

Evaluating Environmental Factors Influencing Urban Health and Development Using HDI Model (Case Study: Metropolitan City of Ahvaz)

Elias Mavadat¹, Muhammad Dideban²

Abstract

Nowadays, about half of the population of the earth live in urban areas, and this rapid trend of urbanization has created a number of physical, social, and environmental challenges, resulting in a reduction in viability levels. The viable city is considered as a bridge between the past and the future. The viable city is a city fighting any sort of wasting natural resources and resources that must be maintained for the use of future generations. Therefore, the viable city is also a sustainable city. In other words, it can be said that viability involves a healthy and safe urban system with a good level of access to urban services, providing high quality of life and an attractive environment for the citizens, following a number of basic principles. Accordingly, the current study utilizes a developmental and applicable approach to evaluate this subject matter in the Metropolitan City of Ahvaz, using a combination of descriptive/analytical and field study methods. It is worth mentioning that in order to analyze the obtained data, statistical software applications and the HDI model based on a spatial statistical approach are used. Based on the results of the study, the average score of physical-social development in the Metropolitan City of Ahvaz equals 0.766. Furthermore, the values of HDI for zones two, three, and four of the city are lower than the average and the HDI of other city zones in the Metropolitan City of Ahvaz are higher than the average. Moreover, based on the spatial statistical approach, the viability of the Metropolitan City of Ahvaz follows an eastern-western pattern.

Keywords: *viability, sustainable development, model and technique, Ahvaz.*

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Analyzing the Spatial Development of Ardebil City in the Period from 1956 to 2011¹**Framarz Montazer², Hussein Nazmfar³, Muhammad Hasan Yazdani⁴****Abstract**

During the recent decades, cities have experienced a rapid spatial development. The swift spatial development of cities is one of the most important issues facing the scholars and researchers of urban issues. Ardabil City is one of the cities which have gone through an increasing spatial development in recent decades. Therefore, the main objective of the current study is to analyze the spatial development of Ardabil City during the time period from 1956 to 2011 using quantitative methods such as Shannon Entropy, Heldren Model, and per capita urban land. The methodology of the current study is a descriptive analytical method with an applicable developmental objective. The obtained results indicate that this city has had a regular spatial development until 1980, and its peak spatial development started in 1980 onwards. The results obtained from the Heldren model for the time period between 1991 and 2011 show that in this period, 71 percent of the spatial development of this city was due to population growth and 28 percent of that development was due to the irregular development of the city. Moreover, the value of Shannon Entropy in 2011 was equal to 1.37, while the maximum value of this entropy for this year is 1.38. The closeness of the value of the entropy to the maximum value indicates the irregular spatial development of Ardabil City. Evaluation of the per capita urban land from 1956 to 2011 shows that the gross urban per capita has increased from 108.40 square meters in 1956 for each individual to 119.2 square meters in 2011. The results obtained from the utilized qualitative methods indicate the irregular spatial development of Ardabil City in recent decades. Therefore, in order to prevent the irregular spatial development of this city in future years, using empty spaces inside the city as well as the vertical development of the city can be suggested.

Key words: *spatial development, Heldren Model, Shannon Entropy, per capita urban land, Ardabil City.*

¹ . This paper is extracted from a master's degree dissertation entitled "Analyzing the Spatial Development and the Formation of Modern Urban Cores, Case Study: Ardabil City" under the supervision of Dr. Hussein Nazmfar.

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The Modus Operandi of City Quarters in Isfahan of Safavid Period

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Abstract

A glance at the studies in the area of historical urbanology of Persia under Safavids makes it clear that subjects of importance like city quarters (*mahalla*) – which is at the heart of city-dwelling – have not been studied thoroughly and in a comprehensive manner. At the beginning, it seems that quarters of cities like Isfahan are lacking in a specific system or pattern. A close inspection of the sources on Safavid period, however, proves the contrary. The present study tries to represent the patterns and features of Isfahan's quarters under Safavids – a task which will be completed with a historical approach and an analysis of the main sources of the period. The findings reveal that Isfahan's quarters used to have a unique cultural, social, administrative and physical system and identity, which corresponded to the residents' religious, ethnic, vocational and social class background. Conflicts across various quarters – be it religious, ethnic or of class nature – are stressed in the sociological analysis of pre-industrial societies. The study of the quarters system of Isfahan indicates patterns which correspond to the features of pre-modern societies in their last years, ignoring the class and social interests of city-dwellers. The system of these quarters was, nonetheless, self-administered, which proved to be efficient when it came to satisfying the people's economic, cultural, social and administrative needs.

