Community Perception on Participatory Local Center and its Design Principles: Chizar

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Abstract

Local participation is a solution for getting decreased the social relationship that is presented by the recent urbanism paradigms and sustainable development. The main standpoint of this paper was to analyze the citizen's perceptual concepts as a missing link between the physical principles of local center and public participation. The selected perceptual concepts were sociopetal, security and memorabilia. This paper chose one of the regions of "Tehran" as its case study. The methodology of this paper is factor analysis via questionnaire. The paper concluded the perceptual concepts with their similar physical principles that more effectively relate to the participation.

Keywords: Public Participation (P.P); Local Centre; Perceptual Concepts (P.C); physical principles

1.0 Introduction

Public participation (P.P) is today's main issue in urban planning that specialists like Oosthuizen, Arnstein and Cao Trí considered theoretical and philosophical dimension of it before the year 2000. On the other hand, Sustainable development is a 21st-century paradigm which plays a significant role in urban planning and has introduced new aspects in urban spaces and (P.P). A community-based planning is one of the derived aspects of this approach that emphasizes both on the (P.P) and local scale. The combination of these two main principles; local community and participation; turns into local participation. To improve local participation considering local center is essential.

Moreover, the role of perception in the participatory local center will be considered. To assess people's perception; the author will select Perceptional Concepts (P.C) such as security, socio-petal, and memorabilia. Based on the literature review, many studies focused on spatial issues that could improve P.P. Besides, many studies indicate that some P.C like security and others could improve the social interaction. The gap in the literature review that found is the relation between the P.C with participation. The new idea in this paper is considering all these perceptual concepts holistically in one package about participation. This idea refers to this fact that a person percepts all these perceptual concepts simultaneously, and his behavior based on all in one pack. Furthermore, this study has not done in Iran and especially in selected case study.

Therefore, the paper's basic objective is to show the model of those local centers that positively impact the P.C of Iranian citizen and finally improve their social participation. In another word, the purpose of the study is finding the spatial principles that could improve the selected perceptional concept. Therefore, the participation will increase by these intermediate variables. The hypothesis of the paper is that some of the P.C have more importance to improve social participation. In the end, the main conclusion of this article will be mainly focused on the preference of those physical principles that more effectively relate to the selected P.C.

2.0 Literature Review

2.1 Public participation

Participation in urbanism, established as a new approach after the failure of imperial planning approach at the 1960s (Oosthuzen, 1984). The most important part of participation issue referred to the theoretical and philosophical dimension of planning such as social democracy, democratic planning, and sustainable development, rather than urban planning and design (Cao Trí, 1988). The public has the right to know and participates in making decisions, particularly those which potentially affect the communities in which they live and work (Mohamed Ikhwan, 2013, 90). As a key code, citizen participation has given a way to obtain success in the decision-making process. Researchers like Arnstein (1996) have appropriately illustrated that programs have succeeded in which more people are involved in the planning process (Sarvarzadeh, 2012, 215). Social participation has been defined by

Gamble & Well as the active, voluntary involvement of individuals and groups aimed at changing problematic conditions in poor communities (Okunola& Amole, 2013, 48). A community-based planning that is derived from sustainable development has two keywords such as local-level and P.P. This approach emphasizes on bottom-up planning and community and decision making based upon local communities (Fridman, 1993, 482). The community-based program is not a short-term intervention program. It has been conducted for more than seven years (Laurens, Joyce Marcella, 2012, 373).

2.2 Selection of local scale

Selecting local scale in this paper has two reasons. The first reason relates to sustainable development that is the fundamental theory of this paper. This approach includes community-based planning and emphasizes that uniqueness of each rating system is distinguishable from the aspects of local context (Abu Bakar, 2013, 490). The second reason relates to localization of participation. A Review of Iranian historical culture about local participation shows that local scale is the best scale to adapt to Iranian culture. A traditional Iranian didn't believe in over local space as a public space and seen it as an administrative space. From an Iranian aspect, spaces which belong to the whole of the tribe are public property, and it differs from official space. Although he respected public properties in local scale and tried to conserve it, he didn't have a sense of community to over local space because he perceived it as an administrative space (Pakzad, 2003, 35). Nowadays, central squares also have the potential to involve with P.P, but because of historical –cultural support about local community centers, this scale is selected in this paper.

