# Theses for a doctoral dissertation (PhD)

# INVESTIGATION OF RECREATIONAL- AND SPORTS CONSUMPTION HABITS OF STUDENTS WITH DISABILITIES AND THE RELATED DETERMINATIVE FACTORS

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# 1. INTRODUCTION OF THE BACKGROUND, OBJECTIVES AND HYPOTHESES OF RESEARCH

The relationship between sport and disability is a relatively rare focus of surveys in Hungary, and studies on the recreational and sporting habits of people with disabilities are not as comprehensive (LAOUES-CZIMBALMOS ET AL., 2019a) as studies on the sporting activities of non-disabled people. The promotion of sports and physical activity for persons with disabilities is still a field that has received relatively little attention compared to other research interests. This is unfortunate, as regular physical activity can provide multiple benefits for people with disabilities, including improved physical health, increased social interactions and an enhanced quality of life.

People with disabilities often face barriers when participating in sport and recreational activities, including lack of accessible facilities, equipment and programmes. This can lead to social isolation, poor health conditions and deterioration in life quality. The issues that arise may also be due to the fact that the range of additional sporting and competitive opportunities for young people with disabilities who leave institutions is not as extensive as the scope of available sporting facilities for people without disabilities. For various reasons, (social status, lack of specialised facilities or professionals) they show low participation rates in sport with high drop-out rates (ZABLOCKI - KREZMIEN, 2013; HÖRICH - BACSKAI, 2018).

The dissertation is organised around two main pillars, namely secondary and empirical research. The aim of the paper is to provide a comprehensive analysis of the subject, drawing on both secondary and primary research to explore the problem in depth. The first pillar consists of a comprehensive review of the relevant national and international literature on the subject. The second pillar concerns empirical research, which consists of three subresearch studies.

The dissertation has a multi-faceted objective. The primary goal is to explore the current situation regarding sport and physical activity for children with disabilities. The study presents the outcomes regarding leisure time, sports consumption and sports motivation of children with disabilities. A secondary objective of the survey is to investigate the socioeconomic situation and sports attitudes of parents of children with disabilities, given that the involvement of children with disabilities in sport and physical activities has a positive

impact on their physical and mental health, as well as on their social integration and general well-being. The thesis also seeks to generate positive change. I would like to use my research to raise awareness of the importance of addressing this issue and to motivate professionals to make it a priority in their own practice. A further objective and a tertiary aim of my research is to investigate the features offered by the national sports organisation that supports and coordinates competitive and recreational sports for children with disabilities in Hungary (the National Federation of Disabled Students, Competitive and Recreational Sports (FODISZ)), and to gain an insight into its operation and organisational management. I looked for answers to what communication and motivational factors the interviewed executives consider important, highlighting the importance of marketing communication in raising awareness of the activities and existence of the organisation.

The focus of this dissertation is to raise awareness of the importance of sport and physical activity for children with disabilities and to promote positive changes in the practices related to this issue.

I am confident that the findings of this dissertation will provide valuable insights for professionals working with children with disabilities, including teachers, coaches and health professionals, as well as parents and sport officials. The revealed outcomes have an attentive impact on both the problem and its solution.

### I structured my research around the following questions:

The questions were formulated based on information from the literature, shortcomings in previous research and my own experience.

I looked for answers to the following questions:

**Q1:** How do the leisure time habits, sporting activities and sport consumption of students with disabilities develop in the two surveyed regions? Are there any gender-based differences in sporting habits, sport consumption, sport motivation and attitudes towards sport?

**Q2:** What motivates children with disabilities to participate in sports? What are the main reasons for not being involved in sports?

**Q3:** How do the socio-economic background, sporting habits, sport and health-related spending habits of parents of pupils with disabilities develop?

**Q4:** What leadership tasks do the interviewed leaders consider important and what factors affect their perception of these? What are the communication and motivational factors in the surveyed organisation?

**Q5:** What competitive and recreational sports facilities does the national sports organisation (FODISZ) offer to children with disabilities and their families?

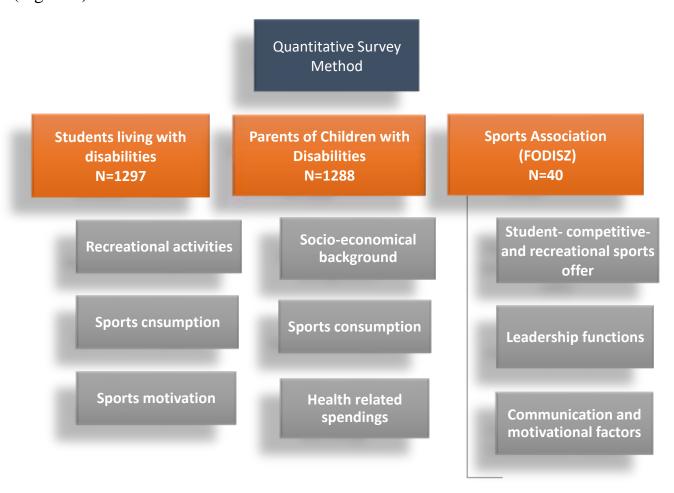
### Accordingly, I formulated the following hypotheses:

- **1. Hypothesis:** Passive (TV, listening to music) recreational activities predominate in the leisure time consumption of students with disabilities, in contrast to active sport activities, and there is a difference in leisure time and sport activities and sport motivation in terms of gender.
- **2. Hypothesis:** Students with disabilities prefer sports activities organised on school grounds due to easy accessibility.
- **3. Hypothesis:** Parental socio-economic status and educational attainment affect both self and child sporting behaviour as well as sports and health-related (vitamins, nutritional supplements) expenditure and health status (parent, child).
- **4. Hypothesis:** There are differences regarding the importance and perception of leadership, organisation, communication tasks as well as motivational factors within the FODISZ organisation.
- **5. Hypothesis:** The FODISZ has an offer of leisure and sports activities, but children with disabilities require other types of services (accessibility, personal assistance, transport, information, etc.).

#### 2. DESCRIPTION OF THE DATABASE AND METHODS USED

I conducted my studies using secondary and primary methods. For the secondary research, I mapped the most important national and foreign articles, journals, textbooks, strategies, statistical data, and in the course of the scientific studies and analyses, I used the following sites and search databases, both for national and international aspects: KSH, STATISTICAL MIRROR, EUROSTAT, SCOPUS, GOOGLE SCHOLAR, PUBMED and MATARKA, as well as RESEARCHGATE, a community platform for researchers, which provided the theoretical background for this dissertation.

For my primary research, I conducted quantitative research by creating three questionnaires: the first one for children with disabilities, the second one for parents of children with disabilities and the third one for the national sports organisation (FODISZ) (Figure 1).



1. Figure 1: Research methods and concept

Source: own research, 2023

#### DESCRIPTION OF QUESTIONNAIRES I. AND II.

I conducted my research in the regions of Northern Hungary (Borsod-Abaúj-Zemplén, Heves, Nógrád) and the Northern Great Plain (Hajdú-Bihar, Jász-Nagykun-Szolnok, Szabolcs-Szatmár-Bereg). A questionnaire method was used in the survey, both among students with disabilities in public education and among parents of children with disabilities. The questionnaire survey was conducted with the consent of the institution managers, teachers and parents.

The first questionnaire survey examines the leisure and sports consumption habits of the 8-18 age group. I present the findings of the questionnaire for disabled population in Hungary, which was adapted to a sample of children. A part of the used questionnaire was adapted from the work of SÁRINGERNÉ (2014) and the other part from the report of SPRING (2013), some items of which were adapted and adjusted to the national specificities.

In our country, only the adult population with disabilities (N=500) has been surveyed (SÁRINGERNÉ, 2014), and the previously mentioned GOMBÁS (2016) research focused on only one type of disability, namely the visually impaired. Therefore, my study focusing on children and covering a wide range of disability areas could serve as a potential gap-filler.

The pupils included in the study sample were from segregated and integrated majority schools. During data collection, FODISZ assisted in reaching out to students with disabilities (n=1297) and parents of disabled children (n=1288). Out of the 1500-1500 distributed questionnaires, 1297 and 1288 could be evaluated, resulting in a response rate of 64.8% for the former and 64.4% for the latter.

The survey was carried out among pupils in special education and integrated education. Respondents attend primary and secondary education institutions. The survey used both paper-based and online questionnaires.

I started the data collection in the academic years 2018/2019 and 2019/2020, but unfortunately the COVID-19 pandemic prevented me from completing further questionnaires, therefore I continued the survey in 2022 and managed to reach the target participation rate by 2023.

The questionnaire for children started with a short introduction, which explained clearly that the data would be used to help me in my research. The questionnaire was completed in homeroom, and the pupils completed the questionnaires with the help and guidance of surveyors (teachers, special education teachers, physical education teachers), I therefore enclosed a detailed teacher's guide with the questionnaires, which included instructions concerning the completion of the questionnaire and the timing of the survey, as well as a parental consent form indicating that the parent had given his/her consent for his/her child to complete the questionnaire. Of course, the questionnaires were completed anonymously and participation in the data collection was voluntary. In addition to sociodemographic variables, the items of the questionnaire also covered students' leisure and sporting habits, sport motivation, as well as the attitude of disabled children concerning sport.

The questions of the questionnaire for parents of disabled children were related to the socioeconomic background of the parents, their leisure and sporting habits as well as their motivation to participate in sports. The survey also examined parents' propensity to spend on sports and health.

