

Social Environment and User Participation in the Management of Public Urban Green Spaces in Jijel -Algeria-

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Abstract

User participation, especially civic participation, in the management of urban infrastructure components such as green space management has become an important issue and challenge as its prevalence has increased in recent years worldwide. This participation as a human behavior is affected by many factors, including factors related to the social environment. This study aims to find out the social factors affecting the participation of users in the management of green spaces in the city of Jijel in Algeria and to deduce the level of this participation through a questionnaire sent to 64 users of the El salam garden. The data were analyzed by the SPSS[®] 21.0 software using Means and Principal Component Analysis. The results showed that there is no real participation and that the social environment negatively affects this participation, whether it is the political-legal arrangements, the mechanisms and tools and the impact of the authorities. While the neighborhood effect was the least influential.

Key words: Green space management, Human behavior, Jijel, Social environment, User participation.

INTRODUCTION

Given the importance of green spaces in improving the quality of life of citizens (Guitart, Pickering, and Byrne 2012), the importance of user participation in different types of green spaces, especially public ones, is unavoidable. The possibility of participation has been promoted through several project phases related not only to the planning and design of the space, but also to the management of these spaces as an emerging and growing trend in recent years (Mattijssen et al. 2017). Indeed, participation has many benefits in different social, economic and environmental spheres. Participation increases the sense of place (Mattijssen 2018), reduces pressure on and enhances the value of financial resources (Jausus and Said 2014), and improves the quality and preservation of green spaces (Fors 2018).

At a time when user participation in the management of green spaces has become widespread in many countries of the world, where it has been supported by numerous action plans and agreements such as: the European Landscape Convention (Council of Europe 2000) and the Aarhus Convention (Stec, Casey-Lefkowitz, and Jendroška 2000), Algeria still remains far from this trend. The management of green spaces is directed towards local authorities, while the participation of users in the management of these spaces has not yet materialized in the manner required by the conditions of the various plans such as the National Territorial Arrangement Scheme for 2030 and laws such as law 07-06 and law 06-06. In this context, Jijel, a city located on the north-eastern coast of Algeria and the commune and capital of the province of Jijel, is one of the Algerian cities representative of this reality, where it bears witness to the phenomenon of limited or almost inexistent participation.

This scientific paper will attempt to understand this phenomenon of limited participation, where we will try to understand the factors affecting this participation, which will allow us to find solutions to encourage it. Participation in the management of public urban green spaces is in essence a human behavior (Fors 2018). According to the equation proposed by the psychologist Kurt Lewin, human behavior (B) is a combination of personal factors (P) and environmental factors, including the characteristics of the physical environment of the space (E_{Phy}) and the social environment (ES), i.e. the influence of society and the actors involved. This combination is summarized in the following equation (Lewin 1936):

$$(B) = f(P, E)$$

This article will focus just on the social aspects of citizen participation. This study aims to know and identify the factors related to the social environment that influence the participation of users, especially civic participation, in the management of public green spaces in Jijel and to conclude the real level of this participation.

Level of Civic Participation Of Users

The levels and scales of participation are not unified they, differ from one project to another, where city managers easily combine them according to their greater or lesser willingness to involve citizens. Indeed, in the most widely used is Sherry Arnstein's scale. (Arnstein 1969) developed his scale, which he called « a ladder of citizen participation » as a strategy to ensure a real involvement of the 'powerless' citizens in the political, economic and urban process. The scale is organized in three levels distributed on a scale of eight rungs, each of which represents a degree of real power of the citizen and his ability to influence the final decision (Figure 1).

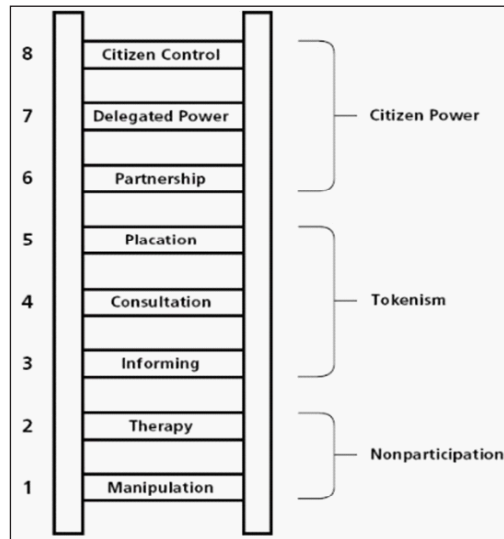


Figure 1. Ladder of citizen participation (Source: Arnstein 1969)

