

# Applying Environmental Design Approach (CPTED) to Improve Security in Urban Worn Out Texture; Case Study: Worn Out Texture of Urmia Downtown

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**ABSTRACT:** Most crime occurs when the perpetrator finds an appropriate opportunity; the opportunities may be due to a factor or a combination of several factors. In many cases, the term of opportunity to commit crime is used with security together. Security is one of the main sustainable factors of today's communities, without stability and security, there is no possibility of growth and development for any community and positive achievements will be replaced by negative ones. One of physical solutions to increasing security is crime prevention through environmental design (CPTED), which is currently the most efficient solution to supply physical security through reducing criminal opportunities in urban areas. Worn out textures in cities due to the specific physical and activity characteristics are considered as one of the main crime rise centres. In this study, the factors affecting insecurity and creating criminal opportunities of worn out texture of Urmia downtown have been studied. The research method is analytical-descriptive and the tool of library studies, survey and open questionnaires has been used to collect required data. The research result shows that due to insecurity reasons in the scope of the study, the principles of CPTED approach can be effective in reducing the rate of insecurity. To this end, strategies for enhancing security in the study area using environmental design approach would be proposed at the end.

**Keywords:** Security, Crime Rise, Worn Out Texture, Crime Prevention Through Environmental Design (CPTED), Worn Out Texture of Urmia Downtown

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## INTRODUCTION

Living in cities, the densest human settlements have always been along with complications. Aggregation of disparate groups of people together can cause problems such as insecurity. In the past, due to individuals' social life stability, and their extreme unity in the rituals, customs and traditions; it was considered a major obstacle for criminal behaviour and crime was not taken into account as a major social problem. But with the development of civilization and industrialization of societies, the emergence of large cities and population density, social customs and moral rules lost their long power. Regardless of social contradictions, conflicts and exclusion, poverty and financial needs in cities, there is another important factor that can be followed by deviate behaviour in the society. Today, there is consensus on the point that the phenomenon of crime and social harm (deviation) is as an integral part of a community, and the existence of a phenomenon free society is an abstract notion. Moreover, increase of crime and delinquency and social damage will cause many problems in man-made environments. According to the issue and considering the case that in some zones due to the physical characteristics of the environment, predisposing social and cultural characteristics, the existence of abnormalities will be more than other areas; offering solutions based on planning and appropriate urban design and safe spaces is one of the organization

Necessities and urban textures design. One of the security approaches in urban environments is CPTED approach which is multidisciplinary that can be defined as an idea for crime prevention through environmental design. The main idea of CPTED is that the physical environment plays an important role in the crime. Hence, the theory is based on a hypothesis that the proper design and use of the built environment and the surroundings can improve quality of life through the prevention of crime and reduction the fear of crime (Atlas, 1999).

Worn out textures with their specific characteristics in terms of physical and activity have appropriate possibility for the growth and formation of crime rise locations-can, in this research it has been dealt with insecurity creation factors and provide effective solutions to prevent it by using environmental design approach. Therefore, worn out texture of Urmia downtown that has the crime rise potential has been selected as the study sample. The research method is analytic-descriptive and library studies have been used for creating theoretical base and to examine the study scope we have used survey method and open questionnaire. Therefore, due to target range population and according to Cochran formula, 286 questionnaires have been distributed in the area and the residents have been asked to express factors affecting their accommodation and prioritize them. In the end, some strategies have been proposed based on environmental

design approach in order to increase security of the area residents.

## MATERIAL AND METHODS

### The concept of safe urban space

Humans and the environment in which he lives are an inseparable universality from each other. This environment is a space and field of implementing social functions in which lots of social interactions are carried out, for the continuity and survival of these interactions; and active presence of people in these spaces, the existence of security is considered as one of the most basic needs.

