

## Architecture and its Impacts on Children's Happiness and Satisfaction in the Sport Spaces

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**Abstract:** Architecture from birth to death affects human and in between that time, puts deep impact on his mental and spiritual conditions as well as his psyche. Meanwhile, the childhood period is very important in shaping the future character of each individual and the buildings put the most impact on him. However, the spaces where children grow to become creative individuals in the future is usually designed without considering their requirements and so are the sport spaces. Therefore, worthy and noble architectural design for children's sport spaces may put a great impact on the growth and shaping the future of the child and consequently all individuals of every society because children's creativity and personality will be shaped under the influence of vitality of these spaces and the prosperity and creativity can be the basis of architectural design for sports spaces and enhance the children's satisfaction sense. This study attempts to find some criteria for excitation and strengthening the creative sense of children and solutions related to the prosper design, related to children including game rooms, training rooms and relaxation area with the descriptive-analytic method.

**Key words:** Children, joy, satisfaction, sportspaces, architecture

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### INTRODUCTION

The surrounding environment and a space that human builds have tremendous impact on personality, behavior and human education, especially in the early years of the formation of his personality. The space and architectural style of homes and public places will have the impact on the relationships kinds and how to deal with people how the formation of these relations will form the social behaviors of people. The question is that which factors in designing sports spaces for children can lead to physical activity, game and curiosity of a child and thereby increase his/her mental health? Do creating a joyful space that gives a satisfaction feel to the kid can lead to flourishing of a child?

Limited understanding of the complex nature of environmental issues relevant to suitable children's environment for children, led that the appropriate programs for children, often be remained at the primary levels. Therefore, the need for changing the approach of these programs to the fitting space with the children, including using bright colors or cartoon images with deeper content and approach is felt. This shift in approach is not possible without the doing studies that in

them applying a holistic and integrated approach, investigate the interaction of the child and the location in sports spaces to create a deep relationship with a sense of belonging and attachment to the environment under study. According to Schultz, "we are creating a view that is flat and lacks depth means and only gives facilities with the ordinary and simple experience" (Dunn, 1993).

The beginning of growing many human abilities and budding imagination and creative power is formed in the childhood. Children are learning, educating and gaining information from their environment and apparently, expressing their feelings and interests to the related places and activities. For Freud, the source of creativity to be found in one's childhood experiences (Ghazze, 1998). Over the years, the child's environment can be more effective. While most sports areas in Iran are not designed specifically for kids. The aim of this study is to provide solutions to improve spaces for children 3-6 years old with a view of promoting their creativity in order that by applying the obtained ideas from designing spaces for children, child motivation for physical activity and exercise are enhanced the imagination and curiosity will be increased and he will be breeding his creativity. In this regard, a report on the methodology and research tools

for it to be offered and then the model of study are explained and described and then the ideas of sports spaces designing children based on the model of study are expressed.

#### **Literature review**

**Recognition of children:** Firstly to precise identify the issue, it is necessary to define children. According to the definition of "Persian Moein dictionary," "children mean small, minors and children who have not reached puberty-son or girl. In "American Heritage Dictionary" the child defined as "a person between birth and puberty". On the other hand; according to the legal definitions in the Islamic republic of Iran, the child referred to an individual "not reached the age of maturity" according to the definitions, the result is that a child is a person who has not reached puberty and given that the puberty of son is usually between 13 and 16 years old and for girls between 11 and 14 years of age. Selection a criterion for the definition of a child <12 years is appropriate.

**Children interaction with the environment:** Decision making of architects must find a way to increase propel a variety of sensory experiences that cause pleasure of users we call such a quality as sensory richness. For the majority of people, vision is the dominant sense. Most of the information we are dealing flowing off through our eyes. However, sensory richness is not only a matter of pure visual but other senses influence it and considered as the design requirements. Senses involving in the design requirements can be outlined as follows:

- The sense of moving
- The sense of smelling
- The sense of hearing
- The sense of touching

**Children and sport spaces:** Architecture after the parent's is the child's first coach; the education made through forms that constitute the surrounding environment of the child. So in the primary section for the child and to some extent by the child, must gradually establish make abalance between individual living spaces and architectural space. To achieve this goal, the architect must on the one hand and understand the space and his demands and recognize his needs and problems and find its solutions and on the other hand should be familiar with the environment in which the children lived in it and understand it well. To realize this, the architects have to keep up with education experts, sociologists, psychologists, doctors and more or less completely known the world of children. Through a long-term

learning that encompasses all childhood we learn to master the space as we had learned to keep self-control.

