

Article

Historical Public Parks: Investigating Contemporary Visitor Needs

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Abstract: Worldwide, several large-scale historical gardens have been adapted to social needs and became public parks. Historical parks, designed in a different era and often subjected to pressures for development, raise concerns in meeting contemporary visitor needs, rendering them vulnerable to private interests. The main purpose of this paper was to determine whether a historical park designed in a different era can meet today's visitor needs. The National Garden (NG) in Athens, Greece, a well-protected historical park, was selected as a case study. A questionnaire survey addressed to the visitors of the NG was undertaken on the basis of the main components of park design, factors affecting visitation, and visitor perceptions of involvement in park management. A descriptive and regression analysis was applied. Even though the NG was not originally designed as a public park but as a garden, overall results showed it satisfies its visitor's needs. The planting and associated tranquility are the most liked characteristics of the NG that are inextricably linked with its original design as a private garden. The main qualitative traits of plants that people like were found in the NG plant species. Suggested improvements to fulfill further contemporary visitor's needs have to be considered carefully and must comply with the statutory measures that protect the NG and associated wildlife habitat. As in many urban parks, concerns for safety and cleanliness and willingness to volunteer in park maintenance were also expressed by visitors of the NG. This study illustrates that historical gardens designed many years ago and transformed into public parks can protect and conserve the historical and cultural heritage and concomitantly meet today's visitor needs. Further research is suggested to study other historical parks.

Keywords: National Garden; landscape character; landscape design; historical and cultural heritage; perceptions; public parks

1. Introduction

Within urban areas, the presence of historical gardens and parks is not uncommon. Urban areas that conserve cultural heritage including historical gardens and parks are more sustainable, diverse, and inclusive [1]. The protection of historical gardens and parks are regulated by international conventions, charters, and guidelines that have also been passed in the national legislation of many countries [2]. The Florence Charter [3] is the first charter to address historic gardens and their preservation in particular, characterizing them as "living monuments" [2,4]. More specifically, the Florence Charter [3] states that "A historic garden is an architectural and horticultural composition of interest to the public from the historical or artistic point of view" and notes that "the term *historic garden* is applicable to small gardens and to large parks, whether formal or *landscape*". The materialized

aesthetic, ecological, and social aspects of the past are integrated into the present use of the historical gardens [5]. Historical gardens have resulted from the initiatives of people with varying backgrounds such as royals, noblemen, gardeners, and laypersons [4]. Hence, the role that these gardens play in urban life varies worldwide, preventing generalized interpretations on their design [4,6], and their conservation is safeguarded through constant monitoring and periodic reviews of their features [5].

The consideration of cultural heritage conservation with sustainable development has been generated from the conditions, challenges, and opportunities in the current socio-economic, environmental, and political context of urban areas and has influenced approaches to heritage conservation [1]. Visitors' involvement in the management of urban public parks develops a meaningful relationship with the park authorities [7], and in historic parks, it can raise awareness and promote conservation [8]. Contemporary trends in maintaining sustainability and developing resilient urban landscapes, and hence resilient communities, have enhanced the importance of green space visitor use [9]; where present, historical public parks can constitute important green spaces in the urban fabric [10]. Accessibility, the perception of safety, and the design and characteristics of green spaces may facilitate or impede visitor use [9,11–14]. In park design, an appropriate interrelation between the various park components is considered, which includes natural elements (land, water, plants), areas with defined use (e.g., playgrounds, paths, maintenance yards), large structures (e.g., buildings), small structures (e.g., park furniture; electric, drainage, and irrigation systems; fountains; borders), visitors, and animals [15]. Nineteenth-century design of parks aimed at creating spacious green spaces offering opportunities for fresh air, exercise, and recreation, described as *rus in urbe* (Latin translated "countryside in the city") [16]. Visitor needs are dynamic and evolve with time. Historical public parks were intended for all social groups and evolved alongside social needs, being initially used for informal promenading and gradually integrating other uses such as sports fields and playgrounds that also accommodate present social needs [17]. Worldwide, many historical public parks were originally designed as private gardens. Several large-scale historical gardens adopted to the social needs and became public parks while concomitantly conserving key design features (i.e., landscape character), for example, Tuileries Garden (Paris, France); Boboli Garden (Florence, Italy); Tiergarten (Berlin, Germany); National Garden (Athens, Greece); Retiro Park (Madrid, Spain); and Kensington Gardens, Green Park, and Regent's Park (London, United Kingdom) [16,18,19]. While maintaining the original landscape character, the transformation of these private gardens into public parks reflect the historical and cultural developments of the time [20]. Thus, the distinctiveness of historical parks is inextricably related to its history that needs to be maintained for future generations as it creates a cultural connection with visitors that would otherwise be lost and forgotten [17]. However, historical parks designed and developed in a different era raise concerns in meeting contemporary visitor needs [10,21]. The questioning as to whether historical urban parks meet the needs of contemporary urban living, combined in many cases with the lack of statutory controls, generate development interests that may lead to the appropriation of neglected historical parks to express contemporary design trends and urban needs that become appealing with promises for better facilities, as well as a higher standard of maintenance [10,17].

Despite the presence of regulations for the protection of historical public parks and gardens, limited size and amount of green space availability, particularly in densely built cities, as well as the need to provide a wide range of cultural and provisioning ecosystem services to meet the needs of urban dwellers continues to exercise pressure on their preservation [22,23]. The primary concern of historic parks is to protect the related historic and cultural heritage; however, unless there is a particular reason, historic parks need not be experienced as displays or archaeological artifacts in museums [21]. They can constitute important green spaces in contemporary urban living [13,20,24] and contribute to the sustainability of urban areas by providing environmental benefits and opportunities for social and human well-being [1]. Over the years, people and their park leisure needs have remained unchanged, but changes occurred in the standards of maintenance, leading to the gradual decline of many historical parks [10]; thus, it is necessary to convince people that historical urban parks can meet

the contemporary needs of their visitors and raise awareness to oppose arguments that contradict this. There are several studies on the use and visitor perceptions of green spaces [25–31]; however, studies on the use and visitor perceptions of historic public parks and gardens are limited [32]. Most studies of historic public parks and gardens are focused on the conservation, history, management, plant collections, and evolution of the historic public parks and gardens [23,33–38].

Given the above, the present study investigates the contemporary visitor's needs in a well-maintained and protected historic park with the aim of determining whether a historical park designed in a different era can meet today's visitor's needs. The National Garden in Athens, Greece, is the most popular historic public park in the city, and was selected as a case study in this research project. Visitor use and perceptions of the National Garden have not been studied before, raising the research question "does the National Garden meet the contemporary needs of its visitors?" Identifying visitor use and perceptions would provide information on whether the design of the National Garden meets visitor needs in a contemporary era and could possibly persuade people with evidence of a case study that historical gardens designed in a different era can remain protected and concomitantly serve contemporary visitor needs.

2. Materials and Methods

2.1. History of Research Area

The National Garden is the first designed green space of modern Greece, with an area of approximately 15.4 acres. It was designed as part of the surrounding grounds of the former palace of King Otto and Queen Amalia, today's parliament building of the Hellenic Republic of Greece. In 1836, the Bavarian palace architect Friedrich von Gärtner defined the surface area of the garden [39]. In 1839, the Bavarian agronomist Smarat started planting the garden in collaboration with the Prussian gardener Friedrich Schmidt [39]. The first 30 acres of the garden was planted with 15,000 ornamental plants imported from Genoa [40,41]. Additionally, native plant species were imported from the regions of Sounio and Evia. In 1846–1847, the expansion of the garden was decided and the French garden designer Francois Louis Barauld was appointed [40]. In 1852, the mosaic of a late Roman settlement was discovered in the northwest area of the garden at a depth of 1m [40]. On the departure of Francois Louis Barauld in 1854, the garden was nearly completed, while Friedrich Schmidt continued to manage the garden in close collaboration with Francois Louis Barauld and Smarat until 1884 (Figure 1). In 1860, the final boundaries of the garden were settled to almost where they are today, and the Peisistratio aqueduct (6th century BC) was discovered, from which the garden began its irrigation in 1875 and continues today (1210 m³ per day) [40].

Queen Amalia supervised all the works and rested in a metal polygonal seat on a rocky hill that survives today in the northeastern part of the garden. In 1868, a few years after the departure of King Otto (1862) and his death (1867), about 4.5 acres of the garden were allocated to the Evzones Battalion, the present Presidential Guard [41]. In the years that followed, a greenhouse and contained animal and bird collection (small zoo and aviary) were built. In 1923, it was declared public, open from sunrise to sunset [40]. In 1927, it was renamed the National Garden under the newly established authority "Public Gardens and Tree Committee" [40,41]. In 1984, the children's library was established, and in 1985, the Botanical Museum was founded in a 19th century building [41]. Since 2010, the National Garden has belonged to the National Botanical Garden Network. In 2011, it was characterized by law as a "historic site" (Government Gazette ΦΕΚ 49 ΑΠΠ/2011). In accordance with the ministerial decision (ΥΠΠΠΟΤ/ΔΝΣΑΚ/113998/2568/23-3-2011), the National Garden is "unique in our country and a particularly remarkable example of landscape architecture based on the principles of 19th-century European design and of particular botanical interest. It constitutes a place that has captured the successive evolutionary phases of the recent history of Athens and has been inextricably linked to the collective memory of the city's inhabitants through major turning points in the history of the Greek state and as well as their daily life".

