



## **DEMANDS, PREFERENCES AND EXPECTATIONS OF ACADEMIC YOUTH REGARDING RECREATION IN THE FOREST**

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### ***Abstract***

The survey carried out among university students has proved that they choose the forest as a place to spend their leisure time mostly in the spring (13.2%) and in the summer (21.2%). Students declare that they relaxed in the forest even a few times a week. Apart from recreation (walking – 61.6%, picking mushrooms – 37%), they engage in health improving activities, including sport (29.4%). Young people (especially town dwellers – 40.2%) decide go to the forest to get away from everyday routine (33.9%) in search of peace and quiet surroundings (40.5%). They do not have any specific preferences for the type of forest (50.1%), they feel good in mixed forests (31.9%), however. Since the forms of activity most frequently indicated by students are hiking and biking, they notice poor infrastructure of forest areas (lack of marked hiking routes – 14.3% and bicycle lanes – 12.5%). Respondents are familiar with the condition of forests in the proximity of the place of their residence (81.6%), considering it as basically good (75.9%). However, their knowledge of the natural environment protection forms and fire protection rules is definitely insufficient.

**Keywords:** tourism, forests, needs and expectations, academic youth

## **INTRODUCTION**

In the age of fast pace of life, air pollution and increasing level of noise, the forests are considered to be peaceful and quiet places that provide people with good conditions to relax, calm down and get away from everyday stress. According to Józeficka (2009), apart from the economic one, the most important functions to be performed by forests are recreation and tourism. State owned forests are available to all citizens, and thus every person is a potential user of this national benefit and can easily access tourist infrastructure provided by forest services (accommodation, tourist routes, educational paths, sheds, tables, fire rings, vantage points and terraces, piers, parking lots and stopping places). Those who are involved in forest management create a new tourist reality providing people with the opportunity of recreation in the lap of nature (Marszałek 2010). On the one hand forests provide tourists with the opportunity to have contact with nature, on the other hand attractive and accessible woodlands encourage people to take regular physical exercise, which is crucial for tackling heart diseases and obesity. Beautiful views and sounds have also a calming effect and promote the sense of well-being. This link between trees, forests and health is well-documented, and perhaps in the future, doctors will be prescribing walks in the wood as a preventative measure against various diseases (Forest Recreation in Ireland – A Guide for Forest Owners and Managers 2006). The goal of this study is to establish whether young people consider woodlands as an attractive offer to spend leisure time and what they expect from the infrastructure of forest areas. It seems important to find out whether young people use woodlands only for relaxing activities or also for activities which have a beneficial effect on their health. Additionally, the respondents were questioned about the role of woodlands in the environment and safety regulations.

## **MATERIALS AND METHODS**

The survey was carried out among university students of the Bydgoszcz academic center, at the turn of 2016 – 2017 (XII-I). An anonymous survey consisting of 31 questions was used. Only 5 of them was of open formula and the questionnaire included the following issues:

- frequency of visits to forests in particular seasons of the year, reasons for them and recreation activities,
- preferences for the type of forest and its location,
- expectations regarding development of tourist facilities and promotion materials,
- main obstacles to be overcome in order to use woodlands for recreation and relax,

- awareness of forest threats, conditions, exploitation and safety.

The respondents were supposed to give their age, gender and address. The questionnaire was constructed so that, apart from preferences and expectations concerning recreation and relax in the woodlands, the respondents would be able to share information on their knowledge of the forest environment, especially whether they knew the importance of woodlands for the natural environment and whether their actions did not pose a threat to forest areas. Students also responded to the question whether they had ever acted to the detriment of woodlands. It was explored (using Pearson correlation coefficients  $r$ ) whether there was a relationship between responses given in this area, that is, to what degree the variables affected the overall planning for rest in the woods.

On the average, the respondents needed 15 minutes to complete the questionnaire. More difficult questions, completion of which required more intellectual effort were placed in the middle of the survey. The structure of questions did not cause special difficulties. Nevertheless, it was necessary to explain some terms, such as: 'cap of snow', 'monoculture', 'survival' and 'geocaching'. Eventually, due to different factors, 578 out of 700 questionnaires have been analyzed (4.7% were not completed at all; 8.8% were completed superficially, and 4% were not returned). The analysis also took into consideration the respondents' gender and place of residence (village or town). The studied survey is of initial character and will be completed with further analyses of university and junior and high school students' responses.

