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Students' knowledge of hunting and game management and the main game species in Hungary

Helga Mesterházy¹, Mónika Hoschek²

¹ University of Sopron, Ferenczy János u. 5., Sopron, 9400, Hungary, mesterhazy.helga@phd.uni-sopron.hu

² University of Sopron, Erzsébet u. 9., Sopron, 9400, Hungary, hoschek.monika@uni-sopron.hu

Abstract: *Within the institutional framework, the kindergarten teacher first provides the preschool generation with knowledge, thus preparing them for primary school. It is their job to provide children with authentic knowledge. There are several topics that children have little knowledge about - such as hunting, game management, and our main game species, which would be important for the younger generation to know about, as these topics are part of our everyday lives. Village existence and socialization full of experiences presuppose general knowledge of the subject under study. In our research, we sought to answer the question of whether there is a difference between the knowledge of rural and urban pedagogical students in the field of hunting, game management, and the main game species in Hungary. The results were processed with the SPSS statistical program. We concluded that there is no difference between the knowledge of the studied groups, so the near-natural village existence does not contribute to more and more accurate knowledge in the studied area.*

Keywords: *pedagogical students; hunting; game management; comparison;*

1. Introduction

Environmental education plays a crucial role in the child's process of learning about the world, both in the family and in kindergarten. Nowadays, children spend little time outdoors, so their knowledge of the forest, forest animals, hunting, hunters, and game management is incomplete. It is time to research the topic of hunting and game management among children, parents, and teachers/students, as intermediaries with adequate knowledge are needed for the growing generation to acquire proficiency, skills, and abilities in this topic. This will also be the basis for the establishment of interest in the natural sciences from an early age, and the growing generation will have the appropriate knowledge and approach to the development of environmentally conscious living habits and the preservation of the biosphere.

The Government Decree of the Hungarian National Basic Program for Kindergarten Education (363/2012. XII.17.) Decides as follows: "1. During the activity and interest of the

child, he/she gains experience in the formal, quantitative and spatial conditions of the narrower and wider natural-human-material environment. During the discovery of reality, he develops a positive emotional relationship with nature and human creations learn to protect them and to preserve their values.” (Government Decree on the National Basic Program of Kindergarten Education, 363/2012 (XII.17.)).

Creating a positive emotional relationship requires several experiences, direct experiences, and the exact knowledge associated with it. Parents and educators should also strive to provide the child with spontaneous and organized knowledge of science in the field of hunting and game management.

As fewer and fewer children are outdoors today, this positive emotional relationship can only rarely develop with either nature or wildlife. Otherwise, as a result of inadequate knowledge of parents and the media, negative perceptions of wildlife will intensify in the growing generation.

Children can't gain direct experience with scientific phenomena within the walls of institutions in the traditional way (Holmes, 2011), on the other hand, direct physical contact in out-of-school learning settings makes the natural and cultural phenomena more authentic, more tangible, and better known, hiding the possibility of experiential learning (Liddicoat & Krasny 2014), which children can experience not only by sight and hearing but also by touch, smell, taste, and empathy (Szczepansky, Malmer, Nelson, & Dahlgren, 2007).

It is not a recent discovery that the acquisition of applicable knowledge is greatly facilitated by the acquisition of concrete, direct experience - this has been pointed out by many experts (eg Piaget, Dewey, Vygotsky) decades ago.

For years, place-based education has played a major role in environmental education, emphasizing the importance of collaborative learning and teaching in locations close to institutions (Fägerstam, 2012).

In doing so, children are given the opportunity, through personal experience, to learn about the knowledge and patterns of action necessary for local ecological and social well-being, thus contributing to the development of responsible, environmentally conscious behavior in a spirit of sustainability (Bogner, 1998).

Preschool children acquire basic knowledge / prior knowledge of many topics, so when they enter primary school, they can also use the knowledge provided by the parent and the

kindergarten teacher. According to the National Basic Program of Preschool Education, we group the various forms of activity around the following fields of education:

- poetry, storytelling;
- singing, music, singing games, children's dancing;
- drawing, painting, patterning, needlework;
- movement;
- active acquaintance with the outside world;
- gaining experience with mathematical content (363/2012 (XII.17.)).

