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The Psychological Effects and Benefits of Using Green Spaces in the City: A Field Experiment with Young Polish Adults

Emilia Janeczko [1], Krzysztof Czyżyk [2], Natalia Korcz [3], Małgorzata Woźnicka [1,*] and Ernest Bielinis [4]

[1] Department of Forest Utilization, Institute of Forest Sciences, Warsaw University of Life Sciences—SGGW, 159 Nowoursynowska St., 02-776 Warsaw, Poland
[2] Department of Geomatics and Land Management, Institute of Forest Sciences, Warsaw University of Life Sciences—SGGW, 159 Nowoursynowska St., 02-776 Warsaw, Poland
[3] Department of Natural Foundations of Forestry, Institute of Soil Science and Environment Management, University of Life Sciences in Lublin, 13 Akademicka St., 20-950 Lublin, Poland
[4] Department of Forestry and Forest Ecology, Faculty of Agriculture and Forestry, University of Warmia and Mazury, Pl. Łódzki 2, 10-727 Olsztyn, Poland
* Correspondence: malgorzata_woznicka@sggw.edu.pl

Abstract: Green spaces in cities are places where city dwellers can have contact with nature, which, according to the research to date, can have a very beneficial effect on their mental well-being. However, it is still not entirely clear which characteristics of green spaces are most beneficial in terms of their positive impact on people. In this study, we focus on identifying the restorative attributes of tree canopy sites (forests, street greenery) and open green spaces (water, meadows). Four psychometric tests were used to examine the subjects' reactions before and after exposure to the analyzed environments (the control environment was the room in which the pre-test was conducted). The experiment was conducted with 55 young adult university students. It was shown that, compared to the post-housing (control) environment, all green spaces influenced the subjects' well-being. The water environment had the most beneficial effect, followed by a meadow, a forest, and a housing estate with the presence of urban greenery. A short walk amid open urban green spaces, which provide more opportunities for observation, has a better impact on the well-being of the respondents compared to tree canopy sites such as forests or street greenery.

Keywords: tree canopy sites; forest; meadow; street; open-green spaces; restorativeness; well-being

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1. Introduction

Health, for many people, is one of the most important things in the world [1]. Nowadays, due to widespread advances in technology, reduced working hours, better access to education, and greater environmental awareness, many people are paying more and more attention to mental as well as physical health [2,3]. As Rohrer et al. [4] and Giuntella et al. [5] point out, mental health should be recognized as a public health issue, alongside obesity-related diseases or cardiovascular problems [6]. Public health is receiving a great deal of attention today. The COVID-19 epidemic, in conjunction with the epidemic of chronic non-communicable diseases, has caused a negative synergy effect, thus becoming an important signal to politicians to protect people's health by all possible means. Protection, health, and well-being of citizens from environmental risks and negative effects is the goal of the new development strategy entitled the European Green Deal for the European Union [7–9]. As technology and civilization advance, people are gradually beginning to feel more and more disconnected from the natural world [10,11]. There is now already a wealth of scientific evidence pointing to the therapeutic health functions of natural ecosystems [12,13]. Research clearly shows that direct contact with nature improves our mental health, reducing anxiety, fear, or depression [14–19]. Therefore, among other things, references to the health benefits of greenery, including forests, appears in the EU's

Biodiversity Strategy 2030—Bringing Nature Back to Our Lives [20]. At the beginning of this document, it is already written that nature is as important for people's physical well-being and mental health as it is for society's ability to cope with global change, health risks, and disasters. People need nature in their lives. Similarly, the new EU Forest Strategy 2030 [21,22] notes that forests and other wooded areas provide a place where people can feel close to nature and strengthen their physical and mental health.

According to Coley et al. [23], it is not easy to connect with nature, especially in urbanized spaces. Climate change in combination with the ever-increasing population of cities has recently led to the development of various innovative concepts to shape urban greenery for building a healthy and resilient environment for human habitation [24]. Their development goes hand in hand with increasing recognition of the spectrum of ecosystem services of urban greenery. Greenery in cities provides people with a range of important cultural services, such as recreation and aesthetic experiences, educational values, and many others, in addition to goods and services of a regulatory, provisioning, supporting nature—TEEB (The Economics of Ecosystems and Biodiversity) [25].