## **RESULTS AND DISCUSSION**

As many as 578 respondents took part in the survey, 53.3% of which were dwellers of towns mostly with population of above 150 thousand people (50.9%) and 20 thousand people and below (24.8%). More respondents were men (53.3%), fewer of whom were town dwellers as compared to women (49.2% vs 50.8%). On the whole, 12 persons did not say where they were from (village or town). The respondents were more willing to disclose in which province and district they lived. The most numerous group of students came from Kujawsko-Pomorskie Province (458 persons, i.e. 79.5% of all the respondents), especially from districts: Bydgoski (45.4%), Nakielski (9.2%), Toruński (7.8%), Chełmiński (4.8%) and Tucholski (4%). Young people, mostly students studying in Bydgoszcz, represented the following provinces: Pomorskie (9.4% – mainly districts: Chojnicki, Gdański, Kiwdużyński and Tczewski), Wielkopolski (4.8% – mostly from Pilecki, Wrzesiński and Czarnowsko-Trzecieński districts), Mazowieckie (2% – Sierpecki, Płocki and Gostyniński), Lubuski (1.4% – Słubicki, Gorzowski and Wschowski), Warmińsko-Mazurskie (1% – Kętrzyński and No-

womiejski), Łódzkie (0.7% – Kutnowski) and Małopolskie (Nowotarski), Podlaskie (Białostocki) and Zachodniopomorskie (Sławieński) – 0.4%. Students, represented mostly age group of 19-24 (86.3%).

The survey shows that young people like using woodlands for relax and recreation though rather not in the winter season. In this time these areas are not visited at all by 20.8% of respondents (mostly women and town dwellers), or are visited but once a year (13.1%) or one or two times in the season (20.1%). For comparison, there were fewer indications of this kind for the summer season, 2.8%, 6.3% and 8.6% respectively (tab. 1). The respondents' contact with nature increases along with the end of winter which undoubtedly results from the fact that days become longer and more sunny and nights become shorter. In the spring the number of young people who visit forests rises by 5.9%, as compared to the winter (mostly men and villagers), whereas in the summer the statistics increase by next 8%. Visiting the forest on a daily basis, especially in the summer, was declared mostly by residents of rural areas (13.3%), whose houses are located within a distance up to 400 m from the forest (40 people) and in the forest itself (12 people). However, in the autumn all the respondents (regardless of gender and place of residence) reduce the time spent in the forest to two or possibly one time (15.9%). Perhaps, it is the best time for them to do physical exercises such as picking mushrooms, as is the best season for this popular activity. The interesting thing is that a survey carried out 12 years ago by Janeczko (2005) showed that no matter what the season was, the respondents often chose to relax in woodlands, as often as once a week. The survey results provided by Sławski and Stawska (2009) are more similar to the results of the authors of this study. According to Sławski and Stawska frequency of visits to the forests was limited to a few times a week, though not in the summer and autumn, but in the summer and spring.

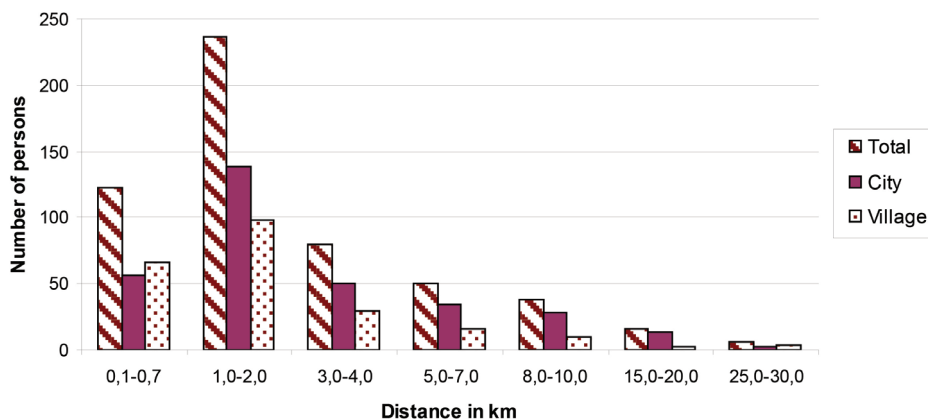
The analysis have shown that young people who like spending leisure time in woodlands do not have to travel long distances to arrive there. As mentioned before, some of them live in the proximity of woodlands (2.1%), a great majority (63.9%, i.e. 358 persons) within a distance of 0.1 km to 2 km (fig. 1). The average distance from the respondents' places of residence was 5.9 km. The main reasons for which students choose visiting the forest are: hiking (61.6%), picking mushrooms (37%) and escaping from everyday routine (33.9%).

