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Residents and urban green spaces: The case of Bari

Giovanni Sanesi[a,*], Francesco Chiarello[b]

[a]*Department of Plant Production Science, University of Bari, 70122 Bari, Italy*
[b]*Department of Historical and Social Sciences, University of Bari, Italy*

Abstract

The total area of public green spaces in the city of Bari, Italy is more limited than in most other Italian cities (2.9 m^2/inhabitant). This fact makes it an interesting subject for research into the general perception that the residents of the city have of green spaces and their behaviour patterns when using them.

A questionnaire (27 questions) was presented by telephone to a representative sample ($n = 351$) of the population of Bari. The aims of the study were: (a) to gain insight in the perception of green spaces with particular reference to those green areas within the city itself; (b) to examine behaviour during visits to parks and gardens and means of transport used to reach them; (c) to investigate what kind of relationship should be set up between the local authority and the population regarding information and participation.

The results show that respondents perceive the green areas as a life quality enhancer in accordance with some previous studies carried out in Italy and in other countries. Citizens are moreover conscious of the limitations in quality and quantity of green areas in their own city, although this result needs to be more closely analysed in the future. Patterns in the use of public green areas proved to be strictly connected with age, sex, marital status, area of residence. Another conditioning factor was the system of mobility. The results moreover underline how citizens see the public and private green areas as single beneficial system.

The research also demonstrates the potentials of applying telephone surveys in studies concerning urban forests.

Keywords: Urban forest; Citizens' perception; Citizens' behaviour; Telephone interviews

Introduction

In recent years more and more interest has been given to urban green space. Originally, merely a decorative element in towns and cities, green space has now taken on a new value and function, the importance of which is widely acclaimed within the parameters of sustainable development.

The presence of green spaces represents a fundamental asset above all when considering contemporary urban reality, with its traffic congestion, pollution and lack of space for socialising. However, the presence of urban furniture, flowerbeds and public parks is not in itself sufficient for claiming the town to adhere to a sustainable model. The efficiency of urban green space lies largely in its overall structure – as an integral part of the entire system of green space throughout the whole metropolitan area – and in the function which it serves in relation to both the entire territorial context in which it is inserted, and to whom is envisaged to be using it.

The greatest asset of the multifunctionality of urban green spaces (the term should be extended beyond parks

*Corresponding author.
E-mail address: sanesi@agr.uniba.it (G. Sanesi).

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and gardens to include surrounding countryside areas, vegetable plots and orchards, green courtyards and sports grounds, and so forth) is – especially in bigger cities – that of improving environmental quality. When these spaces are referred to as the "green lungs" of a city a highly appropriate evaluation is being expressed as these spaces really do generate both physical and psychological health and well-being, first of all for those who use them but also for the entire urban population (Beato, 2002; Grahn and Stigsdotter, 2003).

The following play a particularly important role in the relationship between citizens and urban green: (a) behaviour pattern; (b) the level of perception on the part of the residents towards the green system in their own city; and (c) the social representations which they construct within their own social context (Lalli, 1995). A large amount of research literature exists on this topic (especially in the USA) showing how urban residents rate the benefits associated with urban forest (e.g., Dwyer et al., 1991, 1992; Lohr et al., 2004; Sommer et al., 1994; Wolf, 2004). These studies document that people usually appreciate the practical and aesthetic values of trees but also attribute great importance to other values which are not always so clear or evident. Some previous surveys carried out in Italy show unambiguously that citizens and families pay close attention to the various aspects of the environmental quality of the city (Bambozzi and Sanesi, 1995; La Marca et al., 1996).

In large conurbations, public concern surrounding these issues shows not only uneasiness regarding the quality of life which – in a "risk society" (Beck, 1986) – is inseparably substantiated in the quality of the environment, but also far greater public demand concerning environmental issues than in smaller towns and cities. One of the more significant dimensions of this demand concerns green urban spaces.

On the other hand, the urban system of green spaces has forced its way into urban development thinking on relationships and the elimination of urbanistic, architectural and social barriers. It has now become a citizens' right to have green urban spaces incorporated into city planning. Green spaces no longer figure merely as a decoration, but act as an ecological environmental system, carrying out a wide range of social functions and services. Besides being used as places for leisure, recreation, games and sporting activities, green spaces can indeed generate an elevated level of social participation and collaboration between fellow citizens. Various studies have been carried out, for example, on green areas as places of social aggregation, reduction of conflict between rival groups of young people and reduction of aggression to public property (Newman, 1996; Sullivan and Kuo, 1996; Kuo and Sullivan, 2001; Kweon et al., 1998). Likewise, "green therapy" is becoming increasingly common as a paramedical activity in the treatment of some psychological and physical diseases (Ferrini, 2003).

