Livable Commercial Streets and Its Impact on Social Life, A Case of Ahmedabad

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Abstract-This abstract provides an overview of a case study conducted in Gukukul, a neighborhood in Ahmedabad, focusing on the concept of livable commercial streets and their influence on social life. Livable commercial streets are urban spaces that prioritize pedestrian-oriented design, fostering social interactions, and enhancing the overall quality of life for residents and visitors.

This study explores the impact of the transformation of Gukukul's commercial streets into livable spaces on the social dynamics and community engagement. Through a mixed-methods approach, including surveys, interviews, and direct observations, data was collected to evaluate the effects of these changes on various aspects of social life.

The findings highlight several positive outcomes associated with the implementation of livable commercial streets in Gukukul. Firstly, the pedestrian-oriented design improved walkability, promoting physical activity and healthier lifestyles among residents. Secondly, the availability of public spaces, seating areas, and greenery contributed to a sense of community, encouraging social interactions and fostering a stronger neighborhood bond. Moreover, the revitalized streetscapes attracted diverse businesses and cultural activities, creating opportunities for entrepreneurship, employment, and cultural expression.

Furthermore, the study reveals that livable commercial streets positively impacted local businesses, resulting in increased foot traffic and economic growth. This, in turn, stimulated the local economy and enhanced the overall prosperity of the neighborhood. Additionally, residents reported higher levels of satisfaction with their community, feeling safer and more connected to their surroundings.

Based on the findings, this study emphasizes the importance of incorporating livable commercial street designs in urban planning strategies. By creating vibrant and inclusive spaces, cities can promote social cohesion, improve residents' well-being, and boost economic vitality. Policymakers, urban planners, and community stakeholders can utilize the insights gained from this case study to inform future development projects aimed at creating livable and socially vibrant urban environments.

INTRODUCTION

About city growth

Ahmedabad is the largest city in the state of Gujarat, India, and it has experienced significant growth and development over the years. Here are some key aspects of Ahmedabad's growth:

1. Population Growth: Ahmedabad has witnessed a steady increase in its population over the years. According to the 2011 census, the city had a population of around 5.5 million. Since then, the population has continued to grow, and it is estimated to be over 7 million as of 2021.

2. Infrastructure Development: Ahmedabad has seen remarkable progress in terms of infrastructure development. The city has undergone significant expansion, with the construction of new roads, flyovers, bridges, and improved public transportation systems. The BRTS (Bus Rapid Transit System) and the Ahmedabad Metro are examples of major transportation projects that have enhanced the city's connectivity.

3. Industrial and Economic Growth: Ahmedabad has emerged as a major industrial and economic hub in Gujarat. It has a diverse industrial base, including sectors such as textiles, pharmaceuticals, chemicals, automobile manufacturing, and information technology. The city has attracted significant investment and witnessed the establishment of numerous industrial parks and special economic zones, contributing to its economic growth.

4. Urban Development: Ahmedabad has experienced rapid urbanization, with the expansion of residential and commercial areas. Several real estate projects have been undertaken to meet the growing demand for housing and commercial spaces. Areas like Satellite, Vastrapur, and Prahlad Nagar have witnessed substantial development and are now considered prominent residential and commercial zones.

5. Educational and Healthcare Facilities: Ahmedabad is home to several renowned educational institutions and healthcare facilities. It has numerous universities, colleges, research institutes, and schools, providing quality education to students. The city also has well-equipped hospitals and healthcare centers that cater to the medical needs of the residents.

6. Tourism and Cultural Heritage: Ahmedabad has a rich cultural heritage and is known for its historical monuments, such as the Sabarmati Ashram, Sidi Saiyyed Mosque, and Jama Masjid. The city has also made efforts to preserve and promote its cultural heritage through initiatives like the Heritage Walk and the International Kite Festival. Tourism has seen growth, with an increasing number of visitors coming to explore the city's attractions.

Overall, Ahmedabad's growth can be attributed to factors like industrialization, infrastructure development, urbanization, and a favorable business environment. The city's progress has contributed to its reputation as a major center for commerce, education, and culture in Gujarat.

Ahmedabad has a rich history of urban planning, dating back centuries.
Foundation and Early Planning: Ahmedabad was founded in 1411 by Sultan Ahmed Shah, who established the city on the eastern bank of the Sabarmati River. The city was designed with a grid-like layout, consisting of a central square called the Maidan Shah, which served as the commercial and social hub. The city was fortified with gates and walls, and different areas were designated for residential, commercial, and religious purposes.

1. Pol System: One of the unique features of Ahmedabad's urban planning is the "Pol" system. Pol is a Gujarati term that refers to a residential cluster or a self-contained neighborhood with a narrow entrance and houses arranged in a maze-like pattern. Each Pol had its own community well, temple, and chowk (community space). The Pol system encouraged a sense of community and provided security and privacy for its residents.

2. Colonial Influence: During the colonial period, Ahmedabad saw the influence of British urban planning principles. The British introduced modern infrastructure, including the construction of roads, bridges, and buildings. The Ellis Bridge, built in 1892, was a significant landmark and played a crucial role in connecting the older part of the city with the expanding western areas.