**Table 1.** Frequency of respondents' visits to the forest in different seasons of the year (totally and according to gender and place of residence)

| Specification*                     | Winter<br>(XII – II) |             |             | Spring<br>(III – V) |             |             | Summer<br>(VI – VIII) |             |             | Autumn<br>(IX – XII) |             |             |             |             |             |             |             |             |             |             |
|------------------------------------|----------------------|-------------|-------------|---------------------|-------------|-------------|-----------------------|-------------|-------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                    | T                    | W           | M           | V                   | C           | T           | W                     | M           | V           | C                    | T           | W           | M           | V           | C           |             |             |             |             |             |
| % answers                          |                      |             |             |                     |             |             |                       |             |             |                      |             |             |             |             |             |             |             |             |             |             |
| Every day                          | 3.4                  | 2.2         | 4.5         | 4.2                 | 2.9         | 6.3         | 5.1                   | 7.1         | 7.5         | 5.3                  | 9.0         | 8.2         | 9.7         | 13.3        | 5.9         | 5.6         | 3.8         | 7.1         | 7.5         | 4.1         |
| Once a week                        | 7.3                  | 5.9         | 8.4         | 10.0                | 5.3         | 11.0        | 11.2                  | 11.0        | 10.0        | 11.8                 | 12.4        | 14.1        | 11.0        | 11.7        | 13.2        | 10.7        | 10.3        | 11.0        | 13.3        | 8.8         |
| Twice a week                       | 3.8                  | 2.2         | 5.2         | 3.3                 | 4.1         | 10.0        | 9.6                   | 10.4        | 12.5        | 8.3                  | 9.3         | 10.4        | 8.4         | 10.0        | 8.8         | 7.2         | 7.5         | 7.1         | 6.7         | 7.7         |
| A few times a week                 | 7.3                  | 6.6         | 7.8         | 12.5                | 3.5         | <b>13.2</b> | 11.2                  | <b>15.0</b> | <b>14.2</b> | <b>12.4</b>          | <b>21.2</b> | <b>19.2</b> | <b>22.7</b> | <b>18.3</b> | <b>23.0</b> | 11.4        | 8.2         | 14.3        | 11.7        | 11.2        |
| Once a month                       | 14.5                 | 15.5        | 13.6        | 12.5                | 16.0        | 10.0        | 9.6                   | 10.4        | 9.2         | 10.6                 | 9.3         | 7.5         | 11.0        | 8.4         | 10.1        | 12.2        | 11.1        | 13.0        | 10.8        | 13.2        |
| Twice a month                      | 2.8                  | 3.0         | 2.7         | 4.2                 | 1.8         | 8.0         | 5.9                   | 9.7         | 5.8         | 9.5                  | 4.2         | 2.9         | 5.3         | 5.0         | 3.5         | 6.3         | 8.2         | 4.6         | 6.7         | 5.9         |
| A few times a month                | 6.9                  | 5.9         | 7.8         | 3.3                 | 9.5         | 12.8        | <b>15.5</b>           | 10.4        | 9.2         | <b>15.4</b>          | 16.9        | <b>19.2</b> | 15.0        | 15.8        | 17.8        | 13.8        | 16.3        | 11.7        | 13.3        | 14.2        |
| Once or two times<br>in the season | 20.1                 | 21.6        | <b>18.8</b> | <b>19.2</b>         | 20.8        | 12.8        | 13.3                  | 12.4        | <b>14.2</b> | 11.8                 | 8.6         | 8.9         | 8.4         | 8.4         | 8.8         | <b>15.9</b> | <b>15.5</b> | <b>16.3</b> | <b>14.2</b> | <b>17.1</b> |
| Once a year                        | 13.1                 | 12.7        | 13.6        | 11.7                | 14.2        | 6.9         | 7.4                   | 6.5         | 6.6         | 7.2                  | 6.3         | 5.9         | 6.5         | 6.6         | 5.9         | 6.5         | 5.1         | 7.8         | 5.8         | 7.2         |
| Not at all                         | <b>20.8</b>          | <b>24.4</b> | 17.6        | 19.1                | <b>21.9</b> | 9.0         | 11.2                  | 7.1         | 10.8        | 7.7                  | 2.8         | 3.7         | 2.0         | 2.5         | 3.0         | 10.4        | 14.0        | 7.1         | 10.0        | 10.6        |
| Total                              | 578                  | 270         | 308         | 240                 | 338         | 578         | 270                   | 308         | 240         | 338                  | 578         | 270         | 308         | 240         | 338         | 578         | 270         | 308         | 240         | 338         |

