PRISMA CENTRE FOR DEVELOPMENT STUDIES

SYNTHESIS REPORT OF THE URBAN OPEN SPACE USERS' SURVEYS IN DARMSTADT, ATHENS, GYOR & EINDHOVEN

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Terms of References

Synthesis Report of the Urban Open Space Users' Surveys in Darmstadt, Athens, Gyor and Eindhoven, (IO 02) submitted in fulfilment of the requirements for the Erasmus+ Project Promoting education and jobs to enhance the use of urban blue and green infrastructure for health and fitness (PREHealth).

Project partners

Technische Universität Darmstadt
Utrecht University
PRISMA – Planning and Research Consultants
Széchenyi István University
City of Darmstadt
City of Athens
City of Győr

Content

1. Introduction

The field survey of open space users was conducted in the framework of the PreHealth project in the 4 cities participating in the project, namely Athens, Darmstadt, Gyor and Eindhoven. The survey included two parts: a face-to-face survey and an online survey of users of urban open.

The objectives of the survey are:

a. to gather empirical data from the four cities, focusing on a number of open spaces selected in cooperation with the City Councils for the face-to-face survey; while inviting all open space users to take part in the online survey.

b. to enable the project team to construct a detailed picture of behaviour patterns in the use of open spaces by city dwellers;

c. to identify the improvements these users consider necessary to allow more thorough and active use of such spaces.

The face-to-face surveys were conducted in the four cities during the summer of 2017, including September 2017 (Eindhoven). The online surveys were launched in the four cities either in parallel or after the face-to-face surveys and were promoted by the partner organisations and cooperating local authorities.

Both surveys used a specially designed questionnaire, translated in the four different national languages of the participating countries (GR, DE, HU, NL). The face-to-face and online questionnaires were almost identical, adjusted only in a few points as was deemed necessary. The questionnaire in the face-to-face survey took about 10 mins to complete, and was administered by volunteers and project partners' staff in the open spaces selected in each city, stopping a random sample of open space visitors requesting their cooperation in the survey

The field survey was conducted in the following open spaces:

In **Athens**, the survey was conducted during the month of July 2017, in three parks:

- Pangrati Alsos, a park of 5 hectares located in Pangrati, a middle-income residential area of Athens close to the city centre (20 minutes' walk). The Pangrati Alsos, one of the oldest green spaces of Athens (trees were planted in 1903), is a pleasant park with dense, natural vegetation which makes it very popular to the locals, while it is really beneficial for the microclimate of the area. The entrance to the park is free at all times. The park facilities include a playground, a basketball court and pathways furnished with benches. The park mainly attracts locals and especially families with children, elderly visitors and people who walk their dogs.
- The National Garden, a central park of 15,5 hectares dating from the year 1836 located in the centre of the city of Athens, next to the Greek Parliament. The park includes a duck pond, a small zoo, a Botanical Museum, a small cafe, a Children's Library, a playground, and various flower gardens. It attracts both Athenians and visitors of all ages and offers a variety of activities, thus fulfilling its initial goal to create a spacious park for the general public. It is open from sunrise to sunset and there is no admission fee.

- Goudi Park and sports complex stretches over 8,5 hectares, located in the periphery of central Athens. The park includes a pine forest area of 4,5 hectares and a sports complex that features an open-air swimming pool, an indoors basketball court, an outdoors tennis court, a mini-football court, and 2 outdoors basketball courts. The park attracts a variety of visitors from east Athens and adjacent municipalities, and active citizens who use the sports facilities or walk and jog in the forest area. The sports complex is open on weekdays 8:00-21:00, on Saturday 9:00-19:00 and on Sunday 9:00-14:00.

In **Darmstadt,** the face-to-face survey took place in four different open public spaces:

- "Kapellplatz" and Skate park: The area of the Kapellplatz had been a cemetery, when in in 1866 most of the tombs were removed. Nowadays the "Kapellplatz" is a public, small park with scattered gravestones. It contains the ruins of the former city chapel (destroyed on the 2nd World War), trees and mosaic pavement paths. The "Kapellplatz" is considered as a local open space that serves to the neighborhood. In addition, near the "Kapellplatz" there is a Skate park which is visited not only by Darmstadt citizens but also by other people from the region. The Skate Park is in the city center and attracts many young people
- "Rudolph-Müller-Anlage": The area comprises wide lawn areas, playgrounds, leisure paths and benches. The area is a local/neighborhood open space and is located right next to the "Großer Woog".
- "Der Großer Woog": The area of the "Großer Woog" comprises a big lake (for recreation and for environmental purposes), playground areas, leisure paths, green lawn areas, and even a small restaurant. The complex is located in the heart of the city of Darmstadt and serves local and regional visitors.
- Ostbahnhof und Am Judenteich: The train station Darmstadt East is a transit station of the "Odenwald" train.

In **Eindhoven**, the field survey took place in two open public spaces: Achtse Barrier Park and Stadswandelpark.

- The Achtse Barrier Park is located in the middle of the neighbourhood Achtse Barrier. The neighbourhood is about 3km north of the city centre of Eindhoven. It is a monotone middle class and lower middle class suburban neighbourhood with detached single-family homes build in the 1980s. Almost all houses have a garden. The Achtse Barrier Park was constructed in the 1980s. It is an elongated park along a ditch. There are some large grassy fields, and there is a playground for kids in the centre of the park.
- The Stadswandelpark is located about 1km south of city centre. Just west and northwest of the park is the neighbourhood Elszent, a high-income neighbourhood with villas, most of them dating from the 1930s. Northeast and east of the park is the neighbourhood Oud Stratus. This is a very diverse neighbourhood with single family attached houses and apartments from the 1930s, 1950s, 1960s, 1980 and 2000s, and apartment buildings, offices and shops along the main roads. Just south is another park, but there is busy thoroughfare road in between that forms a barrier for people walking from one park to the other park. The Stadswandelpark was constructed in the 1930s. It is a square park with a lake at its southern end. There are

many small patches of plants and flowers, and many small paved roads. There are some pieces of art in the park, and there is an upmarket restaurant at the northern entrances of the park.

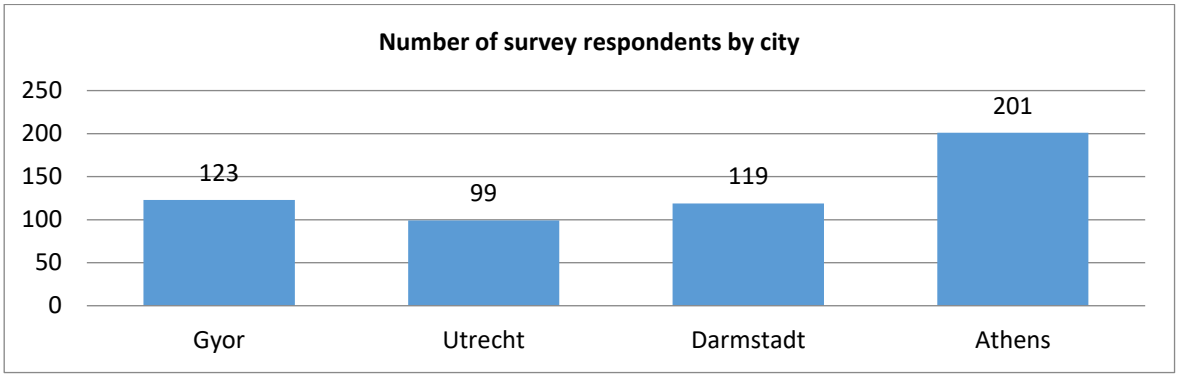
In **Gyor**, the on-site survey took place at three open spaces:

- Batthyány square is an inner city park with a territory of 20.000 m^2 surrounded from all sides by streets and a residential area with 3-4 storey-buildings. The square is mostly used by the neighbouring residents for resting, dog-walking or using the playground and sports field; it was renewed in 2014, and during the renovation a runway and several outdoor gym equipment were also placed in it. Furthermore, on the Eastern side of the park, one can find a fenced playground and a road traffic track for children, as well as a sport field suitable for different ball games. Besides, several benches serve those who want to relax. The open space has traditional green vegetation, with ornamental shrub and assorted trees. The density of the trees offers adequate shade during the summer. In several places annual flowers are planted every year, and the spaces between the pedestrian paths are filled with lawn.
- The Lakes of Adyváros and the surrounding area are the “products” of the 60ies and 70ies, since the construction of the huge blocks of flats needed gravel extraction, leading to the creation of the artificial lakes. Because of the high-rise buildings this district has the highest population density within the city. Surrounding the three lakes of Adyváros there is a green area segmented in several pieces between the buildings, resembling a mosaic. The area is divided in two by an inner by-pass road, accompanied by a thermal pipe and a railway track, further accentuating the fragmentation of the open space. Each of the three lakes has ca. 0,8-1,2 hectare of water surface, while the total area of the surrounding green spaces accounts up to 9 hectare (incl. the water surfaces as well). From the three lakes, the Western is the best landscaped, surrounded by stone pathways, flower beds, information boards, benches and a playground. The middle lake is surrounded by a gravel pathway, while the third (Eastern) lake is surrounded by a runway track and several benches. The vegetation includes several aspen trees (both planted and wild ones), and 20-30 years old ornamental trees. The coastal side of the lakes is overgrown by water plants, especially reeds.
- Riverside (inner city coastline of the Mosoni Danube and Rába River: Aranypart and Dunakapu square). Well-known slogans as “Győr, the city of rivers” or “Győr, the city of meetings” are indeed true, since four rivers are running within the borders of the city. The riverbanks of the inner city have been completely renovated between 2012 and 2014 in the frame of a major water management European Union project, aiming to improve water quality and quantity, river ecology, habitats and flood security, leading to landscape improvement as well. Two territories have been chosen for the face-to-face survey: the inner city coastline of the Mosoni Danube and Rába River, and the traditionally recreational site along the Mosoni Danube neighbouring the university campus (Aranypart). Both of the selected locations are important open spaces, and they are also serving tourism purposes. The *Aranypart* is mainly used daily by the university students, however, during weekends many visitors are arriving from other districts of the city, primarily in order to do some physical activity. During summer it is a popular location because of the beach, and in winter because of the sleigh ride possibilities. This location also serves as a race track for rowing sports, international and world championships were also organised here. The Aranypart has

a territory of around 4 hectares, partly including a sandy beach. The second territory is located *next to the historical inner city centre* (Dunakapu square), just under the former city walls. Besides the city residents, many tourists come here to visit, and it is also a popular place for the anglers. The territory of this selected riverside is around 2,5 hectare. While the Aranypart is mainly serving the water sportsmen (with swimming, rowing facilities, and also other sports field), the children (with playgrounds) and the campers (with fireplaces, and public toilets), the inner city coastline is rather used for resting and walking. You can also find here a playground, several benches and resting places, however, the infrastructure serving the anglers have decreased during the past years.

2. The face-to-face survey

The face-to-face survey included 542 respondents from the four cities. The interviews were conducted during the summer of 2017 with the questionnaire attached in Appendix I.



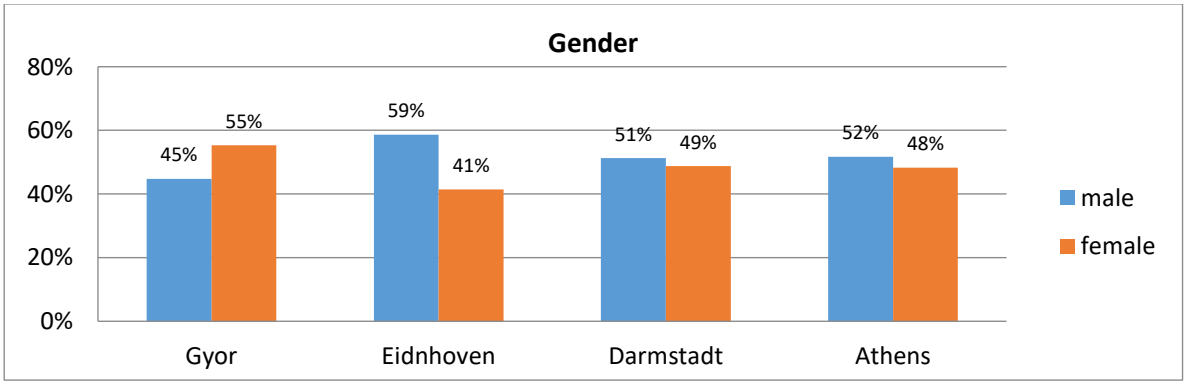
This section presents, through a frequency analysis of the face-to-face survey results in the four cities, the demographic and socio-economic profile of the users of open spaces who were interviewed, their patterns of behaviour, perceived benefits and propositions for improvements, and aspects of their life style.

2.1 User profile

The profile of the open space users who participated in the face-to-face surveys in the four cities can be summarized as follows:

Gender

There are no marked differences in the gender of open space users between the four cities. The proportion of men and women visitors was found to be very close to the general demographic data in the four countries, especially in Darmstadt and Athens (51-52% men, 48-49% women) while in Eindhoven the difference between the two percentages was more marked (59-41%) and in Gyor it was reversed (women's presence exceeded men's by 55-

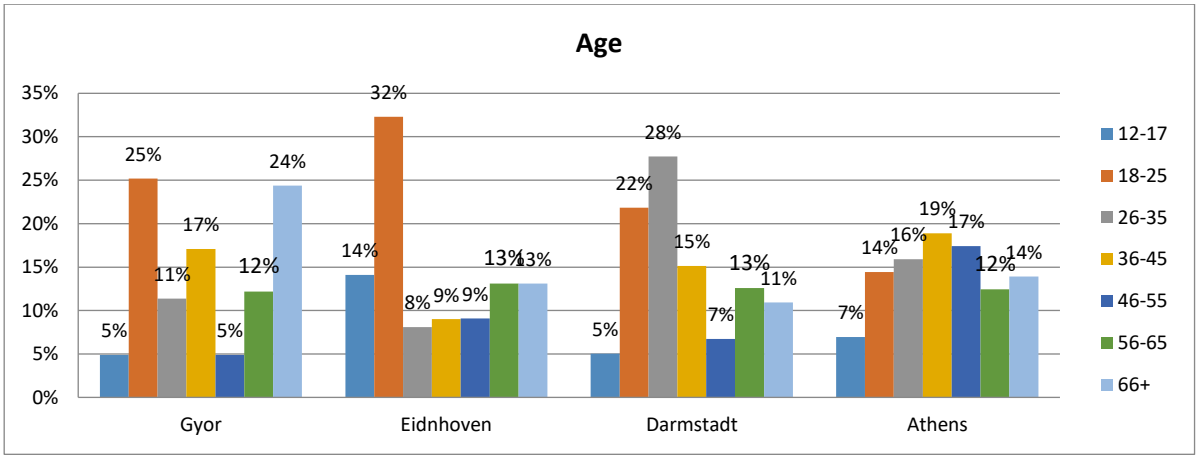


Age

In sumary, the majority of the open space users contacted in all four cities belong to two large age groups, namely young people under the age of 35 (ranging from 37% in Athens to 55% in Darmstadt and Eindhoven); and older people, over the age of 56 (ranging from 24% in Darmstadt to 37% in Gyor). The middle group, aged between 36 and 55 forms a minority in 3 cities namely Gyor, Ehndhoven and Darmsatdt (ranging from 18% to 22%) while Athens is the exception, with a substantial group (36%) in this category.

More specifically:

- In Gyor, young people (18-25) and older people (66+) dominate the open space users (25%, 24% respectively)
- In Eindhoven, young people (18-25) represent 1/3 of the open space users (32%)
- In Darmstadt, people aged from 18 to 35 make up half of the open space users (50%)
- In Athens, in comparison with the other three cities there are less marked differences between the different age groups



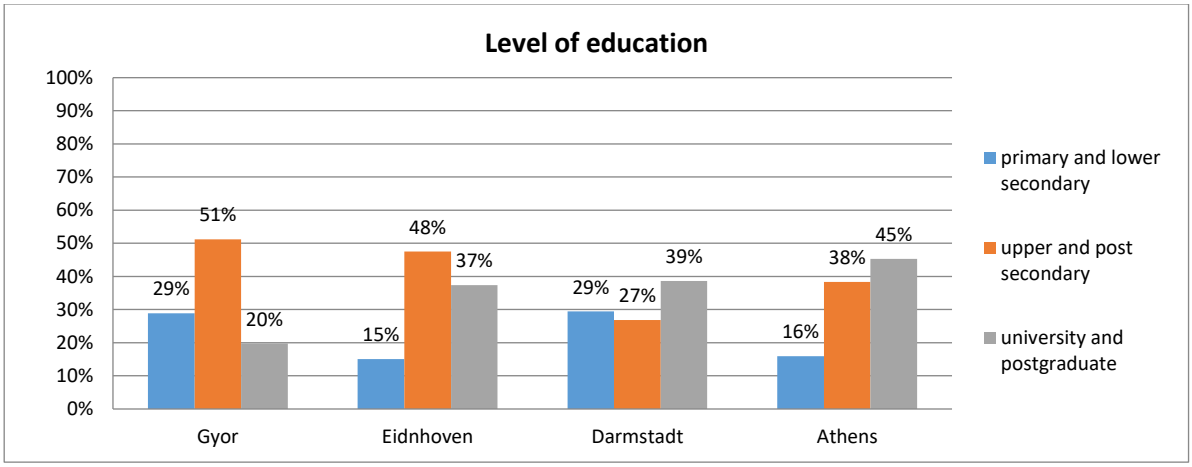
Education

The overall picture is briefly as follows:

- In Gyor, people with upper and post- secondary education represent the largest group of open space users (51%), whilst in its case the group with university and postgraduate education (20%) is distinctively smaller than for the other three cities
- In Eindhoven, people with upper and post-secondary education and people with university and postgraduate education represent the largest groups of open space users (48% and 37% respectively)
- In Darmstadt, there is a relative balance among the different education groups of open spaces visitors; people with university and post graduate education represent

the largest group of open space visitors (39%), whilst the other two education groups represent each just over one fourth of the open space users

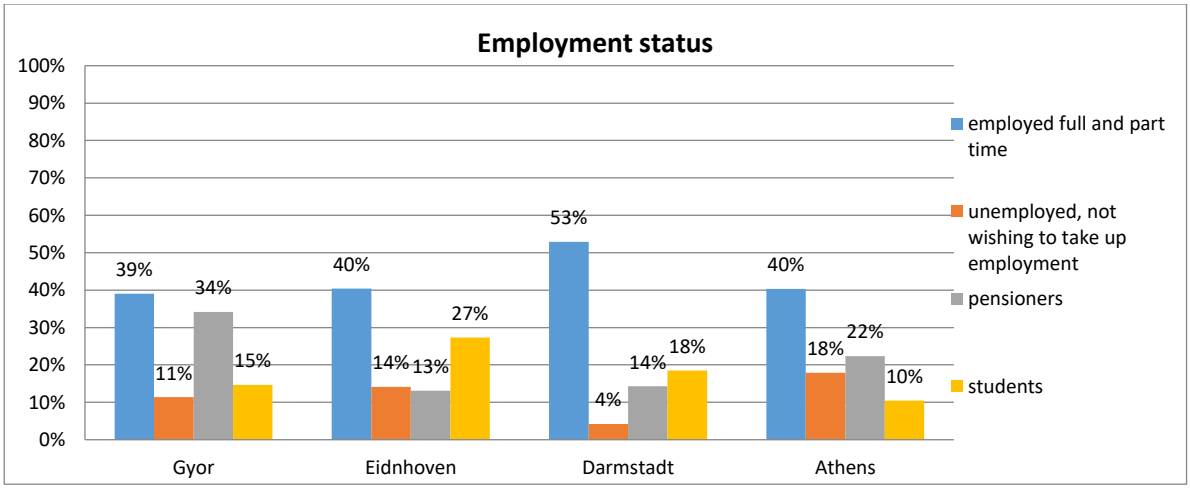
- In Athens, people with university and post graduate education and people with upper and post-secondary education represent the largest groups of open space users (45% and 38% respectively)



Employment

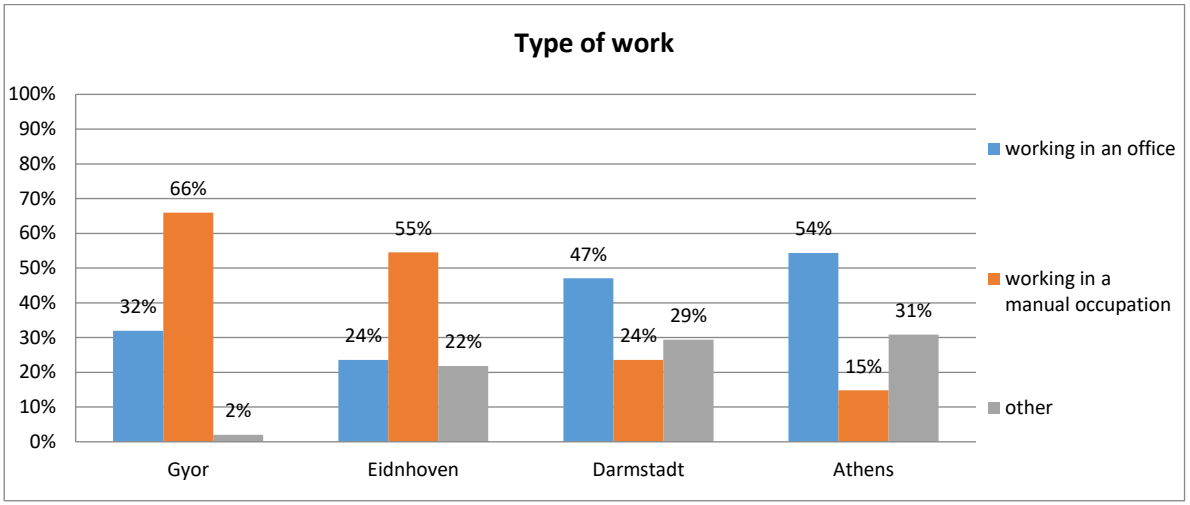
As would be expected, the employed (full time or part time) represent the largest group of open space users in all four cities: in Darmstadt 53%, in Eindhoven and Athens 40%, in Gyor 39%. Pensioners represent the second largest group of open space users in Gyor (34%) and Athens (22%); while students represent the second largest group of open space users in Eindhoven (27%) and Darmstadt (18%)

The unemployed, together with those not wishing to take up employment represent the smallest group of open space users in all cities except Athens.



Type of work

Manual workers represent the largest group of open space users in Gyor (66%) and Eindhoven (55%); in contrast, people working in an office represent the largest group of the open space users in Darmstadt (47%) and Athens (54%).

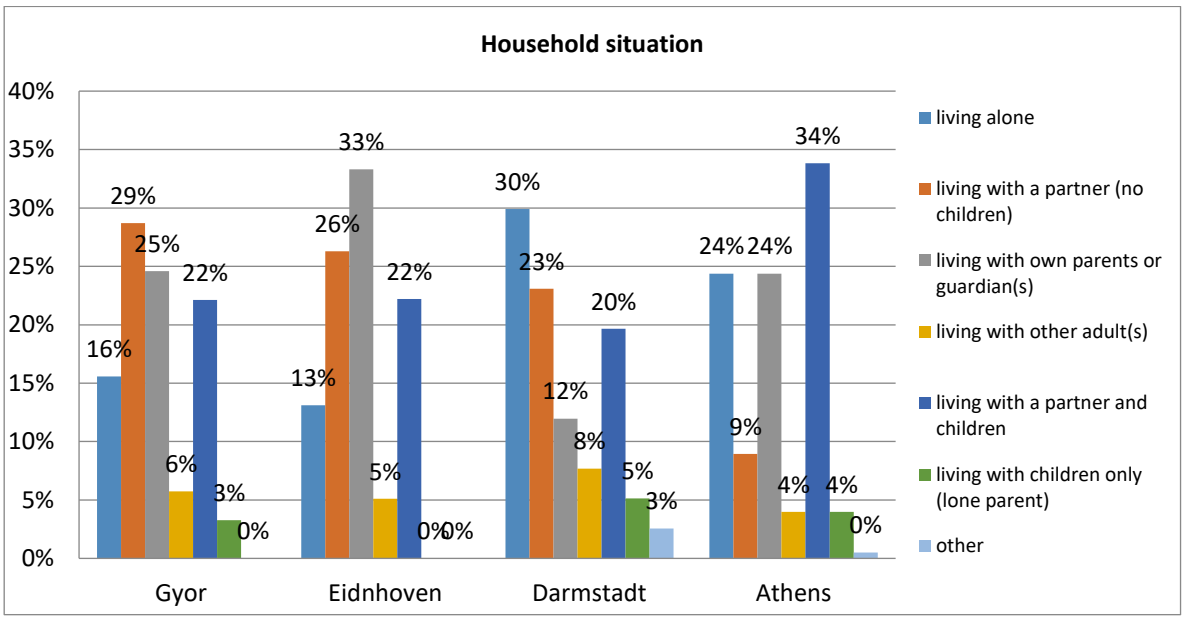


Household situation

The household situation was defined in terms of the following six types of open space users:

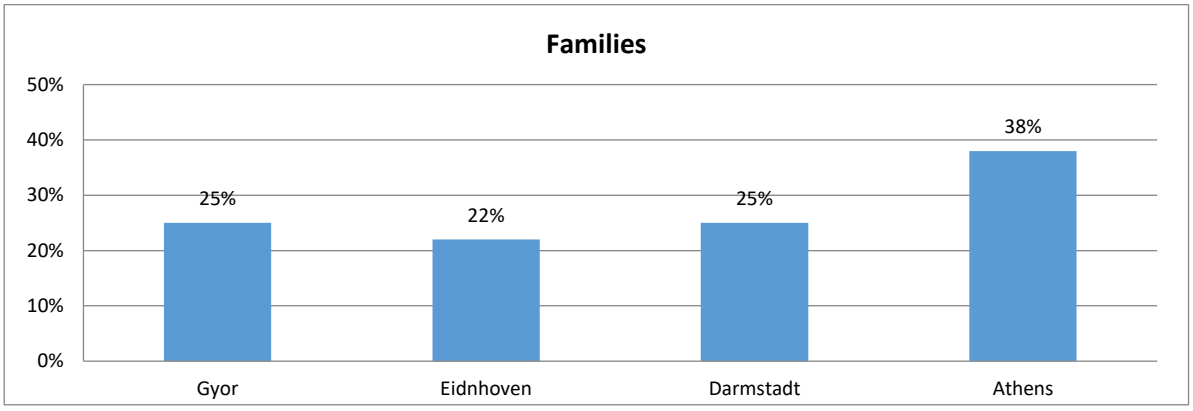
- living alone
- living with a partner without children
- living with own parents or guardians
- living with other adult(s)
- living with a partner and children
- living with children only (lone parents)

There are marked differences in the household situation profiles of the four countries:



Collapsing these six types in two i.e. (a) families with children (i.e. living with a partner and children, living with children only) and (b) adults only (i.e. living alone, with a partner but no children, living with own parents/guardians, living with other adults), provides a clearer comparison between the four cities:

- In Gyor, Eindhoven and Darmstadt, families represent around 25% of open space users
- In Athens families represent 38% of open space users

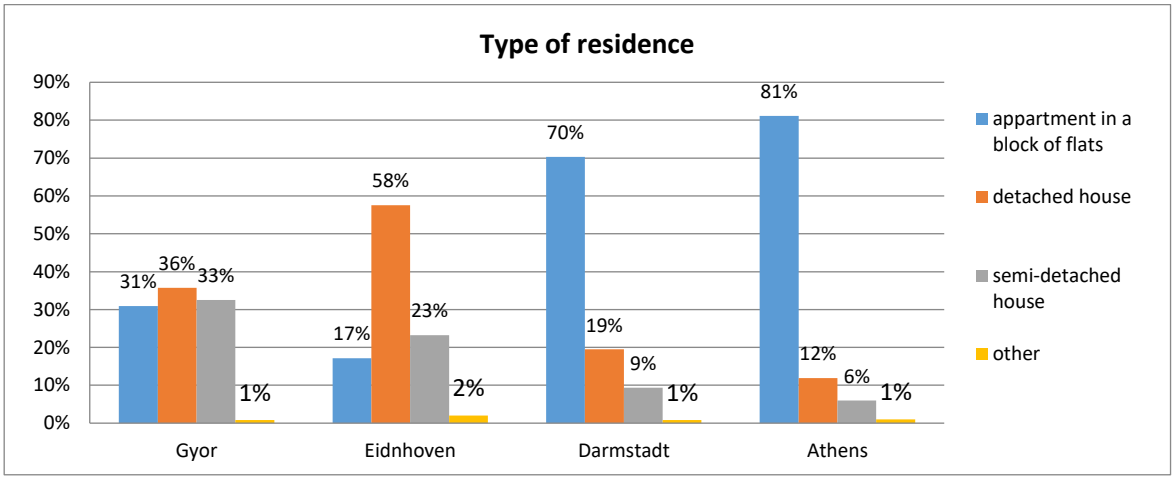


Type of residence

There is no common pattern among the four cities; rather, the findings reflect the differences in the structure of the housing stock of each city, and more so, the housing types prevalent in the catchment areas of the open spaces covered by the survey. Thus:

- In Gyor, all three types of residence are equally represented among open space users.
- In Eindhoven, detached houses represent the type of residence of more than half of the open space users (58%).

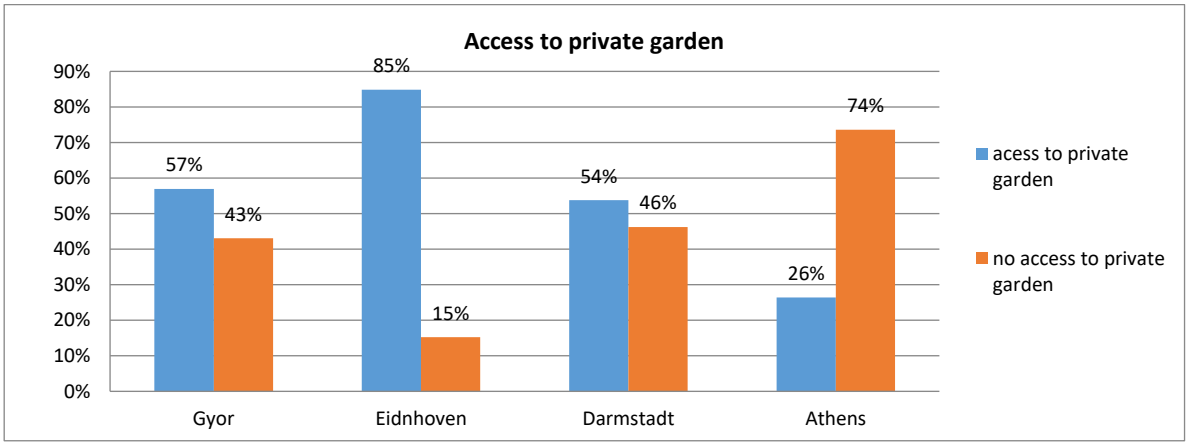
- In Darmstadt and Athens apartments in block of flats represent the type of residence for the majority of the open space users (70% and 81% respectively).



Access to private garden

Similarly, access to a private garden reflects largely the type of housing stock in each city and in the catchment areas of the open spaces covered by the survey.

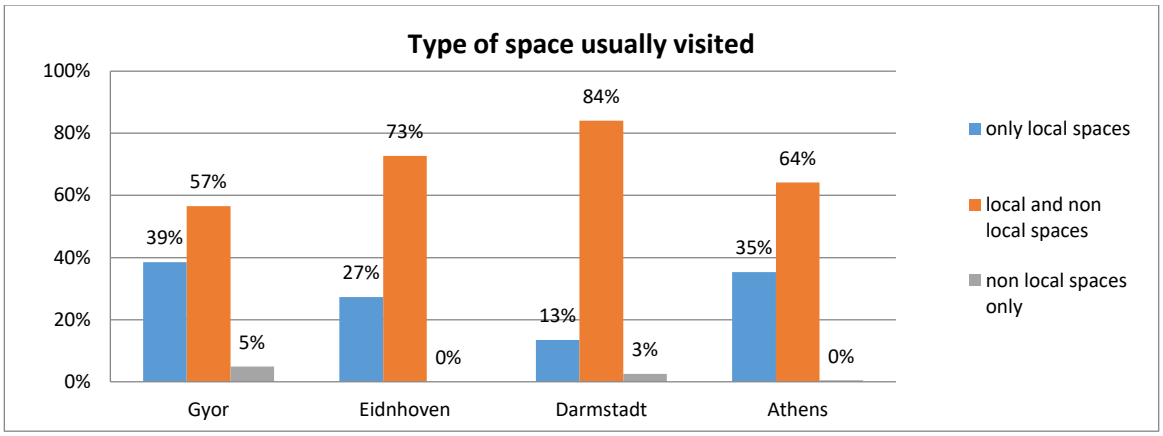
- In Gyor and Darmstadt, just over half of the open space users have access to a private garden,
- In Eindhoven, the majority of open space users have access to a private garden (85%)
- In Athens, only a quarter of the open space users have access to a private garden.



2.2 Patterns of behaviour/use of urban space

Types of open spaces visited

The majority of open space users interviewed visit local and non-local spaces, including spaces outside the city, ranging from 84% in Darmstadt to 57% in Gyor. A significant minority visits only local open spaces, located in their neighbourhood, which is most marked in Gyor (39%) and Athens (35%). The graph below shows clearly that practically all the open space users visit their neighbourhood parks.

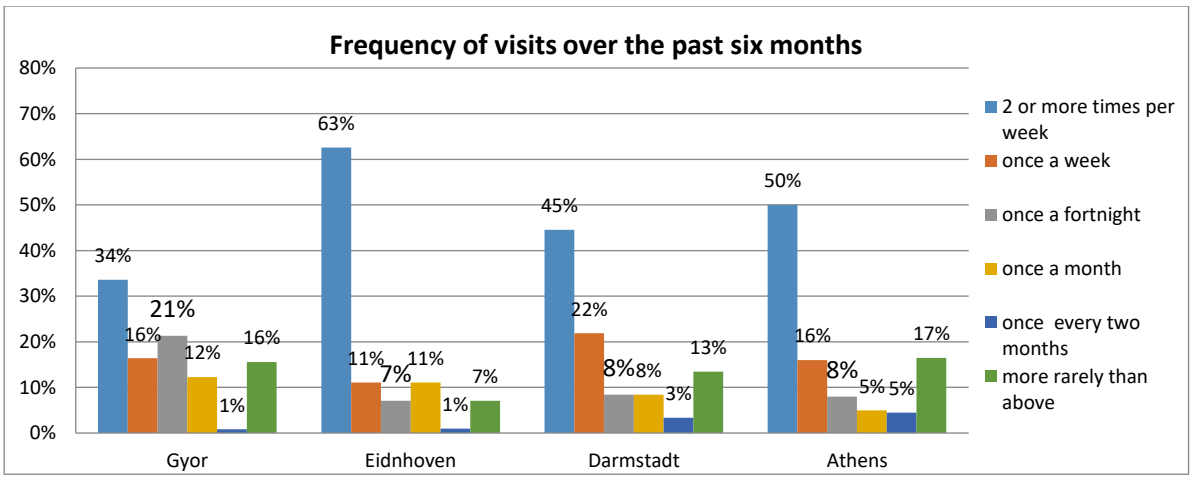


Frequency of visits

There are minor differences between the four cities in the types of open spaces visited:

Frequent users, i.e. those who visit the open space weekly (one or more times per week), represent the largest group in all four cities:

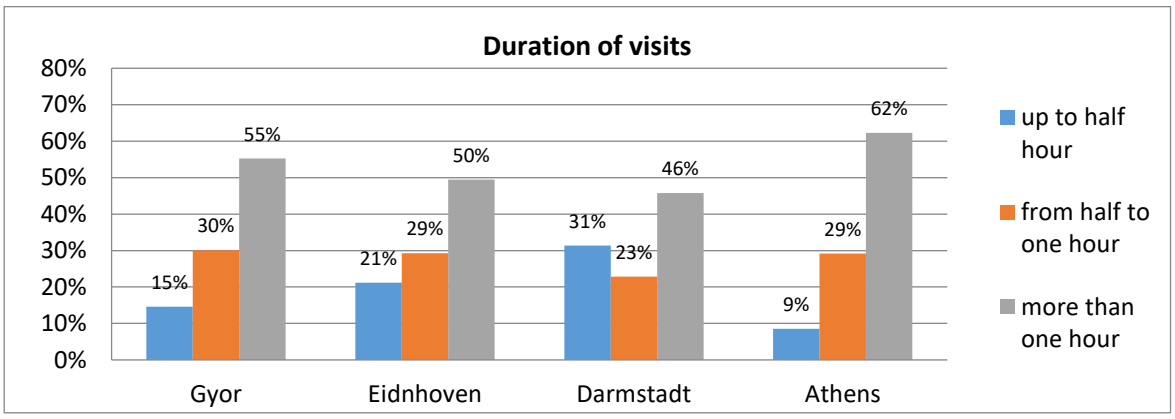
- The very frequent users, i.e. those who visit the open space two or more times a week range from one in three to two in three open space users (in Eindhoven 63%, in Athens 50%, in Darmstadt 45%, in Gyor 34%).
- If added to the group of open space users who visit once per week, they represent the majority of open space users: from 74% in Eindhoven to 50% in Gyor .
- The less frequent users, i.e. those visiting the open space once every two months or more rarely, represent a very small group: from 8% in Eindhoven to 22% in Athens



Duration of visits

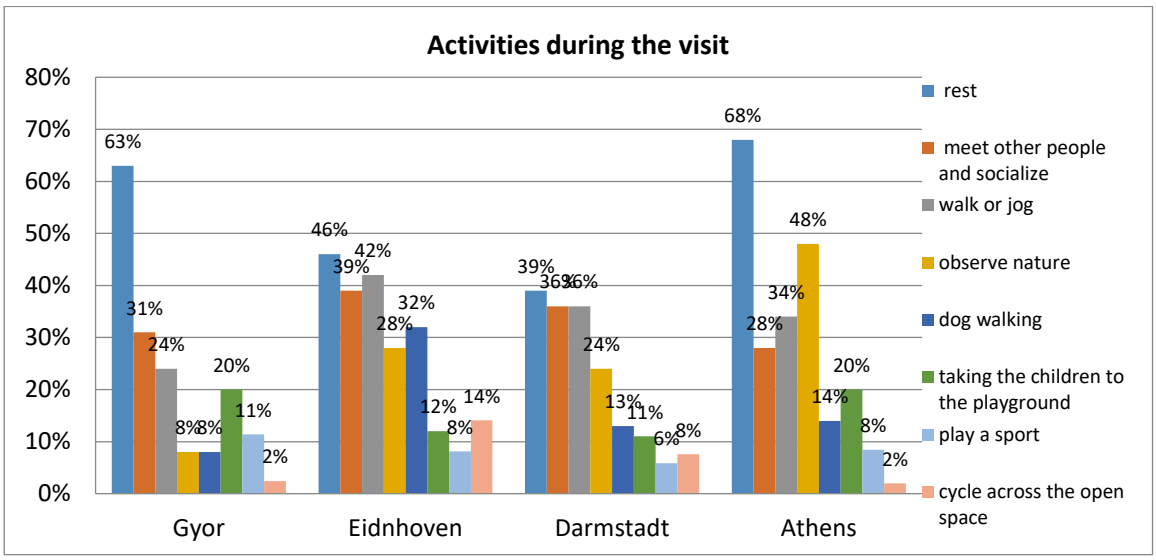
There are minor differences between the four cities regarding the duration of the open space visits:

- For about half of open space users in the four cities, the duration of their visit exceeds one hour: 62% in Athens, 55% in Gyor, 50% in Eindhoven, 46% in Darmstadt.
- Together with open space users whose visit lasts from half to one hour they represent the majority of open space users: from 91% in Athens to 69% in Darmstadt.
- Open space users whose visit lasts less than half an hour, represent a smaller group, ranging from 9% in Athens to 31% in Darmstadt.