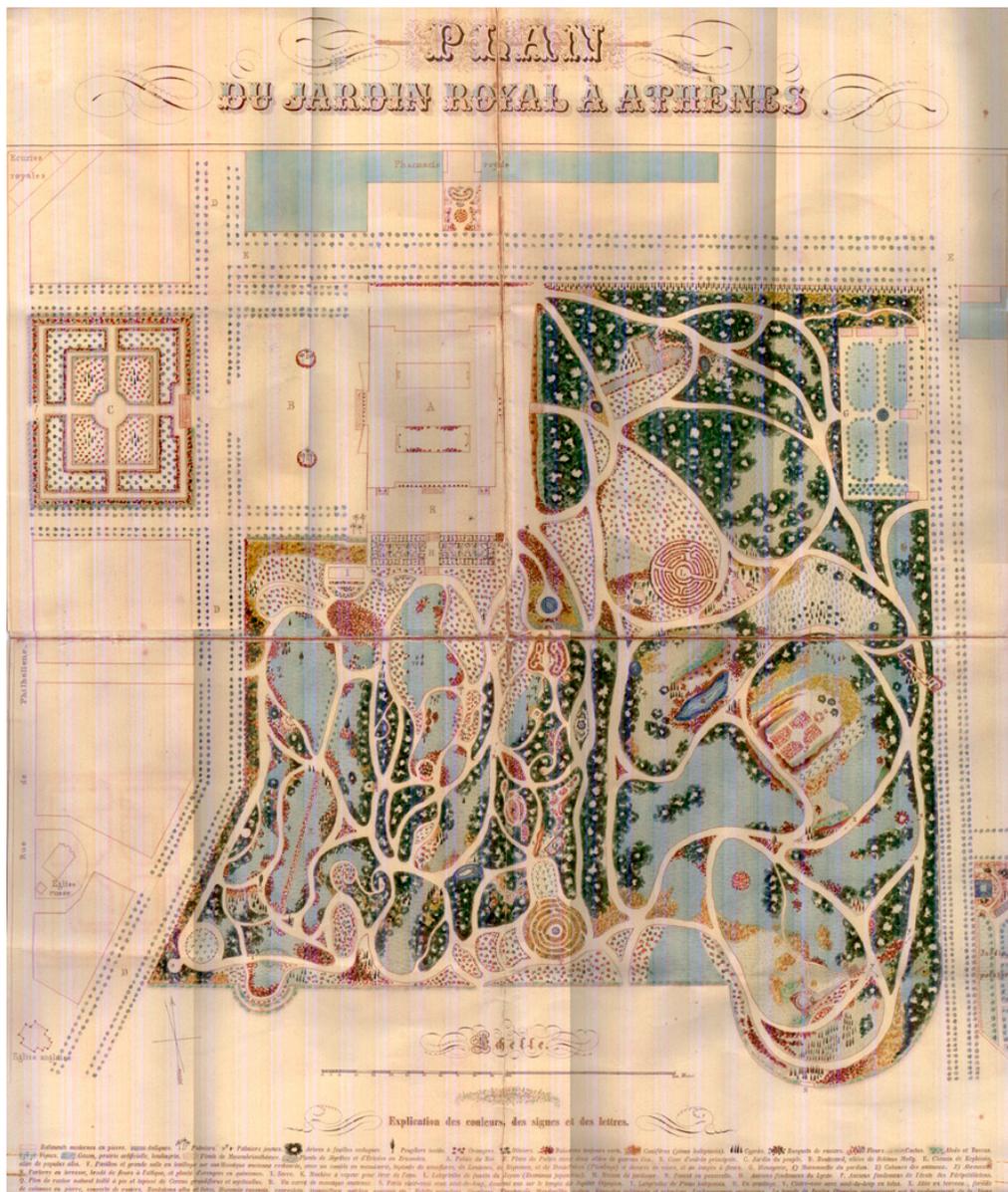


Figure 1. “Plan du Jardin Royal à Athènes” of Francois Louis Barauld depicting the National Garden in 1854 (source: Otto König von Griechenland Museum Ottobrunn).

In October 2004, the Municipality of Athens took over management of the National Garden for 90 years, and according to article 25 of Law 3274/2004 “is obliged to maintain and improve vegetation, to govern, manage, utilize and maintain and generally protect the National Garden, which will retain its forest character and destination intact and will continue to abide by the provisions of forest legislation”. To improve the organization and management of the National Garden, initially the Public Entity “Municipality of Athens - National Garden” was founded, which operated until 2011 and was succeeded by the “National Garden Department of the Division of Green Areas & Urban Fauna”.

In 2005, the Ministry of Environment, Spatial Planning, and Public Works digitally mapped the location of the tree and shrub species in the National Garden as well as the tree stumps of trees that were lost over the years. It was the first digital mapping of plants in a historic garden in Greece. In 2018, the initial plant mapping of the National Garden was updated and a digital spatial database containing information per plant species was created for the first time in a historic garden in Greece using a geographic information system that is updated at regular intervals to conserve and protect the original planting of the National Garden [42].

The National Garden has largely remained unchanged since Barauld's original design, with statutory controls (legislation) in place to ensure its protection and with security personnel present 24/7. Since 1923, it continues to accept visitors between sunrise to sunset. The National Garden is a place where successive evolutionary phases of the recent history of Athens have been captured, with it being inextricably linked to the collective memory of the city's inhabitants, including important turning points in the history of the Greek state and their daily lives (Figure 2). The landscape design of the National Garden (NG) is "eclectic" based on the "picturesque" and "gardenesque" (with the integration of non-native plants) and influenced by the "English landscape park" and at places the "*jardin à la française*". The dense planting interchanged with open areas and viewpoints and the meandering paths constitute strong features of the NG landscape character (Figure 3).



Figure 2. Present schematic plan of National Garden (drawn by A. Paraskevopoulou, outline based on plan by the Ministry for the Environment, Physical Planning, and Public Works; aerial photo showing the urban context of the National Garden by Google Earth 2020, earth.google.com/web/).



Figure 3. Indicative images of the landscape character and elements found within the National Garden, Athens, Greece (photos: A. Paraskevopoulou). (a) Lawn area and colorful flower bed with Parliament building in the background (the former royal palace entry point to the garden). (b) Seating area with colorful flower beds surrounding the pergola-covered fountain with a sculpture of a shepherdess. (c) Grotto and agrimi goat (*Capra aegagrus cretica*), unique to Crete, located in a small zoo. (d) Meandering path with dense planting.

2.2. Questionnaire Survey Content and Conduct

The questionnaire constitutes part of a wider study that investigates all large-size public parks developed in different times and located within the Attica Basin in meeting the contemporary needs of their visitors. The content of the questionnaire was mainly based on four important components considered during a park design process, i.e., visitors (e.g., socio-demographic characteristics), natural elements (e.g., planting), areas of defined use (e.g., purpose of visit), and small structures (e.g., park furniture), [15]; two main factors that affect park visitation were also included: accessibility [12] and the perception of safety [13]. To obtain a further understanding of the visitor–park relationship, we also included the visitor’s perception of involvement in park management. Finally, to facilitate determining whether the visitor’s needs are met, we asked visitors to summarize their overall satisfaction in visiting the park.

Most of the questions in the survey were multiple choice (with single answer) and were used to facilitate respondents, as well as data coding and analysis [43]. In more detail, the questionnaire

survey consisted of 39 questions divided into 8 subject areas; in this study, only the most pertinent are presented (Table 1):

- Participant details: included gender, age, marital and parental status, occupation, location of residence, and park visit companion.
- Accessibility: means and ease of travel, duration of travel, satisfaction of travel (yes/no option), duration of visit, preferred time and day of visit, and frequency of visit.
- Areas of defined use: reason to visit, location within park visited, and visitation of other parks (yes/no option).
- Perceptions on qualitative and quantitative planting: perception of plant aesthetics, quantity, maintained condition (five-point Likert scale), and preferred qualitative traits plants offer.
- Perceptions on qualitative and quantitative park furniture: perception of park furniture aesthetics (five-point Likert scale), quantity, and maintained condition (five-point Likert scale).
- Visitor–park management involvement: awareness of managing authority (yes/no option), state the managing authority, and willingness to volunteer in gardening and clean-ups (yes/no).
- Perception of safety: perception of safety (five-point Likert scale), awareness of the security personnel present (yes/no), and desire to have security personnel present within the NG (yes/no).
- Overall satisfaction of needs: participants rate the satisfaction in meeting their needs from their visit (10-point scale, where 1 = not satisfied and 10 = extremely satisfied), most- and least-liked characteristics of NG (open-ended), and optionally proposing improvements of NG (open-ended).

Table 1. Questionnaire survey content addressed to park visitors.

Questions	Response Options
Participant details	
gender; age; marital status; parental status; occupation; location of residence; park visit companion	M/F; <18, 18–30, 31–40, 41–50, 51–60, >60 years; single, married, divorced, widowed; yes/no; open-ended question; student, self-employed, employee, pensioner, household maintenance, civil worker, pupil, unemployed
Accessibility	
How do you travel to the park?	1. walk; 2. cycle; 3. public transport (i. bus; ii. metro; iii. tram; iv. trolley bus); 4. motorbike; 5. private car; 6. school bus; 7. taxi
How do you characterize your travel to the park?	1. very easy; 2. easy; 3. moderate; 4. difficult; 5. very difficult
How long does it take to travel to the park?	5 min; 10 min; 15 min; 20 min; 30 min; 45 min; 60 min
Are you satisfied with your travel to the park? If no, please state why.	yes/no; open-ended question
How often do you visit the park?	1. daily; 2. weekly (i. Monday; ii. Tuesday; iii. Wednesday; iv. Thursday; v. Friday vi. no particular day); 3. every weekend; 4. holidays; 5. monthly; 6. annually
For how long do you visit the park?	30 min; 1 h; 1 h 30 min; 2 h; 2 h 30 min; 3 h; >3 h
Who accompanies you during your visit to the park?	1. nobody; 2. family; 3. friend; 4. partner; 5. spouse 6. grandchild; 7. pet; 8. other
Areas of defined use	
Why do you visit the park?	1. tranquility; 2. exercise; 3. child walk outdoors; 4. socialization; 5. walking through different entrance points; 6. cycling
What area of the park do you visit?	1. open spaces (i. entire garden; ii. lakes; iii. fountains; iv. pergolas; v. seating areas; vi. paths); 2. playground; 3. small zoo and aviary; 4. café shop; 5. botanical museum
Do you visit other parks within Attica?	yes/no
Perceptions on qualitative and quantitative planting	
How do you rate the aesthetics of the planting in the park?	1. very good; 2. good; 3. moderate; 4. poor; 5. very poor; 6. do not know
How do you rate the quantity of planting in the park?	1. abundant; 2. sufficient; 3. limited; 4. do not know; 5. indifferent
How do you rate the maintenance of the planting in the park?	1. very good; 2. good; 3. moderate; 4. poor; 5. very poor; 6. do not know
What qualitative traits of plants do you most prefer?	1. provide shade; 2. flowering; 3. aromatic; 4. autumn leaf color; 5. wind rustling sound effect; 6. deciduous; 7. evergreen; 8. fruit; 9. fruitless; 10. indifferent

Table 1. Cont.

