

Theses of doctoral (PhD) dissertation

**REGIONAL EXAMINATION OF THE LEISURE SPORT
ACTIVITY, PREFERENCES AND ECONOMIC ASPECTS OF
FAMILIES**

Herpainé Lakó Judit

Supervisor:

Dr. habil. Müller Anetta

senior lecturer



UNIVERSITY OF DEBRECEN

Károly Ihrig Doctoral School in Business Economics and Organizational
Studies

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1. INTRODUCTION OF THE BACKGROUND, AIM AND RESEARCH HYPOTHESES OF THE RESEARCH

In the developed countries of the world free time of the population is constantly rising and leisure appears as a "value". However, the quality of spending the free time is very different in various countries around the world. From various statistics and research it is apparent that in countries where it has been recognized that the preservation of health is not only the interest and responsibility of the individual, but also an important priority at the state level, they managed to effect positive long-term changes through supporting a healthy way of life and various means of prevention.

Owing to the impact of national economy work time and productive work of active earners increased, the number of sick days and expenses decreased and there has been a decrease in public and private expenditures for healing (JUNEAU et al., 2015). Prevention has come to the forefront in these countries and the state has also played an important role in promoting and supporting healthy lifestyle and leisure sports.

What justifies my choice of topic is the extremely poor state of health of the Hungarian population. This is primarily due to unhealthy, improper lifestyles, poor health culture (incomplete knowledge of body culture, unhealthy eating, smoking, neglecting screening tests, self-destructive behaviour). In addition, various negative social processes, environmental hazards and inherited qualities also play a significant role.

Physical inactivity may be a risk factor for the development of many illnesses (cardiovascular diseases, Type 2 diabetes, colon cancer, breast cancer, obesity, etc.). As a result of the increasing prevalence of cardiovascular diseases, myocardial infarction and early death, there is intensive domestic and international research going on in these fields. These researches focus on examining lifestyle elements and aim to find how the various aspects of lifestyle play a role in maintaining health and in the development of particular illnesses.

The deterioration of lifestyle can be recognized not only in the malfunction of the cardiovascular system but also in the formation of many chronic diseases (APOR, 1999). As a result of spreading preventive approaches and due to the disease burden caused by the increasing prevalence of various diseases (Ács et al., 2011b) analysing positive effects of physical activity on the body engage a large number of researchers.

We have a great deal of knowledge and experience in connection with the preventive, developmental and rehabilitation functions of sports and physical activity (STEPTOE - WARDLE, 1992; PATE et al., 1996; BURKE et al., 1997).

The preventive function of solving problems is coming more and more to the forefront of our attitude. What one values as priority and which priorities one will consider to be the most important motivations for decision-making and action is the result of the combined effect of several factors (peer groups, the values and ideals of a particular age group, family, etc.) associated with physical activity. It is in the "battle" of objective and subjective factors that the individual decides what outside (physical, aesthetical, appearance, fashion-driven) goals and what inside (self-discipline, success, perseverance, struggle, will, attention, etc.) goals to achieve in connection with sport, physical activity resulting from personality and values of physical and mental health.

I must emphasize the system of formal and informal impacts that, through direct and indirect effects, educates, shapes and directs the individual's value system within the various socialization scenes (family, kindergarten, school, workplace, friendly communities, etc.). The family as the primary scene of education and one of the most important places for informal learning strongly influences the development of the child's health conscious attitude as well as the attitude towards body culture and physical activity.

In my dissertation I have presented the relevant concepts related to my research, reviewed the topics of value, family, health and the economic aspects of physical activity and sport.

Main goals of my research:

The detailed goals of my research can be summarised as follows:

- I set it as my aim to present the economic role of sport as a lifestyle element in health and working capacity at the micro and macroeconomic level based on the analysis of secondary data.
- In the light of national and international research, I aimed to prove and demonstrate the role of sport in the productivity of healthy labour force (GDP growth) and its positive effects on the economy's productivity and performance. It was my goal to establish characteristics in the light of a comparative analysis of public health data on the north-western part of Hungary serving as the background of my research. I present the effects of regular exercise

on reducing the number of sick days, healthcare expenditures and improving mortality and invalidity rate.

- In the dissertation, I strived to reveal the leisure activities of the three generations (children, parents, grandparents), their sporting habits and their attitude to sport.
- It was my aim to reveal the value system connected with sports among parents and also show how they see positive and value-creating effects of sport in connection with their children.
- My goal was to map how the sporting patterns of parents influence the sporting patterns of children. Based on that, my aim was also to demonstrate connections between parents' value mediation role and the lifestyle elements in the field of regular exercise.
- My further aim was to examine sporting activity of parents and children in the kindergarten age group and I drew conclusions about how it influences children's BMI index and body mass development.
- I wanted to see how the socioeconomic status of families influences the sporting habits of children and their optimal body weight.
- I also intended to establish how the socio-demographic background of the family (education, income, occupation, number of people in the same households, place of residence, etc.) affects the value mediation processes in connection with leisure time preferences and healthy lifestyles, especially regular physical activity.
- Comparing the results of the research, I aimed to establish what value differences between the generations can be observed in certain areas of leisure and lifestyle.
- It was my goal to prove the health appears as a value in the life of families.
- It was my research goal to demonstrate the effects system through which different generations interact and influence each other's views on a healthy lifestyle and physical activity.
- It was my intention to reveal and prove the meaning content behind the phenomena and the response categories through structured interviews study helping to provide a deeper understanding of the topic area (lifestyle, motivation, value system, and sport-related propensity for spending).

Questions and hypotheses

In the course of my research I wanted to find answers to the following questions and based on the questions I created the following hypotheses.

Questions related to area I. of the research:

- What characteristics does the sports / exercise-related habits of kindergarten children and their parents have?
- What correlations can be observed between the body weight of kindergarten children and their sporting habits?
- Is there any correlation between the socioeconomic status of the kindergarten age group and the development of sports habits and body mass (BMI)?

Questions related to area II. of the research:

- How does socioeconomic status affect willingness to spend on sports? How does the socio-demographic background of the family (education, income, occupation, number of people in the same household, place of residence, etc.) affect the value mediation processes in connection with leisure time preferences and healthy lifestyles, especially regular physical activity.
- How do the three generations (kid, parent, grandparent) develop their leisure time (recreational) and sporting preferences and how does it influence their attitude to sport.
- How does the sporting pattern of parent-grandparent influence the sporting pattern of children?

Hypotheses related to area I. of the research:

H1: I assume that the bodyweight of children doing sport regularly falls in the normal category based on the BMI index. I expected to see more overweight children among inactive children.

H2: I assume that sporting habits of parents affect the sporting habits of children.

H3: I presumed there is a relationship between the socioeconomic status of children and obesity. Presumably, children in households with less discretionary income are more likely to develop obesity.

Hypotheses related to area II. of the research:

H4: I assume that in families with better financial status and better socioeconomic backgrounds positive body culture values are more common and the higher discretionary income is more conducive to the family's willingness to spend on sport.

H5: In adults whose sport habits are more pronounced in their lifestyle (sporting more often), the double variable of sports-leisure are rated higher in their preference system.

H6: I presume that parents and grandparents influence the child's relationship to body culture. We assume more sporting frequency and more athletes among children of sporting parents and grandparents.

2. INTRODUCTION OF DATABASE AND THE APPLIED METHODS

The aim of the secondary collection of data and information was to gather and sort Hungarian and foreign research results related to my topic creating a theoretical background of the research. Based on the values I studied literature dealing with the family as primary scene for value mediation and socialisation, uncovering its role and responsibility in the formation of a healthy lifestyle, with special emphasis on the establishment of exercising patterns. I studied the results of health research, analysed the national economic significance of physical activity as a prevention tool based on the results of Hungarian and international literature concerning health expenditures and labour productivity. Among other things, I used the databases of the Central Statistical Office and the National Health Fund (today: National Health Insurance Fund), as well as other statistical data that describe the "capital good" nature of regular physical activity as a lifestyle element.

Within the framework of my primary research I supported the answers to my questions through quantitative and qualitative methods. I applied quantitative research using a written questionnaire, and with the help of structured interviews I qualitatively researched deeper content. In order to collect objective and relevant data I used a questionnaire which was constructed according to the specific objectives of the research, containing both closed and open questions (FALUS, 2000). During my qualitative research, I used structured interviews to reveal the deeper content and issues of the topic (Figure 1.).

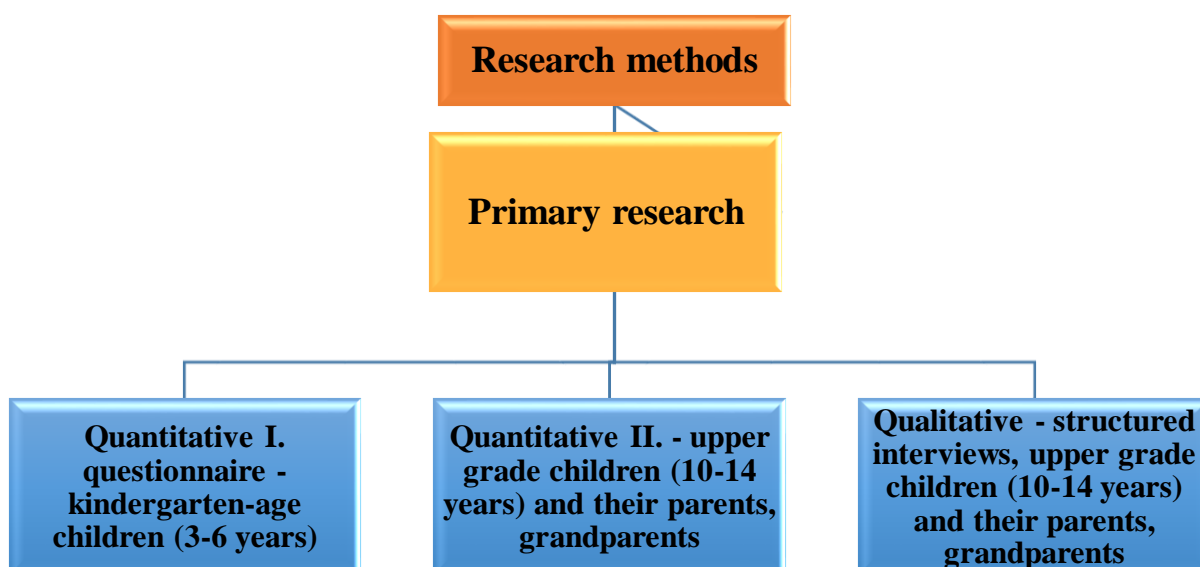


Figure 1.: Methodology of research

Source: Own editing based on own research, 2017

In the course of my research I strived to apply a complex approach examining every factor that can influence the sporting habits of the individual within the family. I considered it important to highlight relationships and value mediation between generations (Figure -3.).