Keywords: *system, quarters, Isfahan, Safavids*

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Factors Influencing the Change in Physical and Spatial Structure of Asadabad City

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Abstract

Similar to a living organism, a city is always changing and evolving. Formation, survival, and changes in the appearance of the urban texture, as well as its growth and development are influenced by a set of natural and manmade factors and forces, which impose a new appearance and texture on the physical body of the city. It is obvious that understanding the current state and problems of the city, as well as predicting its future changes require the understanding of these factors and their mechanisms of impact. The main objective of the current study is to identify the factors which influence the changes in the spatial and physical structure of Asadabad City. This study is a descriptive analytical study which utilizes the following tools and methods: library studies, internet research, field studies (observations), preparing the required map, and analyzing the maps in GIS. In this study, the factors affecting the physical development of Asadabad City include the status of migration, economic factors, physical development components of Asadabad City, policy making factors, marginalization of the population, along with factors such as slope and topography, which can be considered as limiting factors for the physical development of Asadabad City. The results obtained from SWOT analysis show that scientific and efficient management requires understanding the extent and direction of the future development of various areas of the city, which can be accomplished through predicting the future trends of urban development. Using the potentials of the available lands in the process of development can control the development of the city in order to prevent irregular and unchecked development. Finally, the map of the city and the trend of the development of this city indicate a radial expansion. Considering the limitations in the population growth of this city, the porous development inside the city, and then the suburban towns around the city, increasing the number of floors of the buildings, increasing the density, and utilizing vertical development, or a combination of these methods can be a logical solution for preventing the irregular and unchecked development of this city.

Keywords: *structure, spatial development, physical development, Asadabad City.*

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Developing a Tool for Measuring the Compatibility between Urban Living Space and the Citizens' Need for Physical Activity and its Application in Hijab Neighborhood of Mashhad¹

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Abstract

The growth in urbanization during the recent decades has increases healthcare, social, and economic inequalities at a large scale among the residents of many cities. One of the most important consequences of this trend is the tendency of citizens towards a sedentary lifestyle in Iran and around the world. Lack of physical activity, as one of the important issues in public health, is related to the living space and the daily activities of citizens and residents. Since there are no clear universal measures for measuring this phenomenon in urban space and environment, it is necessary to develop and propose a number of criteria for measuring the effects of physical activity on the quality of urban living space. In this regard, using criteria obtained from previous studies in the form of a theoretical framework, a measuring tool can be identified. Accordingly, the main objective of the current study is to develop a measuring tool for the quality of urban living space with an emphasis on the opportunities for physical activity and to evaluate the obtained measures in the area selected for the study, i.e. Hijab Neighborhood of Mashhad. The current study is a descriptive analytical one. Therefore, the theoretical concepts are gathered through library studies, and then, by developing a questionnaire, the obtained measuring tool is administered to the residents in Hijab Neighborhood. The obtained data were analyzed using SPSS software application. Based on the results, factor analysis shows that physical activity of citizens is influenced by four variables including the functional variable, availability variable, social variable, and aesthetic variable. Based on the results obtained from the analysis and the effect size of each of these variables on the variable of physical activity, it can be concluded that the functional factor has the highest level of impact on the quality of urban living space considering the opportunities provided for citizens to have physical activities. The availability factor, social factor, and the aesthetic factor are the other criteria affecting the level of citizens' physical activity, respectively.

Key words: *quality of living space, health, physical activity, Hijab Neighborhood of Mashhad.*

¹. The current paper is extracted from the dissertation of the first author entitled "Feasibility Study of Compatibility of Urban Living Space with the Need of Citizens for Physical Activity"

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The Effects of Environmental Psychology on the Design of Dental Centers

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Abstract

The architectural environment, as the main context for human activities, has significant impacts on the mental health of individuals. Stress in human beings, as one of the indicators and measures of mental health, is highly influenced by this environment. The stress present in therapeutic environment, with its negative consequences, can delay the recuperation of patients. One of the most stressful therapeutic settings is dental clinics where due to neglecting the moods of the users when visiting the clinic for therapeutic purposes, a sort of fear and anxiety is induced in the patients, reducing the impact of the therapy performed on the patients. The main objective of the current study is to identify stress-inducing factors in dental clinics and to evaluate the role of internal design and environmental factors in controlling this stress. With regards to the objectives, this study is an applied one and with regards to the methodology, the study is a comparative one. The results obtained from the study show that focusing on components and elements impacting the internal and external design of these centers base on the principles of environmental psychology can reduce the stress and anxiety created due to being present in these centers and improve calmness for the users.

Keywords: *environmental psychology, stress, architectural design, dental clinics.*

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Investigating the Level of Social Resiliency (Case Study: Ilam City)**Tayebeh Akbari ¹****Abstract**

Nowadays, in the aftermath of disastrous events, communities are trying to quickly return to normal status. Therefore, in recent years, the issue of resiliency has gained much more attention. The social dimension, which is one of the main components of resiliency, involves investigating the social capacity of communities under critical conditions. The main objective of the current study is to evaluate and investigate the level of social resiliency in Ilam City using a descriptive analytical methodology. The statistical population of the study includes the residents of Ilam City, among which 381 participants were selected using multi-step cluster random sampling based on the proportions of the population in selected areas. The questionnaire of the study was developed by the researcher; its validity was confirmed using formal validity while its reliability was confirmed using Cronbach's Alpha which was equal to 0.85. The obtained data were analyzed using descriptive and inferential statistics in SPSS software application. The results show that social resiliency in Ilam City is not at an acceptable level. Moreover, among the selected neighborhoods, the Saadi Neighborhood with an average score of 3.10 has the highest social resiliency, while Banbarz Neighborhood with an average score of 1.64 has the lowest level of social resiliency.