Larousse encyclopaedia defines security as: trust, mental and emotional relaxation the thought based on which danger, fear, panic and loss would have no meaning and is equivalent to lack of hazard (Sumpf and Hugues, 1973). Security as an important element influences the other dimensions of human life. Personal security feeling is a prerequisite for subsistence and urban life (Cozen, 2007). Security, urban life, trade, commerce and craft all together move in a form of sine curve and urbanization will thrive with security, buildings and architectural works would be formed, the urban system could get organized, and stations can be defined and the borne. One the security assimilate urban life, commerce and craft would assimilate too, and the migration of city will heighten fast (Salehi Amiri, 2011).

The concept of security in urban space will be related on one hand with the crime and on the other hand with the concept of victim and the fear of it, also there must be differences between fear and risk, safety and security feeling. Scientifically, understanding the effects of crime, i.e. fear of crime, like the crime its own, i.e. the statistical risks of crime matters are very important. A reaction towards the fear of becoming a victim, causes a lot of people to being away of dangers, or at least reduce rate of being endangered; that will lead to lack of people's presence not only in a specific location but also in more public spaces (Asgari Tafreshi, 2010). The active participation of people in the city is of increasing the security in the urban space. Dominance and being seen by people could create a sense of safety; because the accumulation of a group of people and the extended activities domain of pedestrians would create a safe environment that will cause the lack of encouragement to the crime (Hosseini and Adibzadeh, 2008).

The concept of safe urban space is in front of the concept of unsafe urban space. The phenomenon of objective and subjective uncertainty is ambivalent and on all aspects of life. The concept of insecurity has two aspects of objective and subjective and contains all areas of life. Insecurity category objectively contains all insecurity manifestations such as theft, murder, violence, etc. and subjectively includes the arbitration regarding the security of area and space. To reach the topic of safe urban spaces in stating factors affecting the emergence of anomie and crime, they can be divided in three levels:

1-Macro level: factors affecting the emergence of anomie in the community (extra urban community)

2-Middle level: factors affecting the emergence of anomie in the city.

3-Micro level: factors affecting the emergence of anomie in urban situations and places (places) (Salehi Amiri et al., 2011).

The concept of a safe urban space comprehensively includes all affecting factors mentioned in the three levels. In other words, a safe urban space will be meaningful and practical that all inhibiting levels play their role optimally and the higher levels as a protective umbrella block release, loss and create deformity to the lower levels. Thus, a safe urban space is a space that provides the security and carefreeness of all three groups of these people which include attendance, passers-by and supervisors in the space.

In Davis's idea, since the achievement of sustainable communities requires appropriate understanding of the crime prevention and urban design, intense activity of designers, programmers and authorities of crime prevention is necessary too. Security design is a concept beyond merely installing shield on windows, guard booth, camera or walls. Seven features of sustainable communities that are specifically in relation to the crime prevention are described below (Davis, 2004).

**Table 1.** Features of safe urban space (Resource: Davis, 2004)

|                                   |  |
|-----------------------------------|--|
| <b>Access and movement</b>        | Spaces and directions with defined inputs that facilitate the possibility into space   |
| <b>Structure</b>                  | Places have to have a structure that different uses of them would not cause any conflict and confrontation   |
| <b>Supervision</b>                | Places that is publicly available and convenient   |
| <b>Ownership</b>                  | Places that strengthen a sense of ownership, respect, responsibility, and social relationships and increase a sense of belonging to the environment in individuals |
| <b>Physical protection</b>        | Places that include necessary and appropriate secure facilities  |
| <b>Activity</b>                   | Places that are the location of human activities in harmony with the place and also reduction of the crime, these places are creators of security at all times.    |
| <b>Management and maintenance</b> | Places that can reduce the crime and abuse in the present and future by an appropriate designed management thought.  |

For securing in urban spaces, all indicators listed have to be upgraded. Well-designed buildings reduce crime opportunities and increase natural surveillance and create more security. Providing visibility for the habitants and users of buildings to observe open space around before leaving the building especially at night would increase the security (Sarkissian, 2000).

On the other hand, reducing the crime is also highly effective on the increase of security, and taking into account the objective and subjective aspects of security, the fear reduction of crime and reduction of the crime opportunity in the urban space are considered as the key factors in securing. Accept the opportunity as a factor for crime, a new practice field and arena in order for crime prevention policy, by reducing the chance of the victims of something. These measures and policies, with a focus on reduced misdemeanour criminal events possible lift.

