Assessing the child friendly city indicators in Mashhad metropolis

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Extended Abstract

Objective: Cities and urban spaces can be either positive or negative locations for children. Neighborhoods must ideally be social places for children so that they can easily state the principles of communities and cultures and exchange them with children. In order to convert cities to places that children can growth and live better and their needs and rights to be met, their capabilities must be increased and assistive devices must be used. This is only possible by creating new locations based on group collaborations and interactions at different levels, local areas and social realms. A suitable urban space provides security, and an inappropriate urban space also eliminates it and causes all kinds of harms and social problems. In fact, public spaces such as passages, parks and playgrounds are an area for children to socialize. The main subject is that although the dimensions of child-friendly cities have been determined by UNICEF in 2007, its indicators need to be carefully explained and subsequently localized according to the cities of Iran, especially Mashhad metropolis. This research aims to investigate the current situation and the effectiveness of each indicators of child-friendly cities in Mashhad and then analyze the gap between the current and favorable situation and also Field observations are used.

Methods: This is an applied, descriptive survey research. CFC's theoretical principles and literature were reviewed using the documentary studies. Then, the indicators were extracted and localized using the dimensions stated in the last UNICEF Report (2007) and valid sources in this regard. In the first stage, the status was reviewed by a field visit. Data were collected using a researcher-made questionnaire in order to assess the status quo and the effectiveness of indicators from the perspective of parents with 6-12 year-old children and children in some child-based questions. The statistical population consisted of 13 Municipal Districts of Mashhad, Iran. Districts 1, 6, and 8 were selected as the sample using clustering based on the municipal income in 2014. District 1 represents rich class; District 8 shows semi-rich class; and District 6 represents poor class. Data were analyzed by SPSS. To assess the hypothesis, firstly Kolmogorov-Smirnov Test was used in order to test the normality of the data and then T. test, Tukey test and ANOVA were employed to review the current situation and the impact indicators as well as the gap analysis.

Results: The current situation of playground and green space index in Mashhad is not favorable. The current status of other indicators is higher than the standard number 3 and is in a relatively good condition. Also, gap analysis between the current and favorable status indicates that the children's health index with a
distance of -0.229 and the children's safety index with a distance of -0.229 are the lowest gap between the current and optimal status among the seven indicators of child-friendly city.

**Conclusion:** The results of the current situation in Mashhad in the field of child-friendly city indicators showed that all indicators are slightly higher than the average number 3, with the exception of green space index, also, in terms of effectiveness of indicators, all the indicators identified by UNICEF, taking into account the local conditions in Mashhad metropolis, have a significant and positive effect on creating a child-friendly city. The results of gap analysis between the current and favorable situation indicate a significant difference between the current and favorable situation of green space and access to services indicators. The results of field observations generally indicate a moderate status. Safety and ease of movement and green spaces indicators that have been analyzed, are lower than the standards of UNICEF and measures taken in other cities, developed and developing countries.

**Keywords:** Child-Friendly City, UNICEF, Gap Analysis, Mashhad Metropolis.

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**References:**


Gummesson, M (2007). *Barns säkra tillgängli ghet till skolan* [Children’s safe accessibility to school], Institutionen för arkitektur, Chalmers Tekniska Högskola, Göteborg. *(In English)*

Holt Nicholas, L (2014). *Neighborhood physical activity opportunities for inner-city children and youth*, Journal of Health & Place, 15, 1022-1028. *(In English)*


Kamelnia, H., Haghir, S., (2009). *Patterns of Green Space Design in Child-Friendly City (Case Study: Bam’s Child-Friendly City)*, Bagh-e Nazar Quarterly, 12, 77-90. *(in persian)*


Mitchell, H., Kearns, A., Damian C. A (2007). *Nuances of neighbourhood: Children’s perceptions of the space between home and school in Auckland*, New Zealand. ELSEVIER. *(In English)*

Nordström, M (2010). *Children’s Views on Child-friendly Environments in Different Geographical, Cultural and Social Neighbourhoods*, Urban Studies, 47(3), 122-139. *(In English)*


Qara Biglou, M (2012). *(The role of environmental factors in fostering children's creativity)*, Bagh-e Nazar Quarterly, 20, 18-33. *(in persian)*


Safavi Moghadam, M., Noghani Dokht Bahmani, M., Mazloom Khorasani, M (2015). *A Study of Child-Friendly City and Children’s happiness feeling in Mashhad*, Journal of Social Sciences, Faculty of Literature and Humanities, Ferdowsi University of Mashhad, 12, 143-165. *(in persian)*


Taylor, A.F., Kuo, F.E., Sullivan, W.C (2014). *Coping with ADD: The surprising connection to green play settings*, Environment and Behavior, 1(33), 54-77. *(In English)*

Tsou, K.W., Hung Y. T., Chang Y. L (2005). *An accessibility-based integrated measure of relative spatial equity in urban public facilities*, Department of Urban Planning, National Cheng Kung University, Tainan, Taiwan. *(In English)*


Woolcock, G. Steele, W (2008). *Towards the development of an indicators framework for a child friendly community: literature review*, Urban Research Program for the NSW Commission for Children and Young People, Griffith University, March. *(In English)*


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