fat. It is the imbalance between calories consumed and calories burned. Less involvement in physical activities is a main reason for weight gain. In today's lifestyle people are so engaged in their works that they barely get enough time to spend on themselves mainly on their health. It is a complex task and also a responsibility of an architect to design the surroundings as attractive as possible that people get encouraged to engage themselves in physical activities. Even children now-a-days prefer sitting back at home and play inside rather than going to the grounds.

Since 1980 obesity has doubled worldwide. According to research, "In 2014 more than 1.9 million adults and 41 million children (under the age of five) were overweight or obese in Asia." [1] In India this is an emerging health issue. According to National Family Health Survey India-3 (NHFS-3), 13% of women and 9% of men within the age of 15 to 49 years were found overweight in 2005-06. Also, it was found that urban areas has higher overweight prevalence than rural areas.

2. Related work

A. Literature review

1. *The Architecture of a Healthier Lifestyle (Merel Brabers)*

This study was based on the theory of nudging and doer and planner human behavior. According to the author, we have two systems namely, automatic system i.e., the 'doer' and the reflective system 'planner'. He says according to the book

'Nudge' by Thaler and Sunstein, the planner mostly like to plan ahead as he wants to promote policies for long-term whereas doer is tempted by the seductions that come with excitement and thus he promotes temporary policies. The doer works mostly when we are in "hot" state (out of control) and the planner work things out in the "cold" state. Later he says that the doer beats planner most of the time and the reason is based on these three factors i.e., experience, correct information and fast feedback. We humans analyze everything before reaching out to them and use our reflective system to plan these things. So, to help people make the right choices an architect should have the knowledge of all these theories and should keep this in mind while designing. To make this possible architect have to push people to make the right decisions, also called nudge. Nudging is about making it easier for others to choose for the healthier options and not forcing them. "The idea of nudging is to think about what benefits the people in the long way and what they would choose in the 'cold' state." [1] For this an architect may adopt the following techniques that are Inertia, Transparency and Affordances. Inertia is the existing situation i.e., people don't have to think twice before using the standard setting as they prefer the easiest solutions. Second, transparency is making things clear and transparent that all options are open to them and there is no invasion on their freedom of choice. Affordances is the underlying theory of nudging. Affordance is an action possibility offered by an object. "It is based on the consequences of the interaction between an individual and a situation."

2. *Active Living Architecture (William Weavers)*

This study talks about the guidelines which can be followed while designing active spaces. According to the research, people were not getting enough facilities and spaces for exercise and therefore failing to get recommended levels of exercise. If proper and planned spaces are designed and offered to the public, then according to the author the global obesity epidemic would drop down. A survey was conducted in England in 2007 to find out the barriers to exercise for people. It was found that the two main barriers were less leisure time and work commitments. Also, 21% men and 25% women reported lack of motivation as a barrier. To avoid these barriers many researches and studies were conducted and the conclusion drawn from their reports was to start incorporating small bouts

of exercise in people's daily lives. For this, the author has mentioned 'The Active Living Guidelines' (2010, City of New York). It is a book of measures that could be taken to design such spaces. Key recommendations in the Active Design Guidelines are:

- Mixed land use,
- Facilitate for cyclists,
- Access to fresh food,
- Pedestrian pathways,
- Parking,
- Building exteriors and programming,
- Appealing and supportive internal walking routes and facilities for exercise,
- Staircase planning and positioning.

B. Case study

1. Greenbridge Master Plan, King County, Washington:

Four elements were under primary focus while recreating the space i.e., connectivity, open space diversity, adjacent uses, and placemaking. A variety of different pedestrian pathways cross by various distinct destinations thereby encouraging residents of different age groups and abilities to walk more rather than driving. Open spaces of different sizes, located alongside homes, schools, adjacent spaces increase safety. These spaces include community parks, pocket parks, food gardens, which are placed throughout the site and are connected by different means such as pathways, sidewalks and trails. Nodes for community gathering ornamented by art pieces and preserved trees.

2. Gensler Newport Beach, California:

This office building is organized in a programmatic manner which ensure active movement of employees throughout the day. For inter-office travel, company owned scooters, bikes and skateboard are used. Break room is on the second floor so that the employees have to climb up through the stairs. Alternative work spaces are provided to encourage staff to move away from their desks. Trash bins are located away from desks towards the center. Dramatic interconnected staircase is provided and open office plan is designed to promote break away areas in large number.

3. Brooklyn Bridge Park, New York:

The 85-acre urban park adjacent to the Brooklyn waterfront presents exciting opportunities due to its proximity to residential neighborhood, access to varied modes of transportation, and its exceptional view of the city. To deflect the noise from the traffic, sound-attenuating hills are provided which ensures calmer and peaceful environment for the user. Two of the five piers house a number of amenities spanning from high-intensity sport courts for sports like basketball and dynamic children's jungle gyms within natural terrain to flexible-use lawns for fitness classes comprising of hip-hop, aerobics, Pilates, etc. and relaxing gardens by the water. Kayaking docks and other multi-functional spaces for cultural events and environmental education make this project a success. Bike and pedestrian paths are provided throughout the

park. Play equipment and recreational areas are specifically designed to accommodate people with physical disabilities.

