

Original Research

Design of a correction and rehabilitation center in Ardabil focusing on teen security

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Iran.**Corresponding author:****Javad Javan Majidia****ABSTRACT:**

Teenagers of Correction and Rehabilitation Center in Ardabil are adolescents who have made an incorrect decision at a moment as a result of a momentary excitement and have changed their lives. Considering a very important subject, that is teen security, this study tended to design a suitable place for life, correction and rehabilitation based on behavioral studies on this age group as well as effect of this center on teenagers. This center was tended to provide architectural, psychological, social and familial functions required from these places and establish a calm environment in order to leave a positive effect on behavior of teenagers and promote their conscious, residence and meet their security. This study used documentary method by studying theoretical framework of teen psychology, different approaches of psychoanalysis, behaviorism, different socio-cultural theories, security and field studies. To apply the results and integrate them with experiences, a site was selected to design a correction and rehabilitation center focusing on security.

Keywords:

Adolescent, Correction and rehabilitation center, Sense of security.

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INTRODUCTION

When speaking about design of environment, landscape and building, the first principle to be considered is that for whom the environment, landscape and building are designed and to what purpose these people use them. In the past, designs were based on interests and information of designers and people used these spaces without making decisions in design and construction. However, design is currently based on interests and needs of users by considering what they consider beautiful, comfortable and safe.

Environments such as correction and rehabilitation centers are designed for adolescents who have committed a crime. Since users of these environments are all children and adolescents, provision of special principles and regulations in design will promote sense of satisfaction and security of users. In designing a correction and rehabilitation center, it is first essential to know general principles of design and details individually. In general, physical and mental security is the most important factor which should be considered in regard to needs and demands of criminal adolescents. In the next levels, differences of adolescents and adults in security criteria can be noted. Moreover, security criteria must be used in design for adolescents based on their importance and capacities. Unsuitable spatial structure of correction and rehabilitation centers can pave the way for future mistakes and lead people who have lost many of their future opportunities and as humans have a long time ahead to stresses and future social disorders. It seems that unconscious effects of architecture, particularly by using mental feature of space in its architectural position, can provide a better definition of a temporary residence for these teenagers, revive their mentality in the most sensitive period of their lives and provide them security.

Due to increasing growth of population in Ardabil which mainly results from migration from surrounding rural areas, crime has been increased among adults, even adolescents. This has reduced security of

residents, particularly adolescents. Therefore, this study focuses on security of adolescents residing in the Correction and Rehabilitation Center of Ardabil to improve quality of behavior control in adolescents, train them in a safe and calm environment, reduce psychological pressure on them and lead to eternal freedom.

A study conducted to explain effective factors on social security of adolescents claimed that security is one of the most important needs of organisms, particularly humans. To develop self and society, human needs peace and security in all fields. Based on findings of this study, unemployment, rising age of marriage in youth, migration and urbanization are effective factors in security of youth (Rasooli and Salehi, 2011). A study was conducted on the relationship between social trust and sense of social security among 15-29 year-old young people living in Shiraz and Yasouj. Sense of social security of respondents was most influenced by trust rather than their residence. Moreover, generalized and institutional social trust both increased sense of social security (Enayat *et al.*, 2012). A study on crime analysis of adolescents in the Tehran Correction and Rehabilitation Center found that personal strength, such as high self-esteem, high levels of frustration tolerance, positive attitude to authorities and aggression inhibit crime. This project examined above variables in normal and criminal groups. To prevent, treat and rehabilitate crime, educators, parents, media, correcting and training professionals must build and increase self-esteem. They also need to build positive attitude toward authorities in children and adolescents (Ansarinejad, 2012).

Theoretical framework

Child

Legally, child is someone who is not physically and mentally matured enough for life. Since real life of a child begins with birth, childhood also begins with birth.

Adolescence

Adolescence is a period between puberty and

maturity. A mature person is a fully grown person who is able to take roles and responsibilities of an adult (Torkaman *et al.*, 2011). Literally, puberty means growth, adulthood of the child, sophistication and perfection.