Questions	Response Options
Perceptions on qualitative and quantitative park furniture	
How do you rate the aesthetics of the park furniture in the park?	1. very good; 2. good; 3. moderate; 4. poor; 5. very poor; 6. do not know
How do you rate the quantity of park furniture in the park? If not sufficient, what park furniture would you like to have more of?	sufficient/non-sufficient (i. seats; ii. lampposts; iii. information posts; iv. signage; v. rubbish bins; vi. table benches; vii. drinking water fountains; viii. wi-fi hotspots)
How do you rate the maintenance of the park furniture in the park?	1. very good; 2. good; 3. moderate; 4. poor; 5. very poor; 6. do not know
Visitor-park management involvement	
Do you know the managing authority for the park? If yes, please state.	yes/no; correct/wrong answer
Would you like to volunteer in the maintenance of the park? If yes, what type of maintenance would you like to volunteer in?	yes/no; gardening/clean-up/both
Perception of safety	
How do you rate your perception of safety within the park?	1. very safe; 2. safe; 3. moderately safe; 4. little safe; 5. unsafe
How do you rate the amount of security personnel within the park?	1. very good; 2. good; 3. moderate; 4. poor; 5. very poor; 6. does not exist; 7. do not know
Would you like to have security personnel present within the park?	yes/no
Overall satisfaction of needs	
Please rate at a scale from 1 to 10 how satisfied you are with your visit to the park.	scale (1 = not satisfied, 10 = extremely satisfied)
What are your most liked characteristics of the park?	open-ended
What are your least liked characteristics of the park?	open-ended

The survey was completed on sunny days in June–July 2016, on both weekdays and weekends as well as at different hours during the day. Face-to-face interviews were undertaken by the interviewer, asking each question separately and recording the answer. During the day, visitors seem to be distributed homogeneously throughout the National Garden area, apart from the playground, a fenced area with play equipment that occasionally at times becomes busy. The face-to-face interviews were conducted throughout the National Garden, with the exception of the fenced playground area; visitors were approached, informed about the survey, and asked for voluntary participation. The duration of the questionnaire survey was approximately 20 min.

2.3. Statistical Analysis

A descriptive analysis was used; for each question, percentage frequency was calculated for each category that indicated the most frequent answers. Additionally, a regression-type analysis approach was used to look for the potential associations between the dependent variables of interest (i.e., visitor's needs of NG) with selected predictor variables. In this study, the dependent variables correspond to categorical responses in the questions of interest. Hence, to account for the discrete nature of the collected response data, we applied a series of multinomial logistic regression models that ensure the validity and robustness of the obtained parameter estimates through statistical inference, instead of utilizing the standard linear regression analysis. Treating the categorical responses as generated by a continuous Gaussian process and performing linear regression analyses can lead to severe problems and difficulties since these types of data violate two important assumptions of standard statistical techniques, i.e., the assumption of normal error term and constant variance [44,45].

In more detail, a multinomial logistic regression modelling approach [46] was used for the majority of the questions with the independent variables participant gender, age group, marital and parental status, occupation, location of residence, and accompanied person during visits to the NG at ($p < 0.05$). Specifically, for modeling the multinomial categorical responses on the questions of interest, we assumed that the dependent variable $y_i = (y_1, y_2, \dots, y_k)^t$ ($i = 1, 2, \dots, k$) followed a multinomial distribution and was linked to a set of m predictor variables $\{x_1, x_2, \dots, x_\ell, \dots, x_m\}$ via the following equation:

$$\log\left(\frac{p_i}{p_{i^*}}\right) = \beta^T \mathbf{X} + \varepsilon, \quad (1)$$

where p_i denotes the probability of answer category i , whereas i^* is the reference category of the response variable, with \mathbf{X} being the matrix of covariates, β being the vector of parameter estimates corresponding to \mathbf{X} , and finally ϵ being the error term. Covariate selection upon fitting the various logistic regression models was performed through a backward elimination stepwise procedure. The collected data were imported and analyzed using SPSS Statistical Software, v.17.0 (SPSS INC, Chicago, IL, USA).

3. Results

A total of 202 visitors participated in the survey, and all the completed questionnaires were valid.

3.1. Participant details

Participants ($N = 202$) were representative of both genders (42.1% male, 57.9% female), and their age ranged between 15 and 70 years with a mean of 36 years ($SD = 1.82$) (Table 2). The majority of participants were single (57.9%); however, a relatively large percentage were married (36.6%), and the remainder were either divorced (4.6%) or widowed (1.0%) (Table 2). Moreover, a relatively large percentage of participants were parents (43.1%) (Table 2). Concerning the type of occupation, participants were mostly students (27.7%), followed by self-employed individuals (18.8%), employees (17.3%), pensioners (14.4%), individuals occupied solely with household maintenance (7.9%), civil workers (7.4%), and others (<5%) (Table 2).

Table 2. Socio-demographic participant details of questionnaire survey addressed to National Garden (NG) visitors ($N = 202$).

Gender	Number	Percentage	Parental Status	Number	Percentage
Male	85	42.1	parent	87	43.1
Female	117	57.9	not	115	56.9
Age	Marital status				
<18 years	8	4	single	117	57.9
18–30 years	89	44.1	married	74	36.6
31–40 years	27	13.4	divorced	9	4.5
41–50 years	21	10.4	widowed	2	1.0
51–60 years	27	13.4			
>60 years	30	14.9			
Occupation					
Student	56	27.7			
Self-employed	38	18.8			
Employee	35	17.3			
Pensioner	29	14.4			
Household maintenance	16	7.9			
Civil worker	15	7.4			
Pupil	8	4.0			
Unemployed	5	2.5			

The majority of the NG visitors are residents of the Municipality of Athens (32.3%), followed by residents of the central district municipalities (23.9%) (Figure 4). Most of the people visiting the NG are accompanied by a friend (33.2%) or visit alone (24.3%). Less people visit the NG with their family (13.9%), partner (13.4%), spouse (8.9%), grandchild (4.5%), pupils (1.0%), or pet (1.0%).

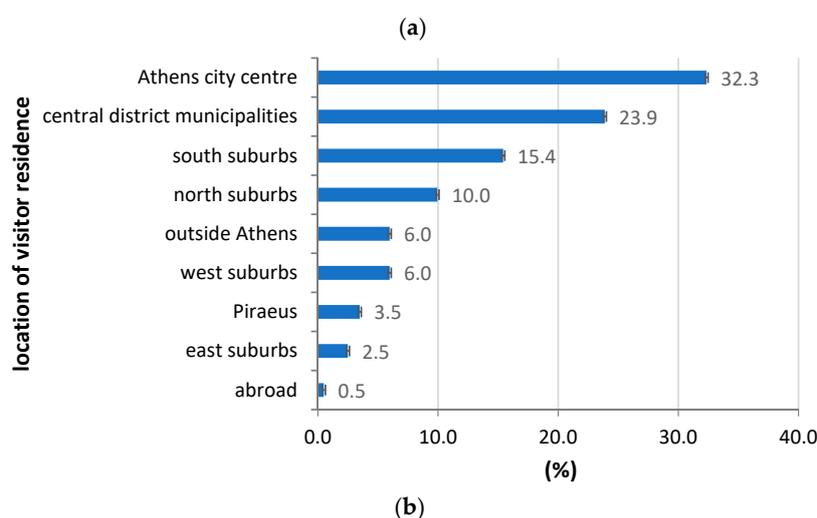
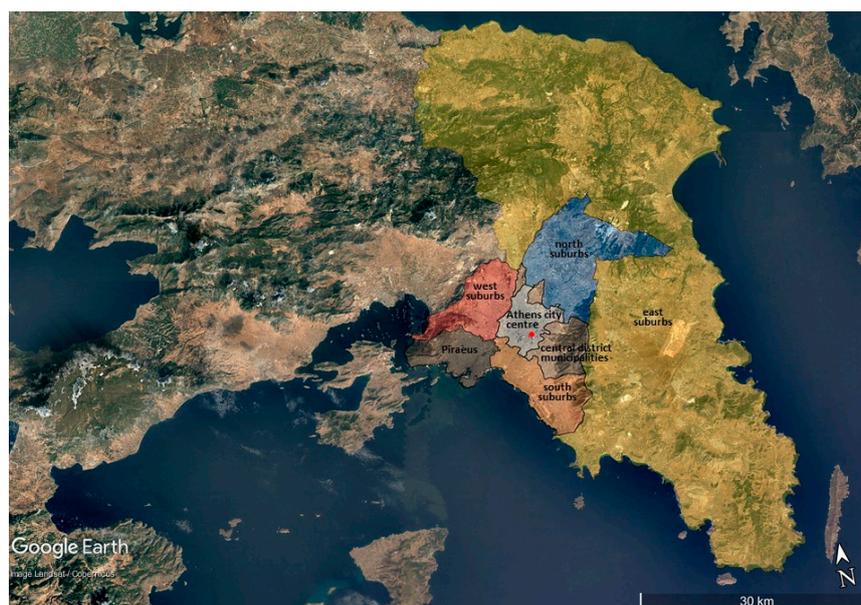


Figure 4. Details of the location of residence of the visitors of the National Garden that participated in the survey. (a) Satellite image indicating the different locations of residence (source: satellite image of Attica, Google Earth, 2020, earth.google.com/web/; image landsat/Copernicus, modified by Angeliki Paraskevopoulou); the red circle denotes the location of the National Garden. (b) Percent distribution of the location of residence of the visitors of the National Garden that participated in the survey (values are the percentage of 202 participants \pm SE).

