


Exploring the background conditions for playing sports of pre-school children



Abstract

The objective of kindergarten education is to satisfy the psychosomatic needs of preschoolers. It is important that children are provided with the opportunity to be physically active. In the research, authors were interested in whether the necessary infrastructure and other requirements were provided to achieve this goal. The survey was conducted in the spring of 2018 in the kindergartens of Debrecen and Hajdú-Bihar County. Authors were keen to find out how many and what size gyms were available for children. The analyses how much time children spent in the open air and asked what other afternoon sessions were held in kindergartens. We need to teach our children the love of physical activity and kindergartens play a decisive role in this process. The survey reveals that there are big differences in the relevant infrastructure; however, institutions involved in the present study seek to meet the children's need for physical activity according to their capabilities.

Keywords: kindergarten, children, physical activity, infrastructure

INTRODUCTION

The increasingly widespread phenomenon of childhood obesity – in Hungary, about 20% of children under the age of 15 can be considered overweight (KSH, 2015) – has drawn attention to the analysis of the physical activity of children of this age. Physical activity in early childhood serves not only healthy physical development but is also an essential prerequisite for many other physiological and psychosocial changes (Strong et al., 2005). Nonetheless, studies and guidelines based on these studies initially addressed the issue of school-age children, for reasons such as the lack of studies on the physical activity of younger children, and the assumption that children of pre-school age participate in a sufficient amount of physical activity. However, in the light of the latest research, this is unlikely to be the case.

The year of construction of kindergartens varies between 1845 and 2015. Looking at the population data of the Hungarian Central Statistical Office database and having examined the period between the end of World War II and 1991 it can be stated that there were 4 “peaks” of live births. After the war, the

number of births increased and after some decline, it almost reached the level of the 1930s by 1954. This is probably due to the aggressive population policy of the Ratkó campaign, which persecuted abortion and trying to encourage the willingness to have children by tax on childlessness (Mink, 1991). However, the illegality of the abortion and the tax on childlessness were abolished in 1956. Consequently, and as a result of the massive employment of women, the number of live births began to decline significantly, which only started to increase after the record-low numbers of 1962 (130,053 persons/year) till 1968, followed by some stagnation in 1975 (194,240 persons per year). Thereafter a continuous decrease may be observed. Overall, it can be stated that – having taken the pre-school age into account – the dates of establishing kindergartens follows the “culmination” of live births.

In Government Decree 363/2012. (XII.17.) on the National Program of Kindergarten Education the Hungarian Government has stipulated that the objective of pre-school education is to satisfy the psychosomatic needs of pre-school children. Within this framework, the Decree emphasizes the importance of education concerning healthy lifestyle in the first place. Health promoting activities (i.e. games and exercises involving physical activity adjusted to the individual level of development of children) also play an important role in this process.

The increased degree of physical activity improves the oxygen supply to the brain and thereby stimulates its functioning, thus reducing the likelihood of developing possible learning disabilities (Komjáti, 2016). It is therefore essential to ensure that children have the possibility to participate in physical activities of all sorts.

In our research, we wanted to observe whether suitable infrastructure and other conditions are ensured for kindergartens.

1. LITERATURE BACKGROUND

Numerous studies indicate that kindergartens play a key role in satisfying children’s need for physical activity (Finn et al., 2002; Venetsanou-Kambas, 2010). It is also important to emphasize that at this age the definition of physical activity requires a completely different approach than in adulthood or even in the case of older children (Balogh et al., 2015). The motor development of children of 3-5 years does not primarily happen through or may be improved by participating in classical structured-movement-based activities (such as fitness, aerobics, etc.), but through and by playing games. According to international literature, every activity is considered a game that is “enjoyable” and pursued for the sake of the child’s self-satisfaction (Burdette-Whitaker, 2005; Timmons et al., 2007). It is also important to note that at this age motor activity is typically not characterized by continuous moderate or intensive effort, but rather by short activity periods that are followed by longer periods of inactivity (Goodway et al., 2003; American Academy of Pediatrics, 1992). It must also be stressed that according to the Guidelines for the Physical Activity of Pre-School Children issued by the

American National Sports and Physical Education (2002) non-structured physical activity is at least as important as structured; moreover, the former must play a significantly greater role in daily physical activity. In this relation, it is clear that outdoor physical activity in this age group is also an essential part of appropriate development (Timmons et al., 2007).