3. Post-Independence Development: After India gained independence in 1947, Ahmedabad witnessed significant growth and urban development. Several planned residential areas, such as Satellite, Vastrapur, and Paldi, were developed to accommodate the increasing population. Modern amenities and infrastructure were introduced, including wider roads, housing colonies, and public institutions.

4. Sabarmati Riverfront Development: In recent years, one of the most notable urban planning projects in Ahmedabad is the Sabarmati Riverfront Development. The initiative aimed to revitalize the riverfront area by reclaiming land, creating parks, promenades, and recreational spaces, and improving the overall environment. The project has transformed the riverfront into a vibrant public space and a major attraction for residents and tourists.

5. Ahmedabad's UNESCO World Heritage Status: In 2017, the historic city of Ahmedabad was declared a UNESCO World Heritage Site, recognizing its outstanding universal value as a living example of the urban planning and architecture of the Indo-Islamic period. The recognition highlights the city's unique urban fabric, architectural heritage, and cultural significance.

Throughout its history, Ahmedabad has witnessed a blend of traditional and modern urban planning approaches. The city has evolved from its early foundation to accommodate the changing needs of its residents while preserving its cultural heritage and identity.

Figure 1 Location Of Study Area- Gurukul road, Ahmedabad, Gujrat, India

- Urban environments play a significant role in shaping the social dynamics and overall quality of life for residents. Livable commercial streets, with their pedestrian-oriented design and focus on creating vibrant, inclusive spaces, have gained increasing attention as a means to enhance social life and community engagement within cities. This case study focuses on the neighborhood of Gukukul in Ahmedabad, India, examining the transformation of its commercial streets into livable spaces and assessing their impact on social interactions and community well-being.

- Gukukul, like many urban areas, has experienced rapid urbanization and commercial development in recent years. However, this growth has often come at the expense of the pedestrian experience and community cohesion. Traditional commercial streets in Gukukul were characterized by heavy traffic, limited pedestrian infrastructure, and a lack of public spaces, hindering social interactions and contributing to a decline in the overall livability of the neighborhood.

- Recognizing the need for change, local authorities and community stakeholders embarked on an urban revitalization initiative to transform Gukukul's commercial streets into livable spaces. The objective was to create an environment that prioritized pedestrians, encouraged social connections, and fostered a sense of place and identity within the community.

- The transformation involved a range of interventions, such as widened sidewalks, dedicated pedestrian zones, improved lighting, landscaping, public seating, and the introduction of cultural and recreational amenities. These changes aimed to enhance walkability, promote

social interactions, support local businesses, and improve the overall well-being of Gukukul's residents.

- This case study seeks to evaluate the impact of these interventions on social life and community engagement in Gukukul. By employing a mixed-methods approach, including surveys, interviews, and direct observations, the study examines various dimensions of social life, including social interactions, community cohesion, physical activity levels, economic vitality, and residents' satisfaction with their neighborhood.

- The findings of this study will contribute to the growing body of knowledge on livable commercial streets and their potential to positively influence social dynamics in urban areas. By analyzing the specific context of Gukukul, this research aims to provide valuable insights and practical recommendations for urban planners, policymakers, and community stakeholders seeking to create more livable and socially vibrant neighborhoods.

- In the following sections, we will delve into the methodology employed in this case study, present the findings and analysis of the data collected, and discuss the implications of the research for urban planning and community development in Gukukul and beyond.

MOTIVATION

- The motivation behind conducting a case study on livable commercial streets and their impact on social life in Gukukul, Ahmedabad, stems from the recognition of the growing importance of creating vibrant and socially inclusive urban environments. Rapid urbanization and the dominance of car-centric infrastructure have often resulted in the neglect of pedestrian experiences, limited social interactions, and decreased community engagement.

- The transformation of traditional commercial streets into livable spaces presents an alternative approach to urban planning, emphasizing the well-being and social connectivity of residents. By prioritizing pedestrians and creating inviting, people-centered environments, livable commercial streets have the potential to revitalize

neighborhoods, foster a sense of community, and enhance social interactions.

- Gukukul, like many urban areas, faced challenges associated with urban growth and the decline of public spaces. The motivation behind this case study was to explore how the revitalization of commercial streets in Gukukul could serve as a catalyst for positive social change. By examining the impact of these interventions, the study sought to provide evidence-based insights and recommendations to guide future urban planning and community development efforts.

- Understanding the potential benefits of livable commercial streets can inspire policymakers, urban planners, and community stakeholders to prioritize the creation of pedestrian-oriented spaces in their cities. By examining the specific case of Gukukul, the motivation behind this study was to demonstrate the transformative power of such interventions, highlighting their potential to enhance social life, community engagement, and overall urban livability.

- Moreover, this case study aimed to contribute to the existing body of knowledge on livable commercial streets by providing empirical evidence of their impact on social dynamics. By focusing on a specific neighborhood and conducting a detailed analysis of the social, economic, and physical aspects, the study aimed to generate practical insights and recommendations that can be applied not only to Gukukul but also to similar urban contexts around the world.