3.2. Accessibility

Most participants access the National Garden by public transport (55.0%), followed by on foot (24.8%); private car (15.3%); and other means of transport such as motorbike, bicycle, school bus, and taxi (< 3% each). The most popular form of public transport used was the metro (45.9%), followed by the bus (22.5%), or a combination of different forms of transport (18.9%). Access was characterized by most participants as easy (45.5%). Many participants also characterized access as very easy (28.7%) and moderate (21.3%), and only 4.5% of the participants characterized access as difficult or very difficult. Furthermore, the multinomial logistic regression on the type of transport used to access the NG showed differences in relation to the occupation of the visitors; visitors that were civil workers cycled to the NG more (beta coefficient = 5.433; p -value = 0.01 < 0.05) rather than walked in relation to visitors of other

occupations, including the reference category. Moreover, men showed more satisfaction in accessing the NG than women (beta coefficient = 1.392; p -value = 0.015 < 0.05).

Most visitors take approximately 20–30 min to reach the NG (24.2% and 29.6%, respectively); a relatively large amount of visitors take approximately 15 min to reach the NG (18.3%). The remaining visitors take approximately 5 min (6.5%), 10 min (9.7%), 45 min (7.0%), or even 60 min (4.8%) to visit the NG. The majority of visitors stated they were satisfied with the way they access the NG (88%). The main improvements suggested in accessing the NG included transferring the transport stops nearer the NG entrances (24.0%) and increasing the number of parking spaces (36.0%). Other improvements suggested included increasing the NG number of entrances (12.0%), the number of spaces for motorbike or bicycle parking (8.0% each), and the number of disabled car park spaces (4.0%) or bus lanes (4.0%), as well as expanding the metro line (4.0%).

Most of the visitors visit the NG monthly (33.3%) or annually (28.9%). A relatively large amount of people visit the NG weekly (23.8%), of which, nearly half of them during the weekends (10.9%). Only 1.5% of the people visit the NG daily, while the remaining 12.9% have non-regular visits to the NG that are occasional. The most popular day to visit the NG is Friday (28.6%), followed in descending order by weekday (28.6%) and weekend (26.2%) visitors, while the remaining 16.7% visit on non-particular days. The majority of the visitors (43.9%) visit during the morning hours between 06:00 and 14:30. A relatively large amount of people (37.8%) visit during the evening hours between 18:01 and 22:00, and less during the afternoon (14:31–18:00) (18.3%). Visit duration for the majority (32.8%) is 2 h, followed in descending order by 3 h (21.0%), 1 h (18.8%), 1 ½ h (14.0%), 2 ½ h (7.0%), > 3 h (4.8%), and ½ h (1.6%) visits. Results from the multinomial logistic regression showed that visitors from the south and west suburbs (beta coefficient = 3.282; p -value = 0.020 < 0.05 and beta coefficient = 3.857; p -value = 0.014 < 0.05, respectively) visit the NG during morning hours (06:00–14:30) more than during evening hours (18:01–22:00) in relation to visitors from Athens city center, the central district municipalities, north and east suburbs of Athens, and Piraeus. Additionally, visitors that were employees spent much less time, i.e., half an hour (beta coefficient = 7.022; p -value = 0.022 < 0.05) compared to over 3 h visits from visitors of other types of occupations.

3.3. Areas of Defined Use

The main reasons expressed for visiting the NG were tranquility (38.6%), exercise (29.7%), child walk outdoors (15.9%), socialization (12.9%), cycling (1.0%), and walking through different entrance points (2.0%). Amongst the most popular locations within the NG visited is the small zoo and aviary (36.9%) and aviary (36.9%) and playground (13.1%). Many people visit the entire NG (23.2%), while the rest visit particular features or services of the park such as the lakes, fountains, pergolas, paths, seating areas, and the café shop (24.2%) (Figure 5).

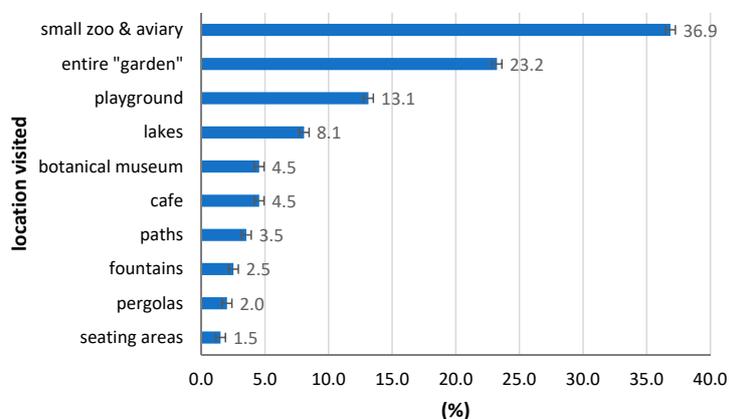


Figure 5. Percent distribution of participants of the survey visiting particular locations within the National Garden during their visits (values are the percentage of 202 participants \pm SE).

The majority of the visitors stated that they do not usually visit other large-sized parks within the Attica Basin (80.4%). The multinomial logistic regression on the visitation of other large parks within the Attica Basin showed differences in relation to the occupation of the visitors; visitors occupied with the household visited other parks much less (beta coefficient = -2.080 ; p -value = $0.023 < 0.05$) in relation to visitors of other occupations.

3.4. Perceptions on Qualitative and Quantitative Planting

The aesthetics of the planting within the NG was considered by most visitors as “good” (50.5%) (Figure 6). Many visitors considered the planting aesthetics as “moderate” (25.7%) or “very good” (19.3%). As for the quantity of the planting within the NG, the majority of the visitors considered it to be sufficient (68.7%), while a relatively large percent considered it to be limited (16.9%) (Figure 7).

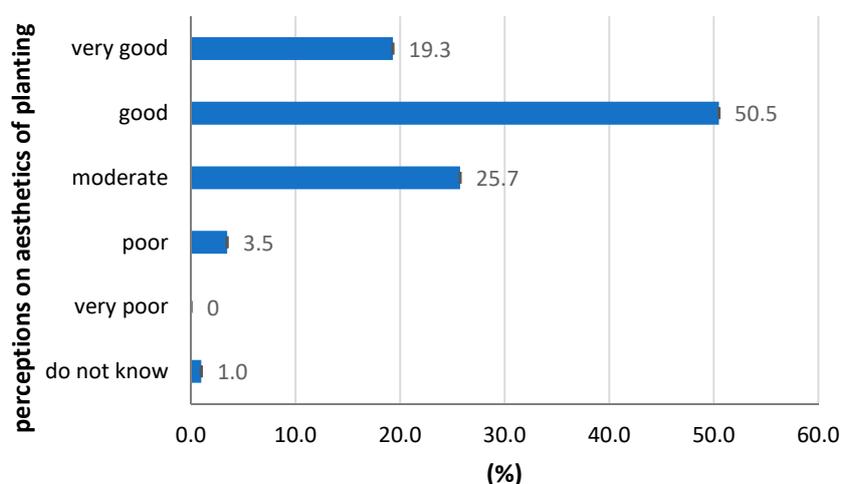


Figure 6. Percent distribution of the perceptions on the aesthetics of the planting of the NG by the participants of the survey (values are the percentage of 202 participants \pm SE).

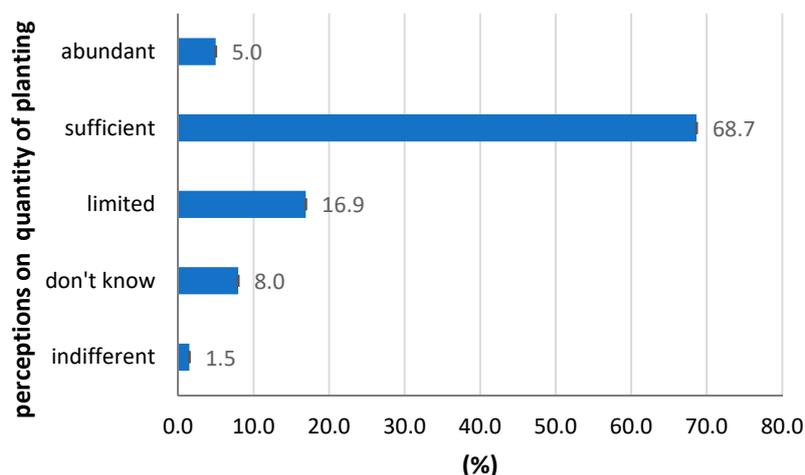


Figure 7. Percent distribution of the perceptions on the amount of the planting of the NG by the participants of the survey (values are the percentage of 202 participants \pm SE).

With regards to the maintenance of the planting within the NG, most visitors stated that it was “good” (47.0%); many visitors also stated that it was “moderate” (33.2%), and a relatively large percent of visitors stated that it was “very good” (14.9%) (Figure 8).