The aim of the study presented here is to understand what kind of general relationships exist between citizens and urban green spaces in the context of one of the "poorest" Italian cities in terms of public green spaces. Thus, besides assessing visitors' behaviour when using parks and gardens, the research focuses on pinpointing possible alternatives for the management of public green spaces.

According to year 2001 data provided recently by ISTAT (2002), urban green spaces of Bari amount to 2.9 m^2 per inhabitant and the city therefore holds the penultimate place amongst the larger Italian cities (only Naples has a smaller area of green spaces). Moreover in Bari, Apulia's main town, the difference between the amount of green space per capita set by the Master Plan and the green spaces actually created, totals around 17 m^2. Of the southern Italian cities only Chieti, Cagliari, Benevento and Vibo Valentia show a greater difference between ambition and practice than Bari. All this means that in Bari the density of urban green space – i.e. the relationship between the green area and the area of the municipal – territory is less than 1%, pushing Apulia's most important city into bottom place in the league table of large Italian cities.

This lack of green space in Bari is mainly a result of its history of city development. When observed from the air, three zones can be clearly distinguished. The first is the medieval city with its many narrow streets inside the ancient walls and without green space. The second zone is the "Murat zone" built at the beginning of the 19th century. This zone is characterized by a regular design of streets and buildings. Here the green spaces consist of a few trees along the main streets and within the squares. The third zone is the 20th century city. This has an extremely dense urban structure where gardens and parks have been built during the last three decades.

Material and methods

There are different ways of studying people's behaviour and these can include various techniques for taking samples, and in the case of interviews, for asking questions.

In medical and social scientific fields, growing attention has been paid to telephone interviews which have been used as a tool for scientific investigation for over 20 years (Marcus and Crane, 1986; Siematycki, 1979; Wilson et al., 1998; Worth and Tierney, 1993). However, there is as of yet limited experience in the use of this technique in the field of urban green space. In the USA, this methodology has recently been used as a

backup to the development of the master plan for urban green space and in monitoring the quality of services to the citizens (City of Seattle, 2000; MVH McIntyre Lees, 2001; USDA, 2001). Lohr et al. (2004) report on telephone interviews in a paper about a survey on benefits and problems of trees in urban areas.

Nowadays this type of survey technique is frequently used in opinion research and it is particularly useful for reaching all of the potential users of a service.

The research was carried out in the city of Bari which, according to ISTAT (2002) had a resident population of 316,532 inhabitants and a territorial area of 116.2 km^2 in 2001. The planning structure of the city is of a "compact" type and, particularly in the central areas (Medieval and Murat zones), there is a notable lack of open spaces (Fig. 1). Telephone interviews were carried out during the summer and autumn of 2003 among adult residents (i.e. over 18 years of age) with a landline telephone were considered the statistic population. A random sample was extracted from the statistical data of the municipal population and from the database of home telephone providers. This sample was stratified according to age, sex and the administrative district of residence (Siematycki, 1979; USDA, 2001); the city of Bari is made up of nine reference administrative districts which were subsequently regrouped into three areas according to their distance from the city centre: centre, outskirts and hinterland. Of the 1065 people that were contacted, 33 percent (351; 160 male and 191 female) were willing to participate by answering all of the questions. The socio-demographic characteristics of the sample were made comparable with those from the census listed in Table 1. The overall response rate was 33%, which can be assumed to be high for a telephone survey in Italy (see www.agcom.it and www.censis.it for further information about telephone surveys in Italy). This rate includes all the valid interviews; the other 67% includes cases where respondents refused to answer, interrupted interviews and interviews not carried out because the contact did not comply with the stratification criteria.

Fig. 1. Satellite image of the city of Bari and neighbouring municipalities. (1) Medieval zone, (2) Murat zone, (3) the 20th century city.

In all, 27 questions were asked, concerning: (a) the perception of green areas with particular reference to the city; (b) behaviour when visiting parks and gardens and means of access; (c) communication to be set up between the town administration and the population in terms of information and participation. The questions allowed for selecting one or two possible answers.