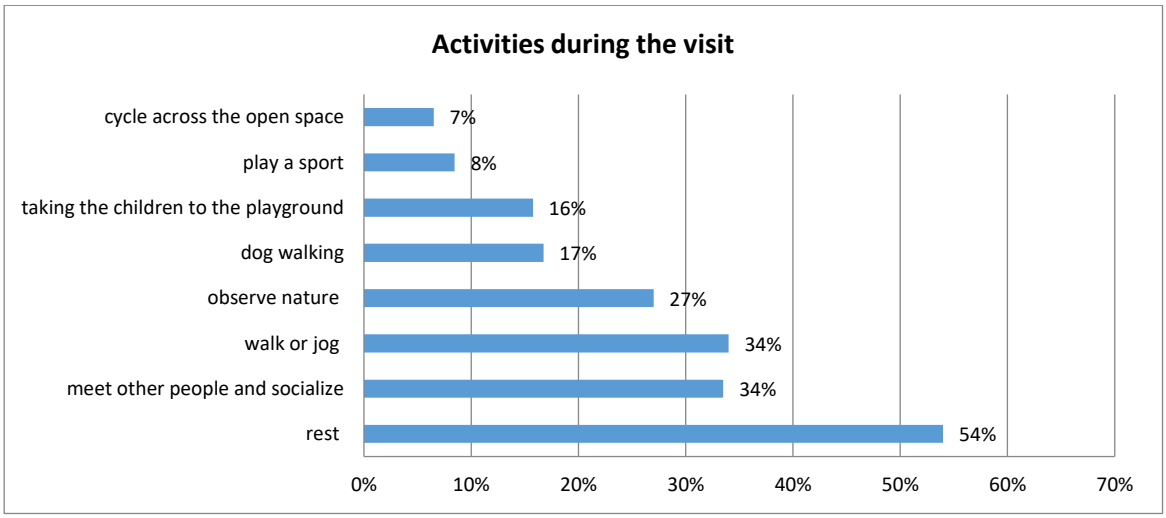
Activities during visits

- Resting stands out as the most frequent activity in all four cities, especially in Athens (68%) and Gyor (63%).
- In Eindhoven and Darmstadt, resting has been mentioned by less than 50% of the people interviewed, but meeting other people and walking or Jogging appear to be more popular than in Gyor and Athens, ranging from 36% to 46%.
- The popularity of observing nature varies substantially among cities: from 48% in Athens to 8% in Gyor.
- Dog walking is quite popular only in Eindhoven (32%).
- Taking children to the playground is more popular in Athens and Gyor (20%),
- Cycling and playing a sport are the least popular activities in all cities.



The comparison of the findings for all four cities suggests that overall:

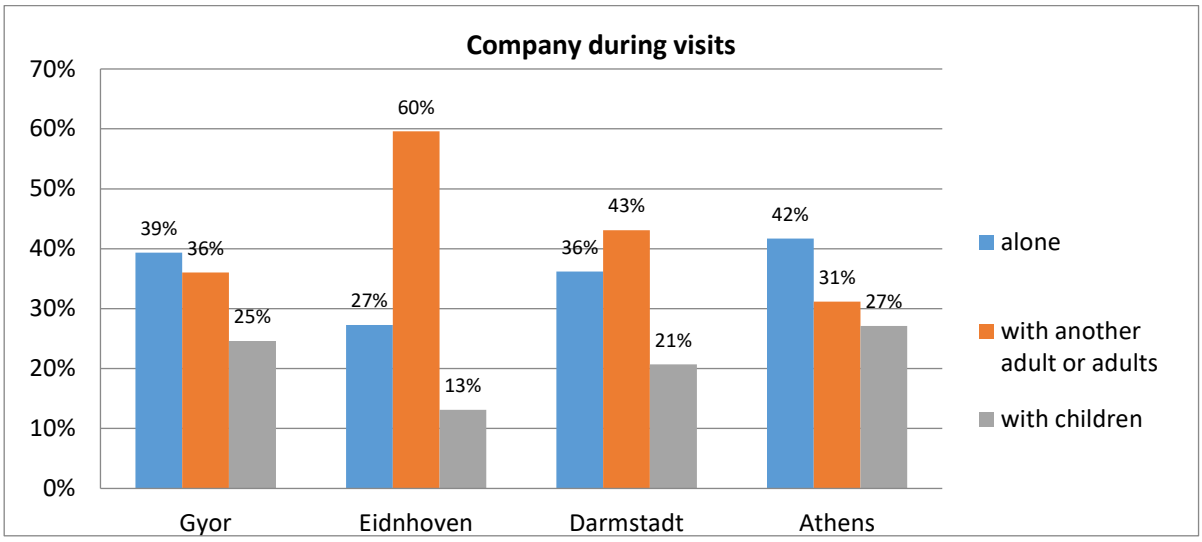
- Resting is the most frequent activity for open space users (54%), followed by meeting other people/ socializing and walking/jogging (34%) and observing nature (27%).
- Less frequent activities include dog walking and taking the children to the playground.
- Least frequent activities include playing a sport and cycling, which depend on specific facilities being available in the open space.



Company during visits

- Open space users being alone in their visit represent the largest group in Athens (42%) and Gyor (39%).
- Those accompanied by one other or more adults represent the largest group in Eindhoven (60%) and Darmstadt (43%).

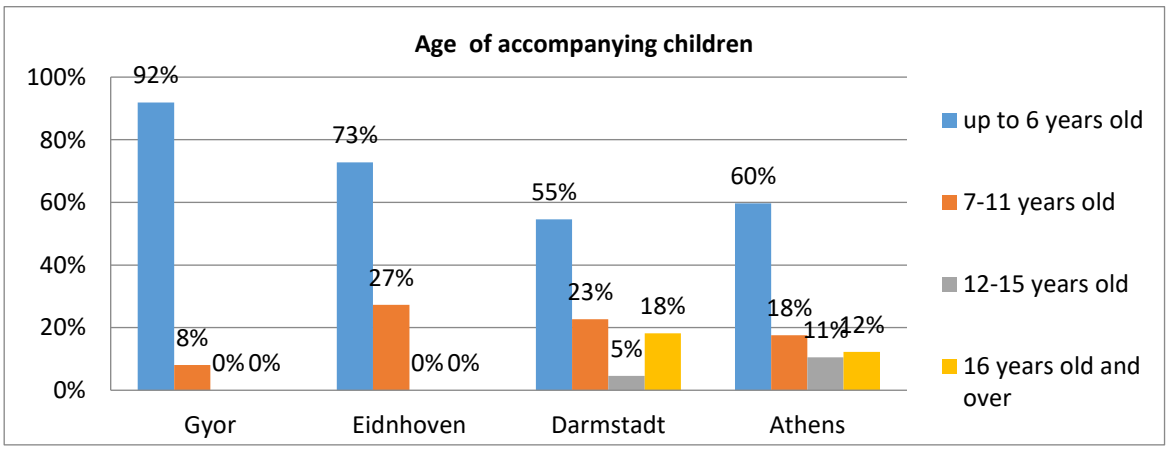
- Open space users accompanied by children represent the smallest group in all four cities (from 27% Athens to 13% in Eindhoven).



Age of accompanying children

There are marked differences as well as similarities between cities in certain aspects of company during visits:

- In all four cities the very young children (up to 6 years old) make up the majority of accompanying children: 92% in Gyor, 73% in Eindhoven, 60% in Athens, 55% in Darmstadt.
- In Darmstadt and Athens the whole age range of accompanying children is covered; in contrast, in Eindhoven and more so in Gyor there are no accompanying children over the age of 11.

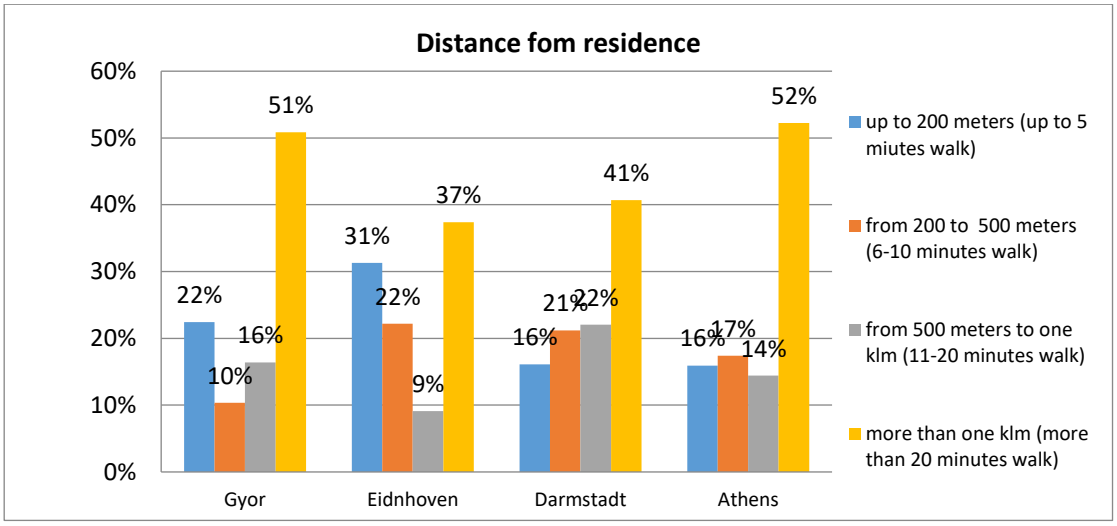


Access to open spaces

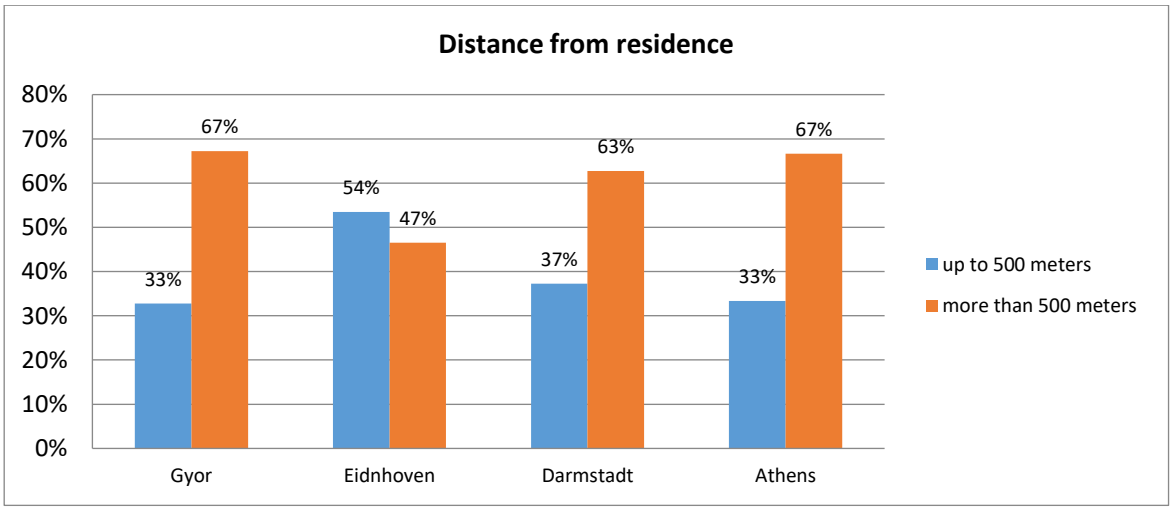
The distance from the residence to the open space represents a measure of access to open space. A 4-point scale of distance is used: up to 200 meters (or under 5 minutes on foot),

from 200 to 500 meters (or around 6-10 minutes on foot), from 500 meters to one kilometre (or around 11-20 minutes on foot), more than one kilometre (or more than 20 minutes on foot).

- Access is highest in the case of Eindhoven with 31% of open space users living up to 200 meters from the open space and 22% living up to 500 meters away – in total 53%. This compares with 37% in Darmstadt, 33% in Athens and 32% in Gyor.
- Overall, in all four cities, the largest group of open space users is living more than one klm away from the open space where we met them (or more than 20 minutes walk), especially in Athens (52%) and Gyor (51%).

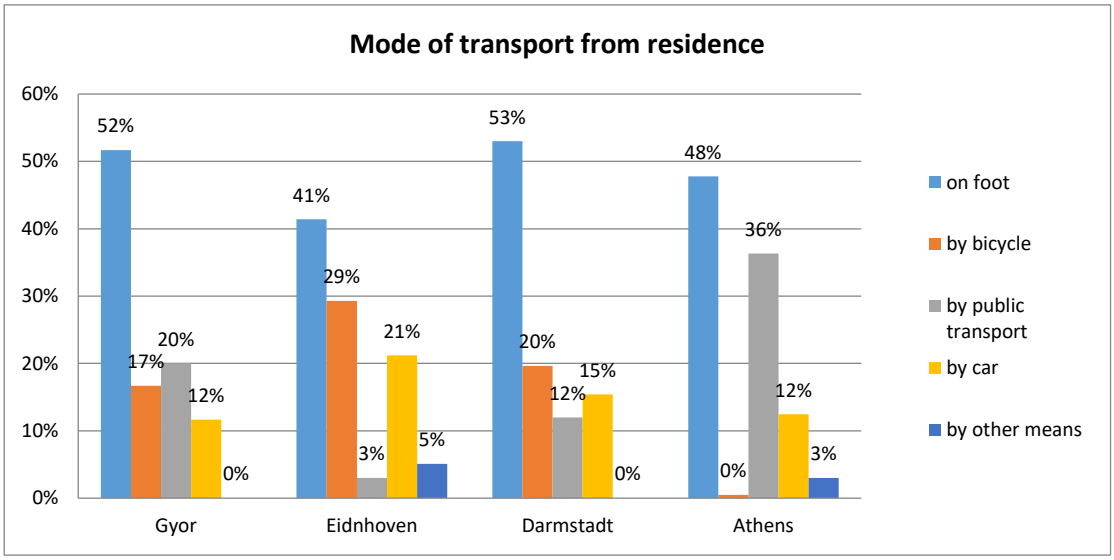


Collapsing the 4-point scale in a 2-point scale, suggests that overall access is highest in Eindhoven with 54% of open space users living up to 500 meters away from the open space, compared with the other three cities where the majority of open space users live further than 500 meters away.



Mode of transport from residence

- In all four cities about half of open space users walk to the open space: from 53% in Darmstadt to 41% in Eindhoven.
- Cycling as a means for transport to the open space represents a less popular mode of transport: in Eindhoven (29%), Darmstadt (20%) and Gyor (17%); in Athens only one person (out of 200) reported to having reached the open space by cycling.
- Public transport represents the second most popular means of transport in Athens (36%) and Gyor (20%).
- The use of the private car is highest in Eindhoven (21%).



2.3 Benefits experienced and improvements desired

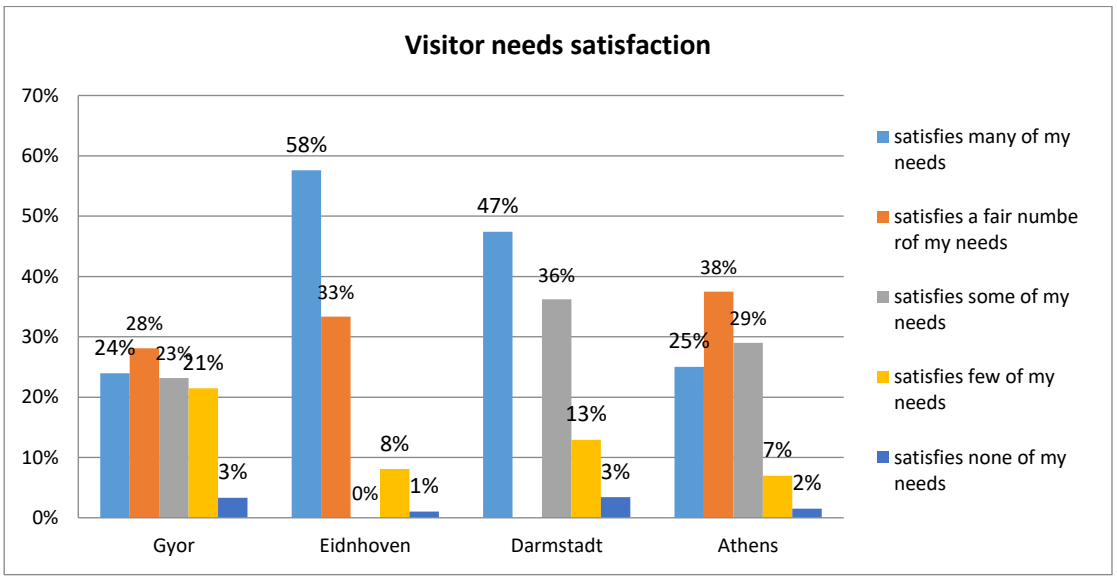
Visitor's satisfaction

Visitor satisfaction with the open space has been assessed on a 5-point scale as follows:

- 5- satisfies many of my needs
- 4- satisfies a fair number of my needs
- 3- satisfies some of my needs
- 2- satisfies a few of my needs
- 1- satisfies none of my needs

All cities score relatively high:

Eindhoven stands out as 58% of open space users report that many of their needs are satisfied and 91% that many or a fair number of their needs are satisfied; in Athens 63% of open space users report that many or a fair number of their needs are satisfied; Gyor and Darmstadt follow, with 52% and 47% respectively of satisfied users.



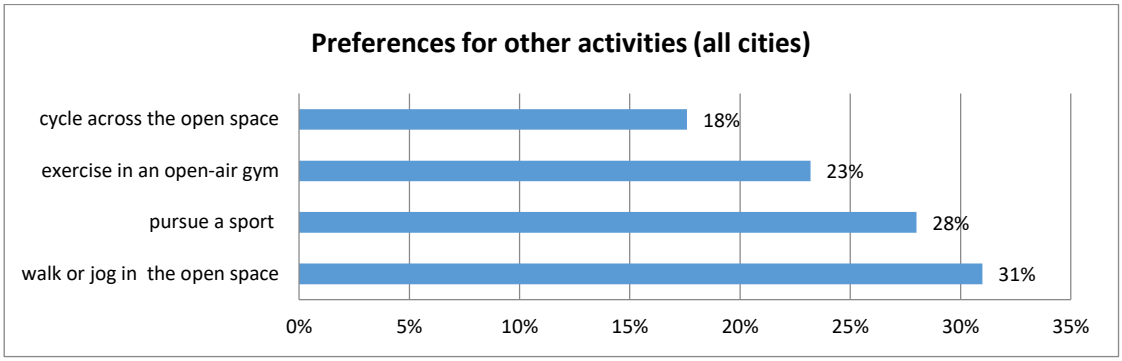
Computing the average satisfaction on the 5-point scale reveals that visitor satisfaction is highest in Eindhoven (over 4) while in Athens, Darmstadt and Gyor the score is between 3 and 4.

Visitor's other activity preferences (wished for)

Respondents were asked what other activities they would like to pursue in the open space where they were interviewed if they had the opportunity (i.e. if the appropriate facilities/infrastructure were provided). The activities presented to the respondents have been placed into five groups for the purposes of the analysis:

- cycle across the open space
- exercise in an open-air gym
- walk or jog in the open space
- pursue a sport (basketball, volleyball, football, tennis, swimming, skating, etc.)
- other activities

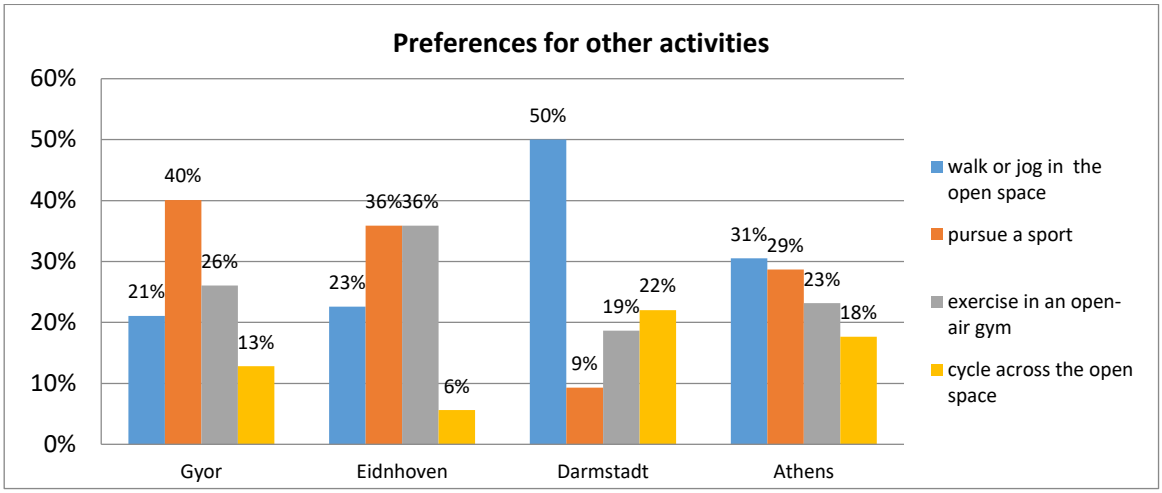
The comparison of the preferences' data (excluding other activities) for all four cities, suggests that on average, walking and jogging and pursuing a sport are the most desired activities by open space users (31% and 28% respectively); followed by exercise in an open-air gym (23%) and cycling (18%).



Regarding the volume of preferences, i.e. the number of activities proposed per respondent from each city, Gyor stands out as the city with most preferences for new activities, with respondents proposing new activities at a rate of 196% (2 new activities proposed per respondent) compared with 135% in Athens, 99% in Darmstadt and only 53% in Eindhoven.

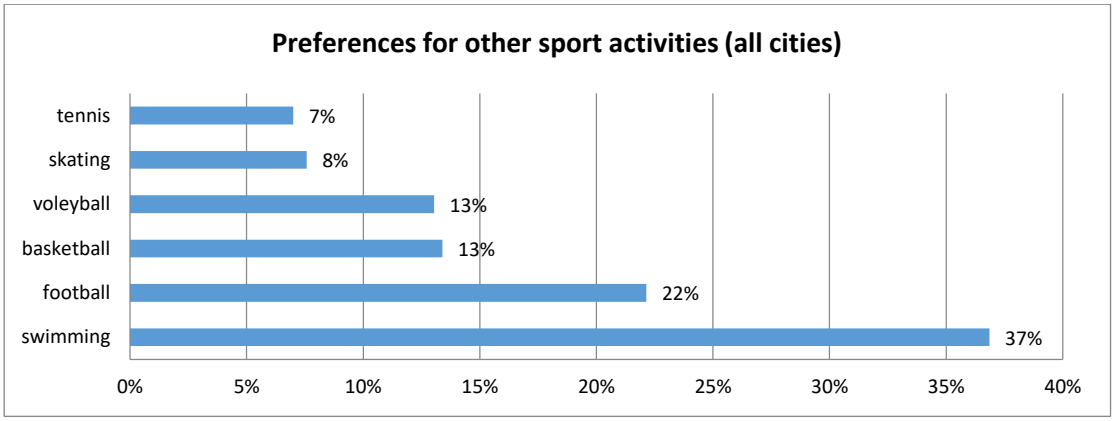
Regarding the type of new activity preferences for each city:

- In Gyor, pursuing a sport is the most preferred activity (40%), followed by walking or jogging (over 20%).
- In Eindhoven, pursuing a sport and exercise in an open air gym are the most preferred new activities (36%), followed by walking or jogging (23%).
- In Darmstadt, walking or jogging is the dominant preferred new activity (50%).
- In Athens, preferences for new activities range from walking or jogging (31%) to cycling (18%).



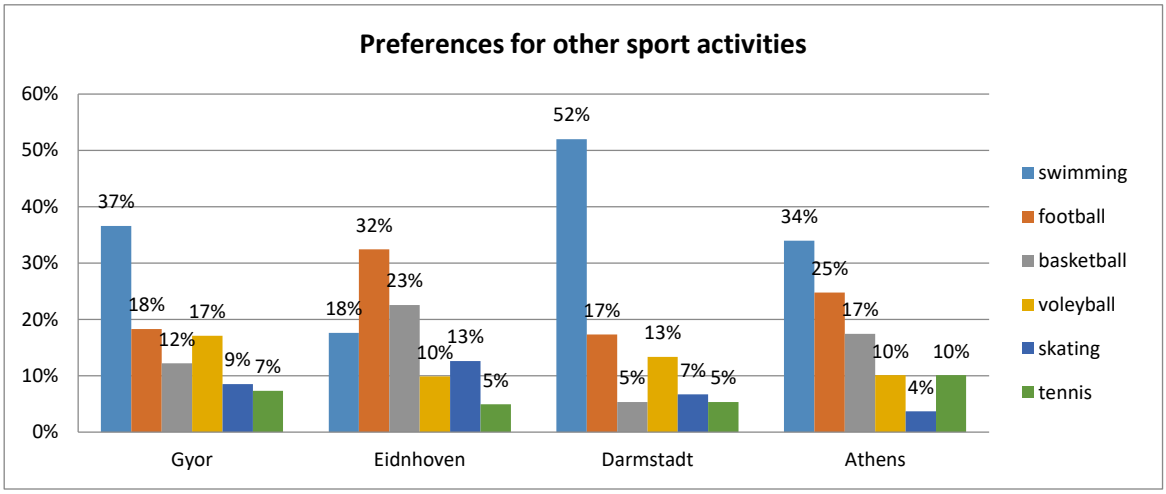
Regarding preferences for pursuing a sport, six different types of sport were identified: swimming, football, basketball, volleyball, skating, tennis.

Comparing the data on other sport preferences from all four cities suggests that overall, swimming is the most preferred sport activity by open space users (37%) followed by football (22%), basketball and volleyball (13%), skating and tennis (8-7%).



Regarding other sport preferences for each city:

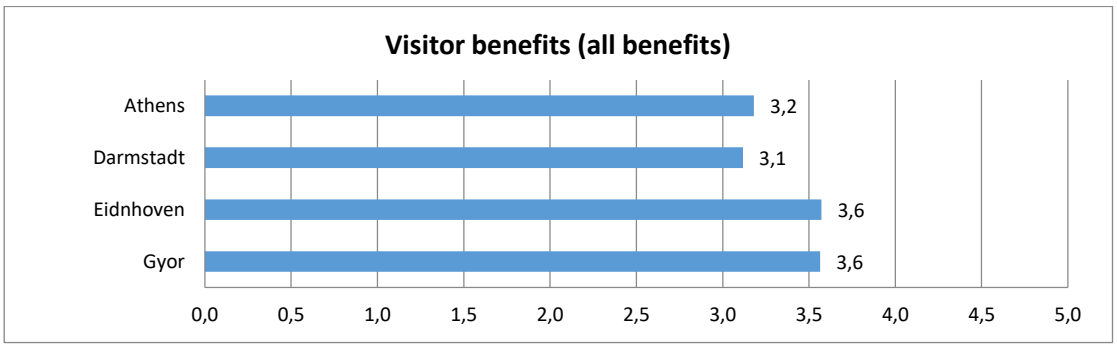
- In Darmstadt, Gyor and Athens, swimming is the most preferred new activity: Darmstadt (52%), Gyor (37%) and Athens (34%).
- Football is most preferred in Eindhoven (32%).



Benefits

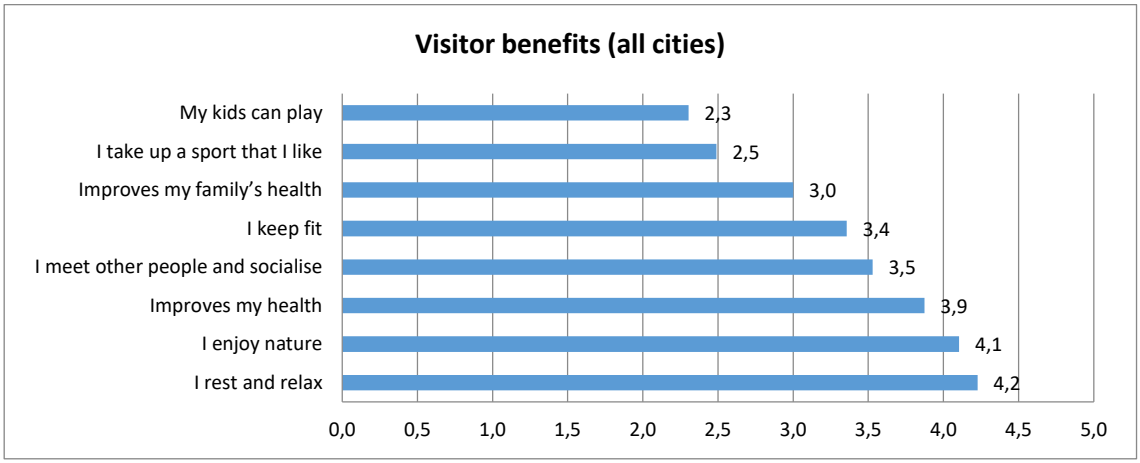
Visitor benefits were assessed on a scale from 1(very low benefits) to 5 (very high benefits).

Combining the data on visitor benefits for each city suggests that open space users in Eindhoven and Gyor report higher benefits (3,6) than open space visitors in Athens (3,2) and Darmstadt (3,1).



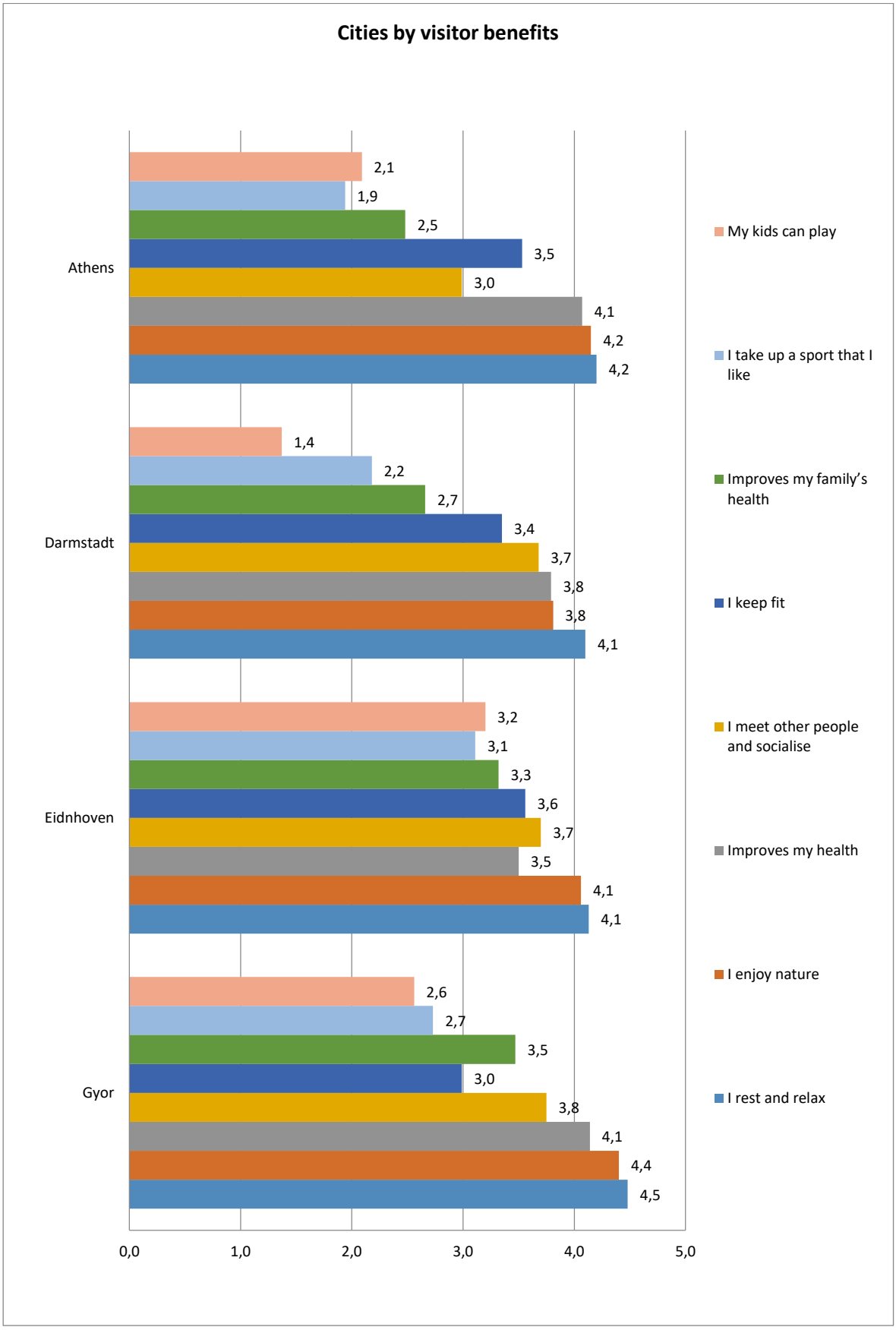
Combining the data on visitor benefits for different types of activities suggests that:

- The highest benefits are reported by open space users for resting and relaxing, improving one's health and enjoying nature (4,2-3,9)
- Medium benefits are reported for meeting other people and socializing, keeping fit and improving one's family health (3,5-3,0)
- Low benefits are reported for taking up a sport they like and giving to kids the opportunity to play.

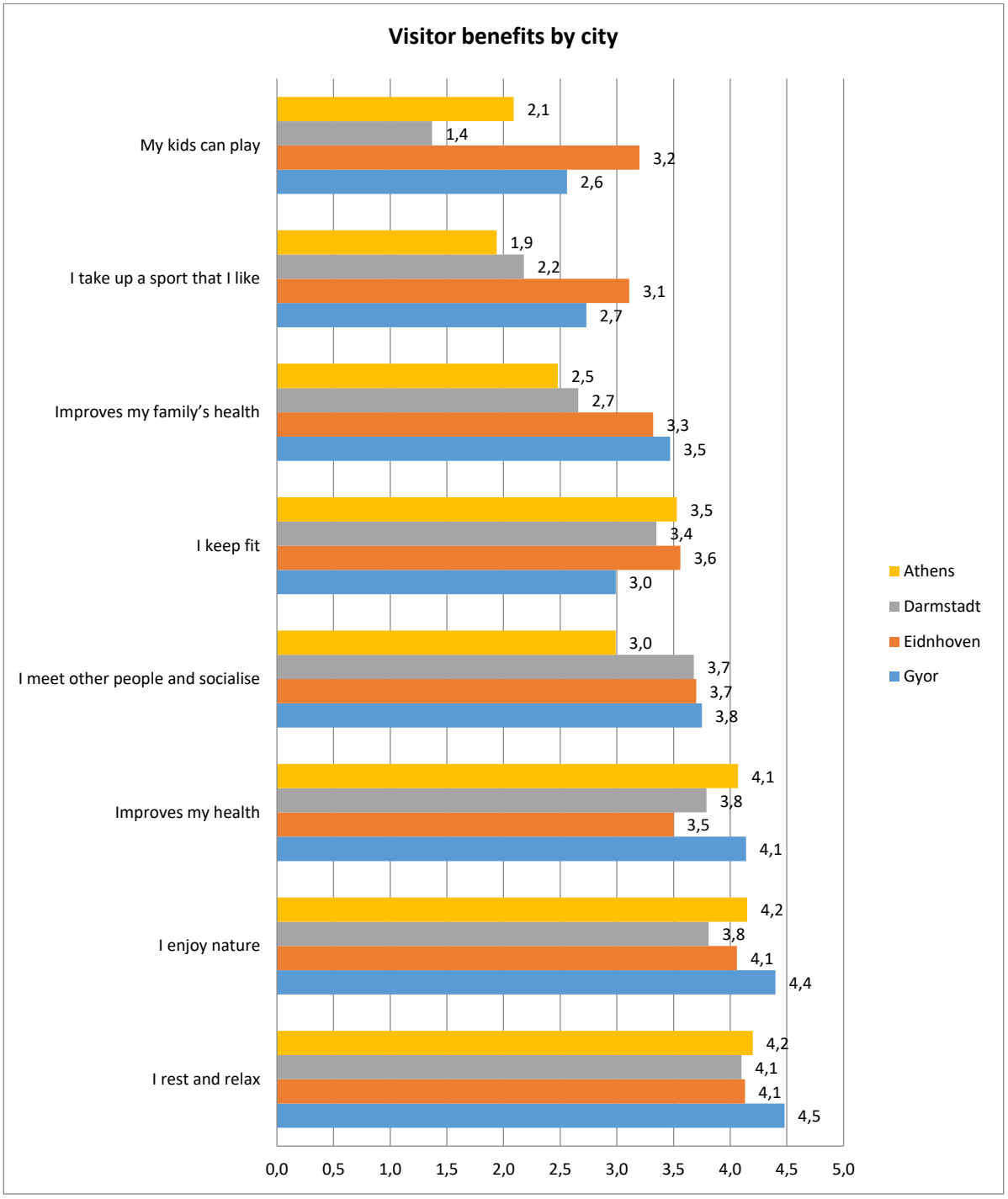


Comparing cities by type of benefit suggests a rank order of benefits for each city, which is roughly similar to the cumulative rank order above. However there are some marked differences between cities in the case of specific benefits: for example, the benefit "my kids can play" varies from 1,4 in Darmstadt to 2,1 in Athens, 2,6 in Gyor and 3,2 in Eindhoven.

In the graph below the scores for each benefit per city are presented.


Cities by visitor benefits
Athens
Darmstadt
Eidnhoven
Gyor
2,1
1,9
2,5
3,5
3,0
4,1
4,2
4,2
1,4
2,2
2,7
3,4
3,7
3,8
3,8
4,1
3,2
3,1
3,3
3,6
3,7
3,5
4,1
4,1
2,6
2,7
3,5
3,0
3,8
4,1
4,4
4,5
0,0
1,0
2,0
3,0
4,0
5,0
My kids can play
I take up a sport that I like
Improves my family's health
I keep fit
I meet other people and socialise
Improves my health
I enjoy nature
I rest and relax

Comparing benefits by city suggests again a rank order of benefits for all four cities which is roughly similar to the rank order of benefits combined for all cities as depicted in the respective diagram above. There is some variation across the 1-5 benefit range scale between cities in the case of benefits with lower ranking.

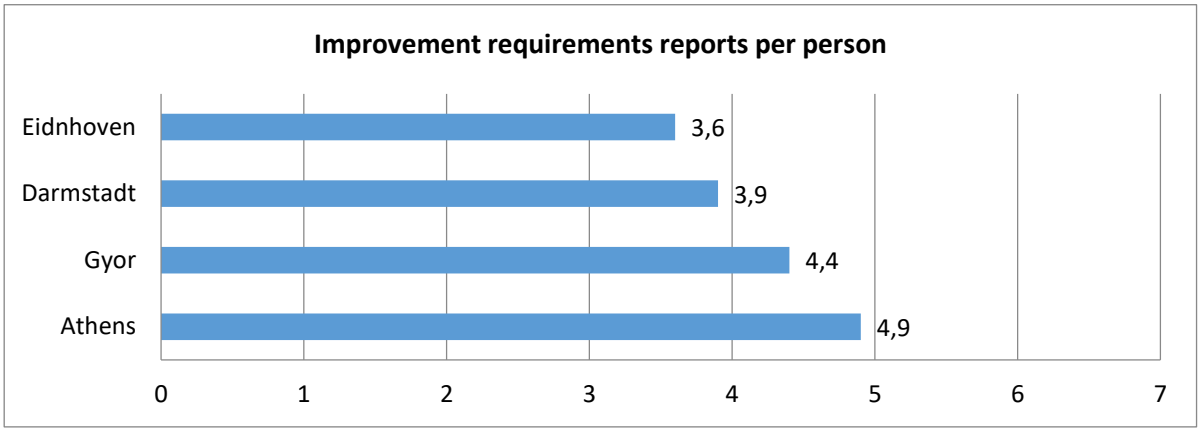


Improvement needs

Respondents were asked the kind of improvements they would like to see in the open space they visited, out of a list of 16 types of improvement. Only 3% thought that no improvements were necessary. Proposed improvements fall in 3 main groups:

- Improvements of the conditions of the open space: safety, cleanliness, accessibility for disabled people, upkeep of footpaths and other areas used by the visitors, improving the vegetation, keeping different activities separate (activity zoning).
- Improvement of general facilities available: free drinking water, free Wi-Fi access, benches or other open air furniture, bicycle parking.
- Improvement of facilities for physical activity, sport and recreation: infrastructure and information including options locally and in the city.

Combining the data on improvement requirements for each city, we note that the number of reports for improvements per visitor suggests a rank ordering for the four cities, ranging from Athens (4,9 average number of improvements) to Eindhoven (3,6 average number of improvements).



Combining the data on types of improvements desired by visitors, leads to a rank order of improvements ranging from free drinking water (51% of visitors endorsed) to keeping different activities separate (13% of visitors endorsed).

