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THE ROLE OF OPEN SPACES IN HIGH RISE: CATALYST FOR SOCIAL INTERACTION

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Abstract: These days high rise has become the entity of modern residential planning theories. And open spaces behaves like a vital physical element of these modern planning's. They act as a major tool for social interaction, both as of outdoor and indoor, consequently building the sense of community and advancing the level of ecological behaviour. This paper aims at investigating and researching about the vital role of open spaces in the development of high rise, and finding the ability of social interaction to achieve the psychological stability and goals with the help of these spaces. The approach is based on both social and physical activities involved to emphasis on social interaction. This paper focuses typically on the physical open spaces structures that can be used as a medium of social interaction. By differentiating between two open spaces i.e. 'green space' and 'grey space' this paper develops the focusing area of 'green open spaces' interrelating the high rise in the same. The goal of this paper can be achieved by the help of the residents living in high rise and their perspective about the same. Ultimately the findings will be applied in bridging the gap between people of high rise living in modern era.

Index terms: Psychological stability, high rise, open spaces, social interaction, bridging the gap.

I. INTRODUCTION

Increasing population has led to the growth of towns and cities later in the nineteenth century which led to the call of more green open spaces benefiting the health of maximum workers and simultaneously it also benefited the society as well. This development is taken as the call of awakening showing the role of open spaces in supporting the health of the society. These open spaces directly - indirectly also increased the rate of economy by keeping people healthy, happy, and hence productive. People's social life become interactive and relaxing. It also had an impact on the environment by keeping it clean and pollution free. Day to day increase in population has taken the face of high rise development as the land becomes short, people are confined within their places, losing connection with ground after certain level and proposed a gap from person to person. Cities become crowded and stress has duly overtaken their minds in the process of chasing time. Therefore open spaces need to be developed in these high rise to cope up with stress of daily routine and for being healthy which finally happens to become more productive in nature. Open spaces has unique qualities both socially and ecologically. This paper develops an integrated approach that appreciates the fact of both the goals, thus it provides the broad platform of supporting social interaction medium open spaces that acts as a heart of the planning.

II. OPEN SPACES IN HIGH RISE

Different approaches lead to the different definitions of open spaces. In all these approaches social interaction and ecological enhancement stands out as two different but integrated perspectives. Regarding the social perspective the open spaces has been classified into three segments i.e. macro level; micro level; and mini level. In this approach spaces are analysed with the viewpoint of user interference of built to open spaces; built to build spaces; and within the built spaces. These spaces act as a catalyst for the diverse need of users and their future generations contributing to the high quality of life and the rise of economy. People running at the high pace of every Nano second involved, does not find themselves relaxing and socially interactive due to lack of organised open spaces in these high rise. Social interaction word can also be used to understand the context of psychological stability that is written in the reports of 'Social Relationships and Health: A Flashpoint of Health Policy' by Debra Umberson¹ and Jennifer Karas Montez (2010) and in 'Green Cities: Good Health' by University of Washington. It concludes that open space is the main component of social interaction having the composition of built environment, connectivity, services, sociology as well as culture at all the different levels and stages of life.

From another view point regarding the ecological perspective of green open spaces will lead to the purification of ecological factors, enhance air quality and keeps away the pollution to enter the quality of living making people healthy and much more productive. Huge Barton (1966) concluded that "one way of approaching the problem of sustainable design is to see each development as an organism or a mini ecosystem in its own right". Considering his view point ecological aspect in the neighbourhood provides essential local elements and habitats for human, creating the microclimate of the area with possible comfort and sustenance.

III. LITERATURE REVIEW

Due to rapid urbanisation need of housing is increasing constantly and lands are getting short. There was time when only plotted development was in trend but then migration started from rural to urban areas in search of employment, better education, better living etc. in current scenario urban population growth is 2.6 times of rural population growth (census 2011), hence to accommodate this increasing population vertical development started and later the concept of integrated township is developed. But because land is reducing day by day, open spaces are also being neglected by the developers. People are getting disconnected from nature, green spaces, hence risk of life is increasing (source: psychological surveys).