The majority of people are forced to live and research in places that have been designed by others. So, it is particularly important that the users are able to belong to the available settings. This is the only way that most people reach to the environment arising from the interests, values and achieve their personal signs. To meet these demands, the designer of the location is expected that provide with their vast effort a needed requirement to create their own belong (Collins and Laursen, 1999). One of the best ways to create a sense of belonging is that one can manipulate space and would not be completely submitted to the available organization in it (Azemati, 2014).

There is no need to use the traditional duality of the physical space in contrast to mental space and physical space in contrast to the social space. The more coherent approach can see a space as objectively or physical space with the social and psychological dimensions. On the other hand, cultural and recreational facilities will help that the city center is known as a destination for leisure and to visit and be strengthened the objective image to the identity of the city and life quality in that. These attractions could include a variety of cultural and recreational facilities such as sports centers (Ghavidel, 2012).

#### **The influence of environment on children**

**Light and brightness:** The light is one of the architecture principles in the comfort of space that its psychological effects are different in humans. Natural light has a positive impact on the senses of children and children in these areas are glad and joyful. Enough light and perfect lighting in spaces cause that willingly, accuracy and concentration of senses be increased and eye health and vision be preserved and prevents fatigue of nerves.

**Noise:** The children love sounds and generally the gentle noise of background helps the imagination of the child and relates them to the outside life.

**Ventilation:** Good ventilation is essential in space. Hence, accurate localization of the openings to the wind direction using appropriate materials in walls, using of plants and trees can be useful for natural ventilation of the environment.

**Natural environment factors:** The use of natural elements in the environment helps to increase the feeling of happiness.

**Table 1: The relationship between physical condition and behavior of children (Kiani *et al.*, 2012)**

Physical condition	Behaviors
Light	Lighting with different sources, focused light and emitted light and different colors of light in different light temperatures like warm, white and cold, creates different shades for children and playing with it
Color	Colors should go beyond the limited number of colors. It is better children to offer a subtle color scheme with different shades, contrast and visual richness of diversity
Smell	The different materials of construction and generally whatever are generally found in the building-up has a special smell that can be used to create a pleasant atmosphere
Touch	A variety of materials with surfaces that are smooth, hard and rough, dry, dull and bright, transparent and semi-transparent creates a different sense
Weather	Ventilation, humidity, temperature, pollution, all have an impact on the functional usage of space

**Color:** Color is the first thing children recognize. Children first understand black and white colors, light and darkness but within 6 weeks to 2 months, the situation of children will fundamentally change (Collins and Laursen, 1999). The children begin to recognize red color and then began to realize the bright colors, especially yellow. Small children are attracted to the bright colors. Academic research shows increase in the age, change children's tastes we see that this process associated with the growth and revelation the ability to receive and understanding of various aspects of the child's feelings. Color preferences are closely related to gender. It seems that color preferences are instinctive (Seyedhosseini *et al.*, 2016).

**The impact of architecture on children:** Many educational points inadvertently permeate through architecture status in the mind and soul of children and cause the formation of various aspects of their personality. The meaning goes beyond the function and pure tools. When the hidden aspects of operations are intended to find out how the environment researchers then the means is centered and immediately understood and when the hidden aspects of performance are considered this will be more important (Table 1). Each activity can be analyzed in four parts:

- Pure activity
- Specific way of doing it
- Additional and related or associated activities that become a part of the system activity
- The meaning of activity

Diversity in items 2-4 and the difference in the shapes bring the success of different designs, credibility and judgment to bring about environmental quality. This typology is in relation to the interesting ways of the hierarchy of means that begin from pure objects and continues to the use of valuable objects and symbolic objects (Mohsen, 2011).

The meaning is not apart from performance and the most important aspect is the performance so that the physical environment will be used in creating an identity. The importance of meaning based on that the human thought is essentially trying to create means using the

recognition, classification, shapes and images. Physical elements, not only, creating durable and visible cultural categories but also have to mean. Wright a renowned architect of the twentieth century in the complaint of machine life and soul of today writes "the human substituted his main interaction of rivers, forests, farms and animals with permanent agitation, carbon dioxide pollution and accumulate in rented cells that are set up in the artificial ground".