When compiling the kindergarten program for physical activity, the goal should be to preserve the natural motives of children to play and enjoy physical activity, as it serves not only the development of physical, but also intellectual and social skills (Király-Szakály, 2011). Children's individual needs for physical activity differ, some of them are more relaxed, some more active, but we need to be aware in each and every case that motion development (whether it be free play or planned classes) remains a positive experience, that contributes to the development of physical, mental, psychological, and social abilities when offered regularly (Williams et al., 2008; Gaál, 2010; Csányi, 2012) and helps integrate physical activity spontaneously into everyday life, thus affecting adulthood. To be able to meet the relatively high demands concerning physical activity of pre-school children the relevant requirements need to be met (Government Decree on the National Program of Kindergarten Education, 2012), since it is possible through this to have children learn their own needs, abilities, and limitations and acquire self-discipline and endurance (Farmosi, 2011; Koltói, 2013).

In the process of developing adult habits, childhood plays an extremely important and fundamental role (Telama et al., 2005; Németh-Költő, 2014). Parents have a decisive influence on physical activity pursued both on a competitive level and during free time. This can be observed in parental behavior – serving as a model – encouraging and persuading the child to be physically active, as well as organizing physical activity sessions, including jointly pursued sports activities and the solving of the issue of transportation (Edwardson-Gorely, 2010).

Teaching the importance of active living should therefore be started in childhood, and in this context, physical education introduced in a phasing out system as part of the Act on Public Education in 2012 is of great importance. Most European countries have a strategy for teaching school sports (European Commission, 2011). The EU also urged the Member States to adopt a national plan for sports education in order to make society aware that physical activity not only has positive health effects (EU physical activity guidelines, 2008), but also contributes to the improvement of learning outcomes (Hawkins-Mulkey, 2005; Carlson et al., 2008; Pfeifer-Cornelißen, 2010).

2. MATERIALS AND METHODS

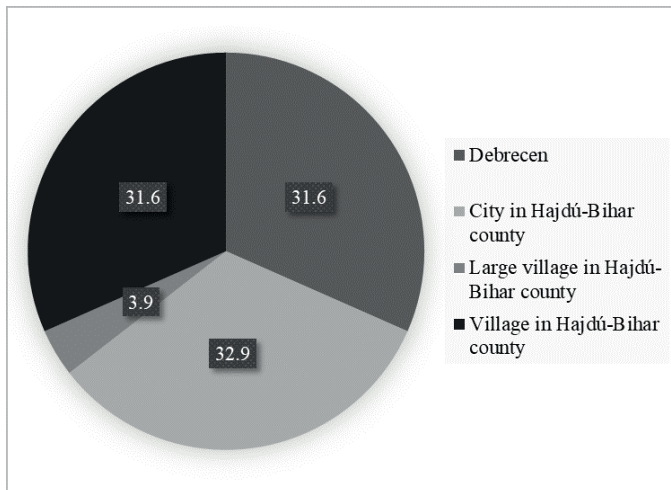
Our survey was conducted in the spring of 2018 in the form of a questionnaire-based telephone interview. We compared the kindergartens of Hajdú-Bihar County with the kindergartens of the local government and foundations in Debrecen.

Hajdú-Bihar county is the fourth largest county in Hungary, with 5.7% of the country's population living there. It ranks 3rd in the country in terms of population aged 0-14 years (79 373 people). The county seat Debrecen is the second largest and second most populous city in Hungary (KSH, 2018)

In the course of our research, we were trying to find out how many and what size gymnasiums are available in each kindergarten, when they were built, and how much time children spend in the open air. We also asked whether the kindergarten has its own swimming pool and whether it is possible to swim in in an organized form as well as what kind of sessions are held in the afternoons. Data was processed using the EvaSys software (VSL Inc., Hungary; <http://www.vsl.hu>).

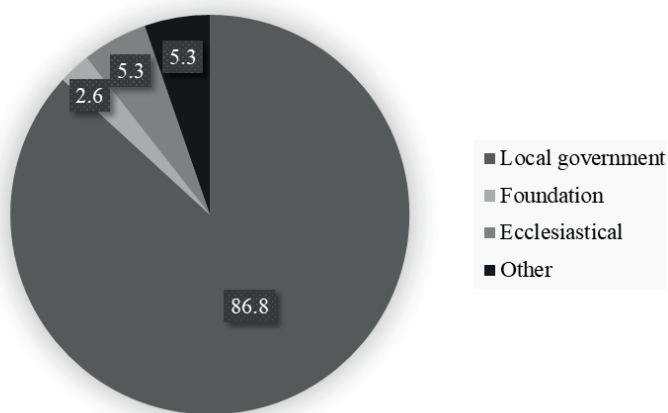
One third of the 152 institutions surveyed was in Debrecen, another one third in the towns of Hajdú-Bihar County, while the rest of them were in smaller settlements of Hajdú-Bihar county (Figure 1). The survey can be considered representative, as more than 90% of the county's kindergartens have been involved. The vast majority of interviewed institutions (86.8%) were owned and maintained by the local government, but some of them were owned by foundations, the church, and other institutions (Figure 2).