Security

Different definitions have been presented for security so far. Different literal definitions vary from mental states and situations (sense of security) to objective and external situations (secure situation). In Amid Farsi Dictionary, security is defined as being safe, comfort, peace and safety. Larousse dictionary defines security as trust and mental peace. Security refers to an idea based on which hazard, fear, horror and loss is meaningless. Security is equivalent to lack of hazards (Salehi, 2008).

MATERIALS AND METHODS

This descriptive-analytic study was conducted to describe, record and explain status quo or, in other words, describe general and spatial perception of 6-18 year-old adolescents living in a correction and rehabilitation center. The subject was identified and analyzed. Archival and field (using questionnaire) studies were processed and computerized; then, they were analyzed using SPSS 23. Final analysis was done by using Chi-square test. Moreover, graphical tools such as photoshop, 3Ds Max and Autocad were used. Based on

findings, two types of factors were identified: factors which increase security and factors which reduce security. Nineteen questions of the questionnaire were divided between these two types of factors. Finally, the relationship between these two subjects was examined. The considered population was selected among 250 adolescents living in the Tehran Correction and Rehabilitation Center. Based on the Morgan, sample size was estimated as 148. The questionnaire was filled during an interview with the samples in one week in the Tehran correction and rehabilitation center (See Appendix). Example, Spring Hill Correction and Rehabilitation Center

Appropriate location for children and adolescents

For the analysis of characteristics on children and adolescents 250 adolescents were selected among those living in the Tehran Correction and Rehabilitation Center. Some of the literature sources were also reviewed to get the details prevailing in the subjects of this region [Spencer and Blades (2006); Ravens-Sieberer *et al.* (2008); Sobel (2004); Hart (2013); Walsh *et al.* (2010); Churchman (2003); Somerville (2015); Turner (2006)].

RESULTS

Experts believed that satisfaction of mental needs and provision of a calm space away from stresses can encourage children to live in the space in which they are kept. By providing conditions which fit their limitations, moreover, it is essential to encourage chil-



Figure 1. Tehran correction and rehabilitation center



Figure 2. Exterior view of main residences in Tehran correction and rehabilitation center

dren to establish social relations. Security and protection of external spaces was provided. In selecting the site, following factors were considered:

Places were avoided in the vicinity of crowded main streets, intersections, squares, landfills, animal shelters, slaughterhouses, factories etc. The project location should be away from pollutants and raucous sounds. Easy access to bus station enables independent movement of employees. Ideally, the site must be in 500 m from the bus station and accessed through a safe, plain and well-lighted route. East-west extension of the site allowed the optimal utilization of southern light; moreover, the site could be easily accessed through downtown. Proper location is the most important aspect of design. It is essential to avoid too crowded and too quiet areas. Obviously, crowded children spaces inevitably influence the environment. Too crowded or too quiet areas will not fit the children space.

It is essential to consider hierarchy of the area;

for example, the site must not be alongside a highway to which access is difficult and dangerous. A certain hierarchy is required to enter the site; for example, children must enter an intermediate space between the street and the site and then go to the street. The location considered for children must be comfortable, safe and healthy. The adjacent land-uses must not produce noise, environmental and air pollution.

The most important land-uses which are consistent with children space are educational facilities, houses, parks, and cultural and recreational centers. Adjacency of children space with residential high-rise buildings should be considered in terms of environmental effects of tall buildings such as shadow and its effect in wind flow.

Considering topography of the site, it must be located in a place with the lowest slope, unevenness and surface differences. The location of the building must reduce the effect of annoying winds and allow desirable winds, so that airflow into the building enables natural ventilation. Winter and summer sunlight must be proportional to climatic conditions of the site. The site must be located in a direction in which spaces receive sufficient light.

In urban areas, the site must be located in areas in which vehicle speed is low rather than in main streets. The entrance must not be adjacent to the street.