An understanding of the importance of green ecosystem services is demonstrated by the creation of pocket parks, vertical green walls, the increasing introduction of water into city centers, or greenery on the roofs of urban buildings. All of these activities serve to make urban living more comfortable, and also to improve public health [26]. Today, green and blue infrastructure is as important as other types of urban infrastructure and is essential for the proper functioning of a city. The phrase "blue-green" or "green-blue" infrastructure appeared in the first decade of the 21st century [27,28] due to a growing awareness of the need for a more integrated systems approach to managing green and blue infrastructure. Ghofrani et al. [29] describe BGI as "an interconnected network of natural and designed landscape components, including water bodies and green and open spaces". Among the most valuable resources of the city's green infrastructure are forests, but equally important are open spaces including watercourses and reservoirs, which are part of the blue infrastructure resource. Green and blue urban infrastructures make it possible to satisfy the basic needs of contact with nature and outdoor physical activity, which directly translates into the health of urban residents. They are also seen as an effective way to improve the public realm [26]. High-quality, open, and safe public spaces strengthen identification with the city and ultimately improve well-being for all residents [30]. They aid social interaction and integration, human health and well-being, economic exchange and cultural expression, and dialogue between different people and cultures [31].

Well-designed, managed, and interconnected green spaces and water areas are a prerequisite for achieving a clean and healthy living environment, adapting to climate change, and preserving and developing urban biodiversity [30]. Green areas of high quality promote renewal or human regeneration. However, the strength of this impact is not always equal [18], and not every type of space is highly enhancing/healing (restorative). Several works have already been written indicating that the speed and sustainability of the restorative process in the forest environment are much higher in comparison to built-up space. For example, Korpela et al. [32] have shown that the restoration process in natural environments, especially in forests, is much more stable than in urban parks or other open recreational areas in cities. Hartig et al. [33] and Lee et al. [34] determined that natural surroundings reduce stress more effectively. Still, we know little about how other open green (e.g., meadows, extensive grassy areas) and blue (e.g., artificial and natural bodies of water) spaces in cities affect humans.

There is still a lack of knowledge about how different physical features of urban space affect the recovery/regeneration of the human body in the form of improved mood, increased positive feelings, vitality levels, etc.

Therefore, the purpose of this study is to examine the regenerative/restorative effects of short stays in four different spaces encountered in the city: on a street with a lot of greenery; in a forest; in an open meadow space; and by a body of water. The comparison of the importance of these areas for the restoration process allows us to obtain objective information about the optimal conditions for recreation in urban spaces, especially open spaces, both green and blue. We decided to conduct the study among young people because there are numerous studies [35–37] that show that this group is the most vulnerable to stress. A study by Thapar et al. [38] indicates that rates of depression in young people have risen sharply over the past decade, especially in women. In Poland alone, according to the Forum Against Depression [39], 1.5 million people suffer from depression. Depression is most often diagnosed in people between the ages of 20 and 40. Women suffer from it twice as often. As many as 17 percent of respondents under the age of 25 admit to suffering from depression, according to the CBOS (2021) report [40].

The hypotheses formulated for the study are as follows:

I. All four urban spaces have restorative features. Even brief exposure to them contributes to an improvement in mood and an increase in positive emotions and vitality while reducing negative emotions.
II. The restorative effect achieved as a result of contact with an open area, offering ample opportunities for landscape perception, was higher than the effect achieved when in contact with a tree canopy site.
III. The leisure effect achieved in contact with a blue environment is higher than that achieved as a result of exposure to green areas.

2. Materials and Methods

2.1. Participants

Fifty-five students at the Warsaw University of Life Sciences, aged 20–23 years (19 men, 36 women) participated in the study. The volunteers, individuals without obvious medical symptoms who had agreed to participate in the study, were informed before the start of the experiment about the objectives of the study and the procedure for conducting it. Participants were advised that they were forbidden from communicating during observation in a given area (about 15 min) and while completing psychological test questionnaires (about 15 min). In addition, there was a ban on using telephones, drinking beverages containing alcohol or caffeine, and smoking cigarettes. Respondents were informed of the detailed survey procedure but had no knowledge of the observation surfaces. None of the respondents were residents of the Warsaw district—Wilanów—where the research was conducted. The psychological questionnaires used in the study were anonymous, with the students adopting pseudonyms for the duration of the study. Each questionnaire form, upon completion, was checked by the study supervisors (2 people) for completeness. All actions taken during the research were in accordance with the ethical standards of the Polish Committee for Ethics in Science and the 1964 Declaration of Helsinki, as amended.