**Designing sports spaces for children:** Aesthetic factors in the sports spaces that are designed for children's sport, should be encouraged them to physical activity. The environment should be full of joy and energy, according to age group and factors such as the fields of sports, education and psychology also should be considered. The enjoyable factors of environment for the children, providing clarity and readability of environment. In designing sports spaces, this space should be integrated with the outer space, especially green space. Creates architecture environment for learning in addition will create a physical environment that causes positive behavioral reactions and also creates a social environment (Tahmassebpour, 2016). Maintain and strengthen memorable factors is a tool that is linking residents to the neighborhood and deepens a sense of belonging in them. Memorable factors can be physical or even auctioned. Small markets or a single tree belonging to all residents and contains great memories (William, 1974).

Need a sense of security, reliability and excellence in space, the need for physical activity and mental and surrounded by various factors, the need to achieve an emotional relationship with the space around it and a place for the loneliness of the most important needs of children in space. In designing spaces for children there are needs for open spaces for play and exercise. Because playing is one of the most important factors in the physical and mental development of children and the external environment naturally provides sensory stimulation. The diversity and richness of the environment as well as is an exercise in the use of the various senses such as sight, hearing, touch and through color, sound and texture variation need to be created (Rappaport, 1981). Creating an atmosphere for children

includes creating a perfect atmosphere for their lives. Unlike the past those designers knew the space limited to educational and sporting setting. Now a days space for children deemed to be a continuous space. Some types of spaces that children are attracted to include:

- Natural spaces: trees, water and living organisms that make up the most fundamental and most important spaces for children
- Open spaces: the wide spaces where kids could run arbitrary thereand evacuate their internal energy
- Public spaces: including roads, hospitals, libraries, etc.
- Spaces for adventure: the spaces that are full of complexity which strengthening the imagination of children in these areas
- Hidden spaces: the independence of children is growing through the secret spaces
- Games and sports areas including areas where there is an appropriate application equipment for children's mental and physical activity

## MATERIALS AND METHODS

The theoretical framework of the research has developed with the qualitative approach and with the aim of exploring effective component in promoting children's interaction with the location in the past studies and the

history of the subject. Answering the question of research that the impact has architectural spaces on the mood, emotions and creativity of children.

## RESULTS AND DISCUSSION

### Case study

**Ways of improving mental health in children:** Ways to improve the mental health in three areas: behavioral, physical and meaning are as set forth in Table 2.

**Children and the natural environment:** Environmentally the humans are adapted for growth in the open and wooded forests, natural environments. The environment provides well-designed and open spaces and naturalistic environment for children that are important for growth. Sudden and radical changes in habitat can cause disruption and stress. So, if children have to grow up in a domestic and sedentary environment will be suffering and this is quite different with the atmosphere that is consistent with its nature (Gibson, 1968). In today's urban environment by spending more time of life inside the buildings the life of children is more structured and supervised and the children have less opportunity for free play, learn and explore. While the children in the past children could play without any constraints and stress to search and to interact with nature. In Table 3, the relationship between the natural environment and development of children has been drawn.

Table 2: Ways of improving the mental health status of children (The researcher)

Methods of creativity	Impacts
Observing the scale for children	Enhancing the child's understanding of space Creating a sense of belonging to space
Creating flexible space in the design	The formation of new ideas in the minds of children Increasing the self-confidence
Taking advantage of the natural elements	The probability of participation of children in the design environment Explore, search, experience and play and cognitive development of children The familiarity of children with natural materials like sand and water flowers Strengthen children's five senses
Creating a quiet and relaxing space	Enhancing confidence and create opportunities for creative work
Attention to outdoor or patio	Creating collaborative activities Growth and the ability of social skills Enabling the intuitive sense of children

Table 3: Designing and appropriate principles of open spaces that help children for growing and creativity