Figure 3. The hostel entrance hall, which is also the site of morning exercise and stairs communication dorms

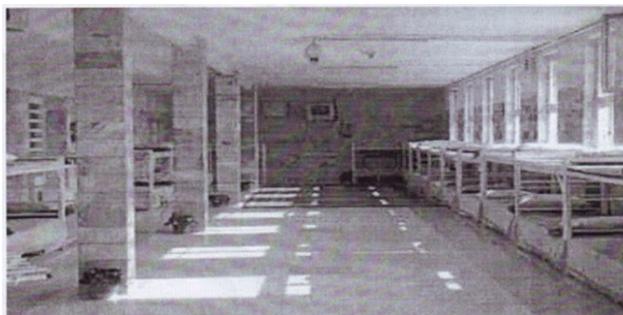


Figure 4. Image of accommodation of the 48-member association; two residences to the south; two residences to the north

Moreover, there must be safety zone for controlling movement of children.

Environmental conditions and access roads must be considered in locating the site. Proper locations for establishing different urban activities are determined in detailed plans of cities. In some cases where a city lacks a detailed plan, a proper site for establishing children space can be located by considering three main criteria including adaptability, suitability and capacity. Adaptability refers to coordination and consistency of the land-use with surrounding activities. Suitability refers to usability of the location for establishing children space. Capacity refers to usability of the location considering population requirements of the area.

Adaptable and non-adaptable adjacent land-uses

The location considered for children must be comfortable, safe and healthy. The adjacent land-uses must not produce noise, environmental and air pollu-

tion.

Factories, railways, highways, airports and airlines, hospitals, public toilets, garbage dump, cemeteries, industrial and manufacturing workshops which cause environmental pollution, watercourse, vicinity of power lines, gas stations, slaughterhouses, open canals, cliffs and other places which may cause disturbance (smoke, dust, noise and hazard). Tables 1 and 2 showed two examples of adaptable and non-adaptable adjacent land-uses.

Houses, parks, cultural and recreational centers, adjacency of children space with residential high-rise buildings should be considered in terms of environmental effects of tall buildings such as shadow and its effect in wind flow. Given the type of users, height of the building must not be higher than two storeys. Since the land is plain, outside view is not an issue and landscapes must be built inside the site.

The building was located because of following reasons:

- Proper use of sunlight
- Proper use of wind for natural ventilation
- Proper access to internal spaces of the building considering the suggested place for entrance
- Given the low height of the building, windbreak wall composed of trees can be used to prevent annoying wind.



Figure 5. School children center in the eastern part of the building dorms

Table 1. Spring hill correction and rehabilitation center

S. No	Center	Architectural evidence
1	Architect	In response to sudden increase in population of the area, this center which was designed based on international architectural principles of New Zealand prisons are different from old prisons; new principles are used in this center to reduce stresses caused by form of old prisons. This center has four separate units each of which acts individually and has separate service and open spaces. Note that each unit has only one entrance. The center is located in a 215 ha site of which 20 ha is enclosed by walls. The built area is 40 ha site for 650 criminals and 340 employees. Construction costed 380 million dollars. This center has prisons with low to high security.
2	Location: New Zealand	
3	Project area: 215 ha	
4	Construction time:	

Design

Weak and small members of the society who can influence formation of their environment by expressing their needs and demands require special attention of designers and constructors. Those who consider themselves advocates of design for children need full information about characteristic of an intimate environment built for children. Designers should note the ideas and topics of design in their buildings which create an environment supposed to be intimate for children, details of design which seem appropriate and attractive for small users, elements of designs which seem unpleasant and ugly for children, features which lead to easier and more pleasant use of the designed place.

The designed place must encourage children to spend their time there without feeling of fear and anxiety, play comfortably and establish relationships with

other children.

Therefore, children who are small users of the building must provide their feedbacks along with development of planning and architectural design. It is essential to consider attitude of children toward the environment designed for them.

Interesting places

What are favorite places of children? Why do they love these places?

Ugly places

Are there places which are not favorite for children? Why they do not love these places?

Ugly things

What elements children do not like? What elements they spontaneously consider beautiful, silly or ugly?

