

## Green Spaces and Happiness

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### Abstract

*City of Kanpur which was once bounded by gardens and farms; now days has change into a huge mass of high rise and inappropriate structures in contrast with other buildings and has almost lost its green uniqueness. Kanpur city with the speedy growth of population and uneven growth of automobiles, and construction projects which have changed the feature of city. This made Kanpur face a lot of shortages such as green spaces, quiet and impressive atmosphere which might have established social relationship among people. This city is now seriously facing with shortages green spaces which consequences in lack of sufficient oxygen, air pollution and reduce in value of living and not have of city livelihood which the adverse result of them can be seen on the core, psyche and the body of its civilian. The aim of this study was as certain the impact on pattern of happiness of the participants as affected by type of age group and space type. It was contended that the variation in age group and space type would lay its impact on happiness. One hundred twenty participants (60 participants young age 25–35 yrs and 60 participants 70–80 yrs) served as participants and they were arranged according to the requirements of 2 way factorial design with two types of age group (young & old) and space type (presence of green spaces & absence of green spaces). 30 participants in each cell. Rastogi & Moorjani (HS-RHMJ) Happiness Scale was used to assess the happiness behavior of participants. Data were analyzed by two way analysis and it was found that age group and space type, as main effect laid their influence on happiness. The type of age group x space type is significant in happiness and all variables in sum laid their impact. Findings are interpreted in terms of age group and space type as effectors of happiness.*

**Keywords:** Age group, green spaces, happiness, mental health, urban design, environmental perception

### INTRODUCTION

Green spaces play an important role in a township ‘eco scheme’ as long as a place for relaxation, social gathering, bodily activity, group interaction, community events and so on. Access to green spaces is considered important for mental health, happiness and well being. The World health organization (WHO) has highlighted analysis suggesting that physical activity in a natural environment can help alleviate mild sadness and reduce psychological anxiety indicators. Green spaces include- Parks, Common land, Community gardens, cemeteries, Meadows, Woods, Playing fields, Green roofs, Allotments, Wetlands, Green corridor etc. Parks and open spaces improved the quality of life of cities and neighborhood by the city. Local neighborhood parks are developed and used for numerous purposes for example social and cultural interaction, leisurely activities, recreation. As emphasized by, parks are primarily designed for recreation, and give enormous benefits to the neighborhood and community by improving health, enhancing enjoyment and social well being of local environment [1]. Similarly, benefits of leisure also cover Psychosocial well being, physical health, spirituality, actualization, self identity, child growth, family unit bonding, social skills expansion and education of environment [2].

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The important role of urban open spaces is known both on the temperament and the life they bring to towns and cities around the world. Urban open spaces must provide a place for gathering weather for strangers or a place for a person to be alone or for those who can transcend within the mass and be anonymous [3]. Study suggested that the recent sustainable indicator for town development which is must related to most city planners and town designers in their work should take into account the accessibility of community spaces and green open areas as they have been proven to fulfill the needs and hope for the happiness of their living surroundings which should lead to a sustainable city [4].

Green space is connected with large number of fitness benefits, longer life expectancy, fewer mental health problems, less cardiovascular disease, better cognitive functioning in senior and kids and healthier children, and provides opportunities for physical work out and public relations. Particularly kids, our future generation, emerge to advantage from green space. Green space adds to climate mitigation by falling urban results, but it gives comparatively little to carbon confiscation, as town account for only a small percentage of our land use CO<sub>2</sub> emissions are high. Green space can get better ecosystems and raise biodiversity in towns, mainly through well planned green infrastructure all over the city. Visit to nature are important for better health and well being. Sustainable countryside architectural plans make ecological designs for the outdoor and urban environment. It begins with appropriate systems which address function, energy efficiency, cost, environment and the beauty. Broadly speaking, sustainable landscape architecture is the integration of economical, cultural, ecological and social factor in designing landscapes and help to guard natural habitants, supply to tempest water management, preserve water among the other objectives. Sustainability and preservation landscaping both struggle to effort with natural world to reduce air pollution, lower water consumption, increase water quality, reduce usage of pest control and utilize native plants. However, sustainability and preservation differ in the highlighting sustainability places on addressing public and financial factors in adding together to ecological factors. In other words, preservation can be seen as the ecological part of the sustainability concept.

