



فصلنامه مدیریت شهری  
(ویژه نامه لاتین)

Urban management

No.43 Summer 2016

■ 195 - 206 ■

Received 12 Oct 2015; Accepted 2 Jan 2015

## Investigating the Factors Affecting the Safety and security in the Public and Semi-Public of Residential Complex

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### Abstract

Threats are one of the most fundamental problems of our modern societies that daily will affect citizens in urban spaces. This becomes more problematic when the people in their everyday living spaces encounter with behaviors that cause lack of security and should have been feel comfort and their families used these spaces freely. This causes many problems for citizens. In today cities because of the increasing growth in construction of residential complexes and high population density in a little area comfort with more problems and security is more important. So providing security in outdoor and semi-outdoor spaces of residential complexes is not exact scope and is very important. In this study using the analytical-descriptive method and library studies, the factors influencing the security of residential complexes in the form of a conceptual model investigated.

**Key words:** *security, residential complexes, outdoor, semi-outdoor space*

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## Introduction

Human social life has long been over all needs security. Looking at the history of human life on earth, it is evident that humankind has always and at any time has changed their territory and living space to minimize the amount of risk as possible. Today, due to increasing growing crimes in modern societies need to create security more than ever attended by peripheral designs. It should note that the architectural design is practices to create security through environmental design and beyond things like locked out doors and windows. Environmental design principles applied so easy and inexpensive to provide security during construction or repair of all complexes and residential homes and in different communities is efficient. Correct design and effectiveness of the built environment can lead to a reduction in fear and providing security improved quality of life.

Security  
Security literally means freedom from anxiety, fear (Nasri, 2002: 114) or a sense of comfort and confidence (Mandel, 2000: 44). In Moein dictionary, security shall come with meaning immunization, safe, and no fear (Moein, 2005, 140). Security is subject to relative freedom of threatened and optimum utilization of opportunities (Khalili, 2002, 448). In another definition, security is a condition that causes stability and confidence in society and removes fear and dread of public comment (Bayat, 2008, 2). Human needs and the role of housing in resolving them:

### Security in the residential complex

According to Abraham Maslow, safety needs and requirements are the most important human biological needs, from psychological perspective express the human need for inner peace and mental comfort, and avoid confusion and disorder in the community structure (Pourdeihimi, 2013, 11). In terms of substantive, security means freedom from danger, threat, vulnerability, anxiety, panic, anxiety or calm, confidence, comfort, reliability, security, toggle. Security at levels of passive - active -

hyperactive maintain the continuity of social and cultural identity. Social Security as a social phenomenon in the course of developments over the development of the status quo and a favorable situation to the attention of the people and social groups considered. Attaching importance of the social security issue in society is result of increase in social capital. At community level, the environmental conditions and the density and higher density of social interactions increase in social environments, thus cohesion, trust and social interaction increased (Sharbatian, 28, 2013). Regarding to various aspects of the human personality, security has various dimensions, including social security, economic, environmental, political, etc. The focus of this paper is on social security because social security as one of the major indices phenomenon of security and the basic human needs and the intersection of all human problems ranging from mental illness, suicide, addiction and crime. Especially in providing social and psychological health, social security and in reducing social and psychological damage, also in the development of social and mental health is very important. So relax, prosperity, growth, human flourishing, develop their talents and creativity and achieve perfection in all shades of security, including social security will be achieved.

Protection Varieties of residential complexes  
Building done under the protection of a variety of forms:

### Active protection

Active protection provided through appropriate design of building includes building projects and materials used in this way, the way of illegal entry to the building is examined who controls imposes on the residents.

### Defensive protection

This type of protection means: creating a barrier between the outdoors and indoors and above barriers such as safe fences, specific methods to access and unlocked. Defensive protection is strengthening parts of the building in order to prevent the entry of illegal

Design Solution	Need
Quality housing, adequate equipment, comfort and ecological balance	Physiological
Quality road safety, the possibility of surveillance, infiltration and Accessibility	Safety
Provision of community facilities, enhance sense of place, identity, readability, visual fit	A sense of belonging
The quality of the ownership of land and buildings, creating a sense of individuality	Self-esteem
Ensuring the cultural activities-recreational and urban design	Aesthetic

▲ Table 1. human needs and the role of housing in resolving them (Lang, 2009, 112)

persons will also be included. Wireless alarm systems and devices: this method used when these mentioned methods are ineffective and use of alarm systems makes assailant who managed to enter the building has to found and caught.

