



The Role of Health Environment and Location in the Emergence of Urban Criminal Behaviours in Tehran

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Abstract

Background: Although, the roots of criminal behaviours clearly lie in social, economic, and cultural factors, the increase criminal offences in urban settings has raised the issue of prevention through urban environmental health, planning and design.

Methods: The approach of the study was based on the scientific research methodology and indicators were compiled from observations and comparative analyses of those urban spaces that are most often the sites of crime.

Results: Pearson's correlation coefficient showed that 37% of sampled males and 51% of females emphasized on effectiveness of environmental factors. The urban space observations show that the environmental and physical factors affect on security and sensation of community safety among the citizens.

Conclusion: Crime is committed in a particular place; place-related factors play a role in creating the potential for crimes to be committed. The results show the close bond between crimes and environmental problems. Recognition of the influence of location-specific characteristics and the correct environmental response may make it possible to prevent or at least reduce criminal acts in urban places.

Keywords: *Crime, Environmental factors, Security sense, Urban spaces*

Introduction

As a result of urbanization and the social problems common to cities, everyone acquainted with a fact that, a city's environment and the social problem of a city cannot be separated. Certainly, the problem of criminal behavior can be viewed in this framework. It can be studied in relation to the environmental and site-specific characteristics of the affected locations so that the role of these characteristics in crime can be determined in the formulation of prevention programs and the creation of safe urban spaces.

Generally, in any society the "phenomenon of committing crime", with respect to cause and effect, is always influenced by a series of interdependent environmental factors, all of which play a

role in the emergence of criminal behaviours¹. These can be divided into: Social factors, Economic factors, and-Cultural factors.

However, in the case of social factors, the French authority Lacassagne believes that, the "social environment is a cultivating container of offence (1). Similarly, the experts of the Chicago School have pointed out factors such as "high social incompatibility". The well-known sociologist Durkeim noted the "oppositeness of [the] unlimited wishes of humans and [the] social restrictions. Walter Miller pointed to deep gaps between social facilities, while

¹ In addition to environmental factors, the psychological reasons of offenders can be mentioned. In such cases, environmental factors may have less of an influence, with a greater role ascribed to genetic inheritance.

Merton argued for the "lack of possibility to control the instinctual tendency of individuals, when there is no monitoring or social structure in society (2).

In the case of economic factors affecting emerging criminal behaviors, different authorities such as W. Godwin, C. Pecquer, Proudhlhon, F. Angels, A. Parnell, J. Kasarda discussed the existence of "poverty and financial needs", "unemployment level", "economic cost of committing crime", "unbalanced economic growth and development", "amount of inflation" (3) among others. Cultural factors have also been suggested to play a role in the emergence of crime in urban society. Lewis Worth, Robert Redfield, Walter Miller, R. Cloward, and L. Ohlin observed a "breakdown of cultural structure", "existence of micro deviator culture", "cultural in homogeneity in large cities", etc (4).

All these factors as Fig. 1 shows, interact within the frameworks and conditions created by a par-

ticular environment (in both its general meaning referring to the general condition of natural and in the context of human-made environments, i.e., the spatial, physical, and environmental conditions of a specific place). Thus, in all urban societies, undesirable social, economic, and cultural conditions and factors cause social, economic and cultural abnormalities that, alone or in their interaction, lead to criminal acts.

It must be considered that each urban environment, as a human-made environment, is part of a larger environmental space, i.e., the city, and each city is a part of a larger environmental space, i.e., society. Hence, the same factors (including social, economic and cultural ones) and reasons involved in the emergence of abnormalities such as crime at the general level of society also play a role in urban spaces. In other words, whatever affects human behavior in urban societies, also affects human behavior in urban spaces.