The motivation behind the case study on livable commercial streets in Gukukul, Ahmedabad, lies in the need to understand and showcase the positive influence of pedestrian-oriented design on social life and community well-being. By examining the specific context of Gukukul and its transformation, the study aimed to inspire urban planners, policymakers, and community stakeholders to prioritize the creation of vibrant, inclusive, and socially connected urban environments.

AIM AND OBJECTIVE

The aim of the case study on livable commercial streets and their impact on social life in Gukukul, Ahmedabad, within the context of urban planning, is to examine the transformative effects of pedestrian-

oriented design on social dynamics and community well-being. The study aims to achieve the following objectives:

- Evaluate the Impact: The primary aim is to assess the impact of transforming traditional commercial streets into livable spaces on various aspects of social life, including social interactions, community engagement, and overall quality of life for residents.
- Understand Community Perspectives: The study seeks to understand the perceptions, experiences, and attitudes of Gukukul residents towards the revitalization of their commercial streets. By gathering insights through surveys and interviews, the aim is to capture the community's feedback and perspectives on the changes made.
- Assess Physical and Social Parameters: The study aims to examine the physical parameters of the transformed commercial streets, such as the design elements, infrastructure improvements, and the provision of public spaces. Additionally, it aims to assess the social parameters, such as increased social interactions, community cohesion, and the sense of place and identity among residents.
- Identify Economic Implications: The study aims to analyze the economic implications of livable commercial streets in Gukukul. This includes examining the impact on local businesses, employment opportunities, and economic growth within the neighborhood.
- Provide Recommendations: Based on the findings, the study aims to provide practical recommendations and insights for urban planners, policymakers, and community stakeholders on integrating livable commercial street concepts into future urban planning projects. These recommendations will focus on creating vibrant, socially connected, and inclusive urban environments that enhance social life and community well-being.

By achieving these objectives, the case study aims to contribute to the knowledge base of urban planning strategies that prioritize pedestrian-oriented design, social connectivity, and community well-being. The findings and recommendations can inform future urban development projects in Gukukul and serve as a valuable resource for urban planners and policymakers seeking to create livable and socially vibrant neighborhoods.

PROBLEM STATEMENT

The concept of livable commercial streets has gained significant attention in urban planning, as they play a crucial role in shaping the social fabric and quality of life in cities. This research aims to investigate the impact of livable commercial streets on social life, focusing on a case study of Ahmedabad, a vibrant and culturally diverse city in India.

Ahmedabad, like many other rapidly growing urban centers, has experienced significant urbanization and commercialization in recent years. The city's commercial streets are vital public spaces where economic activities and social interactions converge. However, the unplanned development, rapid motorization, and inadequate pedestrian infrastructure have posed several challenges to the livability and social vitality of these streets.

This study seeks to address the following research questions:

- What are the key characteristics of a livable commercial street in the context of Ahmedabad?
- How do livable commercial streets influence social interactions, community cohesion, and cultural activities in urban areas?
- What are the current challenges and barriers to achieving livable commercial streets in Ahmedabad?
- What strategies, policies, and design interventions can enhance the livability and social life of commercial streets in Ahmedabad?

By exploring these questions, this research aims to contribute to the knowledge and understanding of the relationship between commercial streets and social life in the urban context of Ahmedabad. The findings will serve as a basis for formulating evidence-based recommendations and guidelines for urban planners, policymakers, and designers to create more inclusive, pedestrian-friendly, and socially vibrant commercial streets in Ahmedabad and potentially other cities facing similar challenges.
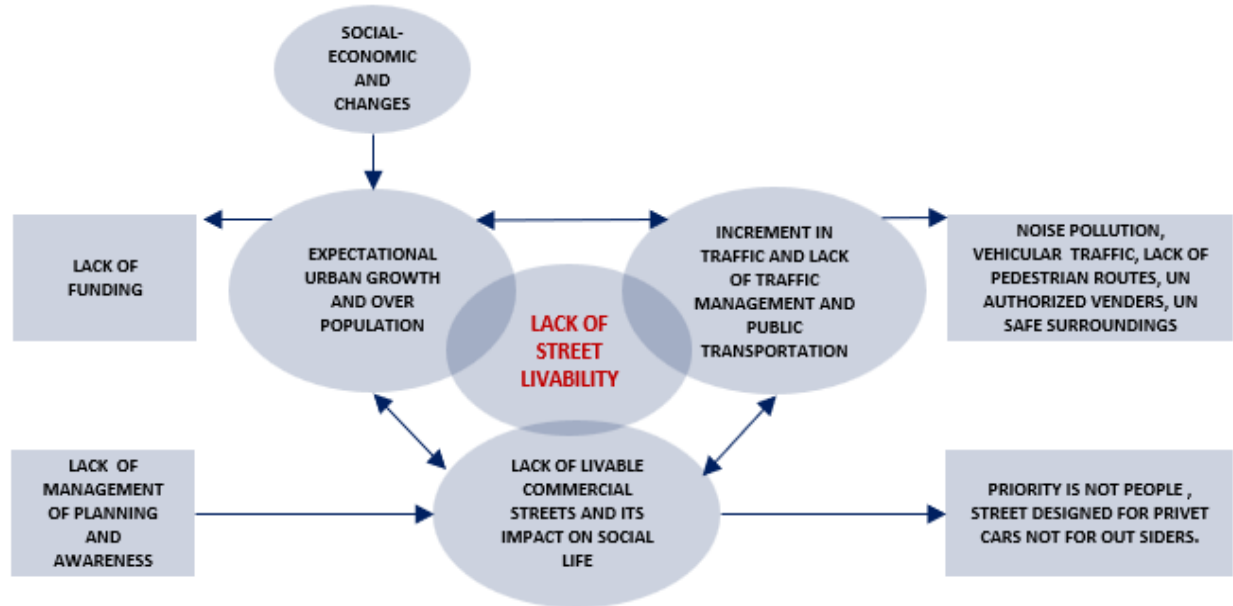
Figure 2 Chat Of Problem Statement