Opportunity acceptance as a factor for delinquency has created a new activity area and scope to policy for preventing the crime through reducing the delinquency opportunities. These measures and policies make the

reduction of crime possible by focusing on criminal events.

**The theories history of crime prevention with environmental design approach (CPTED)**

Preventive view at the environmental criminology and identification of strategies for reducing deformities through improving framework at the environment is of theories which were introduced since 1960s onwards as a result of people’s activity, such as Jane Jacobs with the book of death and life of great American cities, Angel with the book of crime prevention through urban design, Elizabeth wood with the book of social aspects of housing and urban development, Oscar Newman with the book of defensible space and the book of C. R. Jeffrey titled as crime prevention through environmental design, was introduced (Mahmoudi Janaki and Ghurchi Beigi, 2009). Jacobs is one of those who have done the first discussion about urban decline in particular and its relationship to crime. He believes that the relaxation of urban space is firstly kept by unconscious and complex social network and existing standards among people.

He believes on self-abstract of a street that some eyes must always look to help its life ability and by appropriate urban designing and planning we can provide social control possibility for the crime and abuse prevention (Jacobs, 1965). C. R.

Jeffrey introduced CPTED theory in 1969 suggested that believes the crimes can be prevented through environmental design (Bayat Rostami et al, 2010).

In this regard, Oscar Newman has developed some of Jeffrey and Jacobs’ ideas developed and emphasized on actively monitoring and defining the fields. Based on the study of the location of crime in New York residential plans, Newman in the book of people and design in the violent city suggests defensible space theory, and gives the suggestion of changing the structure of urban environment in a way that a community would be defined not by the police, but by the people who have the share of specific areas. Newman believes that physical environment must have features like symbolic mechanisms, defined borders and hierarchy from the private to the public areas to understand and know different arenas (Newman, 1973). Hiller criticizes the above defensible approach, because it prevents natural movement of people and either peacefully or violently allows limited access for strangers Hiller believes the presence of people either familiar or stranger will promote the feeling of safety in the public space and it’s as a tool by which can monitor the space naturally; therefore, he follows characteristics of a kind of space that increases the presence of people and consequently the sense of security (Hiller, 1984).

**Table 2.** Four suggested theories about crime and violence in urban space

|   | Activity  | Surveillance  | The space control/territoriality   |
|---|---|---|--|
| <b>Jane Jacobs</b>                        | Sidewalks necessity: the use of it almost continuously causes the increase of the street effective monitors and also causes sufficient number of people in buildings along the street to watch the sidewalks. | Need to street observers be that are natural owners of the street (users and residents of the street) will be increased with a variety of various functions and activities. | Set clear limits between private and public spaces   |
| <b>Oscar Newman</b>                       | Prevent the arguments that cause more activity on the streets, and the existence of commercial users would necessarily lead to reduce street crime.   | Increase capacity of physical design to provide residents and their own representatives’ monitoring opportunities.  | Increase capacity of physical environment to create visible areas. (Including systems that refer to the borders, and identify the hierarchy of rising private areas.                           |
| <b>Crime prevention institute (CPTED)</b> | The surveillance that will be provided by people movement within the space.   | Natural surveillance as a result of normal use of the space.  | Natural access control that provides less opportunity by preventing access to commit the crime. Create or extend a influence district so that creates a sense of ownership in the space users. |
| <b>Bill Hiller</b>                        | Since the security depends on districts with continuous residence and user, these districts must provide the possibility by their more appropriate merge and according to moving paths.                       | The surveillance that will be provided by people movement within the space.   | Merge spaces with other spaces so that the pedestrian would be encouraged to see and move in them.   |

From the middle of 80s with formation of environmental criminology theory and other theories like broken windows, theoretical basics of crime prevention were also more strengthen through environmental design.

According to the broken window theory which was edited in 1982 by Wilson and Kelling; indicators such as monitoring, control inputs and territoriality were added to the strategies of CPTED theory (Mahmoudi Janaki and Ghurchi Beigi, 2009).