Initially, a "rough draft" of the questionnaire was drawn up which was administered in a trial involving 30 interviews. This allowed the researchers to verify the layout, the content and the wording of the questionnaire, which on the basis of this first trial, was then edited to its final form.

The actual survey was carried out by two interviewers who were instructed beforehand on keeping the tone of the questions impartial and on limiting their influence on the interview. At the beginning of each interview, the user contacted was informed of the aims of the research work, of the number of questions and of the overall length of the telephone call, i.e. no longer than 20 min as suggested by Lohr et al. (2004).

Results and discussion

Bearing in mind the other parameters used for stratification, the significance of the sample is equal to a confidence level of 95% with a confidence interval of ± 0.05 with respect to the questionnaire's set of 27 questions. The analysis in the subfields derived from the classification work (sex, social status, etc.) has only relative significance and are reported for information purposes only.

The results are reported below according to the grouping of questions explained above. For each answer, the valid cases are indicated, i.e. the percentage of answers given with respect to the sample of the population.

Perception of urban green space

The citizens of Bari are of the opinion that the most important function of green space is that of improving climatic conditions. The remaining answers are almost equally divided between two options, namely a place for leisure and recreation and a fun place for children (Fig. 2). The climatic function of green space was

Table 1. Classification of samples and census data (in percentages)

	Sample	Total population	Difference in the sample
By urban district[a]			
Palese-S. Spirito	8.3	6.3	+2.0
San Paolo-Stanic	10.5	10.7	−0.2
Picone-Poggiofranco	12.0	14.0	−2.0
Carbonara-Ceglie-Loseto	10.3	10.3	0.0
Japigia-Torre a Mare	10.5	10.7	−0.2
Carrassi-San Pasquale	18.2	18.6	−0.4
Madonnella	5.4	5.3	+0.1
Libertà-Marconi-San Girolamo	17.7	18.3	−0.6
Murat-San Nicola	7.1	5.8	+1.3
By sex			
M	45.6	47.3	−1.7
F	54.4	52.7	+1.7
By age			
18–24	10.6	11.3	−0.7
25–44	37.4	37.0	+0.4
45–64	31.1	30.9	+0.2
65 and more	20.9	20.8	+0.1

[a]1991 Census Data (Comune di Bari, 1999).

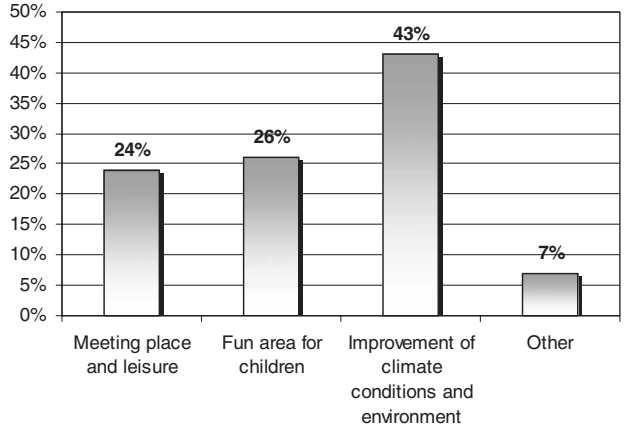

Fig. 2. Functions of urban green space in Bari.

especially recognised by the over 65-year-old male interviewees (66.7%), while women favoured the play option for children (43.4%). The perception of green areas as a space for socialising and leisure is proportionally more widespread amongst the younger interviewees of both sexes. The outcome shows that green space is typically perceived as a multidimensional place and this general approach is in line with other studies carried out in the past (Balram and Dragicevic, 2005; Bambozzi and Sanesi, 1995; Dwyer et al., 1992).