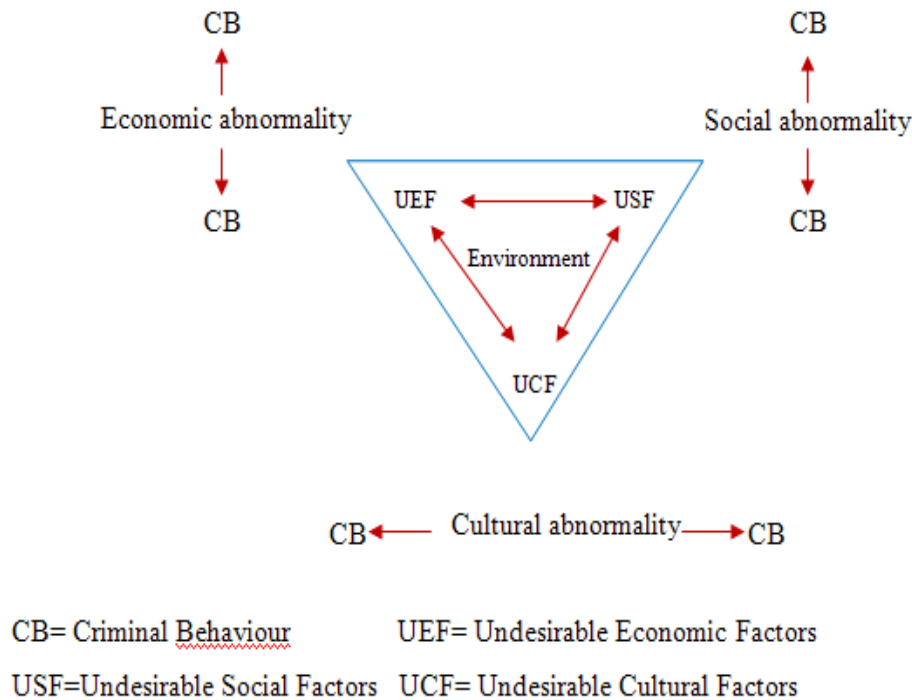


Fig. 1: Role of effective factors (in macro level or larger environment space and society) emergence of criminal behavior

Materials and Methods

In this paper, much of the research work has been directed to examining medium-level effects and has led to the identification of two groups of urban characteristics that influence the emergence of criminal behavior (Fig. 2):

a) Urban physical abnormalities: abnormalities in the size of a city (5), its settlements (6), its public spaces (7), and its transportations and network of streets (8).

b) Urban functional abnormalities: abnormalities in social (9), economic (10) and cultural (11) functions. Finally, environmental and situational circumstances (especially in public places) that lead to the occurrence of crime and anomic behavior can be ascribed to micro level factors.

As shown in Fig. 3, criminal behavior might be surrounded by three basic elements (the three sides of a triangle): offender, victim, and situation.

As John Evry, argued; "Gunpowder has explosion potential, but needs spark and dry air or pressing a button to explode" (12). Analogously, a crime needs a suitable location and situation, an offender, and a victim in order to be committed. The situation and circumstances can be assumed as one side of the triangle. The international group authors of the CPTED (Crime Prevention through Environmental Design) concept and other researchers in this area believe that by defining and reforming the spatial and physical parameters as well as the circumstance of each place, it is possible to reduce the offensive conditions that exist in various places. Figure 4, shows the role of situation and location in crime, as the point where offender and victim intersect with each other.

While in principle this can occur anywhere, there are specific circumstances that facilitate or prevent the committing of a crime at a particular place. Characteristic environmental and spatial circumstances have essential roles in determining an urban space or location's destiny. Success or failure of an urban space depends on the characteristics of that space and not just its equipment and in-

stallation (13). Therefore, everything that occurs in these places and situations including abnormal or normal social behaviours and events is under the direct or indirect influence of these circumstances and include variables of form, space, and function.

By environmental health and environmental design, some sorts of criminal situation might be prevented. "CPTED" is the proper design and effective use of the built environment which may lead to a reduction in the fear and incidence of crime, and an environment of the quality of life (National Crime Prevention Institute).

According to the above-mentioned factors and shown figures, a basic concept of study design was developed. Therefore, three scopes of macro, medium, and micro level according to Fig. 5 were followed as main study structure. As Fig. 5 shows, there are two main parts in this study includes problem explanation and problem analyzing phase.

As the approach of this study, the macro, medium, and micro levels are used to construct an analytical model (Fig. 5). This model takes the form of a case study and the conclusions that can be drawn from it. Analytical models can be divided into two sections: 1- Explain the issue (problem) and 2 - Analyze the issue (problem).