### Specific methods

In some cases, to protect specific methods used at the required level, such as the use of closed-circuit television systems and ... (Tallebi, 2004: 172). Active protection due to play preventive role has particular importance and in this paper considered.

Jane Jacobs, urban theorist and critic (1961), in explaining urban security, focused on interaction between physical space and social process that make up the environment and an active space as a factor in creating a safe environment and (Bemanian, 2009) security in residential complexes improve urban safety.

**Defense:** Defend is a social component in shaping the fence, hedgerows, walls and all in order to prevent the entry of others and sometimes even to camouflage the eyes of others built and shaped buildings. Building is home especially to be able to have the maximum security and a sense of security and it seems that spatial organization based on defensive attention to lifestyle factors, particularly the livelihood and human beliefs; because according to them defense find sense, in other words, these factors determine what is most worthy of de-

fense (Rappaport, 17, 1968).

### Defensible space

Defensible space means not fence and lock the doors and windows, but also it is a space to detect and control activities makes it easy for residents. The concept of defensible space is a public purpose: Prepare a layout of communities to control the areas around the houses. This includes streets surrounding earth buildings, halls and corridors (Sallamati Zare, 2014).

### Defensible space features

The impact of various aspects of physical design of housing in strengthening the ability of residents to control their environment is an important factor, although some control defensive mechanisms act independently. But these mechanisms alone are meaningless generally and the need for a single set, for example, ceding control of a range of sites inhabited if had successful performance and will affect the residents have visual control over the area. On the other hand, if the inhabitants had control over activities that done in unfamiliar places, improving visual care facilities will be vain and as a result, space defensive mechanisms by interaction returning repeatedly has other divisions and either act together or in tandem or jointly (Tallebi, 2004: 175).

### Strategies and practical principles make defensible spaces have no defense in residential complexes

Increasing risk and trying to commit a crime

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The aim of this project is not to create a new building, but rather to use pre-existing structures, widening the functions linked to the defense of the inhabitants in case of natural disasters. When we were looking for common elements, that are present in many places and that meet at the same time the various necessary requirements for this project (structural resistance, public place, symbol of a city), the choice naturally fell on the figure of the Olympic stadium.

As during the Middle Ages, when many public structures were occupied and converted into dwellings, the project 'Safety-Arena' restores the figure of the stadium as a resilient building, capable of performing normal functions and, in case of necessity, able to transform itself into a site where members of the community can convene and begin reconstructing their lives.

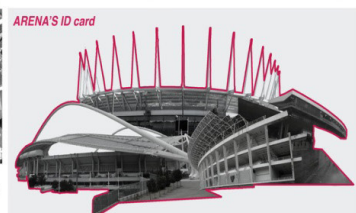
Every stadium is different in form and size, notwithstanding, certain elements are in common throughout all the structures. Modifying these elements and adding others, the planning proposal envisions how, after a natural disaster, a community can re-stabilize and find identity through a symbolic building.



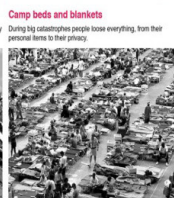
**Hiroshima Peace Memorial (Genbaku Dome)**  
Some buildings testify tragic events better than others and this is why they are converted into monuments and symbols for a specific community.



**Roman amphitheatre of Lucca**  
The history of architecture is full of structures that have changed form and function depending on needs of the inhabitants.



**Rubble after the disaster**  
After a natural disaster the only things left are ruins that are hardly reusable. This produces a high amount of rubbish to digest.



**Camp beds and blankets**  
During big catastrophes people lose everything, from their personal items to their privacy.

#### COMMON ELEMENTS

##### accessibility

There are few accesses which will permit a supervised entrance and a higher security for the guests.