**Definitions and concepts of CPTED approach:**

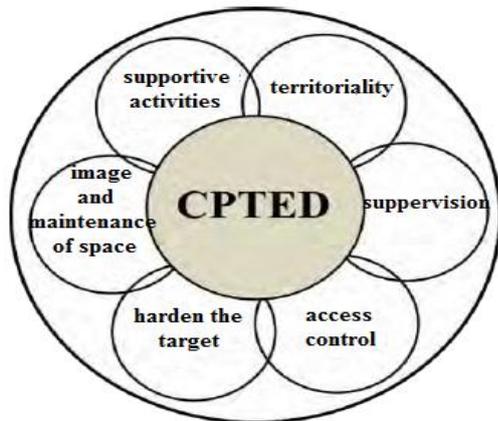
CPTED theory is based on the claim that the crime could be prevented by the proper design and an efficient user of the environment and in addition to improving the

quality of life environment we can also overcome the fear of crime (Crowe, 2000).

This theory founded the purpose and its focus on the built environment and believes that if the environment is designed so that can improve people’s supervision, it will rise residents’ belonging to its territory and create a positive image of the space, which will result in the reduction of criminal opportunities and committing the crime (Cozen et.al, 2005).

This theory has six pillars that can be seen in Figure 1. A-Territory: encourage citizens to more use the spaces as well as increase the sense of ownership so that the guilty understands and causes the reduction of environment vulnerability against the crime (Rezazadeh

and Kabir, 2010). Newman in the definition of a sense of territory knows it belonging feel and the size of residents' involvement to their habitat area and emphasizes whatever the feeling, the crime and abuse would be more likely reduced (Pakzad, 2007).



**Figure 1.** Main indicators of CPTED approach

**B-Natural surveillance:** in this type of surveillance, the residents normally and accidentally monitor public and half public spaces of their habitat and identify strangers in the area (Jason, 2008). Newman introduces the concept of natural surveillance as the residents' ability in observing their territory of life; i.e. the ability of body space in providing its monitoring opportunities, so that more observers' control on a space the possibility of crimes would be less and the possibility to see the guilty while violating will be more (Pakzad, 2007).

**C-Access control:** it's a designing idea that reduces the opportunity of crime and is applied in order to prevent entry of suspicious or annoying people that increase the risk of crime in neighbourhoods (Rezazadeh and Khabiri, 2010). Hence this principle is used to reduce the access potential in areas for crime. **D-Harden the targeting of crime:** targets and objects that are usually destructed or theft must be designed in a way that will be resistant against crime and remain immune at times of destruction or theft (Mahmoudi Janaki and Ghurchi Beigi, 2009).

**E-Supporting activities:** people's activity during a day should be an opportunity to increase natural monitoring. It means the presence of people and residents in environment should be more, because it will causes the increase of informal social control and supervision. Encouraging people to perform some activities in public spaces will prevent the crime.

**F-Maintenance and management:** management and maintenance of roads, physical spaces, and urban facilities and equipment are important topics of crime prevention, because effects of vandalism in an environment will present the environment insecure.

### Security and urban worn out texture

The urban worn out texture are introduced by the various titles such as "worn out", "unstable", and "inefficient" in the literature of urban development and urban management in the country. All of these titles can be correct, because basically the textures with any extension have being lagged of the process of urban growth and development, and multidimensional problems of the textures contain a range of physical, functional,

social, economic, environmental, legal, and management topics.

Therefore, in the definition of worn out texture it can be stated that: worn out texture is fitted to a city texture that its citizenship values have been reduced and its inhabitants have not satisfaction and sake of safety of the living conditions in their district and their basic needs are not met well (Andalib, 2007). In fact, considering that in past years and centuries restorative developments within the cities have had less speed than destructive developments, activity and body composition, and in the total, urban space has been involved changes, variation and kind of exhaustion (Habibi and Maghsoudi, 2005).