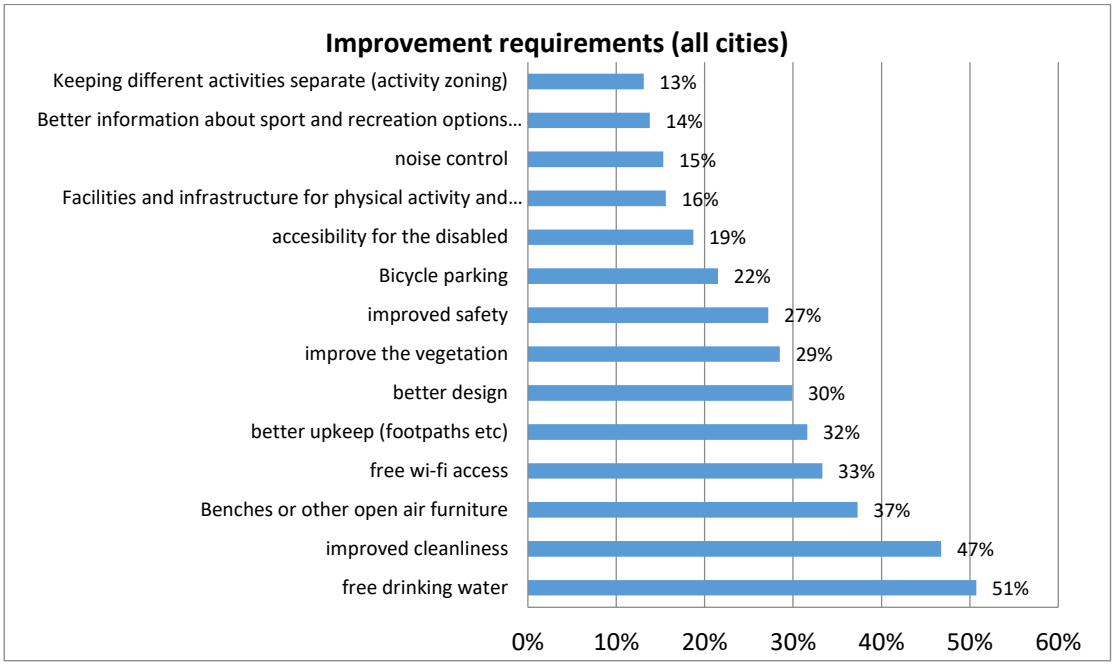
Overall three groups of improvements can be identified in order of importance for open space visitors:

High importance: free drinking water, cleanliness, benches/other furniture

Medium importance: Wi-Fi access, footpaths upkeep, better design, improve the vegetation, safety, facilities for physical activity and sport

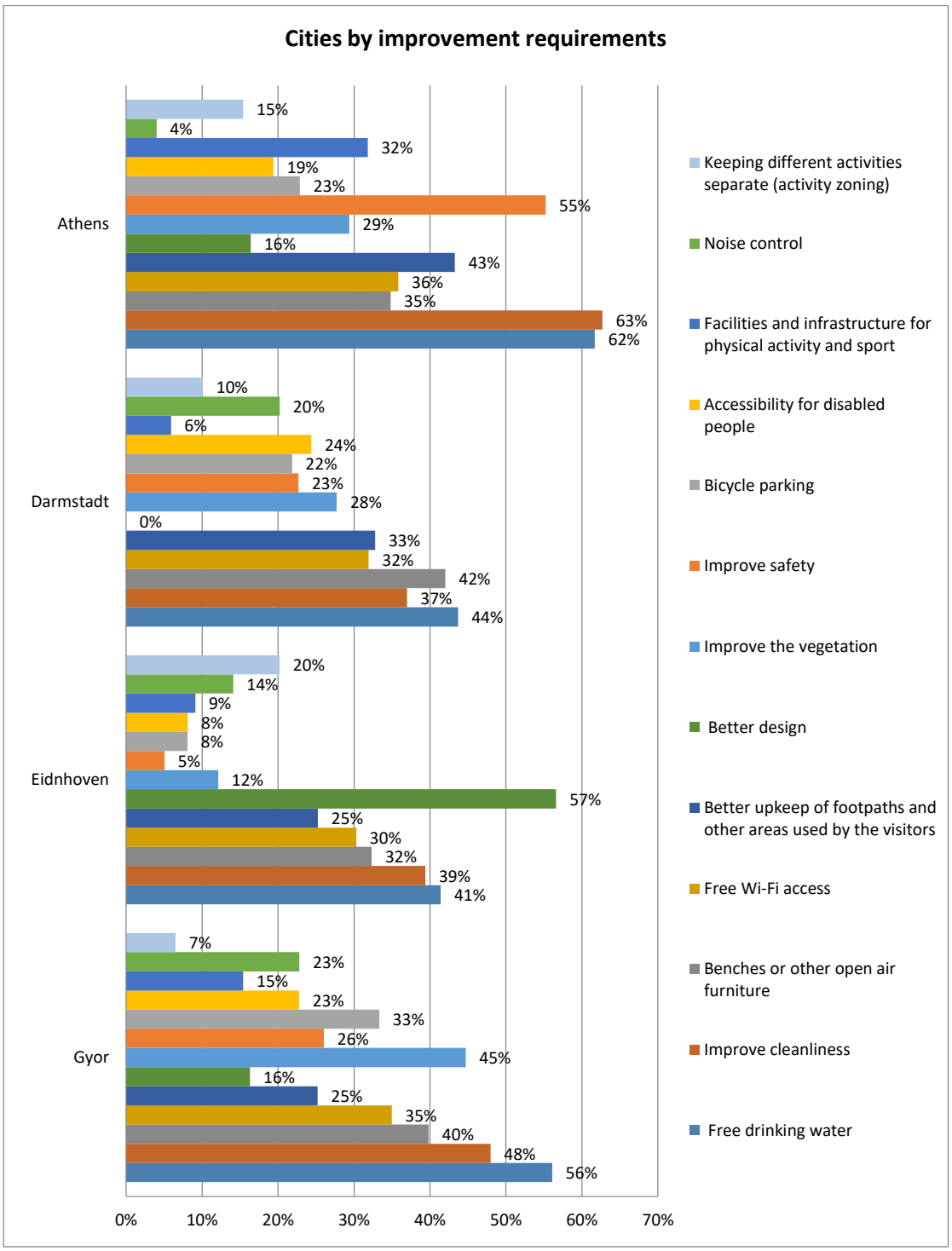
Low importance: bicycle parking, disabled access, noise control, information about sport and recreation options, activity zoning.

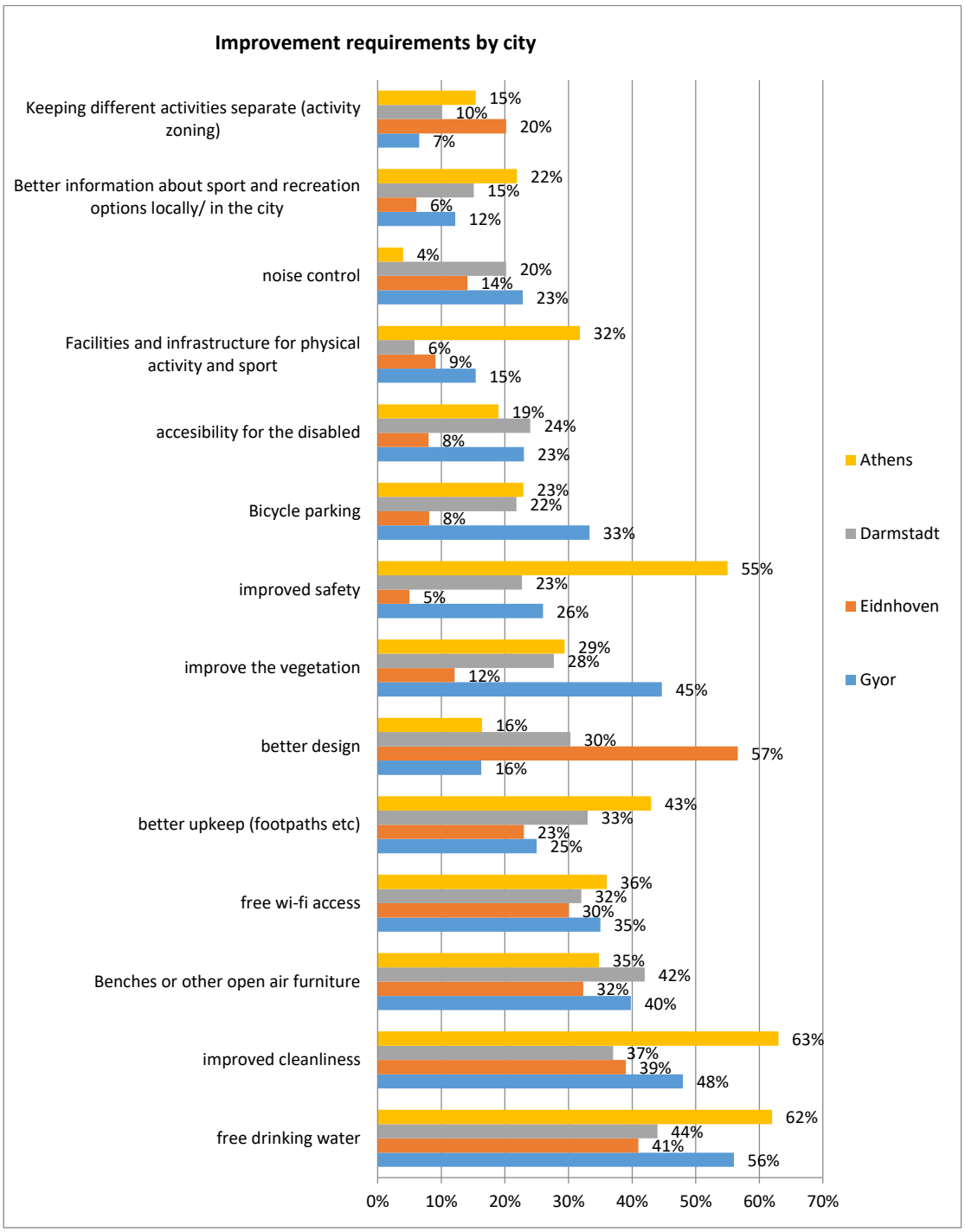
Comparing cities by improvement requirements suggests a rank order of improvements for all four cities which is broadly similar to the cumulative rank order above, with some exceptions e.g. in Athens (improve cleanliness is the third most important improvement at 55%) and in Eindhoven (better design is the most important improvement at 57%).



According to the diagrams below, Athens ranks first in improvement requirements followed by Gyor, Darmstadt and Eindhoven. Some particular characteristics of certain cities emerge. For example:

- Athens stands out compared to the other cities for improvements referring to free drinking water, cleanliness, safety and facilities and infrastructure for physical activity and sport.
- Eindhoven stands out for improvements regarding better design of open space.

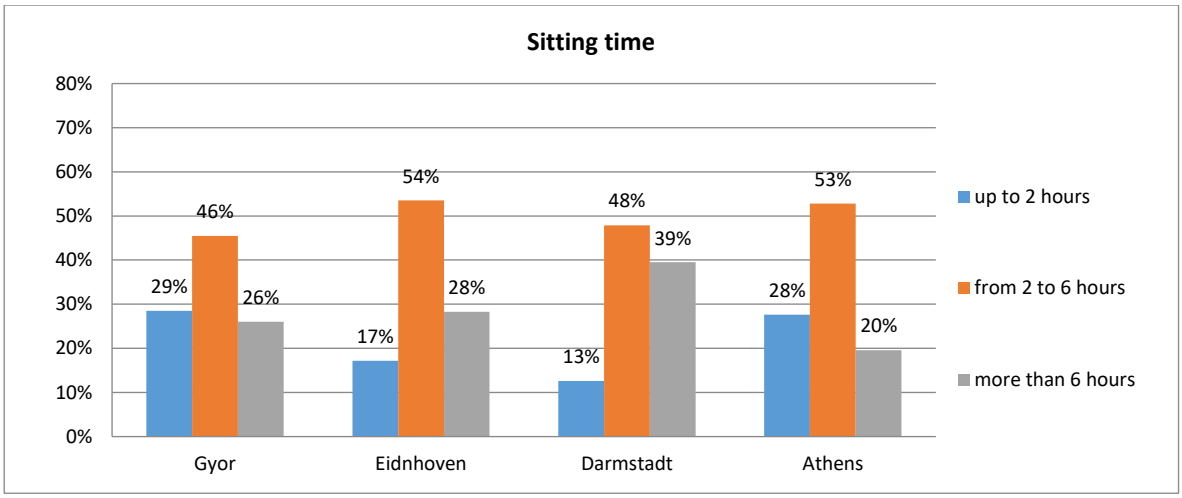

Cities by improvement requirements
Athens
Darmstadt
Eidnhoven
Gyor
15%
4%
32%
19%
23%
55%
29%
16%
43%
36%
35%
63%
62%
10%
20%
6%
24%
22%
23%
28%
0%
33%
32%
42%
37%
44%
20%
14%
9%
8%
8%
5%
12%
57%
25%
30%
32%
39%
41%
7%
23%
15%
23%
33%
26%
45%
16%
25%
35%
40%
48%
56%
0%
10%
20%
30%
40%
50%
60%
70%
Keeping different activities separate (activity zoning)
Noise control
Facilities and infrastructure for physical activity and sport
Accessibility for disabled people
Bicycle parking
Improve safety
Improve the vegetation
Better design
Better upkeep of footpaths and other areas used by the visitors
Free Wi-Fi access
Benches or other open air furniture
Improve cleanliness
Free drinking water


Improvement requirements by city
Keeping different activities separate (activity zoning)
15%
10%
20%
7%
Better information about sport and recreation options locally/ in the city
22%
15%
6%
12%
noise control
4%
20%
14%
23%
Facilities and infrastructure for physical activity and sport
32%
6%
9%
15%
accesibility for the disabled
19%
24%
8%
23%
Bicycle parking
23%
22%
8%
33%
improved safety
55%
23%
5%
26%
improve the vegetation
29%
28%
12%
45%
better design
16%
30%
57%
16%
better upkeep (footpaths etc)
43%
33%
23%
25%
free wi-fi access
36%
32%
30%
35%
Benches or other open air furniture
35%
42%
32%
40%
improved cleanliness
63%
37%
39%
48%
free drinking water
62%
44%
41%
56%
0%
10%
20%
30%
40%
50%
60%
70%
Athens
Darmstadt
Eidnhoven
Gyor

2.4 Life style

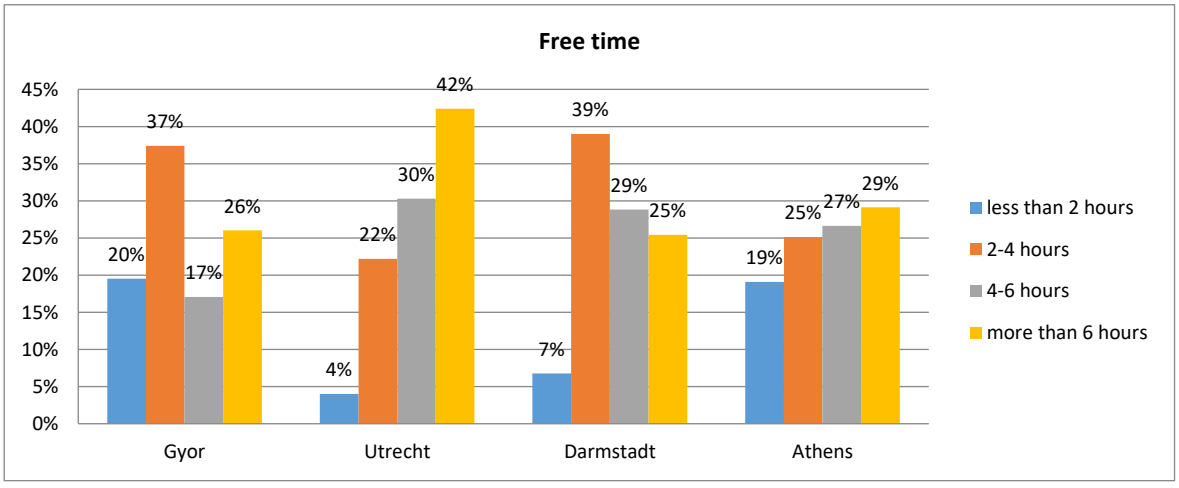
Sitting time

A near majority of open space users report having sitting time during the day between 2 and 6 hours (from 46% in Gyor to 54% in Eindhoven); less report sitting time of up to 2 hours (from 13% in Darmstadt to 28% in Athens and Gyor); while sitting time of more than 6 hours is reported by a considerable percentage of open space users (from 20% in Athens to 39% in Darmstadt).



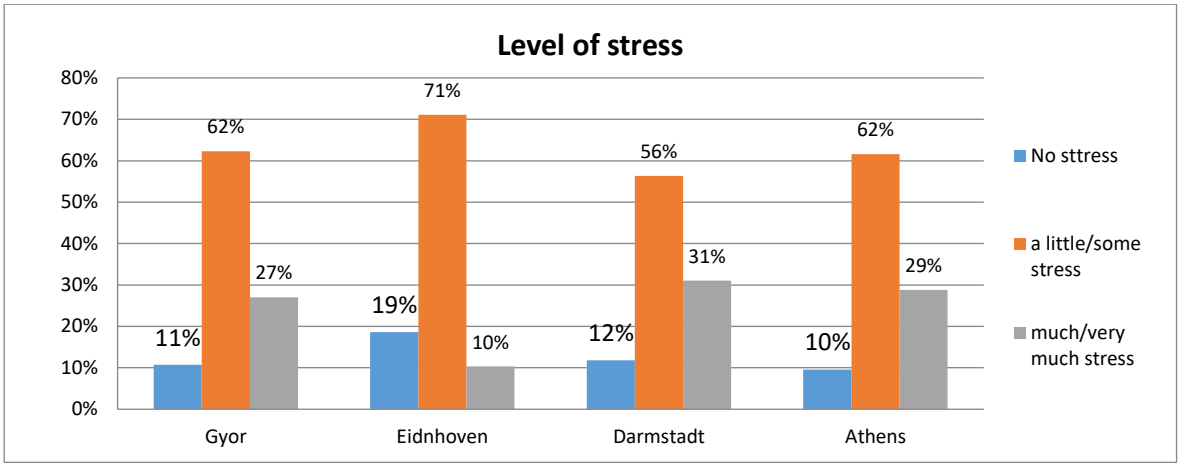
Free time

There are marked differences between the four cities regarding the free time. In Gyor, Darmstadt and, marginally in Athens, the largest groups (37%, 39%, 29%) report free time during the day between 2-4 hours; in Eindhoven the largest group (42%) report free time more than 6 hours.



Stress

In all four cities a clear majority of open space users report no stress or little/some stress (from 90% in Eindhoven to 73% in Gyor, 72% in Athens and 68% in Darmstadt).

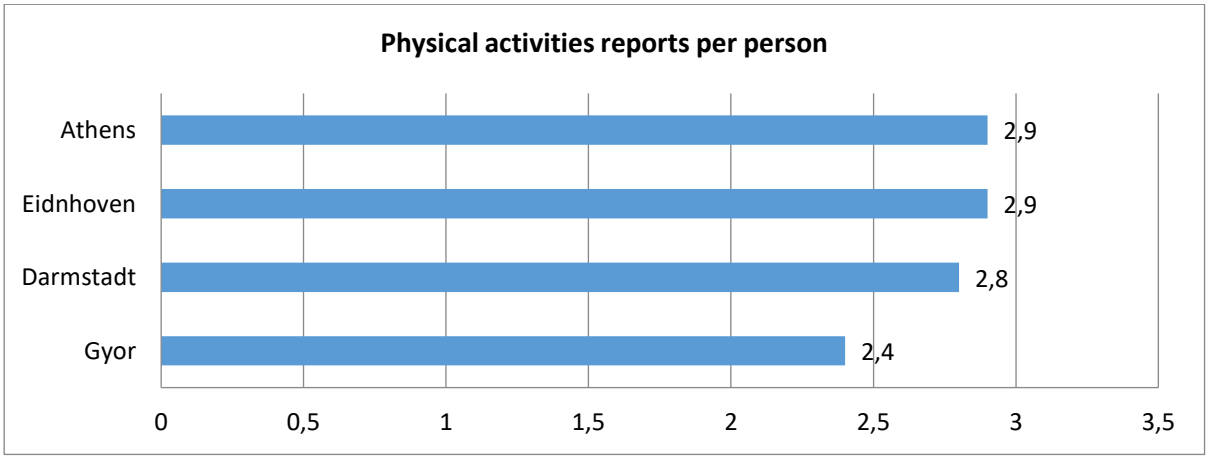


Physical activity

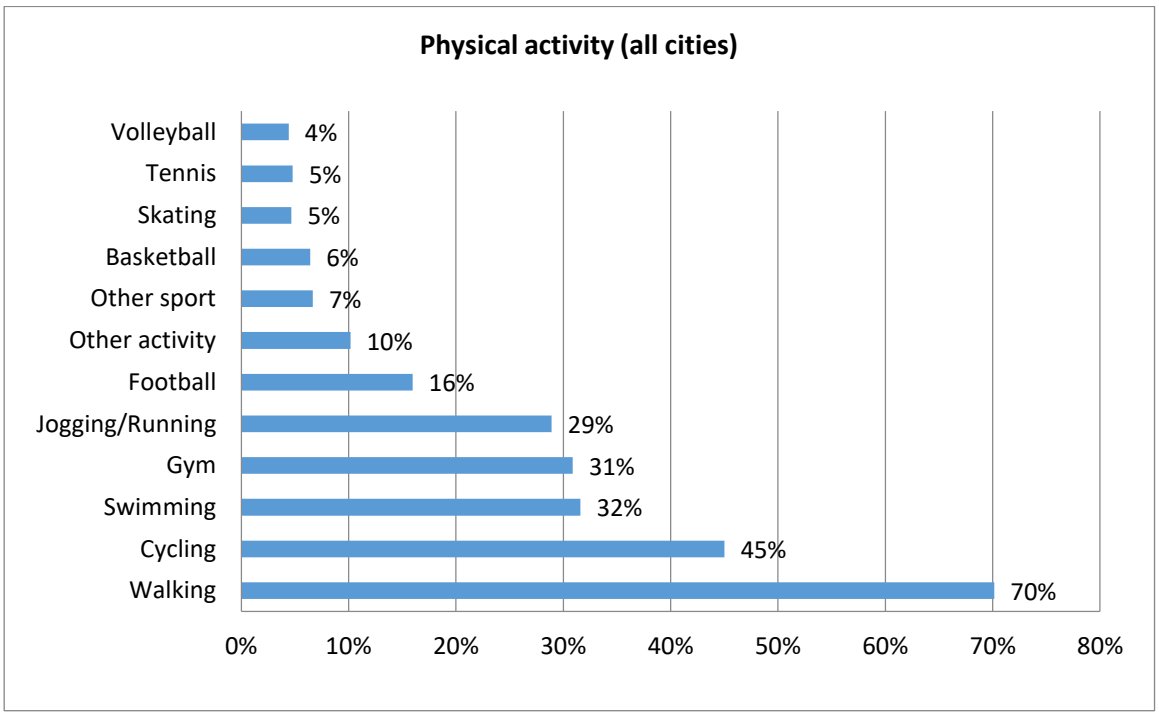
Respondents were asked to report on any physical activity they may have undertaken during the past month from a list of 12 indoor and outdoor activity options.

All respondents report as having undertaken one or more activities -mostly outdoors- and some reported other activities, not in the list.

Combining the data on physical activities for each city, the number of reports for activities undertaken per person provides a rank order of the four cities, ranging from Athens and Eindhoven (2,9 activities/person), to Darmstadt (2,8 activities/person), to Gyor (2,4 activities/person).

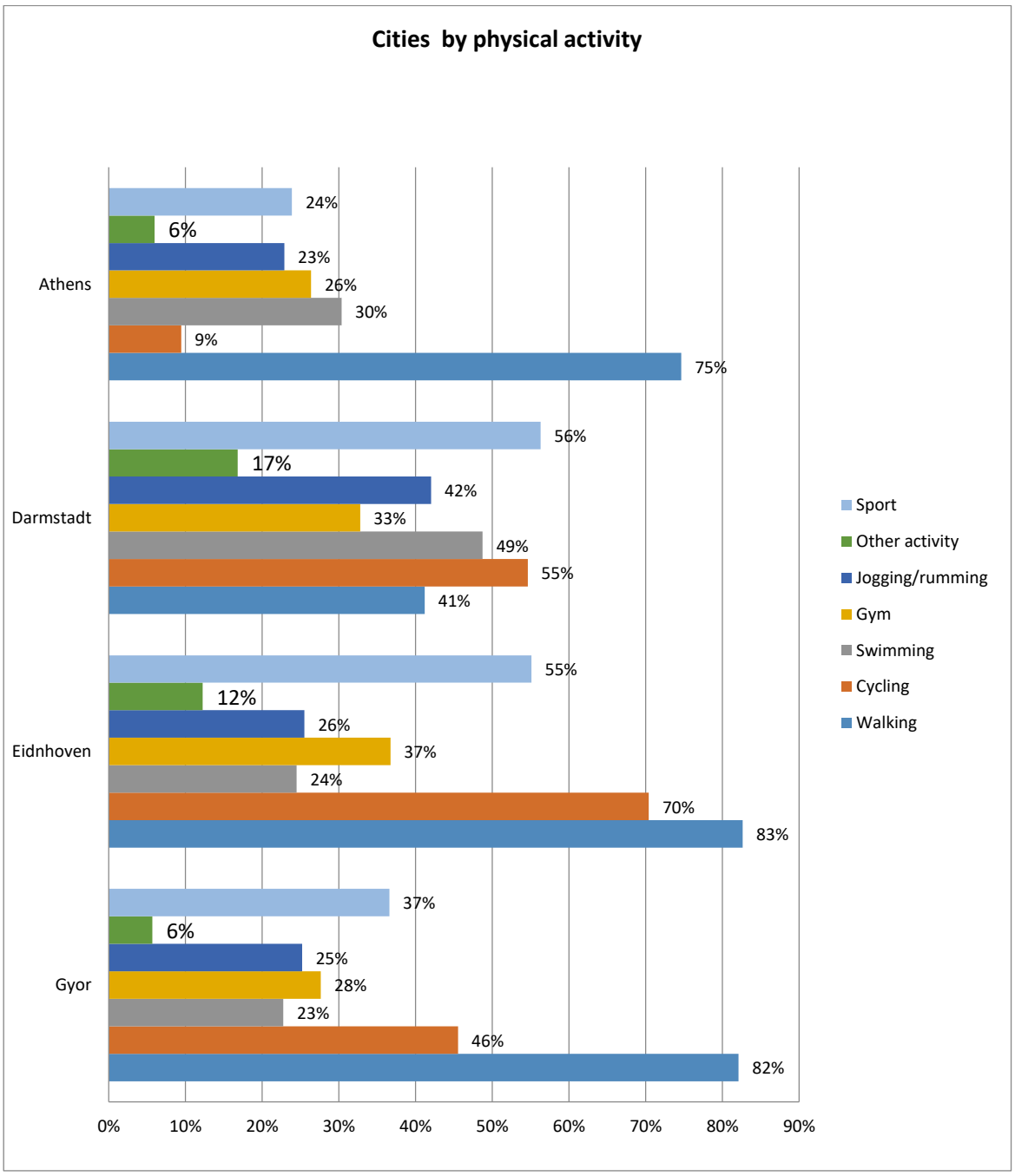


The data on the different physical activity types for all four cities provides a rank order of the popularity of physical activities from walking (70%) and cycling (45%) to tennis, skating, and volleyball (4-5%).

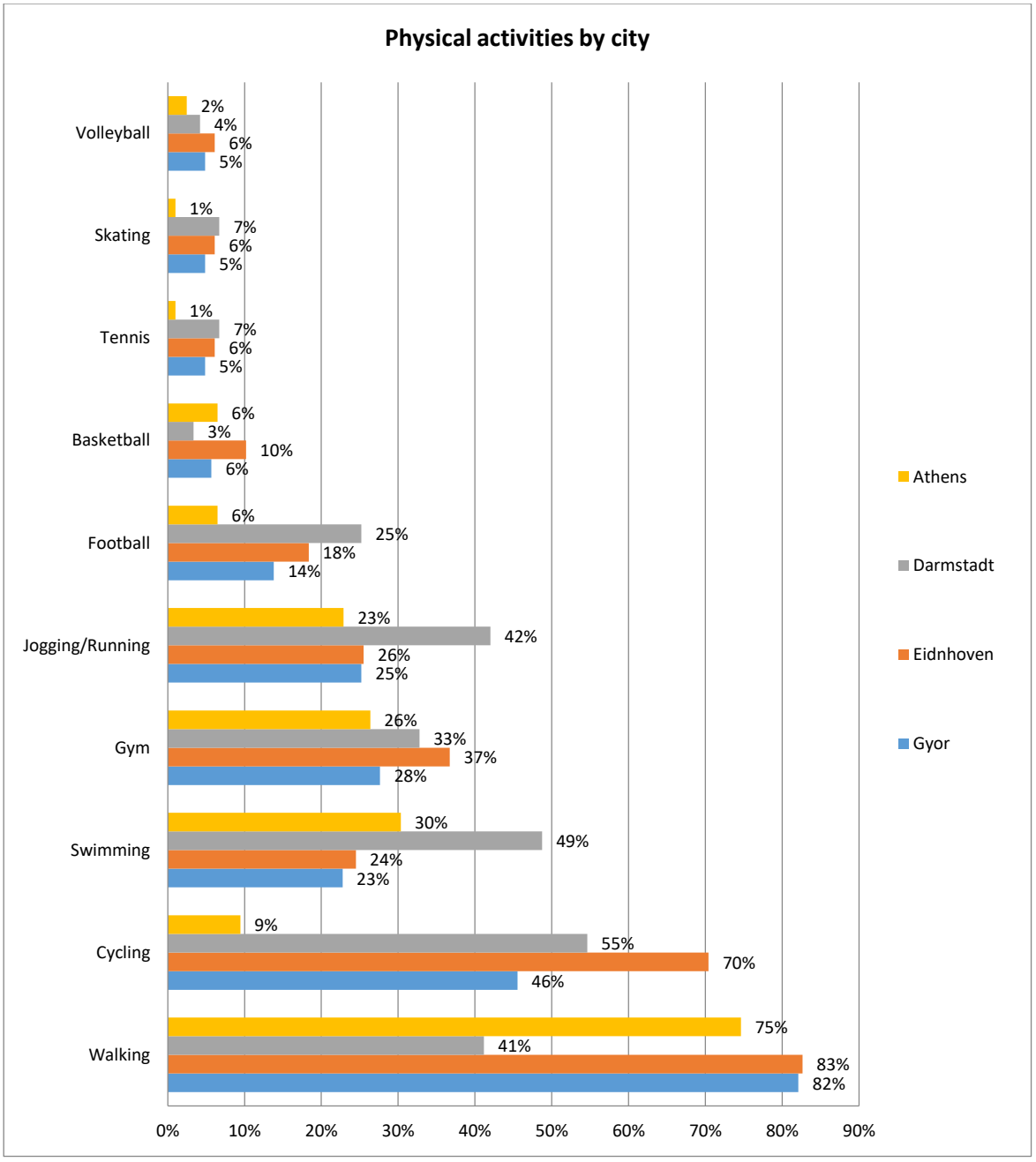


If we look at the physical activities reported in the each city, we note that:

- Walking represents the most popular physical activity in Eindhoven (83%), Gyor (82%) and Athens (75%) in contrast with Darmstadt (only 41%).
- Cycling and sport are very popular in Eindhoven (70% and 55%), Darmstadt (55% and 56%) and less so in Gyor (46% and 37%)
- In Athens physical activities are the least popular compared to the other cites (all under the 30% mark) except walking.

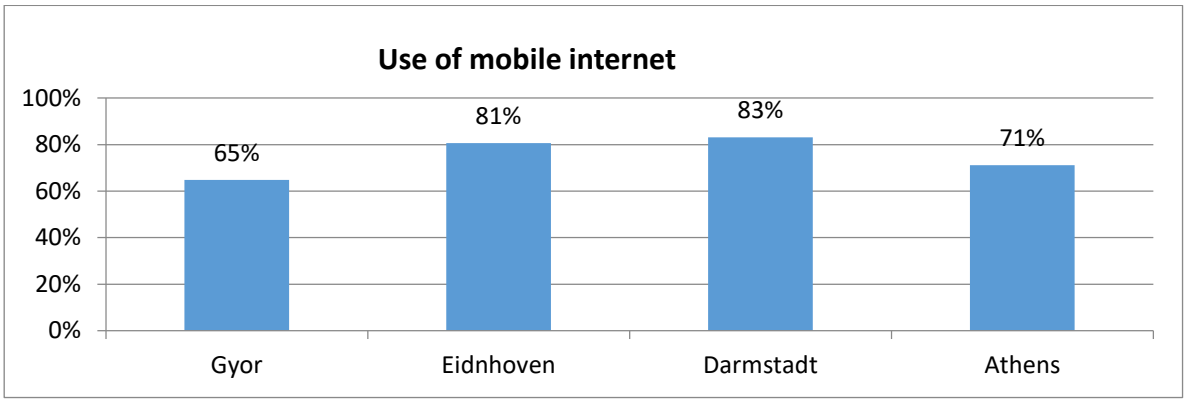

Cities by physical activity
Athens
24%
6%
23%
26%
30%
9%
75%
Darmstadt
56%
17%
42%
33%
49%
55%
41%
Eidnhoven
55%
12%
26%
37%
24%
70%
83%
Gyor
37%
6%
25%
28%
23%
46%
82%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
Sport
Other activity
Jogging/rumming
Gym
Swimming
Cycling
Walking

If we look at the popularity of each physical activity across the four cities, the overall popularity of walking and cycling, and to a lesser extent swimming, gym and jogging, is confirmed.

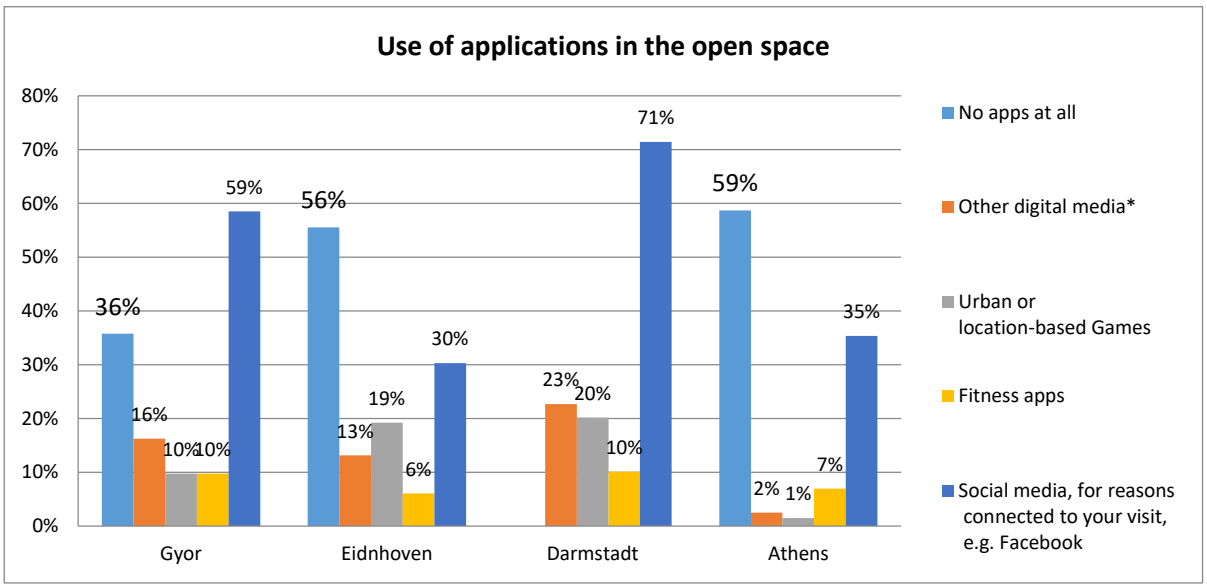


Digital technology

Open space users lead in the use of mobile internet in Darmstadt (83%) and Eindhoven (81%), followed by Athens (71%) and Gyor (65%).

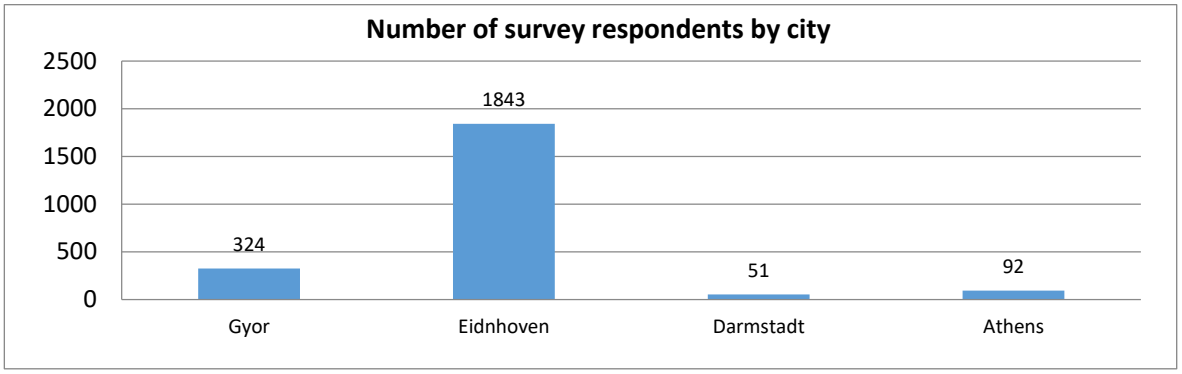


The social media represent the most used application by open space users in all four cities although in varying extent: from 71% in Darmstadt and 59% in Gyor to 30% in Eindhoven and 35% in Athens. A substantial proportion of open space users report that they do not use apps at all in the open space (59% in Athens, 56% in Eindhoven, 36% in Gyor). Fitness apps are used by a small minority (between 6% and 10% in all cities).



3. The online survey

The online survey included 2310 respondents from the four cities, with the majority (1843) coming from Eindhoven.



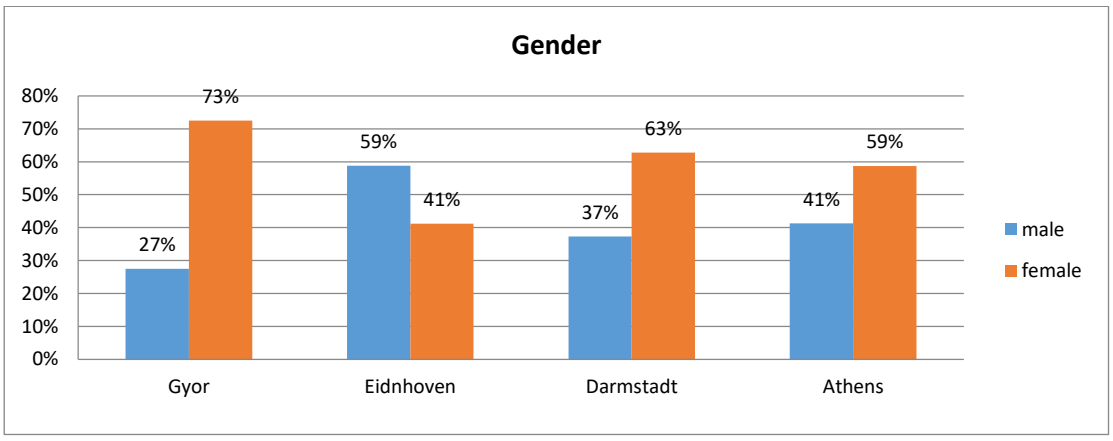
This section presents, through a frequency analysis of the online survey results in the four cities, the demographic and socio-economic profile of respondents, their patterns of behaviour in relation to their experience of open space, the perceived benefits from open space use, propositions for improvements, and aspects of their life style.

There are certain marked differences in the socioeconomic profiles of the respondents between the two surveys, which was expected, given the different recruitment methods used to compile the sample of each survey. However, in most aspects investigated, including user behaviour and perceived benefits, the differences were minor.

3.1 User profile

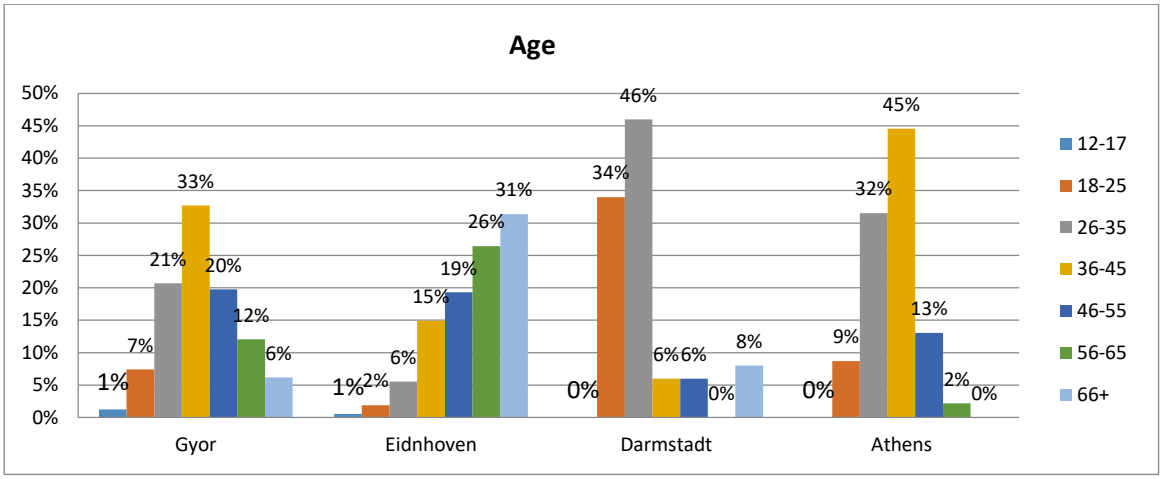
Gender

There are marked differences in the gender of the survey respondents between cities: the majority of the respondents are female in Gyor, Darmstadt and Athens, but only a minority are female in Eindhoven. Moreover, the ratio men/women in every city diverts highly from that of the general population.