For students with disabilities, I used a questionnaire with 36 closed questions and a five-point Likert scale. For the parental questionnaire (29 questions), I used both open, closed and semi-closed questions. These included both single- and multiple-choice as well as scalar questions (Annexes 2 and 3).

I only used the fully completed questionnaires, which I encoded. After data cleaning, the responses were processed using IBM SPSS Statistics 27 software. I analysed the database using both the resulting descriptive statistics and multivariate procedures. To describe and present the basic statistics, I used frequency and relative frequency tests, mean calculations (mean, median and mode) and standard deviation.

In order to investigate the correlations between data series, I performed cross-tabulation analyses and Chi-square statistics, and for higher levels of measurement I used correlation procedures (Spearman's rank correlation). In some cases, I also performed discriminance analysis.

The main groups of children with disabilities were identified using cluster analysis. The optimal number of clusters was determined by hierarchical cluster analysis and the final clusters were formed using the K-means procedure.

Similarly, for parents of disabled children, I used cluster analysis to form clusters from the parent sample as described above.

### III. DESCRIPTION OF THE QUESTIONNAIRE

I conducted my research at the level of the national and provincial affiliates of the organisation. The respondents were the leaders of the organisation (FODISZ) and representatives of the provincial affiliates. I used an online questionnaire to research information regarding the operation of the organization. The leaders of the organisation were invited to complete the questionnaire by e-mail. The respondents' anonymity was ensured by not having to give their names and by using an online interface. One part of the survey was conducted in January 2018 and the other in December 2022. The questionnaire used was adapted from PIEROG's (2013) doctoral thesis on "Management and operational characteristics of NGOs", thus ensuring its applicability and validity. In my research I adapted part of this questionnaire. In the questionnaire, I investigated some of the leadership functions necessary for the operation of the organization, with special emphasis on communication and motivational factors, planning, decision making, organization, in order to identify the factors that affect the importance of leadership functions. The questions include response choice items (where only one answer can be marked), multiple-choice items and I have used a Likert scale from 1 to 5, which refers to items measuring the degree of agreement with a statement. A total of 40 completed questionnaires had been returned by the end of the survey, i.e. 100% of respondents had replied. The questionnaire consisted of several parts: one part included the respondent's personal characteristics, such as gender, age, position in the organisation, and the other part covered the respondent's management responsibilities, process management, management planning, decision-making, organisation, as well as student-, competitive- and recreational sports. In addition to the questionnaire, I also carried out a document analysis, reviewed the organisation's constitutional and operational rules and its website.

After extracting the questionnaire survey data, I processed and analysed the results using IBM SPSS Statistics 27 software. I used descriptive statistical indicators (frequency, relative frequency, mean, standard deviation) and cross-tabulation analyses (first order Chi-square test) to examine correlations.

# SOCIODEMOGRAPHIC CHARACTERISTICS OF STUDENTS WITH DISABILITIES

Gender and age of the responding students

In the survey (n=1297), boys in 55.6% (721) and girls in 44.4% (576) responded to my questionnaire. The average age of the respondents (8-18 years old) was 14.13 years (sd=2.71), so, we can say that upper primary school students gave the most answers in the survey.

### Data regarding type of disability

When asking for demographic data in the survey, I also tried to find out what type of disability the respondents with disabilities aged 8-18 years old belong to. The largest proportion of the surveyed students was 52.4% (680 students) with learning disabilities. 15.3% of pupils (198 pupils) had musculoskeletal disability and 13.3% (173 pupils) had cognitive disabilities. Of the pupils with other disabilities, 8.4% (109) are autistic and 1% (9) are visually impaired. Almost equal proportions of 4.2% (54) of pupils with multiple disabilities, namely 3.4% (44) of pupils with speech impairments and 2% (30) of pupils with hearing impairments participated in the survey.

Data concerning the respondents' place of residence, type of school, parents' educational attainment and labour market status:

My questionnaire survey was conducted in six counties of the Northern Great Plain (77.2%) and Northern Hungary (22.8%) regions - Hajdú-Bihar (41.5%), Jász-Nagykun-Szolnok (7.3%), Szabolcs-Szatmár-Bereg (29.2%), Borsod-Abaúj-Zemplén (17%), Nógrád (1%) and Heves (4%). 50.3% of the pupils reside in cities, 24.2% in county towns and 25.5% in municipalities, and 30.7% of them attend integrated and 69.3% segregated types of schools.

Regarding the highest educational attainment of the parents, the students' responses were as follows: 21.4% of mothers and 18.1% of fathers had completed 8th grade as highest level of education. The percentage of fathers with graduation certificate is 19.7% whereas for mothers it is 24.7%. 6.6% of mothers and 29.5% of fathers have obtained a vocational certificate. The majority (22.5%) of women have a tertiary degree and 15% of men have

some kind of college or university degree. There were, however, students who could not provide an answer, 17.7% for boys and 13% for girls.