Nearly the entire population (93.1%) thinks that at present green areas are insufficient in number and that green space should be increased especially in residential areas and the outskirts. This should be done mainly through the creation of parks (36.9%) and gardens (27.0%). This underlines how most citizens have a clear idea of the level of public green spaces in terms of quantity and are aware that present quantity does not live up to the standards set down by national legislation. The main problems perceived, other than the lack of green spaces, are the low levels of maintenance and structures, the lack of care takers and defects in the planning of the areas (Fig. 3). On a scale of 1–4 (insufficient, sufficient, good and excellent), the quality of municipal green spaces is rated as insufficient by more than two thirds of the sample, while only 6% of the interviewees gave it a positive rating. A detailed analysis shows how the lowest rates were awarded by those residing in the centre of the city as opposed to those living on the outskirts or in the hinterland. This rating is typical also of the two lower age ranges (<45 years of age) as opposed to the higher ones (>45 years of age) and is linked positively to level of education. These results are generally in line with previous studies carried out in Italy (Bambozzi and Sanesi, 1995; Ferrara et al., 1991). However, specific research must be done in the near future regarding the concept of quantity and quality of green spaces in accordance with the results and definitions of the European Union-funded URGE project (URGE, 2004).

Two thirds of those interviewed think that the amount of green space should be increased and its management generally improved especially in residential areas and on the outskirts. Only one third believe that its use can be improved through only one of the aforementioned options (increase in the area or improvement of

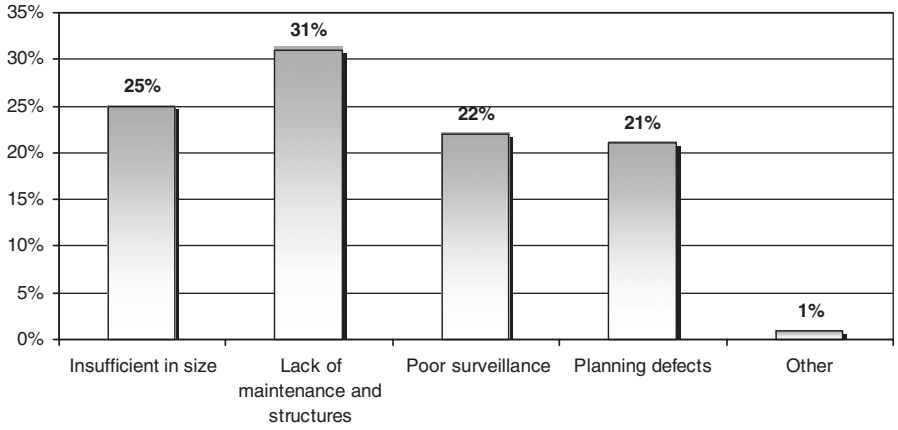

Fig. 3. Perceived problems related to Bari green spaces.

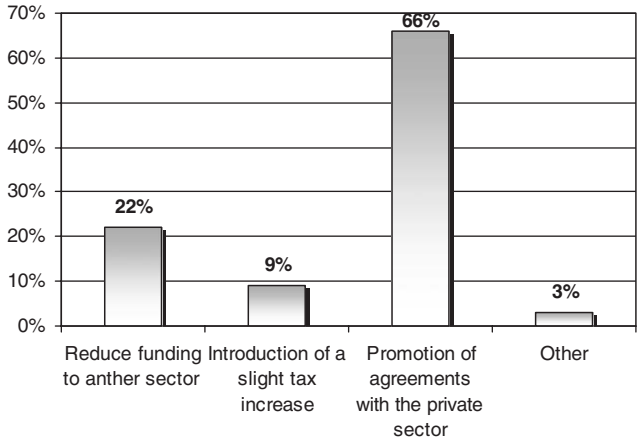

Fig. 4. Suggested ways of generating funding for green space in Bari.

management). As for the funding necessary for increasing or improving urban green space, it is interesting to note that only a minority of the interviewees thought that it would be legitimate to introduce an increase – albeit slight – in citizen taxes or to reduce the funding available to other sectors. The majority of the sample suggested that funding could be found by involving private people or institutions (Fig. 4). This answer is a clear invitation to Bari to follow the example of many other Italian and foreign cities where the involvement of private companies in the creation of green spaces (especially through sponsorship in exchange for advertising visibility or tax benefits) has been applied for a long time, and with great success. People in the younger age range and those who have a higher degree of education (diploma or university degree) particularly favoured this form of incentive. The real willingness to pay to preserve or ameliorate the green spaces must be assessed better in the future. Some research projects show how this willingness is connected to knowledge and perception of urban forest (Balram and Dragicevic, 2005; Lorenzo et al., 2000; Treiman and Gartner, 2005).