Figure 1 Distribution of settlements, n=152, %



Source: Own figure

Figure 2 Distribution of ownership, n=152, %

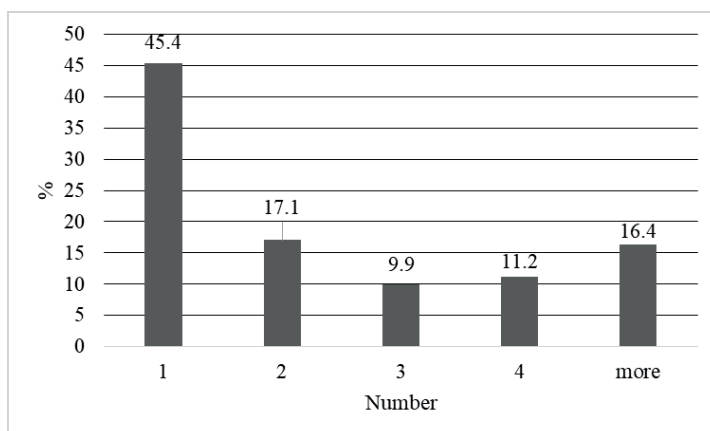


Source: Own figure

3. RESULTS

45.4% of kindergartens has 1 site, but 16.4% have more than 4 sites (Figure 3). 50% of Debrecen-based institutions operate on one site and 29% have 2 sites. In the case of cities, the multiple-site-based institutions are typical, since 42% of them have more than 4 sites.

Figure 3 Distribution of the number of sites, n=152

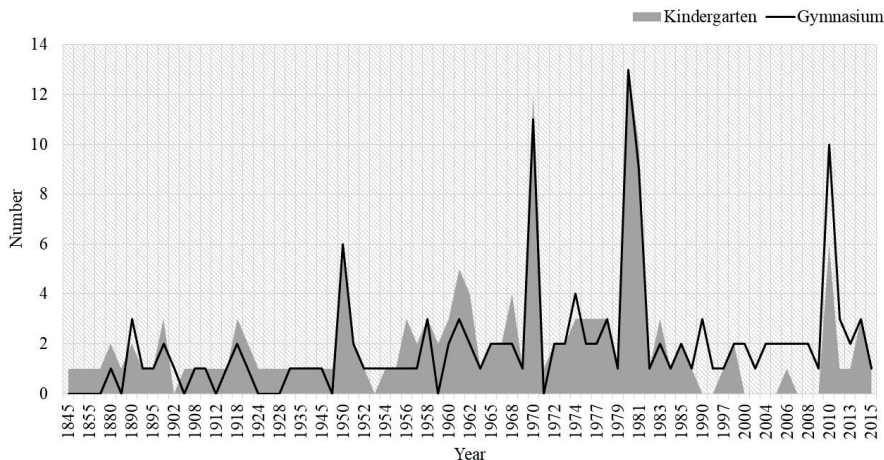


Source: Own figure

The next issue of the questionnaire concerned the date of construction of the kindergarten. Based on this the institutions were established between 1845 and 2015, varying widely. Most of the institutions were established during the 1950s and then in the 1970s and 1980s, and some around 2010. We also asked about the date of construction of the gymnasiums. The years of construction of kindergartens and gymnasiums is shown in a joint chart (Figure 4).

In 115 cases, the gymnasium was built in the same year as the kindergarten.

