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Planning in Germany and Iran

Responding Challenges of Climate Change through Intercultural Dialogue

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Child-Centered Social Resilience based on Child-Centered Urban Resilience and Child-friendly Natural and Social Environments Components

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14.**Child-Centered Social Resilience based on Child-Centered urban resilience and Child-friendly natural and social environments components**

*Elmira Ghasemzadeh, Maryam Taefnia, Ghazal Farjami, Safoura Mokhtarzadeh,
Hojatollah Javadian Jazi*

Abstract

Cities have always lived with natural hazards, but climate change is increasing their frequency and intensity. In any crisis, children are the most vulnerable group and crisis situations related to climate change are no exception. Relation with nature prevents children from many social complications. In fact, one of the most important ways to control social pathology is to make people, especially children, resilient in crisis times. Resilience in cities refers to the ability of an urban system with all its social, environmental, and technical networks to adapt to changes based on its capacity. In this paper, the concept of child-centered social resilience is examined based on the conceptual framework of child-centered urban resilience and considering both child-centered natural and social environments and also their compatibility with the concept of social resilience as a matrix relationship. By considering the components of social resilience at the micro-level and the components of child-centered urban resilience and finding their relationship with the common components of child-friendly natural and social environments, a proposed framework for this concept has been developed.

Keywords: Child-centered social resilience, Child-friendly environment, Climate change

1. Introduction

Childhood is the first and most important period of life and an introduction to the transformations of an adult's personality, whose psychological needs are more complex than physiological needs (Rajabi et al. 2014). Therefore, paying attention to children's issues and problems and meeting their quantitative and qualitative needs is one of the most important necessities of a country. The environment affects children, so trying to provide a child-friendly environment (in urban systems referred to as a child-friendly city) can largely contribute to this encounter (Karkhane & Ahmadi 2015). Wandering children in cities are looking to find access points to nature. Relation with nature prevents children from many social complications (Shie, 2007), and at the same time there appears to be a link between depression, stress and anxiety of children and not interacting with nature (Lou 2006, Safavi Moghadam, Bahmani, & Mazloun Khorasani 2016)

Finding links between the child's connections with the nature of the city, as well as identifying the resulting social consequences, draws on the concept of social resilience. Social resilience is the capacity of a society to deal with disorders and changes. It means the ability of communities to self-organize, reduce stress, and increase their capacity to learn and adapt. A resilient society is able to respond to change and tension in a positive way and maintain its core responsibilities as a society. The purpose of this study is to define the concept of child-centered social resilience. This goal is achieved by identifying the common components of child-centered natural and social environments (Ghasemzadeh et al. 2019).

Subsequently the effects of climate change on children will be taken into consideration. Social resilience and child-centered urban resilience are the main basis of study. According to the definition of a MO'ĪN Persian dictionary, a child is a person, who has not reached the age of puberty (boy or girl). In American heritage culture, the child is also referred to as the person between birth and puberty (Mosby Inc. 2013). Therefore, a child is a person who has not reached the age of puberty, and since it usually occurs in boys at the ages 13- 16 and in girls between the ages of 11 and 14, choosing a criterion less than 12 years old is a proper basis for defining a child (Shie 2007).

2. Child-related environments

2.1 Child-centered natural environment

Children are born with great curiosity and affection to their natural environment (Figure 14-1). There are various studies on the effective effects of green space on different behavioral characteristics of children.

Outdoors and open spaces (such as green spaces) play an important role in children's perceptions and behaviors and ensure their growth and creativity. Natural environments including green spaces, provide children with unique opportunities such as inciting engagement, risk-taking, discovery, creativity, mastery and control, strengthening sense of self, inspiring basic emotional states including sense of wonder, and enhancing psychological restoration, which are suggested to influence positively different aspects of cognitive development (Dadvand et al. 2015). Cognitive development means how children think, explore and figure things out. It is the development of knowledge, skills, problem solving and dispositions, which help children to think about and understand the world around them.