##### resistance

The supporting structures are projected to absorb high energy seismic forces.

##### services

Presence of the locker rooms, toilets and other covered spaces that can change function depending on the needs.

##### ADDED ELEMENTS

##### energy

Installation of solar panels for the emergency instruments.

##### water

Salvage and keep of the water used for services and plantation.

##### materials

The materials are reusable in view of new emergency structures.

##### storage

Spaces aimed for depositing essential goods basic necessities.

##### common space

The internal ground area is a large multifunctional space that can accommodate many people and functions.

##### bleachers

Thanks to their incline, the bleachers are the best place in which to control multifunctional services.

##### infrastructures

Connection with the main transportation system and wide parking lots that could be used by emergency vehicles and ambulances.

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are two important principles to defend different urban spaces and environment. These principles may on the one hand, cause offense and on the other hand may long process of committing a crime that in any case, it can have a major role in reducing the likelihood of crime (Pakzad, 2007: 23). Therefore, Timothy Crowe offered in compliance with the above principles, plans to make defensible spaces have no defense. After recognizing these principles and factors in the design of defensible space used in the practice of it, and architecture and urban design goals, achieve safe and crime-free environment.

#### Schedules to design defensible spaces and crime prevention through architecture

Crowe offered plan seems familiar to many people and they may think that these strategies have known beforehand, but it noted that the implementation of these programs requires

accuracy, as well as how they influence the behavior of individuals. The schedule is as follows:

#### Providing a clear definition and boundaries of controlled space

This would provide a public law where, space and territory must maintain the property, and defined. This definition can be for real (physical) or symbolic. Fences, scrub and symptoms can, offer acceptable definition of border territory. The basic principle based on the belief that a wise person should be able to transition from public space to private space. (Sallamati Zare, 2014).

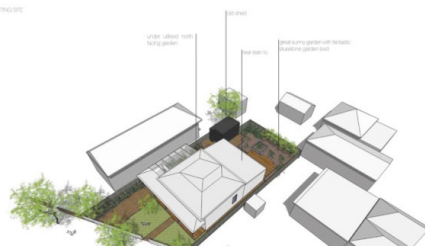
#### Providing clear signs for transitive spaces

Transitional spaces should clearly mark by the transition filters, handling and show shipping of semi-public and semi-public space to private and semi-private. Design must create mobility and transport (Sallamati Zare, 2014).



sitingstrategy

1. DETACHED SITE



sitingstrategy

2. REMODE



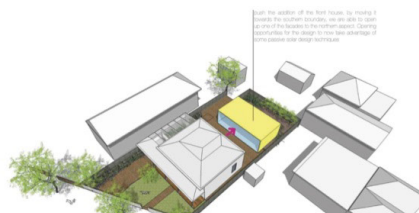
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3. TYPICAL APPROACH



sitingstrategy

4. ALTERNATIVE APPROACH



▲ Fig 1. The rules of motivation of place in public and semi-public space; source: authors.

### Safe activities in non-secure locations

Through this strategy can overcome problems on campus, parks, offices and institutions. Safe activities, act like a magnet that attracts users and to other users, this suggests that they are reserved and non-regular users of space this imply that they are at risk or intervention. For example, staring at other people and ordinary users understood that they are safe and users to understand how unusual it is that they are safe and non-regular users it is advised and exposed to or greater than the risk of intervention by security (Sallamati Zare, 2014).

### Non-secure activities in safe places

Being in the vulnerable position of activities, near defenseless in the window space within hours or strictly controlled overcome risk, and creating a situation that will help users feel more secure.

### Improvement of planning space

This generally deemed the beneficial use and effective risk and a sense of space reduces the risk to ordinary users. The converse is also true; members of unusual risk feel care and intervention in their activities. The relation-

ship between temporary spaces out thinking it would improve the effectiveness and usefulness while this increased control behavior.

### Increasing natural surveillance by properly designed space

The principle of seeing and being seen as one of the best and most traditional methods of crime prevention. Feeling natural surveillance, monitoring than actual existence is more effective. This surveillance is important as mechanical monitoring. Windows, clear sight lines and other natural techniques are effective in reducing crime (Sallamati Zare, 2014).