Generally, it can be said that reducing the efficiency of any phenomenon and lack of attendance, maintaining and revitalization, will result in its exhaustion. When urban life within a scope of the city is recording for any reason and no attempts are carried out to thrive it again, the urban texture of that scope would be in the process of deterioration. Exhaustion in the urban texture will affect the body of texture as well as its social and economic activities. Body deterioration and texture social and economic life deterioration, in a mutual relation will help the intensification of each other and will cause the record of urban life and severe revelation of environmental quality.

The most important issues and problems of the worn out textures can be summarized in the following five dimensions (table 3). The urban worn out textures due to the lack of attention to economic, social and physical requirements, with the loss of a sense of belonging in the textures, have provided necessary fields for social pathologies. One of the basic objectives in creating desirable residential environment is maintaining safety and peace that could be achieved through physical security extension. Due to the predicament, difficulties such as the low quality of life, security reduction, traffic problems, defenceless spaces, the fear, crime rising, etc. worn out textures need fundamental strategies for essential changes in physical, social, economic, environmental and economic dimensions. Since applying changes in all the dimensions will require long-term planning and spend the exorbitant costs, in this document we'll provide a proposal for a change in the physical dimension which is the most important problems next to social dimension and its improvement conditions will be possible in short term.

### Introduction the studied district (worn out texture of Urmia downtown)

Worn out district of Urmia central texture is limited from the North to Motahari St., Velayat-e Faghih sq. and Mahabad St., from the East to Shahid Bakeri St., and from the South Street to Kashani St., Eialat sq., and Fatemi St. and from the West to Madani St. The district with the extent about 277 Ha, has allocated about 3.5 percent of Urmia extent to itself. This texture has an obvious identity that despite the abundant changes, has maintained part of its characteristics. This district has placed the old town market, old buildings, and during the time the main commercial and administrative building of the city and it is still the main center of Urmia. With the organization changes and the city's socio-economic system, some new interactions including the streets, dense

texture and the presence of new activities have been created. Main part of the streets which include Imam St., and the perpendicular street on it, in Velayat-e Faghih sq., are the main characteristics of the urban planning in Pahlavi era. Construction of this group of streets has been

often followed by the establishment of original urban activities like administrative and commercial centers (Armanshahr Consulting Engineers, 2005). General characteristics of this district have come in the template of Table 4.

**Table 3.** Classification of worn out textures problems (Reference: the authors)

|                                    |  |
|------------------------------------|--|
| <b>Economic aspect</b>             | The loss of economic and financial justification will cause the capitals escape of these areas and the lack of investment in them and there are no sustainable resources for allocating to renovation and improvement of textures.   |
| <b>Social aspect</b>               | Cultural development and loss of quality within urban textures, and in other words, social grade demotion of the aforesaid districts at citizens' look, will lead to increase immigration of natives and nobles by desirable economic power and their replacement with those with lower economic power and, people suffering social pathologies such as addicts and alien immigrants. Residents with social pathologies have many negative consequences, and kinds of social crime in worn out textures can be noted as one of the most important of the outcomes.                   |
| <b>Physical aspect</b>             | Instability: most building blocks of urban worn out textures are lack of structural system and any technical measures to resist against natural disasters such as earthquakes.<br>Infrastructure inefficiencies: urban infrastructures and facilities will be worn out and not accountable over time.<br>Networks inefficiencies: urban worn out textures suffers from the lack and inadequate levels of networks and pathways.<br>Lack of urban services: urban worn out textures suffers from the lack of cultural, education and urban services in terms of quantity and quality. |
| <b>Environmental aspect</b>        | Types of environmental pollution, including air pollution and surface water.   |
| <b>Management and legal aspect</b> | Management weaknesses, legal obstacles, lack of appropriate regulations, lack of governmental supports, lack of managers' experience   |