2.2. Site Test

The experiment was conducted both indoors and outdoors (Figure 1) in November 2021. The current mental state of the volunteers before going outside was determined in the teaching room of the SGGW in Warsaw (Item 1, Figure 2).

It was decided to select locations that were relatively close to each other. Instead of a random order of exposure of sites, a variant optimized for walking was used. The point furthest away was the last one viewed by respondents. Respondents were not exposed to stress or excessive noise when changing locations. A time of day was also chosen that guaranteed the least possible traffic in this part of the city. Walking from point to point was not tiring for the participants in the experiment. The relief was flat and there were no terrain barriers along the way.

Figure 1. Sites for conducting the experiment.

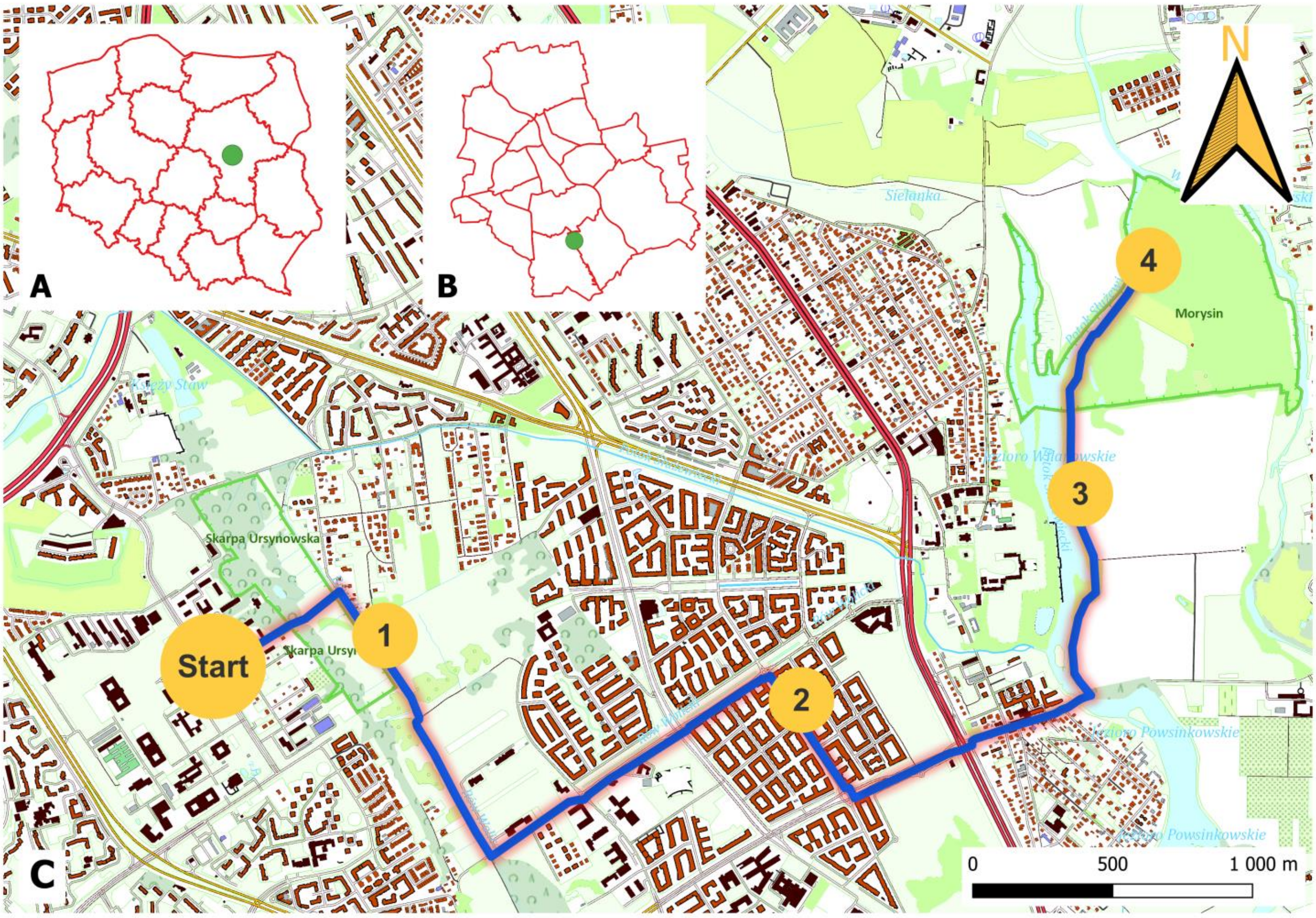

Figure 2. Map with the location of the test sites—A Poland, B—Warsaw, C—the route of the experiment.

