ROLE OF PUBLIC SPACES OF RESIDENTIAL HIGH-RISE BUILDINGS IN SOCIAL CAPITAL INCREASE

*Esmaeil Zarghami and Seyyed Mojtaba Mousavi Gheydari
Department of Architecture, Tehran’s Shahid Rajai University
*Author for Correspondence

ABSTRACT
Undoubtedly, residential high-rise buildings can be an approach for metropolitans confronted with problems such as high cost of land, environmental degradation, lack of time, heavy traffic, etc. in the meanwhile, designing of private spaces of tall buildings have gotten more attention and designing of public spaces in such buildings have gained less. Tehran’s studies suggest that residential high-rise buildings not enjoying a desirable public space lead to psychological and social unrest among their residents and surroundings. Using qualitative content analysis methodology, the present library study reaches to the following results regarding the effect of designing public spaces on social capital:
1- Public spaces are the container of “urban activities”, which these performance activities, whether selective or final, influence social capital creation with the increase of interactions and formation of collective milieus.
2- Given the studies on the concept of social capital and considering the indices of faithfulness, trust, network connections, individual authority, corporate identity, interaction, social norms, reliability, duration of stay, etc. in designing public spaces, one can expect the manifestation of social capital concept in public spaces of residential high-rise buildings.
As such, norms of cooperation, collaboration, difference acceptance capacity, feeling of effectiveness, value of life, social mediation, and socioeconomic support are generators of social capital in public spaces of residential high-rise buildings.
3- Social functions of public spaces including: national solidarity, boosting of local associations, increase of interactions in social spaces, social integrity, and demonstration of cultural values are influential in creating social capital in public spaces of residential high-rise buildings.

Keywords: Public Spaces, Social Capital, Residential High-Rise Buildings

INTRODUCTION
Living in a community and the need for seeing and being seen are among the inevitable characteristics of humans.
This social life and the social interactions within it require especial architectural spaces for social interactions and promotion of qualitative and quantitative level of social dealings. In this regard, as the spaces and places for social life of their residents, residential high-rise buildings call for public spaces in order to perform people’s common affairs and meet public needs. Such public spaces can include spaces for doing residents’ daily affairs and activities, and spaces for promoting of qualitative level of social relations and as a result, for increasing social capital existing among residents of residential high-rise buildings. In a wider view, public spaces of residential high-rise buildings can be a bridge for linking tower residents with surroundings and even with the general public in order to increase social capital among people, for example spaces for holding exhibitions and rituals, etc. In the meantime, pundits’ views regarding designing of public spaces of residential high-rise buildings need to be studied. It is hoped that by relying on social capital-influencing factors, one can introduce a strategy for designing public spaces of residential high-rise buildings with a social capital approach.

Statement of the Problem
Designing and implementing residential tall building without paying attention to rules of constructing tall buildings have led to sharp rise of density and decrease of architectural spaces and urbanism. This disregard causes that the needs of residential high-rise buildings’ residents influence them to use public
spaces of neighbors in urban spaces, in turn leading to psychological disorders among residents of areas around tall buildings.

Under Section 6 of the Iranian Supreme Council for Urbanization and Architecture on March 05, 1993 entitled “Residential Zoning of Towns into Single-Family, Multi-Family, Apartment Complexes, etc.” the minimum open space for nine-or-higher-storey buildings has been decided to be 40 sq. meters per residential unit while in 142 tall buildings studied in Tehran’s areas 1 to 3, only 4.2% enjoy such a per capita. Unfortunately, in designing and constructing other 95.8% of high-rise buildings, the minimum per capita of open space for per residential unit has not been observed (Farhoudi, 2002).

Truly enough, most of urban spaces are not able to meet the needs of man as a social being. People view urban spaces only as a path for passage rather than for transition. In fact, these spaces provoke people to flee instead of encouraging them to participate and doing social dealings. Hence, the experience of contact with others, sense of belonging to society, face-to-face visits, social interactions, and the experience of seeing and being seen which is of the most important needs of people, no longer transpire properly.

People’s not using of such spaces is the result from this shortcoming that will bring about distress and mental illnesses such as overuse of virtual spaces for communicating with others (Mozafar, 2012).

Given the assessment conducted on several residential high-rise buildings in Tehran, failure to codify special rules for these buildings, generality of laws, and lack of strict control in designing, implementing and observing these spaces have created qualitative and quantitative problems for the residents of complexes themselves and surrounding buildings.

