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The Impact of Urban Architecture on the Lifestyle and Health of the People of Mehrauli, South Delhi

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Abstract:
This research investigates the intricate relationship between urban design and its influence on human health and lifestyle, focusing on the specific case of Mehrauli, South Delhi. The study aims to understand how urban development can affect public health and explore the principles of New Urbanism that could mitigate these risks.
Through a mixed-method approach, the study analyzes the impact of various architectural factors, such as building design, green spaces, and infrastructure, on the physical and mental health of residents. The research delves into specific health concerns, including non-communicable diseases, mental health issues, and the overall quality of life in the urban environment.
By examining existing literature and conducting surveys among residents, the study identifies key areas where urban architecture can be improved to promote healthier lifestyles and enhance the overall well-being of the community. The findings offer valuable insights for policymakers, urban planners, and architects to create more sustainable and health-promoting urban environments.

Introduction

The term "urban architecture" refers to the design and construction of structures for use in an urban environment, often in big or expanding cities. Nearly half of the world's populationnow resides in urban areas, making urban architecture an increasingly important and prosperous section of the design industry. High-capacity housing and workspaces, aesthetic and functional coherence, and, most recently, energy-efficient design are all key concerns in this branch of architecture.
Classic examples of urban design include high-rise residential and commercial structures. There is no point in constructing a twenty-story apartment building capable of housing over a thousand people in a rural or suburban area. The space and planning concepts of urban architecture make it possible for many people to live and work in close proximity to one another. To that end, making smart use of available space is crucial in these contexts.
The notion of multi-use buildings is a new style of urban design that is gaining favour in several major cities. These multi-use structures are ideal for the modern era of telecommuting, since they may house both residents and professionals who work from home. These sorts of structures enable people to live, work, and shop all in one convenient location by including retail businesses on the first floor. The closeness to essentials in a multi-use building might provide city dwellers some respite from the hectic pace of life.

Following recent attention paid to the planet's dwindling natural resources, a growing portion of urban architecture is focusing on eco-friendly, long-lasting structures. Insulation made from recycled materials, solar panels, rooftop gardens, and energy-efficient appliances that come factory fitted are just a few examples of cutting-edge methods utilised to make urban design more sustainable. Considering the prevalence of pollution and smog in metropolitan areas, it is not merely hip to design green buildings; doing so may really improve the health ofa city's inhabitants.(Ellis, 2022)

Urbanization in India

Seven out of every ten Indians are found in 'rural' communities. However, more and more of these communities are displaying traits traditionally associated with metropolitan areas. Town planning agencies and development authorities, for example, are expanding the amount of land that may be legally zoned as "organised" in a number of major cities to make room for the swell in population. Since cities are expanding into more and more rural areas, farmers are losing land and villages are shifting to non-agricultural jobs as a result. Additionally, numerous rural villages located near cities are matching the 'urban area' criterionspecified by India's census office, and as a result are being classed as 'urban.' Tier II cities in India are rapidly expanding as a result of population and economic activity migration from larger metropolitan areas.

In 2011, for the first time, census data showed a clear population shift in favour of metropolitan areas. The urban population of India grew at a somewhat faster rate than the ruralpopulation over the decade of 2001-2011. The National Commission on Population (NCP) in India estimates that 38% of Indians, or 600 million people, would call urban regions home by2036. The United Nations also emphasises that India's urban population would almost double from 461 million in 2018 to 877 million in 2050. That being said, current patterns and anticipated future developments point to India's continued urbanisation. Compared to countrieslike Japan, Brazil, the United States, Russia, Indonesia, and China, India has a much smaller percentage of its people living in metropolitan areas. However, the scenario changes when looking at the raw figures, since only China has a higher urban population than India. There has to be effective methods of urban planning, administration, and governance because of the increased demand for products and services that comes with a big population.(AIJAZ, 2021)

Effect of urban development on human life

Independent of urban density, the existence of green infrastructure has been linked to improved individual health and well-being, probably because exposure to nature has been demonstrated to have a calming effect.

The value of good urban planning and design goes well beyond its superficial appearance. Often, the desire to make something special takes precedence above any consideration of the effect it may have on the people who live there. The modern psychology research help us learn more about what kinds of urban settings individuals like and find fascinating. According to these reports, people prefer living in cities that have been designed with human size in mind.(re-thinkingthefuture, 2020)

The effects of urban planning on people's physical well-being, such as the prevention of obesity and pulmonary ailments, have been the subject of a significant lot of research. Mental health, however, is frequently overlooked within the plethora of studies and requirements for the healthy city. This is disheartening since city living has a significant influence on our mentalhealth, and mental health issues have a profound effect on urban areas. A self-perpetuating cycle results from this situation.