Figure 14-1 Children's participation and group games in nature (natureplaywa.org.au)



Figure 14-2 Children's games and discoveries in nature (natureplaywa.org.au)

Connection with green and open space and group and purposeful outdoor games (Figure 14-2) have an effect on reducing the symptoms of behavioral disorders in children (Zarghami and et al. 2013). The evidence consistently suggests a beneficial association between green space exposure and children's emotional and behavioral difficulties, particularly with hyperactivity and inattention problems (Vanaken and Danckaerts 2018). Children are much more affected by the environment than adults, and therefore a child's social, emotional, psychological, and physical growth are greatly affected by the quality of their environment (Özdemir 2019). An examination of theories related to child-friendly designs shows that paying attention to urban green space is the main factor in this approach; improving a child's social participation in decision-making and design can increase children's sense of belonging to their city. Also, green

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spaces create participatory contexts between children and other age groups in society (Kamelniya et al. 2009). Therefore, social participation, security, sense of belonging and urban facilities are the main topics of a child-friendly city. Research by Karen Malone (2009) in Wollongong suggests that the city should be a place for socializing, observing and learning performance and community norms for children. Places where children can explore nature, as well as relation with those encourage children to explore the world.

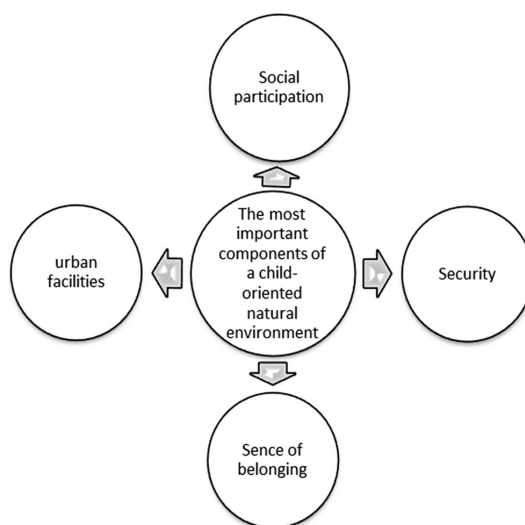


Figure 14-3 Components of a child-friendly natural environment
(Authors driven from text)

Alvin Lukashock and Kevin Lynch have tried to show what children notice in their city and what elements of the physical environment leave the deepest impression on them. After 40 interviews, they made some very interesting points about the child's perception and view of the neighborhood and the city. In fact, elements like the city floor (among the items mentioned most often are the lawns, which are often associated with spaciousness and a sense of freedom), texture and color, foliage, play areas, hills, transport and traffic, space and the sense of crowdedness, marks of social status, associations orientation and neighborhoods have played the biggest role in reminding children of their surroundings (Lukashok & Lynch 2007).

Horley and Pertza (2004), in an article entitled "Child-friendly environments: attitudes and strategies" concluded that the gap between government and administrative institutions and the societies, particularly children's needs and interests, are often forgotten in creating a suitable city for children (Sadeghi, Tahmasebizadeh & Shahi 2018).

2.2 Child-Friendly City in Iran

The concept of a child-friendly city in Iran was first introduced after the 2003 earthquake of Bam; UNICEF, in collaboration with other institutions, has defined and targeted the Children's City project. During the Bam Child-Friendly City project, working groups were formed on topics such as playgrounds, neighborhood and city, school and education, housing and treatment. In order to guide these topics, the opinions and ideas of children aged 6 to 13 years

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were asked about the favorite characteristics of their desired environment or about their needs and wishes. In this project, using group and participatory discussion methods such as storytelling, tables and puzzles, modeling, painting, etc., children's opinions were collected and analyzed. Although most of the children's ideas were related to the topics they had experienced in the past, there are characteristics for material selection patterns, some of the required spaces and their location such as green spaces, bike paths, flower and tree locations, etc. Green spaces in combination with playgrounds, separate areas for children and adults, spaces for shared collective memories and materials such as wood and grass fields including children's desires to describe green space patterns in a sample of group results for the Bam child-friendly city project (Kamelnia and Haghiri 2009). The objectives of this plan are in line with the rights enshrined in the Convention on the Rights of the Child (UNICEF 2018). The main goals of this project were as follows:

Table 14-1 The objective plan for children's rights

	Goals	Children's rights (UNICEF 2018)
1.	Paying attention to the local needs, special needs of children, families and other citizens of the region.	The right to be valued and to be respected and treated fairly. The right to family life, play and entertainment.
2.	Increase social awareness to strengthen respect for children.	The right to be valued and to be respected and treated fairly.
3.	Involve children in the decision-making or policy-making process and use their opinions directly or indirectly.	The right to be heard.
4.	Enhancing facilities and capabilities and capacities development for future generations.	The right to social services.
5.	Identify people and entities that can influence project funding.	
6.	Motivate all stakeholders and strengthen participation.	
7.	Attention of the government and the legislature to the urban needs of children, such as ensuring safety, avoiding violence, meeting educational needs, and etc.	The right to security.