This is of no certain relationship with tallness of buildings. For example, in high crime in tall buildings, the assumption that high altitude leads to crime increase is a rejected one because it is rejected in European high-rise buildings.

The reason for crime increase in Iran’s tall buildings has been inattention to the rules and terms related to construction of high-rise buildings and mass building in Iran (Pour, 2011). The present study is necessary because improper designing of residential public spaces specifically in high-rise buildings may be followed by irreparable effects. Damages resulted from improper designing of residential public spaces, whether qualitatively or quantitatively, can not only do the residential high-rise buildings’ residents themselves harm, but also the residents of surrounding areas. Psychic trauma, human, social, and even regional harm can be resulted from inattention to proper designing of public spaces based on components like security, responsiveness, sense of place, space identity, etc., damages that may sometimes lead to residents leaving their residence, such as what had happened in Pruitt-Igoe project, which finally resulted in destruction of this huge project.

In the meantime, social capital as a social value resulted from residents’ being together and group and associative activities is directly related to designing of residential public spaces. Amount of popularity and use of such public spaces by residents have a direct effect on increase and/or decrease of social capital. Thus, the present research views it as necessary that the existing shortcomings in designing of these spaces decrease and the social and psychological problems from shortage and improper designing of such spaces get to their minimum.

In this regard, the present research seeks to find answer(s) to the following questions:

1- What is the necessity of attention to public spaces in residential high-rise buildings? What are the characteristics of it?
2- What are the social capital-influencing factors?
3- What is the effect of social functions of public places on creation of social capital?

MATERIALS AND METHODS

Research Methodology

Content analysis became predominant mostly in the 20th century as a scientific technique. Various indices of social sciences including communications, sociology, political science, and psychology have adopted this technique in their studies.
Research Article

Social issues have a wide range solving of which is dependent on knowing their subtle, in-depth, and seemingly invisible roots. Knowing these issues automatically calls for getting knowledge of and mastery over the basis of their recognition method. Qualitative and quantitative studies, which are from two different paradigm bases, specify these paths. The method known as quantitative or scientific is adapted from positivist philosophical system while the philosophical bases of qualitative method are rooted from hermeneutic philosophical system. In quantitative methods, it is tried, via creating distance between researcher and study subject, to reach an objective understanding of reality, a reality based upon explanation, prediction, and testing as the criteria of positivism paradigm, and on measurable variables. However, qualitative studies which are based on hermeneutic paradigm and phenomenological methodology are based upon understanding of events’ meanings by studied subjects. In this case, the look at phenomena is holistic and comprehensive, and following this methodology is a way for gaining knowledge through discovery of phenomena’s meanings. In Maykut and Morehouse’ opinion, four fundamental differences between qualitative and quantitative studies are: 1. Words (concepts) versus numbers, 2. Insight-oriented view versus objectivity-oriented perspective, 3- Discovery versus proof, and 4- Anthropocentrism versus tool-orientedness (Mohammed, 2001).

One of the fundamental features of qualitative research is theorizing rather than theory testing (Mohammed, 172). Using qualitative research, one can consider a step-by-step empirical, methodological, and controlled approach by observing components under study. These definitions state that qualitative content analysis allows researchers to interpret the authenticity and trueness of data in a subjective, but scientific manner. Objectivity of results is warranted by means of a systematic coding process.

The present study, using qualitative content analysis of theories, approaches, and designed models and extracting strategies in the area of designing public spaces in residential high-rise buildings with the approach of social capital, seeks to deduce the principles and rules of designing public spaces of residential high-rise buildings with the approach of social capital.

Definition of Public Spaces

Public spaces refer to one of the most important spaces in urban life which is the place for social interaction and economic, social, political and… dealings. Public spaces of a town must provide for social and cultural communications as well (Carmona et al., 2009).

Regardless of having to be globally or locally known, public space as the meeting place for people is representative of a society’s identity and has impact on its identity as well. Public places are all captured from biologic values, habits, and methods of cultural groups which are utilized for living in certain environments. Via analysis of native beliefs and habits of cultural groups, one can find out why etiquette of using public spaces is different.

Today, the challenge in front of public space planners and researchers is mainly related to dealing with these two major views on public space defended by social sciences:

Public sphere and publicly accessible spaces

The former is defined with the concept of dialogue and debate and the latter is related to motion. The first perspective raises the important and even urgent matter of democracy while the second view pays more attention to the concept of individual freedom especially in a form of “the right to the city” (Lefebvre, 1968; Mitchell, 2003).

In any case, public space is the place for interaction and citizens’ behaviors, and forms the social soul and feeling of social congruence (Punter, 1995).

