

Thematic Article

The Impact of Sport on the Health Related Quality of Life of Primary School Children

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Abstract

By participating in some organized physical activities, even at school or in a sports association, children will have an impact on their intellectual, emotional and socialization abilities, as well as develop their motor skills and abilities. As a result, an athlete's health will also be at a higher level and their Health-related quality of life (HRQOL) will change. In the survey, we were researching if there is a difference in the results of the HRQOL dimensions of lower-grade athletes and non-athletes at Ferenc Gál University's Szarvasi Training Primary School and Training Kindergarten. In the cross-sectional study, 89 parents responded to questions in the Kidscreen-27 / proxy questionnaire, which asked about their child's subjective quality of life and its relationship with sports. Based on the statistically processed data, it can be shown that young athletes have higher HRQOL values compared to their non-athlete counterparts in all dimensions. From this, we can conclude that sport has a positive impact on the health and well-being of athlete students, their relationships with family and friends, and their effectiveness at school.

Keywords: physical activity, health-related quality of life, children.

Introduction

Sport is the miracle of the 20th century, one of the most outstanding means of maintaining a healthy lifestyle (Szatmári, 2009). There are few concepts apart from sport that are as universally understood and used on all five continents with approximately the same content (Takács, 2009). It can be said that an average person's athletic habits, which are merely an additional obligation, and those of an active person, which are built-in, regular occurrences, equally impact the lifestyles of both. Initially, parents have considerable influence in their children's choice to participate in sports, since the parents themselves are role models for their children in all areas including sports. The type, availability, and proximity of given sports and their clubs are crucial factors in which social environment a child chooses to involve him-/herself. When it comes to choosing a sport, the professionalism of coaches and the financial situation of parents hold great sway (Balogh, 2015). Overall, children can learn many values in their sporting activities. They can learn to properly deal with success and failure, to develop patience, perseverance, self-confidence, tactical and strategic skills, and they can learn to care for and cooperate with teammates (Balogh, 2015).

Sport makes a significant contribution to authentic self-knowledge through direct feedback: the child is instantly confronted with feedback on his or her performance. Proper self-assessment based on realistic self-knowledge will help a person set goals correctly. Thus, through small steps, small successes can be had, thus increasing self-confidence and encouraging further goal setting. What is really great about sports – and therefore can be taught in physical education classes – is that results require persistent, disciplined, purposeful work.

The cheerfulness and zest for life typical of people living an active lifestyle goes hand in hand with a basic disposition to be move and an increased tendency to take initiative. In addition to the short-term benefits of

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exercise, long-term effects can be shown through cognitive function tests and MRI scans. First, nerve cells expand, making more connections. This stabilization of synapses and expansion of neural connections in a child's brain are invaluable for improving memory and learning (among other things), thus making the motor activity associated with it quintessential (Rétsági et al., 2011; Kovács, 2015).

Due to the increasingly unfavorable environmental conditions, it has become essential to ensure that children remain healthy and active during growth (Đorđić & Bala, 2006). Parents need to encourage them in this, for, aside from perhaps extending life expectancy, an active lifestyle provides benefits like the following: more fulfilling lives, better academic results, sharpened mental abilities, a positive body image and self-image, and enhanced health-related quality of life. Health-related quality of life (HRQOL) measures an individual's perceptions of their own well-being and health within a single cultural environment. HRQOL primarily covers the protection of the health of children and adolescents and has become an important tool for the prevention, treatment, rehabilitation and ongoing follow-up of various chronic diseases and health problems (Stevanović, 2008).

A child's health-related quality of life considerably depends on the extent to which a realistic lifestyle matches the one that the child desires. It further depends on relationships with family and friends, living standards, general health (mental and physical), biological needs as well as specific social, cultural, and economic needs (Rijavec, 2007; Brajša, 2006). The aim of the study was to assess the impact of sport on the HRQOL of primary school children.

Research design and Methods

The primary empirical cross-sectional research was conducted using quantitative methods, following the research plan.

Sample

The authors collected the sample used for study at Ferenc Gál College (renamed Ferenc Gál University in August 2020) Szarvasi Training Primary School and Training Kindergarten, among students in Grades 1-3. The students' parents filled out the questionnaires. Of the 90 parents contacted, 89 completed the questionnaire in full. The sample consisted of 43 boys and 46 girls, 24 first-graders, 31 second-graders and 34 third-graders per class (mean age: 7.12 ± 0.54). There was no significant difference between the classes ($F = 2.56$; $p = 0.12$) or between the sexes ($t = 0.47$; $p = 0.18$) in the dimensions of health-related quality of life, so the sample could be examined together.