\*T (Total)-responses of all respondents, W (Women)-women's responses, M (Men)-men's responses, V (Village)-responses of people who come from rural areas, C (City)-responses of town dwellers.  
Source: own study

The students who were willing to spend time in forests to minimize the stress of every day routine were mostly town dwellers (40.2%). In turn, those who came from rural areas indicated hiking (64.1%), which was consistent with the answers provided by women (72.5%). Picking mushroom was a definite choice of men (35.7%). For many respondents enjoying views (30.1%), practicing sport (29.4%), contact with nature (22.8%), frequently in the company of friends (18.3%) or family members (16.6%), were equally important. Not many people visit the forest for educational purposes (3.1%) or to participate in hunting (2.7% – 10 males from towns and 6 from rural areas). Only 9.3% of the surveyed persons indicated picking forest fruits, and 6.2% entertainment. Other reasons include: passion for photography, dog walking, barbecues and collecting fuel (6.5%).



Source: own study

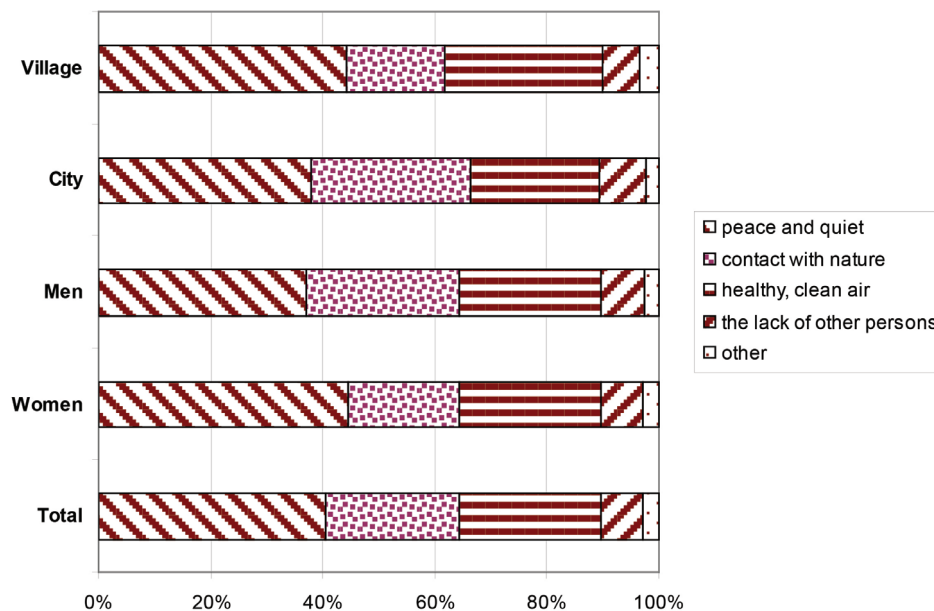
**Figure 1.** Distance of students' place of residence from woodlands

The forest is viewed by young people as an oasis of silence, therefore this aspect was indicated by them as the most appreciated one, (40.5%) (fig. 2). The next choices of students were certainly affected by the environment they live in. Town residents more frequently sought direct contact with nature (28.4%), which they lack in the place where they live. However, those who come from rural areas living in permanent contact with nature, treat forests as the source of fresh air (28.3%), positively affecting their health and well-being (women are of a similar opinion – 25.1%). Although students prefer to go to the forest in the company of other people (friends – 35.5% and family – 34.4%) it was noted that many need solitude while visiting this ecosystem (22.8%). This form of contact with nature was preferred mostly by women (19.6%), men (25.6%) – town residents (25.3%). They indicated riding a bike, hiking or hunting as their favorite