The basis of public spaces is the social interactions and dealings within them. In Francis Tibbalds’ view, public space is a common ground for people’s activities, functions and ceremonies such as celebrations, rituals, and cultural practices, and an instrument for expressing political and social beliefs (Carr et al., 1992).

Briefly speaking, the general opinion is that public spaces for towns are necessary due to political, social, economic reasons, public health, and biodiversity (Banerjee, 2001).
Public space can be open, semi-open, or closed. In accordance with January 25, 1999 Act and June 12, 2000 Amendment of Tehran’s Council for Urbanization and Architecture, the required open space for high-rise buildings is obtained via following relation:

\[
\text{Open Space Area} = \frac{\sqrt{\text{Number of Floors} \times 100}}{4.2 \times \text{Total Area of Infrastructure (except for underground) \times k}}
\]

where k is the adjustment factor for environment and urbanization. In other words, if an area is worse in terms of air pollution or when it needs more open space for tourist attractions or if it has greater need of semi-private green spaces due to lack of public green space or when the proportion of children and the old in the potential residents of high-rise buildings are bigger than others, or when the family aspect is proportionately at a high level, then a bigger factor is taken into account so that more open space is provided.

For instance, if the total area of a high-rise building is 3000 square meters, k factor to be 1/5, and it has 9 stories, then the area of open space will be 630 meters, and if k factor is 1, then this area will reduce to 420 meters. However, this amount should not be less than 40% of total area of the land plot.

Under Section 6 of Supreme Council for Urbanization and Architecture on March 05, 1993 entitled “Residential Zoning of Towns into Single-Family to Apartment and High-Rise Complexes”, the open space per capita for Tehran’s buildings with more than 6 stories has been decided to be 40 sq. meters per residential unit while in 142 tall buildings studied in Tehran’s areas 1 to 3, only 4.2% enjoy such a per capita. Unfortunately, in designing and constructing other 95.8% of high-rise buildings, the minimum per capita of open space for per residential unit have not been observed.

In a way that:
- 32.4 percent are less than 10 square meters;
- 37.3 percent are between 10 and 20 square meters;
- 16.2 percent are between 20 and 30 square meters;
- And 9.9 percent is 30 and 40 square meters (Farhoudi, 2001).

Thus, paying attention to designing of suitable public spaces is a necessity which has to be taken into consideration in planning for designing residential high-rise buildings.

Defining High-Rise Buildings

From centuries ago, high-rise buildings have gained man’s attention in different civilizations. The origin of this attention has been mainly religious and political and its result has been sense of belonging and servitude of unnecessary masses in front of the lords of these buildings.

The witness to this claim is the creation of buildings like ancient temples, churches, mosques, etc. which as an elevated and mighty single-building have had absolute domination over their surrounding urban space. According to historians, the first residential high-rise buildings are related to ancient Rome, where in the third century BC, these buildings became gradually higher with the increase of population in a way that height restrictions were imposed in order to diminish the risk of collapse of buildings (Morris, 1989).

Modern tall-building emerged in the last decades of the nineteenth century in Western countries and has demonstrated itself as one of the predominant forms in the realm of architecture and urbanization worldwide since then. In Iran especially in metropolises, tall-building has been adopted for more than half a century. In recent decades, this has been more influenced by functional need and generally by residential usage. This has been rapidly developed as a policy for meeting housing need. Creation of tall buildings and towers and establishment of different tall and semi-tall, discrete and continuous residential complexes in different cities certify of that (Azizi, 2012).

Generally speaking, there are two frameworks regarding definition of high-rise buildings:

1- Definition by buildings’ height
2- Definition by building’s features and/or feasibility of establishing it in town and in the region

Different definitions have been presented in this regard. As example for the first definition, one can refer to access to fire-fighting equipment (which in Iran is 23 meters according to Journal No.122) and necessity of using elevator in buildings for residents (in Iran, buildings with more than 4 stories need elevator, and they are considered high-rise if having more than 4 stories), and regarding the second
definition, one can say that a high-rise building is not specifically recognized by number of stories or height, but the important feature of such buildings is that their design or function has been influenced by a symbol of height or being high. Of the main high-rise-related definitions introduced in England, one can refer to buildings taller than average number of adjacent area floors and to buildings remarkably changing skyline. For instance, a building with 75 meters height is considered high while Times considers 30 meters height to be tall. Accordingly, “Council of High-Rise Buildings and Urban Settlements” in USA approves of any definition for tall buildings in relation to the effect of their tallness on design and function or the urban effects of the buildings in a city (Rahmatoallah, 2001). However, 6- or more-storeyed buildings are called high-rise buildings according to Rules and Regulations of Iran’s Supreme Council of Architecture and Urbanism in 1998. According to the Tehran’s Comprehensive Plan Act of 2007, 12- or more-storyed buildings are known as tall buildings (Main Document Approved by Comprehensive Plan of Tehran, 2007).