Research process

With the principal's permission, the teachers handed out the questionnaires in the selected classes, to be filled out at home. The parents had to return them within five days. The collection of the questionnaires was followed by data entry and then data processing.

Instruments

The Hungarian language version of KIDSCREEN-27 was used to assess the health-related quality of life (HRQoL) of children and adolescents. The KIDSCREEN-27 questionnaire was created as part of the international project "Screening and Promotion for Health-related Quality of Life in Children and Adolescents – a European Public Health Perspective," with 13 participating countries,

including (Kidscreen Groupe Europe, 2006; Ravens Sieberer et al., 2006).

Two separate questionnaire versions were available for use – a child-adapted version (self-report) and a parental one (proxy-report). The authors used the Kidscreen-27 / proxy version in the survey. It took about 10-15 minutes to complete the questionnaire.

The multidimensional questionnaire contained 27 items on 5 scales / dimensions: Physical Activity and Health (5 items), General well-being and the child's emotional well-being (7 items), Family and leisure (7 items), Peers (4 items), School and teaching (4 items). As far as results are concerned, a higher score indicated a higher quality of life.

Table 1. The children's sport activity

	N	%
Participates in sport	71	79.8
Does not participate in sport	18	20.2
At a sports club (SC)	23	25.81
At school sports (SS)	20	22.47
Both (SC+SS)	28	31.50
Does not participate in sport in any circumstances	18	20.22
Total	89	100.0

Source: Authors' own research

Statistical analysis was performed using SPSS 20.0. Significance levels were determined at $p < 0.05$ for each trial. Descriptive statistics were performed on the dimensions of the KIDSCREEN-27 questionnaire to determine means and standard deviations. Differences between classes were examined by analysis of variance (ANOVA) and gender differences by independent t-test. An independent sample t-test was used to compare the means measured on the dimensions of KIDSCREEN-27 for sport. The focus of the analysis was to explore the differences between athlete and non-athlete children. In accordance with the recommendation of the KIDSCREEN working group, the raw data were transformed by Rasch modeling (Kidscreen Groupe Europe, 2006).

Results

The obtained results, related to habits and HRQOL dimensions of the children, are presented in tables and diagrams with brief explanations.

Almost 80% of the students surveyed participated in some form of sport and 25.81% did so through a sports club, while 22.47% participated in school sports, and a total of 31.50% were sports-active in both settings. About one fifth of the students, 20.22% of children did not participate in any sports anywhere (Table 1.).

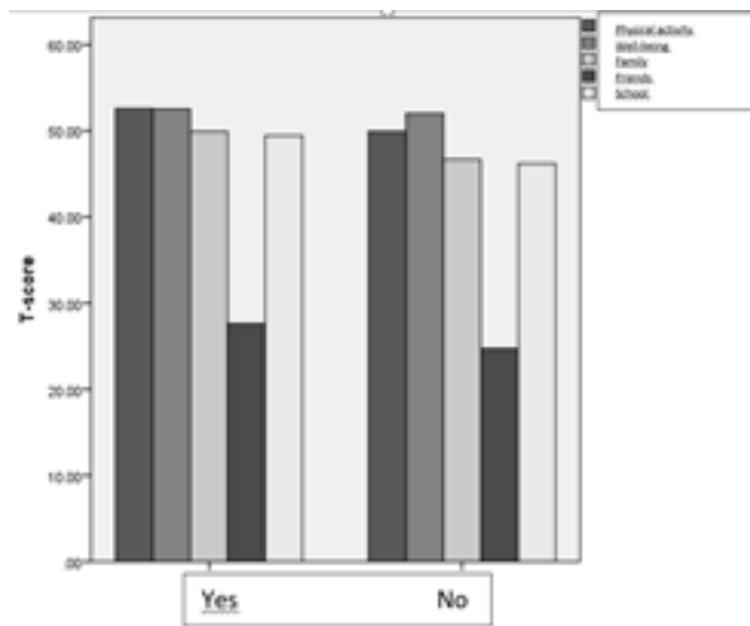
Table 2. Comparison of HRQOL dimensions

	Participates in sport	Does not participate in sport		
HRQOL dimension	Mean ± Variance		t	Sig.
Physical Well-being	53.11±8.81	49.93±10.83	1.31	0.01**
Psychological Well-being	52.89±10.98	52.02±13.01	0.29	0.77
Autonomy & Parent Relations	50.04±13.18	46.67±15.26	0.94	0.03*
Social Support & Peers	27.73±19.35	24.73±17.05	0.63	0.03*
School Environment	49.35±11.38	46.35±16.55	0.94	0.04*

t-independent sample t-test; p-significance level ($p \leq 0.05$)

Source: Authors' own research

Using an independent sample t-test (Table 2), the authors revealed that there was a significant difference in the means of the HRQOL dimensions for the Physical Well-being, Autonomy & Parent Relations, Social Support & Peers, and School Environment variables, but not for the Psychological Well-being variable alone. Yet on the basis of Figure 1 it can be stated that those students who participated in sports had higher scores in all cases when compared to their non-sports-participating peers in terms of health-related quality of life, which included 5 dimensions in the Kidscreen 27 / proxy questionnaire with a total of 27 questions.