Age

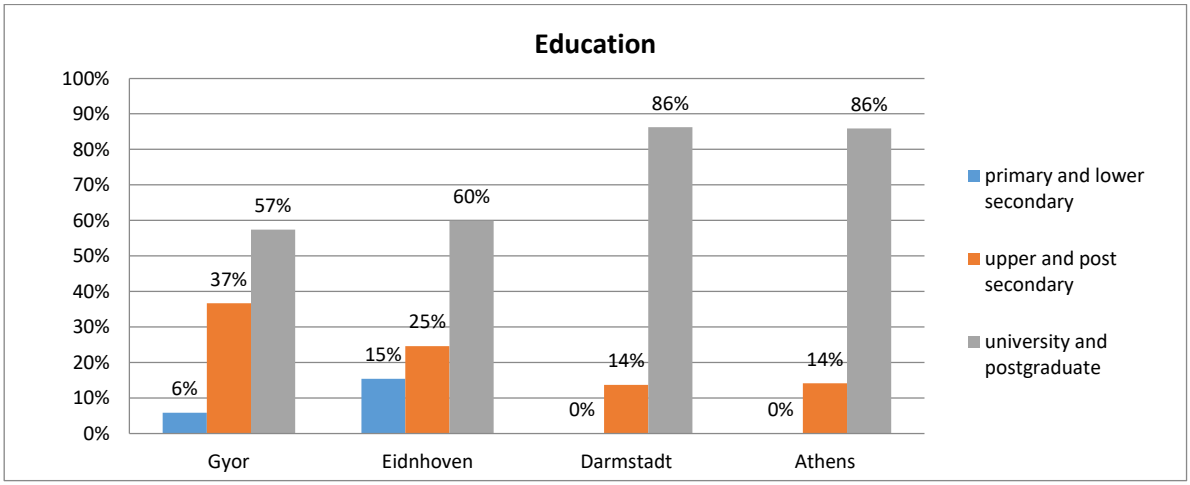
- In Gyor, people aged from 36 to 45 represent the largest group of respondents (33%)
- In Eindhoven, people over 66 represent the largest group of respondents (31%)
- In Darmstadt, people aged from 18 to 35 represent 80% of respondents
- In Athens, people aged from 26 to 45 represent 77% of respondents



Education

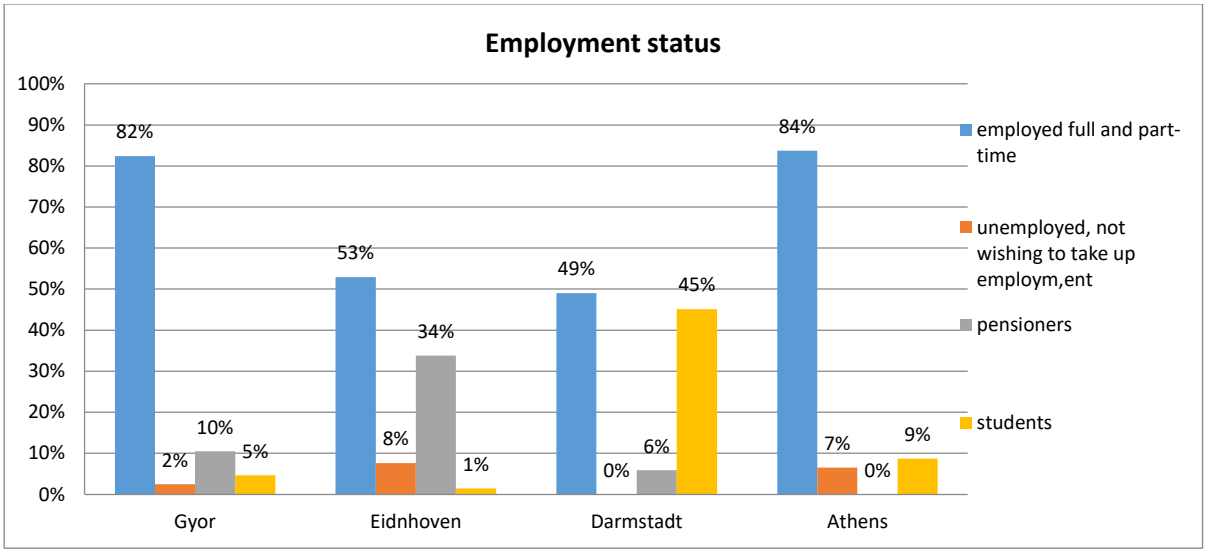
As with age, the education profiles of respondents differ substantially between cities.

- In Darmstadt and Athens people with university and postgraduate education represent 86% of respondents; there are no respondents with primary or lower secondary education.
- In Gyor and Eindhoven, people with university and postgraduate education represent the largest group of respondents (57% and 60% respectively).



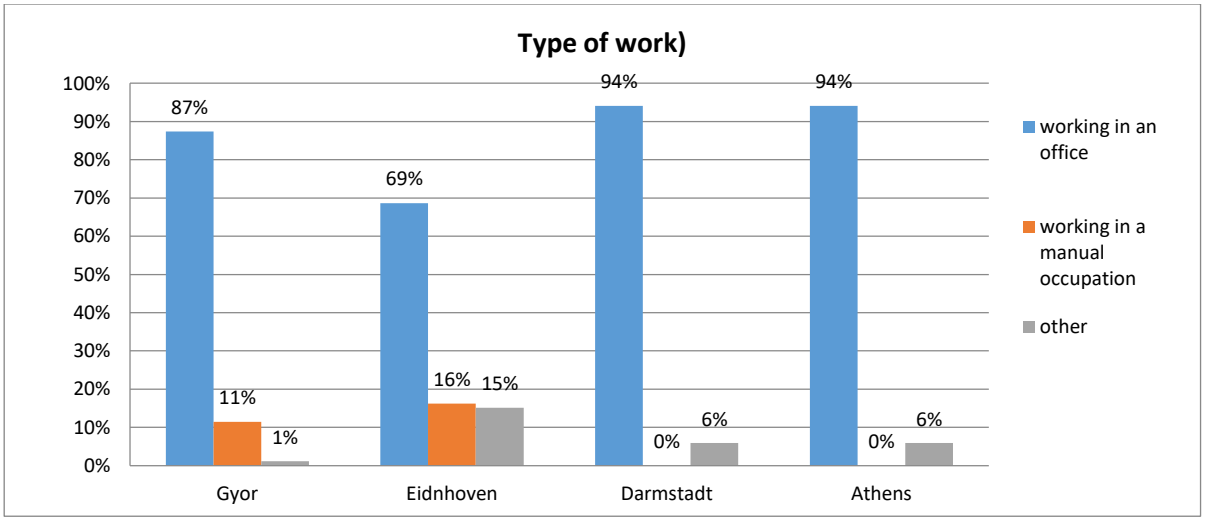
Employment

- In Gyor and Athens, employed people (full time or part time) represent the majority of respondents (82% and 84% respectively).
- In Eindhoven and Darmstadt, the employed represent about half of respondents (53% and 49% respectively), followed by pensioners (34%) in Eindhoven and students (45%) in Darmstadt.



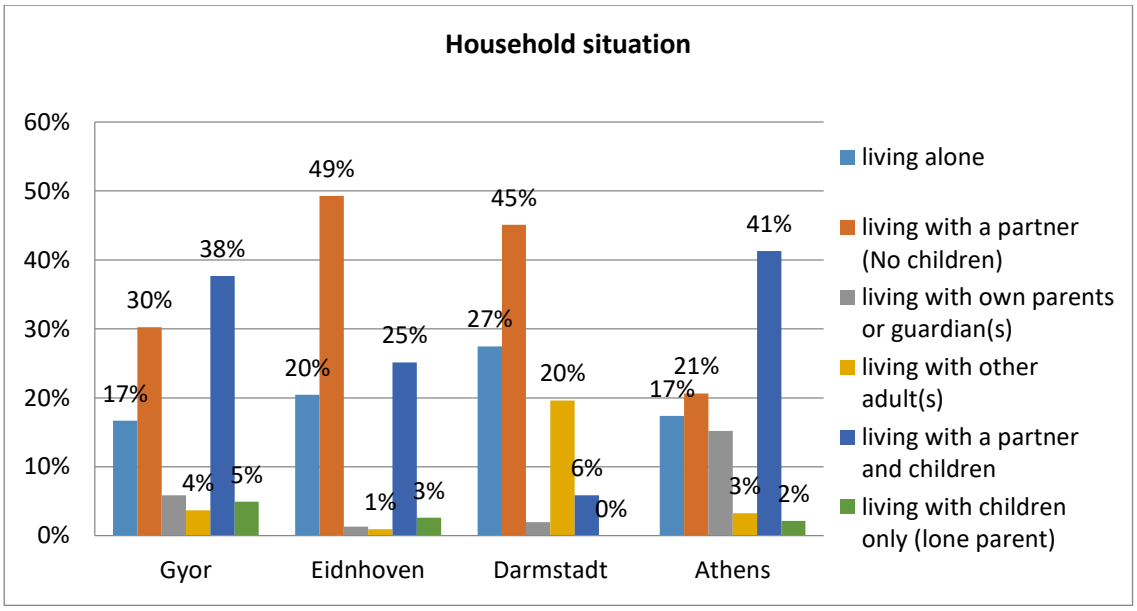
Type of work

- People working in an office represent the majority of respondents, around 90% in Gyor, Darmstadt and Athens and 69% in Eindhoven.
- People working in a manual or other occupation are found only in Darmstadt and Athens as a very small minority.



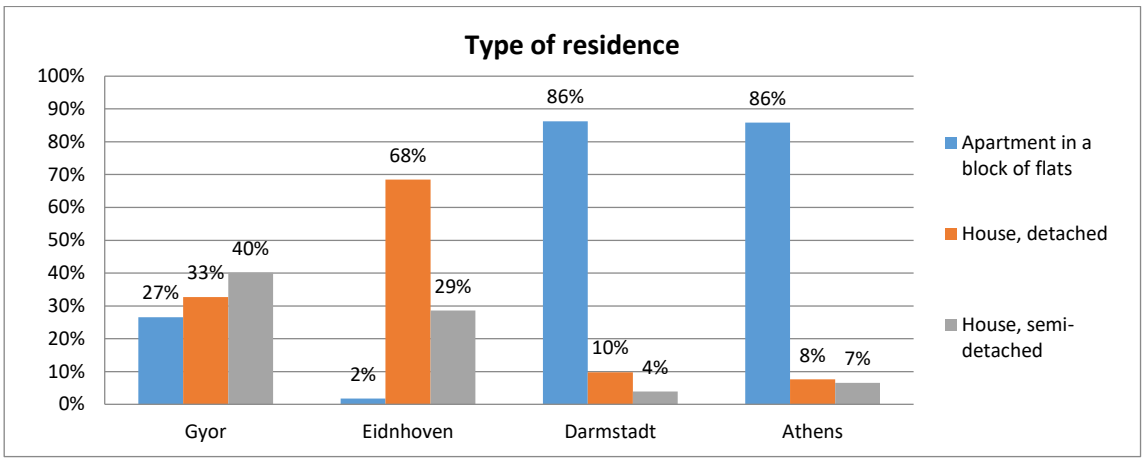
Household situation

- In Gyor and Athens, the majority of respondents live with a partner and children (38% and 41% respectively); together with those who live with a partner but without children they constitute over two thirds of the total (68% and 625 respectively).
- In Eindhoven and Darmstadt, those living with a partner without children represent the largest group (49% and 45% respectively); together with those who live alone, they represent over two thirds of the total (69% and 72% respectively).
- Lone parents represent a very small group in all four cities.



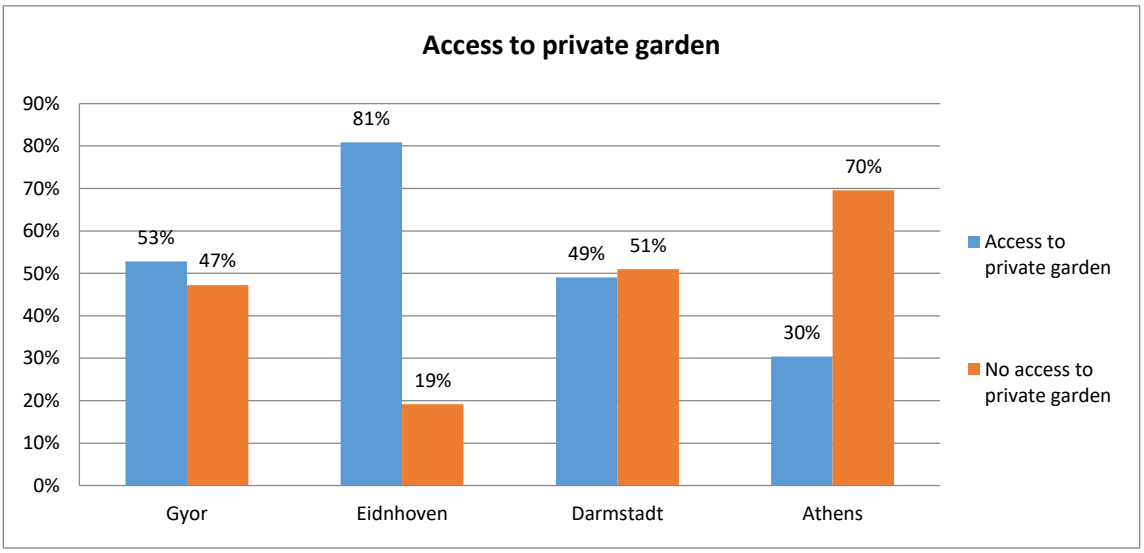
Type of residence

- In Gyor, all three types of residence are relatively equally represented among respondents, from the semi-detached house (40%) to residing in a block of flats (27%).
- In Eindhoven, the majority of respondents live in detached houses (68%) or in semi-detached houses (29%).
- In Darmstadt and Athens the majority of respondents live in a block of flats (86%).



Access to private garden

- In Gyor and Darmstadt, about half of the respondents have access to a private garden
- In Eindhoven, the majority of respondents have access to a private garden (81%)
- In Athens, one third of respondents have access to a private garden.

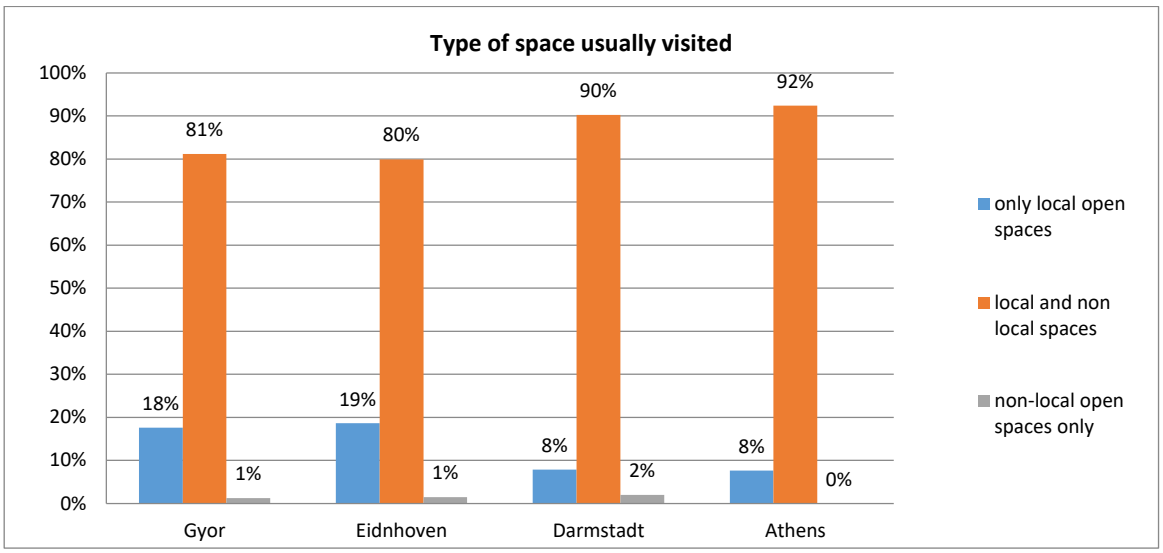


3.2 Patterns of behaviour/use of urban space

Types of open spaces visited

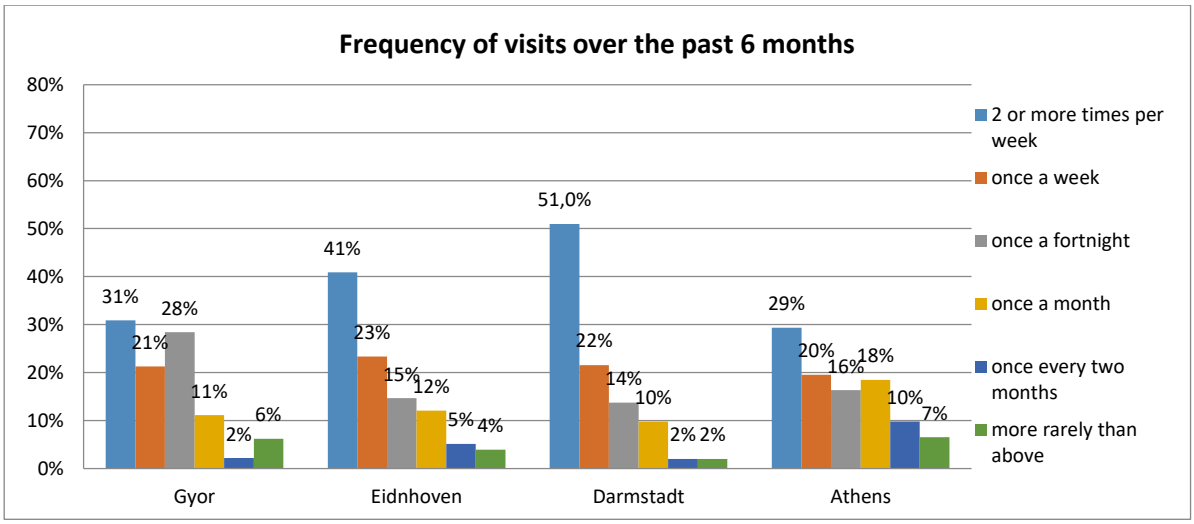
In all four cities the vast majority of respondents visit local and non local spaces, including spaces outside the city, ranging from over 90% in Athens and Darmstadt to over 80% in Gyor and Eindhoven.

Only a small minority visit only their local spaces, ranging from less than 20% in Eindhoven and Gyor to less than 10% in Athens and Darmstadt .



Frequency of visits

- Open space visitors who visit an open space two or more times per week, represent the largest group in all four cities: from 51% in Darmstadt to 29% in Athens.
- If added together with visitors who use an open space at least once per week, they represent the majority of open space users: from 73% in Darmstadt to 49% in Athens.
- Open space visitors who use an open space once every two months or more rarely, represent a very small group from 27% in Athens to 4% in Darmstadt.

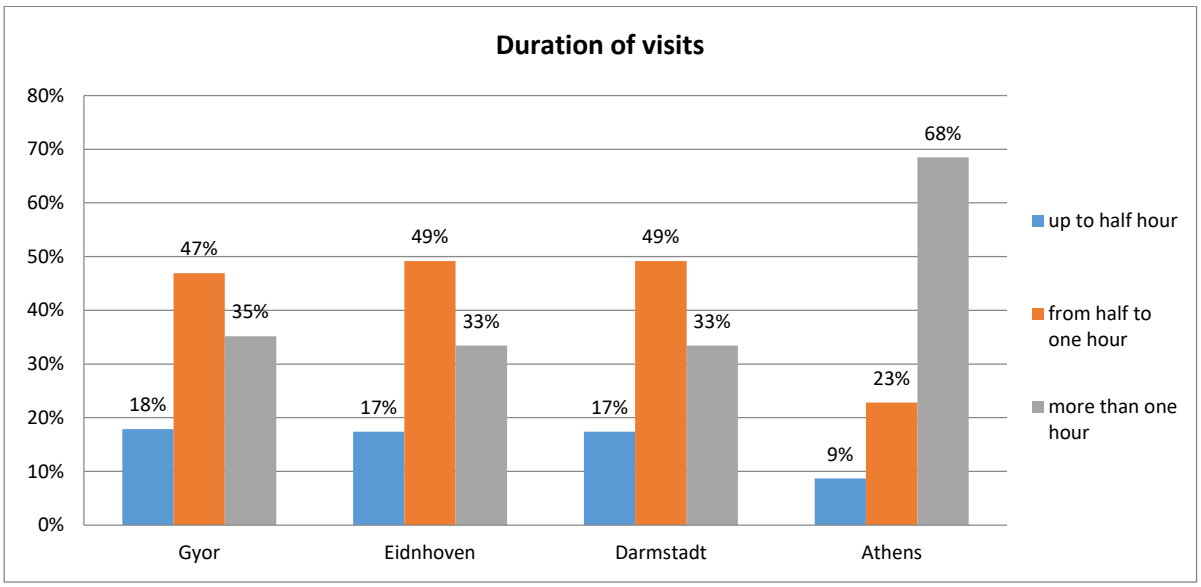


Duration of visits

- Gyor, Eindhoven, and Darmstadt present a common pattern of open space visit duration: for just under 50% of respondents their visit lasts from half to one hour; for about 33-34% it lasts more than an hour, and for about 17-18% it lasts for up to half

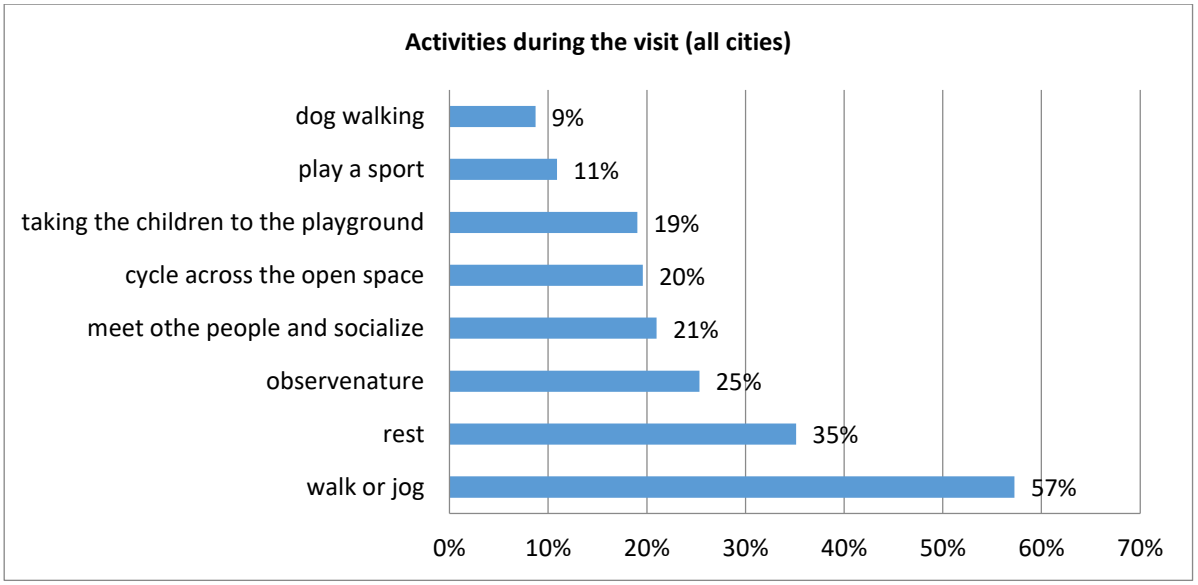
an hour. In contrast, in Athens those whose visit lasts more than one hour represent the majority (68%).

- If all visitors whose visit lasts more than half hour are added together, they represent the majority of open space users in all four cities: from 91% in Athens to 81% in Darmstadt and Eindhoven and 82% in Gyor.
- Open space users whose visit lasts less than half an hour, represent a small group, ranging from 9% in Athens to 18% in Gyor.



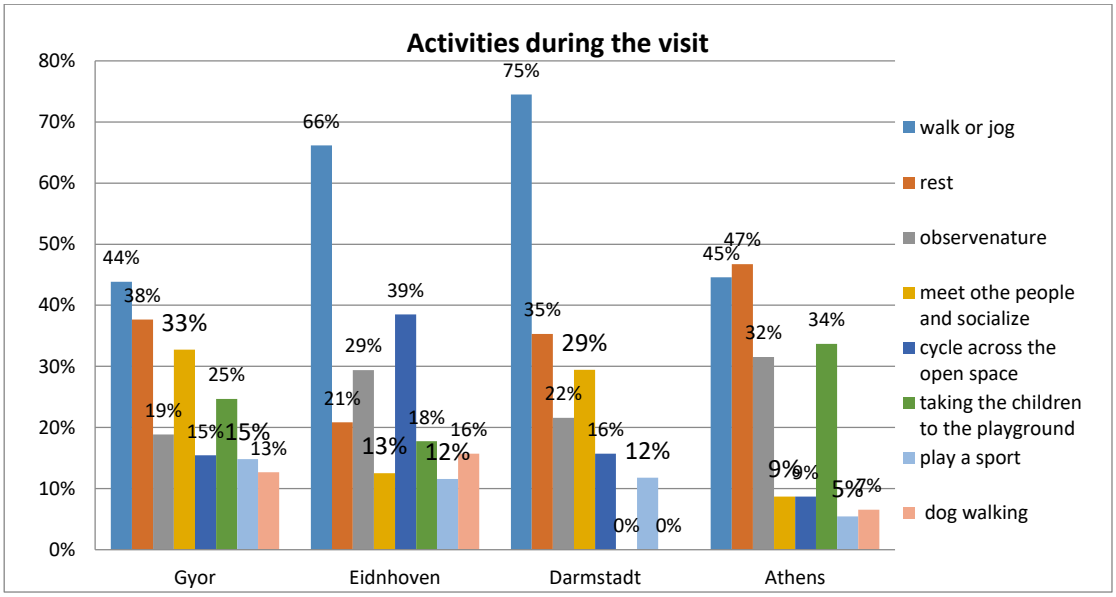
Activities during visits

Combining the data from all four cities indicates that walking or jogging (57%) and resting (35%) are the most popular activities across the cities, followed by observing nature, meeting people and socialising, cycling and taking the children to the playground (25% - 19%) , with dog walking and playing a sport being the least popular (9%-11%).



Looking at the activities' pattern in each city, we note some marked differences between the four cities.

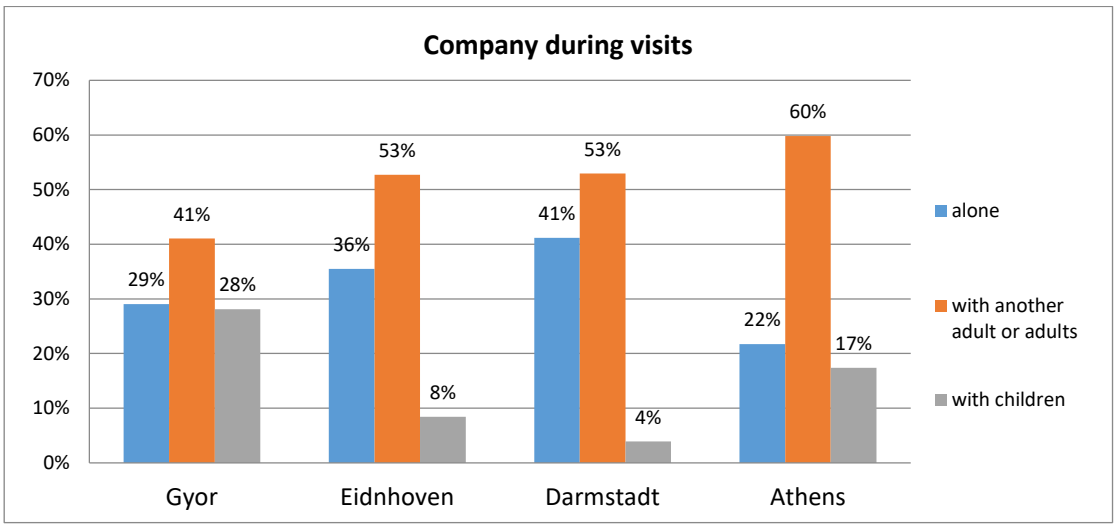
- Walking or jogging are the most popular activities of open space users in Darmstadt (75%), Eindhoven (66%), and together with resting in Athens (46-47%) and Gyor (44-38%).
- Other popular activities include: cycling in Eindhoven (39%), meet other people and socialize in Gyor (33%) and Darmstadt (29%), taking the children to the playground in Athens (34%) and Gyor (25%), and observing nature in Athens (32%), and Eindhoven (29%).



Company during visits

Open space users accompanied by one other or more adults in their visit represent the largest group (from 60% in Athens to 41% in Gyor), with those visiting alone representing the second largest group (from 41% in Darmstadt to 22% in Athens).

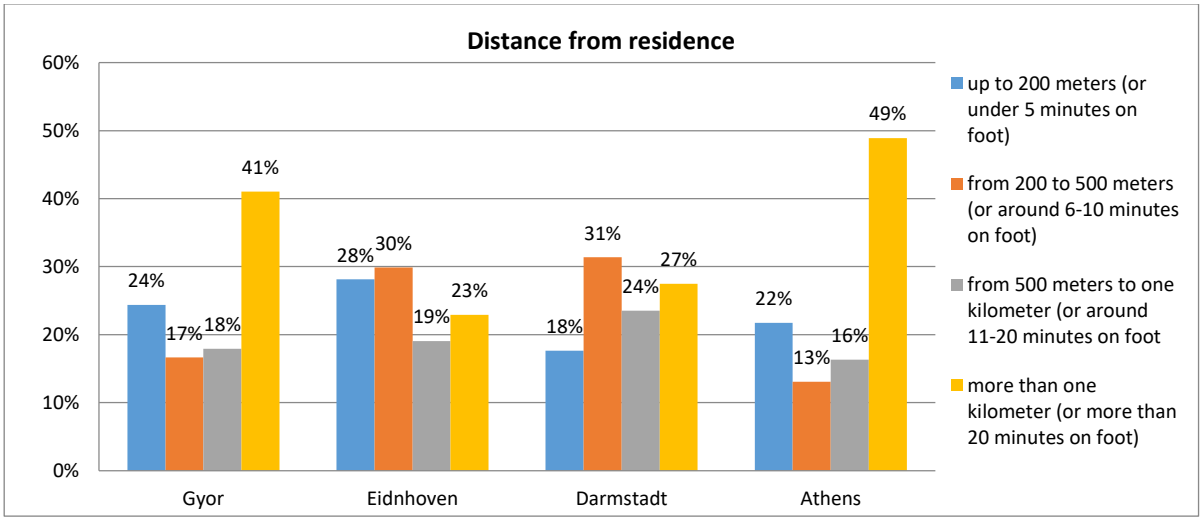
Open space users accompanied by children represent the smallest group in all four cities (from 28% in Gyor to 4% in Darmstadt).



Access to open spaces

The distance from the residence to the open space represents a measure of access to open space. A 4-point scale of distance was used: up to 200 meters (or under 5 minutes on foot), from 200 to 500 meters (or around 6-10 minutes on foot), from 500 meters to one kilometre (or around 11-20 minutes on foot), more than one kilometre (more than 20 minutes on foot).

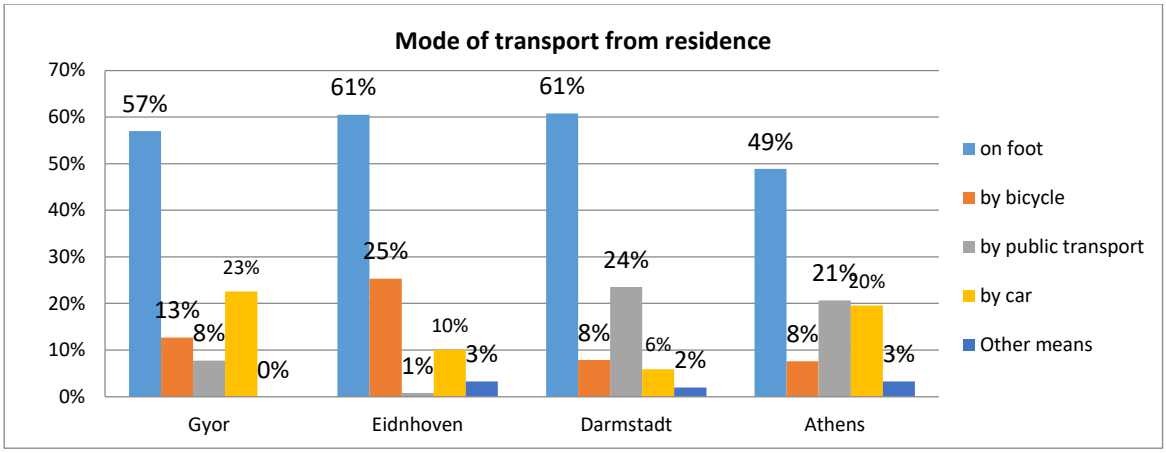
- Access is highest in Eindhoven with 28% of open space users living up to 200 meters from the open space and 30% living up to 500 meters away – in total 58%. This compares with 49% in Darmstadt, 41% in Gyor and 35% in Athens.
- The percentage of open space users living more than one klm away (or more than 20 minutes' walk) is highest in Athens (49%) and Gyor (41%).



Mode of transport from residence

- In all four cities the majority of open space users walk to the open space: from 61% for Eindhoven and Darmstadt to 49% in Athens.

- Next most used mode of transport for open space users is cycling in Eindhoven (25%), public transport in Darmstadt (24%), private car in Gyor (23%), and public transport (21%) and car (20%) in Athens.

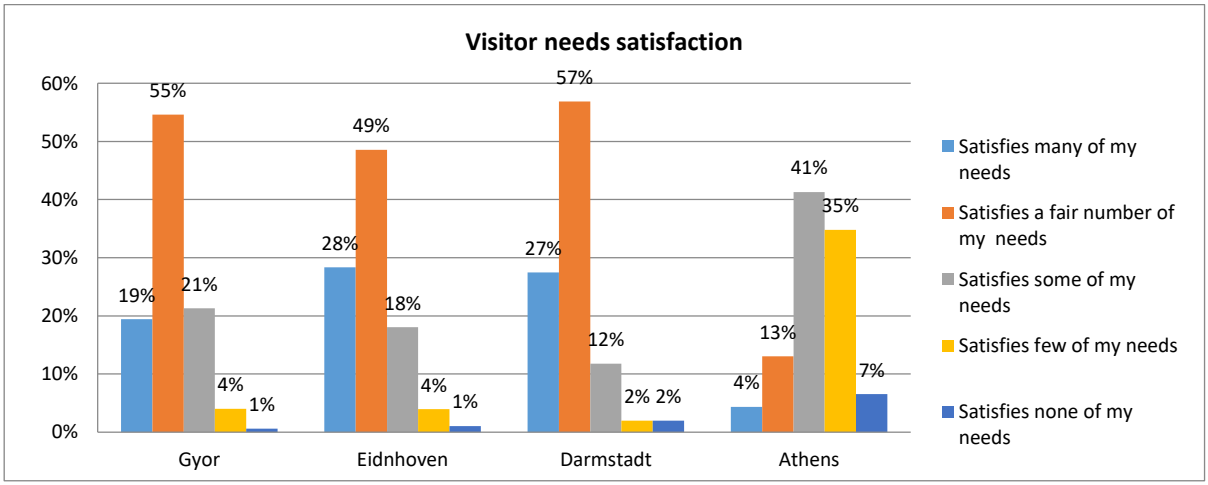


3.3 Benefits and improvements

Visitor's satisfaction

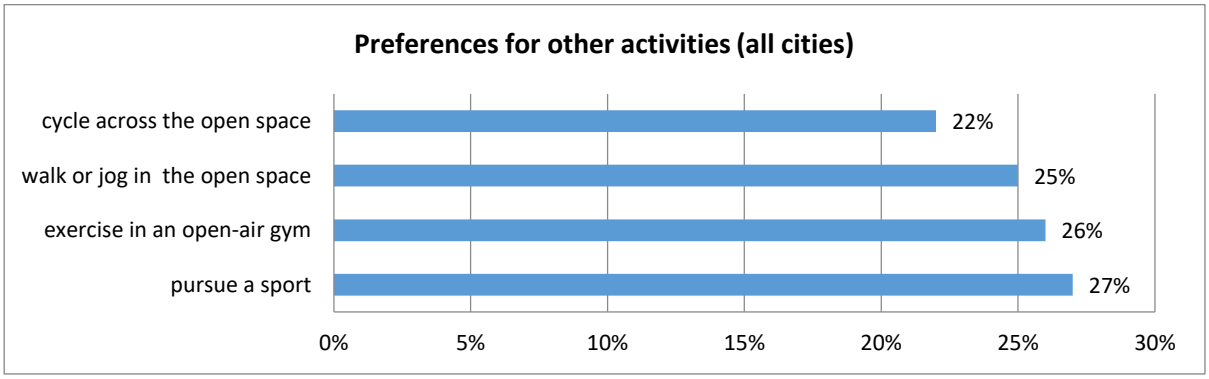
Visitor's satisfaction from the open space was measured on a scale from 1 (satisfies none of my needs) to 5 (satisfies many of my needs). There are similarities between the four cities

- In Darmstadt, Gyor and Eindhoven, the majority of open space users report that a fair number of their needs are satisfied. Adding together those who also report that many of their needs are satisfied totals 84% for Darmstadt, 77% for Eindhoven and 76% for Gyor.
- In contrast, in Athens only 17% report that many or a fair number of their needs are satisfied.



Visitor's other activity preferences

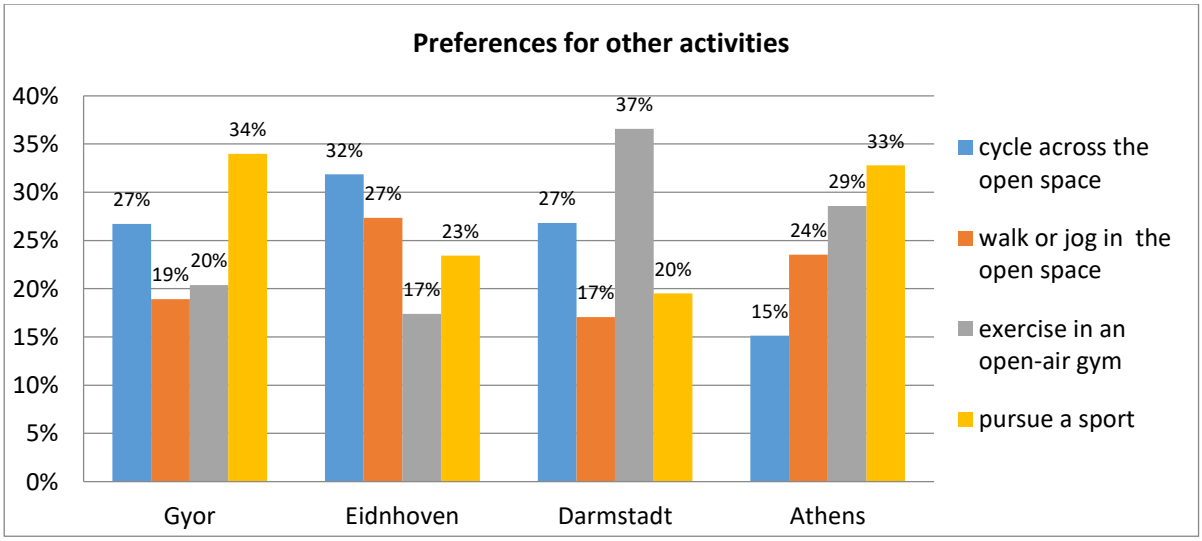
Respondents were asked what other activities they would like to pursue in the open spaces they visited frequently. Combining visitor preferences for other activities for the four cities provides an overall average rank order of other activity preferences, as follows: pursuing a sport is the most preferred other activity by open space users (27%), followed by exercise in an open-air gym (26%), walking and jogging (25%) and cycling (22%).



Regarding the number of other activities proposed per respondent from each city, Athens stands out with most preferences for new activities, with respondents proposing new activities at a rate of 135% (1,3 new activities proposed per respondent) compared to 69% in Gyor, 57% in Eindhoven and 88% in Darmstadt.

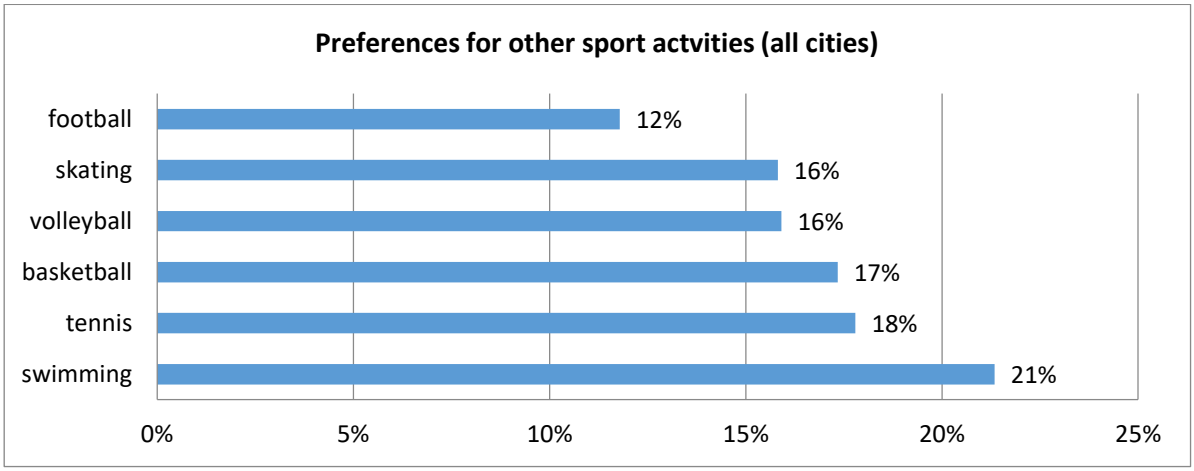
Preferences for specific activities have been reported as follows:

- The highest preferences range from 37% for exercise in an open air gym in Darmstadt to 33-34% for pursuing a sport in Athens and Gyor, to 32% for cycling in Eindhoven.
- The lowest preferences range from 15% for cycling in Athens, to 17 % for exercise in an open air gym in Eindhoven and walking or jogging in Darmstadt.