The first observation point (Point 1, Figure 2) was a meadow located just outside the border of the Ursynów district, below the escarpment that forms the edge of the flood terrace of the Vistula River. This is an area constituting the pre-floodplain of the Vistula River, an important river on which Warsaw, the capital of Poland, is located. The walking time to this point was about 20 min. At the location, participants observed the site for 15 min. At each observation point, participants were allowed to sit, stand, or lean against trees, keeping a distance of 3 to 5 m from each other. In their field of view was an extensive grassy area with traces of secondary succession, with shrubs and trees present due to irregular hay use. After 15 min of observation, the participants filled out the psychological questionnaires once again and then walked to the third observation site—a built-up area of the so-called Wilanów Township in the Warsaw district of Wilanów (Sarmacka Street) (Point 2, Figure 2).

The walking time from Point 1 to Point 2 was about 35 min on foot. Wilanów Township was designed as a large, cohesive neighborhood structure. This urban development project has been under construction since 2002 and is the first example of an estate in Poland built on the basis of a project called "Masterplan". The main premise of the project was to create a self-contained settlement with diverse functions, based on the idea of a city within a city. The development within the township has a coherent character, although each quarter is designed by a different architect so that the buildings are not identical and monotonous. Sarmacka Street, where the experiment was carried out (location No. 2), is one of the typical streets for the Town of Wilanów; multi-family houses are separated from traffic routes by rows of hedges. There are trees along the street, quite a few perennials, and ground cover plants of various types. As in the previous location, the participants were able to observe the scene in any way they wished, keeping a distance of 3 to 5 m from each other. The exposure time was 15 min.

The participants were then asked to fill out the questionnaires again, and then, once again, they walked to point 3, which was Wilanów Lake (Point 3, Figure 2), an oxbow lake of the Vistula River. The lake has an area of 13.5 hectares. The average length of the viewing axis from the observation point was about 350 m. The banks are overgrown with a dense mass of shrubs and trees of natural origin, dominated by willow, poplar, and alder. Participants in our experiment observed the surface of the lake for 15 min in any position they chose while maintaining the required distance from each other and then completed the psychological tests again. The last observation point was the forest nature reserve "Morysin" (Point 4, Figure 2), a dense green complex with an area of 53.5 hectares, whose purpose of protection is to preserve for scientific, didactic, and historical reasons a fragment of the Vistula River valley, together with the preserved remnant of a floodplain forest, with numerous monumental trees and rich flora and fauna. There are several historic buildings from the 19th century (including the ruins of a palace, a grove, and a 'Roman' bridge).

After a 15-min exposure to the forest, the volunteers were asked to fill out the psychological questionnaires one last time. The detailed course of the research procedure is shown in Figure 3. The length of the entire route was 6.5 km.

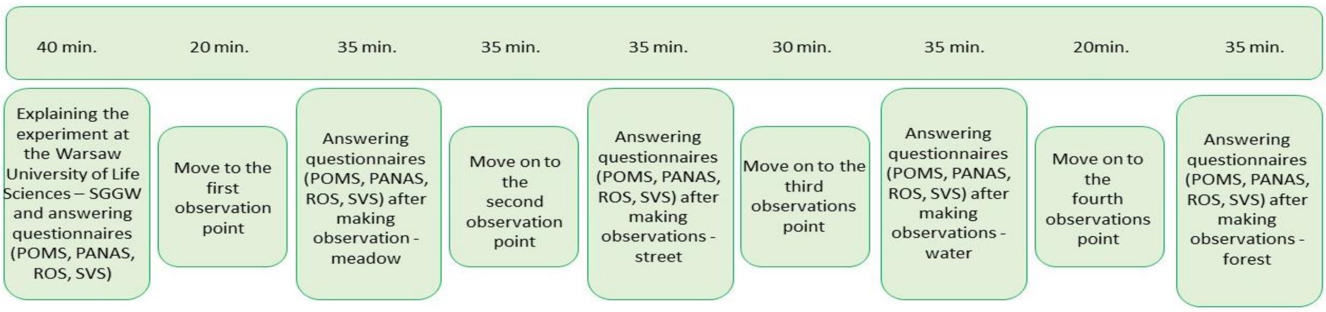

Figure 3. The detailed course of the experiment.

