

Risk management: urban area designing for attendance of children



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Abstract

Recently, attention to children's needs in urban projects as "Child-friendly city" is paid in a special stand, but regarding to these new projects it is understood separated nature of these studies compared with the other fields which have been resulted definition and preparation of these kinds of designing in other countries. Hence, what has been implemented in this background follows the topic more aesthetic. As a matter of fact, mostly, urban areas insecurity deprives children to attend to the public areas to achieve social skills as an experience of examination and error, because contrary to adults, children realize their environment world via direct experience therefore they are in more surrounding dangers. Hence urban area designing should precisely be performed since in continuation of mono dimensioned approach the connected chances will be lost, child individualism and increasing dependence to parents to use urban areas will be appeared.

The goal of this article is examining integration of urban areas designing and risk management process for children by authorities, urban designers and finally parents and children in urban projects for more efficiency to fulfill more children presence and their participation in the urban areas as a citizen. In this direction first of all dangerous data parameters for children in the urban areas would be collected, then regarding to indices and space classification as the base of current risks, the compilation of safety strategies in tiny and total levels have been made.

Key words: Child-friendly city, Risk management, Urban area designing

1. Introduction

Attending to children's needs in environment and their participation in making decision which affects their life can bring about progress in acquiring of the skill, social responsibility, expansion of knowing power and finally increasing of the motivation.

Some urban areas specialised for children (like schools, playgrounds) and other places are the environments which child forcibly tackles with it like distance between school and house. In most cities of the country the child's specialised areas not only have not been designed well-proportioned with standard parameters but disregarding to children's needs amongst these areas, their special locations have been converted to so-called islands that child should be dependent on parents or to suffer many dangers, thus their independence will be decreased as distance increases between home and special location like playground. It is evident lack of

chances for choice or other social events like visiting of a classmate in a safe cycling course between school and park will deprive the child from social experiences. In recent decades actions have been made to improve child's health and safety. For example world health organization has performed some programme in direction of child protection against all sorts of physical dangers, biological hazards, chemical contamination, air and water pollution which have been accepted via action plan development with cooperation of different organizations.

As a matter of fact, with communiqué and international announcements for children's rights or plans which is called child friendly city, tries to study in all threatening dangers and with a participative and flexibility visions in direction of children point of view have fulfilled the executive plans.

In the mentioned above matter according to international announcement of children's rights, the safety means that the people should not have any fear and anxiety to their rights and lawful freedoms.

The main target and duty of each society should be to make calmness and satisfaction for its member but each community can not completely be safe and if the people do not feel they should have responsibility in front of society this arrangement will encounter with many difficulties. So it is necessary to mention the producing of a fundamental management and steady moral which will be feeding source for people of a society to be able reaching cultural establishment in the society areas.

The goal of this article is examining integration of urban areas designing and risk management process for children by authorities, urban designers and finally parents and children in urban projects for more efficiency to fulfill more children's presence and their participation in the urban areas as a citizen. In this direction first of all dangerous data parameters for children in the urban areas would be collected, then regarding to indices and space classification as the base of current risks, the compilation of safety strategies in tiny and total levels have been made.

2. Research Methodology

There are danger groups which threaten children in urban areas:

- Dangers emerging from child mentality and thinking :

These dangers mostly emerging from lack of environment recognition and low experience, low analysis power for time and locality, low ability in simultaneous focus on different subjects. For example moving rapid and sudden jumping to the street after exit from playground as a non-corresponding to new situation is serious or a child who has paid full attention to his play is not able to regard presence of dangers parameters like strangers around himself.

- Dangers emerging from physical situation :

These dangers are as a result of small body, too much moving, physical inabilities. For instance many accidents have been taken place by moving of parked vehicles and invisibility of the child by drivers because of his small body

- Dangers affected from community's environment:

Children of populated families because of control decreasing and parent's concentration insufficiency, work children because of supervising deficiency of parents, children of low income families because of high engagement of the parents, ethnic groups and religious are more subject to maltreatments.

- Environmental dangers:

as a result of incorrect design of city areas or others behaviours like passages which as lacking of parking area many cars have parked beside the streets.