In terms of labour market status, nearly half (58.2%) of the young people's parents work, while in 22.7% of the cases only the father had a job, in 9% only the mother had a job, and in 7.6% both parents were unemployed, and there were other responses too (2.5%).

# SOCIODEMOGRAPHIC CHARACTERISTICS OF PARENTS OF CHILDREN WITH DISABILITIES

Demographic characteristics of responding parents

Of the parents (n=1288) interviewed in the sample, 28.2% (363) were male and 71.8% (925) were female.

The age distribution of the surveyed parents was as follows: females aged 18-20 years 1.1% (10 persons) compared to 1.7% males, mothers aged 21-30 years 17.2%, fathers 11.8%. The age group 31-40 years consisted of women in 35.6% and men in 27.3%. The age group of 41-50 years comprised women in 35.6% and men in 41.6%. The respondents in the age group over 50 years are 10.6% females and 17.6% males. 43.2% of parents live in cities, 26.4% in county seats and 30.4% in villages/towns. Based on the responses received on the educational attainment of the parents surveyed, it can be observed that most of them have a graduation certificate and a vocational qualification (43.6%), followed by college/university education (32.4%). 12% have only a graduation certificate, 8.9% have completed primary education, while 3.1% have less than eight grades of education.

Concerning the outcomes of the question on financial situation, a significant proportion of responding parents stated that their net monthly income per capita is above 150 001 HUF, namely 29.2%, 38.0% of males and 25.7% of females. 25.7% of the surveyed parents have a net monthly per capita income between HUF 50 001 and 100 000, broken down by gender, the proportion is 28.9% for women and 17.6% for men, but 4.6% have a net monthly per capita income below HUF 50 000, 4% for women and 6.1% for men. Nearly one-seventh did not answer the question (14.1%), while 3.6% did not know the answer.

Most of the respondents (32.8%) work in white collar jobs, 28.6% in mixed (physical and intellectual) jobs and 25.5% in physical jobs. 13.1% of parents do not have a job.

Parental responses indicate that 70.5% live in the Northern Great Plain region and 29.5% in the Northern Hungary region. In six counties, the distribution of respondents' place of residence is as follows: 37.9% in Hajdú-Bihar, 11.4% in Jász-Nagykun-Szolnok, 24.1% in Szabolcs-Szatmár-Bereg, 14.6% in Borsod-Abaúj-Zemplén, 5.9% in Nógrád and 6.1% in Heves. 19.6% and 25.8% of the parents surveyed are in employment; 2.4% of women and 3.3% of men are jobseekers, while 10.3% of women and 10.5% of men are on maternity leave. 13.8% of women and 8.5% of men have a household job. 13.8% of women and 19.6% of men receive a care allowance. 15.6% of parents and 17.1% of parents are in education. There are parents who are unemployed, namely 7.4% of women and 5.8% of men, but there were also parents who are in a status of being unable to work: 9.2% and 11.6%. 4% of respondents and 1.7% did not answer the question.

# PRESENTATION OF THE SPORTS ASSOCIATION FOR CHILDREN WITH DISABILITIES (FODISZ)

The name of the organisation covered by the research is the National Association of Disabled People in Student, Competitive and Recreational Sports (hereinafter: FODISZ). FODISZ was established as a public benefit society organisation on 8 March 2008 with the aim of developing a structure that enables the quality and efficient organisation of the activities of disabled people, students and recreational sports in all disability areas.

The FODISZ offers recreational and health promotion programmes for both children and adults with disabilities. This work is effectively supported by the FODISZ provincial affiliates and their network of professionals. It operates an Olympic competition system for students with disabilities in Hungary, which provides opportunities for students to participate in several sports in all fields of impairment.

The main objective of FODISZ is to promote the education of students with disabilities to adopt a healthy lifestyle outside the classroom. This includes encouraging physical activity and regular exercise as well as the promotion of recreational sports activities for the disabled population. It also has an important role to play in promoting physical activity and sport among people with disabilities beyond their school years, providing opportunities for people with different disabilities to participate in these events, organising several recreational sport events each year for people with intellectual disabilities, hearing impairments, visual impairments and mobility impairments, promoting inclusiveness by meeting the needs of

people with disabilities and ensuring that everyone can participate in these events, regardless of their abilities.

By organising recreational sporting events, it provides opportunities for people with different disabilities to come together, socialise and engage in physical activity. This can be beneficial not only for physical health but also for mental and emotional well-being. Participating in such events can help reduce social isolation, build self-confidence and develop new skills.