Also, in cities such as Chalous, Lahijan, and Tehran, measures have been taken in this regard (Sadeghi, Tahmasebizadeh & Shahi 2018). Creating essential and safe spaces, safe transportation, green spaces and creative games as well as museums and children's libraries are the main issues in child-friendly cities in Iran (Iran Unicef 2019). Twelve cities in Iran were

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selected as pilot cities for a child-friendly city, and Esfahan is the third child-friendly pilot city in West Asia (Imna 2019). The initiative encourages local governments and other stakeholders to pay more attention to meeting the needs of their children, and ensure their participation in local decision-making (Unicef 2019).

2.3 Child-centered social environment

According to the literature presented in the previous section, the environment is considered from two perspectives to examine the conditions of the child: the natural environment and the social environment. The child's relationship with environment should be studied in the context of both natural and social environments (Shie, 2007). The sociological approach considers the child to be a social actor whose personality is formed in connection with different spaces.

Children with their different abilities, needs and natures develop a more complex personality based on the stages of age and development, also being moderated by their living conditions and social context of their place of residence (Karkhane & Ahmadi 2015). Homes, kindergartens, schools, parks and other public spaces such as streets and alleys should be able to meet the biological,



Figure 14-4 Strengthen children's social skills and participate in group activities (brisbanekids.com.au)

educational and leisure needs of the child (Figure 14-4); but in urbanized areas, there are often times, little attention paid to the needs of children, and a tendency to keep them in protected places such as playgrounds until they reach the age of confrontation with the urban environment, can be observed (Ghiasvand & Soheili 2014). If the children are well-embedded within social environment of the city, this will largely support them to become a capable human being and a successful adult.

Otherwise, society and future generations might suffer social and psychological harm. A society where there are experiences of depression, frustration, and spatial stress in childhood, and through the process of socialization in urbanized areas, will encounter various difficulties (Sadeghi et al. 2018). In urban communities, social units, families, schools, and urban spaces are of particular importance in the process of educating and socializing children. Children want to be social and interact with their peers and the community. Also, they like to spend their time

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in natural environments and be active. Therefore, facilities should be available to children and provide a safe urban environment for them. Today, the focus of urban planning and management has shifted to lower, smaller, and more objective levels of urban life and creating a proper environment for children has been identified to be one of the most important items in the urban life realm (Tavassoli 2017).

As we move beyond the traditional concept of urban planning, new concepts have emerged inherently descended from sciences such as sociology as well as psychology. Sense of belonging, social security, and social vitality (Figure 14-5) are some of the most important of these concepts, which have particularly been outlined to contribute to a healthy growth process for children in large cities (Ghiasvand & Sattari 2015). Hence, urban environments corresponding to these social requirements of the citizens can contribute to the development of a more happy and vibrant society.

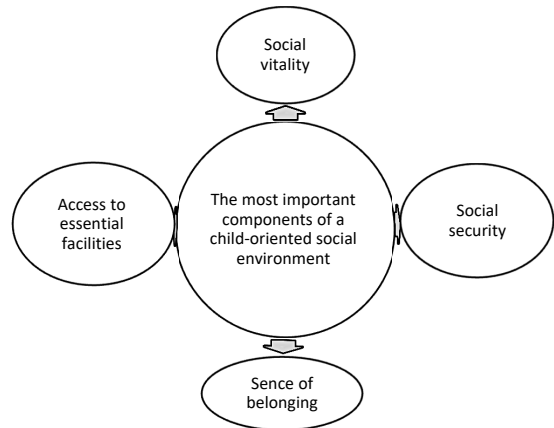


Figure 14-5 The most important components of a child-centered social environment

3. Natural hazards and children

Children can identify environmental risks based on their conception and analysis. A child-centered participatory research project in El Salvador and the Philippines found that children have a unique ability to conceptualize and understand risk in relation to their own experience of vulnerability and that children's risk perceptions differed according to age and gender (Tanner 2010). Children can also be the cause of change and are often able to mobilize their communities and create a fertile ground for action. Evidence gathered from the children participating in a study in Kenya and Cambodia demonstrated their aptitude for absorbing new information, proposing adaptation strategies, acting on future visions and the needs of future generations, taking action for the benefit of their communities; and prioritizing sustainable management of natural resources and environmental concerns (Chatterjee 2015).