Non attention of urban planners to make children's play areas will finally lead the children activities to the dangerous streets. unfavourable management for air pollution, sanitary water facilities and... in huge scale that emerge from authorities behavior and in smaller scale the behavior of other citizenships like not reducing velocity of the vehicles by drivers in the scale areas, schools, and non skillfulness of the child's educators, nurses paying attention to them.

Reconnaissance of risky regions:

Actions should be done to improve existing situation and making new safety facilities. In this category, at first there should be distinguished dangerous and safe locations from different organizations like transportation, fire station, police station, parks and green areas, studies organization through transact and cooperate to prepare a master plan according to their point of view of existing safe regions with owns criteria. For example, in recognition of more dangerous regions as compared with data from social affairs organization, transportation, hospital accidents toll one can observe that there are very high possibility of physical dangers emerging from collision with vehicles in areas which children workers are active, such places are reconnaissance as full dangerous regions.

Reconnaissance of risky times:

Taking care of children in different times is very diversified. The most important times which the children must be under tough care are:

Infantry courses (before school), invalidity times, before and after school, holiday times, leisure times.

It is mentioned that there should be equilibrium between all of these cares, for example the care should not be ignored during invalidity time as a reason of its difficulties and complications. As a matter of fact this needs cooperation between families and different organizations.

Needs reconnaissance

Children's presence in city area only take place when their needs correctly be reconnaissance and they feel they are a part of community and this subject needs to bring them for participation in urban process and support them during this participation.

Complication of urban problems caused cooperation of many specialists as follows in designing urban areas to make safety for children; experts from the fields of urban planning, architecture, geography, anthropology, psychology and environmental education. Growing up in an urbanizing world gives new emphasis to the active participation of children and youth in the planning, design and implementation of urban improvement. Creating better cities with children and youth is a practical manual way on how to conceptualize structure and facilitate the participation of young people in the community development process.

Apart from involving young people in making improvements to the places where they live, one of the most effective strategies for creating better cities is through the actual process of participation :helping young people to listen to one another , to respect differences of opinions , and to find common ground , developing their capacities for critical thinking , evaluation and

reflection , supporting their process of discovery , awareness building , and collective problem – solving , and helping them to develop the knowledge and skills for making a difference in their world.

It should be made opportunity for children to identify the environmental problems but children's preference from their needs depends on their tuition system and if there be an experienced teaching group their participation will be more applied.

The different methods which exist in this project for children participation are as follows:

- Tours of children's spaces with children
- Informal talk and observation in playgrounds
- Paper survey of parents
- Filmed interviews with head teachers
- Interview with play workers

Because artificial environment quality was mentioned as an important factor which decreases safety feeling potential in the society, therefore at first global designing for primary needs of children should be considered:

The principles of universal design should be applied with the needs of children in mind:

- Equitable use: urban design is useful to all people with diverse abilities
- Flexibility in use:

The urban design accommodates a wide range of individual preferences and abilities

- Simple and intuitive

Use of the urban designed features is easy and understandable, regardless of the users experience, knowledge, language skills or current concentration level

- Perceptible information:

Necessary information is communicated effectively to the users, regardless of ambient conditions or the user's sensory abilities

- Tolerance for error

Hazards and the adverse consequences of unintended or accidental action are minimized

- Low physical effort :

The urban design can used efficiently and comfortably with a minimum of fatigueless

- Size and space for approach and use:

Appropriate size and space is provided for approach reach and manipulation, regardless the user's body size, posture or mobility

Danger evaluation

the children's injuries have drew attention to a high range spectrum like play providers, the persons in charge of tuition, equipment manufactures, playground designers, play promotional agencies, assurance organizations, the health services, solicitors, advisory bodies, the media, parents and finally universities.

Danger is clearly an aspect of the social dimension of space. Assessing danger is the first priority for children when thinking about different environments and their preferences within them.

There are different methods to evaluate dangers. For example it is possible to classify dangers according to happening places, danger producing equipments(play levels, heights, play equipments), dangerous behavior which emerge from an incorrect behavior of a playmate such pushing until dangers of strangers),but in this classification the quantity is not alone

considered; For example, in classification on a base of equipment type, it maybe the number of children who have been injured by slide be more than whom have been fallen from heights, but intensity of injuries in children who have been fallen from the heights included damages like head fracture and serious injuries, hence the relationship between this kind of classification with injury's rate is very important that contrary to mentioned above subject it is a quality criteria and can not easily be measured.

