

Explaining the Role of Physical Indicators in Promoting the Security of Citizens Adopting a CPTED Approach (A Case Study of Isfahan, Zeinabayeh Worn Out Area)

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Extended Abstract

1. Introduction

The most important human need is security, which is one of the most important factors in the quality of urban design and influences the presence of citizens in urban neighborhoods and, consequently, the vitality of neighborhoods. Several factors have a role in the emergence of crime, one of which is physical factors. Prevention through environmental design can be effective in improving the quality of life and increasing citizenship satisfaction. The selected approach in this research is the CPTED approach.

The worn-out area of Zeinabayeh area of Isfahan located in district 14 of the municipality with an area of 91.5 hectares is studied here. Based on the research carried out by the Police Station of Isfahan province in 2009, the highest frequency of crime (17.9%) is related to the 7th and 14th municipalities of Isfahan (Shahivandi, Soltani, & Ahmadi, 2009). Investigating the status and the amount of crime committed in Zeinabayeh range and the physical and social conditions governing it has doubled the importance of addressing the issue of security in the Zeinabayeh area of Isfahan. The purpose of this study is to evaluate the effect of the physical environment on preventing

crime, increasing the sense of security of citizens, improving the quality of life, and increasing the satisfaction of residents in Zeinabayeh area of Isfahan.

2. Methodology

The research method is descriptive-analytical and applied. Theoretically, the data collection is conducted through reviewing the records of libraries and other information centers as well as documents. In collecting the physical data, the current status of the fieldwork dealt with using a questionnaire, and interviews to examine the characteristics of insecure environments and to measure the amount of physical indices. Also, in order to analyze the statistical data, correlation, chi-square, and Friedman tests were used in SPSS software. Using SPSS software, Cronbach's alpha coefficient (its value for all questionnaire questions was higher than 0.7), the validity and reliability of the questionnaire were verified and confirmed. The statistical population of this study is the number of households living in the Zeinabayeh worn out area of Isfahan. According to the latest available statistics, the population living in this area is 26280 people. Based on the household size 4, households (statistical population) were calculated to be 6570. To save time and money, we chose the sample of the Cochran formula. Regarding insecure environmental conditions and low literacy and high age, a

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sample size of 250 families was determined. To this end, considering the probable problems and the error of the answers and questionnaires, 300 questionnaires were distributed in a simple and systematic manner in the range of the study, 44 of the questionnaires were excluded from the study process, and 256 questionnaires were approved and the research work continued with this number of acceptable questionnaires.

3. Results

This research investigates the effect of nine structural components (land use, urban furniture, visual fit, environmental health, readability, grain size and area compression, passages, vegetation, and informal monitoring) as independent variables on security as a dependent variable in Isfahan Zeinabayeh neighborhood. According to the results of the Chi-square test, the variables of land use, urban furniture, visual fit, readability, environmental health, informal supervision and passages as independent variables and sense of security as dependent variables were found to have a statistically significant level less than 0.01; it can be concluded that with 99.9% of confidence, independent and dependent variables have a significant relationship with each other. Significant level in the study of the relationship between vegetation variables and security was found to be higher than 5%, which indicates that there is no significant relationship between the two variables. Also, to correlate the correlations of each of the physical indices with the security, the correlation test was used. The results showed that there is a high correlation among land use variables, urban furniture and informal supervision, and security. Also, according to the results of Friedman test, which was measured using a questionnaire, visibility and visual fits were the most desirable while vegetation cover and informal monitoring were the most undesirable factor. This means that they should be prioritized in the planning for the study area. According to the data collected

from the questionnaire and the results of the test of the ratio of binomial (ratio), the security of the study area is low. In other words, according to the significance level (0.000) and the frequency, the responses given to the medium, low and very low were about 80%, and with 95% confidence, residents are dissatisfied with the security of their area, and they believed that security was at a low level.

4. Conclusion

Providing security in cities in addition to law enforcement and social institutions is one of the tasks of urban planners and policy makers. Regarding the results of data analysis and statistical tests, the study of the physical condition of the study area showed that vegetation indices and informal monitoring were recognized as the weakest indicators. There is a significant relationship between all physical indices except vegetation as an independent variable and security as the dependent variable. The land use and urban furniture index have the highest correlation with environmental security. Also, in the eyes of citizens, inappropriate lighting in the urban furniture sector and the presence of land in the area of land use and congestion in the segment of tissue area will have the greatest impact on security. Considering the importance of three areas of land use, urban furniture and vegetation, all projects and activities in the Isfahan Zeinabayeh area with these three indicators and with the aim of improving its quality level should be carried out. What modern people can do is not to eradicate the issue of crime because it is beyond the control of the person, but, he is able to minimize the crime through the proper design of the environment. At the end of the research, to improve the quality of life, increase citizenship satisfaction, and reduce crime according to the CPTED approach, strategies are presented separately for each indicator together with executive suggestions.

Key words: Security, Physical index, CPTED, Zeinabayeh neighborhood, Isfahan city

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