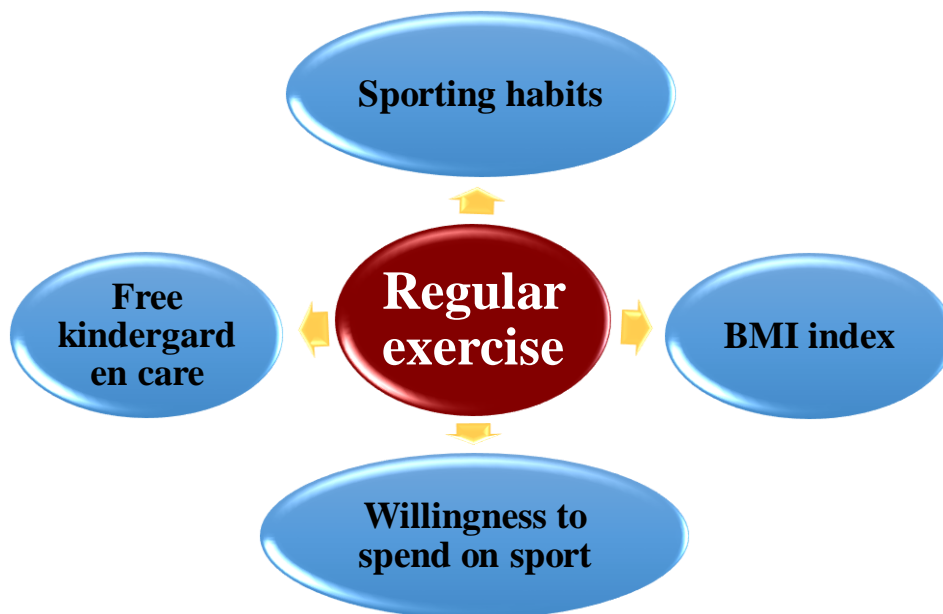


Figure 2: Research concept of examining kindergarten-age children

Source: Own editing based on own research, 2017

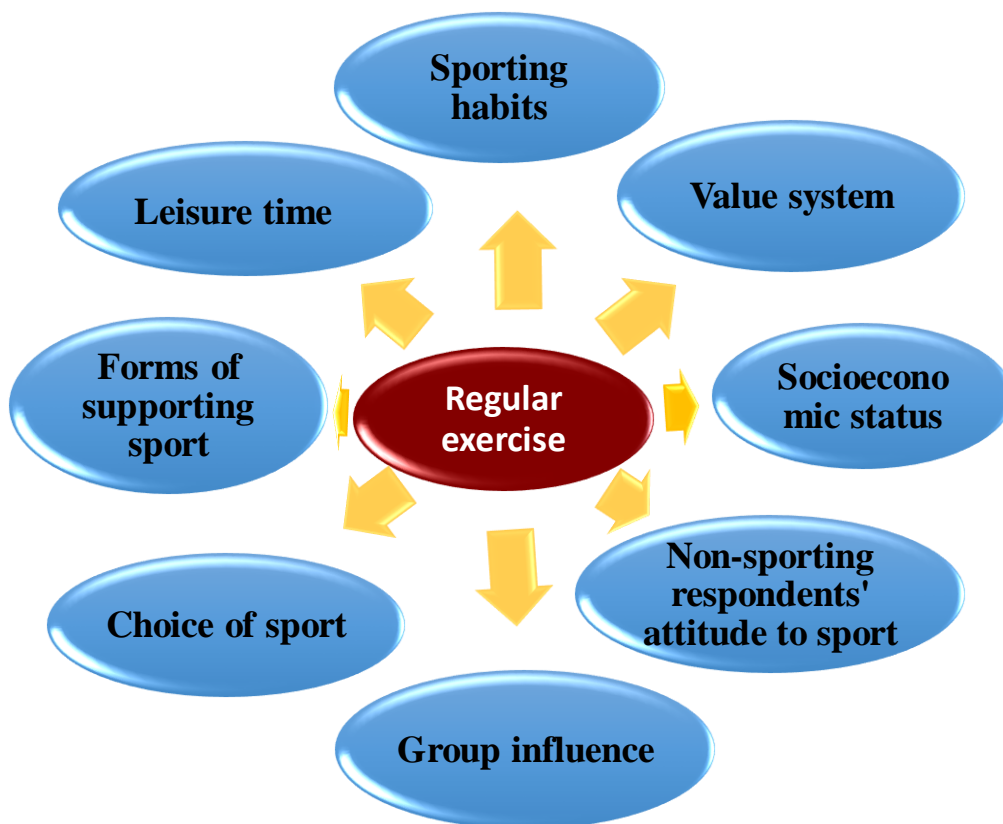


Figure 3.: Research concept of examining the 10-14 age group, their parents and grandparents

Source: Own editing based on own research, 2017

Table 1.: The methodology of the research

	QUESTIONNAIRE FOR 3-6 AGE GROUP	QUESTIONNAIRE FOR 10-14 AGE GROUP, THEIR PARENTS AND GRANDPARENTS	STRUCTURED INTERVIEWS OF 10-14 AGE GROUP, THEIR PARENTS AND GRANDPARENTS
MEASUREMENT TOOLS	- quantitative questionnaire - 16 questions, open, closed and half-closed questions	- quantitative questionnaire -26-32-36, open, closed and half-closed, partly adopted	-qualitative, oral inquiry, structured interviews -13 questions
SAMPLING	- parental consent form - Random sampling, every second child of every Eger kindergarten were chosen	- parental consent form - quota sampling - Random sampling within groups after creating layers proportionate to group size - representative for gender, age, settlement type of school	- parental consent form - quota sampling
NUMBER OF CASES	252 persons	509 families, 2036 respondents	150 interviews (50-50-50 persons)
METHOD OF INQUIRY	- with the help and supervision of kindergarten teachers and parents -location is kindergarten	-written inquiry (oral and written explanation) -location is school, for parents and grandparents their own homes	-oral inquiry -own home or a location, quiet place chosen by them - audio recording – consent given
DATA RECORDING	-coding, creation of database -SPSS 21.0 statistical software		-creating database
EVALUATION	-uni and multivariate procedures -descriptive statistics: percentage makeups, means, median and modus, Std analysis -Low level measurement variables: Pearson-Chi square test to examine strength of relationships in the multivariate procedures		-Explanatory function in dissertation - quotes

Source: own editing based on own research, 2018

Methodology of examining the 3-6 years age group

One area of my examination was the kindergarten-age group of children. During my research qualitative inquiry and questionnaire surveys were used to examine the weight, sporting habits and socioeconomic factors and their relationships. The questionnaire contained 16 own-edited, open and closed questions, of which 1-4 questions served as a basis for further calculations. I recorded the gender, age, weight and height of the children and used these data to calculate the BMI index. According to BMI's age-based percentile

values and based on the categorisation of JOUBERT et al. (1993) I created three groups of children (underweight, normal and overweight/obese).

My survey was focused on the movement / sporting habits of children in the Gyermeklánc, Farkasvölgyi, Zöld Liget, Gyermekkert and Ney Ferenc kindergartens of Eger. In the study I examined 252 primary nursery and their parents with simple random sampling; every second child was sampled from these kindergartens, thus ensuring equal chances of getting into the sampling. The survey took place in October 2016 with the help of kindergarten teachers working in these kindergartens and also involving and obtaining the consent of the children's parents. In all cases, the location of the interview was the nursery room of the kindergarten where the necessary conditions for recording the data were provided.

I created a database from the responses of the completed questionnaires and then, using the SPSS 21.0 statistical program, I analysed nearly 10,000 data from different aspects. I used uni- and multivariate methods for data analysis. For the presentation of descriptive statistics, I used percentage distributions, means, medians and modus and in some cases I used variance analysis. For low-level measurement variables the Pearson chi-square test was used to evaluate the strength of the relationships in multivariate procedures.

Methodology of examining 10-14 years age group, their parents and grandparents

In my other target group I applied both quantitative and qualitative methods. First I introduce the methodology of the written, questionnaire-based inquiry. I studied the lifestyle, value system, characteristics of lifestyle, their attitude to physical activity and the influence of values mediating and educational factors of the children, parents and grandparents in a questionnaire.

For the 10-14 years age group, I compiled a questionnaire consisting of 26 open, closed and half-closed questions. For question 22. I used the response categories from BOGNÁR (2007), while question 36. was taken from the work of PIKÓ AND BALÁZS (2010).

The parents' questionnaire included 33 and the grandparents' questionnaire included 36 open, closed and half-closed questions. Questions 31. and 33. of the parental questionnaires and questions 34. and 36. from the grandparents questionnaire used the response categories from BOGNÁR (2007) thus ensuring that the results can be compared with other research data.