Demographic characteristics of the leaders of the FODISZ organisation

The following professionals (executives) participated in the survey: national director of competition for student sport, director of competitive sport, director of communication and marketing, commercial manager, office manager, executive president, provincial representatives of member organisations and competition directors. A total of 40 people participated in the research. According to the gender analysis of the respondents, the surveyed organisations consisted of women in 32.6% and men in 67.4%.

In terms of education level, 64.3% of the women have a college degree and 35.7% have a university degree, while 72.4% of the men have a college degree and 27.6% have a university degree. The majority of respondents are also education specialists. An examination of the respondents' years of service with the organization reveals the length of time the responding managers have been with the organization. The largest proportions, between 5 and 10 years, 44.3%, between 3 and 5 years, 21.3% and less than 3 years, 19.7% and 14.7% have been with the organisation for more than 10 years.

#### 3. MAIN FINDINGS OF THE THESIS

In this chapter I present the outcomes of my research in relation to the predefined objectives. I highlight the key findings that emerged during my study, in line with the specific objectives I set.

For my objectives and hypotheses, I have drawn the following conclusions:

**H1:** Passive (TV, listening to music) recreational activities predominate in the leisure time consumption of students with disabilities compared to active sport activities, and there is a gender difference in leisure time and sport activities and sport motivation.

My hypothesis was confirmed. The research on students with disabilities shows that passive recreational activities are prominent in their preference and activity systems. Research on able-bodied people also confirmed the finding that listening to music and watching TV are the most frequently chosen leisure activities in Hungary, which was also confirmed in my research.

The research confirms that passive leisure activities are the most prevalent among young people with disabilities, with listening to music (37.2%, 482 people) and watching TV (29.0%, 376 people) being the most popular. While these activities can improve mental and cognitive functions and aesthetic perception, they increase the proportion of time spent sitting, i.e. inactivity. It would therefore be important to motivate them to try out and participate in recreational sport on a regular basis, thus integrating it into their lifestyle as a permanent consumption.

My research among children with disabilities shows that there is a gender gap in sporting activity and frequency. Boys are more active, playing more sports (61.4%, 443 persons) and more often ("more than 3 times a week" 4.3%) compared to girls (56.9%, 328 persons; "more than 3 times a week" 2.9%).

Boys' motivation and attitudes to sport also differed from girls', with statistically verifiable higher proportions of boys who love sport (77.8% boys; 71.7% girls), have aspirations (76.6% boys; 73.1% girls) and feel able (88.2% boys; 85.9% girls) to play sport. The less favourable results among girls in terms of frequency of participation and attitude in relation to sport highlight the need to focus more on girls when conducting background studies on sport motivation among children with disabilities.

Girls' sporting activity is lower compared to boys, but their sporting behaviour was found to be more in favour of water sports (swimming) and musical forms of exercise. The inclusion of new trends and new types of movement in the offer is important because it can motivate children and provide them with new and exciting experiences that can be used for their motoric development.

The hierarchy of motivations in my research was similar among boys' and girls' responses, as they were most motivated to play sports for health, external traits and recreation. I found a significant gender difference in motivation to engage in sport, with girls being most motivated to exercise for health, appearance, fear of being overweight and improving physical performance, while boys were more motivated to do sports for fun, recreational activities, companionship (making new acquaintances, socialising with friends) and increasing self-confidence.

**H2:** Students with disabilities prefer sports organised on school grounds due to easy accessibility.

The results of my primary research confirmed my hypothesis. Students with disabilities prefer organized sports on school grounds (41.5%) because of its easy accessibility. Besides physical education classes, pupils prefer school-organised sports activities. This could be explained by a variety of reasons, such as parents being more comfortable with playing sports at school, children feel safe in familiar surroundings, having friends within school, sticking to familiar teachers. In addition, they are attracted by the range of sports activities on offer and the sports infrastructure of the institution is appropriate for them. Another reason could be the financial situation of parents, which does not allow them to take their children to paid activities or to finance the extra costs of travel, which we would like to confirm in our further research.

**H3:** Parental socioeconomic status and educational attainment affect both self- and child sporting behaviour as well as parental sport and health-related (vitamin, nutritional supplement) expenditure and health status (parent, child).

The results show that parents with higher levels of education also have higher levels of income (r=-0.441; significance level p=.000), so there is a significant correlation between income and education (p<0.05) and the two variables are closely related, with higher education being associated with better financial situation (r=0.364; significance level

p=.000). Parents with higher incomes also spend more on sport for themselves and their children (Wilks' Lambda 0.866,  $\chi$ 2=184.662, p=0.000). Children of parents involved in sport are significantly more likely to play sport (78%) than children of parents not involved in it (38.5%).