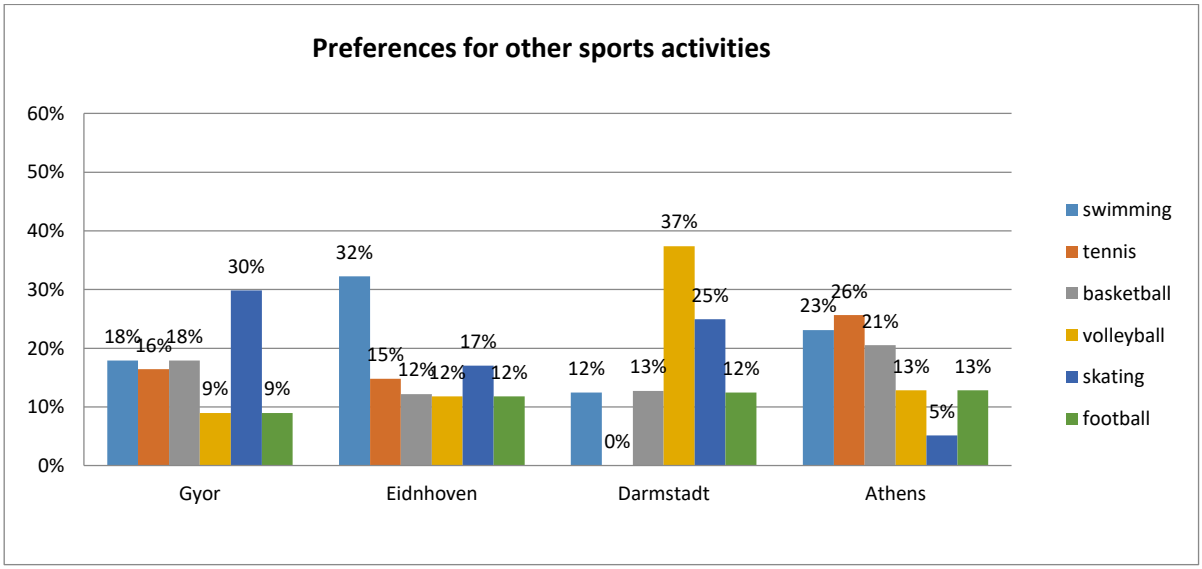
Visitor's other activity preferences for sport

Regarding preferences for pursuing a sport, respondents were offered a list of six different sports: swimming, football, basketball, volleyball, skating and tennis. Combining sport preferences from all four cities we note that overall, swimming is the most preferred sport activity by open space users (21%). followed by tennis (18%), basketball (17%), volleyball (16%), skating (16%) and football (12%).



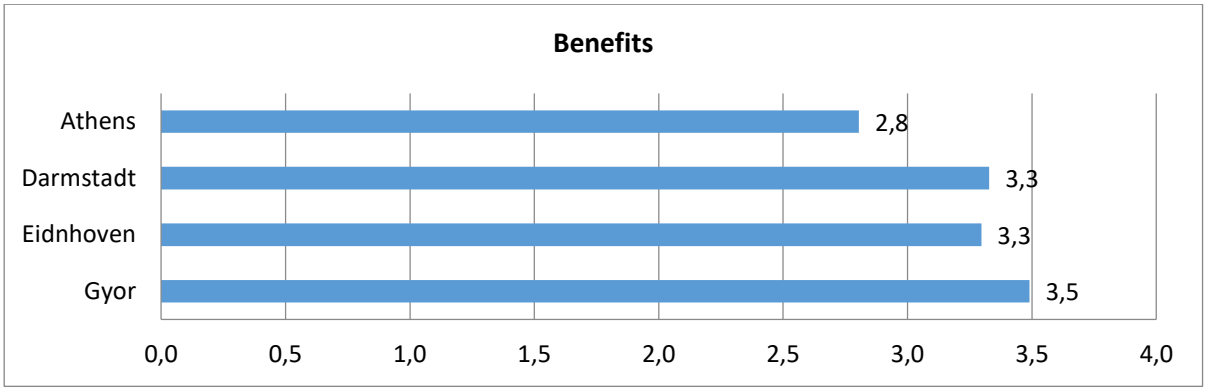
Considering preferences for other sport activities per city, we found that:

- Most preferred other sport activities include basketball (37%) and skating (25%) in Darmstadt, swimming in Eindhoven (32%), skating (30%) in Gyor.
- In Athens, most preferred sport activities include tennis (26%), swimming (23%) and basketball (21%).



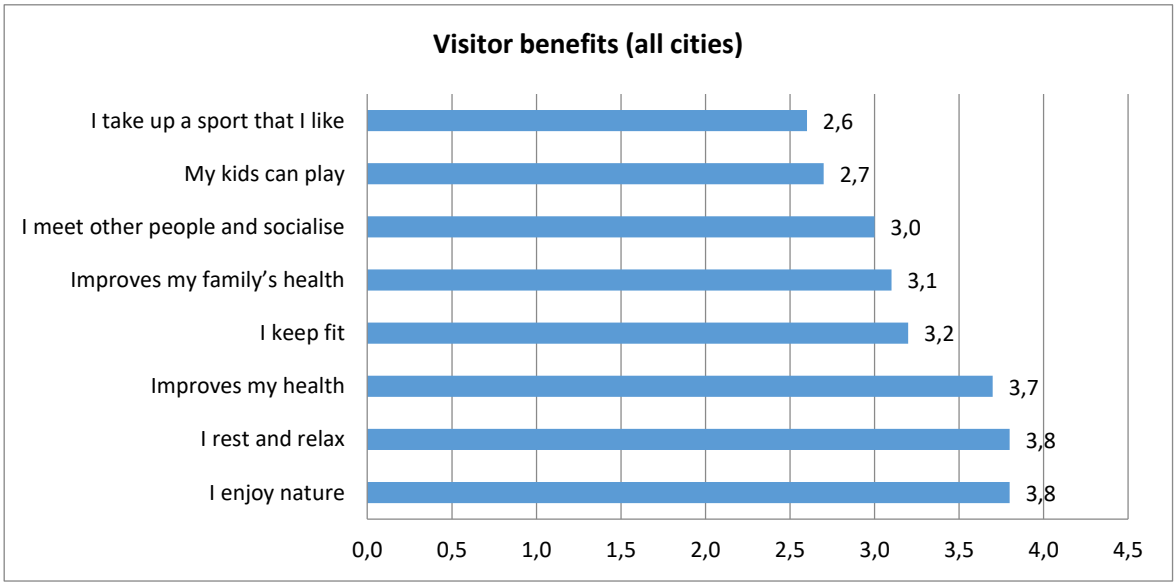
Benefits

Visitor benefits were assessed by open space users in a scale from 1(very low benefits) to 5 (very high benefits). Combining the data on visitor benefits for each city indicates that open space users report relatively high benefits in Gyor (3,5), Eindhoven and Darmstadt (3,3), but lower benefits in Athens (2,8%).

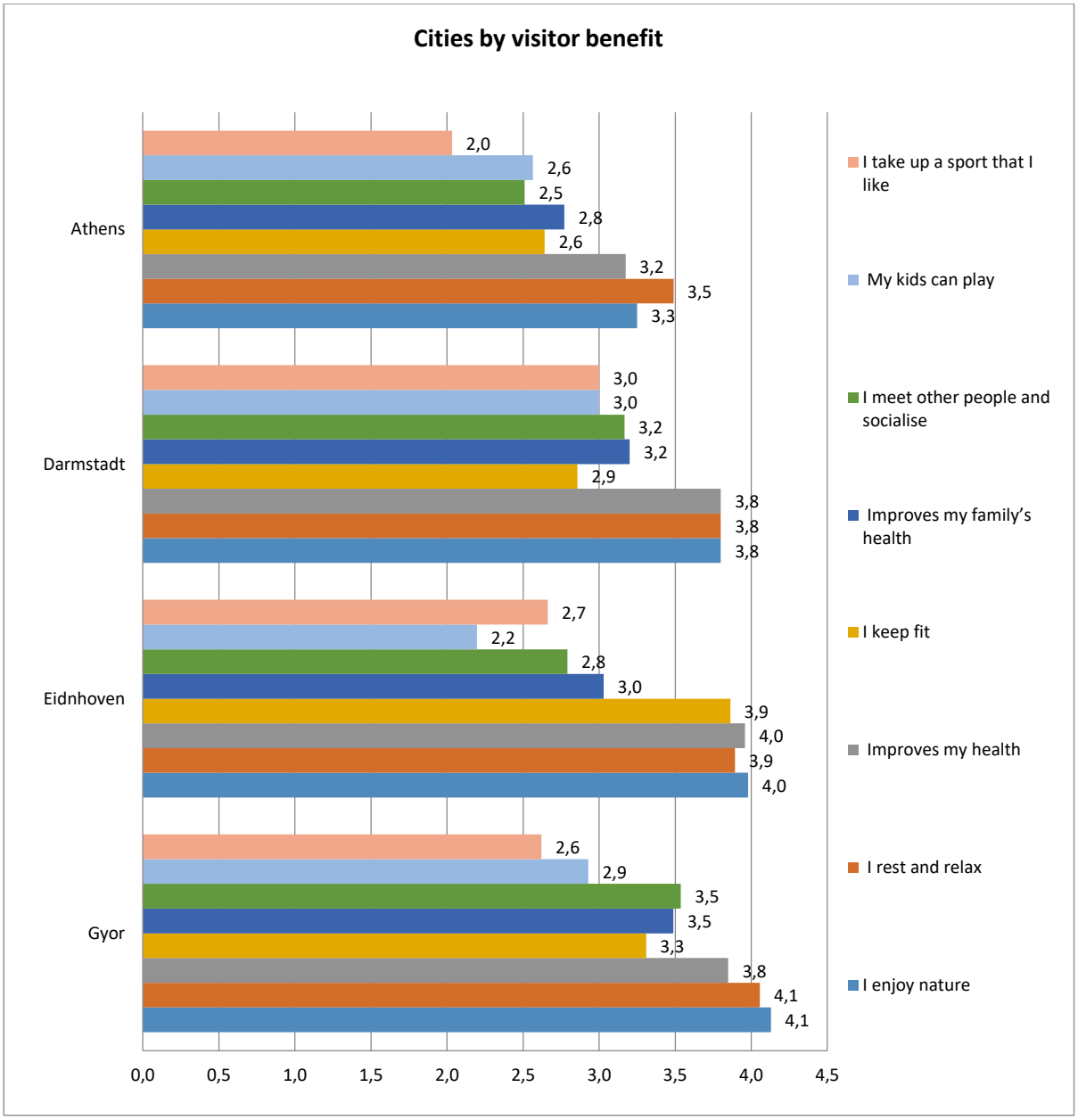


Combining the data on visitor benefits for all cities per type of benefit reveals three groups of open space activities, which correspond to high, medium and low benefits:

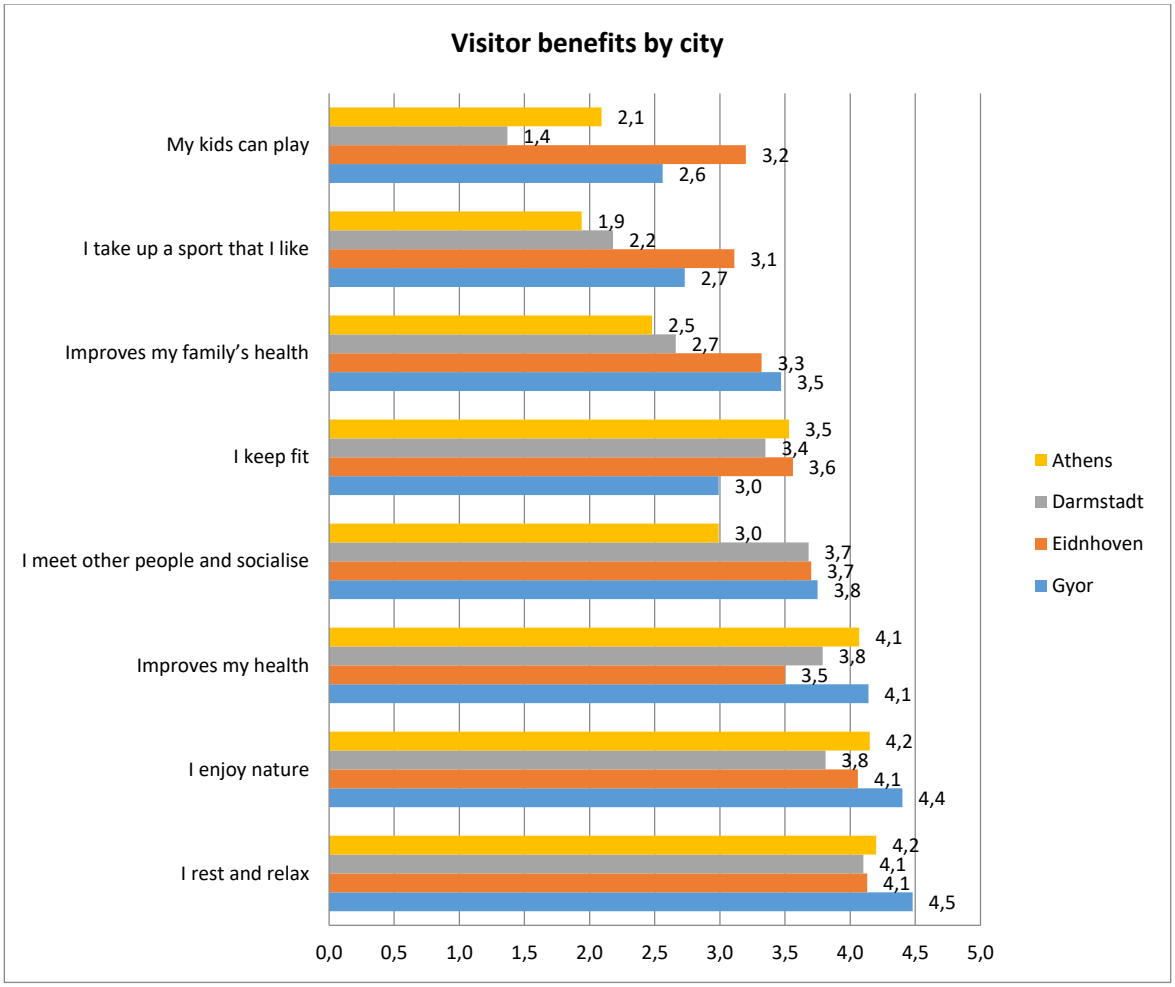
- High benefits are reported by open space users for resting and relaxing, enjoying nature and improving one's health (3,8-3,7)
- Medium benefits are reported for meeting other people and socialising, keeping fit and improving one's family health (3,2-3,0)
- Low benefits are reported for taking up a sport they like and giving to one's kids the opportunity to play(2,7-2,6)



Comparing cities by visitor benefits leads to a rank order of benefits for all four cities, which is broadly similar to the rank order of benefits combined for all cities as depicted in the respective diagram above. In all four cities, enjoying nature, resting and relaxing and improving one's health are linked to the highest benefits.



Comparing visitor benefits by city confirms broadly earlier overall comparisons between benefits, as depicted in the respective diagram above, with a few exceptions, for example in the case of Athens.



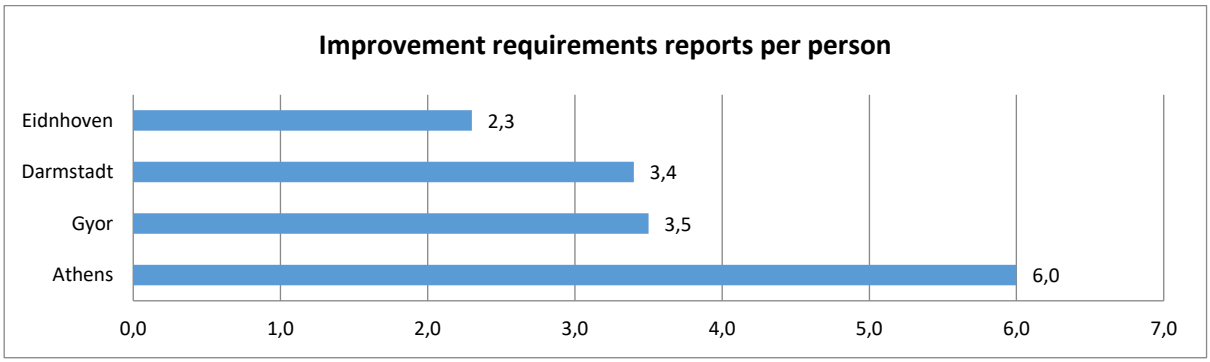
Improvement requirements

Respondents were asked the kind of improvements they would like to see in the open space they visited, out of a list of 16 types of improvement. Only about 3% thought that no improvements were necessary. Proposed improvements fall in 3 main groups

- Conditions of the open space: safety, cleanliness, accessibility for disabled people upkeep of footpaths and other areas used by the visitors, improving the vegetation, keeping different activities separate (activity zoning)
- Convenience facilities available: free drinking water, free Wi-Fi access, benches or other open air furniture, bicycle parking
- Facilities for physical activity, sport and recreation: infrastructure and information including options locally and in the city

Combining the data on improvement requirements for each city for the two surveys, the number of reports for improvements per person provides a rank order of needs for

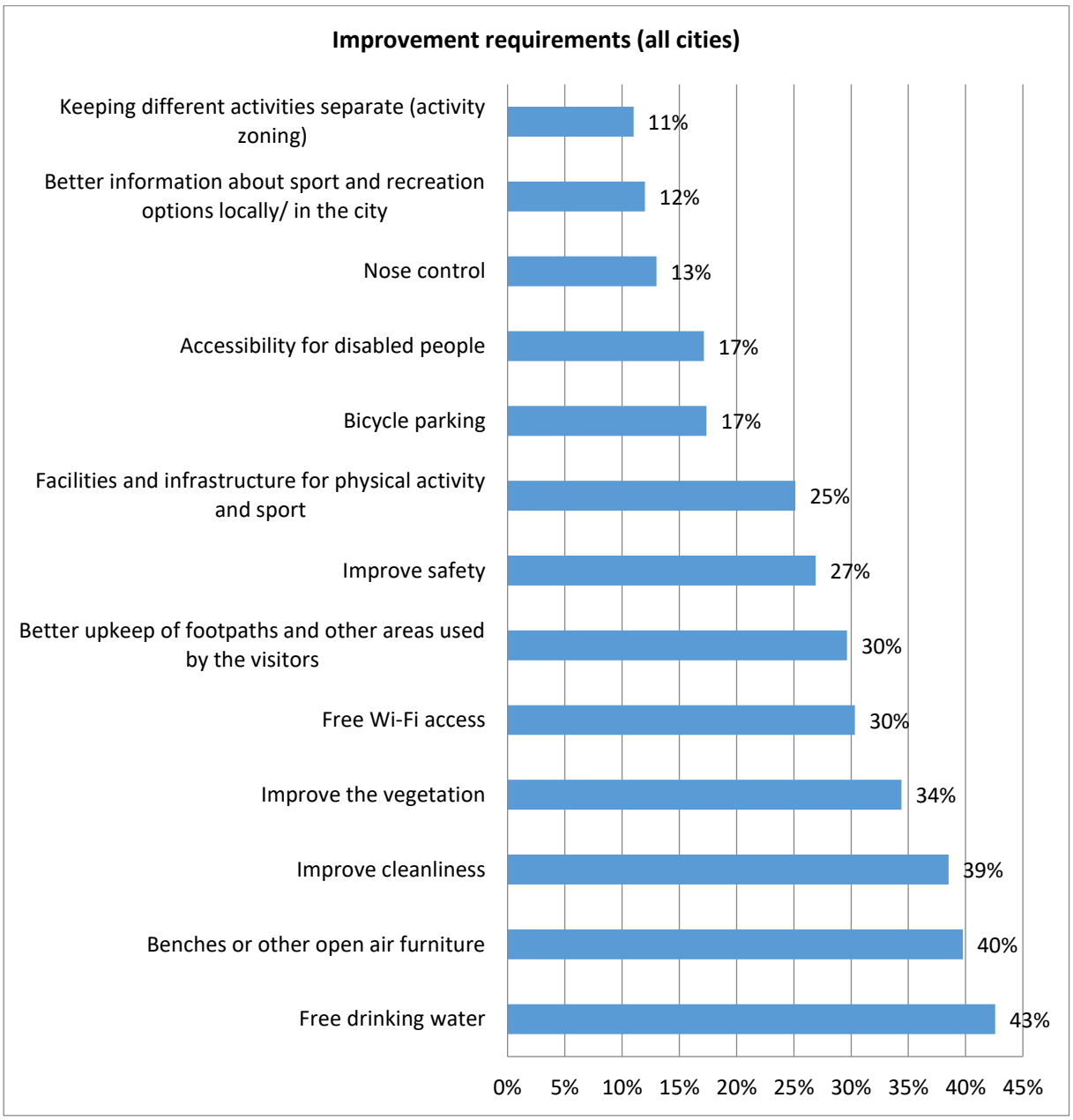
improvement for the four cities ranging from Athens (6,0) to Gyor and Darmstadt (3,5-3,4) to Eindhoven (2,3).

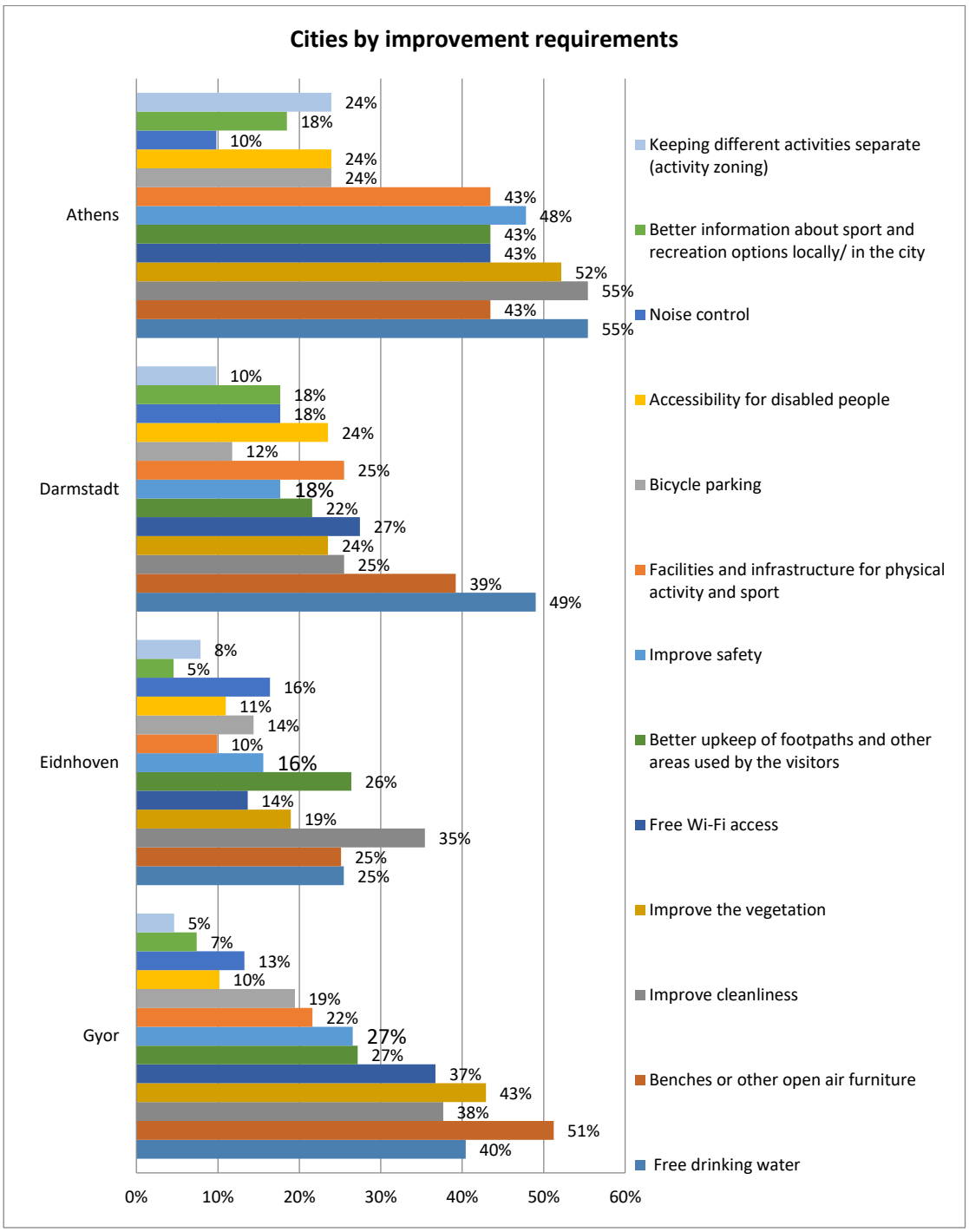


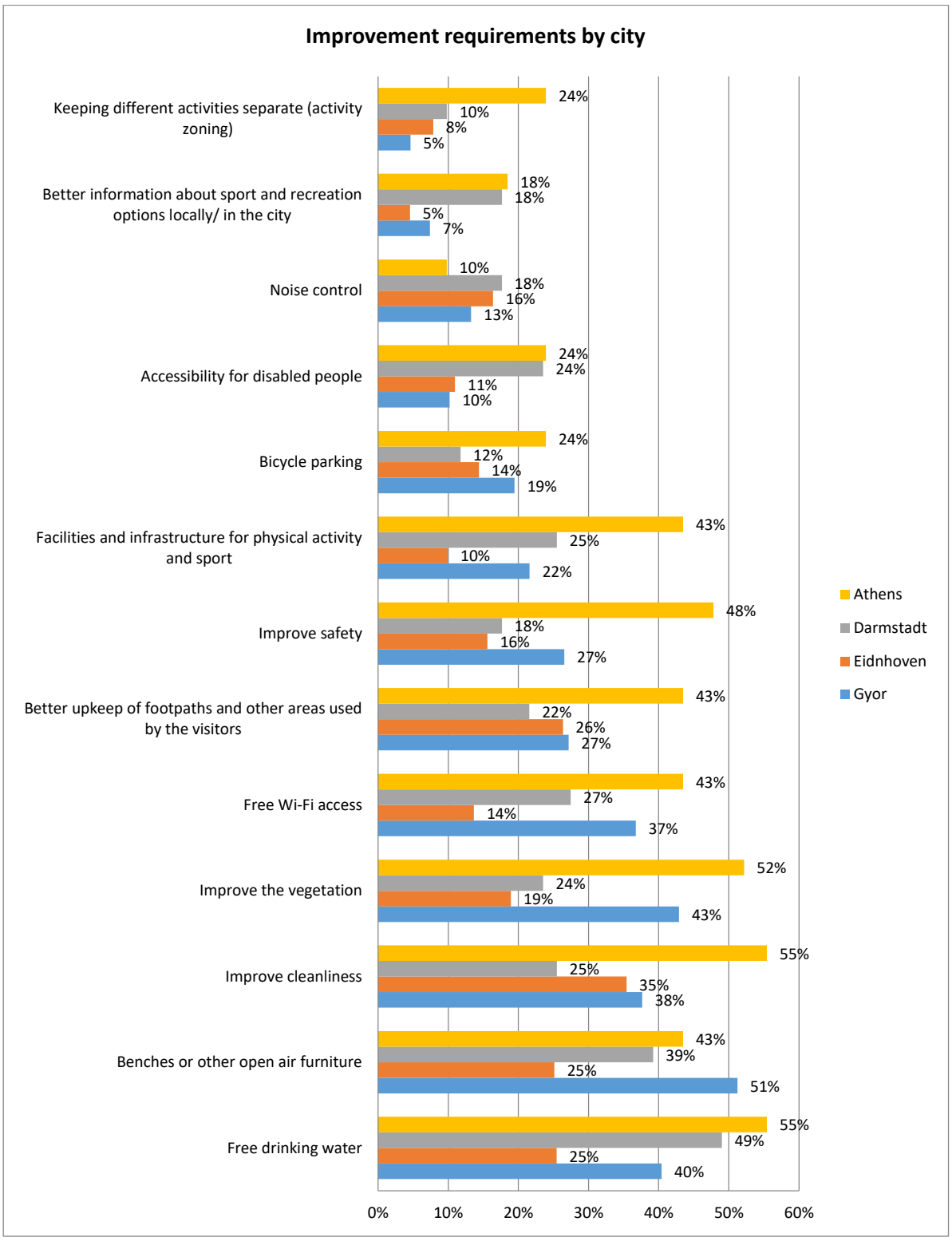
Combining the data on improvement requirements for all four cities provides a rank order of requirements for improvements. Overall four groups of improvements can be identified in order of importance for open space visitors:

- High importance: free drinking water, benches or other open air furniture, improved cleanliness (43%– 39%)
- Medium importance: improve the vegetation, free Wi-Fi access, better upkeep of footpaths and other areas used by the visitors, improve safety, facilities and infrastructure for physical activity and sport(34%-25%)
- Low importance: bicycle parking, accessibility for disabled people, noise control, better information about sport and recreation options locally/in the city, keeping different activities separate (zoning) (17%-11%)

The two graphs that follow present the ranked requirements for improvement overall in the 4 cities and in each city separately. The third graph compares the results of the respondents in each of the 4 cities for every improvement.


Improvement requirements (all cities)
Keeping different activities separate (activity zoning)
11%
Better information about sport and recreation options locally/ in the city
12%
Nose control
13%
Accessibility for disabled people
17%
Bicycle parking
17%
Facilities and infrastructure for physical activity and sport
25%
Improve safety
27%
Better upkeep of footpaths and other areas used by the visitors
30%
Free Wi-Fi access
30%
Improve the vegetation
34%
Improve cleanliness
39%
Benches or other open air furniture
40%
Free drinking water
43%
0%
5%
10%
15%
20%
25%
30%
35%
40%
45%

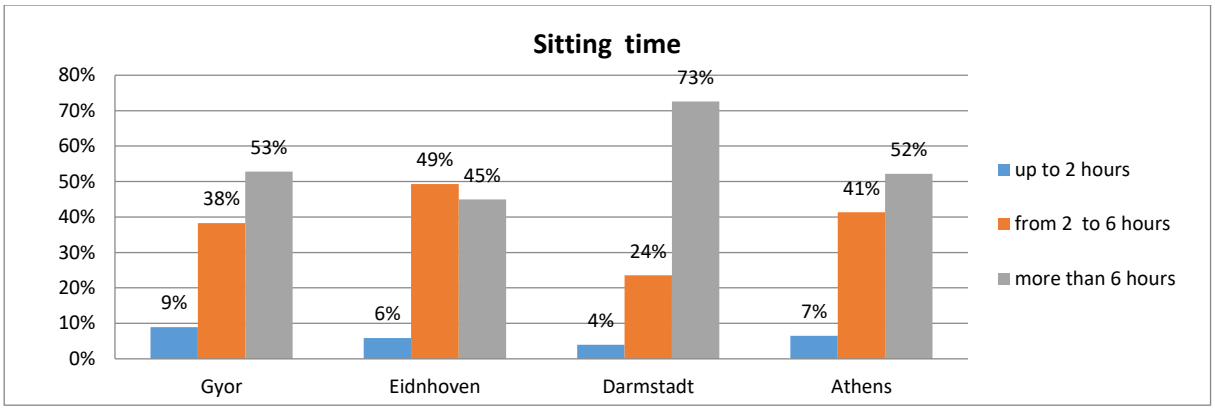

Cities by improvement requirements
Athens
Darmstadt
Eidnhoven
Gyor
24%
18%
10%
24%
24%
43%
48%
43%
43%
52%
55%
43%
55%
10%
18%
18%
24%
12%
25%
18%
22%
27%
24%
25%
39%
49%
8%
5%
16%
11%
14%
10%
16%
26%
14%
19%
35%
25%
25%
5%
7%
13%
10%
19%
22%
27%
27%
37%
43%
38%
51%
40%
0%
10%
20%
30%
40%
50%
60%
Keeping different activities separate (activity zoning)
Better information about sport and recreation options locally/ in the city
Noise control
Accessibility for disabled people
Bicycle parking
Facilities and infrastructure for physical activity and sport
Improve safety
Better upkeep of footpaths and other areas used by the visitors
Free Wi-Fi access
Improve the vegetation
Improve cleanliness
Benches or other open air furniture
Free drinking water


Improvement requirements by city
Keeping different activities separate (activity zoning)
24%
10%
8%
5%
Better information about sport and recreation options locally/ in the city
18%
18%
5%
7%
Noise control
10%
18%
16%
13%
Accessibility for disabled people
24%
24%
11%
10%
Bicycle parking
24%
12%
14%
19%
Facilities and infrastructure for physical activity and sport
43%
25%
10%
22%
Improve safety
48%
18%
16%
27%
Better upkeep of footpaths and other areas used by the visitors
43%
22%
26%
27%
Free Wi-Fi access
43%
27%
14%
37%
Improve the vegetation
52%
24%
19%
43%
Improve cleanliness
55%
25%
35%
38%
Benches or other open air furniture
43%
39%
25%
51%
Free drinking water
55%
49%
25%
40%
0%
10%
20%
30%
40%
50%
60%
Athens
Darmstadt
Eidnhoven
Gyor

3.4 Life style

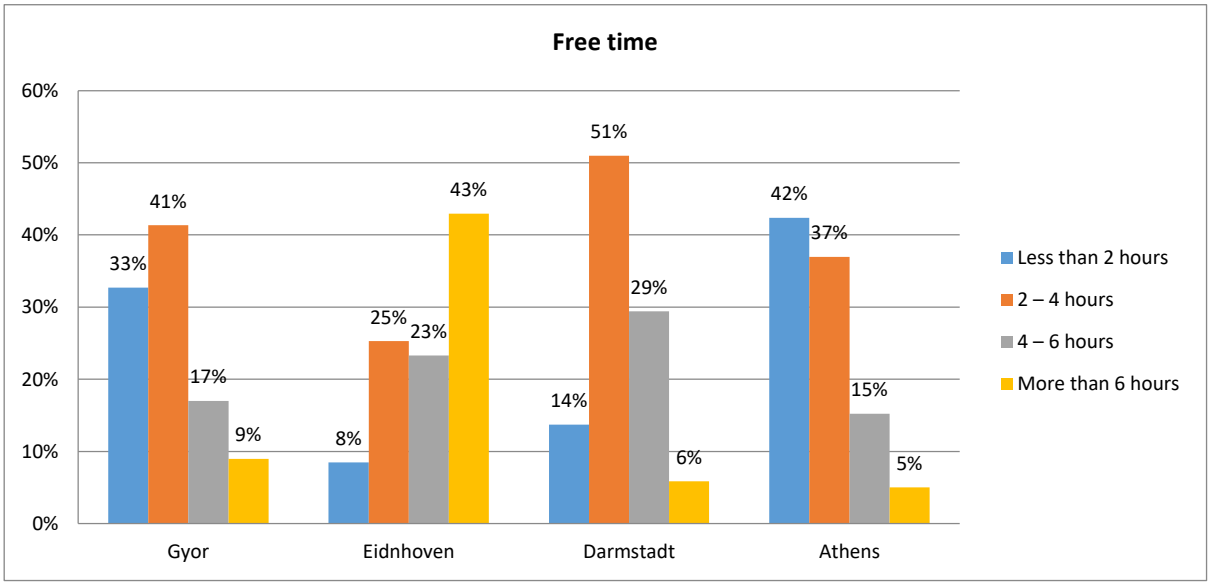
Sitting time

Large groups of open space users report in the four cities that their sitting time is more than 6 hours per day (from 75% in Darmstadt to 45% in Eindhoven); while less than 10% report sitting time of up to 2 hours. Those who reported sitting time between 2 and 6 hours per day constitute a significant minority in all cities (ranging from 24% in Darmstadt to 41% in Athens) except Eindhoven, where they form the largest group (49%).



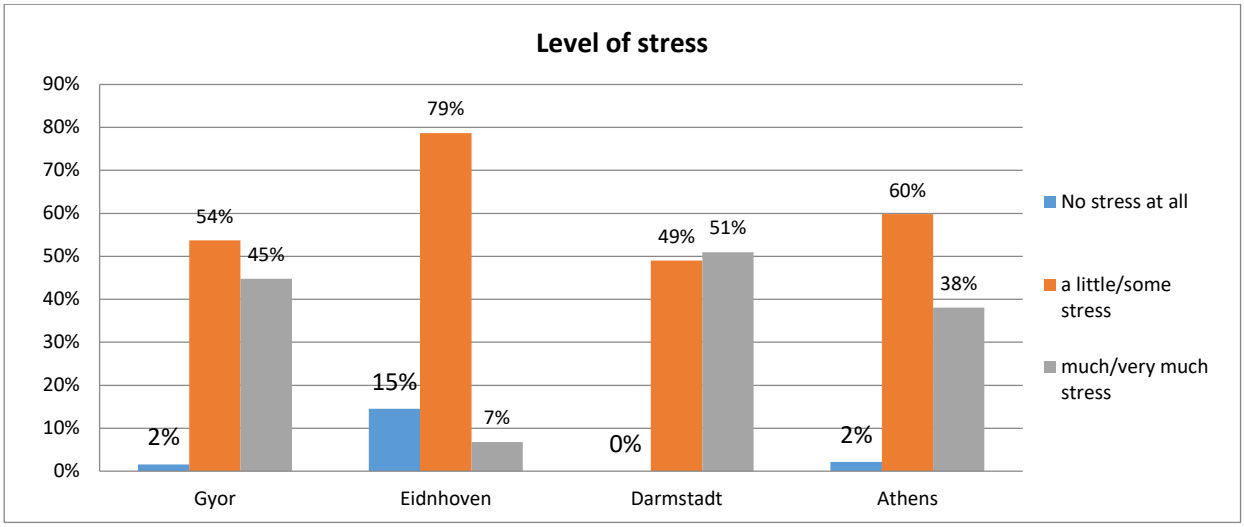
Free time

There are marked differences between the four cities, so that a pattern cannot be identified. Large groups of respondents (ranging from 25% to 51%) report free time from 2 to 4 hours per day and a smaller group report free time from 4 to 6 hours per day. Longer than 6 hours and shorter than 2 hours free time is reported very variably in the four cities.



Stress

In all four cities the majority of respondents report a little/some stress (ranging from 49% in Darmstadt to 79% in Eindhoven). Very small groups of respondents report no stress at all, while a lot of stress is reported by substantial groups (ranging from 38% in Athens to 51% in Darmstadt) except Eindhoven, where much stress is reported only by a small minority (7%).