The base population was children 10 to 14 years of age living in the North Hungarian region, their parents and grandparents. The students were selected by means of quota sampling, the study was representative for age, gender and settlement type of school. The National competency measurement and the National ability and skills database (Educational Office) and the Central Statistical Office (KSH) data series provided the informational background needed to form the layers. After the formation of the layers, I performed a simple random selection within each group in proportion to the size of each layer. I asked for written parental consent to be able to survey elementary school students. In this procedure I was assisted by the teachers of the selected schools.

Children's questionnaires were completed in the school. Aided by oral explanation, I asked the children to use the names parents and grandparents in their responses to those people whom they consider to be a model for value mediation and education. Since there are cases when it is not the natural parent or grandparent who is raising the child or one of the parents does not participate in the child's life, it was instrumental to clarify this question. The parents and grandparents completed the questionnaires at home. I provided them with instructions in connections with the questionnaire in a letter.

I received 2036 (4 x 509) completed and usable questionnaires. I took the completed questionnaire of children as starting point, so 2036 questionnaires from 509 families were evaluated. People completing a questionnaire were a family. The four questionnaires (a child, a mother, a father, a grandparent) belonging to one family were specially labelled, so it was possible to explore the relationships within the family. In questionnaire numbering I used the following form of identification: questionnaire serial number / Child, questionnaire serial number / B mother, questionnaire serial number / father C, questionnaire serial number / D grandparent.

From responses to the questions I created a database with more than 150,000 pieces of data and analysed it using SPSS 21.0 statistical software. I used uni- and multivariate methods for data analysis. For the presentation of descriptive statistics, I used percentages, means, medians and moduses, and in some cases I used a variance analysis. For low-level measurement variable variables Pearson's chi-square test was used to evaluate the strength of the relationships in the multivariate procedures.

For the 10-14 year olds and their parents and grandparents I also applied qualitative methods. Structured interviews provided an opportunity to explore the thoughts and opinions of those surveyed at a deeper level. In the course of the questionnaire inquiry it is not possible to gather detailed information about the personal experiences and the various life paths (especially concerning physical exercise). The sample was the same 509 families selected for quota sampling with whom I conducted the questionnaire inquiry. In this part of the research it was also important to ask questions about the three generations of the 50 families, thus creating the opportunity to explore similar or different opinions within a family. 50 children, 50 parents, 50 grandparents were interviewed in their own homes or in a relaxed environment specified by them.

Those interviewed also took part in the questionnaire inquiry and in this way results of the interviews were comparable to and supplemented the questionnaire results. After obtaining participants' consent oral interviews were electronically recorded and later transcribed to a written form.

Introduction of the kindergarten-age sample

To test the first target group of my research, I conducted questionnaire survey as well as body weight and body height measurements. In the Eger kindergartens introduced above, I replaced the written response with an oral interview, given the age-specific characteristics of the children. During the interview the kindergarten teacher and a parent of the child were also present.

Of the 252 kindergarten-age respondents there were 134 (53.2%) boys and 118 (46.8%) girls. Of the respondents, 14 (6%) were 3 years old, 45 (18%) 4, 89 (35%) 5 and 104 (41%) 6 years of age (Figure 4). I calculated decimal age from their chronological age and then I categorized the children based on the recommendations of the International Biological Program (SZAKÁLY, 2016).

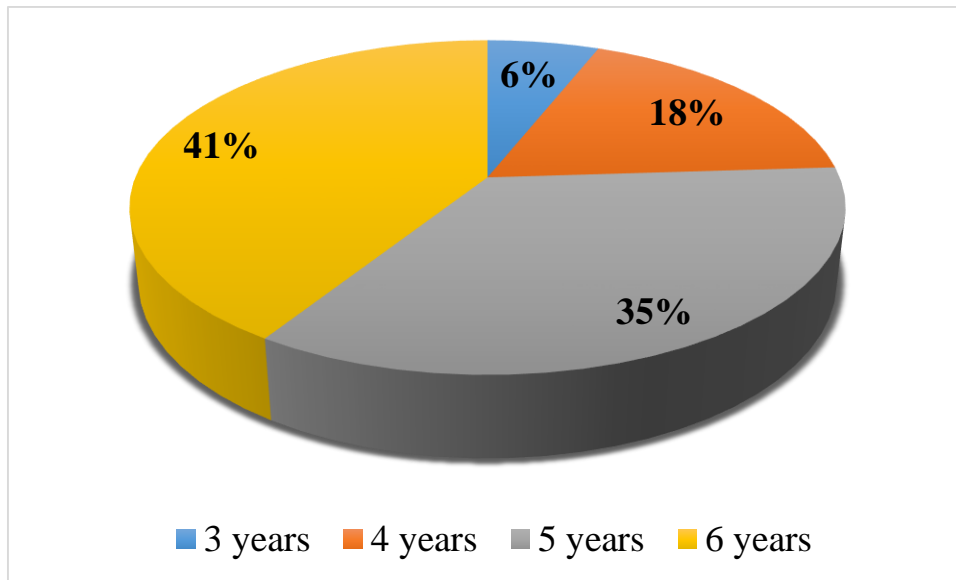


Figure 4.: Age makeup of the kindergarten-age sample (%) N=252

Source: own editing based on own research, 2016

Introduction of school-age, parent and grandparent sample

Age of children, parent and grandparent respondents.

Out of the surveyed upper-grade children 294 were girls (58,3%) and 210 boys (41,7%), 5 children didn't respond. Respondents were 5-8. grade students. 12.6% (64 pers.) 10 years, 14.5% (74 pers.) 11 years, 24.8% (126 pers.) 12 years and 23.4% (119 pers.) 13 and 24.8% (126 pers.) are 14 years of age (Figure 5).

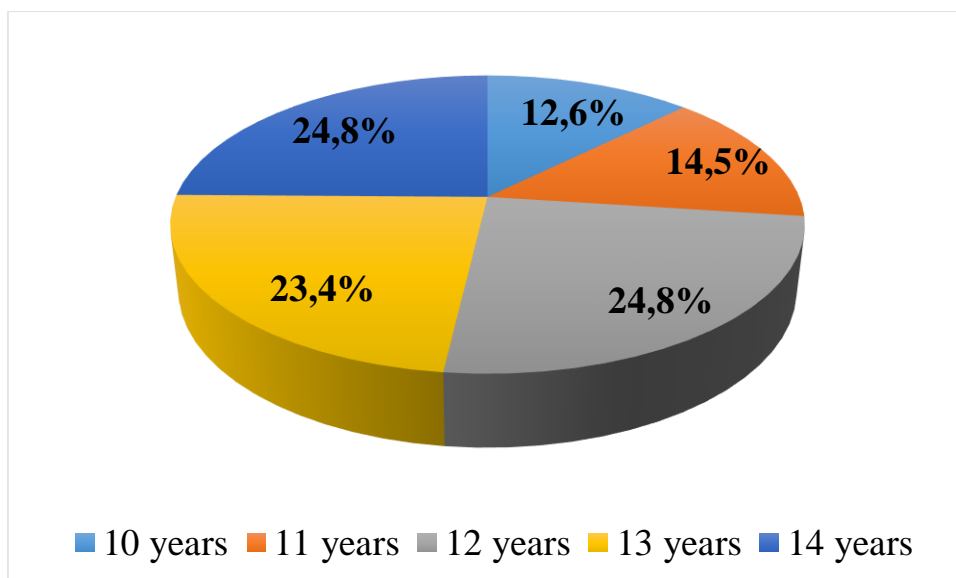


Figure 5.: Age makeup of upper-grade children (%) (N=509)

Source: own editing based on own research, 2014

Below is the age makeup of parents (Table 2.): Mothers under the age of 30 are 1.6% (8 pers.), while fathers 1.1% (5 pers.), mothers 30-39 years of age 54.8% (274), fathers 36, 1% (168 pers.). The 40-49 age group includes 38.4% of women (192) and 50% of men (233). The age range of 50-59 is represented by 5.2% (26) of mothers and 12.7% (59) of fathers. Mothers over 60 don't appear in the sample, fathers over 60 are represented by only 1 person (0.2%).

Table 2.: Age makeup of parents (pers./%) (mother N=500, father N=466)

age	mother /pers.	mother / %	father/ pers.	father/ %
under 30 years	8	1,6	5	1,1
30-39 years	274	54,8	168	36,1
40-49 years	192	38,4	233	50,0
50-59 years	26	5,2	59	12,7
over 60 years	0	0	1	0,2
Total number of respondents:	500 pers.	100%	466 pers.	100 %

Source: own editing based on own research, 2014

The age makeup of grandparents surveyed in my research by gender is as follows: 1,3% (5 pers.) of grandmothers (371 persons) aged 40-49, 18,6% (69 pers.) aged 50-59 , 52.6% (195 pers.) aged 60-69, 25.1% (93 pers.) aged 70-79, and 2.4% (9 pers.) over 80 years of age. We can conclude that more than half of the grandmothers are in their sixties, and more than a quarter of them are already 70 years of age. In the case of grandfathers (115) the age distribution is as follows: 11.7% (32 pers.) 50-59, 47.9% (45 pers.) 60-69 years, 37.2% (35 pers.) 70 -79 years and 3.2% (3 pers.) over 80 years of age. It can be stated that nearly 50% of them are in their 60s and over 40% of them are older (Figure 6).