The first two rungs at the bottom of the scale “manipulation” and “therapy” correspond to the level of ‘non-participation’, their purpose is not to allow citizens to participate in planning or monitoring programs, but to allow those in power to “educate” them. The second level is that of ‘symbolic cooperation’, comprising the next three rungs “informing”, “consultation” and “placation”, it allows citizens to be heard, but their visions are not really taken into account. The level corresponding to the “citizen power” is at the top of the scale and comprises the remaining three rungs “partnership”, “delegated power” and “citizen control”(Arnstein 1969).

User Participation and Social Environment Factors

User participation in the management of green spaces can be affected by members of society such as neighbors and by authorities through their imposed policy (Fors, Wiström, and Nielsen 2019). Regarding the impact of society, the neighborhood effect is a factor that can influence participation as it plays a motivating role in inspiring neighbors to participate (Fors 2018 ; Fors, Wiström, and Nielsen 2019).

The influence of the authorities can be on the political and legal arrangements adopted. The factor determining the emergence of citizen participation is the transition of the governance system from centralisation to decentralized (De Roo and Porter 2007). An overly rigid legal framework (Schicklinski 2015), weak legal support (Adjei Mensah et al. 2016) or a total absence of legal frameworks for participation is a notable obstacle. Furthermore, participation embodies and promotes through the presence of mechanisms and tools such as: consultation (Girma, Terefe, and Pauleit 2019), access to information (van der Jagt et al. 2017), partnership (Mattijssen et al. 2017), and environmental awareness, training and education (Hansen et al. 2015).

On the other hand, all these factors are preceded by another important and fundamental factor, which is the impact of the actors themselves, i.e. the relationship they have with the users and the support they give them. The existence of mutual trust between actors, transparency, the absence of conflict will encourage citizens to participate in different programs and activities (Dickinson and Wyton 2019). The supportive role of authorities is also essential to legitimize and encourage long-term participation (Mattijssen et al. 2017), whether it is technical support (Hansen et al. 2015), financial support (Schicklinski 2015) or any other type of support provided.

MATERIAL AND METHOD

Data Collection

In order to answer the problem posed in this study, we opted for a questionnaire survey of users (N=113) of the public gardens El salam. This garden seems to be the most frequented and the most managed either under state management or self-management.

This questionnaire asks closed questions about the neighborhood effect, the political-legal arrangements, the mechanisms and tools provided and the impact of the actors involved. The questions are presented in the form of a five-point scale: 1: Not at all motivating, 2: Not motivating, 3: Neutral, 4: Motivating and 5: Very motivating. After validating the questionnaire and ensuring that the questions were clear and simple for the respondents, the questionnaire was distributed in Arabic, the mother tongue of the population, and in French as the second most used language in Algeria.

Data Analysis

We used the Means and the factorial analysis (Principal Component Analysis - PCA-) to analyze the data. The Means allow a descriptive analysis of the data. In order to explain the significance of the Means that were calculated for each variable, we calculated the weighted Means for each number of the five-point scale (Alonazi, Beloff, and White 2019), so these points are becoming intervals. (Table 1).

Table 1. Weighted Mean of the Likert scale (Source: authors, 2022)

Five-point scale	weighted Means	Result Interpretation
1	[1-1.8)	Not at all motivating
2	[1.8-2.6)	Not motivating
3	[2.6-3.4)	Neutral
4	[3.4-4.2)	Motivating
5	[4.2-5]	Very motivating

The PCA summarizes and condenses the data into fewer variables called «principal components» (Stafford, Bodson, and Stafford 2006, p 58). In order to identify the most important factors influencing participation, The PCA through Varimax rotation are reduced the variables from 10 to 4 components. All of these statistical analyses were conducted using SPSS ® 21.0.