Open space in neighbourhood is defined as any unbuilt spaces designated with a boundary which provides or has the potential to provide environmental, social or economic benefits. Open space plays an important role in creating sustainable neighbourhood structure in three key issues: space management, space function (circulation and frequency) and role of space. Three important aspects of open spaces are:

- Quantity - calculated through norms
- Quality - analysed by the consumer satisfaction
- Connectivity - understood by the frequency of usage

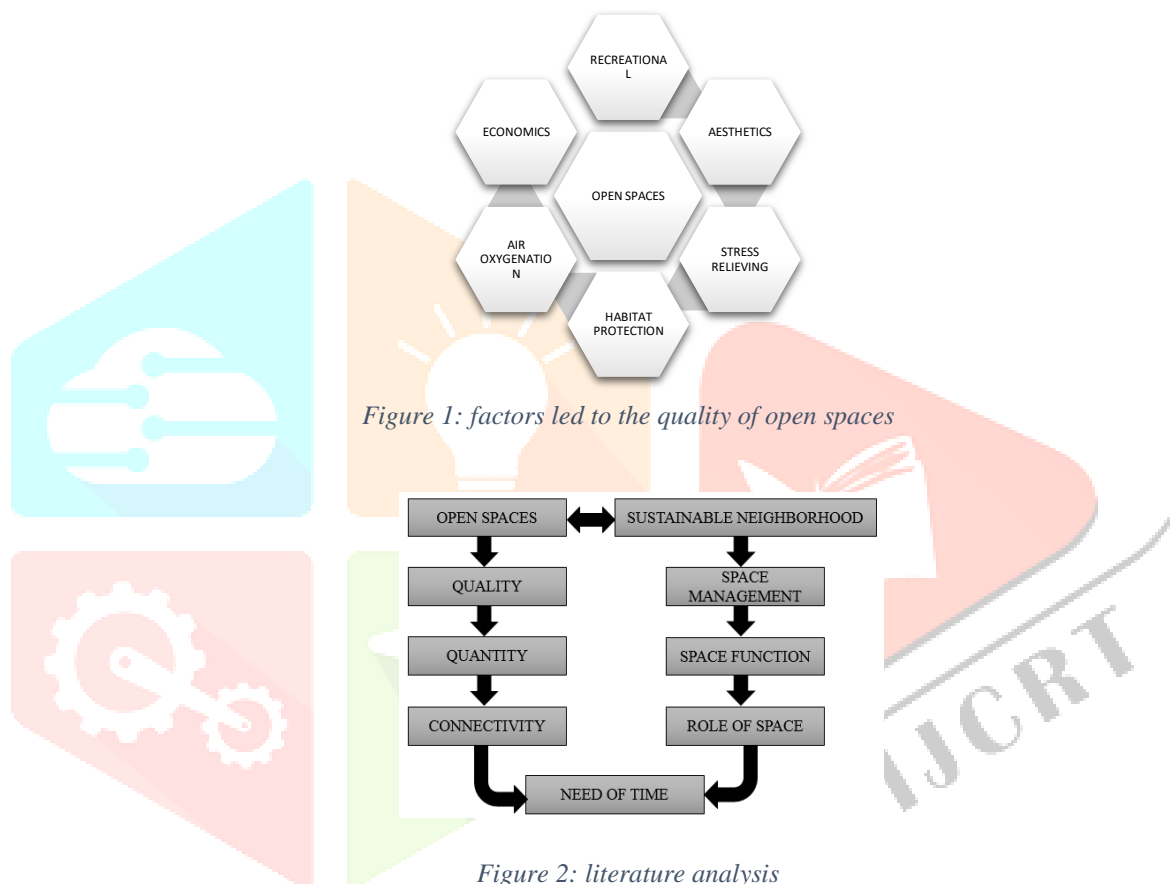


Figure 2: literature analysis

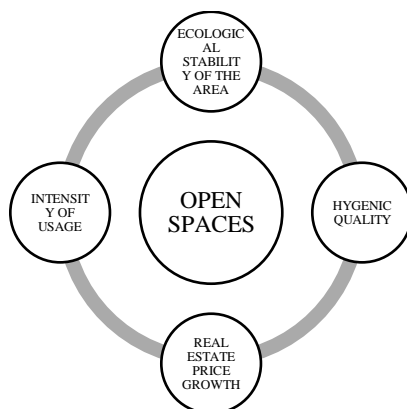


Figure 3: effects of open spaces

IV. OBJECTIVES, GOALS, AND SCALE APPLIED TO THE HIGH RISE OPEN SPACES

The application of wide-scope concepts achieving the social interaction via different parameters.