The outcomes of this study will provide valuable insights into the potential benefits of transforming commercial streets into livable spaces that promote social interactions, strengthen community ties, and enhance the overall urban experience. Ultimately, it will contribute to the sustainable development and improvement of urban areas by fostering vibrant and socially inclusive environments for residents and visitors alike.

IMPACT OF COMMERCIAL STREETS ON THE CITY

The impact of commercial streets on the city of Ahmedabad, specifically in terms of livability and social life, is a significant aspect to explore in urban planning. Livable commercial streets can have several positive effects on the city and its residents.

- Social Interactions: Commercial streets act as vibrant public spaces where people from diverse backgrounds come together. They provide opportunities for social interactions, fostering a sense of community and belonging among residents. Livable commercial streets can facilitate social cohesion and strengthen community ties, promoting a sense of unity and shared experiences.
- Economic Development: Commercial streets are important economic hubs, attracting businesses, entrepreneurs, and investors. Livable commercial streets that prioritize pedestrian-friendly environments and support a mix of retail, dining, and cultural activities can enhance the economic vitality of the city. They can attract more visitors, increase foot traffic, and boost local businesses, contributing to job creation and economic growth.
- Cultural Identity: Commercial streets often reflect the cultural identity and heritage of a city. In the case of Ahmedabad, with its rich cultural heritage, livable commercial streets can showcase and promote local traditions, arts, and crafts. They can become platforms for cultural events, festivals, and performances, celebrating the city's diversity and preserving its cultural legacy.
- Quality of Life: Well-designed and livable commercial streets contribute to the overall quality of life in Ahmedabad. Pedestrian-friendly environments, enhanced public spaces, and well-maintained infrastructure provide residents with opportunities for leisure, recreation, and relaxation. Livable commercial streets can also promote physical activity by encouraging walking and cycling, improving public health outcomes.
- Urban Vibrancy: Livable commercial streets add vibrancy and vitality to the urban fabric of Ahmedabad. They create attractive destinations for residents and tourists alike, fostering a lively atmosphere and promoting a sense of place. By supporting a mix of activities and providing comfortable and safe environments, commercial

streets can contribute to a vibrant urban experience.

- Sustainable Urban Development: Livable commercial streets align with principles of sustainable urban development. By promoting walkability, reducing reliance on private vehicles, and encouraging the use of public transportation, they contribute to a more sustainable and environmentally friendly city. Additionally, they can lead to the revitalization of underutilized areas and contribute to urban regeneration efforts.

By studying the impact of livable commercial streets on social life in Ahmedabad, urban planning can aim to create a city that is socially inclusive, economically vibrant, culturally diverse, and environmentally sustainable. This understanding can inform policy-making, design interventions, and urban development strategies to prioritize the creation and maintenance of livable commercial streets, enhancing the overall well-being and livability of Ahmedabad as a whole.

LITERATURE ANALYSIS RELATED RESEARCH TOPIC

By considering these factors in urban planning analysis, policymakers and urban planners can develop strategies and interventions that improve the functionality, safety, and livability of urban streets in the Indian context. This holistic approach enables the creation of sustainable, inclusive, and people-centric urban environments.

DEFINE THE STREETS

- Streets are public thoroughfares or roads that are typically designed and built within urban or suburban areas to facilitate vehicular and pedestrian movement. They form an integral part of the transportation network and serve as corridors for various modes of transportation, including cars, buses, bicycles, and pedestrians.
- Streets are characterized by their physical attributes, such as their width, pavement material, markings, signage, and lighting. They can vary in size, from narrow residential streets to wide arterial roads or boulevards. Streets often have designated lanes for different types of vehicles, such as travel lanes, turning lanes, and bicycle lanes, to ensure efficient and safe movement.
- In addition to providing a means for transportation, streets also serve as public spaces where social interactions, economic activities, and cultural events take place. They act as vibrant corridors where businesses, shops, restaurants, and services are located, contributing to the economic vitality of the surrounding areas. Streets may also feature public amenities like benches, street furniture, and green spaces, providing opportunities for people to gather, rest, and engage in recreational activities.
- The design and layout of streets can vary based on their function and context. Residential streets are typically designed to prioritize the safety and comfort of pedestrians and residents, with lower speed limits and traffic calming measures. On the other hand, arterial or commercial streets are designed to accommodate higher volumes of vehicular traffic and support economic activity, often featuring wider lanes and more signage.
- In urban planning and design, streets are crucial elements that shape the character, functionality, and livability of cities. The design and management of streets should consider factors such as safety, accessibility, aesthetics, sustainability, and social interactions, to create well-designed and inclusive spaces that contribute to the overall quality of urban life.