activities (25.7%, 20.8% and 10% of all men who are town dwellers indicated these activities, respectively). Moreover, 5.5% of the respondents shared that, they visited a forest in the company of their life partners or dogs. A small percentage of the respondents indicated sports groups (1.3%) and tourist groups (0.2%), that is, a group of persons who meet on a regular basis to develop their interests. According to Pearson correlation  $r$ , it can be said that no matter where they live, young people feel the need to walk in the forest in peace and quiet (0.879) as such atmosphere makes it possible for them to get away from every day duties (0.820). Mushroom picking (0.747) and practicing sport (0.543) were found to have weaker correlation links of this type, which is understandable as these activities do not always need to be accompanied by a desire to relax mentally. However, high significance of correlation coefficients was found for places designed for recreational activities. For instance, places used by young people for cycling are supposed to lie far from the places of their residence (0.998), whereas they were willing to go for walks in places located close to their residence places (0.969). Both the first and the second activity, though improve the mood and health, require different amounts of effort. Fewer respondents go walking (0.666) or cycling (0.860) in neighbouring communes.

Active forms of spending leisure time in woodlands preferred by students were hiking (36%) and biking (29.9%) (tab. 2), like in the research Skłodowski et al. (2013). These activities largely contribute to health improvement and play an important role in stress elimination. Recreation in the form of cycling was also frequently chosen in the survey carried out by Alejziak (2015) and Zawadka (2007). Men, more often than women, indicated intensive physical effort such as orienteering (7.4%), mountain climbing (1.3%) survival in extreme conditions (survival – 5.2%). Women chose significantly less intensive recreation forms (nordic walking – 3.7%, horse riding – 3.4%). Only one out of the 14 forms proposed in the questionnaire was not indicated by anyone, that is, cross-country skiing, and as ‘others’ students marked mostly running, jogging and rollerskating (2.4%). It turns out that the respondents chose to relax in the forests situated in the area of their own commune (56%) (in a close vicinity – as many as 6.6%, forests located far from the place of residence were chosen by 5%, and 32.4% – depending on the kind of activity to be practiced in a given kind of forest) and those who did not have any specific preferences for the type of forest accounted for 50.1% of the respondents. Nevertheless, the survey revealed that 31.9% of the respondents felt best in mixed forests, 10% in deciduous forests whereas 8% in coniferous forests. Looking at the gender of the respondents, it can be observed that women, though they do not pay any special attention to the type of forest (54.8%) as compared to men, were more willing to spend time in deciduous forests (11.1% vs 9%) than in coniferous ones (6.6% vs 9%). At the same time they prefer to relax in woodlands located far from the place where they live (3.5% vs 6.3%). However, depending on the relax form, they visit different types

of forests as frequently as men (32.6% vs 32.1%) and then they do not pay any special attention to the type of trees.



Source: own study

**Figure 2.** The most appreciated (major) benefit of the forest

The survey has shown that young people pay much attention to inconveniences which make their forest activities more difficult. Due to the fact that walking and cycling are the most preferred forms of recreation, they expect well marked both walking trails (282 persons, i.e. 14.3% of all respondents), and bicycle trails (246 persons, i.e. 12.5%). Respondents were of the opinion that poor trail marking is a significant obstacle to be overcome in order to practice recreation activities. However, according to them, it is trash and pollution that makes recreation in the forest less pleasant (46%), like in the survey of Kikulski (2015), though there were 20% less questions of that kind. Thus, in the opinion of students the priority is to provide forests with trash bins. Their lack was observed by as many as 298 persons (15%) (mainly males and town dwellers) (fig. 3). Undoubtedly, according to Janusz and Piszczek (2012) polluted forest areas disturb tourists to enjoy nature, decrease esthetic impression and satisfaction with relax in the forest environment. Students also focused attention to the problem of infrastructure which is very important for effective recreation and relax (12%), that is, they feel that there are not enough beauty spots, sheds with benches, fire rings and information boards. Responses of males and females in