The potential of urban planning for the emotional well-being of a people is quite encouraging. While additional studies are required, there is currently solid data that shows howurban planning and design may improve mental wellness, reduce the risk of mental illness, andaid those who are dealing with these issues. Architects, urban planners, developers, politicians, and others may easily take this knowledge and incorporate it into project needs and design. OurMind the GAPS framework is a concise summary of this, and it can be used for a wide varietyof projects.(urbandesignmentalhealth, n.d.)

South Delhi

The districts of New Delhi to the north, the Yamuna to the east, the Gurgaon district ofHaryana to the southwest, the Faridabad district of Haryana to the southeast, and South West Delhi to the west form South New Delhi's geographical boundaries. Aside from its convenientlocation, this area of the city also has first-rate infrastructure, including reliable power and a plenty of water.

You'll find some of Delhi's finest living in South Delhi. The hotels, shops, tourist attractions, infrastructure, historical landmarks, and eateries in South Delhi are among the bestin the city. Several famous landmarks, including Purana Qila, Qutub Minar, and Humayun's Tomb, can be found in this neighbourhood. Chattarpur Mandir, the Lotus Temple, Lodi Garden, and Kalindi Kunj are some of the other popular destinations in this area of South NewDelhi.

Greater Kailash, Vasant Kunj, Lajpat Nagar, Safdarjung, and Mehrauli are just few of the neighbourhoods included under South Delhi's expansive boundaries. These neighbourhoods in New Delhi are important due to their residential and commercial significance. The Indian diplomatic missions are located in Chanakyapuri, a neighbourhood insouthern New Delhi.(mapsofindia, 2014)

Review of Literature

(Battisti et al., 2021) Given that the average person spends over 90% of their time inside, and that number climbs for those with lower earnings, it is important to underline the importance that indoor environment quality plays in maintaining health. When dealing with struggling metropolitan regions, particularly those in cities that are subject to numerous deprivations, thisposition assumes even greater significance. The objective was to evaluate the relationships among the architectural features of the interior environment, socioeconomic factors includinglifestyle and housing, and ultimately health effects. The purpose of this study was to provide acomparative approach in a circumstance where official data is scarce by combining social, health, and housing surveys with diverse environmental software models. What was discoveredis that poor living circumstances, which are characterised by mould, dampness, uncleanliness, thermo hygrometric discomfort, architectural obstacles, and overcrowding, are frequently linked to recurrent pathologies connected to arthritis, respiratory diseases, and domesticaccidents.

(Rice & Drane, 2020) The built environment's design is a significant factor in determining health. Due to the fact that we currently spend more than 80% of our time indoors as a society,the design of buildings can have a significant impact on human health. As a result, architectural health indices (AHIs) are used to demonstrate the influence of building design on human health.AHIs give architects, clients, users, and other stakeholders quantitative and empirical data on which to monitor and assess the health (or lack thereof) of architectural design. To determine the present level of knowledge, identify gaps, investigate prospective applications, and highlight best practises in this field, a comprehensive literature study was carried out. Althoughthere are many different health indicators for urban and built environments in general, the focusof this assessment is on building size, specifically those features that fall under the purview ofa professional

architect. This review examined three electronic bibliographic databases between January 2008 and January 2019 to investigate the variety and features of AHIs currently in use. The analysis revealed a lack of AHIs that focus on non-communicable diseases(NCDs). There is an urgent need to address this issue because NCDs are now responsible for the majority of all poor health outcomes in the world, and many of these outcomes are influenced by built environment design.

(Fatimah & Syaifudin, 2020) The purpose of this study is to analyse the effects of residentialgreen architectural design on people's lifestyles and the environment. The Miles and Huber man paradigm for qualitative analysis was employed in this investigation. The process is broken down into multiple parts, including data reduction, data presentation, conclusion, and verification. The findings of this study show that residential design has an impact on the environment and changes in a person's lifestyle once they move into a home that has been architecturally planned. It may also indirectly alter someone's thinking.

(Rebecchi et al., 2019) Recent public health studies have examined the built environment's effects on physical and mental health. To promote active mobility and physical activity, whichcan prevent no communicable diseases (NCDs) like obesity, the built environment must be improved, such as by creating a walkable urban landscape. The research aims to create a city'swalkability evaluation framework that identifies its strengths and weaknesses. All variables that have a direct (evidence-based) influence on encouraging healthy lifestyles or active transport as a method to enhance daily urban physical activity should be included. 20 researchpublications were analysed after a literature study to identify all known assessment techniques.The design recommendations help policymakers and designers understand what components of the urban environment must be modified or implemented to encourage a walkable city.