Tall buildings influence urban life in different ways. High-rise buildings have influence on townscape from semiotic, aesthetic, identity, and environment legibility aspects.

In General, the criterion adopted for assessing two different kinds of cluster and single high-rise buildings in townscape includes three major townscape-influencing factors mentioned in the definition of townscape.

**Concept of Social Capital**

Concept of capital was first officially manifested in Marx’s works and in concepts such as added value. It took many years for emergence of more human interpretations of such concepts. In a way that according to subjects, the role of capital and its kinds were introduced to education as well.
Bourdieu has recognized four kinds of capital which include economic capital, cultural capital, social capital, and symbolic capital (Taj-Baksh, 2005). Various authorities and researchers have been paying attention to social capital in economic, social, and political areas and in theoretical and empirical dimensions. However, there still exist ambiguities and confusions in their findings. Accordingly, it is necessary to review experts’ theoretical views in order to achieve a comprehensive conceptual framework. In the opinion of classic thinkers such as John Dewey and Thorstein Veblen, social capital-related subjects have been pointed to. But in sociology, these subjects and themes, with an emphasis on some constituent elements of social capital, are indebted to Karl Marx, Émile Durkheim, Georg Simmel, and Max Weber more than to anybody else. In Karl Marx’s view, material conditions of production such as generative forces and productive relations influence formation of social relations and dealings. He has presented social relations in the form of social classes and revolutionary struggles (Maliheh, 2010).

Durkheim has emphasized the centrality of community for creation of social capital and its kinds and, with social mechanical and organic correlation forms, seeks to analyze social relations. By introducing some aspects of social contracts, Durkheim studies human communications and relations that are preconditions for formation and continuity of mutual actions, networks, and social groups (Durkheim, 1980). With the discussion of social dealings in small and big communities, Georg Simmel has talked about social capital especially social relations aspect (Simmel, 1993). Max Weber, German Sociologist, has studied individual aspects in social relations and dealings and emphasized elements such as responsibility, sense of commitment, intellectuality, etc. in the form of social action (Weber, 1994).

Talcott Parsons believes that when people are collectively considered, they will have actions both consistent with and against others. These actions create expectations, and in case these expectations are constant, they can be regarded as criteria and standards. In addition to these criteria, the difference between communities can be considered as bedding for fertilizing some kind of social capital. Therefore, a kind of traditional social capital and some kind of new social capital are flourished in traditional and modern societies respectively.

In addition to sociological view, while pointing to some psychological features of trust, Anthony Giddens describes the difference between trust-making resources in traditional and industrial societies, views the ground of trust-making in traditional societies to be kinship system, local community, and tradition. However in modern societies, abstract systems take the place of traditional trust-making resources, and abstract trust becomes an awareness of a trusted person’s memory. Under the circumstances, actor’s trust can result in the person or a certain abstract body which is called by Giddens as the idea of trust in specialized systems (Maliheh, 2010).

Diagram 2-12: Grounds of Trust in Traditional Societies
Coleman knows social capital to be potential resources and energies which allow for communications among people. These resources include trust, empathy, understanding and common grounds which link human and social network to each other and provides for collective practices.

Social capital is a resource that can promote the level of individual relations to the level of social relations and has two fundamental components: 1) social structure, and 2) actors’ actions. The role of the first groups such as family, friends, and neighborhood is of a special importance in creation of social capital (Coleman, 1998).

Social capital is the basis of society’s identity, recognition, and credit and encourages people towards social interactions and attachments through trust building in order to reach certain goals. The fundamental elements of social capital are mutual commitment and trust, common values and norms, sense of belonging, honesty, and social interactions (Putnam, 2001).

In fact, Robert Putnam regards social capital as a set of concepts such as trust, norms, and networks that lead to communication and optimum participation in a society and finally provide for their mutual profits. In other words, social capital is a collective concept the basis of which is upon individual behaviors, attitudes, and talents. Different bodies including social and voluntary institutes, family, religion, and cultural patterns play a role in formation of social capital-generating habits and values.