Since 2007, environmental education has played a key role in the development goals of public educational institutions. Based on this, all public education institutions should be given a prominent role in the system of goals and tasks. Within the field of active learning about the outside world, children have the opportunity to gain experience in their narrower and wider environment, in which they also gain experience with mathematical content. During the activities, one of the main tasks of the kindergarten teacher is to support the children in developing a positive emotional relationship with nature. At the same time, education for environmentally conscious behavior takes place, embedded in play and activities, of course, which requires a kind of holistic approach not only from kindergarten teachers but also from children.

In addition to the above, the National Basic Program of Kindergarten Education emphasizes that the pedagogue equipped with expertise and competencies is primarily responsible for the learning processes. Thus, it is expected that the knowledge transfer based on experience and focusing on experience and activity will contribute to the formation of environmentally conscious behavior and the development of a responsible personality in the interest of sustainable development (Molnár, 2015). According to Péntekné, environmental education promotes the development of appropriate environmental attitudes, creates a special value system, and strengthens people's attachment to nature (Péntekné, 2000).

Today, in the 21st-century children spend their free time at home using one digital device. Due to the rushed world, children can get knowledge inside a house or apartment with the help of a TV, computer, or tablet, e.g. getting to know the animals, which hardly gives as much experience and knowledge, as if they experienced it in nature. Creeping, climbing, and perceiving create a much closer connection between the child and nature (Mesterházy, 2019).

This has eliminated the opportunity for children, parents, and educators to meet our wildlife outdoors, in the natural community of animals.

In the everyday life of kindergarten life, children actively discover nature and their environment, for which the kindergarten teachers - in a good case - convey appropriate scientific and natural knowledge during the processing of the content - recommended activities. The development of an environmentally conscious approach is an educational process that permeates the development of the whole personality, therefore, the organized transfer of knowledge in this field must be ensured from the very first age (Molnár, 2015).

Children are introduced to their immediate environment for the first time, which includes the animals that surround them. In addition to pets, wildlife is also an extremely important topic, not only for children but also for adults, as many are unaware of the names of species, the names of individuals of different sexes, or even their recognition can be a problem. Accurate knowledge of wildlife, hunting, and game management is important to educators, children, and adults because the media sometimes presents us with a distorted picture. News, hunting-related accidents, improper killings, and tradition-related misconceptions most often reach media consumers, leading to negative judgments about hunting and game management.

The importance of orientation platforms in terms of hunting topics is not negligible. A society that obtains information about social media sites can often encounter hateful, anti-hunting groups where they are inundated with inadequate knowledge. This helps them to develop a kind of negative feeling about the hunting community and hunting activities. Those who get information from credible sources, e.g. they try to find their way through nature films and magazines broadcast on television, are more likely to get near-reality information.

In recent decades, society's attention has turned to hunt and game management in a greater quantity than ever before. Hunting and wildlife management mean different things to everyone. Numerous public opinion polls confirm that lay people often have no idea that hunting and wildlife management takes place within a planned framework and is regulated by laws. This is also proven by the research I carried out in 2019, in which I measured the knowledge of the subjects of hunting, hunting-game management, and the main game species among teacher students (Mesterházy, 2019).

In the light of my results, it can be said that the students are not aware of this type of knowledge. Nevertheless, the importance of the authenticity of knowledge cannot be neglected.

The realization of environmental education outside the institutional framework is essential, as it has a deeper, more lasting effect through one's own experiences: during the experience, the child becomes a part of the activity, so his own experience leads to emotional attachment, which is very important. we want to protect what he means (Halászné Szakács, 2017).

For all these reasons, it is necessary that children do not get a misconception about the above-mentioned topics, but have authentic, accurate knowledge as soon as they enter school. The kindergarten teacher also helps with this. Our research aimed to examine whether there is a difference between the knowledge of rural and urban pedagogical students in the field of hunting, game management, and our main game species in Hungary and whether we can find similarities between the above-mentioned and full-time pedagogical students. No research has been done on this topic yet, so its significance would be to fill a gap.

2. Hypothesis

Konrad Lorenz (2014) puts it this way: “The general, increasing alienation from nature is largely to blame for the aesthetic and ethical roughening of civilized humanity.” In connection with the above ideas, the hypothesis of the presented study is as follows: Rural pedagogical students have a more diverse knowledge of the topic of hunting, game management, and our main wild species in Hungary than urban pedagogical students.

By the more diverse knowledge formulated in the hypothesis, we mean the correctness of the answers.