Figure 4 Date of construction (kindergarten and gymnasium), n=152

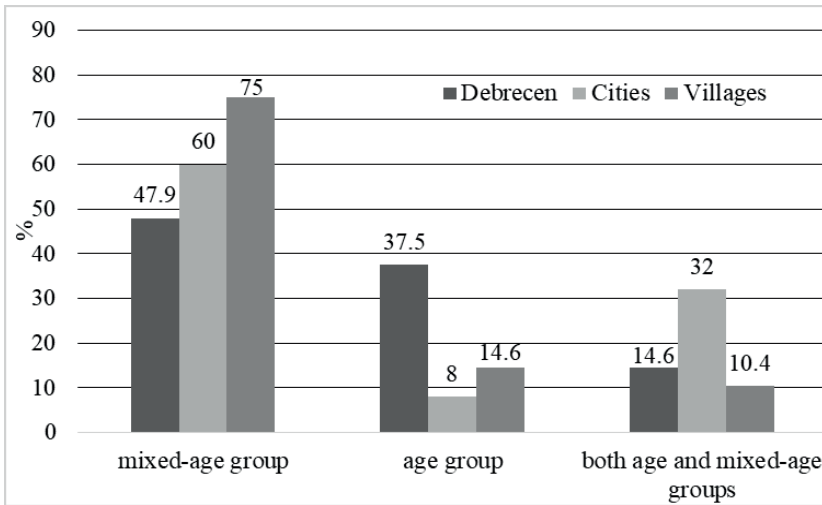


Source: Own figure

61.8% of kindergartens operate with mixed-age groups and only 19.1% of them have single age groups solely, with the remaining 19.1% operating with both mixed-age and single age groups.

The settlement-based data show that mixed-age groups (75%) are the most typical in the villages, while in Debrecen there is a large proportion of age groups as well (Figure 5).

Figure 5 Distribution of the types of groups, n=152



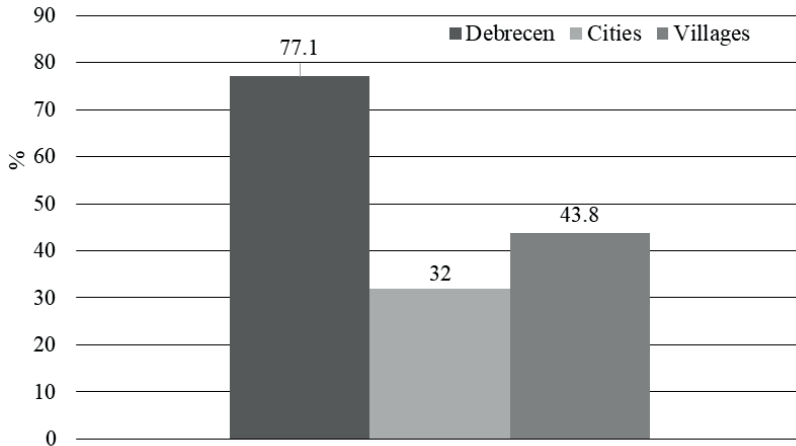
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42.1% of kindergartens have their P.E. classes in sport rooms (rooms that are not necessarily equipped as a gym but are dedicated to sport activities), 29.6% of them in the gym (out of which 2.6% rent the place), while 27.6% of them rearrange the class room for this purpose. About one fifth (20.4%) of these rooms have a mirrored wall surface.

Typically, the kindergartens in Debrecen have a dedicated sports court (77.1%), but at least one third of kindergartens in smaller towns and other settlements also have one (Figure 6).

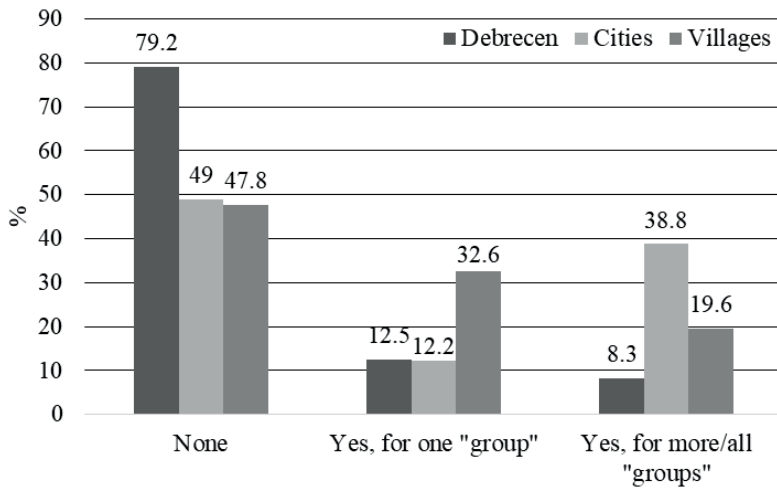
A covered terrace may only be found in 42% of the kindergartens, and out of these only 21.5% (typically urban institutions) say that their terrace is large enough to suit some of the groups or every one of them (Figure 7). It is interesting to note that in the case of kindergartens in Debrecen, the covered terrace is not typical. This is particularly surprising from the point of view, as we will point out later, that it is typical in Debrecen that children spend a lot of time outdoors.