2.2.1 Local public space

Many studies indicate that public open space is one of essential urban environment elements which give the positive contribution to the quality of life (Nasution; 2012, 59). The role of public space in encouraging people to have social interaction and high quality of life is vital. Loosing public space resulted in social problems which its' name is up to down movement and decay of social interactions (Atkison & Blandy, 2005, 179). Public local space, especially in traditional Iranian cities, has an important role and specific definition. It should support the daily and short-term needs of local citizen and provide economical installations such as some small shops, mosque, public bath and reservoir. This local center is a place for social interaction and appearance of cultural values (Parsi, 2006, 75-77). The participatory local center is an issue for current research derived from the literature review.

2.3 Role of environment and behavior in participatory local center

Environment perception has a principal role in analyzing activity systems in physical spaces. The physical appearance and users' behavioral and perceptual response can provide data in the area of design (Sahachaisaeree, 2012, 48). The manner of perception effects on his behavior, so it has a relationship with the level of social interaction. In the end, based on co-relational argument, understanding of citizen has a meaningful relation with his participation. Thus, this paper takes a perceptual approach for participation topic.

The perception process could help to find how we could analyze perception. Many phenomena that are named reality occupy our environment. A person could perceive a part of it depends on his physical position and mental situation. These perceptible phenomena which have external existence are exactness. The person brings reality with his sense into his brain, during the perception process and changes it to exactness. Then, the person assesses this exactness and makes an imaginary from these phenomena. After that, the person doesn't react based on the reality and exactness but based on imaginary and experiences (Pakzad, 2010, 47).
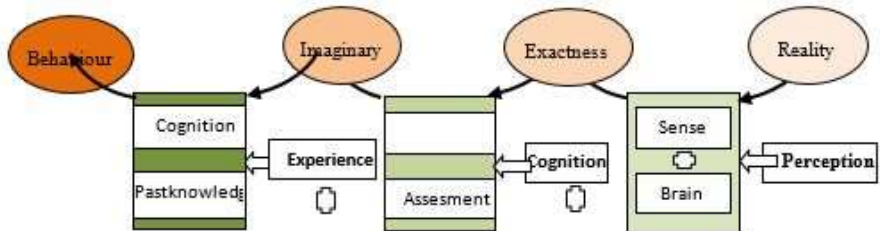

Figure 1: Procedure of perception

2.4 Perceptional concepts

Thoughts, concepts, and human ideas enriched a built environment. We predicate concepts, meanings, and symbols to represent exactness (Bartuska, 2007, 33). Canter believed that when we could abstract a perception of space into recognized component, perception considered as a reference for behavior (Canter, 1983, 659- 98). In this study, P.Cs are applied for measuring public opinion via questionnaire and we priories concepts indirectly.

2.4.1 Security concept

A careful study of relevant literature indicates that some factors have been associated with the perception of safety in residential neighborhoods. These are social participation and sense of community (Okunola& Amole, 2013, 48). The similar principles with security concept include visibility (Crowe, 2000), transparency, defining territory, form, good combination of different uses, Aesthetic values, proper lighting and evening activities. Another principle that could help to security is mixed-Use because it creates a safe and productive environment in streets and individual buildings. The reason of interest and safety of public realms is that it could invite different people at different time for different aims. This affair provides the informal control on public space (Tibbalds, 2001, 54).

2.4.2 Sociopetaloid concept

Hall categorized environments in socio-petal and Socio-fugal Environments. Socio-petal environments encourage social interaction (Hall, 1982). Environmental psychology researches show that a good organization of space and proper spatial arrangement could increase social communication (Lang, 1987).

One of the similar principles with the sociopetal concept is creating centers for gathering. An area or center that is around a fountain, artwork or historic buildings is needed for creating a place that has a potential for gathering people. These gathering centers possibly have developed local community centers are social central points. Another similar principle is creating a place for stay (Pakzad, 2010, 118). For encouraging people to stay specified elements including facilities for resting, considering various and multifunction areas for sitting are needed (Gehl, 2002, 81).