**Table 4.** The potentials and limitations in the worn out texture of Urmia downtown (Resource: the authors)

|   | <b>Potential</b>   | <b>Limitation</b>  |
|---|--|--|
| <b>Physical organization</b>            | -Valuable urban centers (squares, market, etc.)<br>-Pattern of texture classification based on districts.  | -Structures functional and anatomical exhaustion and their destruction<br>- the lack of urban open spaces<br>-Separate the larger pieces into smaller, regardless of texture aggregation.<br>-Indiscriminate construction regardless of the future development plan  |
| <b>Functional activity organization</b> | -The importance of central texture and impact of Imam service – commercial axis on physical structure of the city<br>-The evident range as commercial hub of the city.                 | -Lack of coordination between citizens' activities and new needs<br>- Negative impact of urban and extra-urban users on the texture system<br>-Annoying industries and workshops within district of Imam street<br>-Inconsistent users with the historical and cultural identity of texture<br>-Improper combination of business units storages with residential sector.                   |
| <b>Transport network</b>                | -A hierarchy in transport network<br>-Formation of transport links within the texture based on walking.  | -Organic access networks in texture and lack of meeting today's needs<br>-Heavy traffic in the area<br>- Lack of access to relief vehicles<br>-Lack of attention to various centers in the development of transport network  |
| <b>Economic organization</b>            | -Market as an active social link<br>-Combination of various economic activities<br>-Central banks in the area that is proposed as the economic center on the scale of city and county. | -Reduction of investment by natives and leave social and economic life environment<br>-Not willing to invest in housing<br>-Low-income of residents and increase of low-income class<br>-High unemployment rates than the city.  |
| <b>Social organization</b>              | -Reduction of family dimension<br>-Increase the percentage of literacy<br>-Increase women active population in society<br>-The role of market as a place for social interaction.       | -People's tendency to live outside of the texture<br>-Reduction of young population and increase of middle-aged and elderly population<br>-Underclasses residence<br>-Velayat-e-Faghih sq. that is the origin of the offenders and their assembly<br>-Exotic people and having different cultures<br>-Lack of safe spaces for women and children, in the final hours of the day and night. |

## RESULTS AND DISCUSSION

### Research Findings

A range can be the possibility to perform different social activities when it can secure its spaces by recognizing and removing unsafe factors and pollution. A safe texture comprehensively should bring security for the

residents in three levels of macro, middle and micro. In other words the security will be meaningful when it plays its role desirably at all levels of deterrent factors. Hence, identifying factors which will cause insecurity is very important. On the basis of what was said affecting factors on creating insecurity in worn out texture of Urmia downtown can be divided as follow (Table 5).

**Table 5.** Affecting factors on creating insecurity in worn out texture of Urmia downtown (Reference: the authors)

| Aspect | Component | Affecting factors on insecurity |             |                  |  |   |
|--------|-----------|---------------------------------|-------------|------------------|--|---|
|        |           |                                 |             |                  |  |   |
| Safety | Security  | Objective                       | Body        | Space            | Size   | -High concentration and mobility of population throughout the day, which leading to overcrowding and thus will lead to crime.<br>-The quiet passages and closure of business centers, especially at night that the makes the crime possible.  |
|        |           |                                 |             |                  | Form   | -The obscure corners and the U-shaped spaces in the residential texture<br>-Sudden levels difference in the western part of the residential market texture  |
|        |           |                                 |             |                  | Visual and symbol pollution  | - New buildings pattern inconsistency with old buildings in terms of materials, colours, number of floors, etc.<br>- Inappropriate link between filled and empty spaces<br>-An overflow of commodities and turbulence in the route<br>-Turbulence caused by inharmonious advertising signs with the texture on the wall profile<br>- Improper locating and design of urban furniture<br>-The lack of signs and traffic signs<br>-The lack of passages lighting in the area residential texture at night             |
|        |           |                                 |             |                  | Environmental pollution  | -Lack of health centers at the district<br>-Accumulation of construction waste in parts of the district   |
|        |           |                                 |             |                  | Access and permeability  | -Tight and narrow passes due to being old and worn out<br>-Entry of passing and uncontrolled population into residential texture, especially in the evenings<br>-Rides and walks motion interferes  |
|        |           |                                 | Mass        | Housing security | -Use low durability and unstable materials against atmosphere falls and physical exhaustion<br>-The lack of housing resistance against unexpected events<br>-The lack of services to units in critical and insecurity situations |   |
|        |           |                                 |             | Housing quality  | -Destructive buildings in residential and commercial texture<br>-Inharmonious construction density with services available around Imam St.   |   |
|        |           |                                 | Performance | Mass And Space   | User and service quality   | - Change of Velayat-e Faghih sq. to the center of guilty and unemployed persons accumulation<br>-The abandoned lands, desolate location and spaces without operation<br>-The negative impact of administrative users accumulation on the South range life (Enghelab Square)<br>-Focus of activities in Imam St. and as a result of the lack of other parts' prosperity<br>-Abundant disabled users, especially at night in the main streets and inside districts and the lack of citizens' presence in urban spaces |
|        |           |                                 |             |                  | Meaningful   | District  |