3. Sample and methods

The method of the study was a questionnaire survey, which was conducted in 2019 at the Benedek Elek Faculty of Pedagogy of the University of Sopron in Hungary and the Tata Community Higher Education Center. The questionnaire was completed by 173 second-year pre-school and early childhood education students, including full-time and correspondence students. 100% of the respondents were women, whose average age was 27 years. Among the students, 78 live in rural areas and 95 live in urban areas.

Students completed a paper-based questionnaire during a seminar on their own, without assistance. The data were collected anonymously.

I grouped the 13 questions according to the proposed hypothesis. The questions included both closed and open questions, and for six questions the students could mark their answers on a five-point Likert scale.

The data were nominal and ordinal, therefore non-parametric statistics were carried out using the SPSS (version 19) statistical program (cross-tabulation analysis, Mann-Whitney U-test). Because our variables were nominal, we used cross-tabulation analysis (also known as the chi-square test).

4. Results

The results are presented in the next section. The present research does not focus on the correctness of the answers, but rather on the similarity and possible differences of the answers between the two groups.

Based on our hypothesis, we believe that students living in villages, due to their close and everyday nature experience, have a more diverse knowledge of hunting, game management, and our major wildlife than urban pedagogical students, whose contact with nature can be characterized to have fewer plant and animal contact with nature, in some cases only within an organized framework, e.g. when visiting a game park.

In connection with game management, we can cover several topics: the importance of access to game meat, the arenas of information about the game, issues related to game ownership, the annual financial turnover of game management, and damages.

To prove the hypothesis, it was necessary to distinguish between rural and urban pedagogical students. The questionnaire was therefore completed by 78 rural and 95 urban students.

As shown in Figure 1, the majority of respondents were not interested in hunting-related news, with 40 of the villagers and 50 of the townspeople reporting this. Only 16 people in the village think they are interested in this kind of media content, and 10 of the townspeople are interested. Based on the cross-tabulation analysis, there is no significant difference between the responses of the two groups ($\chi^2 = 3.827$; $df = 2$; $p = 0.148$) (Fig. 1).

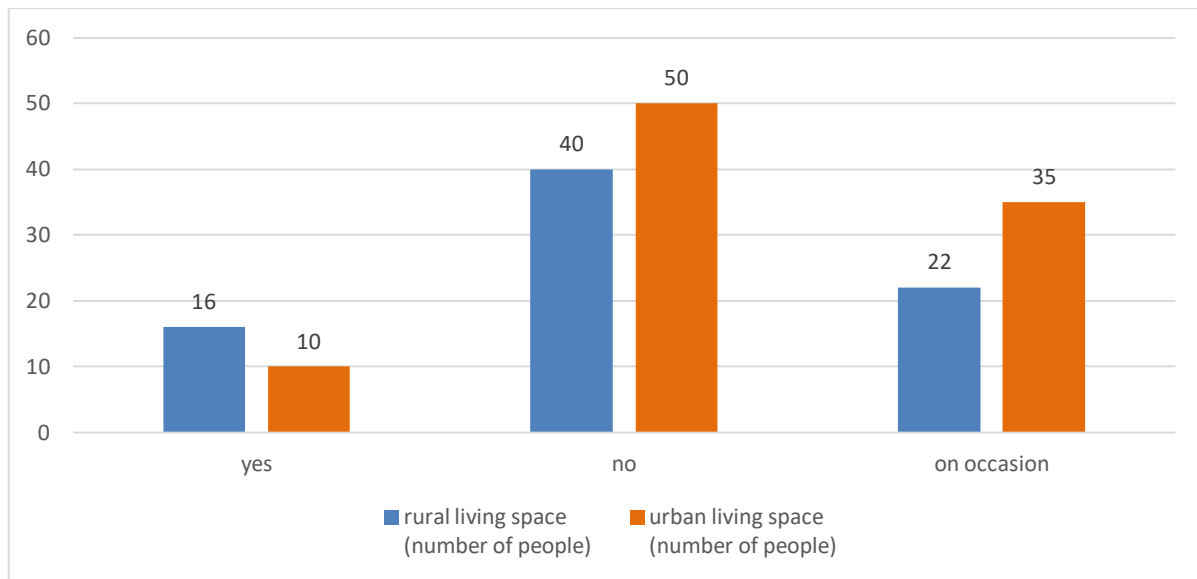


Fig. 1: The interest in hunting-related news among students coming from villages and cities

Students who mark yes or occasionally will find information from their family, friends, or acquaintances, and most of the media will use the internet for information. Students were also allowed to list specific media in an open-ended question: 22 out of 33 people wrote the Fishing and Hunting television channel, 7 people read the Nimrod Hungarian hunting newspaper, 5 people read about the National Geographic channel and 3 people from the Hungarian Hunting Journal. Out of the 33 villagers, 15 people were able to list some specific medium, and 19 out of the urban people, so there is no significant difference between the results of the two groups examined.