Table 2. Tehran correction and rehabilitation center

S. No	Elementary school	Architectural evidence
1	Employer: -	Tehran Correction and Rehabilitation Center was built in 1958 in an area of 3 ha in the northwest of Tehran, Kan. This area which was far from Tehran at the time of construction is now surrounded by residential areas. This center which started to work with 200 people now keeps at least 270 children. Gradual and unprincipled development of the west and north parts impaired its functional arrangement and reduced its efficiency. The center now includes three dorms for girls, 6-12 year-old boys and 13-18 year-old boys. It keeps 40 girls and 200 boys. The girls section was added in 2000; thus, criminal girls are not now sent to women's prison.
2	Location of the building: Tehran_ Iran	
3	Construction time: 1958	
4	Project area	The main dormitory which belongs to 12-18 year-old boys is a 3-storey building, including four salons in 5 half-storeys, all in the west part of the building. In other part of the building which is similar to the western part, there are school, library, social workers, internal management and dining room. These two parts are connected through a space newly added. Outside of the building, there are carpentry, diaphoretic, electrical, mechanical, cinema, pottery, computer and hairdressing workshops. Figures 2 to 8 shows all parts of this center.



Figure 6. Gardening workshops and amphitheater and theater



Figure 7. Indoor sports hall and soccer field in the northern center

Main users of these buildings are children; therefore, the buildings must be consistent with needs and demands of children, so that children tend to spend their day in these places, perceive the sense of home and family. Buildings which are built for children are a certain type of challenges, stimulate their imagination and make them play based on plans and planning.

A general circulation which is relevant to the project must be dominant. Children must be able to experience various spaces in this circulation. This circulation must include symbolic areas. Spaces must be inter-related to enable children distinguish a building from other buildings. Through communication ways, children

need to recognize their path easily without confusion and anxiety.

Demographic variables of this study are shown in the Figures 10-12.

Effective factors on formation

Factors of security

Table 4 indicates the security components based on the survey. As shown in the Table 4, 86% of people consider green space and hidden control via security camera as the most important security components. These two components, creating border between the private and public space, relationship of adolescents in the center and their participation to create unity among the ado-



Figure 8. The main building of official residences in the south site

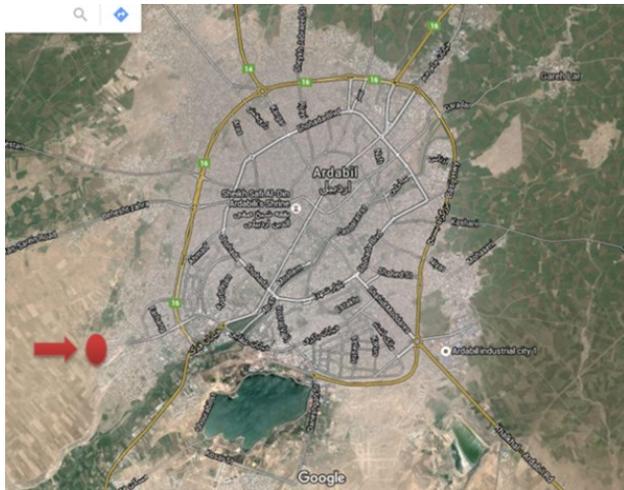


Figure 9. Area of the considered site in the city

lescents are important components of security. In the next ranks, components of workshop space, recreational space, safeguard in front of the entrance door, small spaces and finally the design of free space are considered.

Components of insecurity

Table 5 defines insecurity components based on the survey of people. As shown in the Table, 86% of people considered the design of unsuitable form and the

lack of lighting as the most important insecurity components. After these two components, the components of lack of vivid vision in the entrance, over crowdedness in spaces were the important components of insecurity. In the next ranks, unsuitable color, personal space and lack of intimacy among the adolescents were considered.

Design and practical solutions preferred by adolescents focusing on security

Accordingly, solutions used in design of a correction and rehabilitation center are listed in following tables 6 and 9 considering psychological, environmental-physical, functional and social factors.

As shown in the Table 6, some of the solutions of psychological factors are the design of cozy spaces with the control and monitoring capability, division and separation of public and private spaces and the design of spaces as the adolescents have belonging feeling. For example, we can refer to the meaning and special activities in the space. Also, some of the solutions of environmental-physical factors are avoiding the design of wide spaces, design and size of space regarding the morale of