Sound and light levels were also measured with an iPhone 11 using the LUX Light Meter FREE and Sound Level Analyzer Lite apps. Similar apps have been used in other studies as devices that meet standards comparable to professional laboratory equipment for sound analysis by Janeczko et al. [18] and Korcz et al. [2]. Sound and light were measured four times, at each exposure point, before, 2 x during, and just after the procedure of completing the psychological test questionnaire. The averaged values of sound and light at each point of the experiment are shown in Table 1.

Table 1. Averaged values of sound and light during the experiment.

Test Site	Sound Level (dB)	Light Intensity (lx)
Classroom	54 ÷ 58	42 ÷ 74
Meadow	52 ÷ 57	9721 ÷ 12,161
Street	62 ÷ 68	4264 ÷ 11,442
Water	52 ÷ 58	6582 ÷ 10,950
Forest	51 ÷ 54	1287 ÷ 1935

The meteorological data in effect at the time of the experiment were determined using data from the nearest meteorological station—the Meteo Station of the Warsaw University of Life Sciences [41]—located at an altitude of 100 m above sea level (location: 52°09′37.37′′ N 21°03′11.92′′ E). The average daily temperature on that day was 1.9 °C (maximum 4.6 °C, minimum −0.6 °C), relative humidity 82%–96%, average cloudiness 6.4 (on the octane scale), atmospheric pressure 984 hPa, and wind speed up to 2.7 m/s.

2.3. Measurements

Four psychological questionnaires were used in the experiment:

1. The Polish version of the scale of D. Watson and L.A. Clark's positive and negative affect schedule developed by Brzozowski (PANAS) [42], consisting of 20 questions, ten of which are about positive feelings and ten about negative feelings. Each question is rated on a five-point Likert scale (1—strongly disagree to 5—strongly agree). The reliability and accuracy of the PANAS questionnaire are high, which has been confirmed in many studies [43–45].
2. The Restorative Outcome Scale (ROS), containing six items, each of which is rated by participants using a seven-point Likert scale (1—strongly disagree to 7—strongly agree), was used sequentially. This scale, developed by Korpela [32,46] and adapted into Polish by Bielinis et al. [47], was used to measure perceived reconstructive outcomes.
3. Next, the Subjective Vitality Scale (SVS) was used to assess vitality. It reflects a sense of energy, vitality, and well-being (e.g., "I feel alive and vital" or "I look forward to each new day"). The four items were rated by participants using a seven-point Likert-type scale (1—very unlikely to 7—very likely). This scale has been used in previous studies, thereby confirming its effectiveness [46,47].
4. The last scale was the Profile of Mood States (POMS) scale. The Polish adaptation of the questionnaire was developed by Dudek and Koniark [48]. The POMS is a reliable and contemporary measure of mood state, previously used to assess the impact of the forest environment on the moods of individuals [49,50]. A total mood disorder (TMD) score was also calculated using POMS data. The given tool measures six subscales of mood state: confusion or disorientation, fatigue or inertia, anger or hostility, tension or anxiety, depression or despondency, and vigor or activity. A five-point Likert scale was used for each question to rate participants' mood states from 0 (strongly disagree) to 4 (strongly agree).

2.4. Data Analysis

All raw data were stored in Excel (Microsoft, Redmond, WA, USA), and mean values and standard deviation (SD) values were calculated using this program. Further analysis was performed using STATISTICA version 13.3 (TIBCO Software Inc., Palo Alto, CA, USA)). To compare the measurements of the pre-test and post-test, a paired t-test was used. The distribution of data was similar to the normal distribution. A parametric, one-factor repeated measure ANOVA was conducted to analyze the effects of different expositions on the POMS, PANAS, ROS, and SVS scores. The psychological effects and benefits were compared in the room (a) and outdoor locations (b—forest, c—meadow, d—water, and e—street). After ANOVA, post hoc comparisons using Tukey's HSD test were conducted.

The analyses considered the results for which "$p > 0.05$" was statistically significant in both the ANOVA and post hoc tests.

3. Results

3.1. Positive and Negative Effect Schedule

Significant interactions were observed for PANAS Positive and Negative indicators (Table 2). The PANAS Positive index clearly increased with exposure to the outdoor landscape, reaching higher values when exposed to open space (the highest mean value was for water) than as a result of exposure to the tree canopy landscape, with only slightly different mean values for both forest and street exposure. Statistically significant differences occurred only between mean values from the pretest and exposure to grassland and water (Table 2). This indicator had the lowest mean value at the pretest stage. For PANAS Negative, a significant difference was observed between the mean value determined at the pretest stage and exposure to water. As a result of exposure to water, its value significantly decreased, representing the lowest average value. The strength of the impact of exposure to water compared to exposure to streets is also very clear in the case of negative feelings. Contact with water significantly reduces negative feelings, while contact with streets intensifies them.