### Avoid isolation and separation

Building and space should places in separate space from other spaces in fact, the design should be such that the person feels that he is stuck in place and when you need help, and one cannot help him (Amiri Siahoe, 2008, 176).

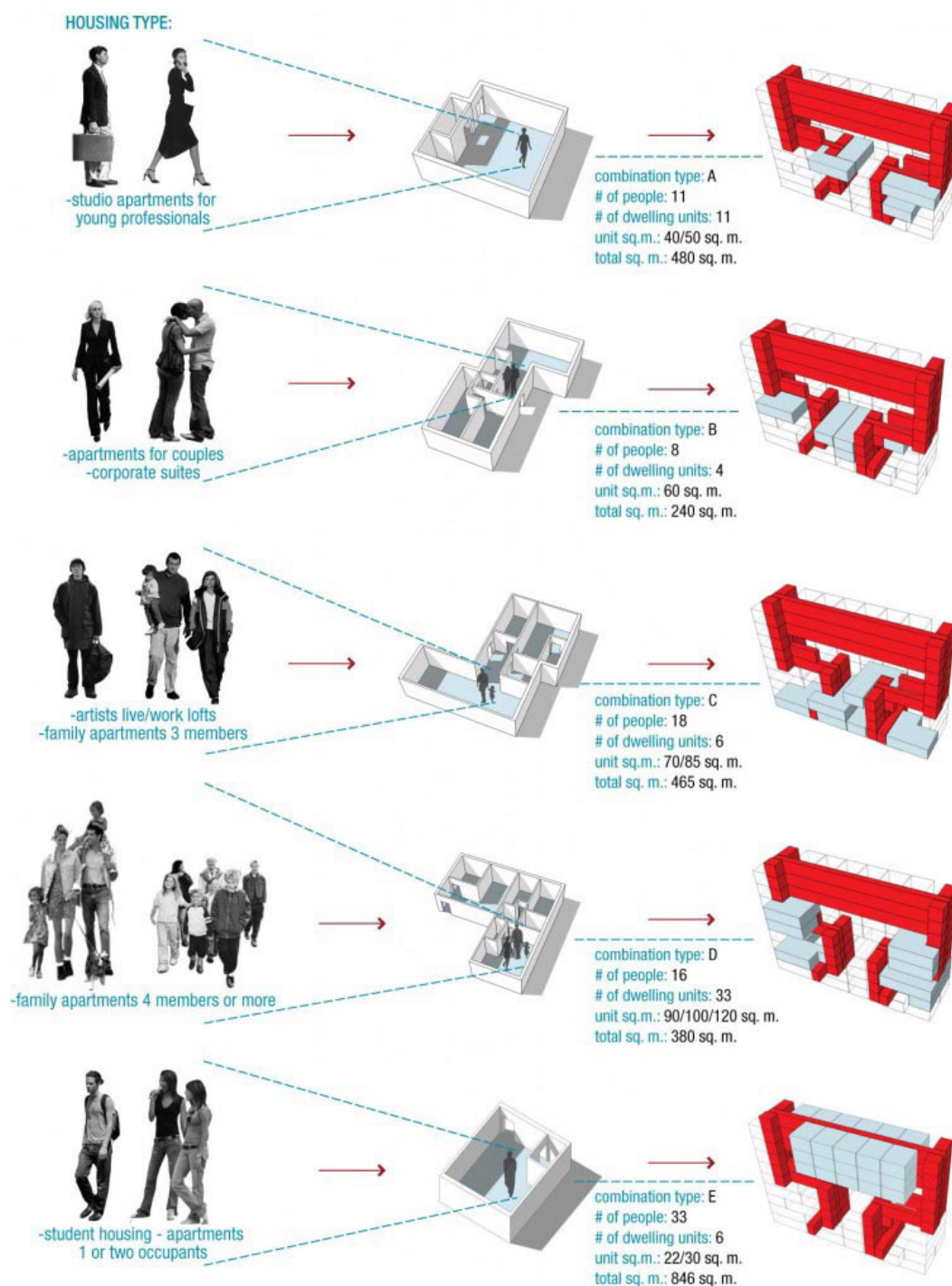
### Types of territory

Although the exact dimensions of the concept of territory in different conditions are not constant, many efforts have made to identify the different species of territory. One of the