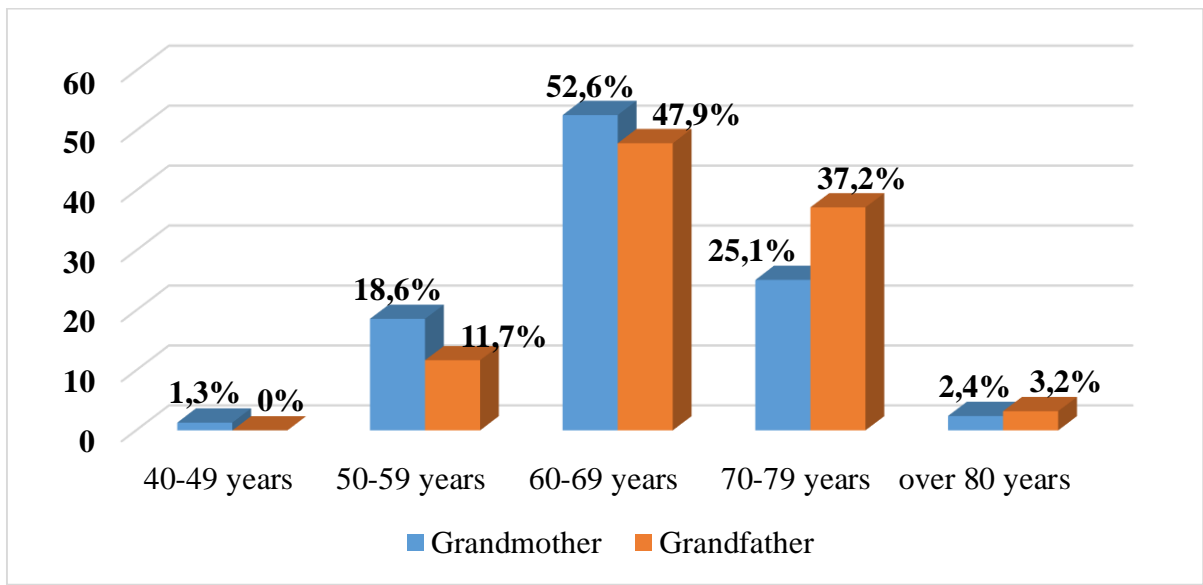


Figure 6.: Age makeup of grandmothers and grandfathers (%) (grandmother N=371, grandfather N= 115)

Source: Own editing based on own research, 2014

3. MAIN CONCLUSIONS OF THE RESEARCH

In the first part of my research children respondents were kindergarten-age children, so I had to define the meaning of sport according to their age characteristics. In view of this, I considered sport all physical activity outside the time spent in kindergarten that makes the children move for at least 30 minutes. This could include cycling with parents, playing football with siblings as well as organised sport done in the course of a training. Since the number concept of nursery school children is not stable, I based my answer to this question on parents' responses. 34.9% of the respondents (88 persons) do physical activity once a week, 29% (73 pers.) two or three times a week, 15.1% (38 pers.) perform physical activity more than three times, while 20.6% (52) does no sport or physical activities. One person didn't answer the question (Table 3.).

Table 3.: Frequency of physical activity and sport (pers./%) (N=252)

Response categories	Respondent (f)	Respondent (%)
weekly 1x	88	34,9
weekly 2-3x	73	29
more than 3x	38	15,1
no sport	52	20,6
no response	1	0,4
Total responses:	252	100

Source: Own editing based on own research, 2016

I studied joint activity and the sports habits of parents from the point of view of family patterns and examples, however, this part of the research was not concerned with regularity, intensity or duration. 78.2% of respondents (197 pers.) do sport with their parents, while 21.4% (54 pers.) did not perform joint activities (Table 4.). (Note: 78.2% of children play sports with their parents, however, this data does not cover adults' sports habits, as it may be that only one parent takes part or the parent may not always be a truly active participant of the activity.) Considering this, similar figures may be obtained as the 23% activity in the EUROBAROMETER (2010) survey.

Table 4.: Parent-child exercising together (pers./%) (N=252)

Response categories for the question asking about sport together	Respondent (pers.)	Respondent (%)
yes	197	78,2
no	54	21,4
no response	1	0,4
Total responses	252	100

Source: Own editing based on own research, 2016

Of the parents, 145 (57.5%) do sport while 42.5% (107) of mothers / fathers don't do regular physical activity. The number of athletes shows a higher proportion compared to the national average. It is due to the fact that I didn't ask about frequency as kindergarten children have a broad interpretation of sport.

After calculating the BMI index of the children, I determined their age-specific percentile values, based on which I created 3 categories. In the light of this, 59.5% (150 pers.) were healthy, normal, 25.8% (65 pers.), overweight, obese, and 14.7% (37 pers.) fall in the lean category (Figure 7.). The categories were defined based on JOUBERT et al. (JOUBERT et al., 1993; JOUBERT et al., 1996). Domestic data also confirm the problem of obesity among children. In 2010, every fourth girl and every fifth boy among seven-year-olds were overweight or obese. (MARTOS, 2010).

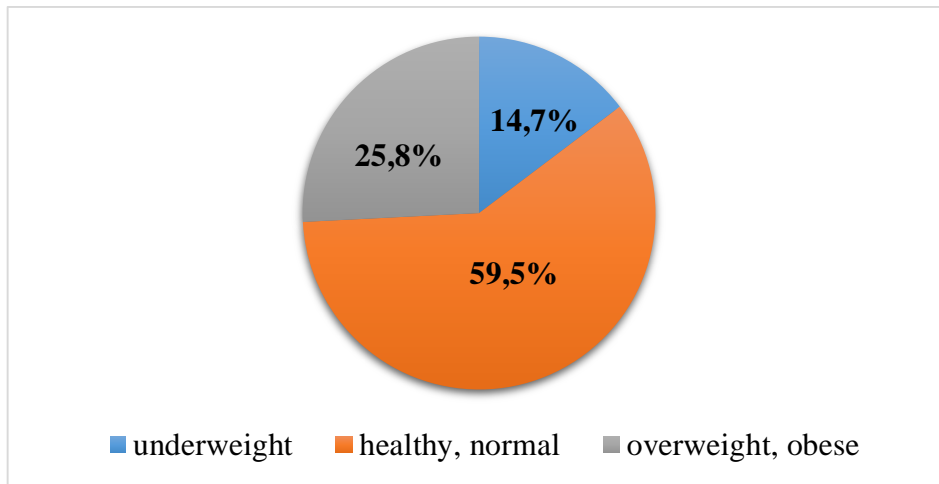


Figure 7.: Physique characteristics of the sample¹ (%) (N=252)

(Calculated from **BMI** based on age-specific percentiles)

Source: Own editing based on own research, 2016

¹ Categories: underweight (percentile < 5%), healthy (5% - 95%) , and overweight/obese (percentile > 95%)

I asked parents of kindergarten children how much money they spend on the child's sporting activities in a month. 23.7% of the respondents (60 pers.) do not spend on this, 27.4% (69 pers.) spend less than 3.000 forints, 13.9% (35 pers.) 3.000-5.000 forints, the total amount is 17.5% (44 pers.) between 5.000 - 8.000 forints, 11.5% (29 pers.) between 8.000 - 10.000 forints, 10.000 - 15.000 forints spent by 5.2% (13 pers.) and 0.8% (2 pers.) spend over 15.000 forints on the sports and physical activity of their child. The largest percentage of parents spend less than 3000 forints in the sample, with a high number who don't spend at all on the child's sports (23.7%, 60). However, it is positive that 76.2% of parents (192 pers.) can and /or want to spend some amount on the child's physical activity (Figure 8.).

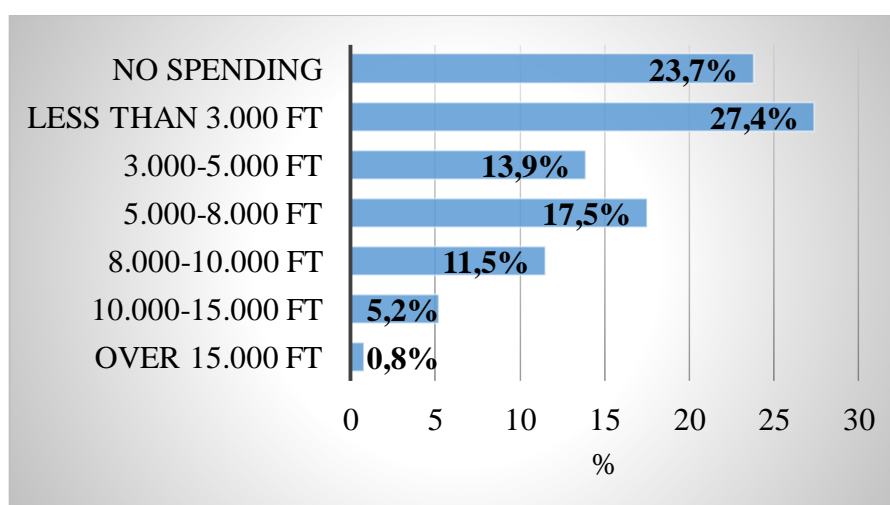


Figure 8.: Willingness of parents to spend on child's sport in a month (%) (N=252)

Source: Own editing based on own research, 2016

Connection has been detected between sporting habits and percentile values by BMI age. 86,5% of underweight category children and 81,3% of normal weight category children do sport with their parents. These values are significantly higher than those of their overweight peers, since only 66,2,% of them do sports with their parents ($\chi^2=9,8$, $p=0,028$).

59,5% of underweight children and 63,3% of normal weight children said that their parents do sports, while in case of overweight children only 43,1% of the parents do sports ($\chi^2=7,68$, $p<0,05$). Value-mediating role of parents is dominant in shaping the elements of life style, since family is the primary socialisation scene.

Strong and significant difference can be observed between the frequency of doing sports and body weight. More of underweight and normal weight children do sports with their parents 2 or 3 times or even more than 3 times a week.

Concerning sporting frequency 43,2% of underweight children say they do sports with their parents 2 or 3 times a week, while it is 34,7% in the case of normal weight children, which values are significantly higher than the values of overweight children among whom merely 7,7% do sports at least 2 or 3 times a week. 13,5% of underweight children say that they do sports with their parents more than three times a week, while 17,3% of normal weight children and 10,8% of overweight children do sports more than three times ($\chi^2=28,7$, $p=0,000$).