URBAN STREETS IN INDIAN CONTEXT

In the context of urban planning analysis in India, urban streets present a unique set of challenges and opportunities. Here are some key aspects to consider when analyzing urban streets in the Indian context:

1. Mixed-Use Nature: Indian urban streets often feature a mix of residential, commercial, and institutional activities. Analyzing the different land uses along streets is crucial to understand their impact on traffic flow, pedestrian movement, and the overall livability of the area. It helps identify opportunities for integrated development and the need for appropriate zoning regulations.

2. High Population Density: Indian cities are known for their high population densities, resulting in heavy pedestrian and vehicular traffic. Analyzing the capacity of urban streets to accommodate this density is essential. Factors such as road width, sidewalk space, and intersection design should be assessed to ensure safe and efficient movement of people and vehicles.

3. Informal Street Economy: Street vending and informal businesses play a significant role in the Indian urban context. Analyzing the impact of street vendors and their integration into the street design is essential. Balancing their economic activities with the needs of pedestrians and vehicular traffic is a critical consideration for urban planners.

4. Safety and Accessibility: The safety and accessibility of urban streets are crucial elements in urban planning analysis. Evaluating the availability and condition of pedestrian infrastructure, including sidewalks, crosswalks, and footpaths, is necessary to identify areas for improvement. Assessing the provision of infrastructure for people with disabilities, such as ramps and tactile indicators, is also important to ensure inclusivity.

5. Public Transportation Integration: Urban streets in India need to support an efficient and well-integrated public transportation system. Analyzing the provision of bus stops, dedicated bus lanes, and connectivity to transit hubs is vital. Emphasizing pedestrian-friendly design near transit stations encourages multimodal transportation and reduces dependence on private vehicles.

6. Environmental Considerations: Urban streets in India face environmental challenges, including air and noise pollution. Analyzing the impact of vehicular emissions, noise levels, and green cover along streets helps identify strategies for mitigating environmental impacts. Encouraging sustainable transportation modes such as walking, cycling, and public transport can contribute to a more environmentally friendly street environment.

7. Cultural and Heritage Preservation: Many Indian cities have rich cultural and architectural heritage. Analyzing the streetscape in relation to historical landmarks, cultural assets, and traditional urban forms helps preserve and integrate these elements into urban planning initiatives. Promoting heritage-sensitive design and placemaking techniques can enhance the cultural identity of urban streets.

8. Community Participation: Engaging local communities and stakeholders is essential for successful urban planning analysis. Considering the perspectives and needs of residents, businesses, and community organizations helps identify context-specific challenges and opportunities. Collaborative planning processes ensure that urban streets reflect the aspirations and priorities of the people who use them.

ISSUES FACED BY INDIAN PEOPLE ON STREETS

In urban planning analysis, several issues are faced by Indian people in streets, which can be categorized as follows:

Pedestrian Infrastructure and Safety:
- Inadequate sidewalks or footpaths: Many Indian streets lack proper sidewalks, forcing pedestrians to share the road with vehicles, leading to safety concerns.
- Insufficient pedestrian crossings: Limited crosswalks or zebra crossings result in unsafe pedestrian crossings, particularly in high-traffic areas.
- Non-compliance with traffic rules: Negligent driving behavior, such as not yielding to pedestrians, poses risks to pedestrian safety.

Traffic Congestion and Management:
- Insufficient road capacity: Rapid urbanization has outpaced the expansion of road infrastructure, leading to traffic congestion and delays.
- Lack of efficient traffic management systems: Inadequate traffic signal timings, poor enforcement of traffic rules, and limited traffic surveillance contribute to traffic congestion and unsafe conditions.

Lack of Accessibility and Inclusivity:
- Inaccessible infrastructure for people with disabilities: Most streets lack ramps, tactile indicators, and other facilities necessary for individuals with disabilities to navigate safely.
- Inadequate facilities for elderly and children: The absence of age-friendly infrastructure, such as seating areas and resting spots, hinders the mobility and comfort of elderly individuals and children.

Encroachments and Illegal Parking:

- Street encroachments: Unauthorized constructions, street vendors, and informal settlements encroach on the pedestrian space, narrowing the roads and impeding smooth movement.
- Illegal parking: Improperly parked vehicles obstruct traffic flow, reduce road capacity, and create safety hazards.

Insufficient Street Lighting and Security:
- Poor lighting conditions: Inadequate street lighting, particularly during nighttime, hampers visibility, poses safety risks, and contributes to a sense of insecurity.
- Safety concerns: Limited surveillance, inadequate police presence, and a lack of women-friendly measures compromise the safety and security of people on the streets.

Lack of Public Spaces and Amenities:
- Inadequate public spaces: The scarcity of well-designed public spaces, parks, and recreational areas deprives communities of spaces for social interaction and leisure activities.
- Lack of public amenities: The absence of public toilets, seating areas, and waste management facilities along streets leads to inconvenience and unhygienic conditions.