In terms of recreational facilities, a large section of those interviewed thought that there should always be children's play equipment, sports facilities, cycle tracks (16.3%) and dog walking areas (Fig. 5). As far as a preference for sports facilities was concerned, we can see how this answer occurs more frequently among unmarried (25.4%) as opposed to the married (16.7%) respondents.

Not only are Bari's green areas widely insufficient in number, but moreover, those which do exist are not considered safe places. A strikingly large number of people believe that it is dangerous to use city parks. About half of the interviewees, particularly women (51%) and retired people (54%), associated going to green spaces with lack of safety. This corresponds to the case histories constructed from the vast quantity of literature on city parks as dangerous places. The main sources of danger were indicated as being presence of syringes, harassment of different types, and substandard facilities (Fig. 6). The risk of harassment is particularly felt by people under 25 years of age and by those residing in the city centre. To deal with these unpleasant drawbacks, greater surveillance in the form of security patrols and more efficient maintenance and cleaning are requested. This result confirms previous research work carried out some years ago in the cities of Turin (La Marca et al., 1996), in Ancona (Bambozzi and Sanesi, 1995) and in Monte S. Angelo, a small town in Apulia (Ferrara et al., 1991).

Citizens consider that surveillance should be carried out by the municipal police force and the local area policemen (32.9%). Also mentioned is back-up from unemployed people (28.1%) and volunteers (20.5%). The breakdown of the sample allows us to see that, while married people express a preference for the public police force (41%), unmarried respondents behave differently (22.7% in favour of this option).

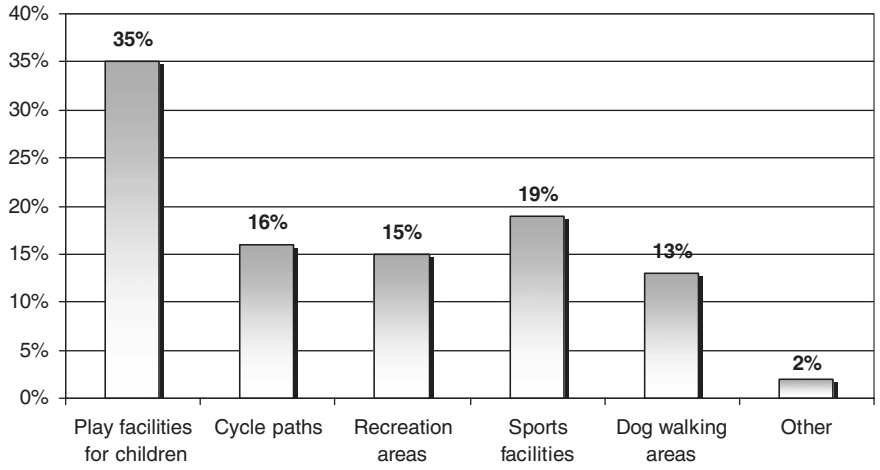

Fig. 5. Green space facilities considered to be essential in Bari.

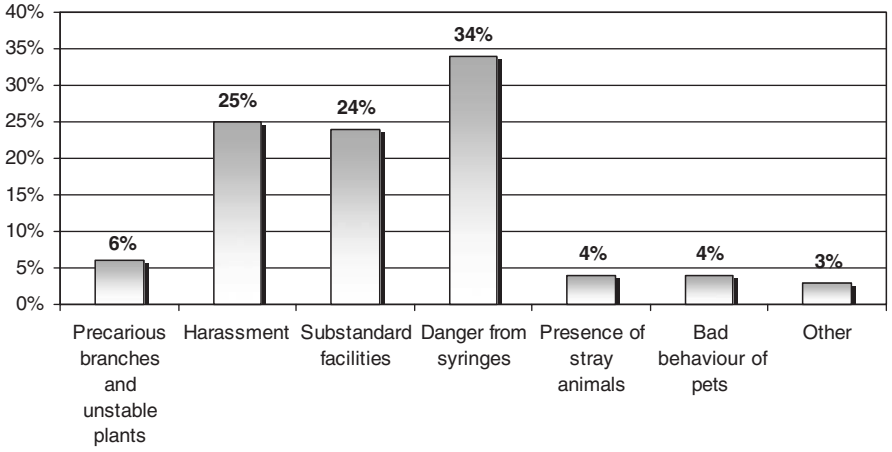

Fig. 6. Perceived dangers in using Bari green spaces.

Unemployed people, however, are not very much in favour of being directly involved in the matter (11.1%).