Figure 6 Institutions with dedicated sports courts, n=152, %



Source: Own figure

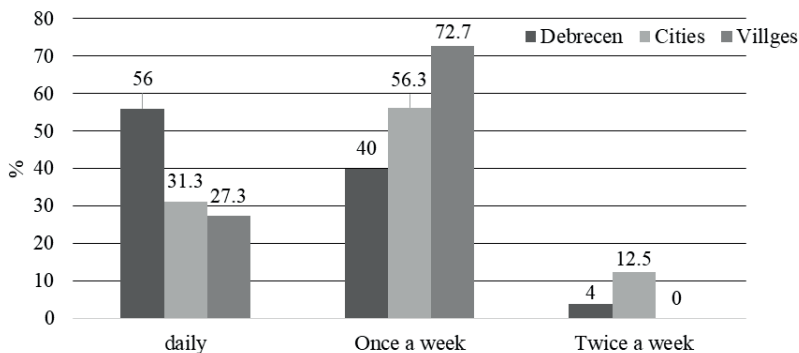
Figure 7 Distribution of the presence of a covered terrace, n=152



Source: Own figure

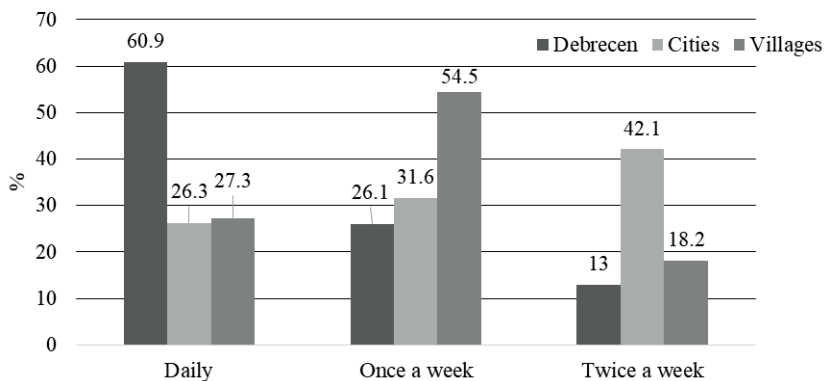
When examining the frequency of sporting activities, it can be stated that they usually take place in institutions 1–2 times per day or per week. While in Debrecen there is a daily regularity, in the villages there is a weekly 1 occasion. Although there are small differences between the different age groups, they do not show a clear trend. (In the case of cities, small group classes take place once a week that increases to two per week later on) (Figure 8, 9, 10, 11).