this respect were similar. However, women more often identified the need to introduce rain and wind protection facilities and places designed for tourists to take a rest and have a meal, whereas men expect to have access to camping facilities. Drábková and Šišák (2013) provides similar observations. They think that there are too few information boards with guidelines useful for tourists to move around in the forest (bans, orders) and with descriptions of places worth seeing. Other observations included: lack of places prepared for picking up tents and not enough hunting boxes. Students were also of the opinion that the forest ecosystem should not be disrupted. Some thought that no facilities should be introduced (1.4%). The respondents were of the view that these are not only disorder, poor trail marking, poor infrastructure that disrupt good recreation but feeling unsafe when confronted with other forest users (16%). Such anxiety was characteristic of people who came from cities (19.6% vs 11.1%) and women (20.3% vs 12.3%). According to 4.8% of the respondents 'other obstacles' which make recreation in the forest less enjoyable is laziness, fear of hunters, and poor structure of roads. There were also students who did not see any difficulties in using forest areas for recreation but there were fewer of them than it was indicated by e.g. Kikulski (2015), more than 15%. Previously nobody expressed a desire to have access to information educational materials on the subject of the neighboring area. Nevertheless, as the survey shows, students reveal interest in such materials. They think that Forest Inspectorates should take on the responsibility of preparing such brochures (32.9%) or books (27%) with maps, or maps alone, best laminated (18%). Leaflets are considered to be important educational materials (12.4%) as well as map collections (6.5%). They also emphasized the role of the internet and cell phone applications in providing information (3.2%). The role of such actions would be very important, as according to analysis, respondents prefer to relax (especially during holidays) in rural areas (63.2%), and while planning vacation in 2017 they will take into consideration locations mainly with access to forest areas (57.8%). They stressed that although during the last two years they had not chosen any agritourist farms as accommodation place (68.1%), they still noticed their huge potential in raising the ecological awareness, including forest protection (59.4%). The question about agritourism was deliberately included in the questionnaire as this form of rural tourism is often associated with relaxing in the forest and the farms are located in a close vicinity of woodlands. According to Nowacka (2015), the role of forests and woodlands in this area needs to be highlighted as by increasing interest of a potential tourist in a rich regional tourist offer we boost the development of tourist and agritourist farms and companies. Recreation is an increasingly important function of the forest, delivering a broad range of benefits to society and supporting rural tourism and economic development (W. Murphy).

**Table 2.** Preferred forms of recreation activity in forests (totally and according to gender students' gender and their place of residence)

| No.                     | Preferred forms of recreation | All the respondents |      | Women  |      | Men    |      | Town dwellers |      | Village dwellers |      |
|-------------------------|-------------------------------|---------------------|------|--------|------|--------|------|---------------|------|------------------|------|
|                         |                               | number              | %    | number | %    | number | %    | number        | %    | number           | %    |
| 1.                      | Biking                        | 394                 | 29.9 | 176    | 30.0 | 218    | 29.8 | 230           | 29.0 | 164              | 31.3 |
| 2.                      | Hiking                        | 474                 | 36.0 | 238    | 40.6 | 236    | 32.3 | 278           | 35.1 | 196              | 37.4 |
| 3.                      | Gymnastics                    | 26                  | 2.0  | 10     | 1.7  | 16     | 2.2  | 14            | 1.8  | 12               | 2.3  |
| 4.                      | Fishing                       | 54                  | 4.2  | 10     | 1.7  | 44     | 6.1  | 36            | 4.5  | 18               | 3.4  |
| 5.                      | Hunting                       | 18                  | 1.3  | -      | -    | 18     | 2.5  | 10            | 1.3  | 8                | 1.6  |
| 6.                      | Geocaching                    | 16                  | 1.2  | 8      | 1.4  | 8      | 1.1  | 10            | 1.3  | 6                | 1.1  |
| 7.                      | Mountain hiking               | 100                 | 7.6  | 42     | 7.2  | 58     | 8.0  | 70            | 8.8  | 30               | 5.7  |
| 8.                      | Mountain climbing             | 18                  | 1.3  | 8      | 1.4  | 10     | 1.3  | 10            | 1.3  | 8                | 1.6  |
| 9.                      | Nordic walking                | 24                  | 1.8  | 22     | 3.7  | 2      | 0.2  | 6             | 0,7  | 18               | 3.4  |
| 10.                     | Horseriding                   | 24                  | 1.8  | 20     | 3.4  | 4      | 0.6  | 14            | 1.8  | 10               | 1.9  |
| 11.                     | Survival                      | 48                  | 3.6  | 10     | 1.7  | 38     | 5.2  | 40            | 5.1  | 8                | 1.6  |
| 12.                     | Orienteering                  | 90                  | 6.9  | 36     | 6.2  | 54     | 7.4  | 54            | 6.8  | 36               | 6.8  |
| 13.                     | Others                        | 30                  | 2.4  | 6      | 1.0  | 24     | 3.3  | 20            | 2.5  | 10               | 1.9  |
| Number of indications * |                               | 1316                | 100  | 586    | 100  | 730    | 100  | 792           | 100  | 524              | 100  |