Who is the owner of the game in Hungary? Students could choose from five answers to this question. Based on the results, we could not detect a difference between the responses of rural and urban students, which can be seen in the following figure ($\chi^2 = 2.804$; $df = 4$; $p = 0.591$) (Fig. 2).

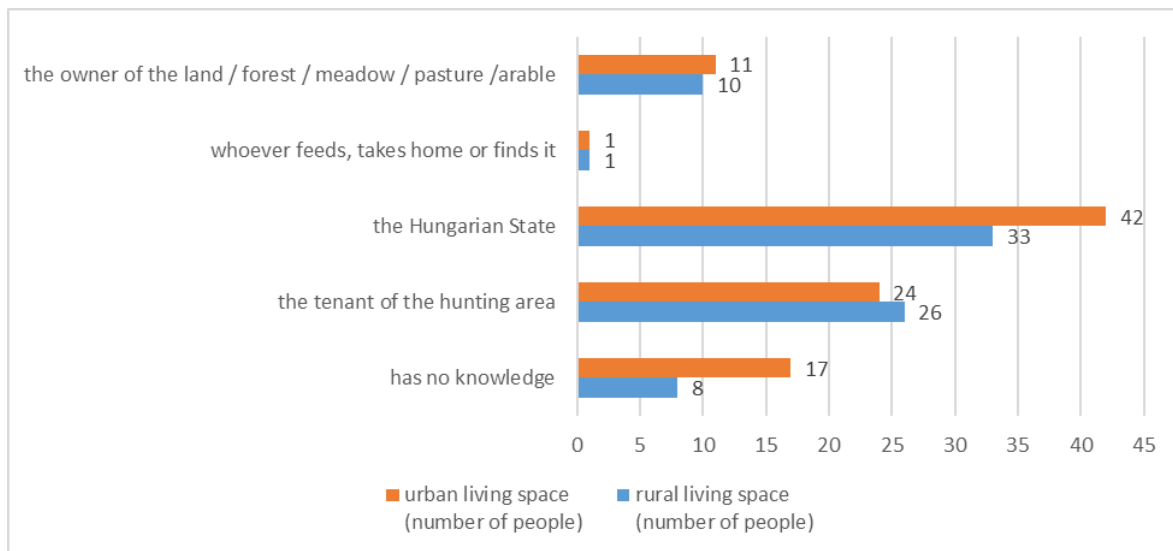


Fig. 2: According to the respondents, the owner of the wild in Hungary

The following question is similar to the previous one, but not the same: Who owns the wild after bringing it down? Based on the answers, as answers so far, we cannot detect a significant difference between the answers of those living in rural living spaces and those living in urban living spaces, which was also proved by the cross-tabulation analysis ($\chi^2 = 2.755$; $df = 4$; $p = 0.600$) (Fig. 3).