Open spaces in urban environment provides many advantages: formal and informal, recreational and sport. Provision of green space, preservation of natural environment and even urban storm water management. Thus green space must be key consideration in urban planning if the health of the city and its people are both considered important [5]. A new, broader vision of parks has also in recent times been emerging. This new view focuses on how practitioners, policymakers and the community can begin to feel about parks as precious contributors to larger town policy objectives, such as work opportunities, public health, youth development and community building. As the world towns continue to raise, continuing to worth green space in towns is vital: but is also a challenge, mainly in rising countries where there is pressure for resources, space and development.

The financially viable aspects of urban green spaces incorporate:

1. Wood to green trade centers
2. Place for production and supply of fruits
3. Attracting tourists provided with convenient atmosphere
4. Place for new jobs

From the planning aspects, urban green spaces include business:

1. Leisure development
2. Tourism development
3. Business retail
4. Employment centers besides residential areas

The high-quality plan of urban green spaces can play a role as a image screen, a function of sound protection and a place for commuting and recreation by providing well designed networks with the park and with the other areas.

Safety, security and natural surveillance which bring the benefits like social cohesion and feeling of being safe. This provided new aspect to the physical available spaces. Few findings suggest that the degree of the area in the urban space having physical accessibility make them constructive, safe or lively space. According to positive places are imaginable and conceivable, and can be calculated and has specific boundaries whereas unenthusiastic spaces are inconceivable, continuous and lacking in perceivable limits and forms [6, 7]. Some argued upon the degree of enclosure and spatial containment in hard spaces. He said “the quantity of enclosure and the ensuing level of repression partially depend resting on the proportion of the breadth of the space to the height of the surrounding walls [8]. The mainly comfortable viewing distance of construction is or should be designed to be seen in a solitary view”. Likewise as per crime prevention through environmental design reported, increased crime enhanced the need of safe green space within the residential community [9]. But bringing the feeling of safety and security depends on the location criteria of the green space. Hence those theoretical arguments develop a build that visible vicinity felt safer rather than those which were not visible.

When its comes to seeking happiness, the quality and quantity of green space matters. Urban green spaces is thought to contribute to citizen happiness by promoting physical and mental health. The advantage of town green space for community health and town planning have been of immense awareness in recent years. Green spaces such as riversides, parks, street trees, gardens, and even private backyards facilitate social events, physical activity, mental relaxation and relief from heat and stress, leading to direct and indirect benefits for mental and physical health and well being. Urban green space and happiness are known to have an contained positive connection. Even though this connection is still unclear, there are main three main causes that relate green space with health, well being and happiness; reduced environmental “bads”, an innate human emotional affiliation with nature and facilitating behaviors beneficial to mental and physical health.

Notably, pathways through which greenery might have valuable effects have been reported:

1. Relieving tension
2. Stimulating Physical action
3. Facilitating public interactions
4. Generating visual pleasure
5. Facilitating a sense of protection from and adjustment to ecological stressors

Studies have shown that open green space support public unity by providing places for societal contact; people can naturally encounter neighbors in local green spaces having outdoor parties, while walking dogs, gardening which enhances community engagement. Moreover, larger green areas such as parks can hold community proceedings and actions, enabling societal mixing between communities. The evidence of positive effects from nature includes studies in specific psychological conditions such as mood disorder depression and anxiety. Access to nature has also been found increase happiness and reduce negative emotions, reduce stress and improve sleep, help positive social connections and still help make a sense of meaning to existence Being in green surroundings improves a range of aspects of thoughts, including memory, concentration and creativity, in populace both with and without anxiety. Using 18 years of survey data from over 10,000 participants across the U.K. the study found the strong correlation between access to green space, self reported physical health, happiness and even well being [10].