3. Scope of study

The main objective of the study is to take a step towards a healthier lifestyle and discuss the architectural techniques that can be used. Analyzing the rapid growth in rates of obesity worldwide, it has become important to design cities, surroundings and buildings as active designs.

4. Fundamentals and techniques

Following are the techniques and principles that could be used by an architect to achieve his/her goal i.e., delivering people a healthier lifestyle.

- *Nudging*: The process of nudging works on basic human psychology. It is the indirect way to push people to do things they usually won't do or choose to do. It may be labelled as the primary principle active living architecture runs on, as the main aim of the active living design is to encourage people to engage themselves in physical activity without telling them to do so. This is accomplished by building such innovative and welcoming spaces that people are bounded to go outside and experience a healthy leisure time.
- *Incorporate a mix of Land use*: According to research, "greater land use mix is correlated with lower obesity." Mixed land use is a term for combining different types of spaces or buildings in the neighborhood rather than planning the same typology for the area. For example, planning grocery stores, newspaper stands, public plazas, schools, parks, etc. near residential areas, it is seen that people living in such neighborhood are more likely to walk to these destinations.
- *Design well connected street networks*: Clean, visible, accessible pathways well connected to all the neighborhood destinations. Well planned and constructed for encouraging people to walk more. Facilities like drinking water fountain, benches for sitting, trees or man-made shades for protection against weather conditions, art pieces for ornamentation, bicycle stand nearby planned, proper signages, etc. should be provided to increase and promote the use of such walkways.
- *Provide pedestrian orientated streetscapes and sidewalks*: Walkways should be provided along all the roads for the pedestrian to increase safety and segregate vehicular and pedestrian traffic. These sidewalks should be properly planned and amenities such as drinking water fountain, resting benches, etc. should be designed. Landscape along these sidewalks should be planned to provide shade, segregation, and

to make the streets look beautiful.

- *Provide infrastructure to support biking:* Different path for biking should be provided so that there is no interruption while riding and people can walk around freely. Proper paving should be done so there is a plain and continuous path for the bikers to ride. Bike stands should be provided along these paths. This will also promote the use of public transport as people can park their bikes safely and use the public mode of transport whenever needed.
- *Provide high quality spaces:* Using good quality materials and construction techniques will result in better outcomes. Providing high quality spaces with innovative mediums can bring more people to such places.
- *Provide spaces for all ages and abilities:* Spaces for all age groups should be provided. Walkways for elders, pocket parks and playing grounds for children should be planned so that people of any age group can use these spaces and entertain themselves.

5. Comparing urban and rural lifestyles

People living in the rural areas are healthier than people in the urban areas as they are engaged in more physical activities as compared to the modern lifestyle of urban areas. People in the rural areas live a simple life and perform most of their routine jobs by themselves whether it is cooking, washing, or any other household activity. They walk kilometers together to draw water from the well manually. Also, they use traditional methods for everything from cooking food on 'chulha' by piping air in and out to control the flame to cleaning their houses with broomsticks and from growing vegetables in their gardens to making spices at home using the 'okhal'. All these activities demand physical force and can be seen as a type of exercise. On the hand, urban areas have simple lifestyles made complex. Use of technology to save time also saves calories. People in the urban zone no longer practice such traditional methods rather using appliances for every purpose made them lazy. Despite of the benefits of using technology for saving time and efforts it has made people work physically less. Also, people prefer going to gym rather incorporating exercise in their routines like walking or cycling instead of driving, using stairs in place of

lifts etc. for which they don't get enough leisure time and that act as a barrier for them.

The percentage of people with obesity in rural area is much less than people in urban areas. Hence it is proved that physical activity plays a major role in fighting obesity and should be incorporated in our daily routines.

6. Benefits of active living architecture

- Promotes Physical activity and hence Physical fitness.
- Improve the environment in the neighborhood for residents.
- Provides more accessible places for all age groups and abilities.
- Job creation in high need areas through supermarket development, landscape development, bicycle and pedestrian infrastructures, etc.
- Saves money as it promotes walking over driving, cutting off the extra cost of transportation by 9%.
- Make surroundings more approachable, appealing and helps maintain cleanliness.

7. Conclusion

The evidence based on researches and the study of this data suggest that architectural features can help to improve lifestyles as it encourages physical activity and therefore can help fight obesity. The main principle behind the working of active living architecture is nudging i.e. indirectly pushing others to do something in the direction. People lack motivation and that barrier can be battled using designing as a weapon. The architects have to incorporate the principles and their knowledge of these theories into their designs thus creating a better environment and gifting people a healthier lifestyle.

References

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