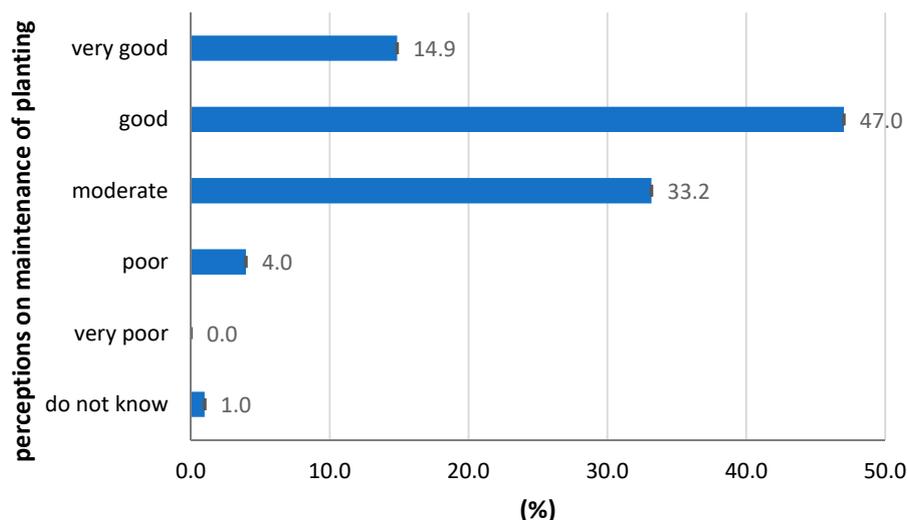


Figure 8. Percent distribution of the perceptions on the maintenance of the planting of the NG by the participants of the survey (values are the percentage of 202 participants \pm SE).

Amongst the various qualitative traits that plants offer, most visitors liked plants that provide shade (55.0%), followed in descending order by flowering plants (53.0%), aromatic plants (42.6%), species with autumn leaf color (21.8%), plants with a wind rustling leaves sound effect (19.8%), evergreen species, (15.3%), fruit plants (10.9%), deciduous species (8.4%), and other plant species that were liked at less than 5.0% (Figure 9).

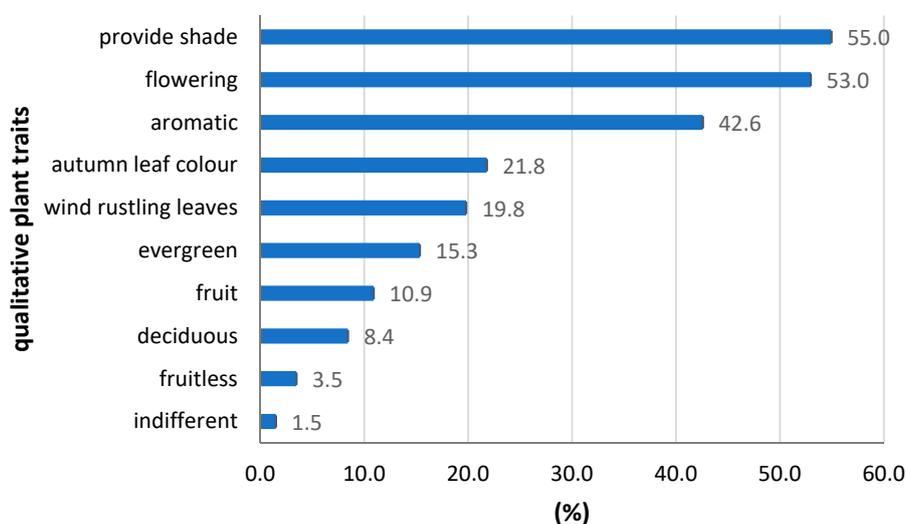


Figure 9. Percentage of qualitative plant traits preferred by the participants of the survey (values are the percentage of 202 participants \pm SE).

3.5. Perceptions on Qualitative and Quantitative Park Furniture

The aesthetics of the park furniture within the NG was considered by most as “moderate” (41.6%) or “good” (38.6%) (Figure 10). Similarly, the condition of the park furniture within the NG was considered by most as “moderate” (40.6%) or “good” (40.6%) (Figure 11). On the other hand, the quantity of park furniture within the NG was considered non-sufficient by the majority of visitors (71.3%). Furthermore, the multinomial logistic regression showed that in relation to the aesthetics of the park furniture within the NG, visitors that were civil workers were more indifferent (beta coefficient = -4.667 ; p -value = $0.027 < 0.05$) compared to visitors of other types of occupations.

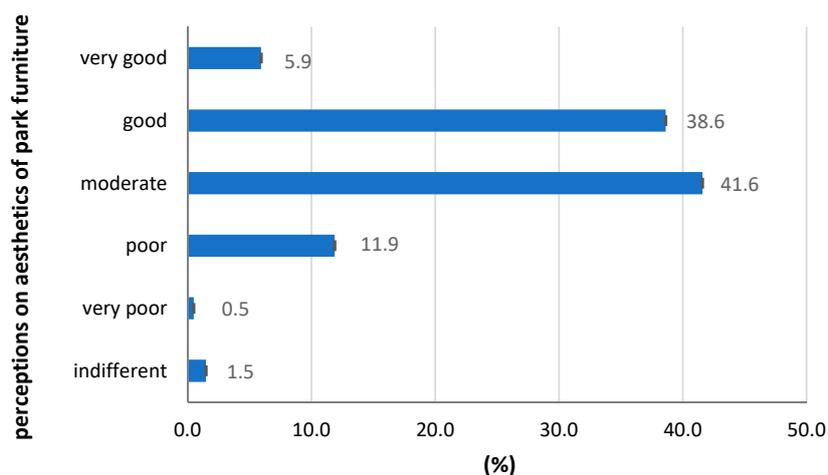


Figure 10. Percent distribution of the perceptions on the aesthetics of the park furniture of the NG by the participants of the survey (values are the percentage of 202 participants \pm SE).

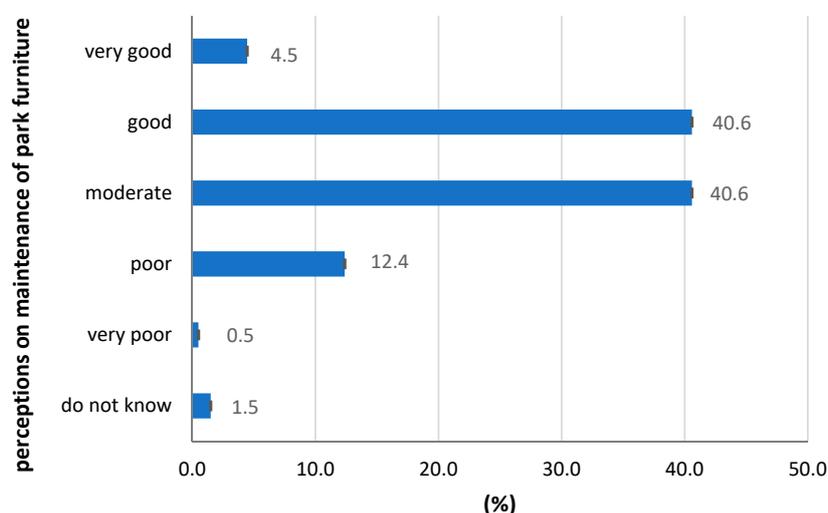


Figure 11. Percent distribution of the perceptions on the maintenance of park furniture within the NG by the participants of the survey (values are the percentage of 202 participants \pm SE).

Regarding the types of park furniture considered as insufficient in amounts within the NG, most visitors stated the need to reinforce the provision of drinking water fountains (36.6%), followed in descending order by lampposts (17.8%), information posts (16.3%), seats (14.4%), rubbish bins (12.4%), signage (6.4%), wi-fi hotspots (0.5%), and table benches (0.5%).

3.6. Visitor–Park Management Involvement

Visitor awareness of the NG managing body was only 13.9%, and the majority of the visitors were unfamiliar with the location of the managing body within the NG (85.6%). Furthermore when visitors were asked for their willingness to volunteer in the maintenance works of the NG, only 27.0% of the visitors accepted; amongst these visitors, most wanted to volunteer in gardening (62.3%), and only 9.4% wanted to volunteer in clean-ups, while 28.3% of the visitors wanted to volunteer in both gardening and clean-ups. In more detail, the multinomial logistic regression results showed unemployed visitors expressed much more indifference to volunteer (beta coefficient = -3.909 ; p -value = $0.029 < 0.05$) at the NG compared to visitors of other types of occupations. Visitors from Piraeus also expressed much more indifference to volunteer (beta coefficient = -6.090 ; p -value = $0.048 < 0.05$) at the NG compared to visitors from other locations.

3.7. Perception of Safety

The perception of safety was moderate for most visitors (31.5%). However, many visitors also stated they felt “little safe” (27.0%) (Figure 12). Regarding the provision of park security personnel, a relatively large percent a visitors stated that they did not know if any security personnel was present (34.7%), or stated that there was no security personnel present (20.3%) (Figure 13). Amongst the visitors that were aware of the park security personnel (44.6%), most stated that the amount of security personnel provided was moderate (16.3%) (Figure 13). In response to the desire for the provision of security personnel within the NG, the majority of the visitors stated yes (96.0%). More detailed analysis using multinomial logistic regression showed that visitors that were self-employed felt “very safe” much more than “unsafe” (beta coefficient = -5.289 ; p -value = $0.030 < 0.05$) within the NG compared to visitors of other occupations. Moreover, visitors from Athens city center felt more “unsafe” rather than “very safe” (beta coefficient = 4.757 ; p -value = $0.034 < 0.05$) in comparison to visitors from other locations while visiting the NG. Visitors that were civil workers, self-employed, or occupied with the household felt “little safe” much less (beta coefficient = -5.717 ; p -value = $0.026 < 0.05$, beta coefficient = -5.557 ; p -value = $0.016 < 0.05$, and beta coefficient = -9.650 ; p -value = $0.026 < 0.05$, respectively) than visitors of other types of occupations. Self-employed visitors felt “moderately safe” much less than “very safe” (beta coefficient = -5.788 ; p -value = $0.011 < 0.05$) in relation to visitors of other occupations. Moreover, visitors from Piraeus felt “moderately safe” much less (beta coefficient = -4.418 ; p -value = $0.026 < 0.05$) than visitors from other locations. Visitors that were civil workers or self-employed felt “safe” much less than “very safe” (beta coefficient = -5.770 ; p -value = $0.030 < 0.05$ vs. beta coefficient = -5.696 ; p -value = $0.013 < 0.05$, respectively) in relation to visitors with other occupations. Furthermore, visitors of all age groups felt “very safe” rather than “safe” (beta coefficient = 2.028 ; p -value = $0.046 < 0.05$) more often while visiting the NG.