Air and Noise Pollution:
- Vehicular emissions: High levels of air pollution from vehicles contribute to respiratory issues and overall environmental degradation.
- Noise pollution: Traffic noise, especially in commercial areas, disrupts the tranquility and impacts the well-being of residents.

Addressing these issues requires comprehensive urban planning strategies, such as:
- Developing and improving pedestrian infrastructure, including sidewalks, crosswalks, and footpaths.
- Implementing efficient traffic management systems, including intelligent traffic signal systems and traffic flow optimization.
- Promoting inclusive design and ensuring accessibility for all individuals, including people with disabilities and the elderly.

- Enforcing regulations to mitigate encroachments and illegal parking, ensuring adequate road space for all users.
- Enhancing street lighting and security measures to improve safety.
- Creating and maintaining well-designed public spaces and amenities.
- Implementing measures to reduce air and noise pollution, including promoting sustainable transportation modes and controlling vehicular emissions.

By addressing these issues through urban planning, cities in India can create streets that are safe, accessible, inclusive, and enjoyable for all users, ultimately enhancing the quality of life for Indian people

APPROACH TOWARDS SUSTAINABLE URBAN LIVABLE STREETS

To develop sustainable and livable streets in urban planning, a comprehensive approach is required. Here are key components of an approach towards sustainable urban livable streets development:

Walkability and Pedestrian-Friendly Design:
- Prioritize pedestrians as the primary users of streets by designing wide and well-maintained sidewalks, ensuring accessibility for all individuals.
- Implement traffic calming measures, such as speed reduction, raised crosswalks, and curb extensions, to enhance pedestrian safety and comfort.
- Promote mixed land use to create destinations within walking distance, reducing the need for long commutes and encouraging active transportation.

Cycling Infrastructure:
- Develop a connected network of cycling lanes, paths, and bicycle parking facilities to encourage cycling as a sustainable mode of transport.
- Ensure safe and separated cycling infrastructure, including protected bike lanes and dedicated cycling routes, to improve cyclist safety and encourage cycling uptake.

Public Transportation Integration:

- Prioritize efficient and well-integrated public transportation systems, including buses, trams, and metro rail, to provide sustainable mobility options.
- Design streets to accommodate dedicated bus lanes, transit stops, and seamless connections between different modes of public transport.
- Implement transit-oriented development (TOD) strategies, locating commercial and residential developments around transit nodes to promote accessibility and reduce dependence on private vehicles.

Green and Active Spaces:
- Integrate green infrastructure, including street trees, parks, and green buffers, to enhance the aesthetic appeal, air quality, and microclimate of streets.
- Create public plazas, pocket parks, and public seating areas to provide spaces for relaxation, social interactions, and community events.
- Incorporate elements of active design, such as exercise stations and pedestrian-friendly street furniture, to encourage physical activity.

Sustainable Stormwater Management:
- Implement sustainable stormwater management practices, such as rain gardens, permeable pavements, and bioswales, to minimize runoff and improve water quality.
- Consider incorporating nature-based solutions, such as urban wetlands or green roofs, to enhance stormwater management and biodiversity.

Smart and Energy-Efficient Lighting:
- Utilize energy-efficient lighting systems, such as LED lights, to minimize energy consumption and reduce light pollution.
- Implement smart lighting controls, including dimming and motion sensors, to optimize energy use and enhance safety and security.

Community Engagement and Participatory Planning:
- Involve local communities, businesses, and stakeholders in the planning and decision-making process, ensuring their needs and aspirations are considered.

- Conduct community workshops, surveys, and public consultations to gather input and feedback on street design and development.
- Foster partnerships with community organizations and local businesses to activate and maintain the vitality of streets.

Monitoring and Evaluation:
- Establish monitoring systems to assess the performance and impact of sustainable street design elements, including pedestrian and cycling infrastructure, public transport usage, and environmental indicators.
- Regularly evaluate the effectiveness of sustainable street interventions, making necessary adjustments based on data analysis and feedback from users.

By adopting this approach, urban planning can create sustainable and livable streets that prioritize people, promote active transportation, enhance environmental quality, and foster community engagement. This approach contributes to creating cities that are more resilient, inclusive, and environmentally friendly.

URBAN LIVELINESS

Urban liveliness refers to the dynamic and vibrant nature of urban environments. It is a qualitative measure of the energy, activity, and social interactions that occur in urban spaces. In urban planning, urban liveliness is an essential aspect to consider when designing and developing cities to create vibrant and engaging places for residents and visitors.

Urban liveliness encompasses various elements, including:
- Social Interactions: Urban liveliness is characterized by the presence of people engaging in social interactions and activities. This can include conversations, gatherings, cultural events, and community celebrations. It reflects the sense of community and connectedness among urban residents.
- Cultural Vibrancy: Lively cities often showcase a diverse range of cultural activities, such as art exhibitions, music performances, theater shows, and festivals. Cultural institutions, creative industries, and public art contribute to the cultural vibrancy of urban spaces.