Key words: *resiliency, social resiliency, Ilam City.*

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Evaluating the Geographical Distribution of Urban Populations in Coastal Provinces of Southern Iran Using the Passive Defense Approach

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Abstract

The current study makes use of the results of the census of 2016 in Iran to evaluate the geographical distribution of urban population in Khuzestan, Bushehr, Hormozgan, and Sistan and Baluchestan using the passive defense approach. The methodology of the study is a combination of documentary, descriptive, and analytical methods where the percentage of urban population of the capital city of the province is compared to the urban population of other cities in the province, and the rank-size law of Zipf along with the urban primacy index are used. The results show that Hormozgan Province with a population density of 55.90 percent of the urban population of the province in Bandar Abbas City has the worst state among the four selected provinces, followed by Sistan and Baluchestan, Khuzestan, and Bushehr Provinces with the concentration of 44.07, 33.55, and 32.73 percent of their total populations in capital cities of Zahedan, Ahvaz, and Bushehr, respectively. Therefore, Bushehr Province has the best possible state among the selected provinces with regard to population distribution. Evaluating the urban primacy index for the selected provinces shows that Khuzestan, Hormozgan, and Sistan and Baluchestan Provinces are faced with the phenomenon of primate city and Bandar Abbas, Zahedan, and Ahvaz Cities are the primate cities in the urban network system of Hormozgan, Sistan and Baluchestan, and Khuzestan Provinces, respectively. Bushehr Province does not have a primate city. The results for the rank-size law model show that the urban population of cities in Khuzestan, Hormozgan, and Sistan and Baluchestan Provinces are far from the rank-size Zipf model, with the state of Hormozgan and Sistan and Baluchestan Provinces being worse than Khuzestan Province, while Bushehr Province does not suffer from the primate city phenomenon, thereby having a balance in its urban system. However, this type of balance follows the combinatory model, i.e. the urban hierarchy of Bushehr Province lacks the primate city phenomenon, but is not standard either; in other words, this province is at the middle of the spectrum. Based on the results from models comparing the urban population of the capital city of the province with the total population of the other cities in the province and the primate city model and the rank-size Zipf model, it can be concluded that the status of Hormozgan, Sistan and Baluchestan, Khuzestan, and Bushehr Provinces ranges from rank one (the worst case) to rank four (the best case), respectively. Therefore, Hormozgan, Sistan and Baluchestan, Khuzestan, and Bushehr provinces are respectively ranked from the worst to the best states with regards to following the principles of passive defense.

Key words: urban population, geographical distribution, coastal provinces of southern Iran, rank-size law, passive defense.

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Analyzing City Development Strategy (CDS) Indices using a Strategic Planning Approach (Case Study: Zanjan City)

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Abstract

The rapid growth of population and its concentration in cities along with the inefficiency of comprehensive urban plans for mitigating such problems have emphasized the necessity of considering novel approaches in this regard for developing countries. The current study analyzes and evaluates City Development Strategy (CDS) Indices using a strategic planning approach in Zanjan City. The main objective of the current study is to analyze the state of indicators of city development strategies (CDS) in Zanjan City in order to identify and understand the status of the strategic pattern and propose strategies and method for improving these indicators. The current study is an applied one which utilizes a descriptive analytical methodology. Moreover, the required data are obtained using library studies and surveys with a statistical population of 430,871. Using the adjusted Cochran's formula, 322 participants were selected as the sample of the study, who were asked to complete the questionnaire of the study, which was developed based on the opinions of 60 authority figures of the city. The obtained data were analyzed using the SWOT technique, and the quantitative matrix of strategic planning was used for ranking the strategies. The findings from the matrix for evaluation of internal and external factors show that the final score of internal factors is 2.26 while the final score of external factors is equal to 2.40, which are both less than 2.5. Therefore, it can be surmised that the indicators of city development strategies (CDS) are weak in such a way that the internal-external (IE) matrix for the state of City Development Strategy (CDS) Indices shows that among the four state of aggressive, conservative, defensive, and competitive, these indices are at the defensive position. Therefore, the City Development Strategy (CDS) Indices for Zanjan City are at the worst possible state. The final results obtained from the quantitative matrix of strategic planning propose four defensive strategies, including WT1 (establishing cooperation and collaboration among urban organizations and authoritative bodies for city development), WT4 (the need for urban organizations and bodies to follow the law and prevent the interference from groups which are irrelevant to the development and management of the city), WT3 (increasing the power of the city council and citizen activists to increase the participation of citizens), and WT2 (considering environmental issues in order to realize sustainable development and create a healthy city), as the main strategies that can be implemented.

Key words: *analysis, planning, city development strategy (CDS), strategic planning, Zanjan City.*

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ISSN : 2588-4735

Journal Of Urban Development Studies

Vol 2, No 5, Summer 2018