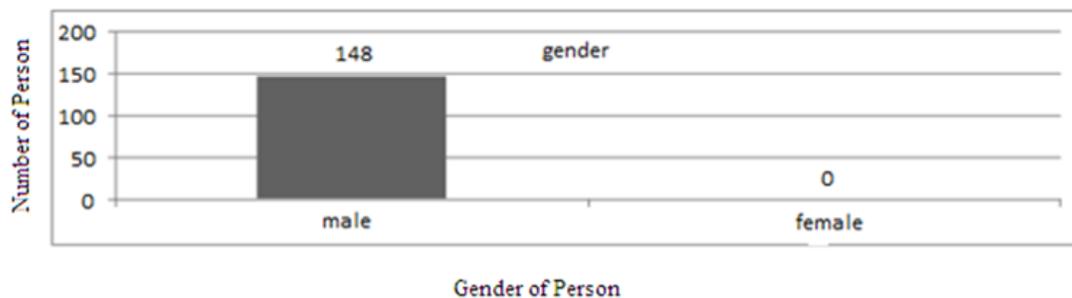


Figure 10. Frequency distribution based on gender

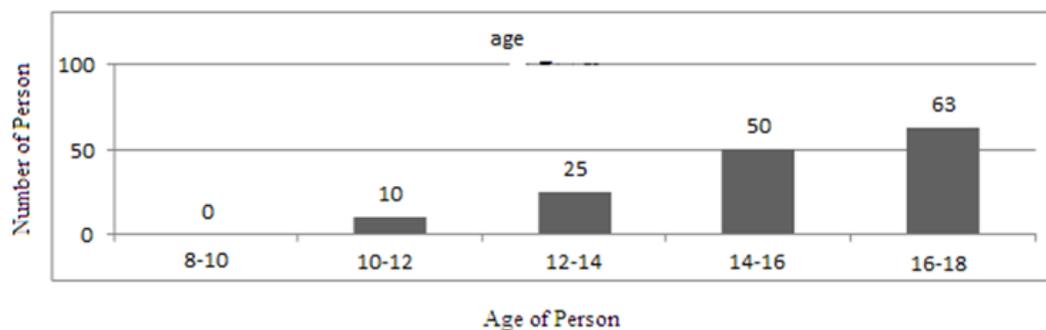


Figure 11. Frequency distribution based on age

Table 3. Site specifications

S. No	Details	Description
1	Project site	This site is located in an area of 9000 m ² within the city limits, in the third phase of the Karshenasan Town. This area which includes the existing urban area is limited to 30 m road eastward and 10 m road northward.
2	Reasons for selecting the site	Existence of adolescent population in this area Cultural land-use Separated from residential areas Lack of correction and rehabilitation center in the area
3	Land-use in the detailed plan	Land-use of the site is cultural; the site is located in a low-traffic urban area.
4	Access	This site can be accessed through low-traffic adjacent streets
5	Topography	This site lack any topography and particular gradient.
6	Pedestrian and car access	As shown in the plan, the site can be accessed from two directions. Thus, the site can be accessed through the 30 m road.
7	Noise pollution	In distribution of noise polluting sectors, this site is located in a low polluted area.
8	Landscape	In distribution of landscapes of Ardabil, this site is located in an area with beautiful landscapes.
9	Population density	In distribution of population density, this site is located in a highly dense area.
10	Urbanism features	In distribution of urbanism features, this site is located in a modern area.
11	Light	According to studies conducted, maximum energy radiated on vertical surfaces is southward in the whole of the year. Given that the area is in cold climates, maximum energy radiated in different times of the year is southward and then south-eastward. Thus, the site is located in an area in which the southward light (which is the best light considering mountainous climate of Ardabil) is radiated on parts of the building which require this light and direct light prevent their optimal activity.
12	Geometry	Irregular trapezoid
13	Important adjacent land-uses	Shafa Square, Maskan Bank, Melli Bank, Saderat Bank, Ali Dai Boulevard

adolescents including small and narrow spaces, adequate lighting design of some spaces as hallway, yard, corners, increasing comfort of space via hearing good voice during leisure time. Also, some of the solutions of functional-performance factors are the design of spaces to improve the cultural activities, design of workshop space to use the talent of adolescents to achieve income,

design of sport space to create vital environment. One of the solutions of social factors is the design of workshop spaces to increase correlation and interaction of adolescents, increase of security with the control of space via Closed-circuit television, group control in spaces, avoiding the creation of wide, uniform and close walls, reduction of density in the room to avoid aggressive behav-