Keeping these views in consideration this study was planned to investigate the impact of age group and type of spaces on happiness.

### **Hypothesis**

On the basis of above objective, following hypotheses were formulated. It was hypothesized that;

1. The age group (Young age 25–35 yrs., old age 70–80 yrs.) would show difference on happiness.
2. The space type (presence of green space, absence of green space) would show difference on happiness.

## METHOD

*Design:* The present study was based on a  $2 \times 2$  factorial design with two group of age group (Young) and (old)  $\times$  two level of space (presence of green space and absence of green space).

*Participants:* A total 120 participants (60 participants 25–35 yrs. and 60 participants 60–70yrs.) were randomly selected from urban area Kanpur city, Utter Pradesh, participated in present study.

## Measures

*Happiness Scale (HS-RHMJ):* The HS scale developed and standardized by Dr. H. Rastogi and Dr. J. Moorjani measures the level of happiness. This scale contains 62 items. The test-retest reliability was found to be 88.

*Procedure:* In the study, participants were contacted in the home setting and requested to cooperate. After they were briefed about the study. Then Happiness scale was administered and were requested to respond carefully. Data were collected and they were thanked to cooperation.

## RESULTS

In this section includes the responses obtained on various measures were scored and treated in the termed of Mean, SDs and ANOVA. Result displayed in table 1 clearly indicate that Happiness varied significantly as a function of Age Group and Space type. ANOVA result for happiness have been reported and interpreted in the preceding section.

**Table 1.** Mean and SDs of happiness as a function of age group and space type.

| Age Group | Space type              | Mean     | SDs    |
|-----------|-------------------------|----------|--------|
| Young     | Presence of Green Space | 188.633  | 38.843 |
|           | Absence of Green Space  | 147.4    | 43.727 |
| Old       | Presence of Green Space | 256.5333 | 21.546 |
|           | Absence of Green Space  | 144.9333 | 31.872 |

Total number of individual (N)= 120

**Table 2.** Summary of ANOVA for the scores of happiness as a function of age group and space type.

| Source of Variance | Sum of Squares | D.F. | Mean of Square | F. Ratio  |
|--------------------|----------------|------|----------------|-----------|
| A (Age Group)      | 32111.408      | 1    | 32111.408      | 26.208**  |
| B (Space Type)     | 175185.208     | 1    | 175185.208     | 142.979** |
| A X B              | 37136.008      | 1    | 37136.008      | 30.309    |
| Within Group       | 142129.5       | 116  | 1225.254       |           |

N=120, \*\*P= < 0.01, \*P= <0.05

*Level of significance (P), Mean (M), F. Ratio (F), Degree of freedom (D.F.)*

It is apparent from the results (Table 1 and Table 2) happiness differs across the age group and space type. Main effect of age group [ $F(1,116) = 26.208, P < .01$ ] was significant, which revealed that the Old age group ( $M = 200.733$ ) show more happiness then young age group ( $M = 168.016$ ). Main effect of the space type [ $F(1, 116) = 142.979, P < .01$ ] was also found significant, which evinced that green spaces ( $M = 222.583$ ) show more happiness then non green spaces ( $M = 146.166$ ). A close perusal of ANOVA result revealed that age group and Space types caused detrimental effects on happiness.

## DISCUSSION

Present findings evinced the significant effect age group and space type on happiness. More specifically Individual live around in presence of green space show high level of happiness as compared to individual live in absence of green space. (Table1) An increase in presence of green space represents an increase in happiness. It is very clear that green spaces play very important role in happiness. When

people are in green, colorful and open space, they are happier, more likely to trust people and inspired to live more eco-conscious lives than people living in non green spaces. The survey in Vancouver results showed that the participants were much happier and more social when they were in a green space, like the concrete laneway, did not inspire participants to socialize with strangers or affect their happiness positively. When the participants were stopped at green spaces, they reported more social, feeling happier, more trusting, more social of the people around them, even though they were strangers. Researches showed the people favored natural environments because these has positives effects on promoting recovery from both stress and additional fatigue [11]. Natural daylight and views of nature are recommended for the positive health.