Fatal accident is a danger in which physical or moral serious injuries in a long term period will affect to the children and should be separately considered.

Serious damages in children special places like schools, playgrounds with standardized equipments if have correctly been designed will rarely take place.

These damages mostly emerge from:

- The equipments which are brought by children or their parents to the playground
- Appearance of activities which are incompatible with forecasted designs like walking in the path of a moving swing
- Machines weariness in the fixed equipments which emerge because of poor attention of the authorities and lack of organizations in which the parents and children can propose their claims.
- Improper behaviors of other children
- Unpleasant behaviors of sinners and lack of control.
- lack of risk management in the child himself like sudden jump to a street which even is standardized from origin designing point of view.

As a result and according to observations, designs and play equipments can not alone be a cause of injuries. For example falling from slope depends on many parameters; children run into a slide, child was pushed from a slide, playing at night. So, management and behavior of the child is more important as compared with designing alone.

Design can to some extent control children behaviors, but there is a question:

Should the urban areas complete be safe for children?

Studying this vision, it should be mentioned that expression of dangerous activities in different countries is diversified according to their culture. In some countries it is believed there should be completely safe places special for children, but in some countries they believe that children should be encountered some degrees of dangers to be prepared with actual and more important dangers which they face in adulthood, hence the areas should have some extent of real risk.

The privilege of this vision is:

- Provides children with opportunities to enjoy freedom, and control over their actions
- Offers children opportunities for testing boundaries and exploring risk
- Offers a very wide range of physical, social and intellectual experiences for children
- Fosters independence and self- esteem
- Develops respect for others and offers opportunities for social interaction
- Increases knowledge and understanding
- Promotes creativity and capacity to learn

Negative consequences of such opportunities:

- Poorer ability in motor tasks
- Lower levels of physical activity

- Poorer ability to deal with stressful or traumatic events
- Poorer ability to assess and manage risk
- Poorer social skills

As these parameters can not mostly be easily quantitative, they are ignored by designers and authorities.

3. Research and Analysis

First step in the risk management is reconnaissance of various dangers. Risky places and its times should be considered as regarding to different organizations via master plan preparation. Evaluation of children's needs in various processes by allowing them to participate from beginning of the project is necessary.

Statistical and quantitative classifications are not reliable in risk evaluation process because they ignore privilege and defects of encountering with dangers and its intensity. Therefore as well as considering qualitative criteria, existing of a systematic cooperation in the administration policy is necessary. It should be pointed out that complete elimination of dangers in urban areas will deprive many social opportunities from the children and they will be encountered with many problems in the future. So it should be taught risk management to the children with definition danger's tolerance as well as delete of mortal dangers. The first step in this category is consideration of international standards of design in all urban areas (special for children or the public). More flexible designs in children special spaces will be done reasonable participation to execute their proposed demands. If in children's special places like parks, there be some degrees of danger (in consideration with tolerance of danger), the children themselves will practically learn their own protection ways including relationship with others, reaction in time of danger, hence their abilities will be increased in controlling and risk management of urban areas

Consequently the actions which should be done in management serial by authorities, organizations, parents and children are as follows:

Actions in huge scale:

Intervention in the risk management involves cooperation amongst groups and organizations like police, education, health and treatment, transportation, local councils and parents.

These interventions are as follows:

- Government support from low income families, orphans and providing suitable background of education, health and so on.
- Provision of necessary educational services, healthy, green and open area for all ages, sexes, ethnics, religious with equality by government.
- Approval of laws to standardize educational, healthy spaces, green and open areas with continuous control as well as compilation of guidance to find such places by government.
- Facilities management concerning drinking water, healthy nutrition, environmental pollutions by related organizations.
- Children tuition about their definite rights by schools and also by parents including security laws consideration, installed signals in the public spaces and a traffic indicators, respecting to other children rights, self defence right against strangers and finally having right of non relationship with strangers.
- Reconnaissance the places by parents in where child can solely go.

- Cooperation of related organizations in security provision of these places.