The connection between socio-economic status and obesity of the children was also examined. In my research it was also asked if the child gets nursery service free. In the majority of the cases those children are given free nursery service whose income per capita in the family is lower than minimal wage. 92,3% of overweight children get catering service free, while in the case of healthy, normal category children this is 12,7%. 13,5% of thin category children get meals free ($\chi^2=137,1$ $p=0,000$). My research confirmed that obesity occurs more probably in families with lower income.

In the second part of my research I examined leisure time- and sporting habits of children aged 10-14 living in the North Hungarian region, those of their parents and grandparents, their values and the socioeconomic aspects of these factors.

Current sporting habits

45% of the surveyed children aged 10-14 do physical activity regularly, that is minimum three times a week and at least 45 minutes at a time, 33,4% of them do sports occasionally, that is once or twice, or even less a week, and 21,6% of the students are passive. 61,1% of the mothers are inactive, 23,8% of them do physical exercise occasionally and merely 10% of them do sports at least three times a week. 51,9% of the fathers do not do sports, 19,8% of them move occasionally and 14,3% of them do regular sports activity. 13,9% did not reflect on the question. 56,8% of the grandparents do not do any physical activity, 17,1% of them do sports occasionally and 16,9% of them do it regularly. All generations reflected on the lack of time and lack of motivation as the main reasons of inactivity, in the case of grandparents restrictive effect of their health condition was experienced (Figure 9.).

According to the results of the 2016 Hungarian Youth Research (BAUER et al., 2016), the proportion of boys performing regular physical exercise is 42%, the proportion of girls doing sport is much lower, only 30%. Compared with my data, I can conclude that the higher ratios I obtained correspond to the more active lifestyle resulting from age-specific causes, which is confirmed by several Hungarian researches (SZABÓ, 2003, PIKÓ et al., 2007;). If we sum up the activity figures of occasionally and regularly sporting parents, we get comparable results to other domestic research data, where sporting one to two times a week was classified into a regular category (EUROBAROMETER 2010; KOVÁCS et al., 2015; KSH, 2015).

FÖLDESINÉ SZABÓ GYÖNGYI (1998) in her research on the physical activity of elderly women found that one of the main reasons how the inactivity of this generation can be explained is the lack or incompleteness of sport socialization process. This generation is often unaware of the benefits of sport and when they were children there were very powerful misconceptions about sports especially with regard to sporting women. During that period, it was not typical that people were acquainted with sporting education and the benefits of a physically active existence.

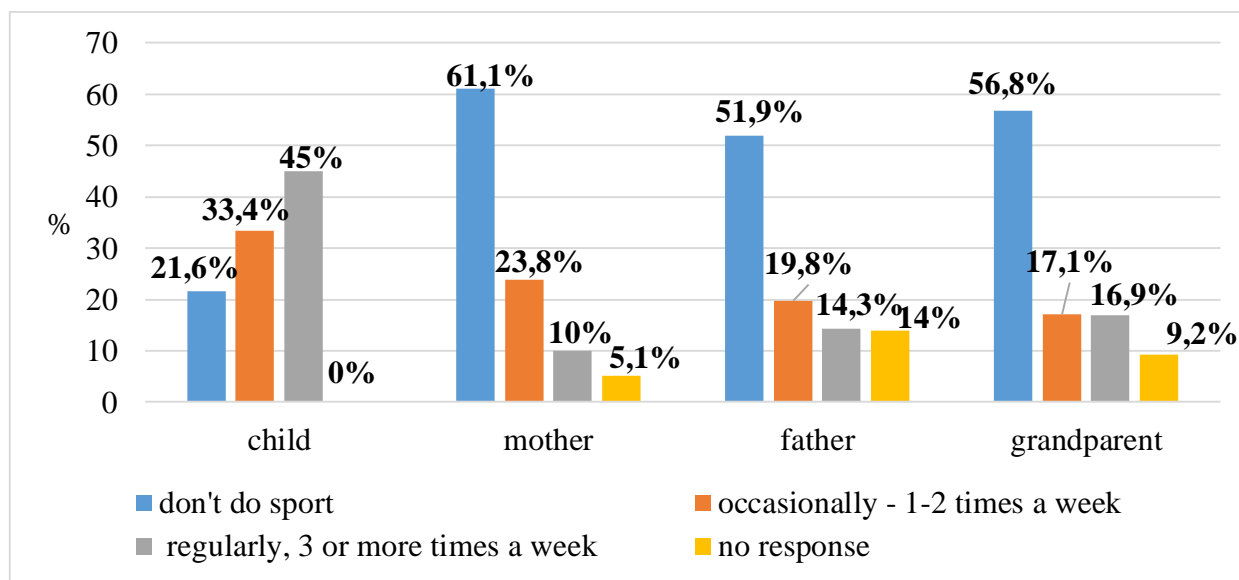


Figure 9: Sporting activity of three generations (child, parent, grandparent) (%) (child N=509, mother N=509, father N=509, grandparent N=509)

Source: Own editing based on own research

The favourite sports activities of the children and the parents are similar: football, dance activities with music, body building and body shaping are dominant.

It supports conclusions drawn by MÜLLER et al. (2017) in their research, stating that sport choice of adults follows current fitness trends.

Water sports, especially swimming are favoured physical activities for all the three generations alike.

The factors mostly influencing sporting habits of children doing sports regularly and occasionally are: internal motivation, role of friends, peer groups, media, parents, siblings, grandparents.

Concerning sporting habits of parents it can be stated that they often choose sporting activity done together with the family, which is a good opportunity to spend more time together, for socialisation and mediating values at the same time. Grandparents are ready to do sports together with their grandchildren, which is their main preference. In case their health condition does not permit joint sports activity, they still support their grandchildren's sports activity mostly by visiting trainings or taking them to trainings.

Forms of supporting the child's sporting activities

With the help of the questionnaire, I examined how, according to sporting children, their parents and grandparents were helping their physical activity. The predefined categories of responses, of which more than one could be identified by the interviewee, are shown in Table 5. Most of them, 87.2% (328 pers.) marked financial support, followed by 37% (139 pers.) marking help in transport to competitions or training camps and 29.3% (110 pers.) marking regular cheering in contests.

According to the respondents, 11.2% (42 pers.) of the parents regularly attend training sessions, 17 (4.5%) don't receive any support from their parents, 17 (4.5%) marked other types of support. Thus, it is apparent from the responses that almost 90% of the parents use part of their income to support their child's sports activities. It is a positive that almost one third of parents regularly watch their children in competitions. 23 athletes did not respond to this question group.

A form of sport support from grandparents is cheering for grandchildren in competitions or assisting parents by accompanying grandchildren to training sessions. This form of assistance naturally provides many opportunities to help shape the personality of their grandchildren, to discuss the events of everyday life and to pass on the values of their lives.

Table 5.: Support forms of doing sporting of children with regular and occasional physical activity (pers/%) (N=376)

How do your parents help your sport activities?	yes		no		total responses	
	pers.	%	pers.	%	N	%
Financial support (training fee, equipment)	328	87,2	48	12,8	376	100
Transport to competitions, training camps	139	37	237	63	376	100
They are regular spectators at my competitions	110	29,3	266	70,7	376	100
They are regular spectators at my trainings	42	11,2	334	88,8	376	100
They support me in other ways	17	4,5	359	95,5	376	100
They don't support me	17	4,5	359	95,5	376	100

Source: Own editing based on own research, 2014

Leisure time preferences of the three generations

Table 6. shows how the three generations rank their leisure time activities. The first priority in the answers of the three generations is free time activities spent in the family, with the family, for children free time, relaxation spent with the peers was important, in the case of parents importance of studies/work was prioritized besides relaxation. In the case of grandparents reading was a popular leisure activity besides relaxation.

Table 6.: Leisure preference rankings of the three generations (mean, std) (1=not important at all, 5=very important to me)

Categories	CHILD			MOTHER			FATHER			GRANDMOTHER			GRANDFATHER		
	N	Mean	Std	N	Mean	Std	N	Mean	Std	N	Mean	Std	N	Mean	Std
family	500	4,75	0,57	477	4,93	0,32	426	4,89	0,42	366	4,92	0,31	92	4,83	0,55
social contacts/friends	500	4,45	0,79	477	3,79	0,91	418	3,81	0,97	364	3,32	1,07	92	3,45	1,08
sleeping/relaxation	502	4,11	0,95	476	4,21	0,88	424	4,1	0,97	366	4,2	0,96	91	4,4	0,85
sport activity/games	496	4,07	1,09	473	3,36	1,03	422	3,5	1,14	364	2,67	1,18	90	3,1	1,11
learning/work	500	3,97	0,95	477	4,26	0,78	426	4,22	0,82	364	3,53	1,18	91	3,54	1,28
computer/internet	500	3,82	1,1	475	2,68	1,08	422	2,91	1,21	362	1,63	0,99	92	1,63	0,95
listening to music	499	3,68	1,1	475	3,09	1,05	425	3,01	1,11	363	2,38	1,16	91	2,37	1,11
TV/film/theatre/cinema	499	3,55	1	476	3,14	0,93	425	3,13	1,01	363	3,12	1,14	92	2,86	1,15
excursion/walking	500	3,37	1,03	476	3,61	0,93	422	3,39	1,05	365	3,29	1,09	91	3,54	1,03
reading	497	3,23	1,2	475	3,65	0,99	425	3,16	1,12	366	3,58	1,08	92	3,64	1,09

Source: Own editing based on own research, 2014

Value system

In my research, I applied the categories listed in the BOGNÁR's (2007) study for later comparisons. They are the following: honour, happiness, family, health, career, sport, leisure, love, knowledge, worldview. Based on the answers given by parents and grandparents to the classification of values, the rankings are shown in Table 7.