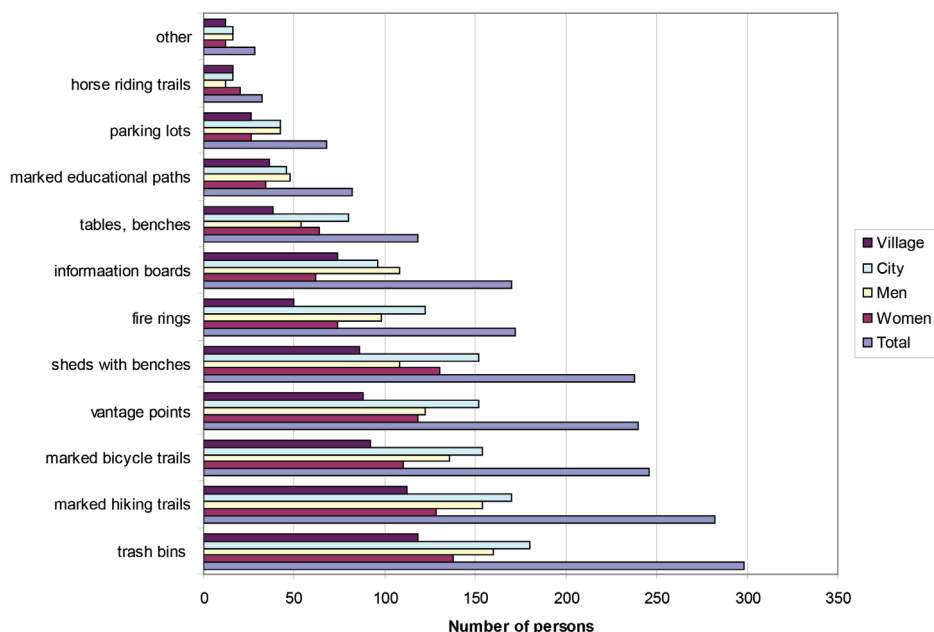
\*respondents could mark more than one form of recreation

Source: own study

The respondents' awareness of the condition of woodlands and their surroundings is really impressive, because as many as 81.6% confirmed that they were familiar with this problem. The respondents indicated that the condition of forests was good (75.9%) and very good (11%). The answer poor and very poor was given by 12.7% and 0.4% of the respondents, respectively. In turn, when they were asked to give one important function of the forest, they focused on the ecological one involving oxygen production and providing its supply to the atmosphere as well as absorbing pollen and gaseous air pollutants (51.5%). Environment protection (21.1%) was placed after the social function – relax and recreation (27.3%), thus priority was given to human needs. It should be mentioned that hardly anyone could list nature protection forms to be applied in the area of State Forests. Only 31.8% of respondents provided their responses writing only one (52.3%) out of ten 10 included in the Environment Protection Act of 16 April 2004. Two indications were given by 19.5% of the respondents, three – 18.4%, four – 5.5%, and only 8 persons gave six laws (4.3%). Most frequently the respondents indicated monuments of nature (22.5%), landscape parks (21.9%) and nature reserves (19.8%) and national parks (18.8%). A significantly smaller