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The social nature of human beings requires that they always interact with each other in a common context and environment so people in society, both individually and collectively, interact with their surroundings. Nowadays in the name of development by technology, human has turned the interaction between himself and nature into a conflict. This conflict has led to environmental crises, such as pollution of urban environments and the proliferation of cancers, destruction of natural resources and climate change (Farahmand et al. 2014). Climate change is an interconnected chain. The chain starts with development activities, especially fossil fuel consumption, and has several consequences, including greenhouse gas emissions and related phenomena such as global warming and the resulting increases in flooding of settlements, storms, floods, or droughts (Khoshmanesh et al. 2015). In fact, one of the most important ways to control such impacts of climate change is to prepare people for times of crisis by increasing their individual as well as societies' resilience. For the first time in a study entitled 'A place-based model for understanding community resilience to natural disasters' Cutter et al. considered 6 forms of ecological, social, economic, institutional (organizational), individual (psychological) and physical (basic) for resilience, and mentioned that resilience involves a continuous process of change and modification (Suleimany et al. 2019).

4. Resilience, Urban and Social Resilience

The emergence of resilience from environmental issues began in the 1970s and was introduced as a system capacity to improve performance in disruption time. Resilience is a function of the adaptive capacity of a given system, and the main goal of systems resilience is to achieve perfection even in the face of pressures and stress (Noruzi et al. 2017). In fact, the root of the Latin word means "return to the past". In 1973, Helling, an ecological theorist, introduced resilience as a descriptive and qualitative concept expressing the dynamic characteristics of a system (Partovi et al. 2016). Some have attributed resilience to human resilience to disasters. But most of all, the "resilience" paradigm may provide insight into the social-environmental system and sustainable management. In particular, resilience is introduced as a very complex adaptive system according to the state of cities; now the question is, what exactly does "urban resilience" mean? (Mohammadi et al. 2016).

Following the possibility of various disasters in residential spaces, urban planners are looking for ways to increase the capacity of communities to compromise and deal with uncertain risks in cities in the form of making them resilient. Resilience in cities refers to the ability of an

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urban system with all the social, environmental, and technical networks to adapt to changes based on its capacity. The components of urban resilience are: infrastructural resilience, organizational resilience, economic resilience and social resilience (Noruzi et al. 2017). *City resilience describes the capacity of cities to function, so that the people living and working in cities, particularly the poor and vulnerable - survive and thrive no matter what stresses and shocks they encounter (Rockefeller Foundation & Arup 2015).*

Social resilience is the capacity of a community to deal with disorders and changes. This includes the ability of communities to self-organize, reduce stress, and increase their capacity to learn and adapt. A resilient society is able to respond to change and tension in a positive way and maintain its core responsibilities as a society (Dalakeh et al. 2017).

The concept of social resilience can be examined on two levels conceptually and empirically: the individual (micro) dimension and then society (macro) (Figure 14-6). In Micro level, social resilience is defined as the extent of commitment and ability of the individuals within the society to act on behalf of mutual social interests while protecting the rights of the individuals within their society; as well as the extent of their ability to cope with various stressful situations. The first part of the definition is concerned with the individual's resilience and encountering various Intra and extra social stressful situations, and the second part emphasizes the individual's sense of social commitment and motivation to contribute to society while protecting the rights of the individual. This definition pays attention to the performance of the individual within the society. So the assessment of it will be measurements of attitudes and behavior.

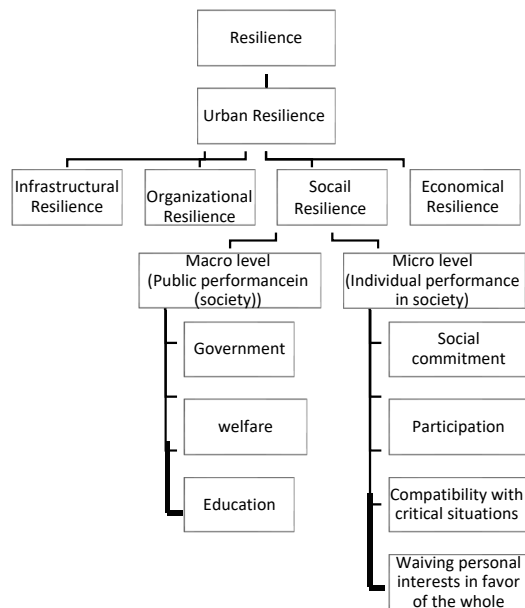


Figure 14-6 Social Resilience Hierarchy
(Authors driven from text)

Social resilience in a macro perspective is represented by the level of the society's general performance in the public sphere, which is expressed in the area of education, welfare, democracy and government, as well as in the society's ability to cope with internal schisms and conflicts while protecting its basic structure and goals. Different social indicators, in the

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fields of education, welfare, democracy and government, as well as data relating to the conflicts within the society, help to measure this level of performance (Friedland et al. 2005). Therefore, finding the framework of child-centered urban resilience in order to be adaptable and faced with the risks of urban climate change will enable the prevention and reduction of this type of nature inflicted damage for children and other members of society.