(Hekmatshoar & Allahabad, 2019) In order to reap the benefits of the Patterns of movement—which include ideas about humanity and the integration of a community's constituent parts—it is necessary to live in the present age, which is known as the age of Nanoscience and fundamental particles in science and technology, and by developing countries enchanted by the forms of modernity of the advanced world. This is an elegant, well-organized,and thorough approach to developing a culture of health and safety in the telecommunicationsindustry. It is crucial in this context to analyse the values, beliefs, habits, traditions, and practises of the dominant group. In order to increase GDP and achieve sustainable development, it is necessary to consider on a global and regional scale and then act smoothly via the challenging road of society and city architecture, balancing costs and benefits along theway. One of the unnoticed markers of sustainable development and community health in this study is motorists' disregard for the right of right turn at junctions. Research that combines description and analysis. Six months, 17–20 overnight shifts, and raw police officers were needed to collect the necessary 380 driver samples using a methodical technique. The Kolmogorov-Smirnov test, Normal filter, and Chi-square were used in SPSS version 16/5 to analyse the primary intersection.

(Dannenberg et al., 2003) The architectural environment of a community has an impact on thephysical & mental health of its inhabitants. Because there haven't been many studies that delveat this link, in May 2002, the Centres for Disease Control and Prevention sponsored a workshopto help create a scientific study agenda on such themes. Participants' areas of expertise rangedwidely, including physical activity, injury prevention, air and water quality, urban planning, transportation, architecture, epidemiology, land use, mental health, social capital, housing, andsocial marketing. The 37 questions that make up the resulting study agenda are described in this report. Priorities need to be established, and resources need to be gathered. The planned study will aid in determining the best methods for developing new neighbourhoods and reviving ageing ones in ways that support residents' physical and mental well-being.

(Van Kamp et al., 2003) A multidisciplinary conceptual framework of environmental qualityand quality of life is needed to advance urban growth, environmental quality, and human well-being. Such a framework would pave the way for a theory-based indicator selection process and the development of tools to evaluate the many facets of urban environmental quality. Thesetools are essential for assessing the present and future state of the urban environment, as well as for gauging the outcomes of spatial and urban planning strategies. For this reason, researchers from the Netherlands' National Institute of Public Health and the Environment (RIVM) conducted a thorough literature analysis to isolate the many ideas, linkages, and theoretical underpinnings in the field that relevant to environmental quality. In this article, I will discuss the study's results. Conceptual models underlying the core notions of culpability, environmental quality, quality of life, and sustainability are shown with instances. The essay "Urban Environmental Quality—A Social Geographical Perspective" in this issue uses the dimensions of "domain," "indicator," "scale," "time," and "context" to compare and contrast different ideas and concepts. It is determined that a cross-disciplinary conceptual framework of environmental quality and quality of life is necessary for the development of the subject. This paradigm has to go beyond the silos of knowledge that exist in the current body of research.

Objectives

1. The main objective of this study is to know about the impacts of urban architecture onthe lifestyle and health of the people of Mehrauli, South Delhi.
2. To better understand the hazards that threaten people's health and happiness.
3. To explores the association between urban developments and health in India.
4. To investigates the New Urbanism principles that affect public health.
5. To learn about the effects of urban design on human health and well-being.

Problem statement

Unsafe environments at home and in the workplace, insufficient green space, pollution(such as noise, water and soil contamination, urban heat islands, and the lack of space for walking, cycling, and active living all contribute to the worsening of non-communicable diseases like heart disease, asthma, cancer, and diabetes). Our emotional reactions, and the influence they might have on our well-being, are frequently overlooked when it comes to design. There are a number of threats to the country's health, including substandard housing, alack of clean water, food insecurity, HIV/AIDS care, mental health issues, and the burden of both infectious and non-communicable illnesses. People living in slums in the urban area see many health problems with the rural poor (dangerous childbirth, malnutrition, infectious diseases) as well as an increased risk of diseases associated with cities (traffic accidents, violence, heart disease). Therefore, the main reason for researching this topic is to know aboutthe impacts of urban architecture on the lifestyle and health of the people of Mehrauli, South Delhi, which is why we are doing this study.