Figure 8 Distribution of P. E. classes in „small groups”, n=152



Source: Own figure

Figure 9 Distribution of P. E. classes in „middle groups”, n=152



Source: Own figure

Figure 10 Distribution of P. E. classes in „large groups”, n=152

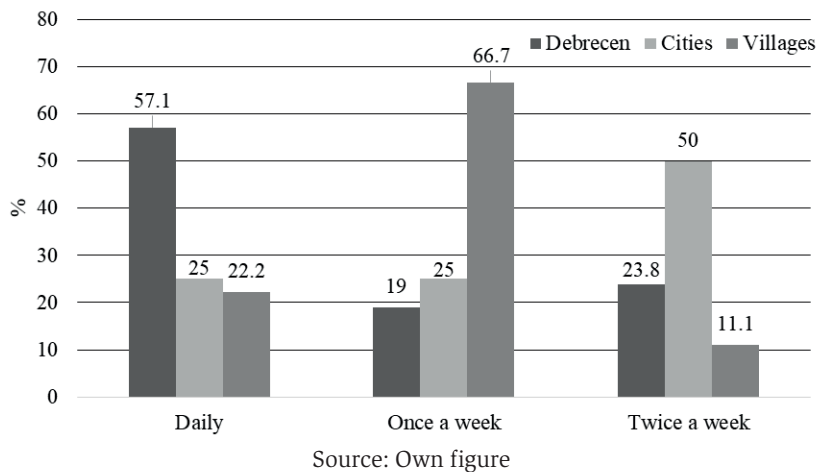
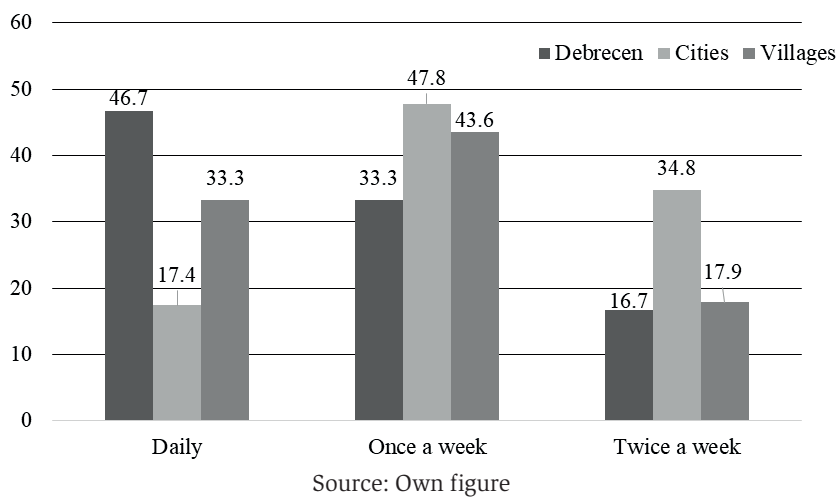
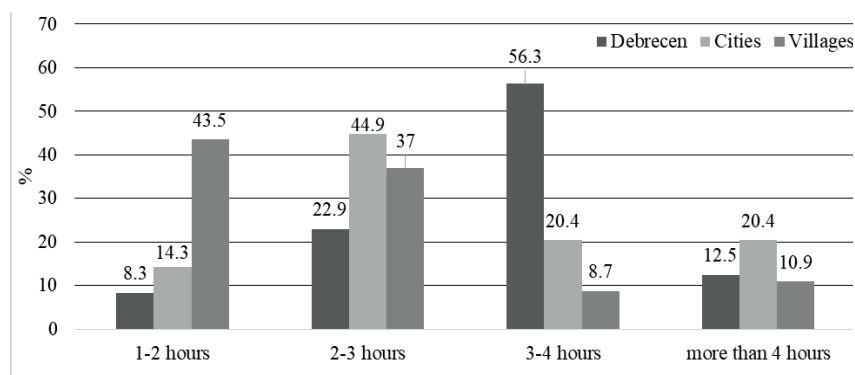


Figure 11 Distribution of P. E. classes in „mixed group”, n=152



The daily time spent outdoors in good weather shows a typical settlement-structure-based distribution. While in Debrecen, 3-4 hours a day are dominant, in most villages children spend only 1-2 hours in the courtyard. It is interesting to note that cities are characterized by a time of 2-3 hours between the two extreme values. Although we do not have direct data for this, it can be assumed that kindergartens take into account the home habits of children when determining the time spent outdoors (Figure 12).

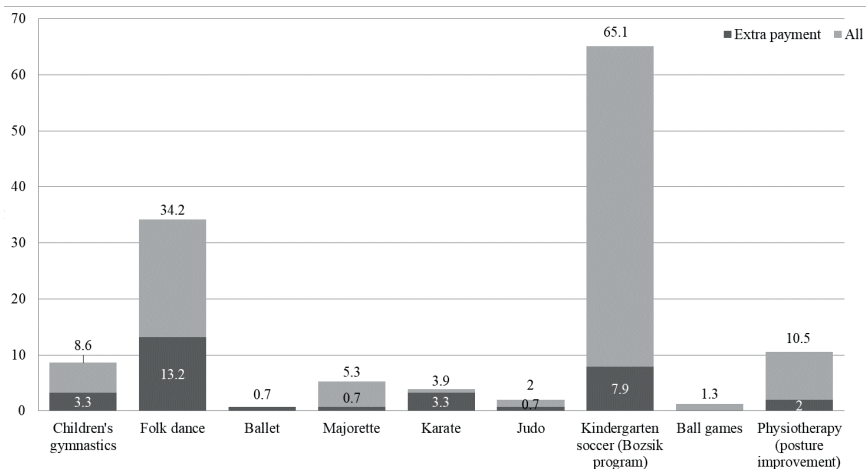
Figure 12 Distribution of the time spent outdoors in good weather, daily, n=152, %



Source: Own figure

Extra sporting activities are offered in 86.6% of kindergartens, most often soccer (65.1%), folk dance (34.2%) and corrective gymnastics (10.5%) (Figure 13). Some of these are fee-paying (typically in Debrecen).