- Economic Activity: Lively urban areas exhibit a thriving economic scene with bustling markets, commercial districts, and entrepreneurial activities. Street vendors, small businesses, restaurants, cafes, and shops contribute to the economic vitality of the urban environment.
- Public Spaces: Well-designed and well-utilized public spaces, such as parks, plazas, and squares, are key contributors to urban liveliness. These spaces provide opportunities for social interactions, leisure activities, and relaxation, attracting people to gather and enjoy the urban environment.
- Active Streets: Lively cities have streets that accommodate a variety of uses and activities. Pedestrian-friendly streets with sidewalk cafes, street performances, and bustling markets enhance urban liveliness. Vibrant streetscapes and active storefronts create a visually engaging and inviting atmosphere.
- Nightlife and Entertainment: A vibrant urban environment extends into the evening and nighttime hours. Cities with a lively nightlife scene, including restaurants, bars, theaters, and live music venues, offer opportunities for entertainment and socializing.

Urban liveliness is an important aspect of urban planning as it contributes to the overall quality of life, community well-being, and economic development. Creating and maintaining urban liveliness requires thoughtful urban design, the provision of diverse amenities, fostering a sense of place, and supporting local cultural and economic activities. It involves designing spaces that encourage social interactions, pedestrian-oriented environments, and mixed-use developments that accommodate a range of activities.

FINDINGS AND CONCLUSION

In conclusion, the case study of Gukukul, Ahmedabad, demonstrates the positive impact of livable commercial streets on social life, community engagement, and urban vitality. The findings underscore the importance of integrating pedestrian-oriented design principles into urban planning strategies to create vibrant, inclusive, and socially connected neighborhoods. By embracing these principles, cities can enhance the well-being and quality of life for their residents, promote economic

growth, and cultivate a strong sense of community and place.

The case study on livable commercial streets and their impact on social life in Gukukul, Ahmedabad, provides valuable insights into the transformative effects of pedestrian-oriented design on urban planning and community development. The findings highlight the positive outcomes of the revitalization of Gukukul's commercial streets and shed light on the potential benefits for social life in urban areas.

1. Enhanced Social Interactions: The transformation of commercial streets into livable spaces in Gukukul fostered increased social interactions among residents. The provision of public seating, open spaces, and cultural amenities encouraged people to gather, interact, and engage in community activities. This led to a stronger sense of community and social cohesion.

2. Improved Walkability and Physical Activity: The pedestrian-oriented design of the streetscapes in Gukukul positively impacted residents' physical activity levels. The widened sidewalks, dedicated pedestrian zones, and improved infrastructure promoted walking and cycling, contributing to healthier lifestyles and reduced reliance on motorized transportation.

3. Economic Growth and Local Businesses: The revitalization of commercial streets attracted a diverse range of businesses and cultural activities. This led to increased foot traffic, economic growth, and entrepreneurial opportunities within the neighborhood. The enhanced street environment became a thriving hub for local commerce and employment, improving the overall prosperity of Gukukul.

4. Sense of Place and Identity: The transformation of commercial streets created a unique sense of place and identity within Gukukul. The incorporation of local cultural elements, public art, and landscaping contributed to a distinct neighborhood character, instilling a sense of pride and belonging among residents.

5. Higher Satisfaction and Well-being: Residents reported higher levels of satisfaction with their community after the implementation of livable commercial streets. The improved streetscapes, increased safety, and opportunities for social engagement enhanced residents' overall well-being and quality of life.

The findings of this case study have significant implications for urban planning. Livable commercial streets can be considered as a crucial element in creating vibrant and socially connected urban environments. The transformation of traditional commercial streets into pedestrian-oriented spaces can foster social interactions, promote community engagement, support local businesses, and improve residents' well-being.

To integrate the concept of livable commercial streets into urban planning, several key recommendations can be made:

1. Pedestrian-Oriented Design: Incorporate elements such as widened sidewalks, dedicated pedestrian zones, and adequate lighting to prioritize pedestrians and create safe and inviting spaces for social interactions.
2. Public Spaces and Amenities: Allocate spaces for public seating, parks, and recreational facilities to encourage community gatherings and activities.
3. Cultural Expression: Integrate local cultural elements, public art, and landscaping that reflect the neighborhood's identity and heritage, fostering a sense of place and pride among residents.
4. Community Engagement: Involve residents and community stakeholders in the planning and decision-making process to ensure that the design and implementation of livable commercial streets meet the specific needs and aspirations of the local community.
5. Sustainable Transportation: Encourage active modes of transportation, such as walking and cycling, through the provision of safe and accessible infrastructure, promoting healthier lifestyles and reducing environmental impacts.

RECOMMENDATIONS AND FUTURE RESEARCH AND CONCLUDING REMARKS FOR URBAN COMMERCIAL STREET FOR STUDY AREA

These recommendations aim to guide urban planners, policymakers, and designers in transforming commercial streets into livable spaces that promote social interactions, community cohesion, and cultural activities in Ahmedabad. By implementing these suggestions, the city can enhance its social fabric, improve the quality of life for its residents, and create vibrant, inclusive, and sustainable urban environments.