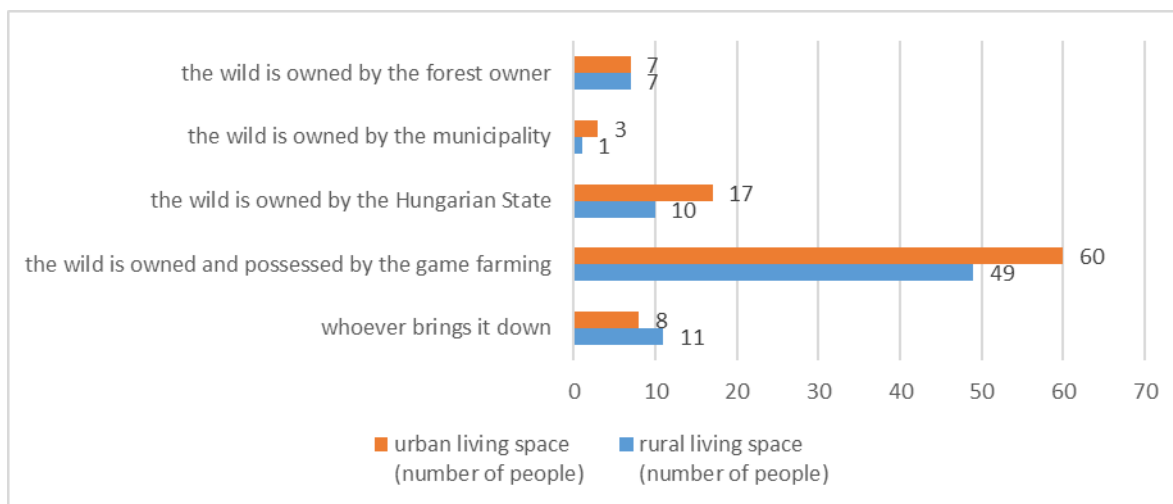


Fig. 3: According to the respondents, the owner of the game after bringing it down

When talking about game management, it is also necessary to mention the annual financial turnover. We could not find a significant difference between the answers to this question ($\chi^2 = 1.892$; $df = 4$; $p = 0.756$) (Fig. 4).

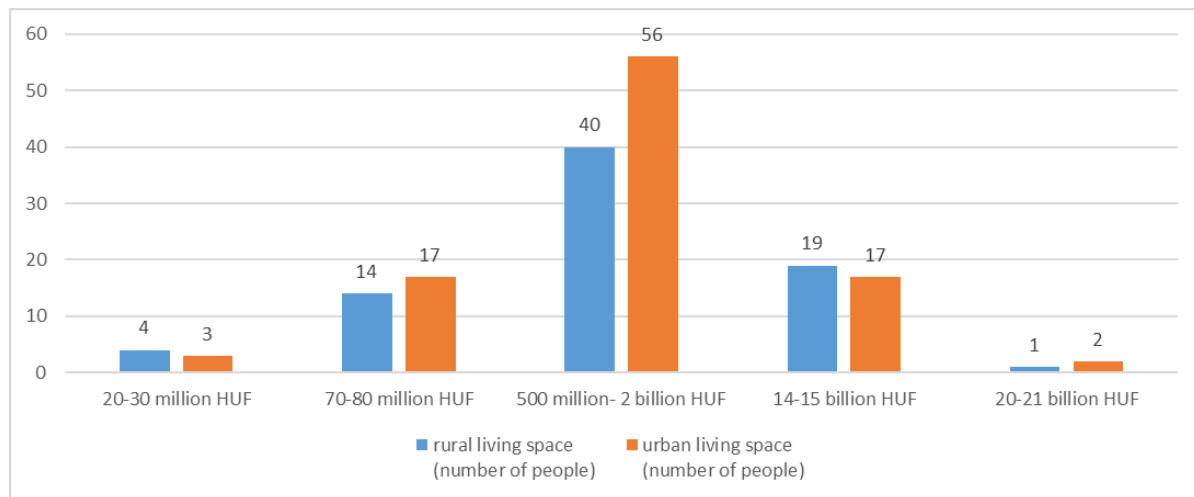


Fig. 4: According to the respondents, this is the annual financial turnover of the Hungarian game farming

The students were able to mark their answers on a five-point Likert scale for the questions about the utility of wild game, the degree of damage caused by hunting, and its necessity. The meaning of the extremes for the Likert questions was as follows: 1= to a small extent, 5= to a large extent.

Among the questions was a question about how useful they think the game is in the wild. Those living in rural living spaces gave an average of 4.09 usefulness to the wild, while those living in urban living spaces gave 4.17, i.e. there was no significant difference between the responses of those living in rural and urban living spaces ($U = 3578.0$; $p = 0.677$).

We also asked students for their opinion on the extent of the damage. For the general harm question, the villagers gave an average of 3.00 and the urban ones a score of 3.09, so we also could not detect a significant difference between the answers ($U = 3501.0$; $p = 0.508$). The same can be said for the responses on agricultural damage ($U = 3477.0$; $p = 0.408$) and on-road damage ($U = 3687.0$; $p = 0.955$).

Regarding forest damage, however, we can say that there is a significant difference between the responses of those living in the two living spaces, which is also supported by the statistics: the average of villagers is 1.94, and the average of urban dwellers is 2.38 ($U = 2754.5$; $p = 0.020$).