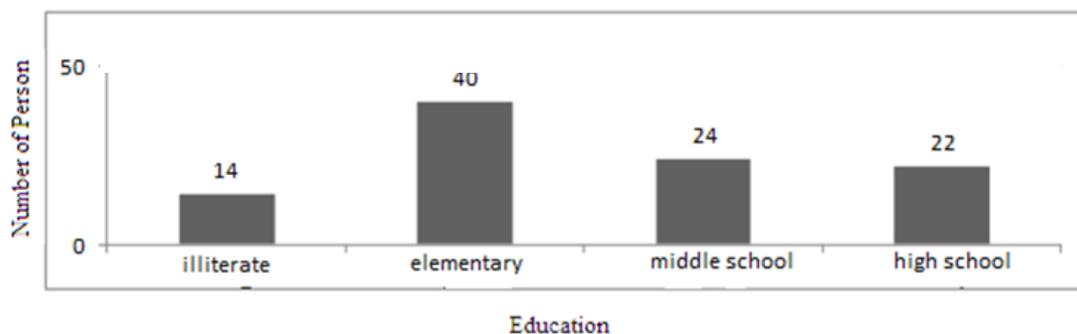


Figure 12. Frequency distribution based on education

Table 4. Components of security

S. No	Component	Very strong and strong agreement of people
1	Open space	62%
2	Boundaries between private and public spaces	82%
3	Small spaces	72%
4	Wall fence and separation of spaces	65%
5	Presence of a guard at the entrance	72%
6	Green space	86%
7	Recreational spaces	74%
8	Invisible control through security cameras	86%
9	Communication of adolescents and their participation	80%
10	Coordination between adolescents	80%
11	Workshops	75%

iors, increase of control of residents via the reduction of density in different spaces.

DISCUSSION

Rasooli and Salehi (2011) explored effective factors on social security of young people. According to their findings, unemployment, the increase in age of marriage of youth, migration and urbanization, etc., were considered as effective factors on security of young people. A study on the relationship between social trust and social security among young people aged 15-29 years living in Shiraz and Yasuj reported that the sense of social security of respondents is more influenced by trust than their place of residence. Moreover, generalized and institutionalized social trust, both, increase the sense of social security (Enayat *et al.*, 2012). A study on juvenile delinquency analysis in rehabilitation center of Tehran found that personal strength such as high self-esteem, high failure tolerance rate, positive

attitudes toward authorities and aggression inhibit delinquency. This study was conducted to investigate the above variables in normal and delinquency groups (Ansarinejad, 2012). By reviewing previous studies, it was concluded that children are the main users of the designed buildings and their design should be based on needs and demands of children, so that children tend to spend the day there and perceive the sense of home and family environment. Buildings designed for children are a particular type of challenge for them, stimulating their imagination and forcing them to play and act according to plans. There should be a general and overall circulation which is relevant to the entire work. Children should be able to experience diverse spaces in this circulatory ring. This circulatory ring should contain symbolic points. In properly coordinated spaces, children should be able to identify or distinguish buildings. In communication routes, children should be able to easily identify their direction and not be lost and anxious.

Table 5. Components of insecurity

S. No	Component	Very strong and strong agreement of people
1	Personalized spaces and lack of intimacy of adolescents	68%
2	Inappropriate form	86%
3	Lack of light	86%
4	Inappropriate colors	76%
5	Lack of clear sight at entrances	82%
6	Crowded spaces	77%

Table 6. Design and practical solutions preferred by adolescents focusing on security