Actions in small scale:

Designing is a symbol of collective life in which for setting up the correct relationship there should be treaties that to some extent can decrease dangers emerging surrounding area and affect incorrect behavior of others. Designing should be such a style that causes more presence of children in their own special places because these spaces are more secure as compared with other spaces.

Most important preparations that should be considered to find special places for children to increase their presence as well as to make an estimate of their demands in other public spaces, are as follows:

- Comfort and security against sound contamination and environmental pollution as well as to move away passing traffic. For this purpose the place should be found out regarding to parameters like noisy and disorder senses not to demolish child's transaction with environment.
- Vicinity with educational centers.
- Vicinity with dwelling units that observation of families to the spaces be possible.
- The conditions of semipublic spaces should be such that the people feel they are under vision, therefore if somebody who intend to commit a minor offence will automatically be stopped.
- Simultaneous use of different cultures from one space will decrease offences which mostly include aged, sexed, ethnic, religious special groups, therefore it is necessary to find special spaces in environments regarding to symptoms of diversified culture, social and economy in the society.
- Children see dimensions in different categories as compared with adults. Dimensions should in all spaces be such a style that the child does not feel strange otherwise he will hardly become moral insecurity.
- Flexibility in elements arrangement and details of semi public spaces in the region in such a way that provide direct participation of child to create his own spaces with possibility of transaction with circumstance alongside his physical, mental and social growth, extending his special needs like research, discovery of space capabilities and chosen behaviors.
- Furthermore, flexibility should be in physical shape of environment like attention to smooth and flat surfaces(play capability and collective sports, running, cycling) chute levels(sliding), heights(ascending, looking around) barricade(hiding, calmness and sitting), but in any circumstances like crawl, hiding in the tunnels, the child should be under vision and control by watchful. For example concerning this matter, the transparent plastic shields can be used to make play tunnels.
- Diversification of building materials and its shapes, variety of element's arrangement and environment's details in such a way should be done that children have opportunities to make experience alongside examination and error with different materials to support their space control and analysis.

Consequence of this flexibility is environmental attractiveness as well as increasing of participation and freedom of action with result of more presence in the area.

- Mobility possibility and replacement in the space in such a way that child can discover new angles of the environment, therefore dogmatic and non mobile designs should be avoided.

- Suitable building materials consumption as well as reduction of obstacles and environmental dangers like edges, bumps, potholes and hindrances which perhaps there are in the floor, walls as ceilings
- Scale diversification in micro spaces of environment because macro spaces invite children to dynamism, replacement, surrounding area vision and micro spaces invite them to concentration, calmness and attention.

But, only creation of these spaces does not bring about presence and using of these groups. Lack of suitable access is a reason that these spaces will convert to islands in which the child for reaching should always be dependent on his parents or endures many dangers.

The preparations that should be considered in access to public spaces are as following actions: Continuing of pedestrian courses in direction of orientation improvement and realization of surrounding area specially distance between school to habitation place and security provision of these routes will cause children's independence from parents, encountering with social events, changing car dependency life to dynamic life as well as car traffic decrease around the schools, reduction in environmental pollution and accidents.

- To make preparation and convenient of public passages, installation of necessary signs and physical signals with preference of squares, main passages and crosses, special places of children.
- To make management for reduction of vehicles velocity like gradual increase of heights in trees, materials variation in the crossroads.
- To equip passages traffic lights with sound signals as well as pedestrian uphill grading near the crossroads to take more attention.
- Setting up signs and guidance signals of the region in the public spaces.
- To establish suitable furniture in the routes for halt and short stops.
- Passages with convenient width, reducing height of the stairs and curbs, to make resistance of the pavements against ecological conditions, smooth levels and non slippery.
- To make suitable aspect and view for edge of the way to increase connecting sense with surrounding area.

4. Conclusions

This literature has revealed several recurrent themes. Firstly, there is increasing evidence that urban areas insecurity deprive children to present in the public space and also lead to dependence to parents. Secondly, urban area designing can affect children's safety beside of organization's decision making, well trained child's work force, participation of parents and children. Furthermore risk associating with urban areas should be accepted to some extent in exchange for the social skills and other benefits and this would constitute a political judgment and not a scientific one, although it may be informed by science.

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