In the problem explanation phase, the model refers to the insecurity and crime in the first degree under the effects of social, economic, and cultural factors in urban community. Either these factors affect environmental conditions or predisposing the inhibitors is intensified or weakened.

The second section, titled "problem analyzing", includes an environmental study, by which the hypothesis, indicators and case study refers to conclusions. The hypothesis, based on this model and the result of the first section include: "Awareness of Environment, Visibility by others, Finding help and Quality of Environment Space", through which, the analysis of environmental factors in any place are verifiable.

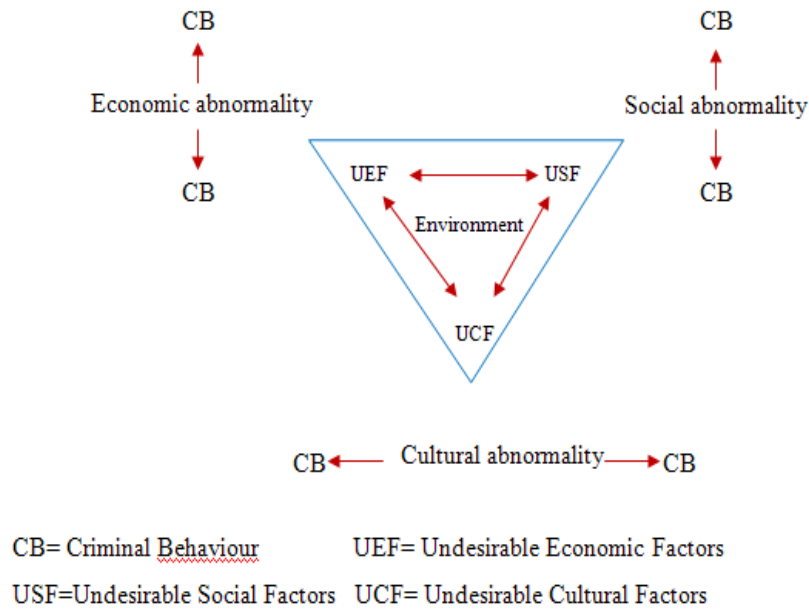


Fig. 1: Role of effective factors (in macro level or larger environment space and society) emergence of criminal behavior