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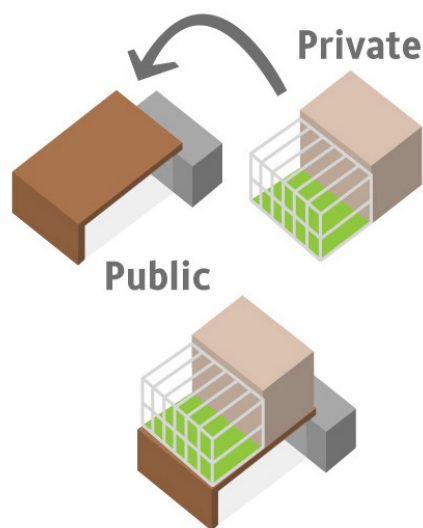


▲ Fig 2. Personal territory in public space; source: authors.

most basic steps in recognition of the territory is according to the arena of residential environments. Alexander and Chermayeff classified in a hierarchy of urban public spaces, urban semi-public spaces, public spaces a group, private spaces a group, private spaces a group

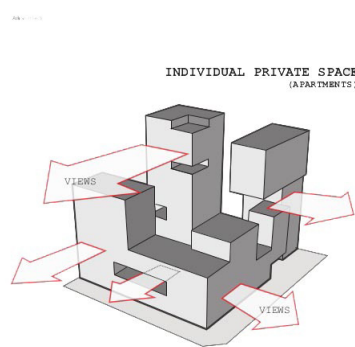
and private spaces in family and people private spaces have introduced. Such a division can be more generally, the public, semi-public, private and semi-private introduced (Bahraini, 1999: 21).

### Territory in residential complexes



▲ Fig 3. Public and private space in architecture; source: authors.

Living in pre-designed residential complexes considered as the most important developments in the process of settling in cities. In this study, the purpose of residential complexes, as the sets under different names and at the same time to be together, planned, designed and implemented. The scale of the common set is variable from multi-unit residential complexes to high-rise buildings and even large collections that have come into an area of the city (objective curls, 2000: 110). To design a residential environment with the aim of creating defensible space, space divided into public spaces, semi-public, semi-private and private to recognize what people allowed to participate in what space. Privacy and territory is one of the most important points providing privacy and security. Taking control of territory through space by range of path is possible, territory can (Private) (semi-private), such as private outdoor spaces and public collections such as the internal communal areas, to be foreigner. Such as semi-private spaces, streets and sidewalks in the area are often vague and usually poorly kept care (cooper, 1986: 23). Create defensible space by using physical elements and architectural designs as diverse as design, neighborhoods and their positions, roads, windows, stairs, doors, elevators, etc.



▲ Fig 4. The impacts of views in architecture; source: authors.

is possible. Create subdivisions in design and construction, create a limited access, creating physical barriers, using psychological barriers, enable knowledge neighbors and enhancing the monitoring of such techniques the people to create defensible space can be sought favorable results (Sallamati Zare, 2014).