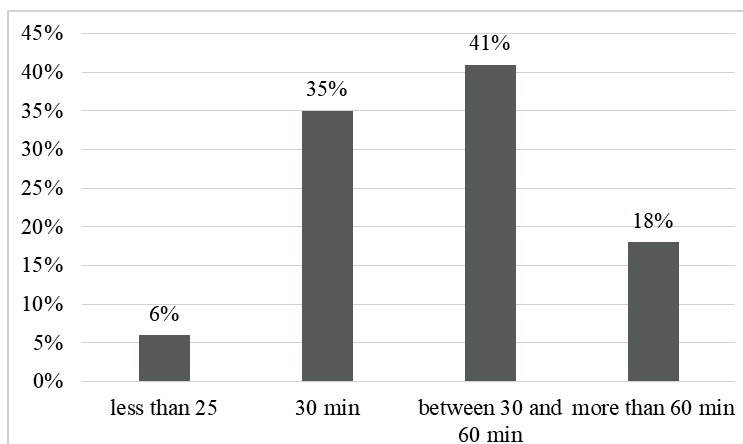
Figure 13 Distribution of specialized P. E. classes offered by the institutions (%). Those that require extra payment are highlighted - note that more than one answer could be named for this question, n=152



Source: Own figure

Classes are typically (35%) 30-minute-long (Figure 14). 41% of the classes are 30-60 minutes long, while only 18% of them are longer than 60 minutes, due to the fact that children are not able to concentrate or focus on one thing for a longer period of time at this age.

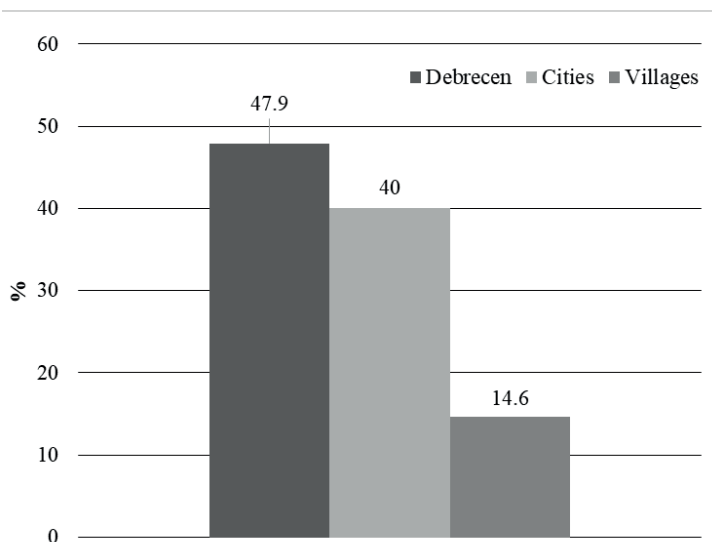
Figure 14 Lengths of specialized P. E. classes, n=152



Source: Own figure

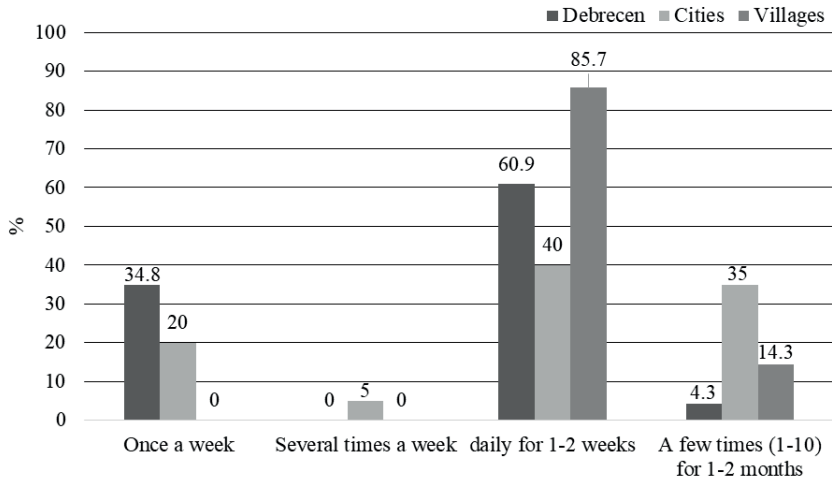
Kindergartens do not have their own swimming pool, but 32.9% organize swimming lessons with different frequencies (Figure 15). The most typical format is attending the swimming pool every day for a period of 1-2 weeks. It should be noted that in 24% of kindergartens swimming lessons once a week are part of the kindergarten program (Figure 16). At the same time, this service is fee-paying in 92% of the institutions. Again, in some parts of the cities and villages – in a larger extent in the case of the latter – the local government supports the swimming lessons by means of tenders, thus free of charge (Figure 17).