Integration is one of the similar principles that provide a unique mental map of the whole space for citizens. This integration needs connectivity of physical elements and activities (Pakzad, 2010, 119). Pedestrianism is a fundamental for creating sociopetal, and safe public spaces. Another principle is diversity; because it helps people with different characteristic and dissimilar circumstances to select a suitable place for resting.

2.4.3 Memorabilia concept

If space is memorable, it becomes a place. The mental image is a product of both immediate sensation and the memory of experience (Lynch, 1972, 4). Adopt with tradition and recognizing the root that constitutes our identification is necessary for having memorable space. Also, memorable places in the local community like a different path with the diversity of activities and spaces for the religious ceremony.

2.5 Chizar community as selected site

Chizar local community locates in the northern districts of Tehran. From the beginning, the border around this local community has formed the triangular shape. Chizar is among other old local communities of Tehran; however, it has a high religious privilege, as two famous shrines are attracting pilgrim and gives a particular identity to Chizar community. Fertile soil and two aqueducts are other reasons of forming this community.

Figure 2: Location of Chizar in Tehran (Tehran.ir)

3.0 Methodology
Factor analysis method
When we face a high number of variables, the method of factor analysis is used. Factor analysis is a class of procedures used for data reduction and summarization to identify new, smaller uncorrelated variables. In this method, factors are identified through rotating component matrixes that explain the correlations among a set of variables. Each factor has Factor loadings that mean Correlations between the variables and the factors. In this paper, the models of each five (P.C) are derived via factor analysis. The limitation of this method is that the variables should have correlations with each other. So, if it isn't approved, this method is not suitable for research. The examination of this is Bartlett's test. Another test is the Kaiser-Meyer-Olkin (KMO). If the measure of sampling adequacy is small, then the correlations between pairs of variables cannot be explained by other variables and factor analysis may not be appropriate.

The survey instrument utilized in this study was a structured questionnaire with the rating scale. The people who are familiar with Chizar local community center answered questionnaires. 60 persons answered it. The questionnaire includes five (P.C) of citizenship like security, sociopetal and memorabilia concept. Each part has questions that related to similar physical principles. These items were determined based on literature review and observation of Chizar local center. Data analysis was conducted using the SPSS Version 18.0. The Cronbach's Alpha is calculated .796 by SPSS. Thus, the reliability of the questionnaire is approved because it is over .7.

4.0 Results and Discussions
4.1 Security Perceptual concept
The six derived factors are available for security. The first factor relates to pedestrianism via two variables and some detailed architectural plan like lighting and Attractive street frontages, so we called it "pedestrianism." Because of being correlated these variables with pedestrianism variables, we derive that they could improve pedestrianism. The second factor measures security via four questions that indirectly ask from people. It could be named "measuring security." The third factor includes Connection another way to Main Street to improve security of bystreet, scale, form and Attractive Street frontages. The fourth factor includes Visibility from the building and open space or the ground floor of buildings. We name it "Eshraf" as it is called in Persian culture. The fifth factor includes Connection to Main Street, define territory to reduce the presence of criminals, visibility. We name this factor "Physical principles to reduce criminals." The sixth factor includes Diversity in function and Diversity in access. We name this factor "diversity" as it is a primary principle in architecture to improve security. The highest factor loading with score .937 in security concept belongs to Diversity in function. It means that this variable has priority to improve security.

4.2 Socio petal Perceptual concept

Table 1: Factor Analysis of Security

Perceptional Concept	Physical principles	Rotated Component Matrix					
		1	2	3	4	5	6
Security	pedestrianism	.856					
	pedestrianism	.884					
	lighting	.732					
	Attractive Street frontages	.088		.674			
	security		.724				
	security		-.551				
	security		.833				
	security		-.809				
	Connection to main street			.610		-.595	
	scale			.854			
	form			.709			
	Visibility from building and open space				.848		
	visibility via ground floor				.722		
	Define territory					.774	
	visibility					.825	
	Diversity in function						.937
	Diversity in access						.746