There was also a question about the need for hunters, to which the villagers gave an average of 4.29 and the townspeople an average of 4.13, based on which we can say that there is no difference between the answers of the two groups ($U = 3277.5$; $p = 0.153$).

The demand for the game is unbroken. It was included in the Hungarian Mintamenza program in 2014 to display game meat in kindergartens monthly. The Ministry of Agriculture is also working extremely hard to get game meat to more and more places and institutions (AM Press Office, 2018). As its importance became more and more popular, we asked pedagogical students some questions about game meat and access to game meat. It can also be seen in Fig. 5 that there is no difference between access to game meat in rural and urban living spaces. The cross-tabulation analysis confirmed the same ($\chi^2 = 0.942$; $df = 1$; $p = 0.332$), i.e. there is no significant correlation between the game meat access of the studied groups (Fig. 5).

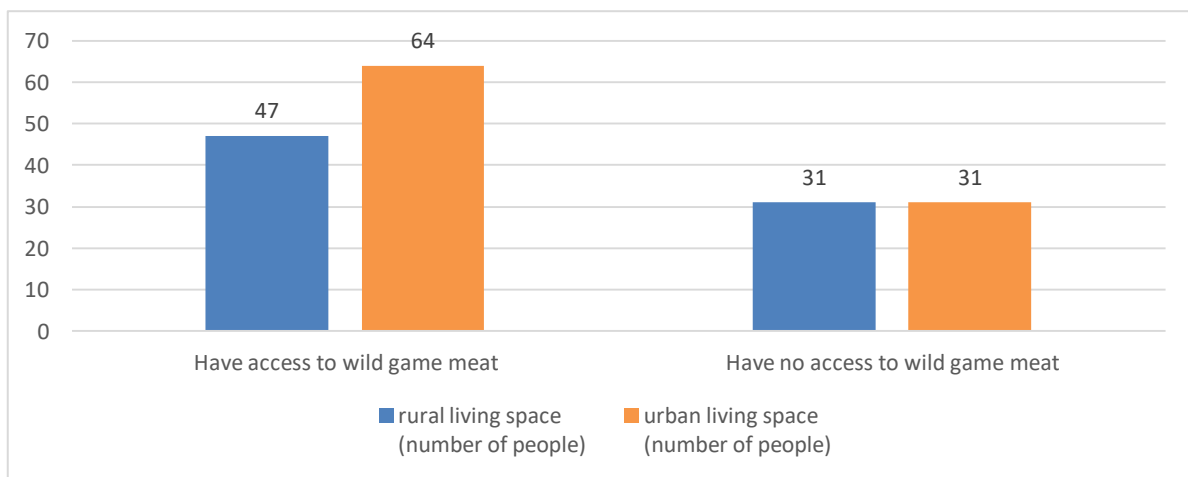


Fig.5: Access to wild game meat for pedagogy students living in rural and urban areas

In the following, we asked about the price of some processed game meat. The first of these was the price of a 1 kg boneless wild boar thigh. It can be seen in Figure 6 that we could not detect a significant difference between the responses ($\chi^2 = 3.592$; $df = 4$; $p = 0.464$) (Fig. 6).

