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Strategic Planning Utilizing the 15-Minute City Approach (Case Study: Hamidian Neighborhood, Rasht City)

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Abstract

Background and Objective: Increasing population density in urban areas and the rising concerns regarding sustainability and public health have encouraged residents to adopt active mobility patterns. In this context, the concept of the 15-minute city has emerged as a modern urban model aiming to ensure that residents can access essential daily needs (such as work, education, healthcare, and recreation) within a maximum 15-minute distance using non-motorized modes.

Methodology: This applied research was conducted with a descriptive–analytical approach in the Hamidian neighborhood of Rasht. Data were collected through library studies, field observations, maps, satellite images, and upper-level planning documents. Strategies for realizing the 15-minute city were formulated using the SWOT technique and prioritized through the QSPM matrix.

Results and Findings: The findings indicate that the most fundamental requirement for steering the Hamidian neighborhood toward a 15-minute city is improving accessibility and mobility systems. The top three strategies holding the highest priority directly relate to enhancing safe and efficient non-motorized mobility (walking, cycling, and public transport), emphasizing that without adequate transport infrastructure, other objectives of the 15-minute city cannot be achieved. Based on the QSPM scoring, "the quality of pedestrian pathways and pedestrian safety" was identified as the key factor with the highest score, while "smart technologies and tourism development" were recognized as the lowest-priority factor under the neighborhood's current conditions. Despite challenges such as limited public spaces and weak transport systems, the neighborhood possesses notable potentials, including its suitable connectivity and the presence of the Einak Lagoon. Priority strategies include improving the transport network, enhancing pedestrian pathways, and developing non-motorized access to services and green spaces. Ultimately, the successful implementation of this model requires collaboration among management institutions, citizen participation, and the adoption of smart technologies.

Keywords: Strategic planning, 15-minute city, Rasht city, Hamidian neighborhood

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EXTENDED ABSTRACT

Introduction:

Increasing population density in urban areas, coupled with growing concerns about sustainability and public health, has prompted a shift among residents towards active modes of mobility. In this context, the "15-minute city" has emerged as a modern urban planning paradigm. This model aims to ensure that residents can access their essential daily needs—such as work, education, healthcare, and recreation—within a maximum 15-minute journey using non-motorized transport modes. Conceptualized by Carlos Moreno and gaining traction globally, this approach is rooted in established planning principles like the neighborhood unit and New Urbanism, promoting walkability, mixed-use diversity, and density. The core objective of this research is to apply this innovative model to the Hamidian neighborhood in Rasht, Iran, to explore its potential for fostering a more sustainable, inclusive, and resilient urban form.

Methodology:

This applied research adopted a descriptive-analytical methodology. The study area was the Hamidian neighborhood in Rasht. Data were gathered through multiple sources, including library studies, field observations, maps, satellite imagery, and review of higher-level planning documents (comprehensive and detailed plans). To formulate and prioritize strategies for realizing the 15-minute city in the case study area, the SWOT (Strengths, Weaknesses, Opportunities, Threats) technique was employed. This involved identifying and analyzing internal (Strengths, Weaknesses) and external (Opportunities, Threats) factors across social, economic, physical-spatial, and environmental dimensions. The subsequent strategies were then prioritized using the Quantitative Strategic Planning Matrix (QSPM), which calculates the Attractiveness Score of each strategy based on weights derived from Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices. Software such as GIS for spatial analysis and Microsoft Office for documentation and data analysis were utilized.

Results and Findings

The SWOT analysis revealed that the Hamidian neighborhood possesses significant strengths, such as a suitable connective location, the presence of the Einak Lagoon as a key natural and tourist attraction, and a young population. However, it faces considerable weaknesses, including an inadequate and unsafe pedestrian and cycling network, poor quality of roads and public spaces, a weak public transport system, and social issues like crime. Key opportunities involve the potential for creating attractive pedestrian and cycling axes, developing tourism around the lagoon, and enhancing public services. Major threats encompass the dominance of private vehicles, loss of small businesses, traffic congestion, and environmental pollution.
The QSPM matrix prioritized the formulated strategies. The findings decisively indicate that the most fundamental requirement for transitioning Hamidian towards a 15-minute city is the improvement of its accessibility and mobility systems. The top three priority strategies are:

1. Reforming the public and private transportation network.
2. Improving and enhancing the quality of the pedestrian pathway network.
3. Providing safe pedestrian and bicycle access to green spaces and the seven essential neighborhood services.

These top priorities underscore that without a robust and safe non-motorized transport infrastructure (walking, cycling) and an efficient public transport system, achieving other objectives of the 15-minute city model is unfeasible. While opportunities related to the Einak Lagoon for tourism and public space development were identified, strategies addressing these were ranked lower due to the more pressing need for foundational transport and mobility upgrades.

Conclusion

The study concludes that the 15-minute city model presents a viable and strategic framework for enhancing sustainability, resilience, and quality of life in the Hamidian neighborhood of Rasht. The model's emphasis on optimal density, proximity, diversity, and digitalization can significantly reduce car dependency, mitigate environmental pollution, and strengthen social interactions and local identity. The strategic analysis clearly demonstrates that the neighborhood's path to becoming a 15-minute city must begin with a fundamental overhaul of its transportation and mobility infrastructure. The successful implementation of this model ultimately requires strong collaboration among urban management institutions, active citizen participation, and the integration of smart technologies to create a more human-centric, sustainable, and adaptable urban environment.

Declarations

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