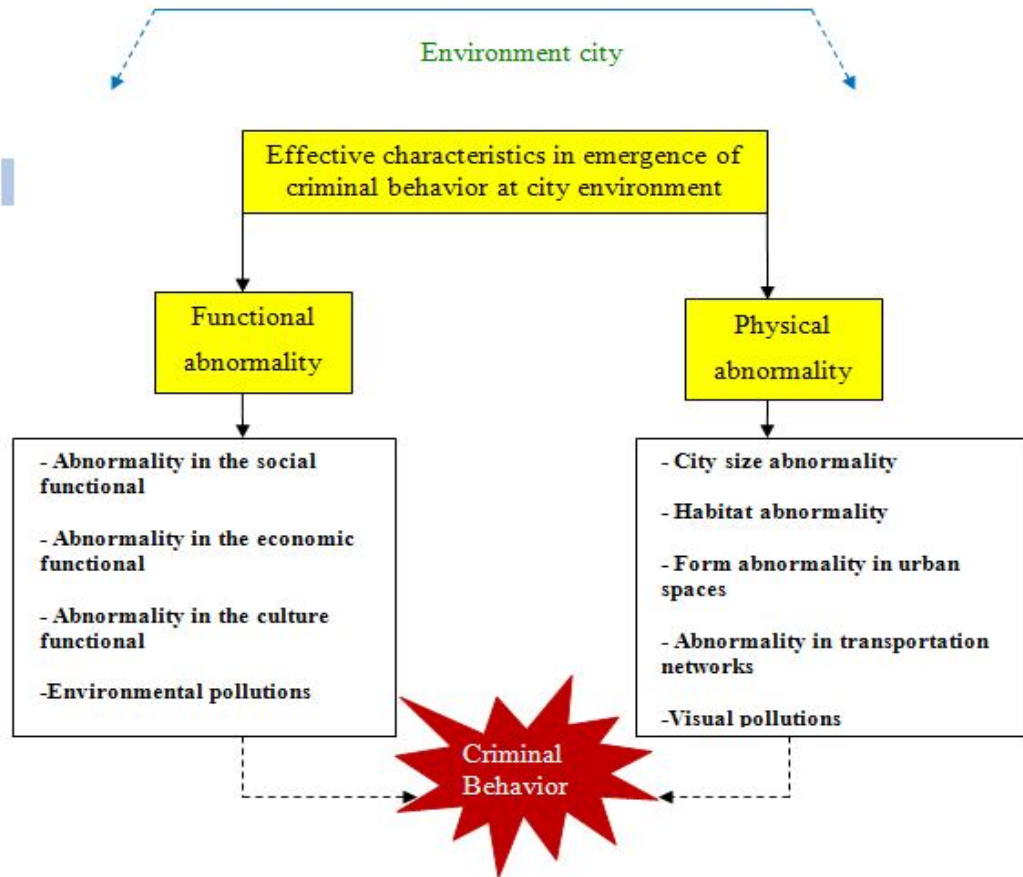


Fig. 2: Effective characteristics of cities environment in emergence of Criminal behavior (14)

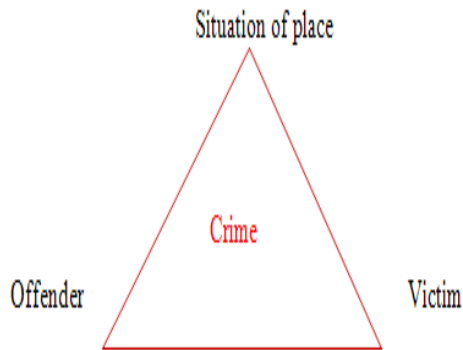


Fig. 3: Analyzing anomic behavior (15)