My analysis also shows that lifestyle-related diseases are less prevalent among parents who play sport. Type 2 diabetes affected only 4.1% of sporting parents compared to 9.9% of non-sporting parents (chi2= 16.3, P=0.000), and heart disease affected only 2.6% of sporting adults compared to 7.8% of non-sporting parents (chi2=17.9, P=0.000). Hypertension affected 15.5% of parents involved in sport (chi2= 4.924, P= 0.016) compared to 20.3% of non-sporting parents (chi2= 4.924, P= 0.016). Cancer was diagnosed in 0.9% of sporting parents compared to 3.3% of non-sporting parents (chi2=8.8, P=0.003).

The prevalence of musculoskeletal disorders in the sporting population was only 8.4% compared to 15.2% in the non-sporting sample (chi2=14.2, p=0.000). Sport also plays a significant role in the prevention of obesity and being overweight, as 9.5% of sporting parents reported this, while 22.1% of parents in the non-sporting category said they had a weight problem (chi2=38.56, p=0.000). 21% of the sporting parents said that they were taking medication, while 31.2% of the non-athletic parents said the same (chi2=17.3, p=0.000). This provided evidence of health-economic benefits of sporting activities. In the parent population, we also asked parents of children with disabilities about their child's medical conditions, but there I could only find a significant difference between sporting and non-sporting children in terms of obesity and being overweight. This problem of obesity and being overweight affected 5.7% of the children who played sport, compared to 9.7% of the children who did not play sport (chi2=7.4, p=0.004). The lack of significant differences among children is probably due to the fact that the child may be taking medication for their underlying condition or disability specificity.

The survey showed that parents who spend more on themselves and their children's sports activities are those who have a higher level of education and who play sports. However, I could only confirm better health and less need for medication for parents involved in sport, whereas in the child population sport only played a role in reducing being overweight and obesity, but its long-term effect may reveal a health protective role in later years. As a consequence, it can be stated that hypothesis 3 is only partially confirmed.

**H4:** There are differences in the importance and perception of leadership, organisation, communication and motivational factors within the FODISZ organisation.

Based on the obtained research results, we can conclude that hypothesis 4 is confirmed. Upon analysing the process management area of the research conducted among the FODISZ managers, I could observe that 88.1% of the surveyed managers considered organisation as the most important task, followed by planning, which was considered important by 83.7% of them and in addition to this, various management tasks such as: organising, decision-making, planning, implementation of decisions, control and provision. The findings indicate that of the various organisational tasks, (4.65) 69.8% considered coordination tasks to be of full importance and (3.90) 44.2% considered the provision of financial conditions to be so.

Executives also considered organisational tasks important, on which there was a consensus in the sample, with coordination, provision of personal and financial conditions being considered the most important. Legal and administrative tasks were considered to be less dominant in their work and therefore less important.

During the investigation of the internal forms of communication, formal (formal) and informal (informal) channels were analysed separately. Regarding formal communication tools, overall, circulars and meetings were considered to be the most important by leaders. Executives prefer communication tools and consider media coverage to be important. However, in terms of informal communication channels, conversations with friends emerge as the most important, with a Likert scale score of 5 indicating that it is considered to be absolutely essential. Effective internal communication is essential to build relationships within the organisation and to facilitate the alignment of organisational functioning. By prioritising formal and informal communication channels and promoting effective communication practices, organisations can improve collaboration, decision-making and overall performance.

Internal communication plays a vital role in building relationships within the organisation and facilitating the alignment of organisational operations. Effective communication between employees, managers and other stakeholders can help to improve collaboration, build trust and promote a mutual understanding of organisational goals and objectives.

The analysis of the outcomes revealed that, when it comes to the importance of external forms of communication, organisational leaders consider group communication and mass communication marketing tools to be of utmost importance. A Likert scale score of 5 was set, but the perception of other methods (lobbying, promotion, sponsorship) was also very important in terms of evaluation, as it was given a score of 4 on the Likert scale.

The organisation recognises the importance of a wide range of marketing tools in achieving its communication objectives.

The analysis shows that the respondents give the highest priority to professional commitment in 69.8% and internal motivation in 67.4%. These are followed by the desire to help in 60.5% and the social motivation in 46.5%. The results of the motivational surveys show that professional commitment is the primary motivation for the majority of respondents.

**H5:** The FODISZ offers recreational and sports activities, however, children with disabilities also require other types of services (accessibility, accompanying assistance, transport, information, etc.).

Hypothesis 5 was confirmed, namely that the FODISZ has a recreational and sports offer (activity in the school year 2021/2022: 8886 pupils, 16 sports offered), but children with disabilities also require other types of services. The 4 clusters of children with disabilities, derived from the cluster analysis, show that the interest in sports and the way of perceiving disability as well as the values are different, and therefore the needs also differ. Thus, FODISZ should offer a more diverse variety of sports and recreational programmes, which I propose by cluster group in a tabular form in the proposals section.