group of respondents were familiar with Natura 2000 areas, animal, plant and mushroom species protection as well as ecological lands and areas of protected lands (6.9%, 6.9% 1.6% and 1.6%, respectively). Nobody indicated Landscape-Nature Protected Complex and documentation sites. Students were not sure whether their actions (behavior) could have an adverse effect on the condition of forests, and, what was surprising, 12.1% (70 persons, mostly men – 80%) confirmed that their past actions can be considered to be harmful. A significant number of the respondents declared that their individual attitude has a significant impact on the woodlands (41.2%), and 2.4% answered that their behavior definitely had no such impact. 34.7% of the respondents said ‘rather yes’, and the remaining ones said that ‘rather no’ (11.7%), or had no opinion at all (10%). Not many students participated in forest protection campaigns (40.4%), or knew how much % of the area of the country they cover (73.8% of respondents said that above 30%) and 26.2 % of the respondents indicated that woodlands cover 29.4% of the territory of Poland, which is the right answer. In fact, nobody knew what Forest Promotion Complexes are (98.3%) and what distance must be kept from the forest boundary if fire is to be used. The correct answer not shorter than 100 m was given by 22.8% and 12.1% did not even attempt to answer this question. In turn, 30.4% of respondents stated that the distance must be up to 80 m (30.3% – and 51.9% – 20 m), whereas 46.8% thought that it is 150 m or even 3 km. The surveyed students were not sure whether hunting is part of environment protection (30.8% said ‘no’ and 28% did not know); however, more respondents were familiar with the structure of horse riding paths (65.2% said that only forest rangers can determine the paths) and which activities can be considered as ‘forest exploitation’. They indicated logging – 31.2%, picking forest produce – 30%, picking plants or their parts for the needs of pharmaceutical industry – 23.2%, spruce cultivation – 13.3%, exploitation of useful minerals – 5.2%. They marked fires as the biggest threat to forests (1), which finds reflection in statistics as according to Szałata (2015), forest fire threat in Poland is the highest in Europe and 90% of them are caused by people. The other threats included: wastes (2), uncontrolled tree cutting (3), droughts (4), urbanization (5), poaching (6), air pollution (7), monoculture (8), wind (9), pests (10), tourists (11), tuft (12), fungi (13), rodents (14), ground frost (15). It can be observed that the respondents’ knowledge of forest problems was sufficient, mainly in natural environment protection forms, forestation degree of the country and fire safety. They were able to share more information on the subject of how to use forests but here again some degree of uncertainty was noted, though all benefits provided by a forest were correctly marked in the questionnaire. Young people know which factors pose a threat to trees and recognize the need to introduce substantial changes to forest areas. They are an important potential group of forest visitors who are conscious of their needs and expectations, and according to Nowacka (2015), it is necessary to define such preferences as the focus of local communities on

the forests is very high and the expectations are growing. The use of forests for recreation reached a certain level which is constantly growing, therefore, tourist-recreation space arrangement requires special attention (including the needs of the disabled). From the point of view of diversified users the forest space creation is a very important challenge. The author adds that due to a vast number of forest visitors it is necessary to consider introduction of a fee for use of forests. It is important to properly manage the forest because it provides many valuable ecosystem goods and services (Braatz et al. 2014).



Source: own study

**Figure 3.** A list of facilities expected by students in the forest.

## CONCLUSIONS

The following conclusions have been formulated on the basis of the carried out surveys:

1. Young people are involved in many recreation activities which they practice in the forest. Some of them require physical effort (mainly men), and others are less intensive and they have a therapeutic effect by providing people with calmness and escape from everyday routine.

Undoubtedly, this is a place where they can find peaceful and quiet environment (40.5%) which they lack in their lives.

2. The most available and the most common forms of recreation and very beneficial ones chosen by students were hiking (36%) and cycling (29.9%) which reflect the currently preferred health-promoting lifestyle. Modern appreciation of the beneficial effect of active recreation on human physical and mental health makes the forest an attractive place for young people to visit and practice sports (29.4%).
3. Students focus on infrastructure improvement (trail marking) and esthetics of the surroundings (elimination of wastes), and though such actions generate some costs, they are necessary to adjust forests to recreational activities, which are important not only from a social point of view but also from the point of view of ecology.
4. Students are aware of factors that pose a threat to forests but are not sure whether their own behavior, habits and actions can have a negative influence on their condition. It is quite alarming, especially considering that young people are so keen on using forest areas for recreation and sport. Undoubtedly, more education is needed in this field. Perhaps this lack of knowledge was reflected by placing 'tourists' in the 11th position on the list of threats, whereas the economic activities and natural events were placed at the top of the list.
5. The respondents' knowledge of security precautions connected with using open fire in the forest was far from being sufficient and though they were of the opinion that fire was the biggest threat, they were not able to say within what distance from the forest boundary, it is allowed to light a fire (77.2%). Therefore, it should be a priority for students to increase their knowledge in this field to avoid any risk of causing this destructive disaster.
6. Due to the modern health and ecology oriented lifestyle and free from city tumult, the expectations of young people from the forest environment are very likely to be increasing. Therefore, the forest management policy needs to be thoroughly considered and forest supervisors will have to face new challenges in order to meet constantly increasing demands and expectations of people who visit these ecosystems.

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