### Administrative solutions and recommendations

CPTED strategies in contemporary experiences are applied in crime prevention, these strategies are familiar to many people, and they may assume that have already known these strategies. But it should be noted that these strategies requires careful attention in the environment and their way of impact on people's behaviour. Crime prevention strategies have to help access and diversity of public users, vitality and other urban environmental and social aspects. Therefore, strategies for crime prevention and in fact safety promotion in the texture of Urmia downtown has been developed in the form of CPTED principles strategies in the following table 6.

### CONCLUSION

The built environment influences human behaviour. On the other hand, the environment can encourage offenders to commit crimes by creating the opportunity for crime, and furthermore it can prevent crime with increase of residents' ability to monitor the environment. CPTED theory claims that by properly design and suitable use of the space it can not only have positive impact on quality of life but also prevent the crime. The theory reduce criminal opportunities according to the six elements that can be considered for it; the opportunities

that are the main cause of crime in mechanical approach to prevent the crime.

As it was studied in this article, the worn out texture of Urmia downtown due to numerous problems in various aspects of physical, economic, social, environmental, functional has provided necessary spatial requirements for the crime, and hence, predicting strategies to increase security through applying physical

and environmental changes that have been today considered as alternative means of force majeure and military has been put on the agenda in securing the urban areas. To this end, by understanding affecting factors in creating insecurity, solutions fit to climate-physical circumstances and historical conditions based on approaches of CPTED theory for the texture if Urmia downtown has been provided.

**Table 6.** Affecting factors on creating insecurity in worn out texture of Urmia downtown (Resource: the authors)

|                                       |  |
|---------------------------------------|--|
| <b>Strengthen natural territories</b> | <ol style="list-style-type: none"> <li>1. Create activities that will ensure dynamism and vitality throughout the day and night hours.</li> <li>2. Create visual cues at key and Harbour points with appropriate measures (neighbourhoods input, the index of historical buildings)</li> <li>3. Apply policies to revive and strengthen traditional community centers</li> <li>4. Emphasis on Enghelab sq. as the historical square of Urmia and strengthen and define the square in the minds of people</li> <li>5. Create public spaces in barren and abandoned lands</li> </ol>   |
| <b>Access control</b>                 | <ol style="list-style-type: none"> <li>1. Define permeable points as the entrance gates areas</li> <li>2. Passages proper lighting in residential areas, especially lighting trails</li> <li>3. Prevent passing traffic into residential neighbourhoods by use of design requirements such as using specific foam covers and landscaping</li> <li>4. Strengthen the attractiveness for pedestrian on value and historical routes</li> <li>5. Adequate and proper lighting on the gates, entrances and access system type</li> </ol>  |
| <b>Natural supervision</b>            | <ol style="list-style-type: none"> <li>1. Provide certain criteria in relation to the placement of urban furniture (billboards, benches, etc.)</li> <li>2. Attention to access places and public spaces such as markets and historical buildings</li> <li>3. Define required mixed and active users at night (recreational and sports users)</li> <li>4. Placement of phone kiosks and newsstands or mobile kiosks in crime rise areas</li> <li>5. Define service spaces needed in blind spots of the area</li> <li>6. Enhance visibility in designing the direction of buildings and parking places</li> <li>7. Create appropriate green spaces for increasing the attendance and accumulation out of houses for residents</li> </ol> |
| <b>Support social activities</b>      | <ol style="list-style-type: none"> <li>1. Define a neighbourhood house and the neighbourhood in areas that have less public control</li> <li>2. Distribution of different activities in the area and prevent their concentration in certain areas</li> <li>3. Create 24-hours users (pharmacy and taxi services) in areas with low visibility and monitoring</li> <li>4. Plan social activities in the areas of crime rise (plan for morning exercise in the park near Velayat-e-Faghieh sq. that is the accumulation place for addicts and guilty people</li> <li>5. Place specific economic activities in areas neighboring the police.</li> </ol>   |
| <b>Repair and maintenance</b>         | <ol style="list-style-type: none"> <li>1. Repair and maintain the urban equipment such as signs and communicative signs</li> <li>2. Use of urban resistant furniture against physical damage</li> <li>3. Landscape-making based on criteria for increasing viability and public monitoring</li> <li>4. Protection from damaging the equipment, such as fencing traffic lights.</li> </ol>  |