Figure 1. Difference based on means of HRQOL dimensions

Source: Authors' own research

Figure 1. highlights the difference in health-related quality of life between sports-active and non-sports-active students.

Discussion

Saar and Jürimäe (2007) emphasized the importance of participating in early organized physical activity as well as participation in competitions in order to develop a positive attitude towards physical activity. This positive attitude is critical because it continues on into adulthood, and is the driving force and motivation for continuing an active lifestyle. In the survey, sports-active participants rated their physical activity and health significantly more positively ($t = 1.31$; $p = 0.01$) than their active non-sporting peers. Participants in a sports club and / or school sports (53.11) had a higher level of stamina and energy use than active non-sporting children (49.93).

The obtained results were in line with previous research, yet it should be noted that organized exercise and participation in various competitions contribute to a higher Physical Well-being index among both girls and boys of various ages. This activity might also spur them on to develop other healthy habits that in adulthood become fixed routines. The sample examined in this study showed that almost 80% of students participated in some form of sports activity in addition to obligatory P.E. classes at school (Table 1). This number is significantly higher than in earlier studies, where in Hungary, the proportion of children participating in sports ranged from 35 to 60%. However, no far-reaching conclusions can be drawn from this result, as there were only two questions related to sports habits and those were considered independent variables (Saar & Jürimäe, 2007).

Although sport can cause stress and anxiety (possibly related to the drive to succeed), it also generates positive emotions by influencing stress management, improving mood, and increasing life satisfaction.

The survey offered proof for such statements as: non-sports-active participants (52.02) scored lower than sports-active ones (52.89) in the General well-being and Child's feelings dimension (Table 2). The difference was not statistically significant, but it confirmed the tendency that children participating in sports are more satisfied, more emotionally balanced, and see the world in a more positive light than their peers (Berger & Motl, 2001).

Based on the responses to the Family and Leisure dimension, the authors deduced (Table 2) that the interaction between sports-active children (50.04 ± 13.18) and their parents and family support was significantly higher than for active non-sporting children (46.67 ± 15.26). In the case of young athletes, the assumption was that because their parents were driving them to their chosen sports club or school sport activity, including practices and competitions, they were spending more time together, which the children experience as positive (Kovács, 2015). Undoubtedly, the role of parents should be limited to supporting the coach, encouraging

children to participate in sports, supporting young athletes, and following the competitions. This gives a young athlete a sense of security, and ensures an atmosphere of togetherness and friendship that indicates that sport is a good choice.

Beyond being a support, parents ought to play sports to set an example for their children, one that might possibly deeply impact their children's sports career (Zečević, 2005).

The Peers' health-related quality of life dimension (Table 2) also highlighted that students participating in sports achieved higher mean values (27.73 ± 19.35), felt more intense interaction with their peers, were more cohesive, and had more support, as compared with the results of students not participating in sports (24.73 ± 17.05). A sports-active young person, who has been assured of support, is likely to be more confident and not shy away from new challenges, which, in turn, will have a motivating effect on his teammates, the sports community and the relationships within the team. The perception of friendships that develop in a sports environment and that already exist has a positive effect on the attraction to different forms of physical movement (sports, games). For young athletes, the support and loyalty of friends and common interests are important to building relationships. An active lifestyle results in young athletes being more socially competent, less timid and aloof, and more confident than their active non-sporting counterparts (Smith, 1999; Weis, 2002).

The integrative role of common experiences is also becoming increasingly important, given that common experiences present an opportunity for socially excluded groups to catch up, contribute to the development of young people's social capital, as well as to their integration into smaller and larger communities and societies (Brohm, 2002).

This study sought to answer questions about lower primary school students' feelings regarding school, cognitive performance, and academic performance. Based on the data in Table 2, the authors determined that students who participated in sports (49.35 ± 11.38) achieved significantly higher values in this dimension of HRQOL compared to their peers who did not (46.35 ± 16.55).

As a result of greater physical activity and exercise, the results of primary school student learning improved, since they scored higher on general standardized tests, mathematics and reading tasks. After the family, school is the most suitable setting for promoting a healthy lifestyle, because it is then that young people can be approached, even when they are the most sensitive, and most receptive to knowledge acquisition (Castelli et al., 2007).