Table 2. Means and SD of psychological measures of PANAS during the experiment (the same letters after means or no letters at all, indicate where there is no difference between means).

Measures	Classroom (Pre-Test) (a)		Forest (b)		Meadow (c)		Water (d)		Street (e)		F Ratio	Prob > F
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
PANAS Positive	2.60 cd	0.72	2.73	0.89	2.93 a	0.83	2.96 a	0.78	2.80	0.76	1.963	0.100
PANAS Negative	1.76 d	0.61	1.73	0.71	1.66	0.68	1.58 ae	0.69	1.83 d	0.68	1.1708	0.323

Letters of the alphabet indicate statistically significant values. SD—standard deviation.

3.2. Restorative Outcome Scale and Subjective Vitality Scale

ROS and SVS significantly increased after exposure to different environmental variants in the city (pre-test vs. post-test, Table 3). With regards to ROS, of the three natural environments analyzed, this coefficient had the lowest value for forest (b), while the highest value was for water. The same was true for SVS. The average value increased even in the case of exposure to urban development. The index had the highest average value for exposure to water (d), and slightly lower values for meadow (c) and forest (b).

Table 3. Means and SD of psychological measures of ROS and SVS during the experiment (marking means with small letters show that they are different to means with different letters).

Measures	Classroom (Pre-Test) (a)		Forest (b)		Meadow (c)		Water (d)		Street (e)		F Ratio	Prob > F
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
ROS	3.59 bcd	1.19	4.13 acde	1.44	4.52 ace	1.43	4.77 acd	1.34	3.82 bcd	1.22	7.405	0.000 *
SVS	3.20 bcde	1.11	3.70 ad	1.33	3.86 ae	1.38	4.01 abe	1.23	3.56 acd	1.19	3.405	0.009 *

"*" means statistically significant differences ($p < 0.01$). SD—standard deviation.

3.3. Profile of Mood States

The results of the post hoc analysis conducted after ANOVA indicate that there were statistically significant differences in the restorative impact of the analyzed environments in the three POMS subscales: fatigue (fatigue), confusion (confusion), and vigor (vigor) (Table 4). The results of post hoc analysis following ANOVA indicate that there were statistically significant differences in the restorative impact of the analyzed environments in the three POMS subscales: fatigue (fatigue), confusion (confusion), and vigor (vigor) (Table 4). A statistically significant difference was found for the Total Mood Disturbance (TMD) score on the Profile of Mood States (POMS). However, differences were also found between groups for other subscales. For example, with regard to the tension subscale, it was found that contact with water, compared to exposure to forests or streets, definitely contributes to lower tension levels. In addition, the level of anger was lower as a result of contact with water compared to, for example, a forest. It was noted that the highest average fatigue values were recorded in the study participants, even at the pre-test stage, before going into the field (Table 4). Each time, exposure to the outdoors reduced the values of the fatigue parameter. Exposure to a body of water (d) caused the greatest reduction in fatigue in the study participants (lowest mean subscale value), with only slightly weaker results from contact with an open grassy area (c). Interestingly, the reduction in the mean value of the fatigue subscale as a result of exposure to the forest was no higher than was found in contact with a built-up space.

Table 4. Means and SD of psychological measures of POMS subscales during the experiment (marking means with small letters shows that they are different to means with different letters).

Measure	Classroom (Pre-Test) (a)		Forest (b)		Mead (c)		Water (d)		Set (e)		F Ratio	Prob > F
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Tension	1.18 cd	0.56	1.14 d	0.66	0.94 a	0.61	0.89 abe	0.61	1.10 d	0.59	2.359	0.054
Depression	1.07 cde	0.74	0.86	0.73	0.72 a	0.67	0.73 a	0.68	0.80 a	0.64	2.317	0.058
Anger	0.91	0.55	1.05 d	0.73	0.86	0.57	0.76 b	0.63	0.95	0.63	1.619	0.169
Fatigue	2.14 bcde	0.93	1.50 a	0.85	1.33 a	0.85	1.24 a	0.84	1.46 a	0.83	9.346	0.000 *
Confusion	1.34 bcd	0.67	1.05 ae	0.63	1.10 a	0.61	0.91 ae	0.58	1.27 bd	0.70	3.988	0.004 *
Vigor	1.39 bcde	0.85	1.86 acd	0.88	2.13 ab	0.85	2.08 ab	0.75	2.01 a	0.71	7.519	0.000 *
TMD	49.44 bcd	32.84	37.60 ad	36.35	28.61 a	33.18	25.55 abe	32.69	35.44 ad	30.84	4.296	0.002 *

"*" denotes statistically significant differences ($p < 0.01$). SD—standard deviation.