#### Security in public space of residential complex

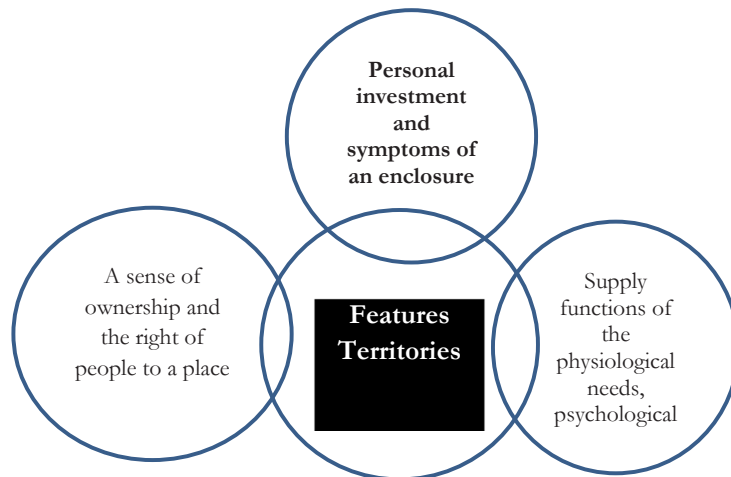
Outdoor spaces are residential neighborhoods including spaces in which individuals located every day or pass through it. This space has a very important role in the lives of citizens. Outdoor spaces within residential neighborhoods in the city of Tehran is also one of the main spaces that all age groups and gender, and above all children, women and the elderly used it, therefore, there is security in these areas so that they can be used easily and with peace of mind of these spaces. Unfortunately, due to urban open spaces and strangers away from the supervision of the people using the space and abnormal behavior occurs in these spaces, which causes reduced security and human presence in these spaces, these spaces are blurred. Although the emergence of behavioral patterns in humans sociological variables are the priority, but the role of spatial characteristics of the built environment, as bed and possibility of occurrence of abnormal behavior should not ignore the crimes. Today, try to prevent crimes must be conducted with regard to all the involved funds and it is necessary and appropriate urban design with efficient environmental regulations. Moreover, the provi-

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▲ Fig 5. Features Territories in public and semi-public security in residential complex; Source: authors

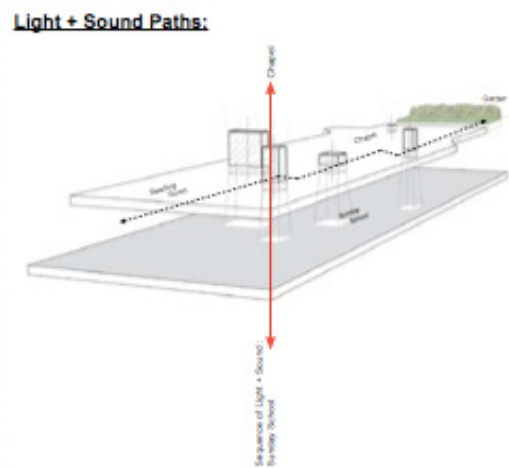
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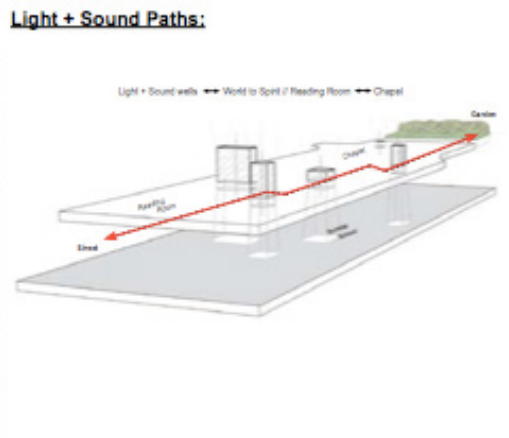
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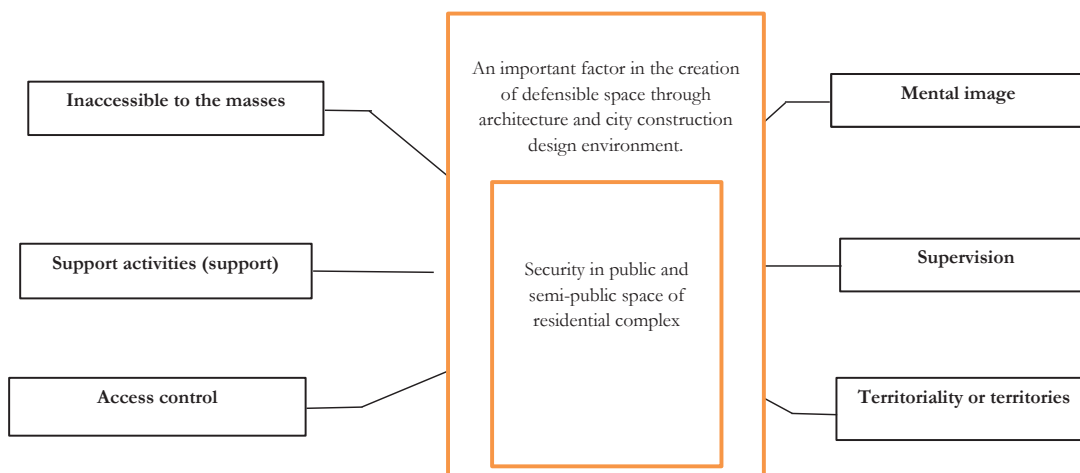
Light + Sound Path : Chapel : Vertical Axis