RESULTS

Descriptive Data Analysis

Table 2. The Means and direction of user responses (Source: authors, 2022)

Test value = 3		
	Means	The direction of the responses
D I : : neighborhood effect	2,2917	Not motivating
D II : political and legal arrangements	2,0573	Not motivating
D III : mechanisms and tools for participation	2,0343	Not motivating
S-d 1 : access to information	2,0417	Not motivating
S-d 2 : consultation	1,8563	Not motivating
S-d 3 : collaboration and partnership	1,9875	Not motivating
S-d 4 : involvement in decision-making	2,1615	Not motivating
S-d 5 : mobilization and awareness raising	2,1094	Not motivating
S-d 6 : training and education	2,0991	Not motivating
D IV : impact of the actors concerned	2,0729	Not motivating
S-d 1 : relationship with the actors concerned	1,9766	Not motivating
S-d 2 : support of the actors concerned	2,1004	Not motivating

Note : D : Dimension. S-d: Sub-dimension

All the sub-dimensions that relate to each of the four dimensions, namely the neighborhood effect, the political and legal arrangements, the mechanisms and tools for participation and the impact of the actors involved, are non-motivating factors for the civic participation of these users (Table2) .

Principal Component Analysis (Pca)

The value of Alpha cronbach is greater than (> 0.6) (Stafford, Bodson, and Stafford 2006, p 99), which indicates a high validity rate of the questionnaire. It is also found that the KMO test is higher than (> 0.5), the statistical significance of Bartlett’s test is lower than (<0.05)) (Carricano, Poujol, and Bertrandias 2010, p 57; Stafford, Bodson, and Stafford 2006, p 80-81) and the rate of extraction of variables is higher than 0.5. The principal component analysis is finally feasible (Table 3).

Table 3. Principal component analysis validation (Source: authors, 2022)

Alpha cronbach	KMO test	Bartlett’s test	Representative quality « extraction rate »
0.834	0,726	0.000	Entre 0,511 et 0.806

The factorial analysis made it possible to extract four components, the first of which explains 31.895% of the internal variance (Table 4). This component, called «provision of appropriate political and legal mechanisms and tools for participation», groups together the variables of mobilization and awareness, access to information, political and legal arrangements and involvement. These Component 1 variables are well associated by the «x» axis and are positively and strongly correlated (Table 5) (Figure 2), i.e., if one increases, the second also increases. They are therefore variables that have a strong effect on participation according to these users. The second component, called «the influence of the actors involved, resulting from the nature of the relationship with the users and the way in which they accompany them», brings together the variable the relationship with the actors involved and the support of the actors involved. These variables of the second component are well associated by the «Y» axis and they are positively and strongly correlated (Table 5) (Figure 2). This second component explains 12.724% of the effect on participation according to these users (Table 4). The third component explains 11.560% of the effect on participation (Table 4), it is called « cooperative work in a partnership framework» and brings together the variables of collaboration and partnership and consultation. These variables are well associated by the «Z» axis and are positively and strongly correlated (Table 5) (Figure 2). The final component of «neighborhood effect» accounts for 10.438% (Table 4) and has the lowest impact on participation. The four dimensions explain over 66.6% of the total variance (>60%, i.e., they explain the phenomenon well (Hair JR and al. 2006, p 108) (Table4).

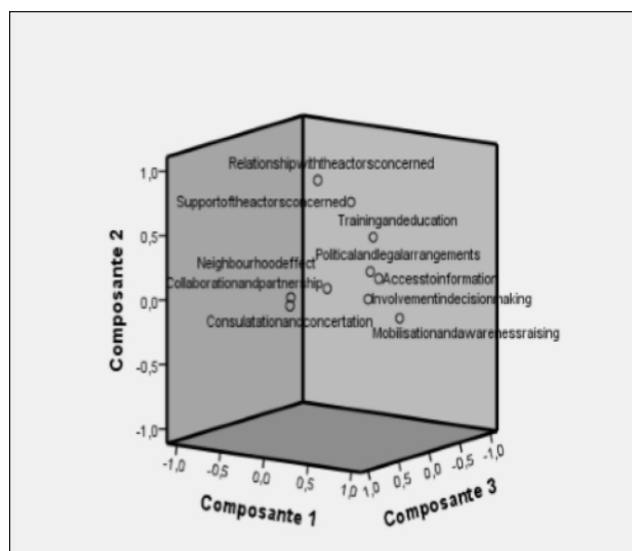


Figure 2. Diagram in space after rotation (Source: authors, 2022)

Table 4. Total variance explained (Source: authors, 2022)

Component 1	Component 2	Component 3	Component 4	% Cumulative
31.895%	12.724%	11.560%	10.438%	66.616%

Table 5. Matrix of components after rotation (Source: authors, 2022)