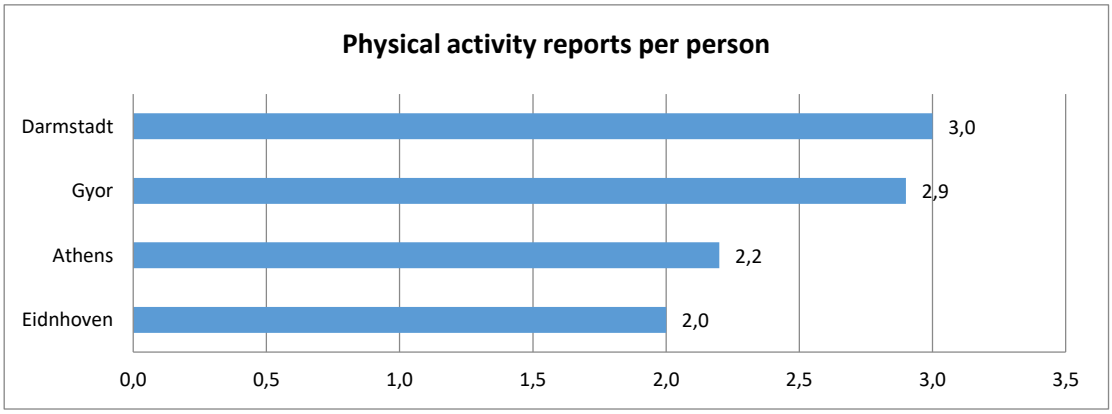


Physical activity

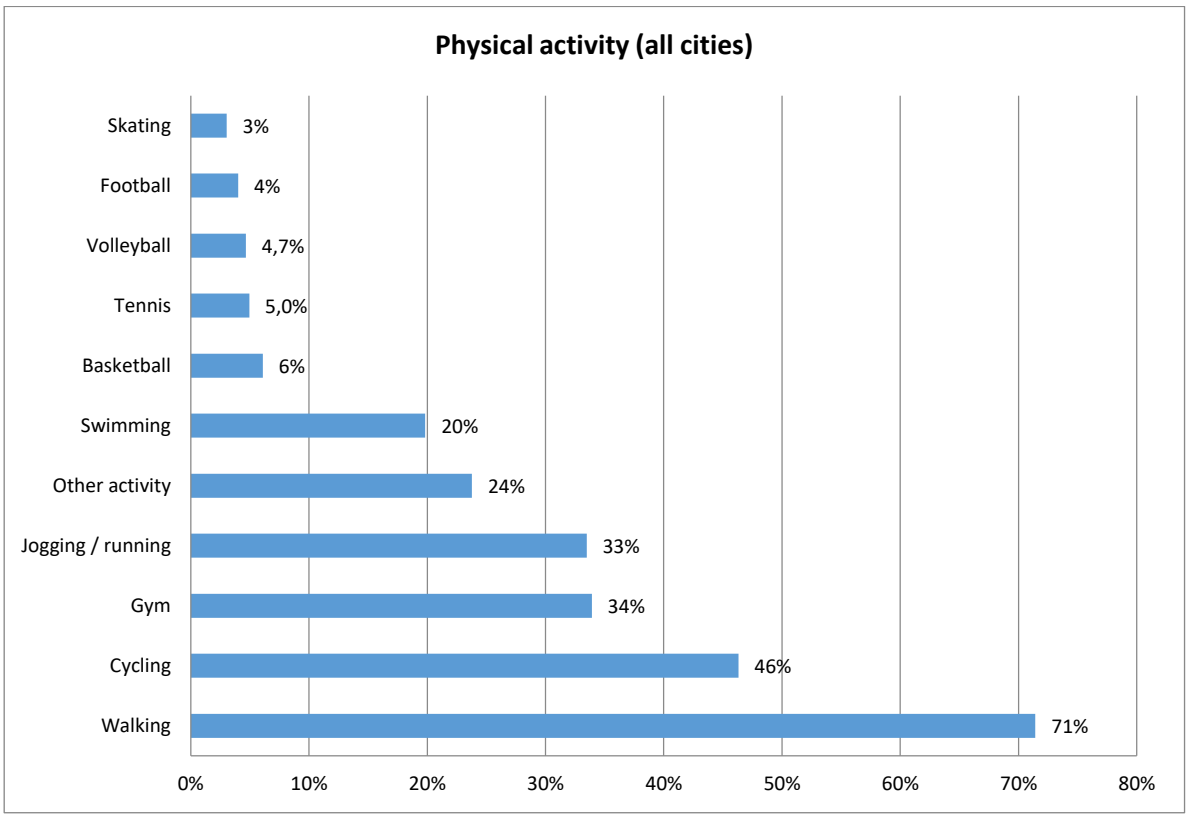
Respondents were asked to report any physical activity they may have undertaken during the past month from a list of 12 indoor and outdoor activity options.

In Gyor and Darmstadt virtually all respondents reported that they undertake physical activities, with the exception of Athens where a substantial proportion (15%) reported that they do not undertake any physical activity.

Combining the number of activities undertaken per person for each city provides a rank order for the four cities as follows: Darmstadt (3,0), Gyor (2,9), Athens (2,2), Eindhoven (2,0).



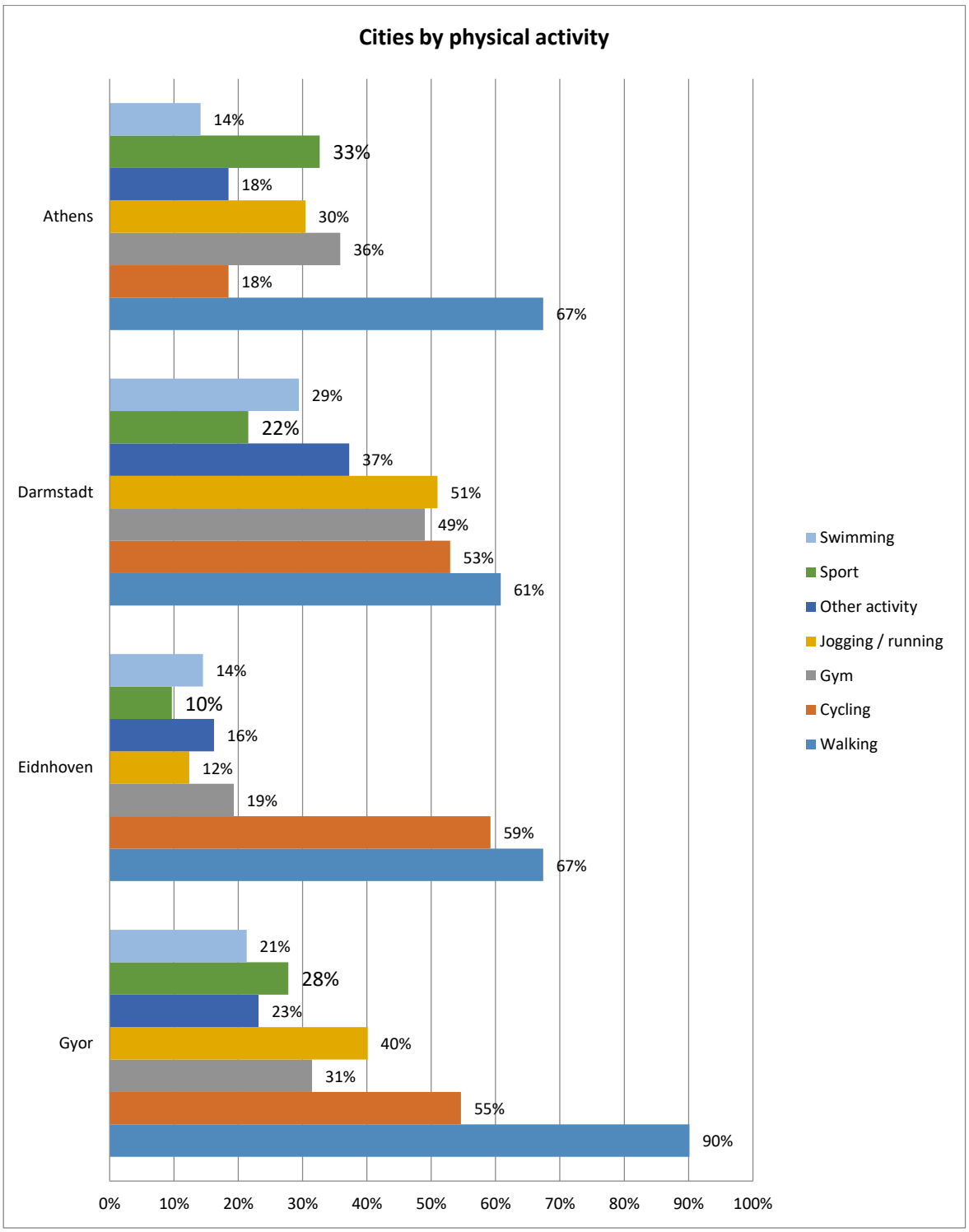
Combining the data on physical activities for all four cities provides a rank order of the popularity of the activities reported, from walking (71%) down to skating (3%).

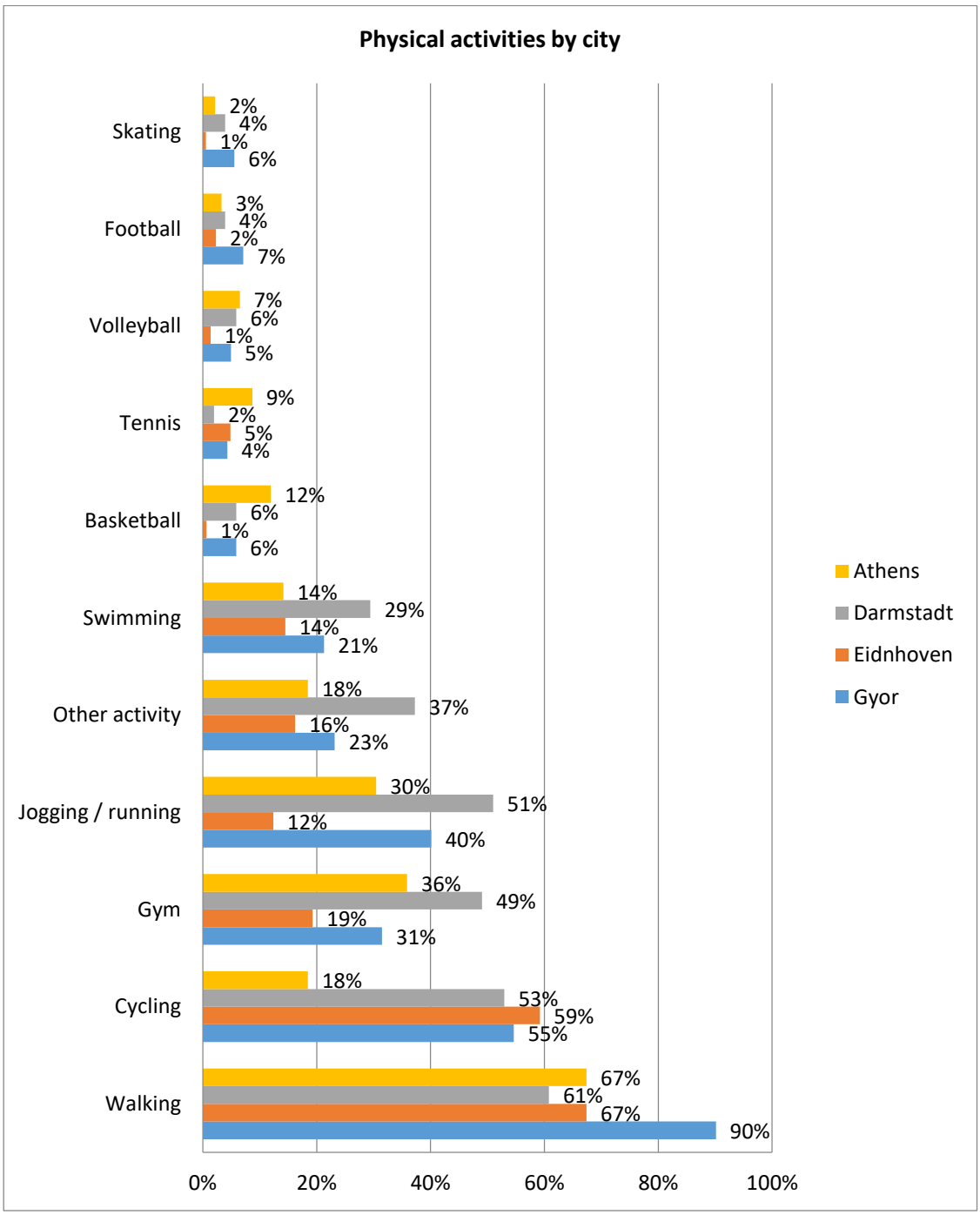


If we examine the popularity of physical activities in each city we note that:

- Walking is the most popular activity in all four cities, ranging from 90% in Gyor to 67% in Eindhoven and Athens and 61% in Darmstadt.
- Cycling is the second most popular activity in Gyor (55%), Eindhoven (59%) and Darmstadt (61%).
- Gym and jogging/running are substantially popular in Darmstadt (49-51%), Gyor (31-40%) and Athens (18-36%)

The popularity of the physical activities presented above in the cumulative analysis for all cities is better explained if we compare the four cities' results separately, in the graphs below.

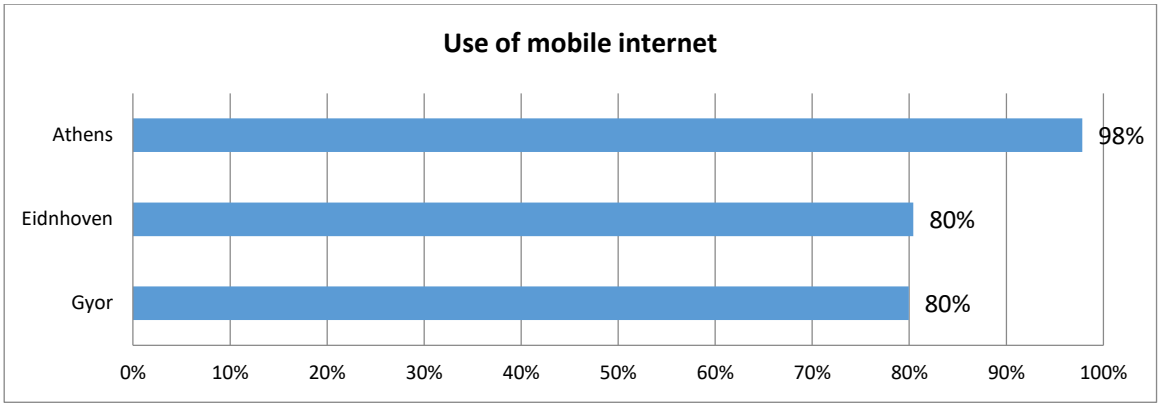

Cities by physical activity
Athens
14%
33%
18%
30%
36%
18%
67%
Darmstadt
29%
22%
37%
51%
49%
53%
61%
Eidnhoven
14%
10%
16%
12%
19%
59%
67%
Gyor
21%
28%
23%
40%
31%
55%
90%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Swimming
Sport
Other activity
Jogging / running
Gym
Cycling
Walking


Physical activities by city
Skating
2%
4%
1%
6%
Football
3%
4%
2%
7%
Volleyball
7%
6%
1%
5%
Tennis
9%
2%
5%
4%
Basketball
12%
6%
1%
6%
Swimming
14%
29%
14%
21%
Other activity
18%
37%
16%
23%
Jogging / running
30%
51%
12%
40%
Gym
36%
49%
19%
31%
Cycling
18%
53%
59%
55%
Walking
67%
61%
67%
90%
0%
20%
40%
60%
80%
100%
Athens
Darmstadt
Eidnhoven
Gyor

Digital technology: mobile internet

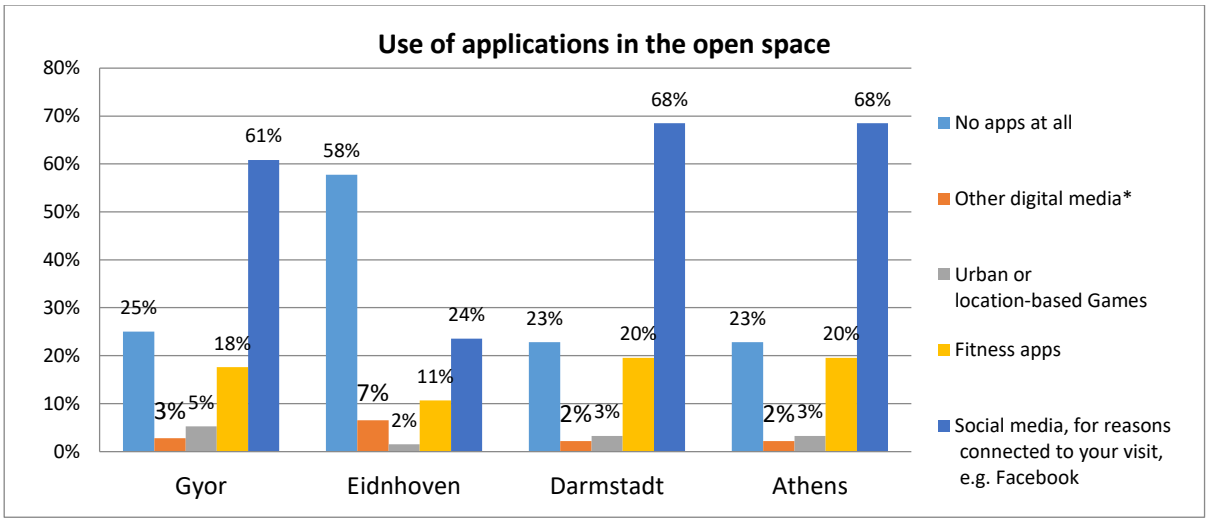
Mobile internet is used in both surveys by a very large percentage of open space users:

In the online survey Athens leads (98%), followed by Eindhoven and Gyor (80%). There is no data available for Darmstadt.



Digital technology: use of applications

Social media represent the most widely used applications by open space users: in Athens and Darmstadt 68%, in Gyor 61%. It is notable that substantial minorities in the same cities do not use apps at all while visiting open spaces (23-25%). Eindhoven presents a completely different picture: social media apps are used by a small proportion of open space users, while a very large proportion do not use apps at all while visiting open spaces. Finally fitness apps appear to have some potential, being used by significant minorities (around 20% in Athens, Darmstadt and Gyor, 11% in Eindhoven) .



4. Comparing the two surveys

4.1 User profile

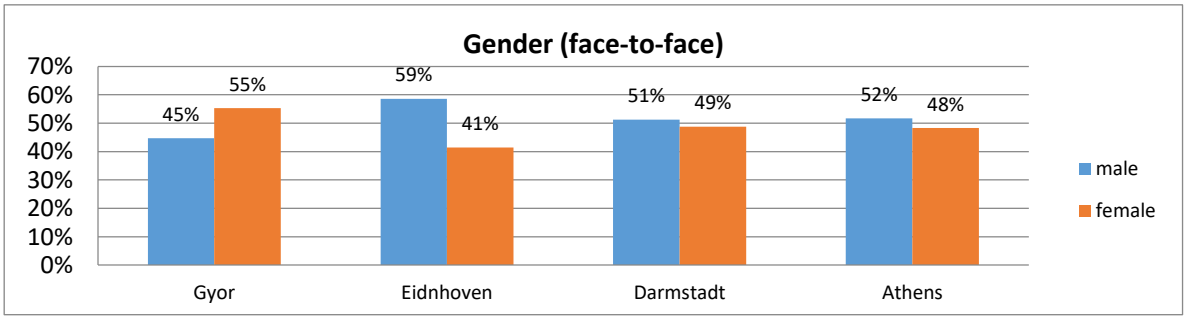
Some basic differences should be noted between the two surveys, which help to explain their findings. One of these is that the field survey respondents were randomly selected and interviewed while visiting an open space and their responses reflected directly their experience of the specific open space they were visiting. On the contrary, online respondents were self-selected through the internet, responding to open invitations in websites and portals, and were asked to choose the open space they visited most often: this led to sub-samples of same-open-space-users that are very small, and cannot be easily compared.

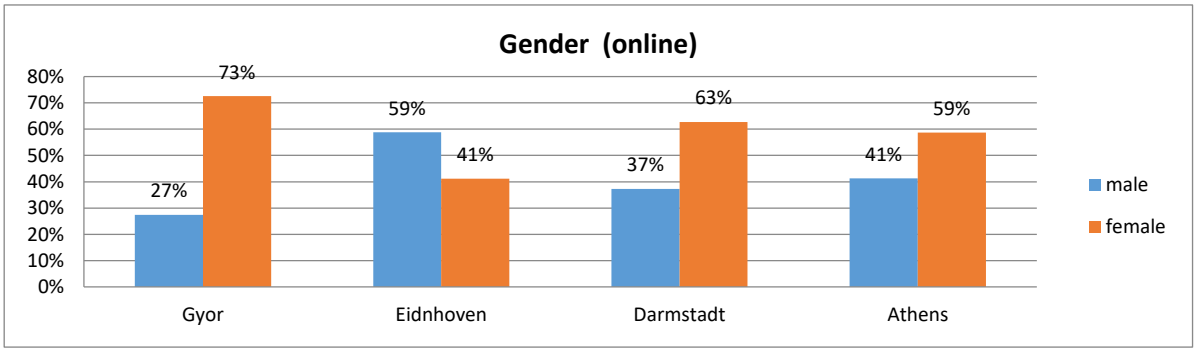
Moreover, the demographic profile of online respondents, being self-selected, cannot be considered as representative of open space users, and presents marked differences from the profile of face-to-face respondents. Thus, the findings of the field surveys can be considered more representative than those of the online surveys of open space users and their behaviour. However, it should be noted that the online survey findings regarding user behaviour and perceived benefits are very close to those of face-to-face surveys, allowing certain conclusions to be drawn with a fair degree of confidence. Furthermore, the data of both surveys were subjected to further analysis based on correlations (Pearson's r), aiming to explore whether user profile influences behaviour in open space usage.

Below, a detailed comparison between the two surveys is undertaken. To facilitate the comparison, the values of most variables have been amalgameted into fewer, wider groups, so that a simpler picture of the two samples can be achieved.

Gender

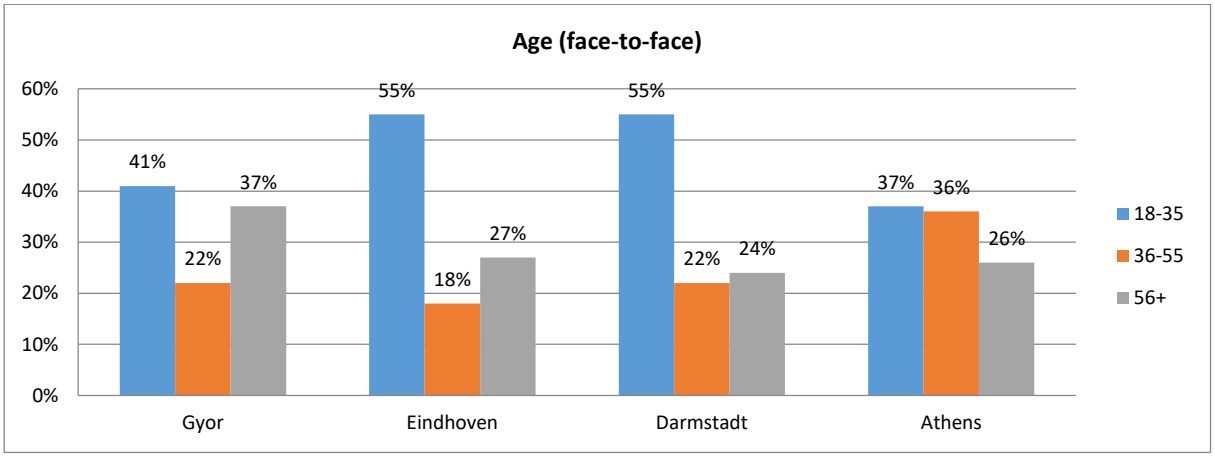
The face-to-face sample is more or less balanced around the 50% mark in all four cities; in contrast, in the online survey the sample is more or less unbalanced in each city. The exception is Eindhoven, where the two surveys produced identical results for gender.

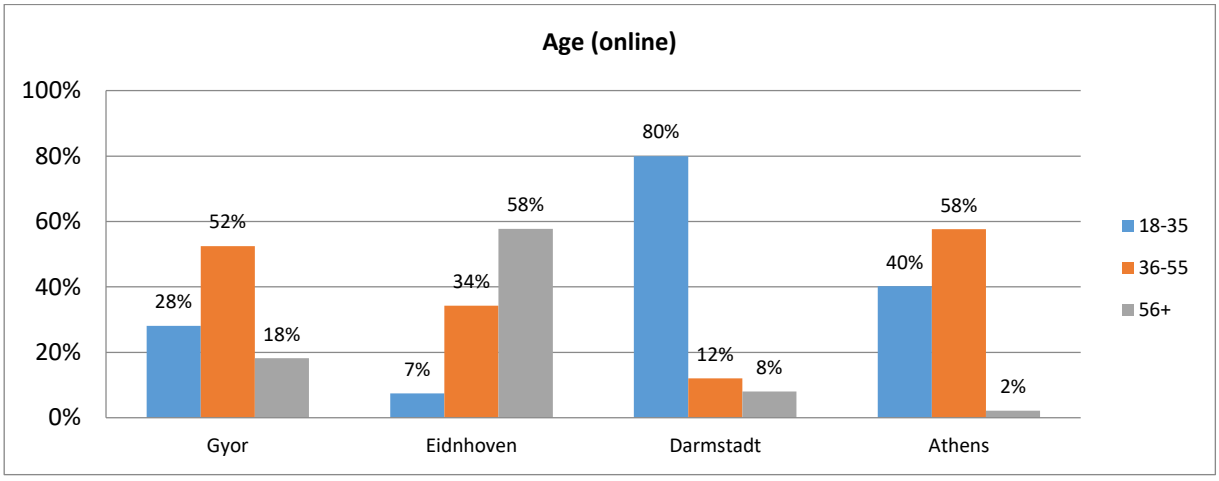




Age

There are marked differences between the age profiles of the two surveys. In the face-to face survey the largest group of open space users in all four cities belongs to the 18-35 years age bracket, while in Eindhoven and Darmstadt this group constitutes the majority of users. The older group of users (56+) has also a significant presence in all cities, around the one-in-four mark. In the online survey the younger group is not predominant, with the exception of Darmstadt, while in the other cities the presence of this group in the sample varies widely. The other two age groups, i.e. the 36-55 years and the 56+ also have a varied presence in the samples of all cities, so that we cannot identify any patterns of open space use in relation to age, as we can do in the face-to-face survey.



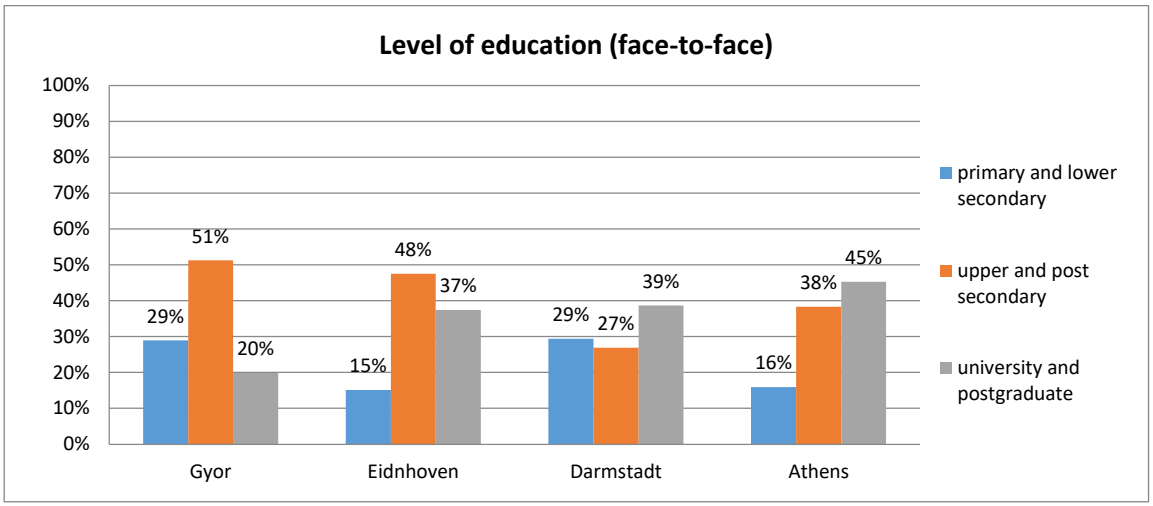


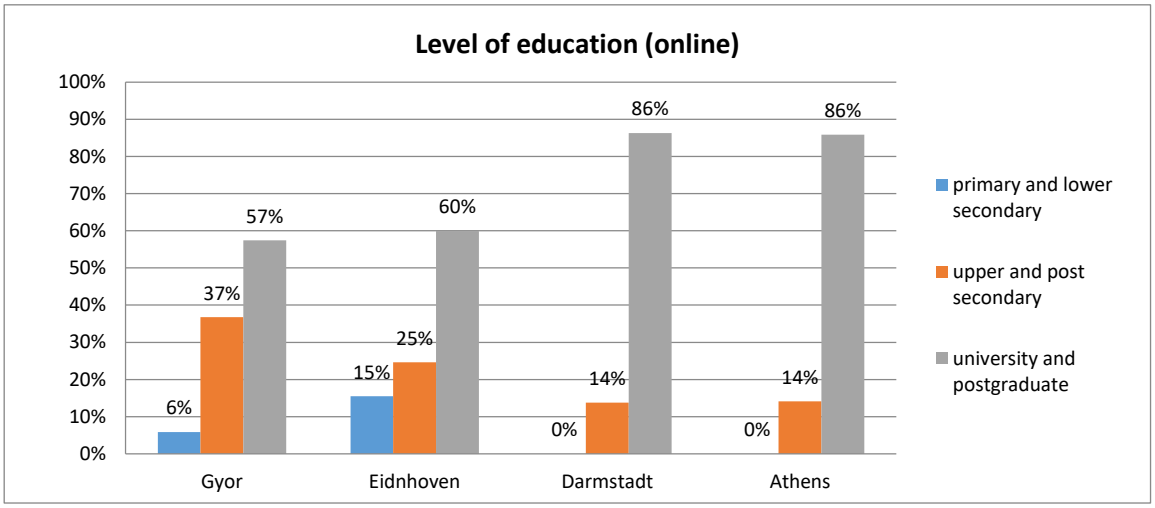
Education

The sample of the face-to-face survey is relatively balanced between different education levels (primary and lower secondary, upper and post-secondary, university and post graduate) none of which exceeds the 50% mark in any of the four cities.

In contrast, the online survey sample is dominated by university graduates and postgraduates, ranging from 57%-60% in Gyor and Eindhoven further up to 86% in Darmstadt and Athens. Due to the fact that the online sample has been self-selected, as

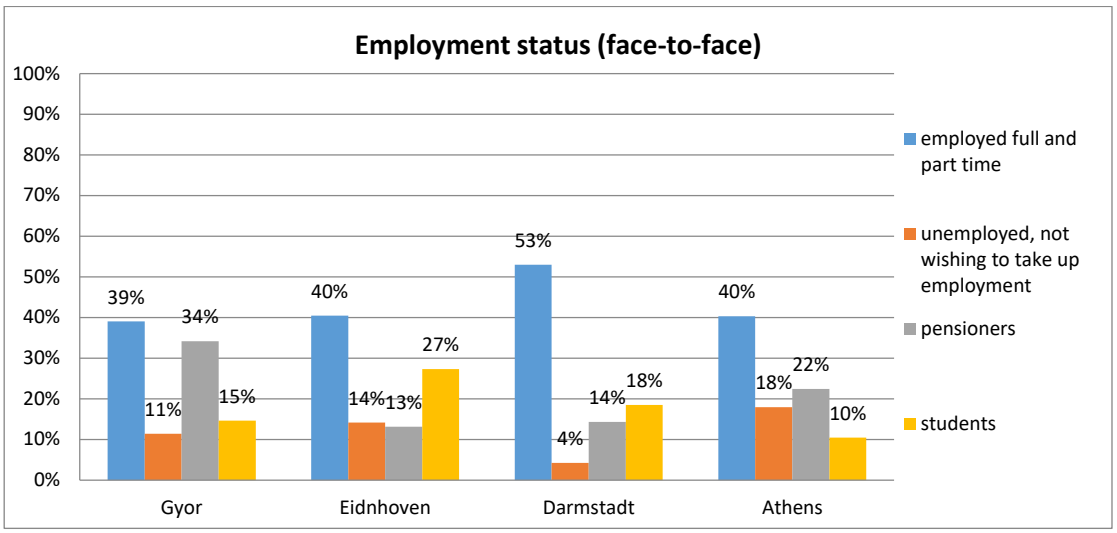
already mentioned, it can be expected that mostly people with higher education were motivated to take part in the research.

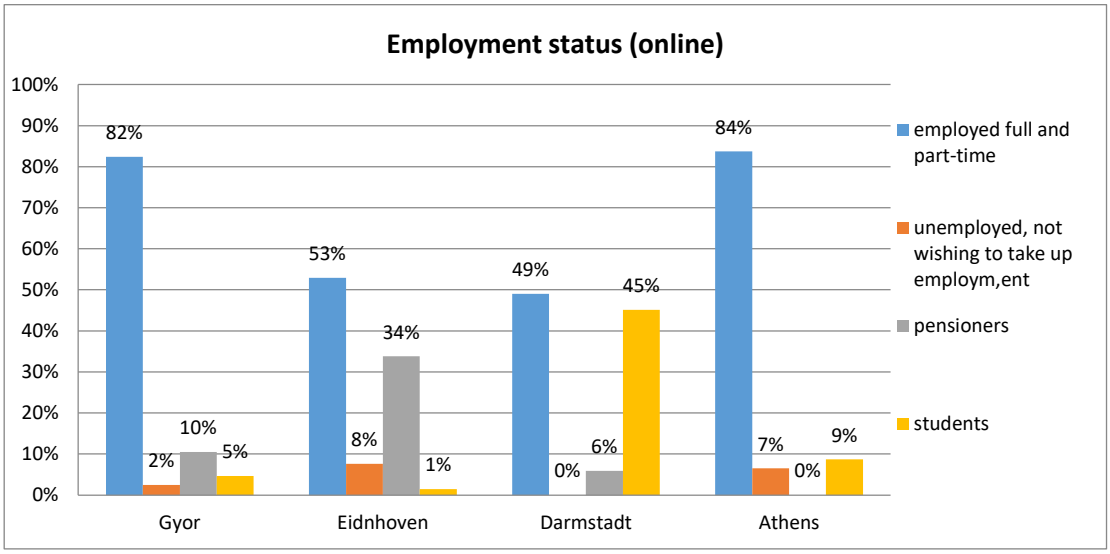




Employment

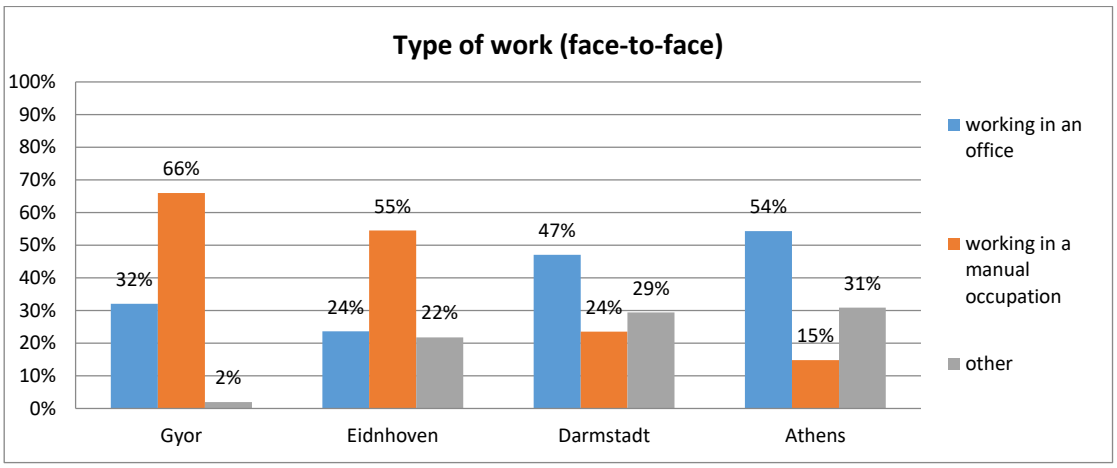
In the sample of the online survey the group of employed people (full and part time) dominates, exceeding the 80% mark in Gyor and Eindhoven, being around 50% in the other two cities. In the face-to-face survey a more balanced distribution between employed and other types of users was present.

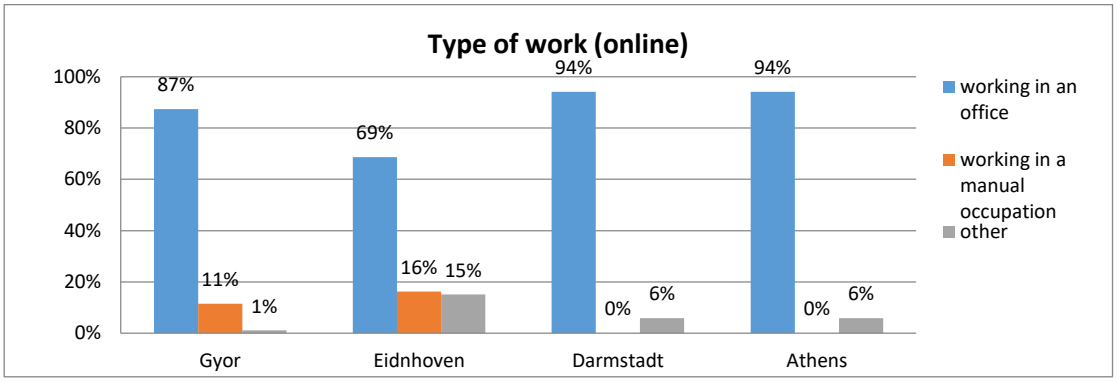




Type of work

Big differences have been observed between the samples of the face-to-face and online surveys regarding this variable. For example, in the sample of the online survey the group of people working in an office ranges between 69% in Eindhoven to 87%-94% in the other three cities, whilst in the face-to-face survey this group ranges between 24%-54%.





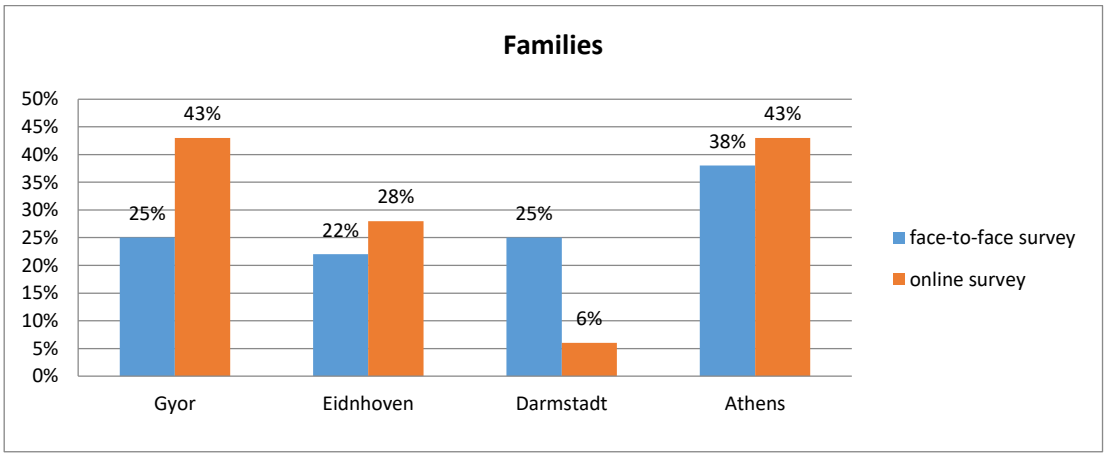
Household situation

The household situation choices have been combined in two groups, i.e.

a. families with children i.e. living with a partner and children, living with children only and

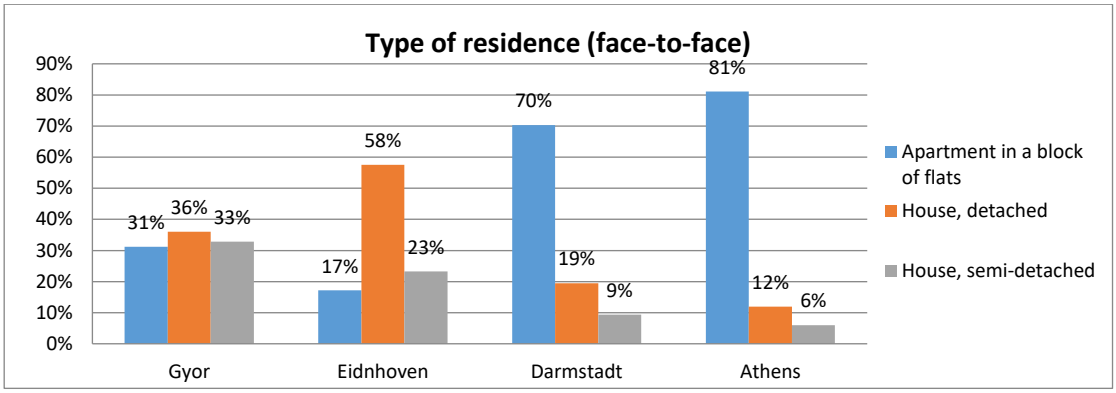
b. adults only i.e. living alone, with a partner but no children, living with own parents/guardians although of age, living with other adults).

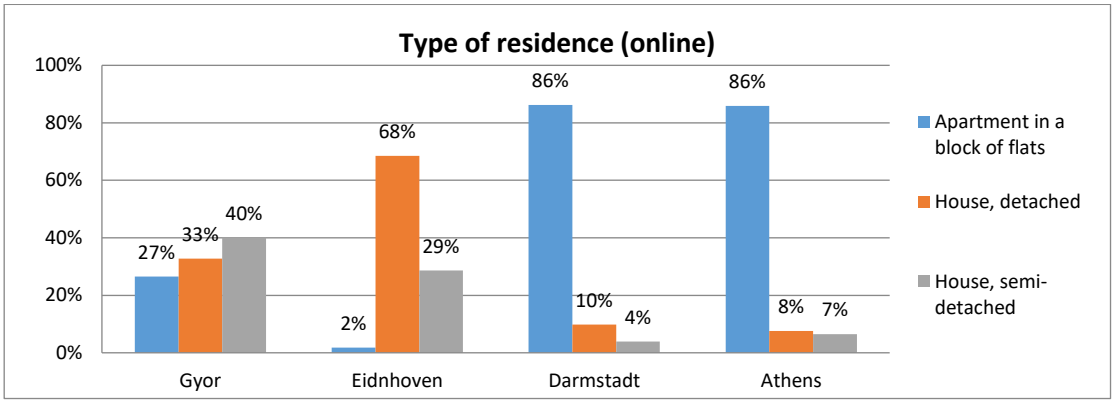
The comparison indicates marked differences between the two surveys, as can be seen in the graph below.