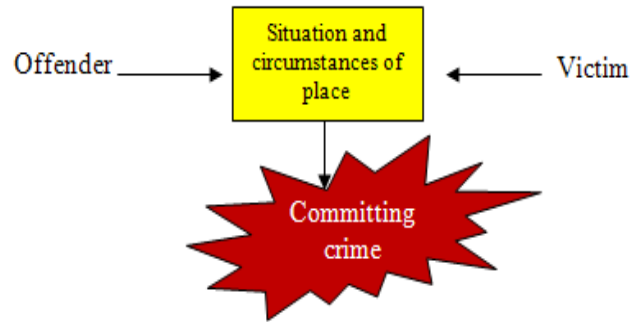


Fig. 4: Situation and places of victim and offender attendance

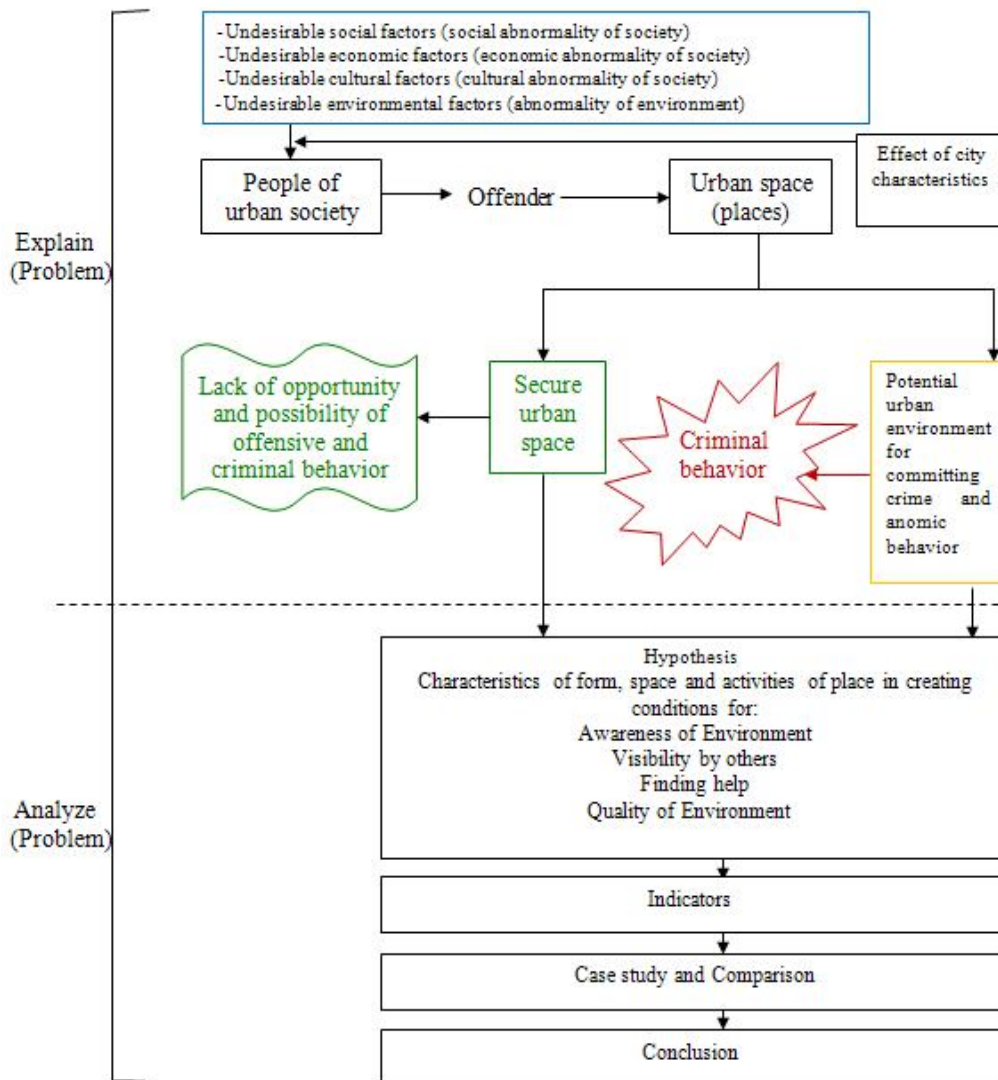


Fig. 5: Analytical model or main study structure

Case Study: The City of Tehran

As a case study, an analytical expressional model such as Fig. 5 was used for the city of the Tehran, considering the above-mentioned characteristics. This city has a high degree of criminal cases among other provinces in Iran. Also among its counties, twelve spaces according to Central Police Office, which are known as areas that are more criminal, were chosen. These spaces are notoriously recognized for hosting some sorts of criminal commitments.

From the social point of view, Tehran is facing a large immigrant population who create several social and economical problems for urban planners and policy makers. Furthermore, Tehran's central position and economic prosperity has attracted great numbers of immigrants from other Iranian cities, and during a couple of decade's ago, 38-50 percents of national immigrants came to this city. This process has contributed to its current urban and the neighborhoods characteristics. Tehran is an economic center for business activities, and has allocated around 33% of GNP, but despite this economic contribution, it suffers from critical problems considering poverty and unemployment, particularly among the immigrants and slums.

In this study, the various public places (urban spaces) of the city were sorted first, according to their type and then categorized in four major categories (street, square, park, and open space with urban functions). Next, in cooperation with the local police, 12 places (3 from each category) were selected among urban spaces of the city that based on the number of criminal offences (personal violence crime and property offence), were regarded as the most polluted. The characteristics of these places were examined with respect to the study indicators and compared with secure urban spaces. Data for each indicator were collected by direct observation and fieldwork analysis (a comprehensive checklist of information needed for each indicator was prepared in preparation for this study), and by carrying out interviews and asking study participants at all of the chosen ur-

ban spaces to fill out questionnaires¹. Data were analyzed by SPSSW in 13.

For data gathering, six experienced experts who attended at a short period training workshop for learning the questionnaires survey were employed. They filled out the questionnaires throughout their field visits; besides every observer had three visits in three different times. Their samples were categorized in three parts as follows:

- A) Area residents
- B) Shopkeepers
- C) Non-resident pedestrians

As there are some differences between the three groups and also considering low deviation within every group, our sampling method for data gathering was clustered sampling, in the first phase and then simple random sampling for selecting our samples within every group. Furthermore every group included males (n= 180), and females (n= 180), so 360 questionnaires were filled out. In addition, the experts assessed the fields of study by direct observations of the sampled areas and filling out a checklist, which included some important yardsticks about environmental issues. Finally, all of these documents were evaluated.