	Component			
	1	2	3	4
Mobilization and awareness raising	0,763			
Access to information	0,673			
Training and education	0,570			
Political and legal arrangements	0,557			
Involvement in decision-making	0,518			
Relationship with the actors concerned		0,886		
Support of the actors concerned		0,738		
Consultation			0,852	
Collaboration and partnership			0,798	
Neighborhood effect				0,873

DISCUSSION

All the variables of the social environment related to the society and the authorities influence the civic participation of the users in the management of the green spaces, which is consistent with several studies. This effect was entirely negative from where these variables represent real barriers to the participation of these users. The most influential factor was the “provision of appropriate political-legal arrangements, mechanisms and tools for participation”, followed by “the influence of the actors involved as a result of the nature of the relationship with the users and the way in which they accompany them”, followed by “cooperative work in a partnership framework”. The least influential factor was “neighborhood effect”.

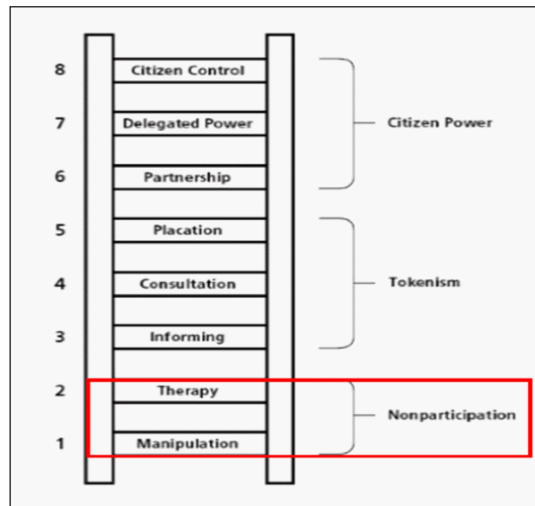


Figure 3. Level of user participation in the management of green spaces in Jijel (Source: Amstein 1969, adapted by authors, 2022)

This negative impact may be due to the inability of the authorities to provide various necessary mechanisms and tools such as access to information, consultation, involvement in decision-making, training, education, mobilization and environmental awareness contrary to what has been reported in studies (Hansen et al. 2015). This inability is also because the authorities do not have the necessary capacities and skills to implement such mechanisms. The relationship and support provided by the authorities also plays a role in participation. The relationship seems to be based on conflicts of interest and mistrust between the authorities and the participating users, in addition to the lack of transparency of the processes and the technical and financial support provided by the authorities, will inevitably be non-motivating factors for participation contrary to the findings of the study (Dickinson and Wyton 2019; Mattijssen and al. 2017). On the other hand, in addition to the centralization and representative democracy that prevails in Algeria, legal arrangements can also be a major constraint and this is consistent with the studies of (Schicklinski 2015; Adjei Mensah and al. 2016; Girma, Terefe, and Pauleit 2019). Indeed, we see the existence of some Algerian laws aimed at involving

citizens in the management of their living environment, even in a partial and succinct manner, and we see a reality that does not reflect this at all. The reality reflects the lack of application of these laws, or the absence of executive decrees or the absence of laws dedicated to the participation of actors, including citizens, in the management of green spaces.

The results of this study also make it possible to evaluate the level of user participation in the management of green spaces by placing it on the Arnstein scale. The absence of a strategy and political will to involve users in the management of green spaces on the part of the authorities concerned, and the absence of tools and mechanisms that invite these users to participate, makes civic participation in management recorded in the level of “non-participation” and may be “manipulation” or “therapy” (Figure 3). If there is participation, it can sometimes take the form of self-administration.

CONCLUSION

This study has shown that the level of participation of users in the management of public urban green spaces, based on the Arnstein scale, indicates that there is no real participation. This study has also highlighted the existence of the relationship between this participation and factors relating to society and authorities. This result confirms the effect of the social aspect of the Lewin equation on human behavior, where its impact was generally negative in our study. These findings make it important to reconsider policy, legal, and organizational arrangements to enhance participation. Future research can also further investigate other aspects of the equation, including the physical aspect of the design and layout of these spaces and its impact on participation as this is the least studied aspect of our knowledge. This will certainly lead to new, more comprehensive and effective strategies and solutions for promoting and encouraging local participation.

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Competing Of Interests

The author(s) declare that they have no competing interests.

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