Table 7.: Rankings of values of parents and grandparents (mean, std)

Value categories	MOTHER			FATHER			GRANDPARENTS		
	mean	std	N	mean	std	N	mean	std	N
Family	4,53	0,825	497	4,57	0,807	461	4,65	0,754	465
Happiness	4,52	0,754	498	4,43	0,862	460	4,46	0,774	464
Health	4,44	0,888	496	4,4	0,915	458	4,60	0,758	463
Love	4,43	0,868	494	4,39	0,887	458	4,53	0,796	464
Knowledge	4,08	0,937	495	3,99	0,948	458	4,02	0,962	463
Honour	4	1,230	497	4,02	1,232	461	4,15	1,216	465
Career	3,99	0,914	494	3,97	0,957	459	3,62	1,160	462
Leisure	3,86	0,916	495	3,73	1,030	458	3,74	0,935	462
World view	3,64	0,997	497	3,53	1,095	460	3,65	1,113	464
Sport	3,43	0,993	493	3,48	1,103	456	3,29	1,083	461

Source: Own editing based on own research

When examining the list of values it can be stated that family is the most important for both parents and grandparents, happiness is ranked the second place by parents, while for grandparents health is ranked at this level. The third for parents is health, while for grandparents it is love. Career obviously is put little emphasis on by grandparents.

Results of the research examining characteristics of sporting habits and leisure preferences of children, parents and grandparents

It can be stated that sporting patterns of parents has influence on the sporting patterns of children, that is the child of a sporting parent is more likely to do sport, a significant correlation can be shown by the results ($\chi^2=9,101$, $Df=1$, $p=0,002$).

My results fall together with that of FORWARD (2000) and GOMBOCZ (2004; 2008; 2010) proving positive and negative effects of exemplary behaviour of parents.

A more dominant role of the father is proven compared to the mother when influencing the sports activity of the child.

Table 8.: Relationship between the income level of mother and the willingness to support child's sport activity (%/pers.)

Categories	mother under minimum wage		mother min. wage		mother between min. wage and 100.000 Ft		mother between 100.000 - 150.000 Ft		mother between 150.000 - 200.000 Ft		mother above 200.000 Ft		p
	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	
they support me	91,9%	9,1%	86,8%	13,2%	91,4%	8,6%	97,0%	3,0%	94,1%	5,9%	91,3%	8,7%	p=0,214
	20 pers	2 pers	46 pers	7 pers	106 pers	10 pers	129 pers	4 pers	32 pers	2 pers	21 pers	2 pers	
travelling to competitions/training camps	18,2%	81,8%	28,3%	71,7%	30,2%	69,8%	34,6%	65,4%	44,1%	55,9%	60,9%	39,1%	p=0,024
	4 pers	18 pers	15 pers	38 pers	35 pers	81 pers	46 pers	87 pers	15 pers	19 pers	14 pers	9 pers	
they regularly come to competitions as spectators	9,1%	90,9%	28,3%	71,7%	30,2%	69,8%	25,6%	74,4%	32,4%	67,6%	39,1%	60,9%	p=0,276
	2 pers	20 pers	15 pers	38 pers	35 pers	81 pers	34 pers	99 pers	11 pers	23 pers	9 pers	14 pers	
they regularly come to trainings as spectators	4,5%	95,5%	7,5%	92,5%	8,6%	91,4%	14,3%	85,7%	14,7%	85,3%	13,0%	87,0%	p=0,509
	1 pers	21 pers	4 pers	49 pers	10 pers	106 pers	19 pers	114 pers	5 pers	29 pers	3 pers	20 pers	
they support me financially	68,2%	31,8%	77,4%	22,6%	81,0%	19,0%	88,7%	1,3%	88,2%	11,8%	82,6%	17,4%	p=0,119
	15 pers	7 pers	41 pers	12 pers	94 pers	22 pers	118 pers	15 pers	30 pers	4 pers	19 pers	4 pers	

Source: Own editing based on own research, 2014

Table 9.: Relationship between the income level of father and the willingness to support child's sport activity (%/pers.)

Categories	father under minimum wage		father min. wage		father between min. wage and 100.000 Ft		father between 100.000 - 150.000 Ft		father between 150.000 - 200.000 Ft		father above 200.000 Ft		p
	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	yes %/pers	no %/pers	
they support me	92,9%	7,1%	73,3%	26,7%	92,9%	7,1%	96,7%	3,3%	97,5%	2,5%	91,1%	8,9%	p=0,000
	13 pers	1 pers	22 pers	8 pers	65 pers	5 pers	116 pers	4 pers	78 pers	2 pers	51 pers	5 pers	
travelling to competitions/training camps	0,0%	100,0%	13,3%	86,7%	37,1%	62,9%	34,2%	65,8%	38,8%	61,2%	46,4%	53,6%	p=0,003
	0 pers	14 pers	4 pers	26 pers	26 pers	44 pers	41 pers	79 pers	31 pers	49 pers	26 pers	30 pers	
they regularly come to competitions as spectators	14,3%	85,7%	3,3%	96,7%	32,9%	67,1%	27,5%	72,5%	31,3%	68,8%	32,1%	67,9%	p=0,033
	2 pers	12 pers	1 pers	29 pers	23 pers	47 pers	33 pers	87 pers	25 pers	55 pers	18 pers	38 pers	
they regularly come to trainings as spectators	7,1%	92,9%	0,0%	100,0%	10,0%	90,0%	6,7%	93,3%	20,0%	80,0%	16,1%	83,9%	p=0,014
	1 pers	13 pers	0 pers	30 pers	7 pers	63 pers	16 pers	112 pers	16 pers	64 pers	9 pers	47 pers	
they support me financially	71,4%	28,6%	63,3%	36,7%	78,6%	21,4%	87,5%	12,5%	92,5%	7,5%	83,9%	16,1%	p=0,003
	10 pers	4 pers	19 pers	11 pers	55 pers	15 pers	105pers	15 pers	74 pers	6 pers	47 pers	9 pers	

Source: Own editing based on own research, 2014

I also surveyed the connections between the income of the parents and the ways of supporting child's sports activity (Table 8-9.).

There is a significant difference in the willingness of financial support of fathers, parents having higher real income spend larger amount on buying sports services.

Parents having lower financial conditions support their children more often by cheering for them, this way compensating them for the lack of other supports.

Mothers doing sports regularly or occasionally consider training more important than mothers not doing sports, a significant difference is represented in the results ($\chi^2=16,7$, $Df=2$, $p=0,000$).

The examination of correlation proved that in the values of fathers doing sports regularly or occasionally training is more dominantly present as priority (that is they find it more important), than in the case of fathers not doing sports ($\chi^2=22,7$, $Df=2$, $p=0,000$).

Children doing sports regularly or occasionally find „tours, walks” more important than those not doing sports. Its explanation may be that preference is on active free-time programs for children leading sporty, active way of life ($p<0,05$).

Children doing sports regularly or occasionally find sports activities, games more important than those peers not doing sports, which is shown by the significant difference in the results ($p<0,001$).

Children doing sports regularly or occasionally find the role and significance of family more important than those peers not doing sports ($p<0,05$). In the case of other examined factors (sleeping, relaxation, reading, computer, internet, company, friends, tv, film, theatre, cinema, listening to music, study, work) no significant difference was detected between children doing and not doing sports, the differences are valid in tendencies.

Sports activities, games are more dominantly present in the values of mothers doing sports compared to their peers not doing sports, since 28, 6% of mothers doing sports think this activity very important, while only 12,2% of not doing sports say the same, representing a significant difference ($\chi^2 =30,36$, $Df=4$, $p=0,000$).

Mothers doing sports find trips, walks as free time activity more important than those not doing sports. It is proven by the fact that 29,3% of mothers doing sports, while only 9,6% of mother not doing sports find this freetime activity very important ($\chi^2 =31,7$, $Df=4$, $p=0,000$).

58,9% of fathers doing sports find regular sports activity and games very important while it is only 14,3% of those not doing sports who think the same about sports ($\chi^2 = 87,16$, $Df=4$, $p=0,000$).

34,2% of fathers doing sports, while only 14 % of those not doing sports find trips, walk important, which values show significant differences ($\chi^2 = 8,25$, $Df=4$, $p=0,049$).

28,5% of grandparents doing sports said that studies, work is very important and 30,4% of them find it important. As opposed to it 21,7% of grandparents not doing sports find it very important and 25,9% of them think it important ($\chi^2 = 25,4$, $Df=4$, $p=0,000$).

10,3% of grandparents doing sports say that sports activities are very important and 21,8% of them find it important. Only a 6,4% of grandparents not doing sports find it very important and 10, 7% of them think sport important ($\chi^2 = 49,7$, $Df=4$, $p=0,000$).

21,7% of grandparents doing sports, while only 9% of grandparents not doing sports find trips, walk important ($\chi^2 = 32,7$, $Df=4$, $p=0,000$).

Value mediating role of grandparents doing regular physical activity is dominant in sports and active recreational activities and also in supporting learning and work.

I examined whether there is a significant difference between values, satisfaction of children doing sports regularly, occasionally or not at all. 60,9% of children doing sports regularly, while 58,3% of children doing sports occasionally said that it caused happiness, satisfaction if their parents, grandparents were satisfied with their results. Only 48,1% of children not doing sports at all said it, which is a lower value than that of the ones doing sports ($\chi^2 = 20,7$, $Df=8$, $p=0,001$).

Satisfaction and happiness caused by sports results was significantly different in the case of children doing sports and occasionally doing sports compared to those children not doing sports ($\chi^2 = 288,1$, $Df=8$, $p=0,000$). 65,2% of children doing sports regularly said that it caused happiness and satisfaction for them if their sports results were good and they were successful in their sports activities, it meant great happiness and satisfaction for 48,5% of children doing sports occasionally, while good results in sports meant satisfaction only for 7,8% of those not doing sports at all.