The questionnaires included some parts and questions, which the most important points emphasized on opinion of sampled volunteers about safe or unsafe public areas of their neighborhoods, and they expressed their feelings toward the effectiveness of social, economic, cultural, and environmental factors on criminal behaviors. In addition, some questions were asked about their opinions and willingness on effectiveness of environmental improvements and design on crimes prevention.

¹ Questionnaires were completed through random sampling with a sample volume proportionate to the number of males and females present in the space (employers and residence adjacent to space), passers-by (peoples merely passing through the space by vehicle) and spectators (individuals that paused in the space for different reasons such as resting, visiting, seeing friends). The data were analyzed with SPSS software through statistical analysis, using chi-square and Pearson's correlation coefficient.

Results

Statistical analysis and tests by SPSS win 13, i.e. chi-square and Pearson's correlation coefficient and T-test, and descriptive statistical outputs, show the environmental agents were known as one of the most important factors, which affected on anomie and delinquency. Above in theoretical background and analysis section, four agents included environmental, social, economical, and cultural factors were studied, but Pearson's correlation coefficient showed that 37% of sampled males and 51% of females emphasized on effectiveness of environmental factors more than other agents did.

In the phase of urban space observations, the following main factors were studied, of course there are several checkpoints in every main factor, which proposed to assess:

Crowded spaces, abandoned, quiet spaces, Incompatibility physical dimensions, unsafe privacy, Informative displays and boards, visual pollution, unfair illumination, environmental pollution, neighborhoods' job activities, commute, and transportation disturbances. Table 1 shows our sampled opinions about the mentioned environmental agents.

Table 1: Percentages of samples opinions about effectiveness of Environmental factors

Environmental factors	Males	Females
Crowded spaces	42	21
abandoned and quiet spaces	36	28
Incompatibility physical dimension,	15	12
unsafe privacy	66	47
Informative displays and boards	22	12
visual pollution	24	18
unfair illumination	47	42
environmental pollution	80	35
neighborhoods' job activities	38	24
commute and transportation disturbances (between pedestrians and other moving objects)	35	27
others	8	9

Discussion

The results confirmed the existence of a "probable" and "possible" effective relationship between the environmental characteristics (form, space,

activity, and function) of urban spaces that contribute to a lack of security and the committing of crimes and criminal offences in these places. In addition, the following detailed results of regarding planning and design strategies for the environmental prevention of crime were obtained.

Spaces (in the urban environments) are the main sources of human urban community actions. In these spaces, challenges and collisions between actions and humans reach their highest level. Currently, environmental rearrangement science, such as environment health, urban planning and design and architecture, cannot be restricted to seeking the achievement of technical principles; rather, they also need to better appreciate social needs with the help of other sciences, such as sociology and environmental psychology, in order to provide a better quality of life to residents and to prevent social degradation. The goal is to establish a harmonious and compatible relationship between individual members of society and their environment. According to the findings of this study, the "invisible hand" of urban planning and design plays an important role in the provision of safety and in preventing crimes and other forms of social degradation. This role may overtake, largely, macro and medium level effects and influence the emergence of crime in arranged places and spaces, by inhibiting opportunities for inappropriate social behavior. The author of this paper would like to add this point that the results of this study are being used as new regulations for urban planners in High Committee on Architecture and Urban Planning (Ministry of Housing and Urban Development).

This study, which is done in all of the criminal areas of the Tehran city, shows that spatial and environmental agents affect the criminal behaviors, so our preliminary hypothesis is confirmed considering the above results. For instance:

- In the Crime prone locations and areas, there was not good situation for detecting the related information by visitor; and
- There were some sorts of visual pollution.
- Illumination design in these areas was unfair.
- According to field study, environmental health problems were obvious.

- According to our field study, there were several problems investigated about quality of accessibility to public transportation facilities, land use, performances and also quality of neighborhoods, quality of connecting paths between community spaces and hidden ones.

Our analyzed results throughout statistical tests such as Chi-square, Pierson regressions and our in-depth observations show that the environmental and physical factors affect the security and sense of a safe community among the citizens.

This study showed in all of the criminal areas, which were introduced by the police office, criminal behaviors are related to tempo-environmental characteristics. Besides, these facts show firm relationships between environmental characteristics and crime, and this result have already reconfirmed our hypothesis.

Ethical Considerations

Ethical issues including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc. have been completely observed by the authors.

Acknowledgements

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