City park behaviour patterns

When asked whether they were in the habit of going to parks and gardens, only 43.3% of the sample claimed a tendency to do so. This preference was decidedly higher amongst those living in the city centre (52.0%) as opposed to those living on the outskirts (33.0%), with a concentration in the age range between 25 and 44 years of age (54.2%) and in the population with higher academic qualifications (55.8%). The fact that 43 out of 100 inhabitants claim to be a habitual user of an urban green space appears surprising if one considers the scarcity of these spaces in the city of Bari. This is a relevant indicator of the demand for green spaces on the part of the citizens of Bari. Almost 76% of park use is concentrated in the two biggest green areas in the city, which are also the only ones with the characteristics of a well-equipped city park.

This phenomenon is particularly typical of users belonging to the younger age group and of outskirts and the hinterland residents. Greater divergence exists in behaviour patterns in the 45–64 years of age group and those residing in the city centre. People usually go to parks in the company of friends, spouse or partner, children or pets. It is evident that the breakdown of the sample can pinpoint differing behaviour patterns: in particular, students declare going to parks almost exclusively with their friends (87.5%) while visits by housewives are mainly in the company of children (52.6%). As far as frequency is concerned, people spend at least one visit per week with a peak at the weekend (Fig. 7). In this case too we see a divergence of habits, as students and housewives say they visit city parks several times a week, while the presence of those in employment – as is obvious – is concentrated during the weekend.

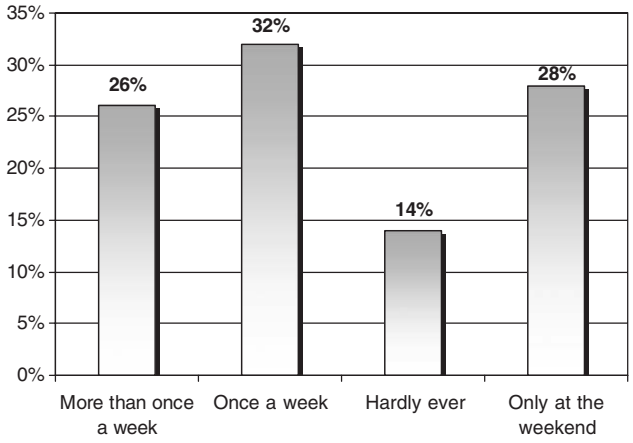

Fig. 7. Frequency of green space visits in Bari.

Of all citizens, 36.7% favour morning use, 27.3% prefer the afternoon, while 2.7% use the green spaces during the lunch hour; the latter figure rises to 15.4% for the under 25 years olds.

Most users reach the green space by car or on foot, while public transport has little importance (only used by 3%). This result is by no means surprising if one considers the fact that the inadequacy of city transport services represents one of the longstanding major problems of the city. In this case, it is interesting to compare behaviour patterns with area of residence. Those who live in the centre favour walking to the parks close to home, while those who live on the outskirts mainly go by car, as do those in the hinterland who are obliged to seek green spaces situated further from their homes. This situation is confirmed by the answers concerning the time spent to complete the trip. In fact, only 37.7% of respondents say they take less than 10 min to reach the place of their choice. Almost the same percentage take twice as long, while the remainder of those interviewed require even longer to reach the green space. While 57.3% of those who live in the city centre cover the distance in less than 10 min, those who live on the outskirts and in the hinterland claim to spend considerably more time reaching the park.

The majority of those interviewed (54.9%) remain in the park for between 1 and 2 h and 16.7% for even longer. Stops of less than 30 min were reported by only 2.1% of the sample. In confirmation of what emerged from the previous questions, those living on the outskirts and hinterland never indicated this option.

What people are looking for when they go to a public green space is principally relaxation and better air quality. Another important motivation is the social and recreation function of a place where children can stop and play and where there is the possibility of practising sports activities. Seeking relaxation and air quality is typically a choice made by students (66.7%) and of working citizens (62.5%). Sport remains a typically prevalent male choice (20% of the sample as opposed to 7.9% of the women), while the function of accompanying children shows an inverse behaviour pattern (40% of the women as opposed to 18.6% of the men).