5. Child-Centered Urban Resilience

Cities have always lived with natural hazards, but climate change increases their frequency and/or intensity (World Bank, 2011). In every crisis, children are the most vulnerable groups and climate change is no exception.

Plan International and Arup developed the Child-Centered Urban Resilience Framework to involve vulnerable groups in planning processes. The framework guides organizations to design, plan and implement community resilience activities in urban settings. Cities are transforming because of demographic and social changes, inequity and environmental risk. In response, signatories to the New Urban Agenda¹ made commitments focusing on vulnerable urban groups, including children. Child-centered organizations acknowledge they need to respond by increasing efforts to build resilience and align these efforts with global declarations, such as the New Urban Agenda. The Child-Centered Urban Resilience Framework (CCURF) was developed to assist the work of these organizations to build resilience in cities in support of children. The completion of the CCURF coincided with the United Nations Conference on Housing and Sustainable Urban Development, Habitat-III (October 2016) and was launched at Habitat-III by Gillian Bird, Permanent Representative of Australia to the United Nations (Pokharel et al. 2020).

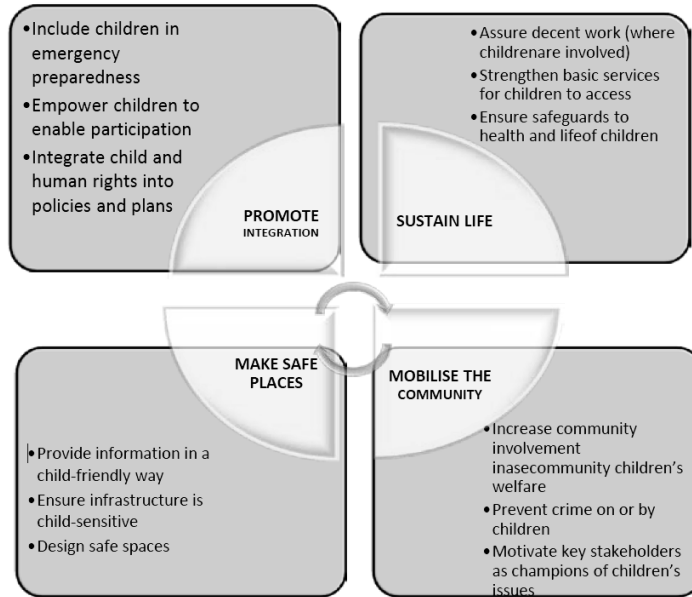


Figure 14-7 Child-centered urban resilience framework (Pokharel et al., 2019)

The CCURF is guided by urban systems thinking and aligns child and human rights and gender-sensitive approaches with urban development and promotes children as agents of resilience. The CCURF sets out four strategic action areas:

- **SUSTAIN LIFE** in urban communities where children and youth lack adequate care. This can be done by strengthening and improving access to basic services, ensuring decent work and safeguarding survival and development.
- **MOBILISE THE COMMUNITY**... to collectively ensure and value the protection and promotion of child and human rights. This can be done by promoting social security and protection, especially for girls, increasing community involvement and motivating key stakeholders.
- **MAKE SAFE PLACES**... in urban areas where children can live, play and grow. This can be done by designing safe spaces and child and gender-sensitive infrastructure, and providing information that all children, youth, girls and boys can access.

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- **PROMOTE INTEGRATION...** to influence the management and planning of resilient cities that are responsive to and inclusive of children, youth, girls and boys. This can be done by improving preparedness to emergencies, promoting participation; and integrating child and human rights into policies and plans (Pokharel et al. 2019).

12 interventions pose answers to critical questions and suggest action to build the resilience of cities for children, youth, girls and boys:

- 1- Strengthen basic services for children to access
- 2- Assure decent work (where children are involved)
- 3- Ensure safeguards to health and life of children
- 4- Increase community involvement in children's welfare
- 5- Prevent crime on or by children
- 6- Motivate key stakeholders as champions of children's issues
- 7- Design safe spaces
- 8- Ensure infrastructure is child-sensitive
- 9- Provide information in a child-friendly way
- 10- Include children in emergency preparedness
- 11- Empower children to enable participation
- 12- Integrate child and human rights into policies and plans
(ARUP, PLAN INTERNATIONAL, SWEDEN and Australian Aid 2016)

5.1 Child-Centered Social Resilience

One of the most important forms of resilience is social resilience which was defined by Timmerman as a 'Reflection of society's ability to cope with probable disasters in the future' (Timmerman 1981). As it mentioned before, making resilient communities is one of the most fundamental action for achieving sustainability; Because resilience in confronting disasters is more than being prepared to cope with, and it affects and depends on different dimensions of a society like social capitals, available resources, etc. (Suleimany et al. 2019).