The creations of healing environments with green spaces, such as parks, gardens or natural landscapes, can promote regenerative experiences. When people experience pressure or unease, looking at environment scenes improves their moods and elicit helpful physiological transforms, such as lower blood pressure and decreased heart rate [12]. An interview study conducted in U.S. Long-Term care services showed that the elder people favored windows with prominent visions of scenery and expressed dislike windows views of built structure without elements of nature [13]. Alike result emerged from a study on gardens and outdoor spaces in assisted living services in the US, where the older residents expressed their preference for outdoor spaces with greenery, flowers, and water features [14]. Older people living in interior city neighborhoods also get advantage from presence of green spaces, which appears to promote social ties and sense of community [15]. Public contact is known to be essential for mental health and well-being, particularly for older people, where social isolation has been significantly linked with increased mortality [16]. The helpful significance of green spaces was also point to in studies involving elder adults affected by dementia, who used to walk outdoor more often if their residential facility included the therapeutic garden [17]. Outdoor green spaces contributes immensely to the elderly population in their bodily and psychological health. Span of park stay with bodily and moving activities is positively linked with elderly fitness [18]. Community who live close to green spaces or parks have less mental sadness and worry. Grassy spaces provides restorative views and reduces hazardous exposures [19, 20]. Well-keep green space and woodland improve public unity Green exercise (exercise in park and nature) has a significant effect on self-worth and cheerful mood. Self-esteem is higher in green work out than club activities [21]. Through regular green ground usage one can improve his societal networks [22]. Existing literature demonstrated urban grassy space had significant effect on mass cohesion, climate services, social network and mental health [23]. There is an connection between the seeing of green frontage and an prolonged level of parasympathetic action. The green front elevation add in a significant progress of relaxed and natural feel. The green front enhance person psychological leisure [24]. The closeness of green space with a house is linked to happiness, improved social support and bodily activity. This presentation has be different in terms of age and gender. Older Citizens opined that communal and physical workout, public networks, and clean surroundings in public open spaces are essential to increase active aging and happiness [25]. These conclusion emphasize the relationship between green space and the old aged happiness that is inconsistent with our study which examined the benefits of public green space on the elderly happiness.

## CONCLUSION

Our conclusion have several policy-level suggestion First community green space should be made nearby to town dwellers to improve social support. In doing so, one serious feature is community security. If public security in urban parks is not guaranteed it's positive role in social support and happiness may diminish [26, 27]. The sense of public security may change; for example, make sure biological security will be priority in keeping urban parks accessible during the COVID-19 pandemic [28]. The high indoor transmission rate of the virus will increase awareness and the importance of open spaces such as, urban parks [29]. Whereas some public parks may be closed throughout lockdowns, some reports hint that viewing them from the home could also help reduce stress during the pandemic [30]. Second, town planning for open green space is required for both urbanized and rising countries.

In addition, it is difficult or nearby not possible to lock land for green space after built-up areas are urbanized in cities. Therefore town planning for green areas and green spaces should be think about in developing economics where new cities and suburban areas are rapidly expanding. This research supports the trend of green spaces in urban environments that have been growing significantly over the last few years [31, 32]. Architects are planning buildings with either solar panels, green space or a garden. With the rise of unusual architecture for the sake of eco-friendly living, it is likely that more green spaces will be pooping up in urban environments every year.

*Limitations:* Since the sample size is small, therefore results cannot be generalized. Variables used in the study are few. Future research could be done on a large population. Various other variables such as residential building type, Biophilic design, Blue spaces, Green roofs could also be analyzed of young and old people,

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