In order to provide a clearer definition of the aspects which concur in outlining the tendencies of the citizens of Bari as far as green spaces are concerned, we used several multiple regression models to carry out an in-depth analysis of some variables deduced from the questionnaire. These models permit, from a statistical point of view, an easy and more precise analysis of those phenomena which require a large number of independent variables to be kept under control and to select those, which amongst all those examined express the greatest influence over some other variables considered "dependent" (Fabbris, 1991).

The results obtained with this technique were not homogeneous. For some issues where the interviewees' answers showed very little divergence (for example, the question concerning the amount of green space available and the necessity of having a public policy in this field), a more complex multivariate analysis of the simple statistical intersection made little sense and thus was not even carried out. For other variables, however, where the answers differed more within the sample, the regression models used did not give statistically significant results

The only two regression models which gave satisfactory results were those (stepwise type) which put two aspects, one behavioural and one attitudinal, as variable dependants. The variable dependants analysed were: (a) habitual presence at an urban green space and (b) the necessity for Bari Town Council to promote action for increasing the available area (see point (c) below). Both these variables are of a *dummy* type; they thus provide for an alternative yes/no answer with respective values of 1 and 0.

Tables 2 and 3 show the independent variables selected from the model according to the *stepwise* method and, in correspondence of the two dependent variables considered, the partial regression coefficients (B) and the corresponding levels of statistical significance (sig T), calculated with the Student test, to verify the independence of the dependent variable from each independent variable. Those which fit the model have a high statistical significance ($p < 0.05$). In the lower part of the two tables are indicated other values which are useful for understanding the validity of the models considered;

- the value of the regression function constant which is the intercept of the regression line on the ordinate axis (COST);
- the Fischer test value relative to the whole model, which allows one to verify the null hypothesis of independence from all the independent variables of

Table 2. Variables influencing the visiting of urban green spaces in Bari ($n = 230$)

	B	Sig *T*
Aged between 25 and 44 years old	0.582	0.000
Use of urban green space: meeting place and leisure activities	0.634	0.000
Living in the city centre	0.355	0.012
Being married	0.331	0.024
Cost	0.202	
F	9.675	
MR	0.383	

B, partial regression coefficients; Sig *T*, statistical significance; Cost, regression function constant; *F*, Fischer test value; MR, multiple correlation coefficient.

Table 3. Variables influencing the opinion that Bari Town Council should act to promote the creation of private green space in the city ($n = 252$)

	B	Sig *T*
Are there sufficient green spaces in Bari?	−0.368	0.001
65 years old and over	0.161	0.013
Centre	0.114	0.029
Cost	0.698	
F	7.494	
MR	0.288	

B, partial regression coefficients; Sig *T*, statistical significance; Cost, regression function constant; *F*, Fischer test value; MR, multiple correlation coefficient.

the model; this is in our interest to refuse in order to be able to state with a reasonable amount of confidence that the dependence hypothesis formed with the regression function is a valid hypothesis (*F*);
- the multiple correlation coefficient, which expresses the strength of the hypothesised dependence relationship. It measures, in fact, how much of the variability of the considered phenomenon is explained by the influence of the independent variables (MR);
- the number of the cases used to estimate the regression model (*n*).

As far as the factors indicating the use of a city park are concerned, this procedure underlines how four variables influence this behaviour pattern more than the others. Nevertheless, one must take into account that they can explain a meaningful, yet limited part of this behaviour pattern. This means that factors, other than those considered in the model and therefore unknown, contribute to determining whether or not one visits a green area. The indications provided by the model are nevertheless interesting in that they remind one of other elements which, however, are linked in a more significant manner to the visiting of a green area by the citizens of Bari.

As can be observed from Table 2, the first variable selected concerns age; more precisely, when in ''one's prime'', as sociologists and demographers consider the point in one's life when there is more likelihood of being in regular employment or of having formed a family, the probability of visiting a city park rises substantially. In confirmation to this, the fact of being married also contributes to determining (with a 33.1% probability) this behaviour pattern. The other two variables that are connected to the model are, on one hand, considering city green space as a place where one can meet other people and for leisure (this variable increases the probability of regular visits to a park by 63.4%) and, on the other, the circumstance of living in a central area of the city (+35.5% probability linked to the use of a green area), where it is moreover easier to find green spaces to visit. Belonging to a middle-age range, being married, living in the centre and considering green areas above all as places for socialisation and fun are the variables which therefore more than others stimulate regular park going.