## REFERENCES

- Andalib, Alireza (2007), renovation process of worn out texture, renovation organization of Tehran, Tehran, Armanshahr Consulting Engineers (2005), the strategic studies of Urmia worn out textures, Urmia development and revitalization organization
- Asgari Tafreshi, Hadiseh et al (2010), a study of effecting environmental factors on urban worn out textures renovation in order to enhance local security, journal of Hoviatashahr, no. 6, Tehran, p.42.
- Atlas, R (1999), Environmental barriers to crime, Atlas safety and security design, p.11
- Bayat Rostami, Roohollah et al (2010), empowering passages and urban districts against the crime, 2<sup>nd</sup> congress of urban planning and management, Mashhad, p.4.
- Cozens, P (2007), Planning crime and urban sustainability, Sustainable development and planning, Southampton, UK: WTT Press, p.23
- Crowe, T (2000), Crime Prevention through Environmental Design: Application of Architectural Design and Space Management Concepts, Butterworth-Heinemann, Oxford, p.46.
- Davis, L (2004), Safer places, The Planning System and Crime Prevention, Office of the Deputy Prime Minister, London, p.13.
- Habibi, Seyed Mohsen and Maghsoudi, Maliheh (2005), urban restoration, 3<sup>rd</sup> edition, Tehran, University of Tehran, p.2
- Hiller, B (1984), the Social Logic of Space, Cambridge, Cambridge University Journal
- Hosseini, Seyed Ebrahim, and Adibzadeh, Bahman (2008), physical security with approach of CPTED, a study of affecting environmental factors on creating safe spaces in organizing and designing urban worn out textures, 1<sup>st</sup> conference of improvement and renovation of urban worn out textures, p.2.
- Jacobs, J (1965), the Dead and Life of Great American Cities, New York, Random House
- Jason, S. (2008), crime prevention through environmental design, translated by Mohsen Kalantari, Azarkelk publisher, Tehran, p.73.
- Mahmoudi Janaki, Firooz, and Ghurchi Beigi, Majid (2009), the role of environment design in crime prevention, legal Quarterly of faculty of law and political science of university of Tehran, 39<sup>th</sup> period, no. 2, Tehran, p. 349, 350, 352.

- Newman, O (1973), *Defensible Space: People and Design in the Violent City*, London, Architectural Press, p.185.
- Pakzad, Jahanshah (2007), *thoughts movement in urbanism 2*, Shahidi publisher, Tehran, p.256.
- Rezazadeh, Razieh and Khabir, Solmaz (2010), a study of locational approach of crime prevention in urban designers and architects' perspectives, *Abadi Quarterly*, 20<sup>th</sup> year, no. 31, p.43.
- Salehi Amiri, Seyed Reza et al. (2011), indicators of security analysis in urban spaces, 3<sup>rd</sup> conference of urban planning and management, Mashhad, p 4, 12.
- Sarkissian Associates Planner (2000), *Crime Prevention and Urban Design Resource Manual*, ACT Department of Urban Services, Canberra, p.17
- Sumpf, M., Hugues, M (1973), *Dictionnaire de sociologies* Larousse: Paris.