#### **Suggestions for FODISZ Association:**

Taking into account the responses from managers, I suggest trainings that:

- Could be useful for expanding management and HR knowledge of FODISZ staff, even in the framework of online courses.
- Regarding the content of the trainings, the development of planning skills and competences is also essential, along with the teaching of organisational skills according to the research outcomes.

- As managers frequently use formal and informal communication tools, the organisation of communication and team building trainings could also be important for the effective functioning of the organisation.
- During the selection of employees, it is important to assess the commitment and positive attitude, paying attention at the interview or motivation letter, as according to the respondents, commitment was the most important motivating factor.

The findings of the study highlight the importance of executives understanding the different aspects of management within the organisation and using this knowledge to develop more effective management practices and strategies.

NGOs are often established to address social or environmental problems, promote human rights and improve the quality of life of individuals and communities. Unlike for-profit organisations, their primary objective is not to make profit but to have a positive impact on society. As such, their marketing communication strategies often focus on raising awareness of their mission and activities, building relationships with stakeholders and mobilising support for their cause. Effective marketing communications can help NGOs attract volunteers, sponsors and partners and increase their visibility and credibility in the community.

# Aspects of product development proposals:

During the research, according to the values of children with disabilities, their experience of their disability and their attitudes towards recreation, the following aspects of sport- and recreational product development should be considered:

Cluster	Characteristics, values	Areas to develop	Suggested sports offer
1. Hindered accepting, active	Characteristics: their disability interferes with their daily activities values: it is very important for them to acquire new skills, to learn, to meet new people, to try new things, to stay fit.	Abilities that determine fitness: stamina, relative strength, strength endurance, joint mobility physical conditioning, circulation enhancement	Physical activity programmes adapted to disabilities and individual conditions. New types of trends and forms of movement (music-dance aerobics) Integrated team sports Hiking, walking, Nordic walking Postural gymnastics Family sports day Accessible venues and enhancing accessibility
2. Non-hindered, rejecting	Characteristics: Their disability doesn't really bother or hinder them. values: They place less importance on maintaining health, playing sports, staying fit, trying out new things and spending time with family.	Encourage interest and develop positive attitudes towards physical activity through recreational and entertaining physical activity programmes	Sport demonstration and sport selection days. Generating interest with flash mobs Opportunities to try out individual sports Sports competitions, physical education- and sports games
3. Non-hindered passive	Characteristics: they are less hindered by their own condition to participate in activities values: Based on their value system, they are less reluctant and less unmotivated in terms of maintaining health, doing sports and getting fit than the previous group.	Maintaining interest and positive attitude towards sport Improving fitness, Fitness determinants: stamina, relative strength, strength endurance, joint mobility	Traditional and new types of activity programmes and sports
4. Hindered accepting, passive	Characteristics: their disability interferes and hinders them in daily activities and sports values: learning, socialising and trying out new things are important to them	Developing a positive attitude towards sport. Development of new skills and competences through sport, Facilitating engagement in sport	Disability-specific sports programmes (rattle ball, wheelchair basketball, etc.). Integrated sports programmes Family sports days

#### 4. NEW, OR NOVEL OUTCOMES OF THE THESIS

I was the first to investigate the sporting habits, sport motivation and reasons for not participating in sport among students in public education in Hungary. I revealed gender differences in sport engagement and activity as well as significant and tendentious differences in motivation regarding boys and girls.

Given the observed gender disparity in sporting activities of children with disabilities, I recommend the development of targeted interventions to address the special obstacles that are specific to girls. Creating inclusive sport programmes that consider girls' motivations could help bridge this gap and facilitate greater participation.

I have examined the recreational activities of students with disabilities as well as the students' preference system, identifying a preference for passive recreational practices, activities that increase sedentary time (listening to music, watching TV).

Using cluster analysis, I have classified and identified students with disabilities according to their activities and values, which can serve as a solid basis for determining the sports offer for students with disabilities as well as for strategic planning in public healthcare.

In my research, I classified students with disabilities into separate clusters - clustering them according to their perceived disability and value systems allows for tailored interventions. By addressing the specific needs of each cluster, more effective supporting systems can be developed to maximise commitment and positive outcomes.

I investigated the sporting habits, health status, values and spending habits among parents of children with disabilities. I found that higher education levels resulted in higher incomes for them, which induced higher propensity to spend on themselves and their children's involvement in sport. I also clustered the parental sample covering sport, recreation and values, which may help in attracting parents to engage their children in sport.

Recognising the correlation between the parents' educational attainment, income and support for sport, efforts should be made to ensure that children with disabilities have equal access to sporting opportunities, regardless of their family's socio-economic background.

Encouraging parents to participate in sport not only benefits their health but also sets a positive example for their children. Initiatives that promote family-oriented physical activities (e.g. the family-friendly programme concept) can contribute to the overall well-

being of both parents and children, as well as strengthening family bonds and increasing overall engagement.