Table 2: Factor Analysis of sociopetal

Perceptional Concept	Physical principles	Rotated Component Matrix				
		1	2	3	4	5
Socio petaloid	Socio petaloid	.532				
	Socio petaloid	.605				
	Number of people	.756				
	Active use	.848				
	Diversity in function	.764				
	flexibility		.643			
	diversity		.887			
	flexibility		.774			
	pedestrianism			.777		
	pedestrianism			.770		
	pedestrianism			.700		
	Gathering center				.678	
	Event ability				-.840	
	Various group				.536	
	Stay					.925

The first factor includes two questions about measuring sociopetal indirectly from people, the number of people, Active use and Diversity in function. We could name this factor "measuring

sociopetal," because we could interpret the meaning of sociopetal from these variables. The second factor includes flexibility with two different questions, diversity and flexibility. It could name physical principles. The third factor relates to pedestrianism through three questions. The fourth factor includes various groups of user, Event ability, and gathering center. Its name is a social dimension of sociopetal. The presence of gathering center in this factor shows that maybe the social dimension of this is more perceptible than the physical dimension. The fifth factor relates to facilities for stay. The highest factor loading with score .925 belongs to stay. It means that facilities for stay have priority.

4.3 Memorabilia Perceptional concept

The factor analysis method derives three factors for memorabilia concept. The first factor measures the level of memorabilia in place with various questions including familiarity, being memorable and Past and today memory. We could name it "measuring memorabilia." The highest factor relates to being a memorable place. It means that this place is memorable. The second factor includes just one variable that is Adaption with tradition. The third factor also includes just one variable that is Diversity in use. The second and third factors are Physical principles that could improve memorabilia concept.

Table 3: Factor Analysis of memorabilia

Perceptional concept	Physical principles	Rotated Component Matrix		
		1	2	3
memorabilia	familiarity	.784		
	being memorable	.954		
	Past and today memory	.877		
	Adaption with tradition		.637	
	Diversity in use			-.731

5.0 Conclusion

Local Public space is a social capital that could increase local participation, specifically if architectural principles of it is adapt with people perception. Therefore, the Perceptual approach is chosen to find suitable physical principles that promote participation. Besides, this paper focused on four selected perceptual concepts that promote social interactions, finding related physical principles to these concepts is another purpose of the study. Analyzing data that is collected from the questionnaire via Factor Analysis conclude that the security and sociopetal concept based on citizen understanding have distinct factors. Each of these factors constitutes from equal indices. Related factors to security are named "pedestrianism and related physical principles," measuring security,"visibility" or "Eshraf, Physical principles to decrease criminals, diversity, and significant physical principles. In the end, related factors to sociopetal include "measuring sociopetal," pedestrianism," social dimension of sociopetal," stay,"significant physical principles." The relevant factors to

memorabilia concept include "measuring memorabilia,"Adaption with tradition" and "Diversity in use."

These data analysis conclude suggestions about the appropriate architectural solution for the case study. It is recommended that focusing on visibility, pedestrianism, diversity in use and facilities for stay could improve the current situation, and consequently, it could increase participation. These are interfaces between the perceptual concepts and have priority. It is suggested that the most places in public local center should have the potential to be seen from any place such as buildings, streets, pathways and.... The form of space, depth of space and vicinity to the busy place is important for the implementation of this. In spite of the fact that many architectural solutions are available for improving pedestrianism, but lighting and Attractive street frontages are the best factors in this case study via data analysis. Creating different places for shopping, eating, resting and playing could improve diversity in use. Therefore, this factor causes both security and sociopetal is percept better by people. The facilities for stay are the best solution for improving sociopetal in this case study. As it mentioned before in the literature review, facilities for stay include facilities for resting, considering various and multifunction areas for sitting (Gehl, 2002, 81) and also places with good scenery or around a fountain or sculpture.

Further studied could research on another local community in Tehran that assume the participation is not acceptable in it. Therefore, it is possible to compare these two case studies. Another suggestion is to select more concepts like privacy, liveability, meaning, identity and, etc. Another suggestion that is very close to this paper refers to rating the factors that found here.

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