Type of residence

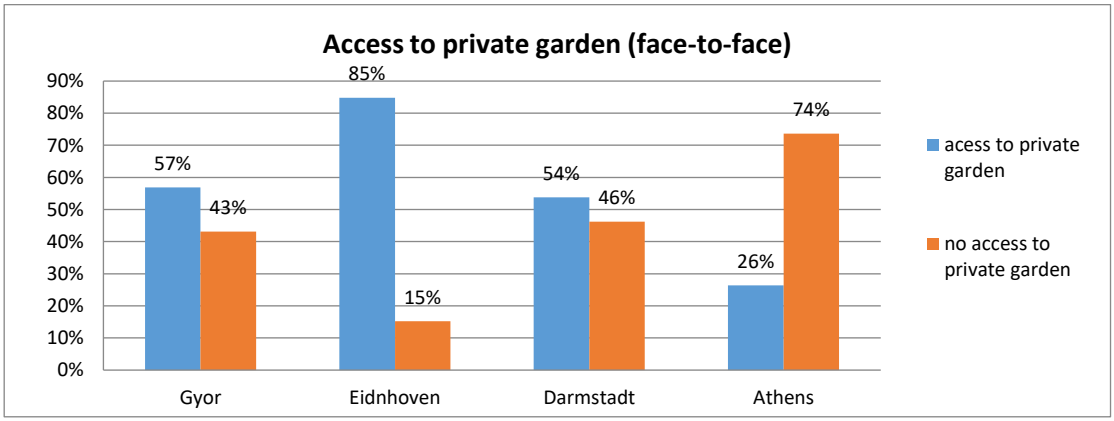
There are minor differences in the residence profiles of open space users who took part in the two surveys, as they have been reported in the four cities. As already mentioned in the face-to-face survey chapter, the type of residence reported by respondents reflects the prevailing housing situation of the city and the neighbourhood they originate from.

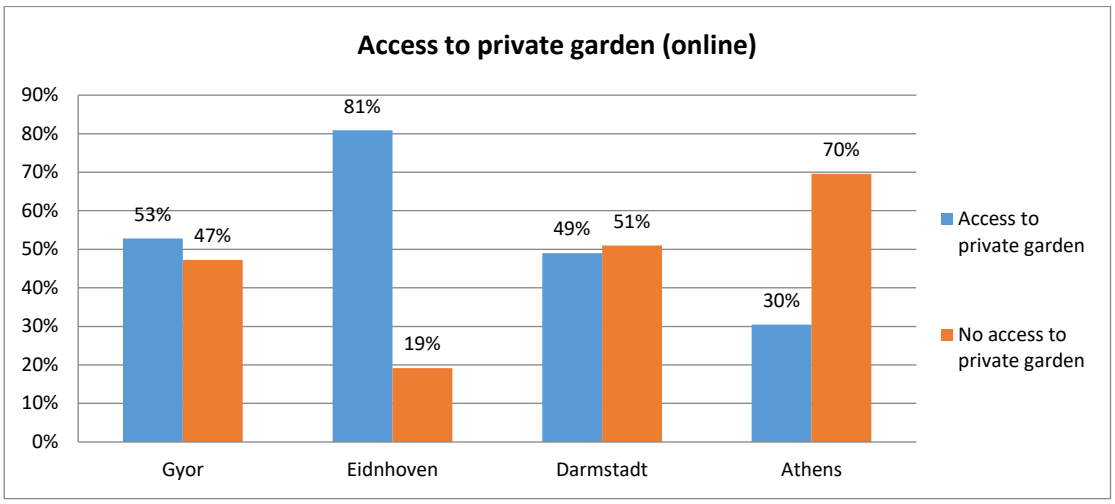




Access to private garden

As in the case of type of residence, there are marked differences regarding access to a private garden between the cities but only minor differences between the face-to-face and the online survey for each city.

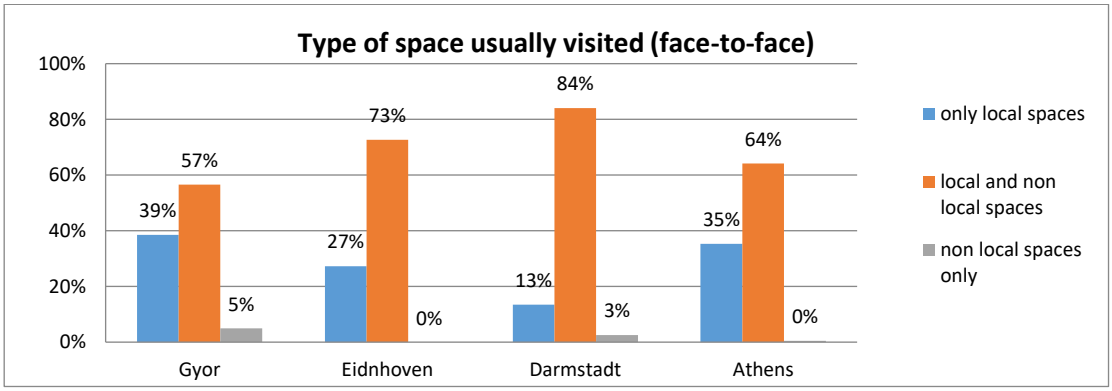


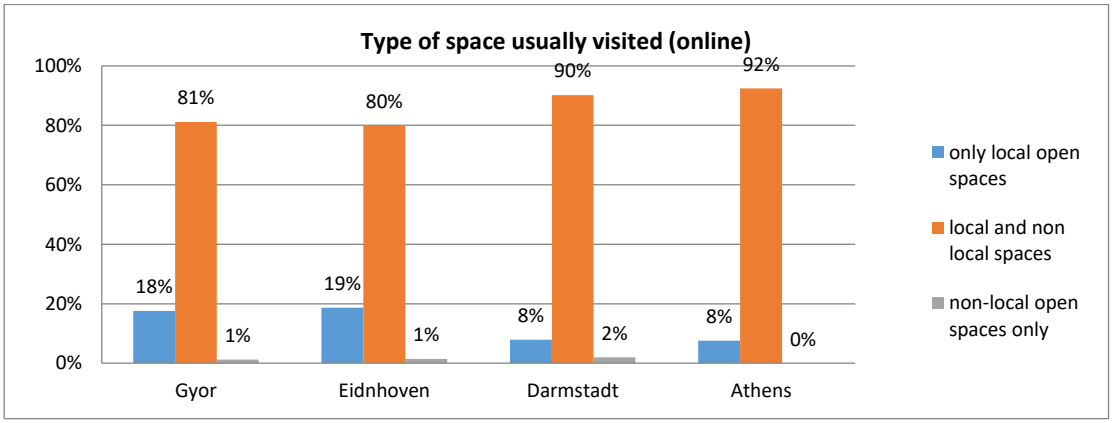


4.2 Patterns of behaviour/use of urban space

Types of open spaces visited

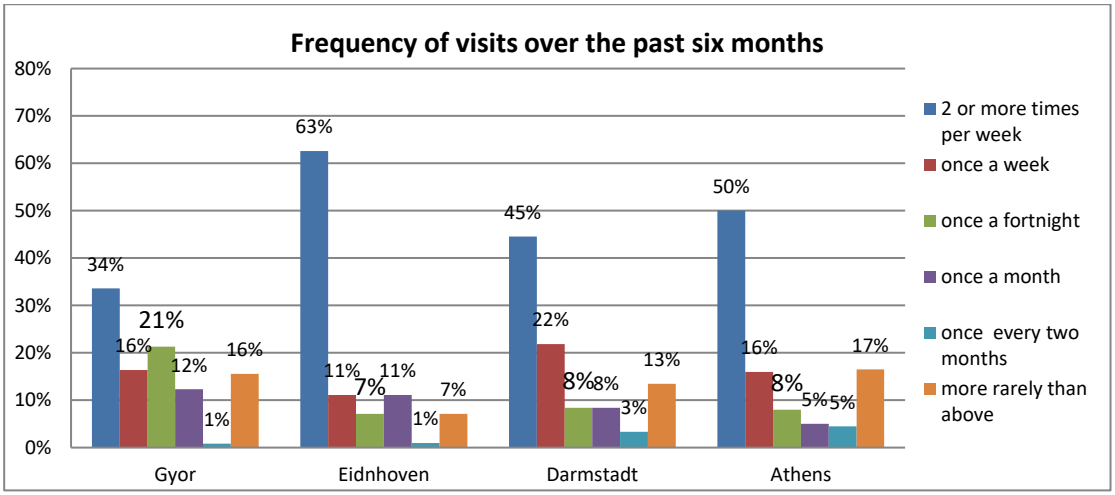
In both surveys, the majority of open space users choose to visit both local and non- local spaces, although with a stronger propensity in the case of the online survey (ranging from 81% to 92%) compared to the face-to-face survey (ranging from 57% to 84%). In all cities, the online respondents appear to be less likely to restrict their visits to local open spaces only.

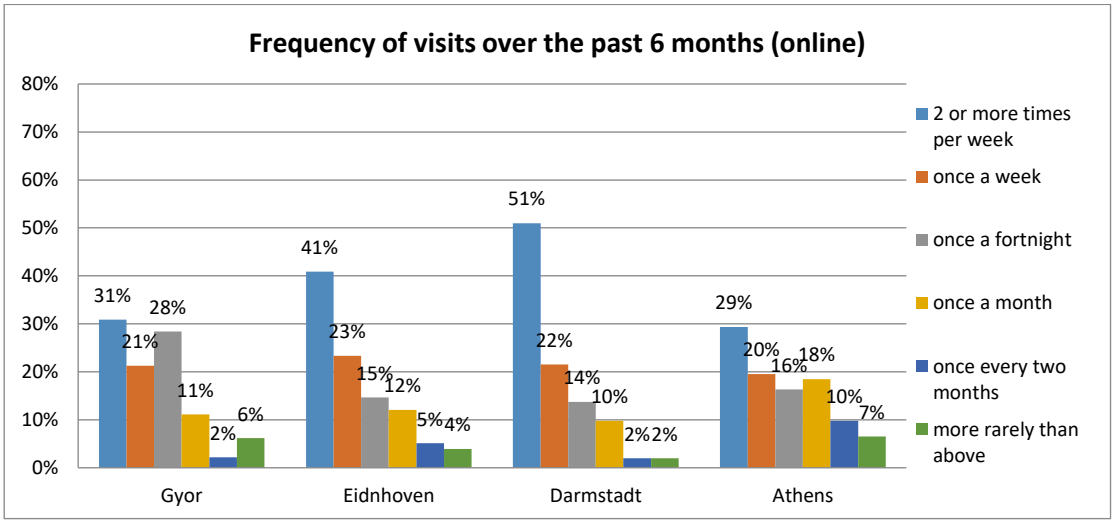




Frequency of visits

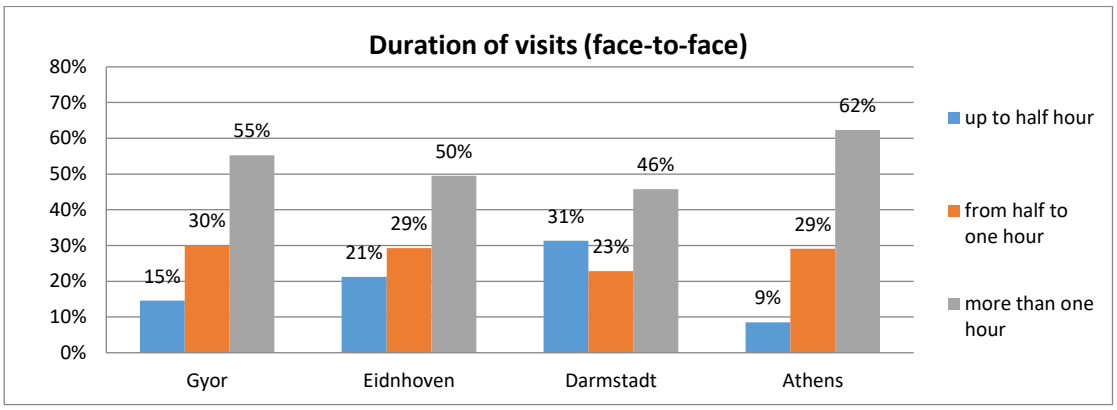
In both surveys visiting open spaces 2 or more times per week is the preferred option, but with different intensity. The differences however are not remarkable: in the face-to-face survey, preferences for this option range from 63% to 34%, while in the online survey they range from 51% to 29% across the four cities.

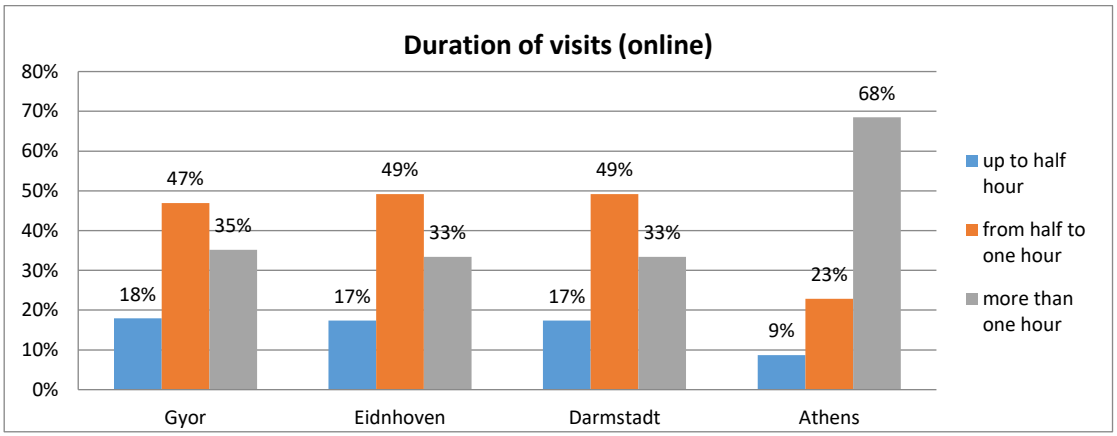




Duration of visits

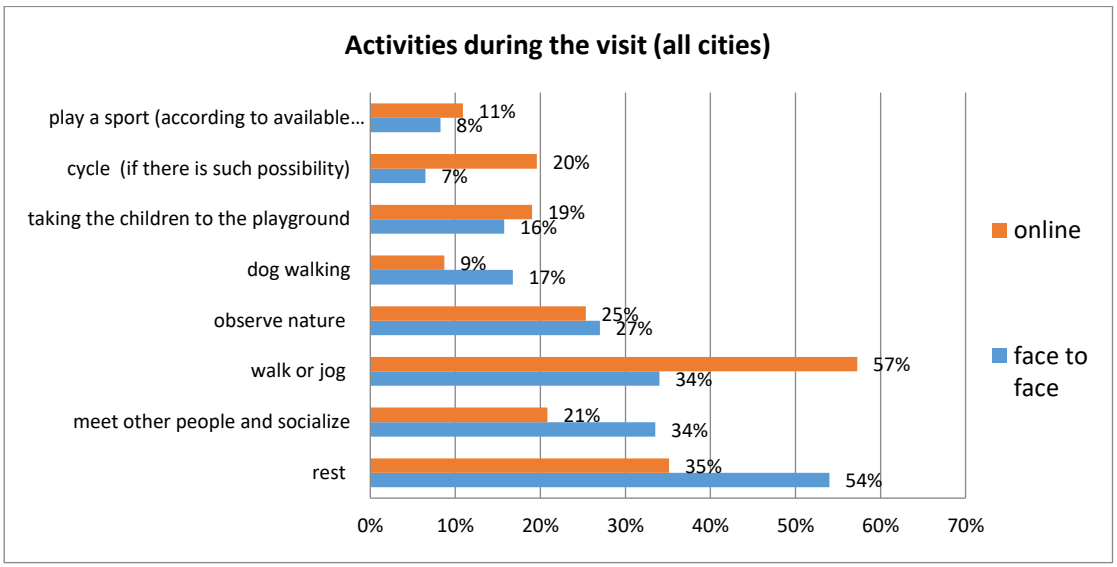
There are marked differences between the two surveys. In the face-to-face survey, the majority of visitors spend more than an hour in the open space, while in the online survey, the majority of visitors (about 50%) spend between half to one hour in the open space, except in Athens where the same trend as in the face-to-face survey seems to predominate.





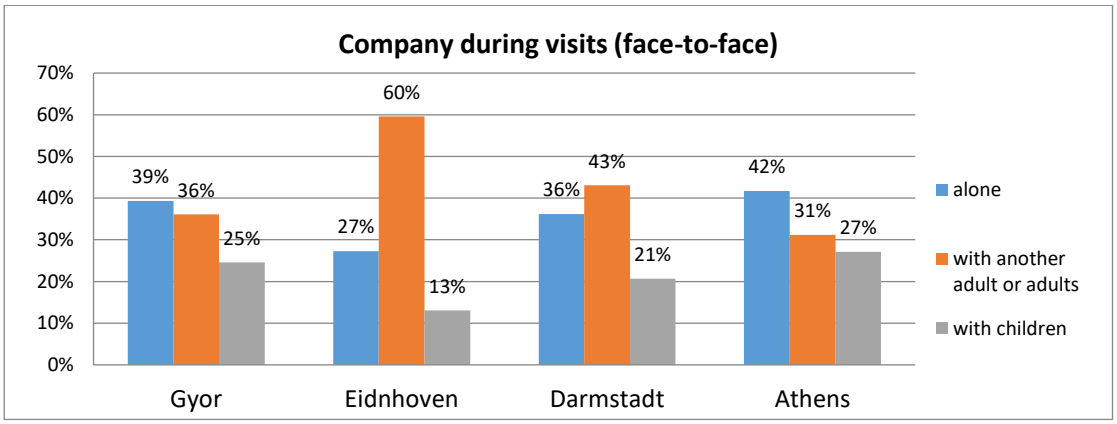
Activities during visit

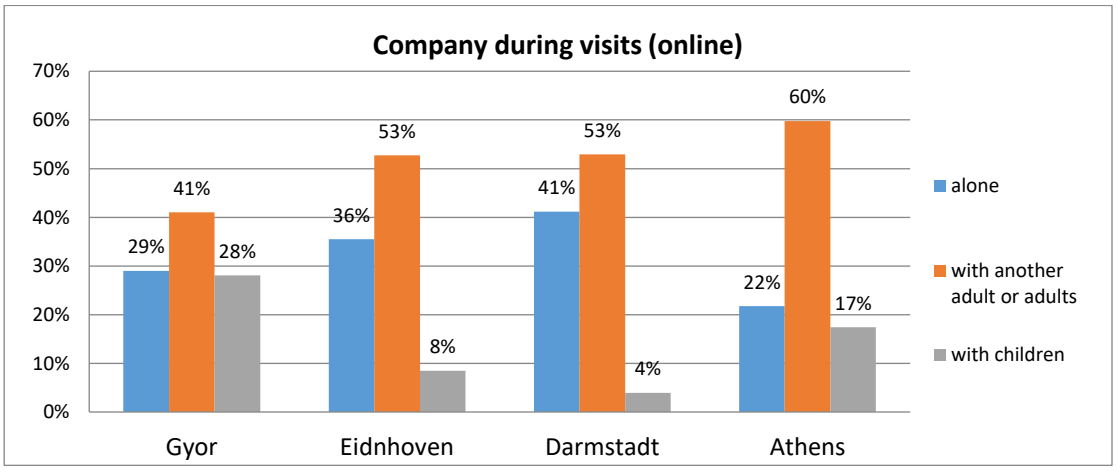
The distinguishing characteristic of the online survey respondents is that they appear to be more active than the face-to-face respondents, declaring higher participation rates in such activities as walking or jogging, cycling, playing a sport or dog walking. Face-to-face respondents prefer to rest in an open space, meet other people and socialise and observe nature in higher percentages compared to the online respondents.



Company during visits

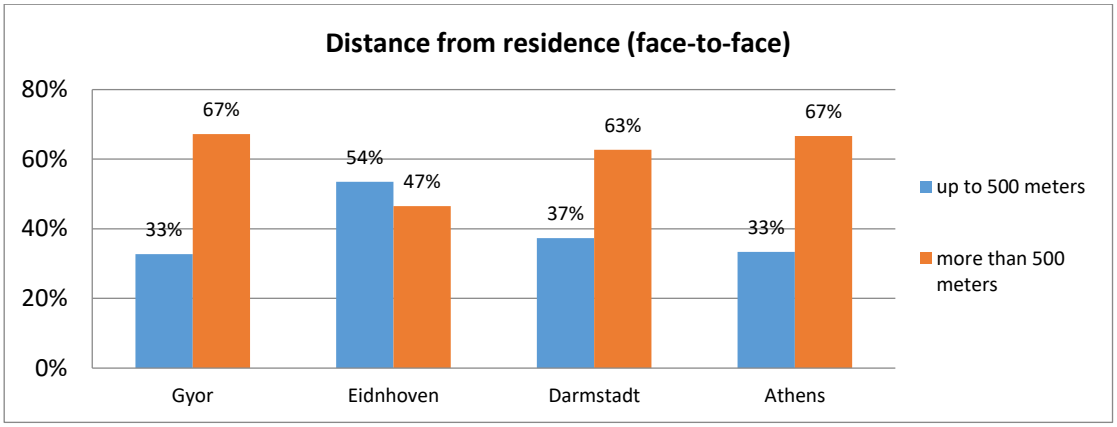
A similar trend is evident in the two surveys for Eindhoven and Darmstadt, but not for Gyor and Athens. In the online survey, the majority of respondents in all cities are accompanied in their visits by one or more adults, while very small minorities are accompanied by children. In the face-to-face survey, Gyor and Athens show a different trend (where visiting alone appears to predominate), while the presence of children is much higher that in the online survey.

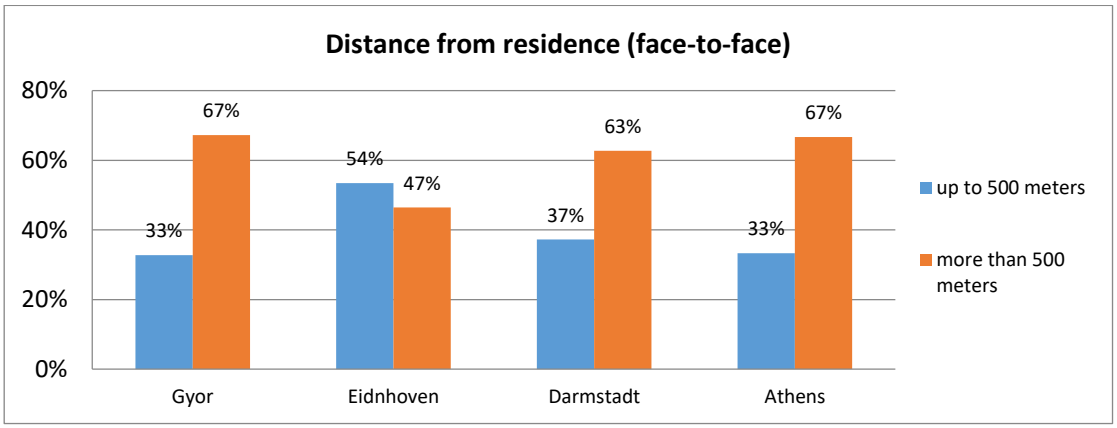




Access to open spaces

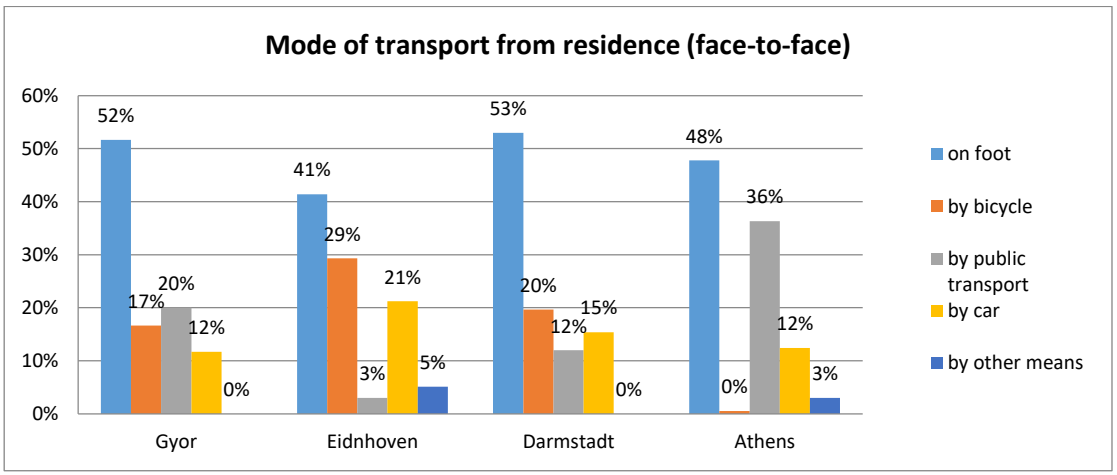
There are no marked differences between the two surveys, as similar trends appear to predominate in the four cities. For example, in both surveys, in Gyor, Darmstadt and Athens the majority of open space users tend to live more than 500 meters away from their preferred open space.

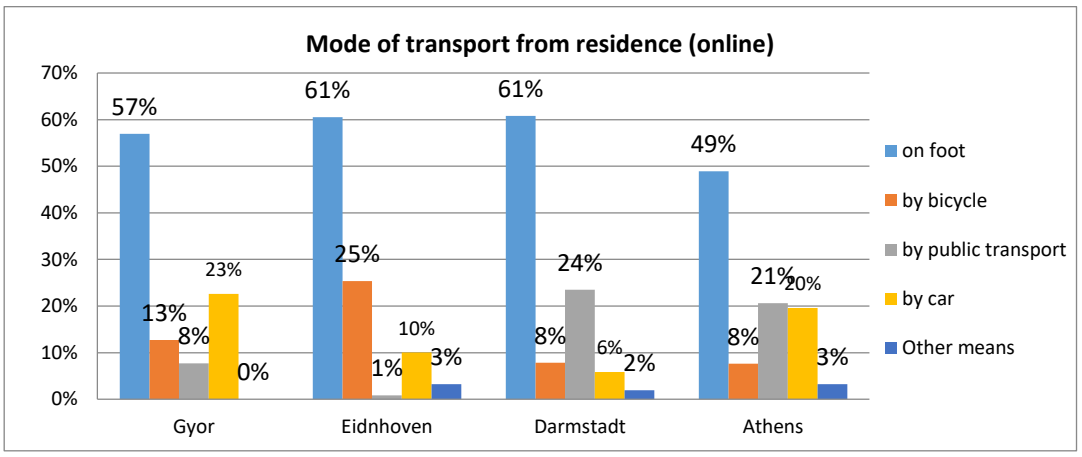




Mode of transport from residence

There are only minor differences between the two surveys. In both surveys, the majority of open space users walk to the open space, from 515 to 535 in the face-to-face survey and from 49% to 61% in the online survey; there is a notable difference between the two surveys in Athens concerning the use of public transport which is 36% in the face-to-face survey but only 21% in the online survey.





4.3 Benefits and improvements

Visitor's satisfaction

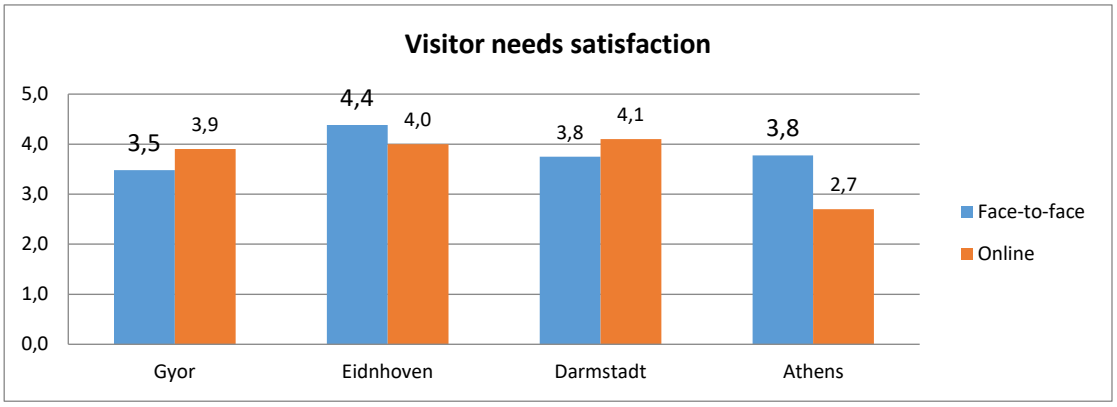
There are certain differences between the two surveys, which can be depicted more clearly by computing the average satisfaction on the 5-point scale used, namely:

- 1 -satisfies none of my needs
- 2- satisfies few of my needs
- 3- satisfies some of my needs
- 4- satisfies a fair number of my needs
- 5-satisfies many of my needs

There are minor differences (0,4 points of the scale) between the two surveys in Gyor, Eindhoven and Darmstadt, but marked difference (0,9 points of the scale) in Athens. Overall the data suggests a rank order of needs satisfaction as follows:

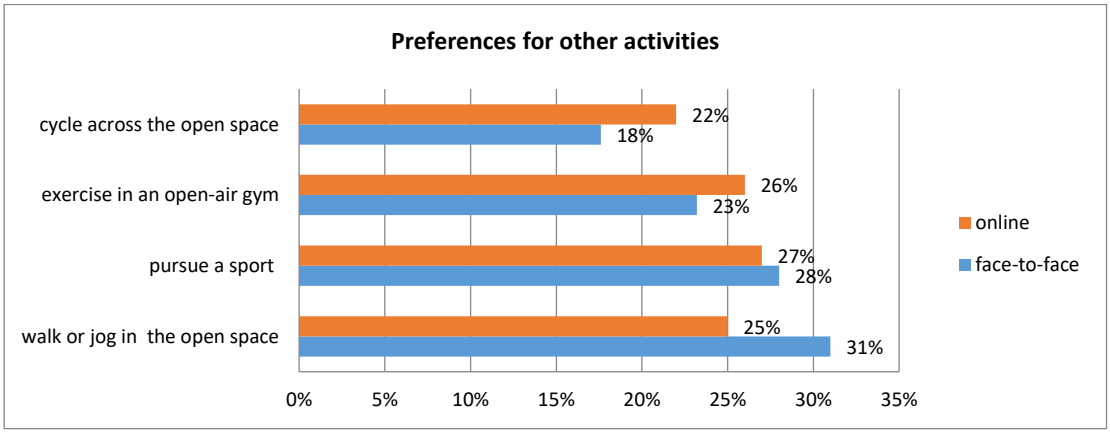
1. Eindhoven
2. Darmstadt

3. Gyor
4. Athens



Visitor's other activity preferences

The differences between the two surveys regarding other activities wished for, are not great. In the face-to-face survey, walking or jogging and pursuing a sport are predominating wishes, perhaps because these visitors did not have the opportunity to pursue these activities in the open spaces where they were interviewed (see activities pursued during the visit). Online respondents show a preference for cycling and open air gym higher than the face-to-face respondents.



Regarding the number of other activities wished for per respondent in each city, we note that:

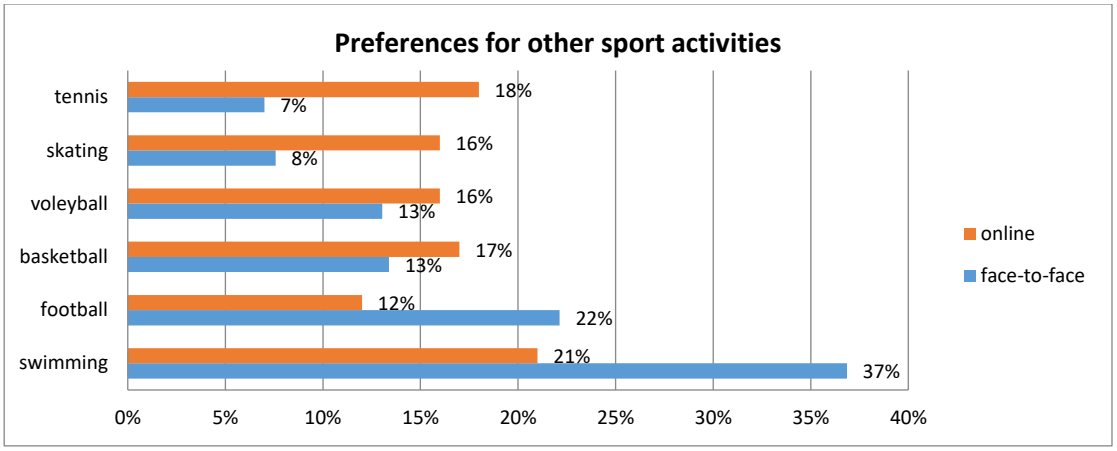
- In the face-to face survey, Gyor stands out with most preferences for new activities with respondents proposing new activities at a rate 2 new activities per respondent.
- In the online survey, Athens stands out with most preferences for new activities with respondents proposing new activities at a rate of 1,3 new activities per respondent.

Visitor's other activity preferences for sport

Regarding other activity preferences for pursuing a sport, six different sports were considered: swimming, football, basketball, volleyball, skating and tennis.

Combining the data on other sport preferences from all four cities, suggests that:

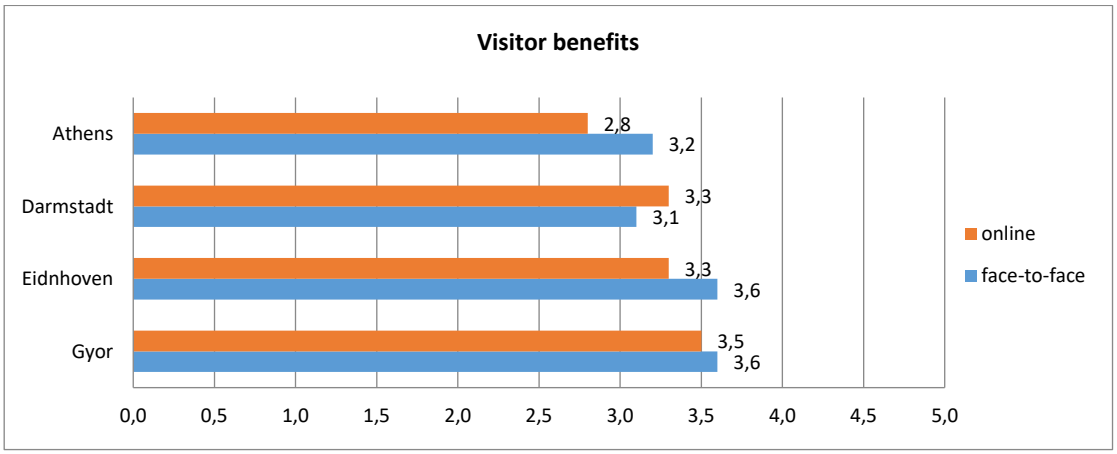
- in the face-to-face survey, swimming is the most frequently mentioned wished-for activity followed by football; other sports are mentioned by few or very few respondents
- in the online survey, swimming is the most frequently mentioned wished-for activity but activity preferences for other sports are also quite high.



Benefits

Visitor benefits were assessed by open space users in a scale from 1(very low benefits) to 5 (very high benefits).

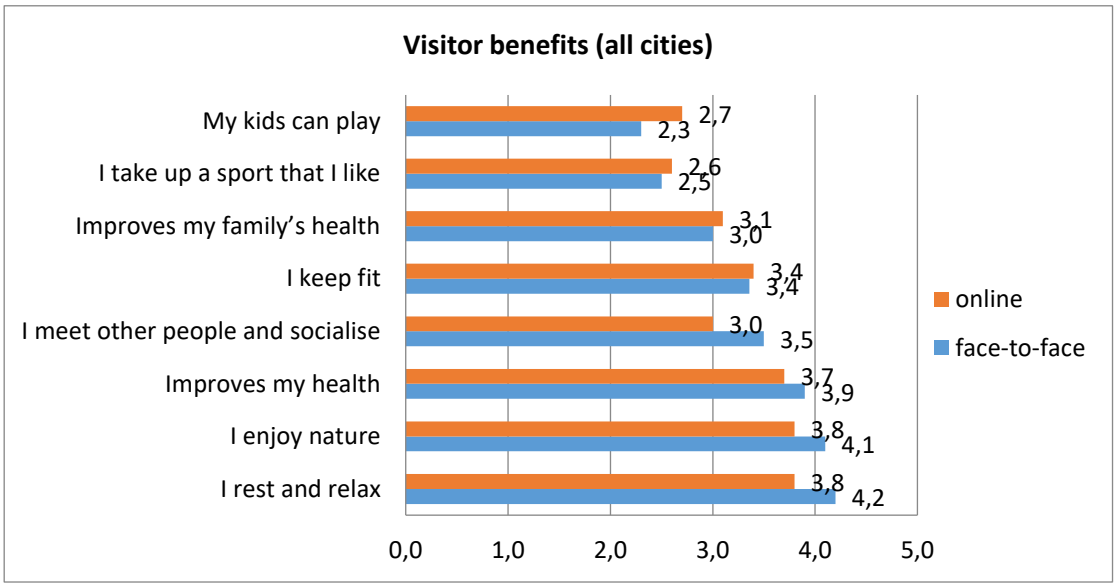
Combining the data on visitor benefits for each city suggests that respondents in both surveys report benefits over 3 (rather high to very high, except in Athens in the online survey where the average score is just below 3 (2,7).



Regarding the type of perceived benefit by respondents, only minor differences are evident between the two surveys. The common trends are as follows:

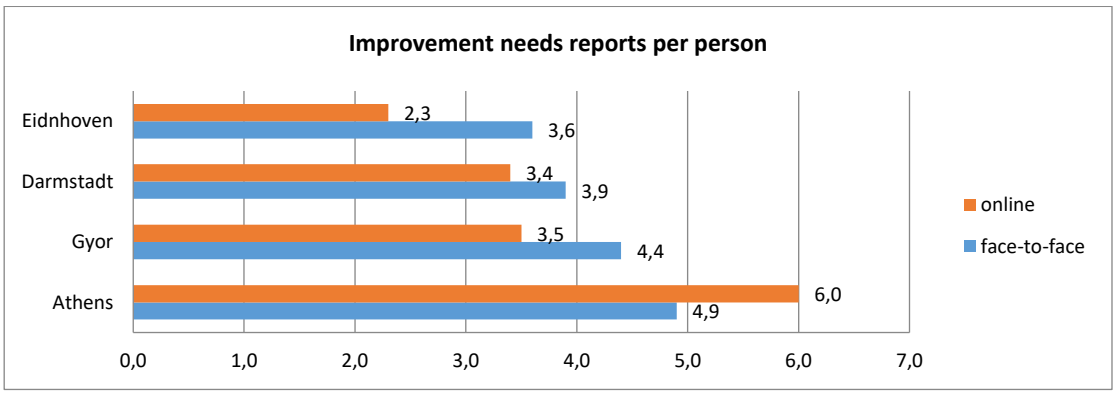
- The highest benefits are reported by open space users for resting and relaxing, enjoying nature and improving one's health (4,2-3,7)

- Medium benefits are reported for meeting other people and socialising , keeping fit and improving one's family health (3,5-3,1)
- Low benefits are reported for taking up a sport they like and giving to one's kids the opportunity to play (2,7-2,3)



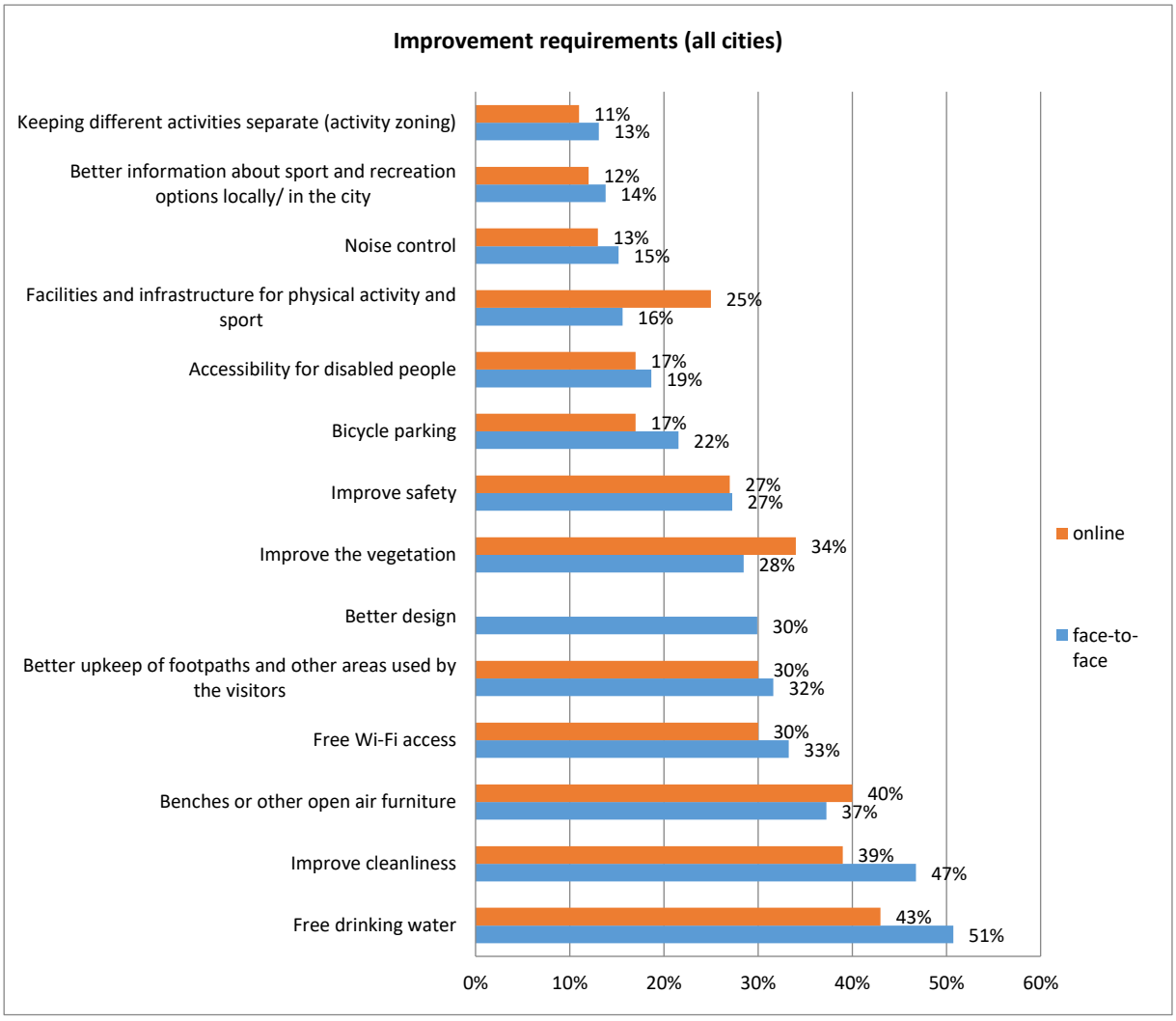
Improvement needs

The graph that follows compares the average number of improvements suggested by respondents in the face-to-face and online surveys. With the exception of Athens, in the other three cities the respondents of face-to-face survey reported more improvements than the online respondents. However, this does not affect the rank order of the 4 cities: Eindhoven is the city with the smallest number of improvements suggested by open space users, while Athens is the city with the highest number.