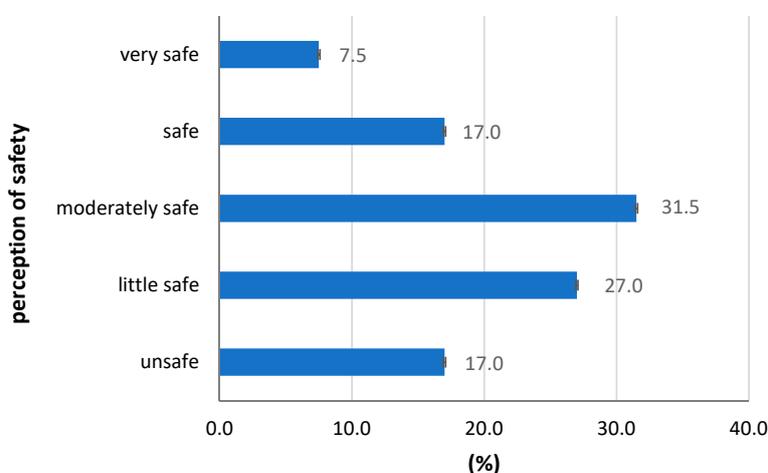


Figure 12. Percent distribution of the perception of safety expressed by the participants of the survey during their visits to the National Garden (values are the percentage of 202 participants \pm SE).

3.8. Overall Satisfaction of Needs

The majority of the visitors (86.6%) stated overall that they are satisfied with their visits to the NG and altogether rated the NG on a 10-point scale (10 = extremely satisfied) with 7.1. The multinomial logistic regression results showed visitors that visited the NG alone or were accompanied by a family member (child, grandchild, spouse, entire family, relative) or a friend graded the park on a 10-point scale with a “10” more than with a “2” (beta coefficient = -41.541 ; p -value = $0.020 < 0.05$, beta coefficient = -43.500 ; p -value = $0.017 < 0.05$, beta coefficient = -41.645 ; p -value = $0.027 < 0.05$, beta coefficient = -41.975 ; p -value = $0.021 < 0.05$, beta coefficient = -40.855 ; p -value = $0.026 < 0.05$, beta coefficient = -42.221 ; p -value = $0.018 < 0.05$, and beta coefficient = -42.287 ; p -value = $0.019 < 0.05$, respectively) much more than visitors accompanied by a dog, colleague, or pupils.

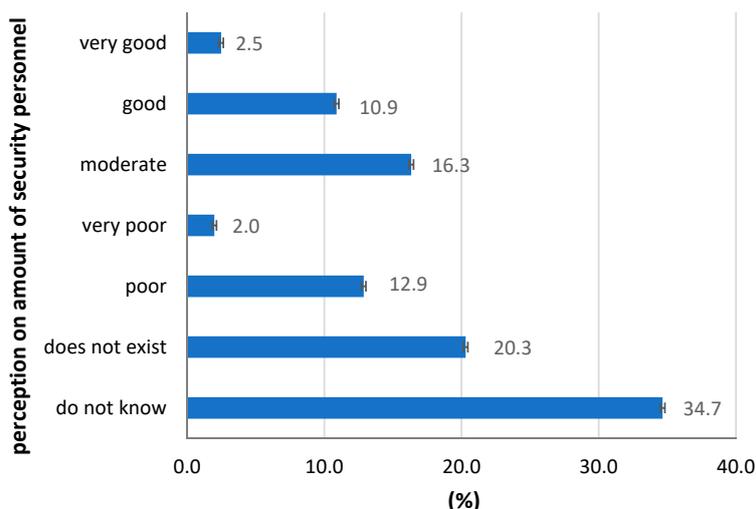


Figure 13. Percent distribution of the survey participants’ perceived amount of security personnel during their visits to the National Garden (values are the percentage of 202 participants ± SE).

The most liked characteristics of the NG included the planting (32.7%), sense of tranquility (19.1%), and the small zoo and aviary (15.5%) (Figure 14). On the other hand, the least liked characteristics of the NG included the lack of security (22.1%), lack of cleanliness (20.0%), and the insufficient amount of park furniture (15.3%) (Figure 15).

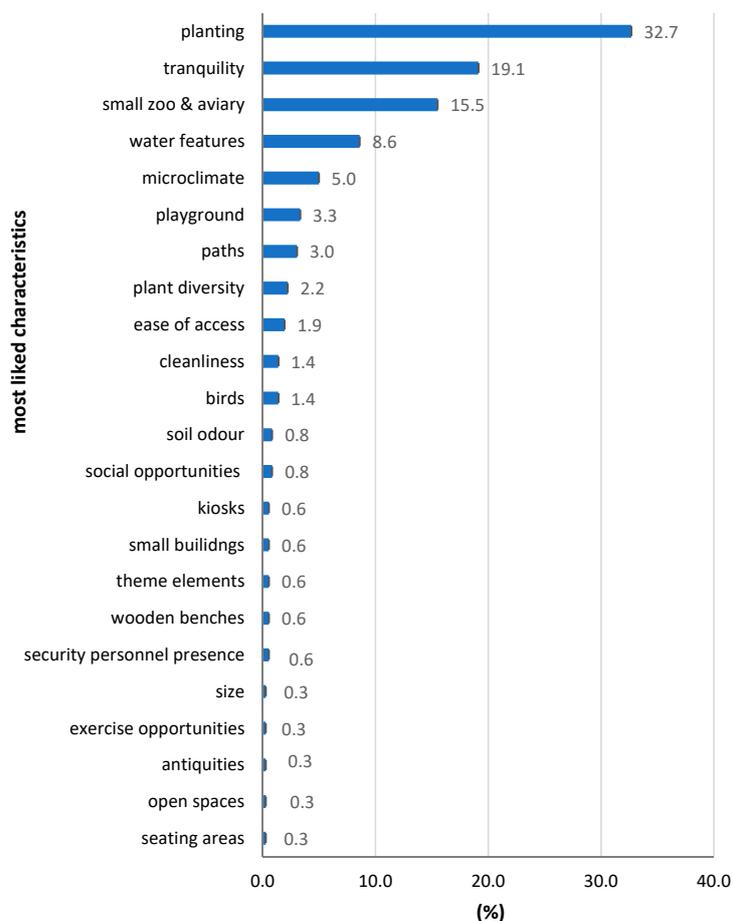


Figure 14. Percentage of most liked characteristics of the National Gardens stated by the participants of the survey (values are the percentage of 202 participants ± SE).

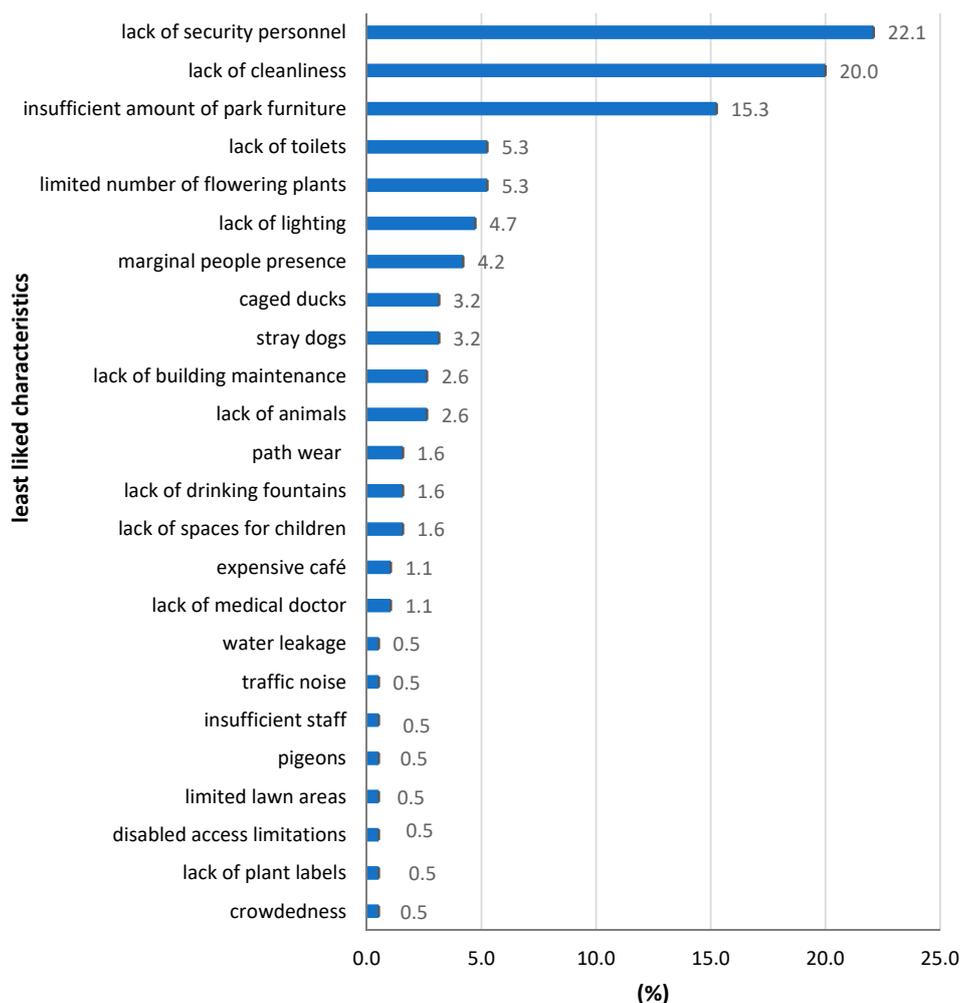


Figure 15. Percentage of least liked characteristics of the National Gardens stated by the participants of the survey (values are the percentage of 202 participants \pm SE).