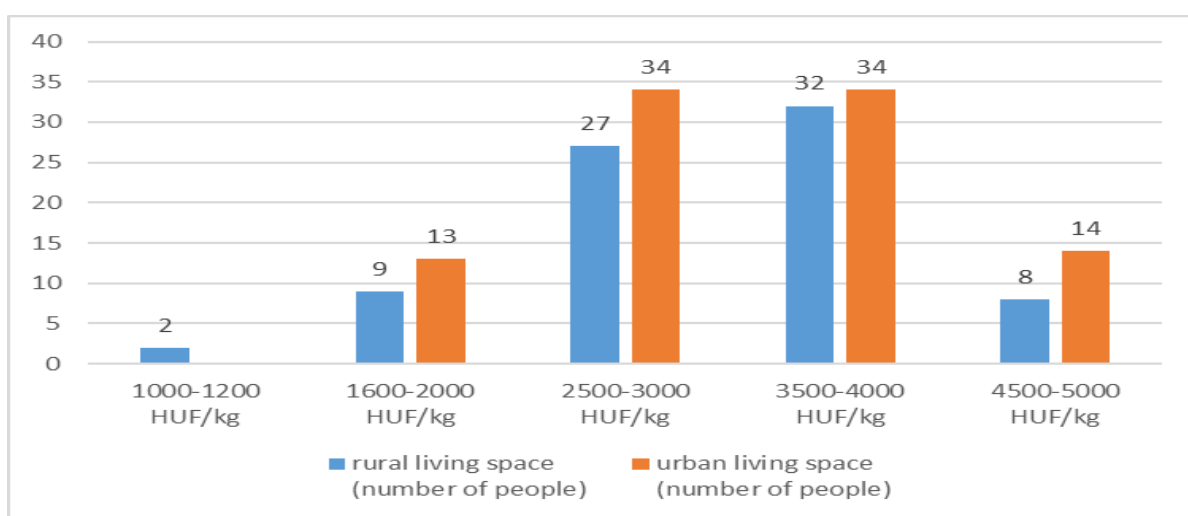


Fig. 6: According to the respondents, this is the price of 1 kg of wild boar thighs without bone

Similarly, we could not detect a difference in the questions about the price of a deer leg ($\chi^2=1.137$; $df = 3$; $p = 0.768$) and the price of a pheasant ($\chi^2=5.794$; $df = 3$; $p = 0.124$).

5. Discussion and Conclusion

In the light of our results, we can state that rural pedagogical students do not have more diverse knowledge than urban pedagogical students in the field of hunting, game management, and our main wild species, so our hypothesis has been rejected. Based on the answers, the two groups studied have the same knowledge, regardless of their living space. Based on our hypothesis, we thought that rural pedagogical students, when completing the questionnaire, are oriented to mark different answers than urban respondents, but that only happened in one case. We found a significant difference between the responses of the two groups for the Likert-scale check for forest damage, which was also confirmed by the Mann-Whitney U-test. On the other issues, this did not happen.

All in all, the pedagogical students living in the village gave the same answers to their close, everyday nature experience as their peers living in the cities, who encounter less and sometimes only an experienced nature experience. This may mean that urban pedagogical students are also more open to nature and visit a wooded area voluntarily and freely or read and watch such content due to their interests.

When setting up our hypothesis, we assumed the fact that those students who socialized in a village community spent more time outdoors, even within institutional and family frameworks than urban students, whose socialization can be characterized by less nature experience due to the location of their place of residence.

The results confirmed the fact that the student's knowledge of hunting, game management, and major game species is independent of whether they were socialized in a rural or urban environment.

The question may arise, to what extent do teachers working in two different living spaces use education outside the classroom in the institutions, if there is no difference between the answers of the two examined groups, and do families living in two separate living spaces prefer free time spent in nature?

Considering the present results, it would be worthwhile to repeat the research in 2022 as well, to reveal the possible similarities or differences between the generations Y and Z.

To continue the research, the data collection took place in March 2022, the processing is in progress.

6. Summary

The aim of our research on the main domestic wild species is to assess the knowledge of student teachers in the subject area. Knowledge of our local natural features, living creatures, and plants are indispensable to create a more sustainable world for future generations. Adequate, accurate, and authentic knowledge of the subject on the part of the teachers/student teachers helps/would help with this. In the spirit of sustainability, we can only love and protect what we know.

In the absence of this, our rising generation cannot develop a positive emotional relationship with the examined topic.

In addition to the parents, the task of the teachers is to pass on the appropriate knowledge, with which they also shape attitudes.

The National Core Curriculum 2020 brought changes to education, which also affect the subject of environmental studies. This means that the subject previously present in the 1st and 2nd grades has been canceled, and they are trying to pass on the lost knowledge by including it in the native language and literature subjects. So the actual teaching of the subject dealing with learning about our surroundings only begins in the 3rd grade. Through this change, kindergarten teachers who represent sustainable values have an even greater responsibility, as they should provide the rising generation with more authentic knowledge.

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About Authors

Helga MESTERHÁZY works as a full-time Ph.D. student at the Gyula Roth Doctoral School of Forestry and Game Management at the University of Sopron. She participates in the teaching of environmental education and sustainability courses at the University of Sopron. She completed her higher education at the Faculty of Pedagogy of Benedek Elek, University of Sopron, as a kindergarten teacher and then as a human resource consultant. Her field of research is hunting and game management in kindergarten and lower public education.

Mónika HOSCHEK works as an associate professor at the Alexandre Lamfalussy Faculty of Economics at the University of Sopron. She is the head of the Institute of Economics and International Relations. She is also a lecturer in Statistics. Her field of research is climate change and active tourism.