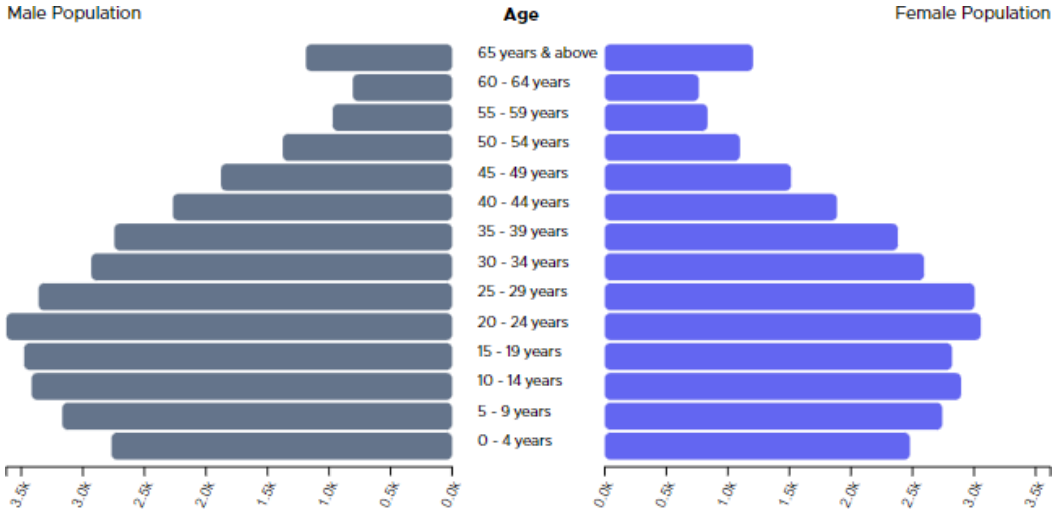
Area of the studyMehrauli

The 63241 residents of Mehrauli are found in the South Delhi district of the National Capital Territory of Delhi. The number of males is estimated at 33815, while the number of females is 29426. It covers an area of around 4.4 square kilometres.

Area (2020)	-	4.4 km²
Population (2020)	-	63241

Population Density - 14370 people per km²Male Population - 33815
Female Population - 29426

Population tree



Demographics of Mehrauli, New Delhi, South Delhi

The native language around here is Hindi.

Politics in Mehrauli, New Delhi, South Delhi

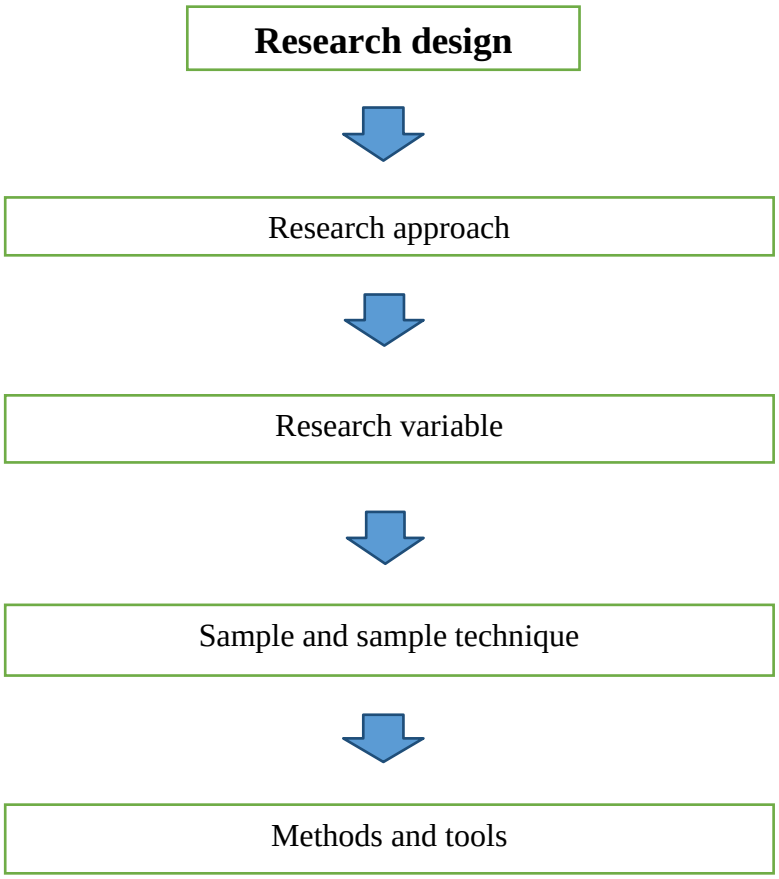
Politically, the region is dominated by the Aam Aadmi Party (AAP), the Bharatiya Janata Party (BJP), and the Indian National Congress (INC).