Success in community life caused happiness and satisfaction for 37% of children doing sports regularly, while 39,9% of children doing sports occasionally said the same, which values are significantly higher ($\chi^2=29,4$, $Df=78$, $p=0,000$), than those of their peers not doing sports (12,3%). This result reflects on the community-shaping role and socialization supporting function of sport.

Cultural roles (e.g. theatrical-, music-, dance performance) caused great happiness and satisfaction for 19,2% of children doing sports regularly, while 29,6% of children doing sports occasionally said the same and 14,2% of those not doing sports at all ($\chi^2=25,2$, $Df=8$, $p=0,001$).

The outcome of the correlation tests showed that the values, satisfaction of students, their parents and grandparents doing sports and occasionally doing sports are similar which differ in certain examined parameters from the ones of students not doing sports. This way the role, the importance of sports in socialization and shaping the values has been proven. Therefore the sporting habits of parents, grandparents, their attitude to sport transmitted to children is important, so value transmitting role of sports in socialization is dominant.

96.5% of mothers doing sport regularly and 98.4% doing it occasionally think that exercise is important for their children or a family member, which is very high in both groups and indicates the value system of sporting mothers in which sport and regular physical activity are highly preferred (Table 7). Only 86.9% of mothers not doing sport believe that exercise is important. Regularly and occasionally sporting mothers consider exercise to be more important than non-sporting mothers, with significant differences in results ($\chi^2 = 16.7$, $Df = 2$, $p = 0.000$).

100% of the fathers (74) doing sport regularly and 95.1% of the occasionally sporting fathers (97) said they considered regular physical activity important for their family members. Only 82.6% of non-sporting fathers (201 pers.) consider it important to have regular exercise in their family. The correlation test showed that exercise in regularly and occasionally sporting fathers is a more dominant priority than for non-sporting fathers ($\chi^2 = 22.7$, $Df = 2$, $p = 0.000$).

Table 10.: Importance of exercise among mothers and fathers doing sport regularly, occasionally and not at all

How important is sport to mother (N=487)	FREQUENCY OF DOING SPORT IN MOTHERS						N		p
	sporting regularly		sporting occasionally		no sport				
	pers.	%	pers.	%	pers.	%	pers.	%	
yes for all my children and family members	55	96,5	123	98,4	265	86,9	443	91	0,000
not important to her	2	3,5	2	1,6	40	13,1	44	9	
Total:	57	100	125	100	305	100	487	100	
How important is sport to father (N=435)	FREQUENCY OF DOING SPORT IN FATHERS						N		p
	sporting regularly		sporting occasionally		no sport				
	pers.	%	pers.	%	pers.	%	pers.	%	
yes for all my children and family members	74	100	97	95,1	214	82,6	385	88,5	0,000
not important to him	0	0	5	4,9	45	17,4	50	11,5	
Total:	74	100	102	100	259	100	435	100	

Source: Own editing based on own research, 2014

I have established that there is significant difference in sports related values concerning parents and grandparents doing and not doing sports. Physical activity appearing in the preference system of mothers, fathers and grandparents is more dominantly reflected in the values, than in those not doing sports activity.

Doing sports, activity in community life and that their parents, grandparents are happy with the achievements causes more happiness and satisfaction for children doing sports regularly or occasionally than for children not doing sports.

Both fields of my research proved that sporting pattern of parents, grandparents has influence on the sporting pattern of children, that is value mediating role of parents is crucial in shaping motion-based way of life elements of nursery- and school children and it has been confirmed that family is the primary scene of socialization.

Hypotheses assessment of area I. of the research

H1: I assume that the bodyweight of children doing sport regularly falls in the normal category based on the BMI index. I expected to see more overweight children among inactive children.

The hypothesis was justified because there are significantly more children in the underweight or normal weight groups who do sports 2-3 times a week or more than 3 times a week than among children in the overweight and obese group.

H2: I assume that sporting habits of parents affect the sporting habits of children.

The hypothesis was justified because in connection with sporting frequency it can be said that 43.2% of underweight children do sports with their parents for 2-3 times a week and while 34.7% of children in the normal weight group. These values are significantly higher than those of overweight children, of whom only 7.7% playing sports at least twice a week.

H3: I presumed there is a relationship between the socioeconomic status of children and obesity. Presumably, children in households with less discretionary income are more likely to develop obesity.

The hypothesis was verified as 92.3% of overweight children, 12.7% of healthy, normal category children and 13.5% of those in the underweight category receive free meals ($\chi^2 = 137, 1 \text{ df} = 2, p = 0,000$). My research proves that obesity is more likely to occur among families with lower incomes.

Among the parents of overweight children there is 40% who don't spend on their children's sport at all. For healthy normal weight children this ratio is 18.7% and for the underweight group 16.2%. In the case of underweight or normal weight children parents are more willing to support their child's sport financially than in the obese group. 35.1% of the parents in the underweight group, 36.7% of the parents in the healthy normal weight category and 7.7% of the parents of obese children said that the amount spent monthly on sports was \$ 5,000-10,000 ($\chi^2 = 44, 8, \text{ df} = 12, p = 0,000$).

Hypotheses assessment of area II. of the research

H4: I assume that in families with better financial status and better socioeconomic backgrounds positive body culture values are more common and the higher discretionary income is more conducive to the family's willingness to spend on sport.

An interesting tendency for mothers is observed. With increasing incomes there is growing support for sporting children, assistance given in connection with competitions and attendance at trainings and competition among parents. Among fathers with higher incomes there are more who financially support their children's sport and fewer who do not give such support, which is significantly more positive than values with lower income fathers. In the light of these results the hypothesis is considered justified.

H5: In adults whose sport habits are more pronounced in their lifestyle (sporting more often), the three variables of sports, health are rated higher in their preference system.

The hypothesis was justified because 28.6% of sporting mothers think it is very important (values of Likert scale 1 = not important at all, 2 = less important, 3 = moderately important, 4 = important, 5 = very important) to do sport while only 12.2% of non-sporting mothers reported the same ($\chi^2 = 30.36$, $Df = 4$, $p = 0.000$). Sporting mothers consider it more important to go hiking and walking than non-sporting peers. This statement is confirmed by the fact that 29.3% of sporting and 9.6% of non-sporting mothers think that this leisure activity is very important ($\chi^2 = 31.7$, $Df = 4$, $p = 0.000$).

58.9% of sporting fathers think that regular sporting activities and games are very important, while only 14.3% of non-sporting fathers think the same about sport ($\chi^2 = 87.16$, $Df = 4$, $p = 0.000$). 34.2% of sporting fathers and only 14% of non-sporting fathers consider excursions and walks important, a significant difference in values ($\chi^2 = 8.25$, $Df = 4$, $p = 0.049$).

28.5% of regularly sporting grandparents reported that learning and work is very important while 30.4% of them stated that it is important. By contrast, 21.7% of non-sporting grandparents consider these things very important and 25.9% of them think it is important ($\chi^2 = 25.4$, $Df = 4$, $p = 0.000$).

10.3% of sporting grandparents say sport is very important while 21.8% of them consider sporting activities important. Only 6.4% of non-sporting grandparents consider it very important and 10, 7% of them think sport is important ($\chi^2 = 49.7$, $Df = 4$, $p = 0.000$). 21.7% of sporting grandparents and 9% of non-sporting ones think it is important to take excursions and walks ($\chi^2 = 32.7$, $Df = 4$, $p = 0.000$).

H6: I presume that parents and grandparents influence the child's relationship to body culture. We assume more sporting frequency and more athletes among children of sporting parents and grandparents.

Looking at the sports habits of parents of children who don't or only occasionally do sport, I came to the conclusion that 87.3% of the fathers don't do sport regularly, only 12.7% of them does. Examining regularly sporting children it can be concluded that 22.7% of the fathers also do sport and 77.5% do not sport, which is a significant difference ($\chi^2 = 7.519$, $Df = 1$, $p = 0.004$). The father's sporting pattern influences the child's sporting pattern.

Comparing the sporting patterns of children and mothers I had partly similar results. Of the non-sporting mothers 91.9% do not perform physical activity, only 8.1% of them exercise on a regular basis. Among sporting children there are more physically active mothers. 17% of respondents regularly exercise while 83% are inactive. The children of sporting parents are therefore more likely to do sport. There is a significant correlation between the results ($\chi^2 = 9.101$, $Df = 1$, $p = 0.002$).

An important result of my research is that 44.2% of the grandparents of regularly sporting children do sports 3 or more times a week, while 10.6% of non-sporting children's grandparents are regularly active physically (χ^2 test = 17.7, $Df = 4$, $p = 0.001$). The results obtained prove my hypothesis.

4. NEW AND NOVEL RESULTS OF THE DISSERTATION

1. Analysing the socioeconomic status of kindergarten-age children, BMI index measurement and sporting habits interpreted in a common context. During my research, I examined the socio-economic background of the children's family.
2. In the course of the research, I revealed the socio-economic status of families and their willingness to spend on sports services. My research has shown that obesity and physical inactivity are more likely to occur among families with lower incomes. 23.7% of parents don't spend on their child's sports, that is, they are not able / willing to pay for sporting services. This is because in these families the per capita income is below or near the minimum wage. With the increase in per capita income, the amount spent on sporting services increases proportionally.
3. I measured the proportion of overweight people in the sample based on the BMI index calculated in relation to the age-proportional percentiles of the kindergarten-age children. I found that 25.8% of children in the preschool age were overweight or obese, 14.7% were underweight and 59.5% had normal body weight. This is similar to the data measured among children 5-7 years of age in Hungary, where it was found that every fourth girl and every fifth boy was obese (MARTOS, 2010).
4. I have found that overweight and obese children play sports with their parents significantly less than those of their peers with normal or underweight body. I also discovered that there is a correlation between weekly sports frequency and weight index. Between normal and lean bodybuilding children, the number of those who are sporting 2-3 or more times a week is significantly higher.
5. I conducted a complex study of the socioeconomic status of three generations (children, parents, grandparents), in particular concerning the relationship between parents' labour market position, discretionary income, leisure time preferences and sporting habits and their overall value system. It is true that there are domestic and international researches that examine some partial results of these, such as the impact of parents on the choice of the child's sports or the social effects of sport, but they have not been studied in the context of three-generation.