Principles	Aspects
Competence and accountability of spaces	How today children's experiences, forms the evolution and understanding of the natural environment and their culture. To create a sense of place, there is a greater need for direct contact with the natural characteristics of the location, soil, landscape and wildlife. We have to understand to be able to move around and we have to move around to be able to understand. Children, understand the space and its environmental characteristics. Perceptual responses such as sight, touch, sound, smell, taste and stimulating environment show that perception is an active experience
Attraction	Natural environments with cognitive development by creating opportunities to explore, experiment and play, led to the development of visual skills, logic processing and concentration in children
Self-confidence	Outdoor environments are important for growing children's autonomy
Scale	The natural environment has the potential to motivate and encourage kids to start their games which this gives the kids the probability of competition, develop physical skills and confidence through search and explore
The evolution of creativity	Development of children's creativity is often associated with the external environment. For the child can comprehend something, should himself create and invent him again to grow a reared people
The evolution of social relations	Part of learning and growing children is the ability to participate in teamwork

## CONCLUSION

The findings show that curiosity, games, sports and children's imagination are effective in promoting creativity and mental health. Children's mental health depends on the strength of their imagination and their motivation, creativity has a direct relationship with joy in the games and sports. Because of mobility in pre-school ages the initial way of activity, speech, learning and progress. How children interact with the location reflects the influence of the body and mental image and physical and non-physical feature of her everyday life environment. By identifying the characteristics of children on the one hand and their surrounding environment on the other hand that determines the way they interact with the environment, can achieve to an acceptable visual impact of the sporting environment. Sports environment that doesn't attract children lead to fatigue, loss of interest in physical activity and education and ultimately lowering the efficiency of physical activity and education. Because of the nature of sports spaces that creates limitations for children and adolescents, the children bring up dry and cool-looking and should make great effort to prevent work transform spaces and leisure sports and children's play environments to an unattractive environment to increase the satisfaction feel in children. Giving the importance to the architectural design of these centers, leading to the creation of spaces mental and emotional demands of children. Currently, less construction and gym can be found that all educational buildings in its style and requirements are observed in it but it is hoped that the construction of new buildings or renovation of old buildings sporting points be considered and the architectural development of the construction to be continued along with the development of the transformation of the building industry.

## REFERENCES

- Azemati, H.R., 2014. Based on the design principles of urban parks promote children's creativity. Ph.D Thesis, University of Science and Technology of China, Hefei, China.
- Collins, W.A. and B. Laursen, 1999. Relationships as Developmental Contexts: Minnesota Symposia on Child Psychology. Vol. 30, Lawrence Erlbaum Associates, Mahwah, New Jersey, ISBN:0-8058-2616-5.
- Dunn, J., 1993. Young Children's Close Relationships: Beyond Attachment. Sage Publications, Newbury Park, California, ISBN:9780803944909, Pages: 141.
- Ghavidel, M., 2012. Participation of children in kindergartens in China, architecture and culture. Q., 41: 12-51.
- Ghazzeh, T.M.A., 1998. Childrens use of the street as a playground in Abu-Nuseir, Jordan. Environ. Behav., 30: 799-831.
- Gibson, J.J., 1968. The Senes Considered as Perceptual System. Allen & Unwin, London, England, Pages: 335.
- Kiani, A., Z. Ismail and A. Quaki, 2012. Analysis and planning Child Friendly Cities (CFC) from the perspective of children case study: Ghochan. Q. Baz Nizar, 20: 51-62.
- Mohsen, H., 2011. Urbanization, Imagination and Reality. University of Tehran Press, Tehran, Iran.
- Rappaport, A., 1981. Identity and Environment: A Cross-Cultural Perspective. In: Housing and Identity: Cross-Cultural Perspectives, Duncan, J.S. (Ed.). Croom Helms Ltd, London, England, pp: 6-35.
- Seyedhosseini, S.M., M.J. Esfahani and M. Ghaffari, 2016. A novel hybrid algorithm based on a harmony search and artificial bee colony for solving a portfolio optimization problem using a mean-semi variance approach. J. Cent. S. Univ., 23: 181-188.
- Tahmassebpour, M., 2016. Performance evaluation and scalability of IP-based and heuristic-based job scheduling algorithm backup systems. Indian J. Sci. Technol., Vol. 9, 10.17485/ijst/2016/v9i26/97260.
- William, H.I., 1974. An Introduction to Environmental Psychology. 2nd Edn., Holt McDougal, USA., ISBN:9780030013461, Pages: 406.