Table 1: Goals Matrix (correlating different goals with social interaction via open spaces)

Goals	Do's	Don't
Qualitative Goals		
Location	Central open space with ease of access with vehicular and pedestrian separation.	Vehicular and pedestrian movement should not be via same pathway.
Frequency of usage	Open spaces designed in a manner so that all the age groups have maximum frequency of its usage.	
Safety measures	All activity areas segregation according to their usage and other safety measures.	All age groups should not be gathered for different activities on a single ground.
Aesthetic quality	Aesthetics will be proposed with horticultures, landscape elements and other artificial fixtures without causing obstruction	Aesthetics should not lead to vision hindrance as it would lead to negative psychological impacts.
Neighbourhood relationship	Open space will be centrally oriented to encourage social interaction in and out of the built space.	Height should not be the problem for residents.
Arrangement of spaces	Spaces segregated according to usage but will be connected.	Lack of connectivity should be taken
Micro climate (perception of noise, dust etc.)	Open spaces will be centrally oriented leaving noise, dust etc. behind.	
Behavioural impacts	Open spaces will be inside the built space as well as outside, for better interaction which ultimately improves health and behaviour of residents.	It should not be far from the reach
Quantitative Goals		
No. of spaces	Designated areas for sports activities, single chunk of space with segregations according to usage pattern	No different age group activities should be clubbed together
Surrounding built form	Built form around will have proper visibility all the time.	Enclosed space should not get dark.
Area per capita	Fulfilling the norms and requirements of residents simultaneously	Open space should not left idle without proper usage

V. USING THE MATRIX FOR EVALUATING DIFFERENT OPEN SPACES IN CASE STUDIES

Above study is applied in finding two different types of open spaces. The first is the Magarpatta City located in the outskirts of Hadapsar, Pune. It is classified as a high rise having open space serving the number of functions like parks, playgrounds, sports facilities and others at site level. The second is The Interlace, Singapore identified as the high rise having open space serving its functions at site level as well as between built to build level maintaining the privacy as well.

Using the proposed matrix (table 1) as reference, the following studies are evaluated accordingly.