The level of the mean value of confusion before the forest visit was also higher than that determined after the experiment, regardless of the environmental variant. This difference was also statistically significant. Here, as in the case of the "fatigue" factor, the lowest average value was recorded in the case of contact with water (d), and the highest in the case of exposure to a built-up area (e). Statistical differences were found when comparing the regenerative value of exposure to the forest and built-up areas, and water and built-up areas. In both cases, exposure to built-up areas did not have as high a regenerative benefit as exposure to either water or the forest. In the case of the "vigor" subscale, it was found that each time the mean value measuring this mood state was statistically significantly different from the mean value found in the results of exposure to forest (b), meadow (c), water (d) as well as streets (e). At the same time, the regenerative effect associated with exposure to open areas, both water and meadows, was higher than that obtained from contact with streets or forests. Considering all scales, it was found that the TMD value before walking and exposure to the outdoors was significantly higher than that determined on an exposure basis. The lowest mean value of this score was recorded for water (b). The average TMD value in the forest (b) was higher than that resulting from exposure to meadow (c) and streets (e).

4. Discussion

Previous research into the effects of outdoor recreation on lowering negative emotions and improving positive emotions does not provide conclusive results as to what characteristics the environment should have, although it does unambiguously indicate that the natural environment is superior to the urban one [18,45,51]. In our earlier study by Janeczko et al. [18], we suggested that noise levels may be responsible for this state of affairs.

The lack of sounds inherent in the city (passing cars, street bustle, streetcar traffic, etc.) makes it easier and faster to have a restorative effect on the body in parks and forests. Sounds of nature such as the sound of water or wind are generally preferred over anthropogenic sounds (traffic, recreational and industrial noise) [52,53]. Research by Frasco et al. [54] shows that the sound of water may be an important factor in why people choose a river as a recreational destination but also demonstrates that the sound of water has a relaxing effect. According to Carles et al. [55], cities are rated higher in terms of perceived pleasure when accompanied by the sounds of nature, especially water. However, it turns out that noise is not the only factor affecting the restorative power of a space. The character of urban space, especially the proportion of vegetation in it, is also important. The results of our research clearly indicate that if the urban space is well-maintained, is of high quality, and is accompanied by greenery and a lack of noise, then the restorative conditions for recreation that take place outdoors along streets and among buildings are not so different from those obtained through contact with the forest.

Considering the restorative properties of specific green spaces, it turns out that the openness of this space is of great importance for regeneration, providing greater opportunities for landscape perception. In the city, among built-up areas, perceptual opportunities are limited, unlike in green spaces. Larger open spaces are conducive to relaxation, the release of negative emotions, and for allowing the senses to calm down, which is reflected in the results of our experiment. Studies in the field of landscape perception by Jin and Wang [56], Subiza-Pérez et al. [57], and visual preference by Ebenberger and Arnberger [58], also confirm these observations. Our research directly points to the positive aspect of psychological restoration in places with water or extensive meadow space (Tables 2–4). Exposure to a landscape where water predominates allowed for a greater regenerative effect compared to exposure to a forest or meadow. The accompanying greenery of urban areas makes them more pleasant and natural to our minds [59,60]. The work of Chang and Chen [61] indicates that people living in cities who have non-direct contact with greenery tend to have faster psychological stimulation and a greater ability to quickly recover from illness. This is due to color psychology. According to Birren [62], colors such as green and blue (cool colors) reduce arousal in people while relaxing them.

Our research points to a very important aspect of water incidence in cities. In the case of the POMS scale, the “tension” subscale indicates that contact with water, compared to exposure to a forest or a disturbance, definitely contributes to lower tension levels (Table 4). It seems that the high restorativeness of open spaces can be linked to an evolutionary theory of environmental assessment by Jay Appleton, termed the view-shelter theory [63], which is based on man’s evolutionary past, in which the savanna was his natural living space. It was a combination of open spaces with groups of trees and shrubs that provided shelter and a sense of security. A corollary to this is the preference for open areas that provide distant views and control, with the simultaneous possibilities of quick and easy hiding and shelter. Researchers postulating a biological basis for the process of landscape perception believe that perception is a functional ability shaped by evolution and by conditioning a preference for environments that increase the chance of survival [64], such as environments that include a landscape with a water element. Supporters of this theory include Kaplan [65] and Ulrich [66]. In their view, the features that characterize human-friendly environments are views and shelter (key attributes of the human ancestral environment).