Information and citizen participation in local urban green policy

A third section in the questionnaire was dedicated to the relationship between public administration and citizens as far as information and participation are concerned.

Almost all those interviewed (89.2%) agree in finding it important for Bari Town Council to provide citizens with information both when setting up new areas and when making decisions concerning the management of existing green areas. This need is felt above all by those who live in larger family units. It is evident from this finding that the citizens of Bari would like not only to have more green space at their disposition, but also to be involved in the decisions regarding this matter.

The information should be principally circulated by means of distribution of informative material through newspapers and local television or via a specially set up office, a free phone number or a website. It is however relevant to note that a third of those who replied express the need to have a more active say on the question of city green through surveys and public meetings on the matter. Evidently, these citizens are not content with being merely informed, but would rather participate directly in the decisions concerning an important city life-quality sector.

The public meeting is the preferred option for people in the higher age range (43.6%) and pensioners (41.1%); information circulated directly or through the press is

the means favoured by larger family units (75.9%) and by residents in the hinterland (59.2%), while multimedial means are more widely favoured by the younger age group (20.6%).

The question of private green space is also covered in this third section of the study. As many as 73.4% of those interviewed think that it is appropriate for Bari Town Council to embark on a policy of increasing private green space. The necessity for intervention in this direction is felt mostly by those living in the centre and by younger women having a higher level of education.

This should be put into action above all through the issuing of specific regulations (54.6%) and tax incentives such as tax reduction (39.8%). In this case, the preferences vary clearly according to age. We can thus witness a 40.0–64.4% preference for regulations, with linear progression, from the younger to the older members of the community, while we can witness diametrically opposite behaviour when it comes to tax benefits (56.7% of the younger age group opposed to 32.8% of the others).

Using the multiple regression model, if we take the opinion that Bari town council should intervene to promote the creation of private green spaces in the city as a variable to be explained (dependent), the model resulting from the multiple regression explains, on the whole, less than the previous one (28.8 of variance explained against 38.3 of the preceding model). However, it also proves to be useful for understanding who feel the need for this kind of action most urgently. In the first place, this need appears to be connected in a negative way with the positive opinion expressed on the availability of green area in the city: those who express this opinion have indeed 36.8% probability of thinking that Bari Town Council should do something to increase the availability of private green spaces. On the other hand, being elderly increases the probability by 16% of demanding this of the local authority and that occurs also (with an increase of 11.4% in probability) for those who live in a central area. These emerge, in fact, as the two segments of the urban population who most feel the need to have ample green space, be it public or private, at their disposal (Table 3).

Conclusions

The study offers a general understanding of the public's perception regarding urban green spaces in one of the ''poorest'' Italian cities from the point of view of public gardens and parks. Making use of the telephone interviews allowed for drawing up a relevant picture of the perception and behaviour patterns of the citizens. In particular, an emerging sense of strong (positive) feelings towards green areas can be noted in the sample, i.e. green space is being perceived as an element which determines an improvement in the quality of life.

With reference to the perception of green spaces in one's own city, a high level of congruity was found between the answers given by the sample and the objective reality of the green urban spaces. The citizens have a very clear idea both of how much green space is really available in Bari and also of its quality. The survey also shows that, for this reason, many citizens are demanding an improvement both in terms of quantity and quality of the green spaces on offer to the public. This is supported by the analysis of the answers referring to behaviour patterns during use of the green spaces. Use proved to be conditioned in a relevant way by factors such as age, sex and area of residence, thus partly confirming the results of previous surveys carried out in Italian contexts in the cities of Ancona and Turin. It has been demonstrated how the city of Bari is evidently lacking not only green spaces but also other public services and facilities (e.g., public transport connections, surveillance, etc).

People's habits when using parks and gardens are greatly influenced by the type of citizen. This demonstrates therefore how important targeted multifunctional planning and design of green spaces is. Despite the absence of public action in terms of providing information, encouraging participation and promoting awareness in this sector, those interviewed showed considerable interest in being involved in the public body's planning activity including partnership activities.

Some results need to be more closely examined in the future. The perception of quality and quantity of green spaces and the willingness to pay for a better public service are topics for further study.

Finally, the study has confirmed how telephone interviews can be used as a valid tool in the planning, design and management of urban green spaces. Telephone interviews can be applied both for checking the level of customer satisfaction regarding the service and for promoting participation processes in the local authority's decision phase.

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