Social capital comprises an actual and/or potential collection of resources linked to ownership of a sustainable network, a network that by supporting each of its members makes them “credit-deserving” (Malieheh, 2011). Francis Fukuyama defined social capital as a specific set of norms or unofficial values in which the members of a group take part who are enabled to intra-collaborate. Participation in values and norms does not automatically create social capital because they may be negative values. These norms must cause to create and increase collaboration in the group. Hence, they are related to traditional virtues such as righteousness, keeping one’s promise, trustworthiness in performing one’s duty, interrelationships and the like (Mousavi, 2014).

**Elements of Social Capital**

In manifestation of social capital concept, indices of faithfulness, trust, network connection, individual authority, corporate identity, interaction, social norms, and reliability have been raised.
There is a negative relationship between resettlement and level of social capital and a positive relationship between duration of stay and social capital (Mousavi, 2014). Finally, social capital can be regarded as a collection of networks, norms, and values facilitating intra- and intergroup collaboration in order to achieve mutual benefits. In the same way, generative norms of social capital are as follows:

![Diagram 2-15: Social Capital-Generating Norms (Mousavi, 2014)](image)

**Conclusion**

By exploring public spaces of residential high-rise buildings and with an incremental approach in line with social capital, the present research has sought to bring questions and address different subject-influencing variables. Thus in this regard, a few questions were presented that have been examined through the study and some results have been reached, given the process of the research.  

1. **Why is it necessary to pay attention to public spaces in residential high-rise buildings? What features should these buildings have?**  
   Based on carried out studies, one of the most important spaces in life relates to public spaces which are the place for social interaction and economic, social, political, etc. dealings. In Carmona’s view, public spaces of a city must also provide for the possibility of social and cultural communications. Regardless of having to enjoy a global or local fame, public space, as the people’s meeting place, is representative of a society’s identity and influences its identity as well. Public spaces are all rooted from values, habits, and biological methods of cultural groups which are utilized in certain areas. In the opinion of Joseph, a sociologist, public space is assessed more on the basis of physical and psychological access than on the basis of discussion and debate possibility.  
   In general, public spaces observe the following social functions:  
   Also, residential high-rise buildings as a place for life of a group of its residents require high-featured public spaces so as to meet their different needs (Mousavi, 2014).  
2. **What are the social capital-influencing factors?**  
   Given the concepts of social capital, one can regard social capital to be potential resources and energies in a society which allow for communications among people. These resources include empathy, understanding, and common values that link human and social network to each other and provide for collective practices. Social capital comprises a potential or and/or actual set of resources linked to ownership of a sustainable network, a network which makes each of its members “credit-deserving” by supporting them. Participation in values and norms does not automatically lead to social capital because they may be negative values. These norms must cause to produced and increased intragroup collaboration. Therefore, they are related to traditional virtues including righteousness, keeping one’s promise, reliability on duty, mutual relations and the like.
Social capital is a resource that can promote the level of individual relations to the level of social relations. Family, friends, and neighbors are of great importance in the creation of social capital. Various bodies such as social and voluntary institutes, family, religion, and cultural patterns play a role in the formation of social capital-generating habits and values.

According to research on the concept of social capital, the following factors influence manifestation of social capital concept:

a) Faithfulness  b) Trust  c) Network Connections  d) Individual Authority  

f) Corporate Identity  g) Mutual Action [or Interaction]  h) Credit  i) Duration of Stay

In the same way, social capital-generating norms are as follows:

1- Cooperation  2- Collaboration  3- Difference Acceptance Capacity  

4- Sense of Efficacy  5- Value of Life  6- Social Mediation  7- Socio-economic Support
Considering qualitative research on public places and social capital, the following can be inferred:

- Function of national solidarity in public spaces can contribute to manifestation of social capital by influencing the factors of identity and social norms and creating socio-economic support and people’s sense of efficacy in a society.
- Boosting of local communities is among the functions of public spaces, which leads to increased social capital by positively influencing the norms of cooperation, collaboration, and sense of efficacy.
- Increased dealings in social capital influence the increase of social capital by having effect on factors of network connections, interaction and norms of collaboration, cooperation, and social mediation.
- Displaying of cultural values is a function of public spaces, which plays an influential role in increase of social capital by relying on cultural, religious, and corporate identity-related patterns.
- Also, social integrity is effective on function of public spaces with the approach of social capital, by influencing the factors of trust, corporate identity and increasing the norms of collaboration and socio-economic support.

Social dealings refer to a function which by influencing the norms of social mediation and sense of efficacy and with an emphasis on factors of interaction and network connection, causes to created and increased social capital in public spaces (Mousavi, 2014).

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