- Based on the research conducted on livable commercial streets and their impact on social life in Ahmedabad, the following recommendations are proposed for urban planning:
- Pedestrianization and Enhanced Walkability:
- Prioritize pedestrian-friendly design and infrastructure, such as wider sidewalks, comfortable seating areas, and well-marked crosswalks.
- Restrict vehicular traffic or implement time-based closures on selected commercial streets to create car-free zones.
- Improve connectivity and accessibility to public transportation hubs, encouraging a modal shift from private vehicles to public transport and walking.

Mixed-Use Development and Diversity:
- Encourage mixed-use development along commercial streets, including a diverse range of businesses, services, and amenities.
- Support the integration of affordable housing, promoting a mix of residential and commercial spaces to foster vibrant, 24/7 activity.
- Ensure the representation of diverse cultural and economic activities, supporting a wide range of retail, dining, and entertainment options.

Public Spaces and Placemaking:
- Create well-designed public spaces along commercial streets, including parks, squares, and plazas, for social gatherings, events, and cultural activities.
- Provide seating areas, shade, and greenery to enhance comfort and encourage people to stay and interact.
- Incorporate public art, sculptures, and installations that reflect the local culture and heritage, creating a sense of place.

Community Engagement and Participation:
- Involve local communities, businesses, and residents in the planning and decision-making processes related to commercial street development and management.

- Establish community-led initiatives and partnerships to activate and maintain public spaces, fostering a sense of ownership and responsibility.

Safety and Security:
- Implement adequate lighting, CCTV cameras, and other security measures to enhance safety along commercial streets, especially during evening hours.
- Improve pedestrian infrastructure to ensure safe and accessible crossings, ramps, and paths for all, including people with disabilities and the elderly.

Cultural Promotion and Events:
- Organize regular cultural events, festivals, and performances on commercial streets to showcase the city's diverse cultural heritage.
- Encourage local artisans and entrepreneurs to display and sell their products, supporting the local economy and preserving traditional crafts.

Sustainable Design and Green Initiatives:
- Integrate sustainable design principles into commercial street development, including energy-efficient lighting, waste management systems, and rainwater harvesting.
- Incorporate green spaces, trees, and landscaping to enhance the aesthetic appeal, air quality, and microclimate of commercial streets.

Monitoring and Evaluation:
- Establish a monitoring system to assess the impact of interventions and track the social, economic, and environmental outcomes of livable commercial streets.
- Regularly evaluate the effectiveness of design interventions, policies, and programs, making necessary adjustments based on feedback and data analysis.
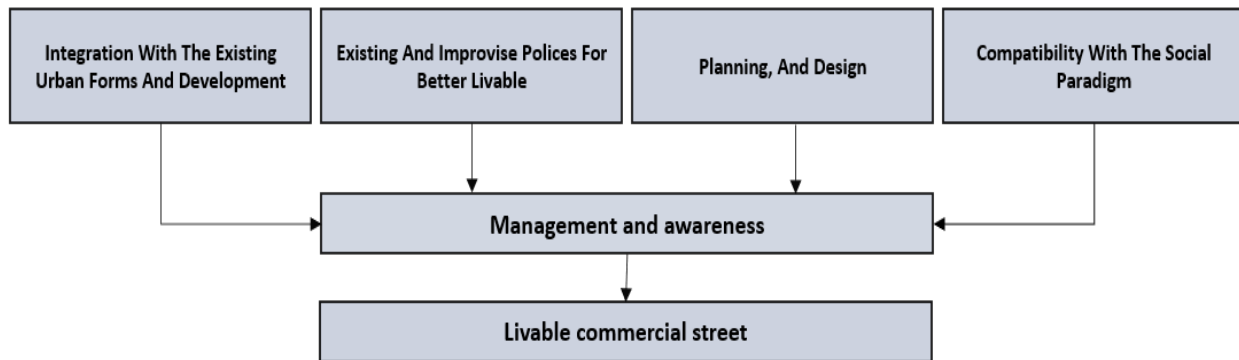

Figure 3 Livable Commercial Street

Moreover, the virtual relationships between the users and places, and between the individual user and the place are not considered in this research. These virtual links should be studied in future research as they impact the urban planning.

Furthermore, the study has limitations and could be more accurate if the secondary data and the information which was collected for the street. It is noted that some information was available on one street but impossible to find on another. Some limitations occurred due to difficulties in interviewing people in some areas. Moreover, no information on future plans for new developments could be obtained from the Ahmedabad Municipal corporation (AMC) and Urban Planning department as most of these data are confidential. But they are parallelly working on the

same issues facing by the local people, out siders and neighborhood.

Finally, the study focused on one major street of Ahmedabad, and aimed to research attitudes and experiences in Ahmedabad's commercial streets. It dealt with the behavior of the people who used them and their attitudes during the contemporary events and concentrated on the spatial dimensions of the selected street.

The data was collected and analyzed from the study street, and recommendations as a result of the findings can be adapted and implemented in all commercial streets in the old city streets. However, despite high levels of similarity in the existing contexts in the territory, these findings cannot be generalized, and the

suggestions do not necessarily apply in different areas at any time.

Note:

The content of this report is based on a fictional case study. The names used, such as Gukukul and Ahmedabad, are for institutional purposes only.

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