The results of our study lead the authors to think more about the design of urban green spaces. Despite the numerous works illustrating that a small amount of greenery in cities can bring positive psychological restoration effects for the organism [18,33,34,67], our research indicates that a very important factor is the presence of water in cities. In a way, this fits in with the concepts of a sustainable landscape [28] or the new urban agenda [31] because, due to the increasing number of people living in cities, urban greenery alone is no longer enough for sports, tourism, recreation, or socializing. In addition, the presence of water, in terms of spiritual, material, and natural benefits, turns out to be a non-essential factor for urban living (landscape multifunctionality) [68–70].

5. Limitations

We realize that our experiment needs to be repeated in subsequent seasons. We conducted the experiment in late autumn. This is a difficult time of year to conduct research on the effects of green spaces on people's well-being due to the end of the growing season in plants. Many plants stop flowering and the defoliation of trees occurs. Hammen [71] indicates that the autumnal period in Poland is a time when people may experience health problems, including mental health problems related to pressure, headaches, and drowsiness, which is largely shaped by atmospheric factors—rainfall, low-temperature air, and fog— which are associated with this time of year. Therefore, it is important and necessary to find out how green areas affect people's moods in autumn. In doing so, we would like to point out that our aim was not to compare different green spaces, which lose their green effect to a relatively similar degree and rate (deciduous forests, meadows, street greenery). In the future, we intend to conduct research on the basis of selected sites so as to prove our thesis conclusively.

Certainly, the fact that we did not control for the gender of the respondents may be a limitation. Many previous studies suggest that the environment and landscape are perceived differently by men and women. Perhaps the same is also true of the impact of green spaces on the well-being of both groups of respondents. On the other hand, statistics show that there are far more women than men among students. Thus, our group of respondents was in a way representative of the student population. However, in future research, we would like to have more control over the equal representation of both genders.

Another limitation is the fact that we conducted all the analyses on the same day. On the one hand, this may have influenced the way responses were given (some respondents may have been bored by answering the same questions several times). Besides, we could be dealing with the cumulative effect of renewal/fatigue at the last stage of the walk. We were aware of this, which is why the tests were completed at the longest possible but comparable intervals (walk time + exposure time) each time at a given exposure point. We could not take the option of randomly selecting the order of exposure precisely because of the potential for physical fatigue as a result of the increased time taken to reach a given point. In addition, it is difficult to control the varying conditions outside (temperature, wind strength, or precipitation). Hence, we decided to carry out the surveys during the same day, under similar weather conditions, and in the most optimal way possible. Exposure to a given type of greenery was not long at only 15 min, which was adequate for the autumn outdoor weather. In the future, we intend to investigate whether exposure time can make a difference when it comes to reducing fatigue and increasing the vitality of people relaxing in green spaces in the city.

6. Conclusions

The study used one built environment (the control sample) and four variants of urban greenery to measure the effects of these environments on human psychological relaxation during exposure to greenery in a randomized experiment. The psychological state, including vitality, emotions, and mood of the participants were measured before and after exposure to greenery (pre-post test). The analyses showed that exposure to different variants of urban greenery had a positive effect on participants' psychological relaxation. Most of the analyzed psychological coefficients changed significantly after exposure to a given environment compared to the pre-test, so we conclude that urban greenery has restorative powers. Urban built-up areas arranged with a lot of greenery, devoid of noise similar to natural ecosystems with a higher degree of naturalness (forest), have a positive effect on people. Our research has shown that for the improvement of the well-being of urban residents, the openness of space, providing greater perceptual opportunities, is of great importance. This observation is particularly relevant given the fact that there is a rapid development process in many cities. New residential, industrial, commercial, and other developments are appearing in places previously occupied by open areas, unused meadows, and even reservoirs. The results of our research indicate the great role of BGI in the city as an indispensable factor in maintaining the emotional balance of city residents.

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Informed Consent Statement: The study was voluntary, no consent was obtained. Based on the data received, the subject cannot be identified.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

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