5.1 CASE 1: MAGARPATTA CITY, PUNE

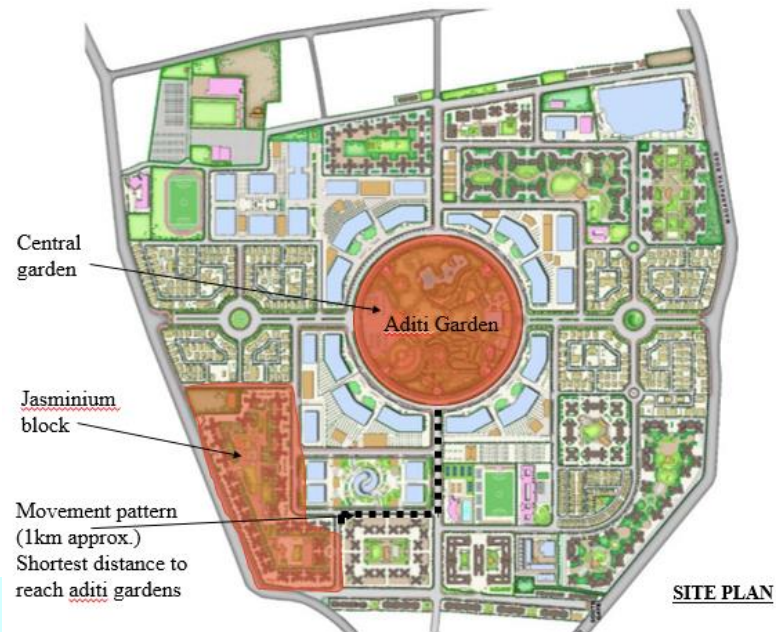


Figure 4: site plan

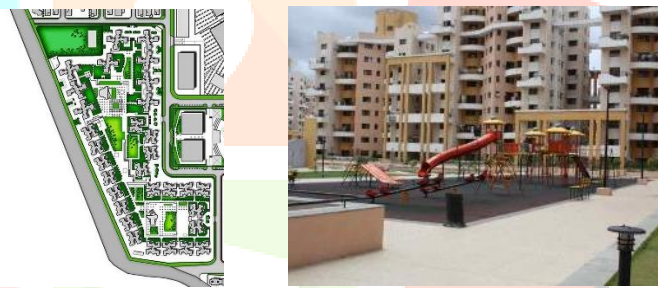
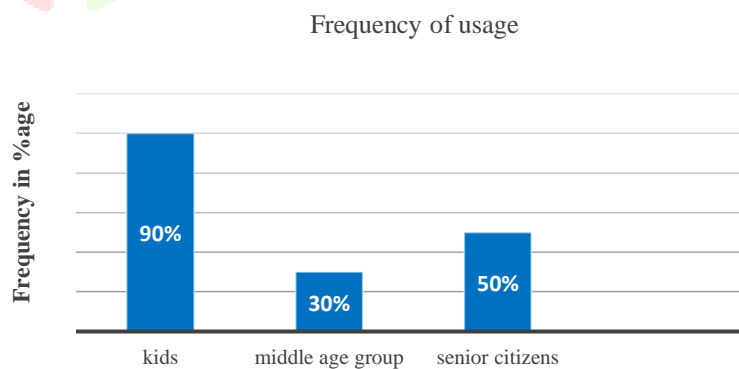


Figure 5: (a) jessimum block; (b) kids play area

This township is the prime example of the relationship between open spaces and high rise, majorly it focused on the central open space surrounded by the high rise towers keeping it private and free from noise and pollution as major openings are held towards the central open space.



Magarpatta City

Figure 6: graph showing the frequency of usage

5.2 CASE 2: INTERLACE, SINGAPORE



Figure 7: built to build interaction

1. Interlace is an example of public open spaces for social interaction, connecting residents from upper floor to the level above the ground.
2. Access of these open spaces at every 6 floors is easy and suitable.
3. Single block area of 1068 sqmt, having open space of 624 sqmt. After 6 floors is more than enough for the residents to connect socially.
4. 75% of the area is dedicated to green open spaces, having different amenities for all the age groups considered. Breaking the monotonous form of housing clusters, Interlace gives an aesthetical as well as functionality a priority.

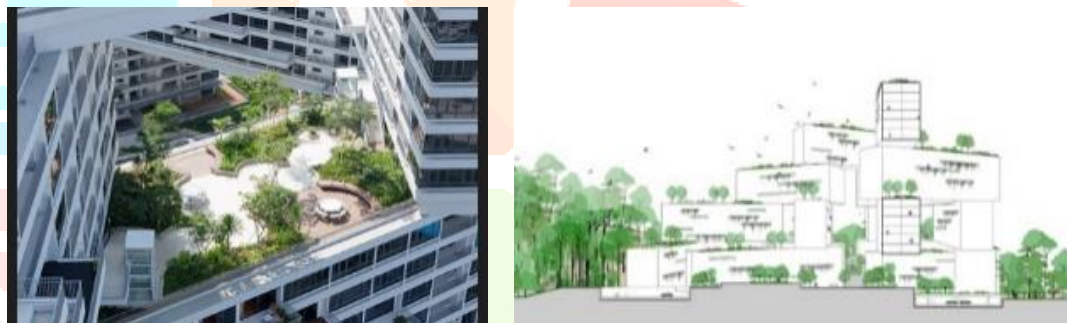


Figure 8: (a) open space connecting different blocks; (b) typical section

VI. RESULTS AND DISCUSSION

This paper proposed an approach based on the colliding area of both social and ecological aspects. It outlines on the burning topic of open spaces acting as the catalyst for social interaction. These spaces are the domain for different social interactions and community sharing activities with the feature to express ecological personality. In the review of case and literature studies being the prime sources of investigation and concluding that people across the globe area majorly suffering from physical and psychological health issues due to being alone. Studies showed that high rise has becoming the important aspect of society, and people are becoming isolated. The paper also discussed the different levels of open spaces can be cultivated in high rise township. The main attributes that need to be considered are: space management, functioning (circulation) of space, and elements of space. The matrix applied on the cases showed that both goals are equally important to achieve sustainable neighbourhood. Regarding Magarpatta City and The Interlace, the paper concludes that: the main goal is to achieve the local environmental quality, to create an aesthetically pleasing realm, promoting psychological health and to establish social interacting networks. Hence, to reduce their isolation it is mandatory to increase the interaction by bringing them to a common place for the activities involving unity and interaction whether it can be at site level, private level or built to build level of interaction. It is recommended to design open spaces more precisely and consciously keeping in mind the present scenario of active lifestyle.

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