Proposed improvements from some of the visitors (15.8%) included in descending order to increase cleanliness (21.9%) and security (18.8%); add more animals (18.8%); equally increase gardening maintenance and flowering plants (6.3% each); improve the park furniture and increase the number of toilets (6.3% each); and equally increase the number of park lamps, drinking fountains, shelters from the rain, table benches, and benches (3.1% each).

4. Discussion

4.1. Participant Details

The overall results showed that the NG is visited by people of both genders, different ages, and social groups, and from throughout the Attica Basin. Most of the respondents visit the NG alone or accompanied by a friend or family member. Our results agree with the results of other researchers that also found most respondents visit parks alone, with a friend, or with a family member [47]. The majority of the NG visitors live within the Municipality of Athens or municipalities within the central district of Athens, which is expected. Visitors from the southern and northern suburbs of Athens are more common, possibly due to the more direct access offered by public transport as opposed to the visitors from the western and eastern suburbs of Athens and Piraeus. Urban density has been found to influence the trade-off between travel time and the time duration of a particular activity, i.e., residents of less urbanized areas would spend more travel time than residents of dense urban

areas to reach the location of a particular activity for the same duration of an activity [48]. The urban density of the southern and northern suburbs of Athens is smaller than that of Piraeus and the western suburbs of Athens that may have also contributed to the particular percent distribution of the NG visitors' locations of residence.

4.2. Accessibility

The majority of the visitors spend 20–30 min to access the NG, suggesting an ease of access. This was confirmed by 74.2% of the respondents when asked directly how they characterized their access to the NG. It was unexpected to find that the type of transport used was influenced by the occupation of the visitors; civil workers appear to cycle to the NG more than the other occupations. However, it has been found that an individual's working environment, employers and co-workers, provision of car park space, free public transport, or cycling benefits can influence their choice of commuting, i.e., cycling to work [49]. Therefore, it seems that the working environment of civil workers visiting the NG supports cycling more than other occupations.

The travel distance to parks was been found to affect park visitation frequency. Tu et al. [12] found that people visiting parks every month or less spent 2–3h or longer in parks, and drove or used public transport to access the park; these results agree with the results obtained in the current study. Similarly, most of the respondents visit the NG monthly, spend approximately 2 h, and use public transport to access the NG. Studies have shown that each activity (e.g., visiting a park) is affected by the travel time ratio (i.e., the ratio between travel time to the location of a particular activity and the sum of travel time and corresponding activity duration); people who live nearer to the location of an activity (e.g., a park) tend to visit more often but spend less time than people who live further away and need to commute to reach their destination [48,50]. Tu et al. [12] also found that when the travel distance increased, high visit frequency (i.e., daily, semi-weekly, and weekly) decreased much greater than the lower visit frequency (i.e., fortnightly, monthly, and occasionally). Furthermore, in this study, the duration of the visit was affected by the occupation of the visitors; employees appeared to visit the NG for less time in comparison with other occupations. Individuals' commitments have been found to influence the duration of the visit [48]. Thus, the commitments of employees probably limit their visit time to the NG. A more detailed study is needed to confirm the effect of visitors' occupations on the duration of their visits.

The results of the current study also suggest that most of the NG visitors are regular visitors and spend a reasonable amount of time during their visits to the NG. The latter is also supported by the fact that the majority of the visitors stated that they do not usually visit other large parks within the Attica Basin. Visitation to other parks was influenced by the occupation of the visitors; respondents that were occupied with the household visited much less other large size parks than respondents of other occupations. All visitors of the NG occupied with the household had children, and the majority lived within Athens or the central district municipalities of Athens (data not shown). Susilo and Dijst [48] found that households with children would choose a location closer to their residence. Hence, it is likely that the visitors of the NG occupied with the household visited other large size parks less, as they were further away in relation to the NG. Further research is necessary to confirm these results.

The most popular days for respondents to visit the NG are Friday (the last day of the week) and the weekend. Visits to the NG are both popular in the morning (06:00–14:30) and the evening (18:01–22:00) hours. The time of visit was influenced by the location of the visitor's residence—visitors residing in the southern and western suburbs visit more during the daytime, possibly because these locations are less facilitated by the metro line and because bus lines are less frequent during the evening than in the morning. Similarly, other researchers have shown that travel mode and travel time influences park visitation [48].

4.3. Areas of Defined Use

The most popular reasons stated by the respondents to visit the NG were the sense of tranquility, exercise, child walk outdoors, and socialization. The sense of tranquility created by the planting of the NG is the main reason people visit parks [51], and has a positive effect on park visitation, people's physical activity, and social relationships [52]. The facilities offered by parks such as paths, playgrounds, and benches also constitute important reasons for park visitation [10,51,53]. The main reasons respondents visit the NG was reflected in the areas of the NG that respondents chose to visit, i.e., small zoo and aviary, playground, and the entire garden. The presence of animal collections (small zoo/aviary) in parks, as well as playgrounds, attract visitors [10,54–56]. Respondents that visit the entire garden probably like walking or jogging within the garden for exercise. Many visitors are seen strolling and some jogging within the National Garden. Giles Corti et al. [57] have found through an observational study of public open spaces that most of the visitors were observed walking or jogging. The percentage of visitors walking or jogging is much greater in attractive public open spaces as opposed to less attractive public open spaces. However, the design of public open spaces could probably also influence the percentage of visitors walking or jogging. Herein, approximately one-third of the visitors stated using the NG for exercise; this percentage is considered relatively high as the NG is full of meandering paths. Although the width of the paths are relatively wide (approximately 3 m width), the meandering paths limit visibility around turns, inhibiting unobstructed jogging, especially during peak visit times. The meandering paths also constitute the main reason cycling is not allowed within the NG, which is to avoid accidents from blind spots.

4.4. Perceptions on Qualitative and Quantitative Planting

The majority of the respondents were satisfied with the aesthetics, amount, and condition of the planting within the NG, suggesting that the NG is well maintained, which was confirmed by the site analysis undertaken. These results also show that the NG visitors were able to discern the maintained condition of the planting. Furthermore, in recent years (i.e., 2006), the planting of the NG that had been lost over the years was restored on the basis of the original planting design of the NG [58]. The NG qualitative traits that plants offer that were most liked by the visitors were the provision of shade, flowering and aromatic plants, autumn leaf color, and wind rustling leaves sound effect. All these traits are found within the NG and are qualitative characteristics appreciated by people in Mediterranean countries. The provision of shade in Greece as well as in countries characterized by hot, dry summers such as the Mediterranean countries is essential [59]. Researchers also have found that the natural shade from trees was more effective in reducing the physiologically equivalent temperature (PET) than the artificial shade from constructed ramadas [60]. Moreover, shade is critical for seniors walking outdoors [61] and encourages physical activities such as walking or jogging [53]. Flowering plants are also appreciated by people as a recognized feature in parks [62,63]. Aromatic plants are often used in urban green spaces in Mediterranean countries due to their ability to withstand limited water and nutritional needs and tolerance to contaminants [64,65]. Color in plants stimulates people's senses [66]. Trees with autumn color are preferred by people over trees with green foliage and induce greater positive emotions [67]. Researchers have found that urban park users have a desire for natural sounds such as leaves rustling, and that dense vegetation has a strong influence on the perceptions of sounds [68].

4.5. Perceptions on Qualitative and Quantitative Park Furniture

Although visitors seemed satisfied with the aesthetics and condition of the park furniture, they considered the amount to be insufficient, being also identified as one of the least liked characteristics of the NG; in particular, visitors stated that they wanted there to be an increase in the number of drinking water fountains, lampposts, signposts, and seats. The provision of free potable drinking water in public parks is an important strategy for preventing obesity and adverse health conditions [69].

There are currently nine available drinking water fountains within the NG; many are in the form of small rock formations and are integrated so well into the design of the NG that it is possible their presence misses visitors' attention. More detailed research is needed to investigate the need for more drinking water fountains within the NG or raising public awareness of their presence. Lighting within the NG is limited mainly along the main paths, as the NG opening and closing hours are at sunrise and sunset. Furthermore, the NG is a habitat for many wildlife species, particularly birds, and an increase in lampposts within the NG is likely to disrupt the existing bird and wildlife population [70]. With the exception of the designed fixed seating areas that have a sufficient number of seats and cannot be altered due to their historic conservation, seat number in larger seating areas within the NG could be increased either with traditional benches or chairs already used within the NG. Appearance and public perception of a park can be affected by park furniture (i.e., the introduction of drinking water fountains, lampposts, seats, gates, railings, etc.); therefore, extreme care must be taken to retain the historic and local character of the park furniture [71]. Additionally, the provision of seating can promote seniors to walk outdoors, catering to their needs [72]. Visitors' perceptions of the aesthetics of the park furniture were influenced by their occupation; visitors that were civil workers were more indifferent than visitors of other occupations. With regards to the latter, this may be because most of the visitors that were civil workers visited the park to physically exercise themselves (data not shown), and hence paid less attention to the aesthetics of the park furniture. More research is needed to conclude whether visitors' occupations influence their perceptions of the aesthetics of park furniture.