S. No	Factor	Criterion	Solution
1.	Psychological	Privacy	Controllable cozy spaces
		Territory	Separation of private and public spaces
		Sense of place (sense of attachment)	Sense of attachment to spaces by meanings, certain activities in spaces
		Size	Avoid wide spaces; Use small and narrow spaces which are consistent with morale of
2.	Environmental -physical	Form	Avoid U and L-shaped spaces; Avoid corridors and invisible spaces.
		Light pollution	Adequate lighting of spaces such as corridors, courtyards, corners, etc. helps improve security in outer space.
		Color Pollution	Avoid stressful colors in walls and floors.
		Noise	Provide psychological comfort by providing location-care conditions.
		Closeness	Separation of spaces to provide security and increase control
		Access control	Guard at the entrance to stop, recognize or inspect of people who are planning to enter the building. Wall fence around the area to create a physical barrier
		Entrance form	Clear view at the entrance effectively enhances security.
		Quality of materials	Use durable materials. Avoid extreme diversity of materials which cause a sense of
3.	Functional	Green space	Use vegetation in open areas to enhance sense of relaxation, beauty and health of users in a way that it does not impede
		Cultural-social functions	Design spaces to enhance cultural activities.
		Economic-social func- Recreational-sport functions	Design workshops to use talents of adolescents for earning Design sport facilities to create a lively environment.
4.	Social	Social interactions	Design workshops to increase cooperation and interaction of adolescents
		Control and inspection	Increase security by monitoring through CCTV; Provide group control; Avoid very wide, uniform and closed walls
		Density	Reduce density in rooms to prevent aggressive behaviors; Reduce density in different spaces to increase control.

After studies and reviews as well as site analyses, suggestions were presented for design. In the early schemes, it was tried to use lines in volume design to create a fluid volume and provide security. Table 3 and Figure 9 represent the chosen location for center design.

CONCLUSION

Considering the components obtained during the studies, it was tried to consider segmentation of functions, establishment of a boundary between private and

public spaces, small spaces, wall and separation of spaces, the presence of guard at the entrance door, green space, the presence of recreational spaces, the existence of communal spaces, subtle control through security camera, teen communications and participation, cooperation of teens, and establishment of workshops in design of open spaces. Finally, several designs were presented and experts chose one of them as the main design.

Table 7. Factors analyzed in the present study

	Criteria	Questions	Source	α	CVR	
Psychological factors	Solitude	Personalization of space and the lack of intimacy among adolescents will reduce security	Sobel (2004); Khanghahi (2016); Rasooli and Salehi (2011).	0.85	0.89	
		There is dialogue and intimacy in outer space or outdoors.			0.85	
	Territory traveling	Boundaries between private and public spaces creates safe and defensible spaces for teens.			0.80	
Environmental (Physical) factors	Sense of place	Teenagers feel attached to their place of residence.	Sobel (2004); Khanghahi (2016); Rasooli and Salehi (2011).	0.73	0.75	
	Size and form of space	Small spaces provide more sense of security and more intimacy			0.89	
		Lack of inspection caused by shape of space provides favorable conditions for criminal purposes.			0.73	
	Visual comfort	Light pollution: Lack of lighting is the first step in creating an insecure space			0.83	
		Color pollution: Colors can influence personality and cause inappropriate behaviors			0.72	
	Spatial organization and permeability	Wall fence and separation of spaces leads to increased security of juvenile center			Grubman <i>et al.</i> , (1995); Rasooli and Salehi (2011).	0.88
	Access control	The presence of a guard at the entrance helps to create a sense of security for adolescents				0.85
	Entrance form	Lack of clear visibility in entrances has an effective role in vulnerability of these spaces.				0.76
	Density	Congestion of spaces reduce control of Inhabitants.				0.73
		Crowded rooms lead to aggressive behaviors as well as sense of insecurity				0.87
Green space	Green space encourages mental relaxation and reduces violent behavior		0.85			
Functional factors	Sports recreation	Existence of recreational spaces leads to more conversation and intimacy	Rasooli and Salehi (2011).	0.76	0.91	

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ban spaces. *Journal of Urban and Architectural Studies*,

Social factors	Control of disorders and space monitoring	Surveillance through the security camera in-creases the safety of teens	Spencer and Blades (2006); Sobel (2004); Khanghahi (2016)	0.88	0.80
		The relationship between teens and their participation contribute to increasing security at the center.			0.89
	Social interactions	Communication and intimacy among adolescents will reduce their inappropriate behaviors			0.74
		Workshop spaces increase conversation and intimacy of teens.			0.71