Figure 15 Distribution of the number of institutions that offer organized swimming classes, n=152, %



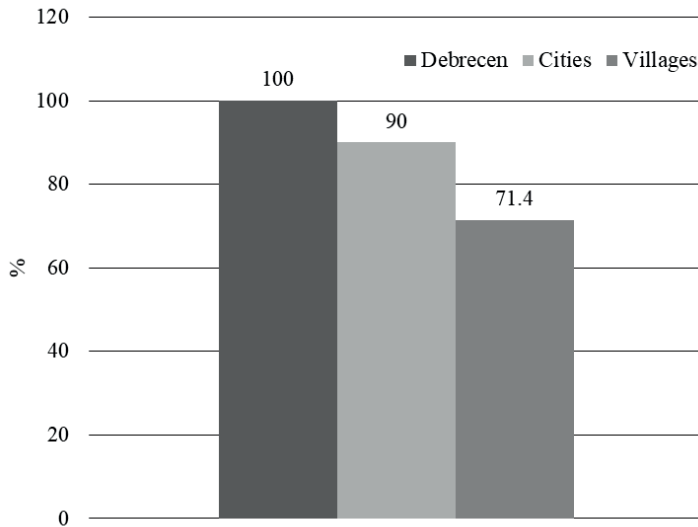
Source: Own figure

Figure 16 Distribution of the frequency of swimming classes, n=152, %



Source: Own figure

Figure 17 Percentage of swimming classes that require extra payment, n=152, %



Source: Own compilation

4. CONCLUSION

If we want our children to be healthy and active, we must teach them the love of sports and encourage them to follow a healthy way of life, in which kindergartens also play an important role, due to our children spending most of their time on weekdays there.

In our survey, we visited 152 kindergartens in Hajdú-Bihar county of Hungary. The institutions were evenly distributed among Debrecen and the towns and small settlements of Hajdú-Bihar county. About one fifth of the institutions operate with single age groups only, all the others operate either with age and mixed-age groups or mixed-age groups solely. Education in a mixed group has many advantages: children become more susceptible to tolerance, their ability to empathize along with their helping and caring attitudes developing greatly. The older ones look after the smaller ones; however, at the same time the smaller ones become independent, more dexterous and attracted by the activities of the bigger ones sooner. In the homogeneous age group, however, it is easier to plan and define the level of expectations, as the child is surrounded by companions with knowledge and abilities appropriate to his / her age.

In more than one quarter of kindergartens there is no gym or gymnasium, so the class room needs to be rearranged if a sports class is to take place. Nearly half of the kindergartens have a dedicated sports court, but only 21.5% of them have a covered terrace. This infrastructure capacity, therefore, “forces” 27.6% of the kindergartens to offer gymnastics in a classroom during rainy or cold weather.

A wide range of extra sporting activities can be observed in the institutions of the region with soccer, folk dance and posture improvement being the most common, but karate, skating, and majorette classes were also mentioned in this relation. It was interesting to note that musical and artistic development, as well as foreign language classes show up in many places in addition to/instead of sports classes in this young age.

We dealt with pre-school swimming lessons as a separate issue. It can be stated that 32.9% of kindergartens are compensated for providing swimming lessons with a diverse frequency.

It can be established that development in this area is also necessary if we want to reach the goal laid down in the National Sports Strategy (2007), that is if we want every child to learn to swim. One of our previous surveys (Balatoni et al., 2018) have revealed that parents (kindergarten, elementary school) expect public education institutions to solve this issue.

Our survey highlights the fact that although there are large differences in the availability of kindergarten infrastructure necessary for physical activity, the institutions involved in the present study seek to meet the children’s need for sports.

In order to have health education achieved as a widespread kindergarten pedagogical objective and to reduce the differences between certain areas in a substantial way the development of health-conscious behaviour among young

people requires more attention. Developing and implementing a progressive and conscious strategy that takes local conditions into account, would be beneficial both at national and local levels. In order to have a less developed region catch up in terms of sports infrastructure and health behaviour, funding sources, governmental, municipal and employer actions are also needed.

Pre-school teachers should be given the opportunity to prepare themselves adequately in order to utilize their knowledge and practical experience to develop the skills of children in accordance with their individual abilities, bearing in mind that physical activity should be registered as a positive experience.

ACKNOWLEDGEMENT

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Legislation:

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- 65/2007. (VI. 27.) OGY határozat a Sport XXI. Nemzeti Sportstratégiáról. [OGY resolution on the XXI National Sport Strategy.]