Light + Sound Path : World : Horizontal Axis







▲ Fig 6. effective factors in public and semi-public security in residential complex; Source: authors.

sion of adequate, facilitate grounds for a rise in crime reduction opportunities in all outdoor spaces and especially because the space is outdoor space within residential neighborhoods after the departure of its residents to enter their homes.

#### Solutions for security in the public space of residential complex

1. Neighboring building shall be captured in the capture of the nobility and see the other to capture the building, through a window or door openings input reduced to a minimum.
2. Proximity input and capture of other spaces within the building done which will capture an alien from the entrance to the interior spaces are limited and their peers in the spaces reduced to a minimum.
3. Residential areas approximately the inhibitor acts have established themselves in other words, seating buildings not exacerbate insecurity or residential complex is adjacent to the surrounding land use is compatible with more security than can be imagined.
4. Shape and physical characteristics of the building must be such as not to create conditions of secrecy and the acts.
5. Failure to create a dark atmosphere and a cozy corner without seeing a (undefended space), impeding the creation of the opportunity for crime
6. Increase the visibility of urban space so

that residents can visually monitor their public places.

7. The creation of diverse and heterogeneous applications in housing complexes can be active throughout the day.

8. -Create short route to avoid creating spaces for crimes.

9. -Create different fence to define the boundary of the building with outdoor public space, this could include gates, fences, stairs, plants, tissue changes, etc. (Sallamati Zare, 2014).

#### Semi-public spaces

Spaces that in terms of ownership, restrictions are not completely private, but because of their specific function or how to design and their key features will not be used all the community, decks and yard space in apartments, parking in front of the entrance wall and adjacent units or homes placed in one of these spaces.

#### Security in the semi-public spaces of residential complex

The semi-public spaces of residential complexes are another very important space in security, which includes corridors, staircases and so on. These spaces as public space and private space is the interstitial space and control and monitoring by individuals and surrounding buildings is higher than the public space. Semi-public spaces are joint space between the private spaces. Therefore, approaches to se-

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curity that could be easier and more from the solutions offered in the public space.

### Strategies to create security in the semi-public spaces

1. Increase the visibility of the units around a semi-public space
2. Avoid dark spaces and cozy corners are in the semi-public space that is not under the control of individuals.
3. The use of intelligent lighting installations at any time of the day if not commute dark space.
4. Design and layout of semi-public space in such a way the units associated with the sense of belonging and the sense of responsibility they have to protect it.
5. Layout of residential units around a semi-public space so that their utilization and effectiveness of this space is to a degree
6. Increased stronger social relationships between units that are more associated with the aforementioned semi-public space (This is the traditional Iranian architecture and the corridors are well visible element).
7. Limited welfare facilities in semi-public spaces like hallways, lobby and... these spaces could be a defensible space have a good performance.

### Conclusion

As mentioned above in the article content can deduced in the space of modern residential complexes due to growing in number and not quality and most important spaces are considered as public and semi-public defensible residential space. As it is evident in the solutions provided by public and semi-public space providing the appropriate arrangements integrated designer measures and considered as:

Defensible space, increases vitality and increasing participation in open spaces and supervision of space, outdoor maintain the effectiveness of existing, and the commission of various crimes and even crime motivated at least reach the various spaces of the residential complex space is secure and defensible. An important factor in the creation of defensible

space through architecture and urbanization and environments design is effective, security in public and semi-public residential complex; include territoriality or territories, access control, surveillance, image, inaccessible to the mass, support activities (support) presented in graph form.

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