REFERENCES

- Ansarinejad N. (2012).** Crime analysis in adolescents living in Tehran correction and rehabilitation center. social welfare. *Journal of Social Welfare Research*, 5(2): 365-381.
- Enayat H, Movahed M and Heydari A. (2012).** The relationship between social trust and sense of social security among 15-29 year-old people living in Shiraz and Yasooj. *Applied Sociology*, 23(1):81-104
- Khanghahi E. (2016).** Design of a correction and rehabilitation center in Ardabil focusing on security of adolescents. *Journal of Environmental Research*, 80(2): 110-112.
- Rasooli R and Salehi A. (2011).** Effective factors on social security of youth. *Disciplinary Knowledge*, 12(2): 165-166.
- Torkaman M, Poorgholami MR and Moradi-Siahsar G. (2011).** Effective factors on tendency of male adolescents in crime subculture. social security studies. *Journal of Social Security Studies*, 17(9): 1-21.
- Salehi I. (2008).** Environmental features of secure urban spaces. *Journal of Urban and Architectural Studies*, 13(4): 29-48.
- Spencer C and Blades M. (2006).** Children and their environments: Learning, using and designing spaces. Cambridge University Press. 296 p.
- Ravens-Sieberer U, Kurth B M., KiGGS Study Group and BELLA Study Group. (2000).** The mental health module (BELLA study) within the German Health Interview and Examination Survey of Children and Adolescents (KiGGS): study design and methods. *European child and adolescent psychiatry*, 17(1): 10-21.
- Sobel D. (2004).** Place-based education: Connecting classroom and community. *Nature and Listening*, 4(1), 1-7.
- Hart RA. (2013).** Children's participation: The theory and practice of involving young citizens in community development and environmental care. 1st ed. Routledge. 224 p.
- Walsh G, Druin A, Guha ML, Foss E, Golub E, Hatley L and Franckel S. (2010).** Layered elaboration: a new technique for co-design with children. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. 7(2): 1237-1240.

Churchman A. (2003). Is there a place for children in the city?. *Journal of Urban Design*, 8(2): 99-111.

Somerville M. (2015). Children, place and sustainability. In children, place and sustainability. Palgrave Macmillan UK. 166-184.

Turner HA, Finkelhor D and Ormrod R. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social science and medicine*, 62(1): 13-27.

Grubman S, Gross E, Lerner-Weiss N, Hernandez M, McSherry GD, Hoyt LG, Boland M and Oleske JM. (1995). Older children and adolescents living with perinatally acquired human immunodeficiency virus infection. *Pediatrics*, 95(5): 657-663.

Appendix - Questionnaire used for retracting data from the respondents

	Criteria	Questions	Disagree	Strongly disagree	Agree	Strongly agree
Psychological factors	Solitude	1) Personalization of space and the lack of intimacy among adolescents will reduce security.				
	Territory traveling	2) There is dialogue and intimacy in outer space or outdoors. 3) Boundaries between private and public spaces creates safe and defensible spaces for teens.				
	Sense of Place	4) Teenagers feel attached to their place of residence.				
Environmental (Physical) factors	Size and form of space	5) Small spaces provide more sense of security and more intimacy. 6) Lack of inspection caused by shape of space provides favorable conditions for criminal purposes.				
	Visual comfort	7) Light pollution: Lack of lighting is the first step in creating an insecure space. 8) Color pollution: Colors can influence personality and cause inappropriate behaviors.				
	Spatial organization and permeability	9) Wall fence and separation of spaces leads to increased security of juvenile center.				
	Access control	10) The presence of a guard at the entrance helps to create a sense of security for adolescents.				
	Entrance form	11) Lack of clear visibility in entrances has an effective role in vulnerability of these spaces. 12) Congestion of spaces reduce control of inhabitants.				
	Density	13) Crowded rooms lead to aggressive behaviors as well as sense of insecurity.				
	Green space	14) Green space encourages mental relaxation and reduces violent behavior.				
Functional factors	Sports-recreation	15) Existence of recreational spaces leads to more conversation and intimacy.				
Social factors	Control of disorders and space monitoring	16) Surveillance through the security camera increases the safety of teens. 17) The relationship between teens and their participation contribute to increasing security at the center.				
	Social interactions	18) Communication and intimacy among adolescents will reduce their inappropriate behaviors. 19) Workshop spaces increase conversation and intimacy of teens.				

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