4.6. Visitor–Park Management Involvement

Results showed that approximately 1 in 10 visitors knew the managing body responsible for the maintenance of the NG and its location within the NG. These results are not surprising, as there are no official signs of the managing body of the NG, apart from the headings on the maps mounted on the information posts located at each of the six entrances, the main lake, children's library, and playground; thus, it is likely that visitors who are familiar with the NG do not consult these maps. Just over a quarter of the visitors expressed willingness to volunteer in the maintenance of the NG (gardening and clean-up), suggesting a communal concern for maintaining the NG and an opportunity for the NG managing authority to commit and utilize appropriately through volunteered park activities [7,8,73]. Visitors involved in park activities acquire a higher perception of the park's quality [38]. Through volunteerism, people can acquire attitudes, skills, and knowledge on both sustainability and conservation, therefore increasing public support in the protection and preservation of historical parks [8,74]. In organizing such activities, to increase the number of participants, the managing authority needs to consider the time of the activity, as activities during working hours are likely to attract a small number of participants [38]. Volunteerism was influenced by the occupation and visitor's location of residence. Unemployed visitors were much more indifferent than visitors that were employed. This is expected, as unemployed visitors are mainly concerned with finding a job. Moreover, visitors that lived in Piraeus were more indifferent than visitors living in other locations. This is also expected, as Piraeus is a different city than Athens and people are more likely to volunteer within their city.

4.7. Perception of Safety

The perception of safety was moderate for most visitors, and nearly one-third stated that they were unaware of the presence of security personnel within the National Garden. Security personnel is present within the NG, however, their uniform is discrete, which might be the reason that many visitors were unaware of their presence. It has been shown that police uniform induced feelings of safety in parks [75]. A change of security personnel uniform that is more noticeable would perhaps increase public noticeability and generate a greater sense of safety to the visitors.

Nearly all visitors responded positively to the provision of security personnel within the NG. These results agree with the results of other researchers [11,56]. The perception of safety plays an important role in the use of public parks [56] and in combination with walking paths predicts

human well-being [11]. The perception of safety may create negative feelings towards dense planting obstructing views and offering concealment [13]. In some areas, the planting within the NG is dense, and views are obstructed through the meandering paths, yet the fact that the majority of visitors of the NG were satisfied with the aesthetics, amount, and condition of the planting within the NG indicates that the perception of safety within the NG was enough not to negatively influence their feelings regarding the planting within the NG. The perception of safety also increases with proper maintenance [13], and it must be noted that the planting of the NG is well managed and possibly also contributes to the perceived sense of safety. Although traditional park security personnel in many historical parks is missing due to budget cuts, closed-circuit television (CCTV) systems are no substitute. CCTV systems can have a damaging impact on the landscape character of historical parks and should be avoided, particularly if lighting is required [17].

The sense of safety was influenced by both the visitors' locations of residence and occupations. Visitors living within Athens city center and Piraeus felt less safe than visitors residing in other locations. Social segregation in densely populated areas with a lack of green spaces creates insecurity [11]; Athens city center and Piraeus are densely populated and have limited green spaces, which therefore might explain why they feel less safe in the NG than visitors residing in other areas. Furthermore, visitors that were civil workers, self-employed, or occupied with the household felt safer than visitors of other occupations. It is difficult to interpret the effect of a visitor's occupation on the perception of safety, suggesting the need for further research.

4.8. Overall Satisfaction of Needs

Overall satisfaction in visiting the NG received a relatively high average mark (7.1) by visitors (10 = extremely satisfied). Overall satisfaction in visiting the NG was influenced by the visitor's companion during their visit to the NG; respondents that visited the NG alone or were accompanied by a family member (child, grandchild, spouse, entire family, relative) or a friend graded the garden higher than visitors accompanied by a dog, colleague, or pupils. It seems reasonable that the respondents' visits to the NG associated with work or a task would generate a lower score than people visiting for their pleasure or accompanied by a family member. The findings of Mak and Jim [47] showed respondents that visit parks alone enjoy the freedom and time of being alone and respondents that visit parks with family members strengthen family ties.

The most liked characteristics of the NG were the planting, sense of tranquility, and the small zoo and aviary, while the least liked characteristics of the NG included the lack of security; lack of cleanliness; and an insufficient amount of park furniture, particularly seats. Furthermore, approximately one in six visitors suggested improvements for the NG; the most popular improvements suggested were to increase cleanliness and security and add more animals. All the characteristics and suggested improvements highlighted by the NG visitors are generally valued by park visitors [11,51]. Greenery and the associated tranquility are the most important components of urban parks [51], and park cleanliness is also an important concern for visitors [52]. The planting of the NG is inextricably linked to its original design, which is maintained carefully. Site visits to the NG throughout the study showed no particular signs of lack of cleanliness within the NG; however, it may be a concern during peak time visits. Researchers have found that visitors of medium- and large-size urban parks scored high in terms of valuing cleanliness, seating, and safety [11], which agrees with the results of the current study. With regards to the addition of animals in the NG, it would only be possible within the NG-defined small zoo and aviary space and in compliance with animal and bird welfare regulations.

4.9. Research Implications

The study showed that the NG attracts visitors from throughout the Attica Basin. Access to the NG is satisfactory and public transport is the most popular choice of transport to visit. Most users visit regularly and spend a reasonable amount of visit time. The natural elements of the NG, in particular the planting and the meandering paths, are key features of the NG design and have been highlighted

by the visitors. The planting and associated tranquility are the most liked characteristics of the NG that are owed to the original garden design. The main qualitative traits of plants that people like are found in the NG plant species. The small zoo and aviary, paths, and playground were the most liked features and services of the NG. Nevertheless, improvements were suggested (i.e., increased drinking water fountains, lampposts, and seats) that need to be considered carefully with regards to the NG bird and wildlife habitat and the local landscape character. Similarly to urban parks, visitors showed concerns for safety and cleanliness. The well-managed planting of the NG and presence of security personnel contributed to the perceived sense of safety by visitors, making them appreciate the main features of the NG design—a combination of different densities of the planting, meandering paths, and obstructed views—without fear. Should future research of the NG find a decrease in the perception of safety, changes in maintenance, and safety personnel should be investigated as they can constitute a likely cause. Visitors expressed an interest to volunteer in the maintenance of the NG, suggesting a communal concern for the NG and presenting an opportunity for the managing authority to utilize appropriately and raise awareness in the protection and conservation of the NG. The NG is a historical park, and even though it was not originally designed as a public park but as a garden, overall results showed it satisfies its visitors' needs, showing it possesses, as one can say, a "timeless" value.

The study's findings are limited by the fact that the distinct design that characterizes each historical park is related to its history. Therefore, the diversity of historical park design cannot account for generalizations. Further research is necessary to include other historical parks as case studies to address the questioning of historical parks meeting contemporary visitor needs. It is not suggested that all historical parks need to meet visitor needs, but if the distinct design of a historical park is appropriate for public use, it can meet the visitor's needs. The NG is a well-maintained and protected "historical park"; research of another historical park less maintained or protected may show opposite results to the current findings. In cases where the findings have shown that visitor needs have not been met, they can possibly be addressed as long as any suggested interventions do not threaten or damage the park's history and cultural heritage.

The methodology applied in this study can generate valuable information in terms of park visitors' perceptions and needs for other historical parks, having two uses: to provide proof that historical parks can meet contemporary visitor needs as well as to inform the meeting of visitor needs without compromising the main goal of historical parks to protect and conserve historical and cultural heritage. Despite the limitations, some practical conclusions can be drawn in meeting contemporary visitor needs in historical parks:

- A good transport system to access historical park supports visitation.
- The perception of tranquility within a historical park attracts visitors.
- Where appropriate, a small zoo/aviary and playground in historical parks attracts visitors.
- The existing path system in historical parks can attract visitors.
- Visitors desire to have drinking water fountains in the park; public awareness of their presence needs to be considered.
- The combined effect of good maintenance and the presence of security personnel makes visitors appreciate the planting without fear.
- The presence of security personnel increases the perception of safety and must be supported; the security personnel uniform can influence the perception of their presence.
- Visitors show interest in volunteerism that historical park authorities can utilize appropriately and raise awareness for the protection and conservation of their park.
- Visitors desire cleanliness to be maintained.
- Suggested improvements by visitors (i.e., increasing park furniture) should be carefully considered in complying with measures for the protection of the historical park, as well as the associated wildlife habitat; proposals that do not comply with measures for the protection of the historical park should be dismissed.

5. Conclusions

The protection and conservation of historical parks creates a cultural connection with visitors and contributes to the sustainability of urban areas. Many large-scale historical gardens worldwide have adapted to social needs and have become public parks. The design of these gardens in a different era and their transformation into public parks while maintaining their original landscape character raises concerns in meeting contemporary visitor needs. The NG was selected as a case study to investigate whether a historical park designed in a different era can meet contemporary visitor needs. The applied methodology provided valuable information on park visitors' profile, perceptions, and needs that can be used twofold: determining historical parks can meet contemporary visitor needs or informing to meet visitor needs. The primary role of historical parks is to protect and conserve their historical and cultural heritage; therefore, care must be taken that the conclusions drawn must comply with the protection of the historical park.

The NG provides both environmental and social benefits. The planting and associated perception of tranquility are the most liked characteristics of the NG, and the main qualitative traits of plants that people like are found in the NG plant species. These features highlighted by the visitors are inextricably linked with the NG's original design as a private garden. Suggested improvements to fulfill further contemporary visitors' needs have to be considered carefully with regards to the protection of the NG landscape character and bird and wildlife habitats. As in many urban parks, concerns for safety and cleanliness as well as the willingness to volunteer were also expressed by visitors of the NG. This study has shown that a well maintained and protected historical public park such as the NG can meet contemporary visitor needs. These findings constitute evidence that private historical gardens designed many years ago that have been transformed into public parks can protect and conserve their historical and cultural heritage and concomitantly meet contemporary visitor needs, giving them a "timeless" value. This evidence can be used to further support the protection and conservation of historical parks.

The distinct design characterizing historical gardens is related to their history. Despite this limitation for providing generalizations, proposals to meet contemporary visitor needs in historical parks are suggested herein. Further research is necessary to study other historical parks as case studies in order to address with evidence the questioning of historical parks meeting contemporary visitor needs.

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