The role of sport in preventing obesity and addressing weight problems is evident. Healthcare and education institutions can cooperate to develop awareness-raising campaigns and programmes that emphasise the importance of regular physical activity.

For the first time, I investigated a national sports organisation (FODISZ) coordinating sports activities for children with disabilities, identifying the management, organisational and planning tasks and highlighting the importance of different areas that could be incorporated into the training of professionals, for which I made specific suggestions. I formulated proposals for encouraging and motivating disabled students to participate in sport and for the development of the necessary sports facilities.

Since students are mainly involved in sport on school grounds, the development of school-based sport programmes also becomes an important task. Schools should focus on creating and maintaining inclusive sports programmes that meet the accessibility needs of students with disabilities. Collaboration with sports organisations such as FODISZ can help to integrate such programmes into the educational environment, while schools and sports organisations should also work closely together to provide diverse and accessible sporting opportunities for students with disabilities. This partnership can facilitate the development of a supportive and inclusive sporting environment for children with disabilities.

The study examined the gaps in research focusing on sport and recreational activities for students with disabilities. It highlighted that more disability-specific studies are necessary to explore different aspects of inclusive sport and that researchers can contribute to a more comprehensive understanding of this important area.

In conclusion, the study has highlighted a number of novel findings in relation to the sporting activities of children with disabilities and their families. These findings can underpin the promotion of inclusivity, the improvement of health outcomes, as well as interventions and programmes that aim to contribute to the overall well-being of children with disabilities and their families.

#### 5. POTENTIAL IMPLEMENTATION POSSIBILITIES OF THE OUTCOMES

The outcome of the hypothesis testing showed that boys' and girls' sports motivation diverge in certain areas. For this reason, I suggest the offering of different recreational sport elements and the use of gender-based vocabulary in sport promotion and marketing communication. As health, physical appearance and recreation are important for everyone, it is necessary to offer sports activities that can provide this, i.e. cyclical sports for health preservation due to their role in fitness development, fitness activities (aerobics, TRX, etc.) for fitness preservation and also for body shaping, while new trends, new types of activities and team sports can provide entertainment. Given that girls are more motivated to engage in sport for the sake of health, good looks, avoiding overweight and improving physical performance, while boys prefer to do sports for fun, recreation, companionship (making new acquaintances, socialising with friends) and to increase their self-confidence, it is important to offer boys and girls different sport programmes. For girls, these could be health enhancing cyclical sports, yoga and relaxation exercises, or body shaping musical exercises or cardio training that promotes weight loss. Boys play sports for the social experience, friends and company, so team sports, ball games and competitions can be offered to them. The slogans to address the target group in the marketing communication for girls could be "Fit and healthy, exercise for health and a pretty body, together against obesity" while for boys it could be "sport for each other", "make friends and socialise through sport", "sport and fun at leisure", etc.

Children with disabilities who are not involved in sport could also be addressed and motivated through similar posters, online platforms, marketing communication with similar slogans and messages: start playing sport, be part of a great community, get a community experience for your health, etc. For non-sporting people, sports days, events to choose a sport, family activities, wellness days, talking to disabled athletes and playing sport together could be elements to encourage them to get involved in sport. At the same time, they should be given information, through accessible communication, about the locations and type of opportunities and conditions for playing sport and spending leisure time actively.

These sports programmes and events can be organised effectively through a three-way cooperation between the FODISZ, parents and schools. The FODISZ should work in close cooperation with the schools, both because it is a matter of student sport and because

research indicates that pupils tend to stick to their usual school venue, and in this case access to it is not a problem. Therefore, in order to improve sports provision, it would be useful to create an infrastructure map or a register of infrastructures and facilities, indicating disability-specific possibilities and recommendations that could be used when organising sports services or recreational sports events and competitions, so that pupils with disabilities could participate in the various sports activities on offer.

As the participation of children with disabilities in sport is largely affected by parental support (in terms of access, finances, morale, etc.), according to the parent cluster I have constructed, it has a significant impact on the involvement of children with disabilities in sport. I also recommend targeted programmes to motivate supportive (active accepting) parents and to engage the less proactive (passive accepting and passive family-centred) ones. To increase participation, I recommend the concept of family-friendly sports programmes with the involvement of parents.

My research provides recommendations for the FODISZ that can help to achieve higher sports participation rates for students with disabilities and improve their status in the framework of equal opportunities. Most research focuses on the able-bodied, including research on the implementation of sports and leisure activities for students with disabilities, so this research explored a niche area. It also raises new research directions, which can provide novel perspectives for disability-specific studies.

#### 6. PUBLICATIONS MADE WITHIN THE SUBJECT OF THE DISSERTATION



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Candidate: Nóra Laoues-Czimbalmos

Doctoral School: Károly Ihrig Doctoral School of Management and Business

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#### List of publications related to the dissertation

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