Combining the data on improvements from all four cities provides a rank order of requirements for improvement, broadly common in the two surveys, ranging from free drinking water to keeping different activities separate. Overall, four groups of improvements have been identified in order of popularity for open space visitors:

- High popularity: free drinking water, improved cleanliness, benches or other open air furniture
- Medium popularity: free Wi-Fi access, better upkeep of footpaths and other areas used by the visitors, better design, improve the vegetation, improve safety
- Low popularity: bicycle parking, accessibility for disabled people, facilities and infrastructure for physical activity and sport, noise control, better information about sport and recreation options locally/in the city, keeping different activities separate (zoning)



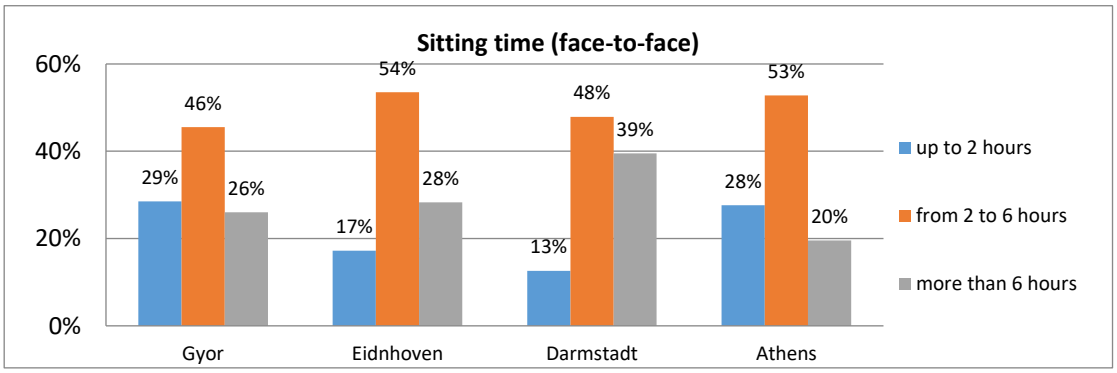
4.4 Life style

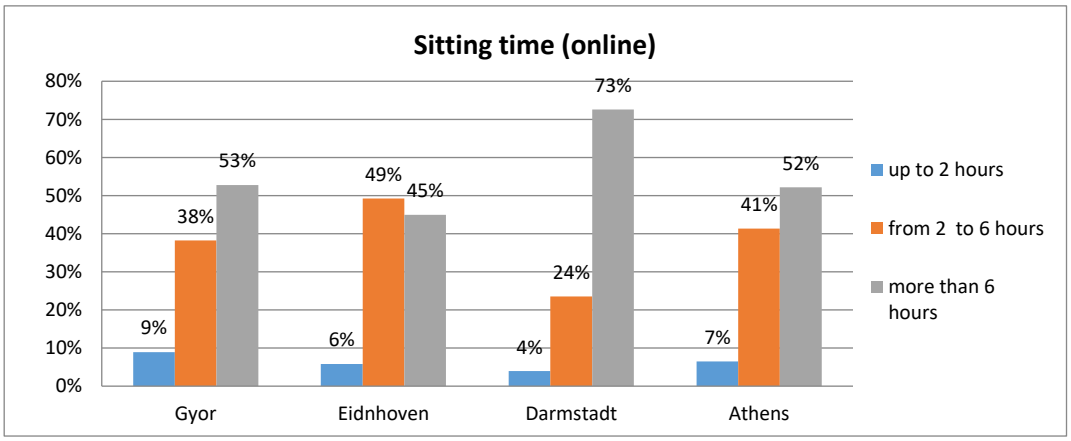
Sitting time

A different trend is evident between the two surveys:

- In the face–to-face survey, the predominant trend among respondents is to report sitting time between 2 and 6 hours.
- In the online survey, the predominant trend among respondents is to report sitting time more than 6 hours.

The above may be explained, at least partly, from the different profile of the respondents in the two surveys, especially relating to their employment situation (higher proportions of employed people have taken part in the online survey) and type of work (mostly office workers have taken part in the online survey).

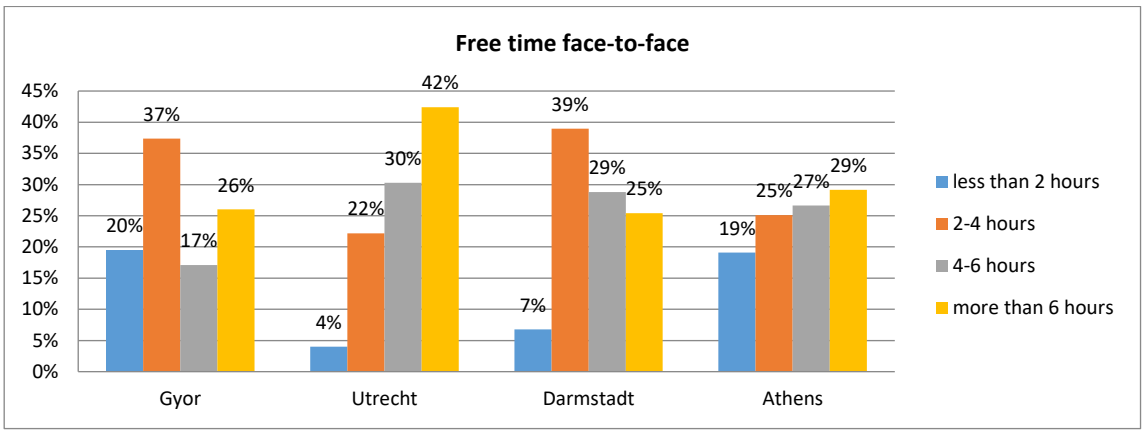


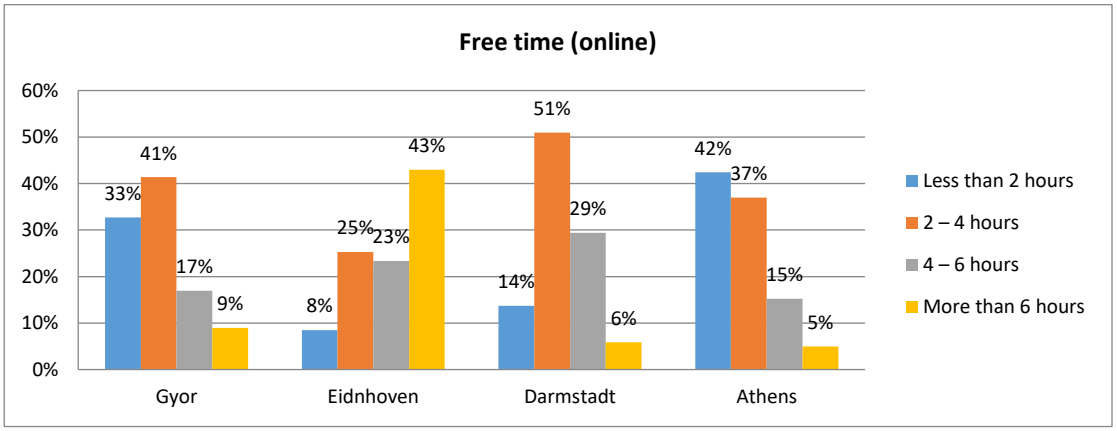


Free time

Different patterns are also evident regarding the reported free time by respondents of the face-to-face and online surveys. Face-to-face respondents appear to have more free time in their hands, compared to the online respondents. The latter appear to have, in their majority, up to 4 hours per day free time in all cities except Eindhoven (where the presence of a large group of pensioners and students in the online survey has affected the results).

To explain these trends, the same comment as those made for sitting time apply.

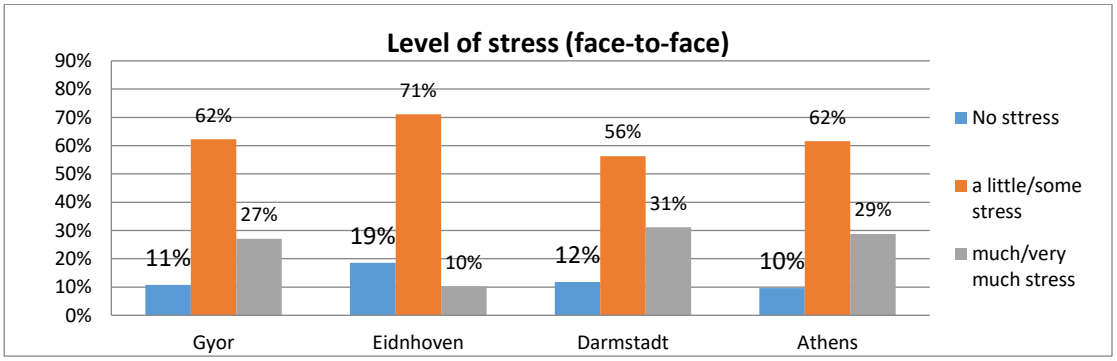


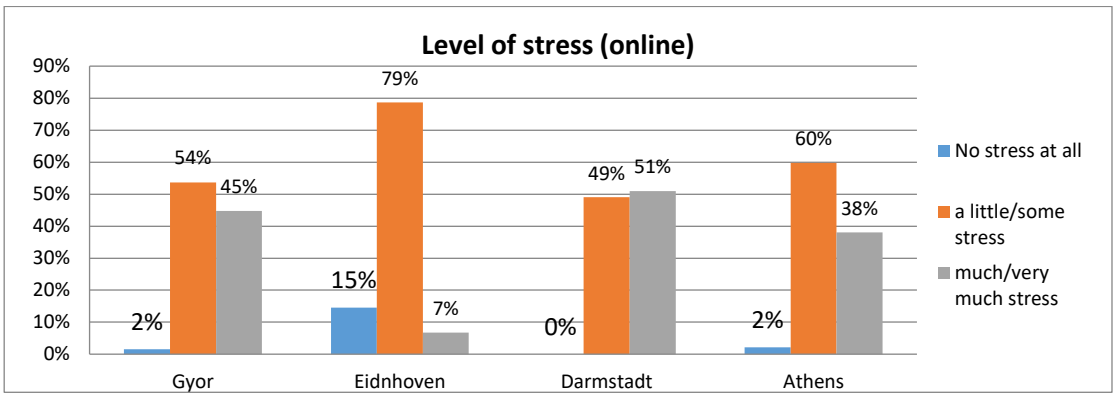


Stress

There are no marked differences between the two surveys regarding the reported stress by respondents:

- Face-to face survey: in all four cities the majority of open space users report a little/some or no stress
- Online survey: in all four cities the majority of open space users report a little/some stress, but the percentage of respondents reporting a lot of stress is much higher than on the face-to-face survey.

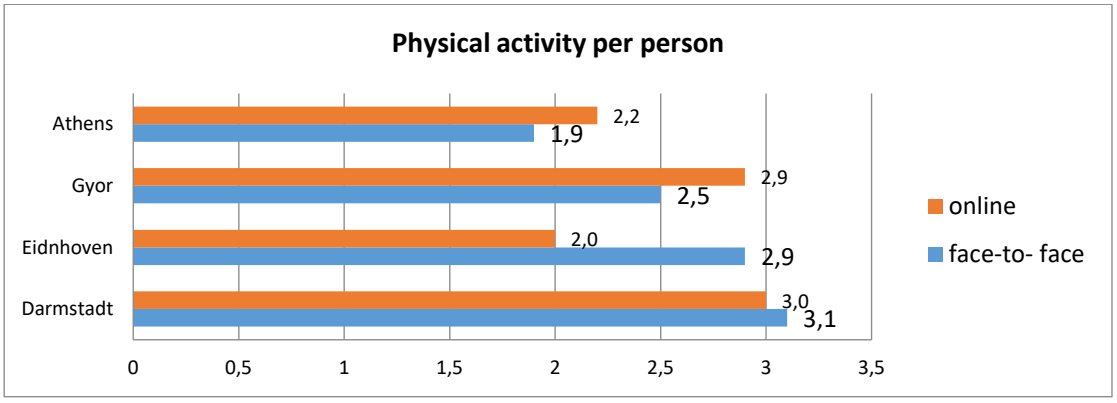




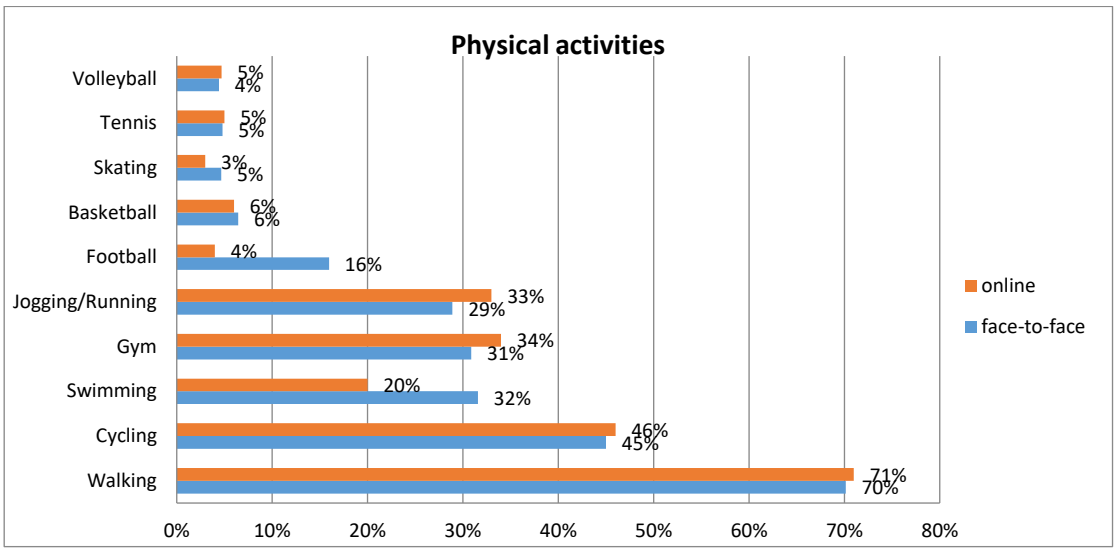
Physical activity

Respondents were asked to report on any physical activity they may have undertaken during the past month from a list of 12 indoor and outdoor activity options.

Combining the number of reports for activities undertaken per person for each city leads to a rank order for the four cities, based on the average number of physical activities undertaken by respondents. The differences between the two surveys do not appear to be substantial, although they are enough to affect the ranking of the four cities.



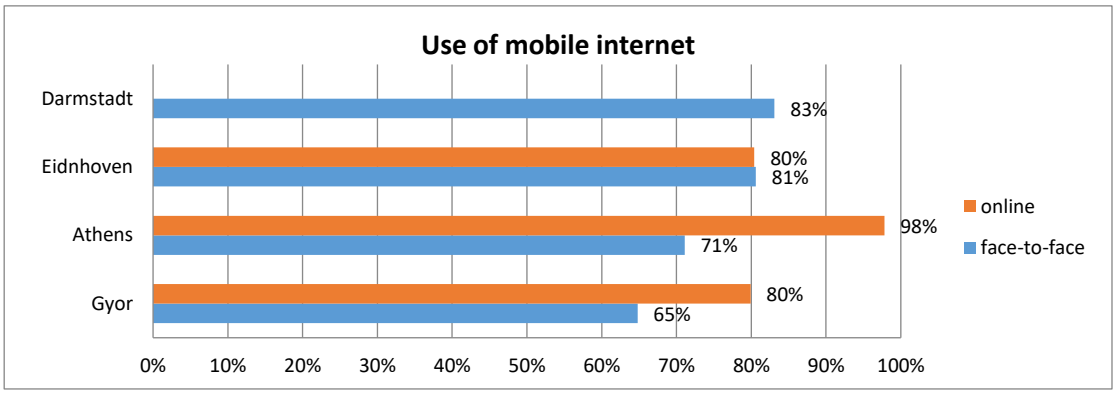
Regarding the type of physical activity undertaken, the graph below compares the percentages of each activity uptake by the respondents of face-to-face and online surveys. The differences between the two are for most activities negligible.



Digital technology: mobile internet

Mobile internet is used in both surveys by a very large percentage of open space users:

- In the face-to-face survey, Darmstadt and Eindhoven lead in the use of mobile internet followed by Athens and Gyor
- In the online survey Athens leads, followed by Eindhoven and Gyor



Digital technology: use of applications

There are no marked differences between the two surveys. In both surveys, social media is the most used applications by open space users while a large proportion of respondents do not use apps at all while visiting an open space. There is low use of other applications, except for fitness apps (20%) in Athens.

5. What influences the open space users?

This question is explored by examining the influence of socio-economic and life style characteristics on open space user behaviour. Correlation analyses were conducted on the data sets for the face-to-face and the online surveys from each city, and inter-relationships were defined on the basis of significance levels (95% or higher). The correlation analyses included two broad sets of variables:

a) Variables denoting demographic, life style and user-location characteristics of open space users, which are measured in a linear way in the surveys (i.e. the variable is measured by a series of consecutive numerical values). These variables include:

- Age
- Education
- Time spent sitting during the day
- Free time during the day
- Level of stress
- Distance of open space from residence

b) Variables denoting open space user behaviour and personal benefits, measured in a linear way. These variables include:

- Frequency of visits to open space
- Benefit scales:

⇒ Improves my health

⇒ Improves my family's health

⇒ I rest and relax

⇒ I enjoy nature

⇒ I keep fit

⇒ I take up a sport that I like

⇒ I meet other people and socialise

⇒ My kids can play

- Overall rating of the open space

The correlations examined include:

- relationships within the set demographic and life style variables, e.g. between age or education and stress
- relationships between demographic/ life style variables and user behaviour including personal benefit variables

- relationships within the set of open space user behaviour and personal benefit variables, e.g. between the frequency of visits to open space and benefits.

The results of the correlation analysis are presented in Annex 3 in a matrix.

The correlation results show clearly that relationships examined differ substantially across the four cities as well as between the two surveys within the same city. To identify common patterns of relationships depicting similarities across the four cities, the following criterion was used: “Significance levels at the 95% or higher level of probability, in the same direction (+ or -) in either or both surveys”. In all, 92 correlations were tested.

Altogether 36 similarity patterns of varying strength were identified as follows:

- across all 4 cities: 3 cases (very strong pattern)
- across 3 cities: 11 cases (strong pattern)
- across 2 cities: 22 cases (weak pattern).

These patterns are summarised below with an indication of the cities concerned (A-Athens, G-Gyor, D-Darmstadt, E-Eindhoven).

Demographic aspects

Age appears to have the strongest direct influence on:

- life style:

⇒ older people tend to spend less sitting time than younger people (G, E)

⇒ older people tend to have more free time than younger people (G, D, E)

⇒ older people tend to experience less stress than younger people (G, D, E)

- choice and frequency of open space use:

⇒ older people tend to visit open spaces nearer their residence, while younger people tend to visit open spaces further away from their residence (A, E)

⇒ older people appear to visit open spaces more frequently than younger people (A, G)

- benefits experienced:

⇒ older people tend to experience stronger benefits than younger people regarding the improvement of their health (A, G, E), the enjoyment of nature (G, D, E), keeping fit (A, E), meeting other people and socializing (D, E)

⇒ younger people tend to experience more benefits than older people regarding taking-up a sport that they like (A, D, E)

Education appears to have less influence than age, but still has an influence on:

- life style:

⇒ people of a higher education level tend to spend more sitting time than less educated people (G, U) - (possibly this is a cross-influence of the type of employment of people with higher education)

⇒ people of a higher education level tend to have less free time than less educated people (A, G, D, E) - (possibly this is a cross-influence of the type of employment of people with higher education)

- choice and frequency of open space use:

⇒ people of a higher education level tend to visit open spaces further away from their residence, while less educated people appear to visit open spaces nearer their residence (G, D)

- benefits experienced:

⇒ people of a higher education level tend to experience more benefits than less educated people regarding the improvement of their health (G,E)

Lifestyle aspects:

Time spent sitting during the day appears to have an influence on:

- life style:

⇒ people declaring more sitting time during the day tend to have less free time (G, E)

⇒ people declaring more sitting time during the day tend to experience more stress (A, E)

⇒ people declaring more sitting time during the day tend to visit open space less frequently (G, E)

- benefits experienced

⇒ people declaring more sitting time during the day tend to experience less benefits regarding taking up a sport that they like (G, E)

Free time during the day appears to have an influence on:

- stress:

⇒ people having more free time during the day appear to experience less stress (A, G, D)

- benefits experienced:

⇒ people having more free time during the day appear to experience more benefits regarding improving their health (A, G) and enjoying nature (A, G), but less benefits regarding being able to have their kids to play (A, G, D)

Stress appears to have an influence on:

- benefits experienced:

⇒ People declaring a high stress level appear to experience more benefits regarding being able to have their kids to play (A,D,E)- (possibly this is a cross influence of the presence of small children in the household)

Distance of open space from residence appears to have an influence on:

- frequency of using the open space:

⇒ people living nearer the open space tend to visit the open space more frequently than those living further away from the open space (A, G, D, E)

- benefits experienced:

⇒ people living nearer the open space tend to experience less benefits than those living further away from the open space regarding resting and relaxing (A, G, D) and meeting other people and socializing (A, E); but more benefits regarding being able to have their kids to play (G, E)

Frequency of use of open space appears to have an influence on:

- evaluation of open space:

⇒ people who visit the open space more frequently tend to rate less highly the open space

- benefits experienced:

⇒ people who visit the open space more frequently appear to experience more benefits regarding the improvement of their health (G,E), the improvement of their family's health (D, E), resting and relaxing G,E), keeping fit (G,E), taking up a sport they like (A, G, D, E), meeting other people and socializing (A, E)

Evaluation of the open space appears to relate to:

- benefits experienced:

⇒ people who rate highly the open space appear to experience more benefits regarding keeping fit (D, E) and taking up a sport they like (D, E)

Summary of results of the correlation analysis

The correlation analysis has shown that age tends to have the strongest direct influence on the choice and frequency of the open space used: older people tend to visit open spaces nearer their residence, whilst younger people tend to visit open spaces further away from their residence; moreover, older people tend to visit open spaces more frequently than younger people.

In addition, age has an influence on the perception of benefits gained when using open spaces: older people tend to experience stronger benefits than younger people regarding the improvement of their health, the enjoyment of nature, keeping fit, meeting other people and socializing. Younger people tend to experience more benefits than older people regarding taking-up a sport they like.

Education has also some influence on behaviour patterns: regarding the choice and frequency of open space use, users who are more educated tend to visit open spaces further away from their residence, while less educated people appear to visit open spaces nearer their residence. Regarding the perception of benefits, users who are more educated tend to experience more benefits than less educated people in relation to health improvement.

Certain life style aspects also appear to have an influence on how people use open spaces. Thus, people spending more time sitting during the day tend to visit open spaces less frequently and they also tend to experience less benefits regarding taking up a sport.

A further analysis between certain behavioural variables was also performed, leading to some interesting results:

Distance of the user's residence from the open space influences the frequency of visits: people living nearer an open space tend to visit this open space more frequently than those living further away (all cities). This is particularly interesting, because as reported in the literature review performed in the context of the PREHealth project, there is limited availability of previous research in Europe connecting distance from residence with frequency of visiting open spaces and related benefits.

Frequent users tend to rate less highly the open space visited than infrequent users (probably because they are faced with the less satisfying elements of the open space on a regular basis), while frequent users tend to experience more benefits regarding the improvement of their health, the improvement of their family's health, resting / relaxing and keeping fit, taking up a sport they like, meeting other people and socializing.

Finally. people who rate highly an open space tend to experience more benefits regarding certain activities they take up in it, such as keeping fit and taking up a sport they like.

6. Conclusions

The surveys of open space users highlighted certain important trends and patterns of user profile and behaviour. It was shown that the profile of open space users differs from city to city, although such differences are not substantially marked in relation to key demographic characteristics such as gender, education and employment status. The typical visitor appears to be a frequent user, undertaking weekly visits to a local open space, although these visitors do also visit open spaces further afield in the city or away from it.

Activities undertaken by visitors in the open space differ from city to city, which may reflect the particular profile of the open space visitors in each city. However, such activities usually combine some passive elements (e.g. resting) with more active elements (e.g. walking or jogging). It is interesting to note that a significant part of the sample (about 1 in 3) reported that they would like to take up more physical activity or sport while visiting the open space, if they had the opportunity.

Also it is particularly significant that improving own health stands out as one of the most important benefits from open space visits.

Regarding patterns of user behaviour, i.e. how the visitors' profile is related to behaviour in the open spaces visited, the results of the data analysis have not highlighted many common patterns in the 4 cities studied: patterns shared by at least two cities are not many and concern selected characteristics of visitors. They provide however some interesting insights related mostly to frequency of visits to open spaces, distance travelled from home, benefits perceived and evaluation of open spaces.

Shared patterns among two or more of the cities studied show that:

- Frequent open space users tend to be in general the local people, who live near the open space. Among them, older people are the most frequent visitors experiencing a variety of benefits. Younger people and more educated people are prepared to travel longer distances to visit an open space; they enjoy a large number of benefits, which for the younger focus mostly on sport engagement.
- Local people visiting their neighbourhood park frequently appear to be more critical than others of the quality and facilities offered in it, probably because they come frequently in contact with the perceived problems.
- Frequent users appear to be the most appreciative of all regarding benefits gained, appreciating highly the health benefits for them and their families, keeping fit, resting–relaxing and taking up sports.
- Life style also has an impact on the use made of open spaces, with some people markedly unwilling to move from their residence and visit an open space, having no interest in physical activity. People experiencing less stress and more free time (these two variable have been highly correlated) appreciate highly the health-related benefits and the same is evident amongst people who are more educated, compared to those less educated.

On the basis of the analysis of both face-to-face and online surveys, it appears that health-related benefits derived from use of open spaces are highly appreciated by citizens. Thus, a policy effort, common for all 4 cities appears to be necessary, to improve neighbourhood open space facilities so that local people are encouraged to visit more frequently, targeting in

particular the young and less educated citizens as well as those who are physically inactive, and stressed/ having less free time. The improvements also mentioned by both survey respondents in the four cities offer a “launching board” for local authorities to start evaluating the measures that are necessary to improve and make open spaces more attractive to citizens, encouraging their wider, health-related use.

ANNEX 1

Questionnaire of the face-to-face survey

Interviewer's name……
Country V100
1 ☐ **DE**
2 ☐ **GR**
3 ☐ **NL**
4 ☐ **HU**
Open space: Name……..V101
Day:……V102
Time:……V103

Instruction: Respondents are expected to choose one box where the interviewer will place a tick. For multiple choice questions, more ticks can be placed - these questions are clearly marked as **Multiple Choice**

UNIT 1: User profile

I am going to ask you a few questions about yourself. All the information you provide is strictly confidential

1. Gender of the respondent V1

1 ☐ Male 2 ☐ Female

2. Please note your age in the boxes below V2

1 ☐ 12-17
2 ☐ 18-25
3 ☐ 26-35
4 ☐ 36-45
5 ☐ 46-55
6 ☐ 56-65
7 ☐ 65+

3. How far have you been with education? V3

1 ☐ Primary education (completed or not completed)
2 ☐ Lower secondary education
3 ☐ Upper secondary education
4 ☐ Post-secondary non-tertiary education
5 ☐ Bachelor's or equivalent level
6 ☐ Master's or equivalent level or Doctoral
7 ☐ Other – specify
……..

……
……

4. Are you V4

1 ☐ employed – full time
2 ☐ employed – part time
3 ☐ unemployed
4 ☐ not wishing to take up employment
5 ☐ pensioner
6 ☐ student
7 ☐ Other – specify
……

Qu 5 and 6 are for employed persons only

5. Are you V5

1 ☐ working in an office
2 ☐ working in a manual occupation
3 ☐ other –
specify……

6. Are you working V6

1 ☐ During the day
2 ☐ In shifts
3 ☐ During the night

For all

7. What is your household situation? V7

Are you

01 ☐ living alone
02 ☐ living with a partner (no children)
03 ☐ living with own parents or guardian(s)
04 ☐ living with other adult(s)
05 ☐ living with a partner and children – what is the children's' age
06 ☐ living with children only (lone parent) - what is the children's' age

Childrens' number and age:

07 – ☐ up to 6 years, number (……..)
08 – ☐ from 7 to 11, number (……..)
09 – ☐ from 12 to 15, number (……..)
10 –☐ older than 16, number (……..)

11 ☐ Other – specify
……
……
……

8. OPTIONAL QUESTION

What is your origin?

1 ☐ national of the country (where the interview takes place)

2 ☐ other country of the EU

3 ☐ a non-EU country of Europe (e.g. Russia) or the Balkans (e.g. Serbia, Albania, FYROM etc)

4 ☐ a country of Asia

5 ☐ a country of Africa

6 ☐ Other - specify……

9. What kind of residence do you live in? V9

1-☐ Apartment in a block of flats

2-☐ House, detached

3-☐ House, semi-detached

4-☐ Other, specify……

10. Do you have access to a private garden? V10

1-☐ Yes

2-☐ No

11. Now, tell me, what type of open spaces do you usually visit V11

1 ☐ only local open spaces (in the neighbourhood)

2 ☐ only other (non-local) open spaces in the city

3 ☐ both local and other open spaces in the city

4 ☐ only non-local open spaces – outside the city

5 ☐ local and other open spaces in and outside the city

UNIT 2: Patterns of behaviour/use of urban open space

12. How often have you visited this open space (on average) over the past 6 months? V12

1 ☐ 2 or more times per week
2 ☐ once a week
3 ☐ once a fortnight
4 ☐ once a month
5-☐ once every two months
6 ☐ more rarely than above

13. How long is your visit to this open space (on average) V13

1 ☐ up to half hour
2 ☐ from half to one hour
3 ☐ more than one hour

14. What do you do during your visit today? V14

Multiple Choice

(coding values 1, 0)

V14.1 ☐ rest (e.g. sit down on a bench, read a book, eat lunch, etc.)
V14.2 ☐ meet other people (e.g. neighbours, friends) and socialize
V14.3 ☐ walk or jog around the open space or across the open space
V14.4 ☐ cycle across the open space (if there is such possibility)
V14.5 ☐ observe nature – e.g. watch the birds, the flowers, the trees etc.
V14.6 ☐ play a sport (according to available facilities – if any) – specify ……
……
……
V14.7 ☐ dog walking
V14.8 ☐ taking the children to the playground
V14.9 ☐ Other – specify
……..
……
……..

15. Are you today visiting the open space alone or accompanied? V15

1 ☐ alone
2 ☐ with another adult or adults
3 ☐ with children – ages as below (please tick)

4 ☐ up to 6 years
5 ☐ from 7 to 11 years
6 ☐ from 12 to 15 years
7 ☐ 16 years or older
8 ☐ Other – specify
……
……

16. How far is this open space from your residence? V16
1 ☐ up to 200 meters (or under 5 minutes on foot)
2 ☐ from 200 to 500 meters (or around 6-10 minutes on foot)
3 ☐ from 500 meters to one kilometer (or around 11-20 minutes on foot
4 ☐ more than one kilometer (or more than 20 minutes on foot))

17. How did you come to this open space today V17
1 ☐ on foot
2 ☐ by bicycle
3 ☐ by public transport
4 ☐ by car
5 ☐ by other means – specify
……..

18. **What else would you like to do in this open space, if you had the opportunity** (i.e. if the appropriate facilities/infrastructure were provided) V18

Multiple Choice

(coding values 1, 0)

V18.1 ☐ walk or jog around the open space or across the open space
V18.2 ☐ cycle across the open space
V18.3 ☐ exercise in an open-air gym
V18.4 ☐ pursue a sport e.g.
V18.5 ☐ basketball
V18.6 ☐ tennis
V18.7 ☐ volleyball
V18.8 ☐ skating
V18.9 ☐ football
V18.10 ☐ swimming
V18.11 ☐ Other sport – specify
……..
……
V18.12 ☐ Other activity not mentioned above – specify……..

UNIT 3. Benefits and improvements

19. What are the benefits from the activities you pursue in this open space (please rate the benefit from 1 to 5, where **1 is no benefit** and **5 is very strong benefit**): V19

Benefits	**1** very low	**2**	**3**	**4**	**5** very high
V19.1 Improves my health	☐	☐	☐	☐	☐
V19.2 Improves my family's health	☐	☐	☐	☐	☐
V19.3 I rest and relax	☐	☐	☐	☐	☐
V19.4 I enjoy nature	☐	☐	☐	☐	☐
V19.5 I keep fit	☐	☐	☐	☐	☐
V19.6 I take up a sport that I like	☐	☐	☐	☐	☐
V19.7 I meet other people and socialise	☐	☐	☐	☐	☐
V19.8 My kids can play	☐	☐	☐	☐	☐
V19.9 Other- specify	☐	☐	☐	☐	☐

20. How do you rate this open space? V20

1 ☐ Satisfies many of your needs
2 ☐ Satisfies a fair number of your needs
3 ☐ Satisfies some of your needs
4 ☐ Satisfies few of your needs
5 ☐ Satisfies none of your needs

21. What kind of improvements would you like to see in this open space e.g. V21

Multiple Choice

(coding values 1, 0)

V21.1 ☐ Better design e.g.
V21.2 ☐ Noise control
V21.3 ☐ Accessibility for disabled people
V21.4 ☐ Keeping different activities separate (activity zoning)
V21.5 ☐ Other design issues – specify
……
……
……
……
……

V21.6 ☐ Improve the vegetation
V21.7 ☐ Better upkeep of footpaths and other areas used by the visitors
V21.8 ☐ Improve cleanliness
V21.9 ☐ Improve safety
V21.10 ☐ Facilities and infrastructure for physical activity and sport – specify
……
……
……
……..

V21.11 ☐ Better information about sport and recreation options locally/ in the city
V21.12 ☐ Benches or other open air furniture
V21.13 ☐ Bicycle parking
V21.14 ☐ Free drinking water
V21.15 ☐ Free Wi-Fi access
V21.16 ☐ Other improvements – specify
……
……
……
……...

UNIT 4. Lifestyle

Now I am going to ask a few more questions about your lifestyle

22. **How much time do you spend sitting during the day?** (This may include time spent at a desk working, visiting friends, eating, studying or watching television) V22

1 ☐ Less than 2 hours
2 ☐ 2 – 6 hours
3 ☐ 7 – 12 hours
4 ☐ More than 12 hours

23. **How many hours a day is your free time?** V23

1 ☐ Less than 2 hours
2 ☐ 2 – 4 hours
3 ☐ 4 – 6 hours
4 ☐ More than 6 hours

24. How much stress would you say you have to deal with on an average day? V24

1 ☐ no stress at all
2 ☐ a little stress
3 ☐ some stress
4 ☐ much stress
5 ☐ very much stress

25. Have you undertaken any physical activity over the past month, such as V25

Multiple Choice

Activity	Indoors	Outdoors
V25.1 Gym	1 ☐	2 ☐
V25.2 Walking	1 ☐	2 ☐
V25.3 Jogging / Running	1 ☐	2 ☐
V25.4 Cycling	1 ☐	2 ☐
V25.5 Basketball	1 ☐	2 ☐
V25.6 Tennis	1 ☐	2 ☐
V25.7 Volleyball	1 ☐	2 ☐
V25.8 Skating	1 ☐	2 ☐
V25.9 Football	1 ☐	2 ☐
V25.10 Swimming	1 ☐	2 ☐
V25.11 Other sports -specify	1 ☐	2 ☐
…… ...		
……		
V25.23 Other activity -specify	1 ☐	2 ☐
……		
……		

26. Do you use mobile internet? V26

1 ☐ Yes
2 ☐ No

27. Do you use any of the following applications while in the open space? V27

Multiple Choice

(coding values 1, 0)

V27.1 ☐ Social media, for reasons connected to your visit, e.g. Facebook / Whatsapp / Instagram / twitter
V27.2 ☐ Fitness apps
V27.3 ☐ Urban or location-based Games
V27.4 ☐ Other digital media – specify
……

Thank you very much for your cooperation

ANNEX 2

Questionnaire of the online survey

The online questionnaire in English can be accessed here

ANNEX 3

The correlations' matrix

ANNEX 2 CORRELATIONS EXPLAINED

	V2 - Age	V3 - Education	V16 - Distance of open space from residence	V12 - Frequency of visits 1=high, 5=low	V20 -Rating the open space 1=high , 5=low	V22 -Time spent sitting during the day 1=low, 5=high	V23 - Free time during the day 1=low, 5=high	V24 - Level of stress 1=low, 5=high	V19-1 improves my health 1=low, 5=high	V19-2 Improves my family's health 1=low, 5=high	V19-3 I rest and relax 1=low, 5=high	V19-4 I enjoy nature 1=low, 5=high	V19-5 I keep fit 1=low, 5=high	V19-6I take-up a sport that I like 1=low, 5=high	V19-7 I meet other people and socialize 1=low, 5=high	V19-8 My kids can play 1=low, 5=high
V2 - Age			High age - short distance (A.-E)	High age- high frequency (A-G)		High age - low sitting time (G-E)	High age -high free time (G-D-E)	High age -low stress (G-D-E)	High age- high benefit (A-G-E)			High age - high benefit (G-D-E)	High age - high benefit (A-E)	High age - low benefit (A-D-E)	High age - high benefit (D-E)	
V3 - Education			High education- long distance (G-D)			High education- high sitting time (G-U)	High education-low free time (A-G-D-E)		High education - high benefit (G-E)							
V16 -Distance of open space from residence 1=low, 5=high				High distance- low frequency (A-G-D-E)						`	Low distance - low benefit (A-G-D)				Low distance - low benefit (A-E)	Low distance - high benefit (G-E)
V12 - Frequency of visits 1=high, 5=low					High frequency- low rating (D-E)	High time sitting- low frequency (G-E)			High frequency - high benefit (G-E)	High frequency - high benefit (D-E)	High frequency - high benefit (G-E)		High frequency - high benefit (G-E)	High frequency - high benefit (A-G-D-E)	High frequency - high benefit (A-E)	
V20 -Rating the open space 1=high , 5=low													High rating- high benefits (D-E)	High rating- high benefits (D-E)		
V22 -Time spent sitting during the day 1=low, 5=high							High time sitting-low free time (G-E)	High time sitting -high stress (A-E)						High time sitting - low benefit (G-E)		
V23 - Free time during the day (no Eidnhoven data) 1=low, 5=high								High free time -low stress (A-G-D)	High free time - high benefit (A-G)			High free time - high benefit (A-G)				Low free time - high benefts (A-G-D)
V24 - Level of stress 1=low, 5=high																High stress - high benefit (A-D-E)

A: Athens G: Gyor D: Darmstadt E: Eindhoven