Research methodology

A research methodology is a systematic approach to meet research needs. Researcherscan learn about the advantages and disadvantages of different approaches in this document. Attempts are made to accomplish the goals of the study by defining research methodology as a basic structure to organize the data collection process. Qualitative and quantitative research methods are combined and integrated within a single investigation to have a deeper understanding of research problems.

Research design

A study design is used to determine which approach is best suited to meet the objectivesof which research topic. Using a descriptive research design, this research aimed to study of the impacts of urban architecture on the lifestyle and health of the people of Mehrauli, South Delhi. There are many ways to conduct descriptive studies, including both qualitative and quantitative. The researchers used both quantitative and qualitative methods in this study. It isa mixed approach strategy. This requires defining the goals and objectives of the investigation,as well as collecting and analysing data from participants, as part of the research process. Thefocus of this research is on the study's analysis of the impacts of urban architecture on the lifestyle and health of the people of Mehrauli, South Delhi. The research design can be viewedas in the table below.



This study is a qualitative and quantitative study to help in future research. The surveymethod will be used in this study. Both primary and secondary sources will be used to collect the data. After the data is collected, the subject matter of the study will be evaluated using SPSSsoftware. The results will be used to fulfil the objectives of studying effect of urban architecture on lifestyle and health. The quantitative method is advantageous as it minimizes the risk of fraud. Quantitative research relies on statistical analysis to reduce inference errors and arrive at more conclusive results.

Research approach

The technique of a study is the most important part of the project. Choosing the right research strategy depends on the objectives of the study. Data will be collected through the useof a questionnaire already developed in this study. When participating in the survey it is possible for respondents to choose between structured and free questions.

Research variable

Variables in a research are characteristics that are unique to each individual subject being studied. As an idea, it is something that can be measured. We use this word to describe things, people or situations that fluctuate or vary.

Independent variable – The researcher has direct control over this variable, which has an effect on the dependent variable. The independent variables in this research are people from Mehrauli, South Delhi.

Dependent variable – In other words, the dependent variable is what you are testing or measuring in an experiment. The dependent variable of this study are urban architecture, life style and health.

Sample and sample technique

The act of selecting a subset of a larger group to draw conclusions about the target population is known as sampling. Probability sampling and non-probability sampling are the two categories of sampling procedures. Choosing a random sample from a target population isknown as probability sampling because a random sample is drawn randomly from the entire population. Rather, non-probability sampling selects the sample group so that therepresentative sample population is not biased. The goal of the present study is to know aboutthe impacts of urban architecture on the lifestyle and health of the people of Mehrauli, South Delhi, so an objective sample will be used for the qualitative investigation of this study. In this study, 200 people will be selected for the sample. A questionnaire related to the researchobjectives will be prepared for data sampling.

Methods and tools

The data was collected through a survey. The survey method is common among many methods of collecting information from people. All surveys characterize or explain thecharacteristics and attitudes of respondents through the use of a sample. The impact of urban architecture on the lifestyle and health of the people of Mehrauli, South Delhi will be assessedusing a checklist. 200 respondents will be selected to fulfil the objective of this study.

Statistical Analysis

Using raw data for data analysis, conclusions can be derived. A preliminary data analysis is necessary before beginning the data preparation process, which includes data entering, editing, and coding. Using software to analyse data quickly and accurately is essentialfor it to be helpful. The study's data was entered into a spreadsheet for analysis. Each respondent's responses were assigned an integer value before being placed into a spreadsheet.Using SPSS statistical software package, we were able to analyse and model our data.

Data in this study will be analysed using the statistical software package SPSS 26.0. Analytical procedures like ANOVA and percentile approach will be used to examine the data which will be considered most important. Percentage analysis will be used for a clear understanding of the most important elements of the study. Comparing and analysing data using percentages is a powerful technique. This is the easiest way to get your point across to your target audience. When the data is collected, an overall picture of the situation can be painted. The use of graphs can improve the appeal of percentage analyses.

Research Hypothesis

Null hypothesis (H0): - There is no significant impact of urban architecture on the lifestyle andhealth of the people of Mehrauli, South Delhi.

Alternative Hypothesis (H1): - There is significant impact of urban architecture on thelifestyle and health of the people of Mehrauli, South Delhi.

Outline of the study

Chapter 1- Introduction Chapter 2- Literature review
Chapter 3- Research Methodology Chapter 4- Data analysis and resultsChapter 5- Conclusion

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