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Understanding children's perspectives as a means of giving meaning to a child's friendly environment in order to improve the quality of environments requires an understanding of how they interact and participate properly. A real understanding of children's values and desires, and not just their showy participation, helps to achieve a child-centered environment. In this context to consider each and every child as a unique personality, not as an immature adult is of central importance (Chatterjee 2015).

In order to better understand the concept of child-centered urban resilience, Figure 14-8 shows the relationship between social resilience components and child-centered urban resilience components. Thus, the role of cohesion, which includes involving children in emergency preparedness in critical situations, their integration into participation and measuring their adaptability, is more important and respectively the life tolerance, social vitality, safety and security are most closely related to the components of social resilience at the micro-level (individual performance in society).

Figure 14-9 also shows the relationship between the components of social resilience at the micro-level and the components of the child-centered social environment. As mentioned, the three components of security, sense of belonging and proper access to sensitive facilities are common to elements of the child-centered natural environment too.














Individual readiness	Coping and Adaptation With critical situations	association	Social Commitment	social resilience child-oriented social environment
				Social vitality
				Social Security
				dependency
				Proper access to sensitive facilities

Figure 14-8 Relationship between the components of social resilience at the micro-level and child-centered urban resilience components (Authors)













Individual readiness	Coping and Adaptation With critical situations	association	Social Commitment	social resilience child-oriented urban resilience
				sustain life
				Safety And security
				Correlation
				Social dynamics

Figure 14-9 Relationship between the components of social resilience at the micro-level and the components of the child-centered social environment (Authors)

6. Conclusion

In this study, the components of child-centered social resilience in line with climate change are examined based on the conceptual framework of child-centered urban resilience. The results are presented in the form of a conceptual model (Figure 14-10). This model refers to children's resilience, readiness, and adaptability to climate change. In the model, the components of social resilience at the micro-level are at the center (social commitment, association, coping and adapting with the critical situation and individual readiness) and the relationship of each separately from one side with the common components of two natural and social child-centered environments and from the other side

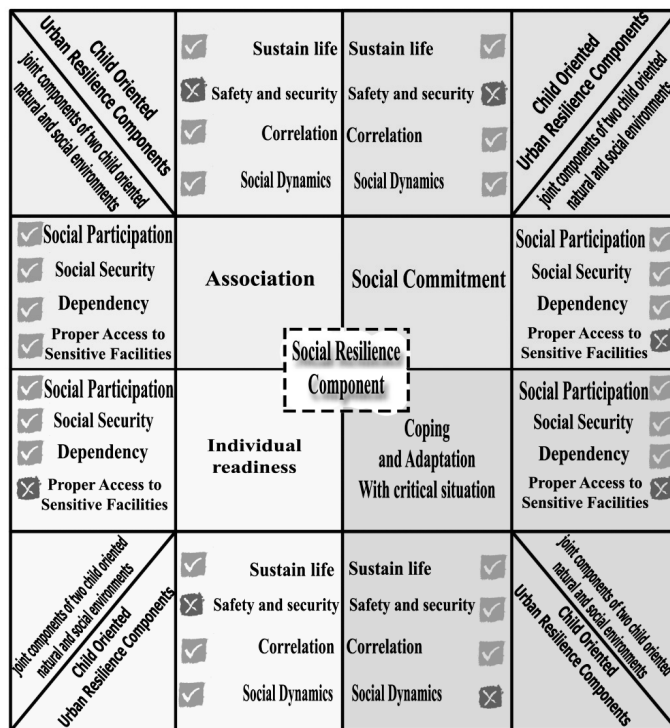


Figure 14-10 Child-centered social resilience conceptual model

with the components of child-centered urban resilience are specified. The tick mark means there is a connection and the cross signifies the absence of a connection. In fact, children's relationship with both natural and social environments and the structure of child-centered urban resilience, as well as the connection of these two with the components of social resilience at the micro-level, has determined the conceptual framework of this study.

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