6. I carried out an assessment of value orientation in the family, for sporting, occasionally sporting parents and grandparents. In testing the value system, the following categories (honour, happiness, family, health, careers, sports, love, leisure, knowledge, worldview) were evaluated.

I came to the conclusion that there is a significant difference only in the value system ($\chi^2 = 37.28$, $Df = 8$, $p = 0.000$). Physical activity in the preference system of sporting mothers is more dominant in their value system than in those of their peers who do not practice sport. I got a similar result comparing fathers sporting frequency and value system. Sporting fathers consider sport more important than non-sporting ones.

In the case of grandparents similar tendencies can be observed as in the case of parents, that is, sporting grandparents consider sport to be more important in their value system than grandparents who don't do sports.

7. I compared the leisure preference system of sporting and non-sporting parents, grandparents and children.

I found that sporting activities, play, hiking and walking are more dominant in the value system of sporting fathers compared to their non-sporting counterparts.

For both mothers and fathers, I could not find a significant difference in the other parameters (sleep, relaxation, reading, listening to music, family, learning, work, TV, internet) in the sporting and non-sporting groups.

For sporting grandparents learning, working, sporting, hiking, and walking are more important than for non-sporting grandparents.

The value mediating role of parents and grandparents performing regular physical activity is crucial in sports as well as in active recreational activities and also in the support of learning and work.

5. PRACTICAL UTILIZATION OF RESULTS

1.

Conclusion: The number of obese and overweight children in the examined kindergarten-age sample was high, which also correlated with the socioeconomic status of the family. It can be assumed that, besides financial resources, lack of knowledge also affects the dietary and sporting habits of the family and by changing it we can do a lot for the growing awareness of the following generations. Based on the tests with 10-14 year olds and their families I found that children whose parents have lower incomes and lower educational attainment do less or no sport at all.

The results support the role of the family as a value mediator in the formulation of lifestyle elements especially in terms of sports and recreational habits. The study of socio-economic background factors directs attention to the importance of providing free sports services, especially for disadvantaged families with low discretionary income.

Recommendation: The primary socialization scene, the family has a major role in the development of the health conscious behaviour of children, and the actors of the secondary scenes such as public education institutions, crèches, kindergartens and schools, also play a significant part. In addition, different communities, NGOs, community spaces can also have a major impact on the health development of younger and older generations, with the goal of enabling the individual to be able to gain control of his health and thereby improve his quality of life.

In order to induce change, it is worth focusing on long-term, regularly repeating programs besides campaign-like, awareness-raising events. It would be important to implement a series of programs aimed at raising the demand for regular exercise, ensuring healthy physical development through spectacular events promoting sports actively involving the target group. This objective can be achieved with the following activities: spectacular sports events (such as ball games, athletics, gymnastics, jumping rope, orienteering, dance and dance-related movements, playful sports competitions, physical education and folk games). One of the "good practices" existing in kindergartens is the kindergarten-football, the spread of which is ensured by the TAO system. For each initiative, the most important goal is the controlled, experience-oriented, target group-specific implementation of the various modes of movement. Athletes excelling in different sports hold interactive sessions that motivate

the target group for regular physical exercise and orientate them in their choice of sport. This can be supplemented by creation of posters by volunteers popularising a healthy way of life, lifestyle and sports.

When developing the program elements, it is important to organize joint sessions for healthy and disabled target groups, which ensures inclusive education and the building of the relationship between healthy and disabled people. The two most important socialization scenes are the institutions of family and public education, so the formation of attitudes takes place in both areas.

Building on these campaigns, small-group, interactive, small community sessions, gatherings, and programs need to be generated, leading to a good understanding of healthy lifestyle topics among those who are interested.

2.

Conclusion: During my research, the significance of example-setting by parents and grandparents has been demonstrated, so it is of the utmost importance to provide this group with the opportunities of improving their knowledge in the widest possible manner.

Recommendation: Support programs and tenders that provide the public with means of health development free of charge, in which regular physical exercise appears and value mediation is also accomplished.

A good example of this is the "Prevention-oriented public health development of the adult population through recreational sport" announced in 2017 supported by European Union funds, its main objective being the implementation of public and recreational sports events and health-enhancing physical exercise programs, resulting in increased daily physical activity. Implementation was primarily carried out in those areas where these opportunities were not granted or were granted to a lesser extent, and equal access to different services and information could be improved.

The activity of these families could be increased through various community programs and awareness raising campaigns. It is especially important to gain first-hand experience and to increase the activity level through positive experiences. The grandparents' positive, supportive attitude enhances the motivation of the child, and it's an - often unexploited - area of transforming physical activity into a lifestyle that must be more consciously reinforced by families. Young people (kindergarten and primary school children) are most

receptive to healthy lifestyles and the related habits can best be shaped during this period if they are to become a lifestyle later on, so it is important to raise this age group's awareness and encourage their activity.

3.

Conclusion: Physical activity, regular exercise are important factors in health protection. It therefore plays a very important preventive role in maintaining health.

Recommendation: Because regular physical activity is proven to be a primary prevention tool for the prevention of certain diseases (cardiovascular diseases, stroke, type 2 diabetes, osteoporosis, colon cancer, breast cancer, obesity and stress-related illnesses), it is essential to introduce government-level measures and programs at large scale supporting sport and physical activity and providing unlimited access. It is undisputed that several laws have been passed that serve this purpose.

The introduction of daily physical education (Act CXC of 2011) has increased the amount of time that contributes to the daily need of movement for children. Exercising in school sports circles continues to carry financial obligations in many places, families with higher discretionary income are more likely to use these opportunities. Therefore, it would be preferable to have free programs in the afternoon through employing recreational organizers and experts.

The amendment of the LXXXI LAW of 1996 on COMPANY TAXES AND DIVIDEND TAXES concerning (TAO) Grants especially for spectacular team sports which also aimed to ensure the supply of young athletes, increased the number of athletes in our country. Compared to EUROBAROMETER's 2010 survey, the inactivity of Hungarians decreased moderately in the 2013 EUROBAROMETER survey. However, these good practices need to be supplemented and continued to increase the population's activity.

It is positive that in 2014 the regulation concerning the quality of food that can be consumed in the restaurants of public education institutions was introduced. It was set out in the "Decree 37/2014 on the requirements of healthy consumption in public catering establishments". (IV.30) "contained in the EMMI Regulation.

4.

Conclusion: The causes of inactivity include lack of motivation and few sports opportunities. In order for everyone to find the right sport they want to pursue the development of the infrastructure of settlements, institutions and organizations is unavoidable.

Recommendation: The development of infrastructure is indispensable on the one hand in public education institutions, on the other hand, in public organizations specialised in prevention and also in the open and closed areas of local governments. Schools need to have an increasing number of appropriate sporting facilities (gymnasiums, tuition classes, etc.). In public areas, it is advisable to create children's and adult playgrounds and workout parks, which offer the possibility of movement with their impressive appearance.

5.

Conclusion: Lack of interest is among the causes of inactivity. To make the coming generations more open to sport, not only the family, but people working in the secondary socialization scenes have to be prepared for the new challenges. In view of this, it is necessary to review the teachers' training programs and to update them in content and methodology.

Recommendation: The system of teacher training and further training needs to be examined. Opportunities should be explored and developed to provide experience-centered, up-to-date knowledge for kindergarten teachers, lower and upper grade school teacher and those participating in teacher training. At different levels, it is also important to support physical exercise-based trainings and to link them with other areas. Graduated experts will have to be offered practical and experience-based training courses to update and upgrade their knowledge on the subject.

Teachers' world view has to be changed so that they realise that it is not only the responsibility of the PE teacher to educate children to have regular physical activity and lead a healthy lifestyle, but it should concern all who work in public education.

6.

Conclusion: As a result of regular exercise, the individual will be healthier. Owing to this, employers can also consider these employees as more valuable in the world of work.

Recommendation: Measures and incentive programs are not only important to the individual, but also to the state or even to corporations, as international and national literature has shown that there are serious positive economic implications at micro and macro levels when physical inactivity decreases.

Beyond healthcare savings, it results in a more productive employee, which can be quantified as GDP growth and is reflected in productivity gains, decline in absenteeism, decline in lifestyle-related illnesses, decreasing accidents and positive changes in mortality. Thus, besides the individual's own development of health, support provided by the workplace is also important.

7.

Conclusion: My research has shown that the implementation of public health and health promotion programs, through the connection of primary (family) and secondary (public education institutions) socialization scenes, based on the development of strategies, action plans and series of programs and chain of events, is advisable

Recommendation: To deeper explore problems and target groups, further research would be needed. Exploring the lifestyle, leisure habits, healthy lifestyle and sporting activities of disadvantaged and older generations are but some of the possible research directions. Building on the results, it is advisable to create target group-specific action programs that can be more effective based on local opportunities and needs.

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Candidate: Judit Herpainé Lakó
Neptun ID: VURPK6
Doctoral School: Károly Ihrig Doctoral School of Management and Business
MTMT ID: 10027133

List of publications related to the dissertation

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Address: 1 Egyetem tér, Debrecen 4032, Hungary Postal address: Pf. 39. Debrecen 4010, Hungary
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The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of Web of Science, Scopus and Journal Citation Report (Impact Factor) databases.

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