Sports-active children should be made aware that with the right qualifications, even if they fail as an athlete, they can still continue to build a successful career using and benefiting from their own previous experiences in sports. As a result, these young athletes are in a sense also an integral part of the sports system. They may no longer be competitors, but they may still become successful journalists, doctors, and coaches, among others. (Kalish, 2000; Karković, 1998).

Conclusions

It can be concluded that sport, as a human activity, is a significant factor in promoting the life and work of the individual, but also in the development of society as a whole. Nowadays, sport is not just a game, but a way of life, so it can be a driving force for the development of the narrower social environment, but also of the wider social community. Considerable attention must be paid to the mass involvement of children and young people in the sports system, but a key precondition for this is the training of the teacher / physical education teacher / coach, who can keep the child interested on a daily basis. For a young, sports-active person, it is tremendous motivation for success, competing, making friends, a wish for fun, draining excess energy, and a desire to reduce daily stress. In addition, playing with peers, sharing sports experiences with family members, and feeling that they have chosen an active lifestyle on their own are all important to a sports-active child. Sport has a strong influence on educating young people in all walks of life, from the socialization of a young athlete to solidarity with others, while educating young people on how to win, but also on how to accept defeat.

In addition to leading a healthy lifestyle, it is essential to acquire new knowledge, develop certain attitudes, increase the level of motivation, not only in sports, but also in other activities. After experiencing the feeling of "flow", the sports person will gladly engage in their favorite activity in the long run, which is important for maintaining health. Respect for others and respect for rules are also key factors, making sport a significant contributor to modern ethics. Through sports, young people have the opportunity to develop their personalities and find different sources of joy by doing something for personal reasons and mostly of their own (free) choice. In conclusion, children who participate in sports are healthier, more competent, and more satisfied with their

lives. They more easily and effectively complete daily responsibilities, which rewards them with an overall improved quality of life (Lorger, 2011; Zečević, 2005; Renson, 2009).

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References

- Balogh, L. (2015). *Bevezetés a sportdiagnosztikába* [Introducing Sport Diagnostics]. Campus Kiadó.
- Berger, B., & Motl, R. (2001). Physical activity and quality of life. Life Spain Development. In R. Singer, H. A., Hausenblas, C. M. Janelle (Eds.), *Handbook of Sport Psychology*, (pp. 636–671). J. Wiley & Sons, Inc.
- Brajša, A., & Kaliterna, Lj. (2006). Kvalitet življenja, životno zadovoljstvo i sreća osoba koje profesionalno pomažu drugima [Quality of life, life satisfaction and happiness of people who professionally help others]. *Društvena istraživanja*, 4/5(84–85), 713–728.
- Brohm, A. (2002). Linking Extracurricular Programming to Academic Achievement: Who Benefits and Why? *Sociology of Education*, 75(1), 69–95.
- Castelli, D. M., Hillman, C. H., Buck, S. M., & Erwin, H. E. (2007). Physical Fitness and Academic achievement in Third- and Fifth-Grade Students, *Journal of Sport & Exercises Psychology*, 29(2), 239–252.
- Đorđić, V., & Bala, G. (2006). Rast i razvoj dece predškolskog uzrasta [Growth and Development of Preschool Children]. Fakultet fizičke kulture.
- Kalish, S. (2000). *Fitness za djecu: Praktični savjeti za roditelje* [Fitness for children: Practical tips for parents]. Gopal.
- Karković, R. (1998). *Roditelji i dijete u sportu* [Parents and children in sport]. Oktar.
- Kidscreen Groupe Europe. (2006). *The Kidscreen questionnaires-Handbook*. Pabst Science Publishers.
- Kovács, K. (2015). *A sportolás mint támogató faktor a felsőoktatásban* [Sport as a supporting factor in higher education]. Cherd.
- Lorger, M. (2011). *Sport i kvalitet života mladih* [Sport and quality of life in youth]. PhD Thesis. Sveučilište u Zagrebu, Kineziološki fakultet.
- Ravens-Sieberer, U., Auquier, P., Erhart, M., Gosch, A., Rajmil, L., Kilroe, J., & European KIDSCREEN Group. (2007). The KIDSCREEN-27 Quality of life measure for children and adolescents: psychometric results from a cross-cultural survey in 13 European countries. *Quality of Life Research*, 16(8) 1987, 1347–1356.
- Renson, R. (2009). Fair play: Its origins and meanings in sport and society. *Kinesiology* 41(1), 5–18.
- Rétság, E. H., Ekler, J., Nádori, L., Woth, P., Gáspár, M., Gáldi, G., & Szegerné Dancs, H. (2011). *Sportelméleti ismeretek* [Knowledge of sport theory]. Dialóg Campus Kiadó.
- Rijavec, M. (2007). Životni ciljevi mladih i psihološka dobrobit [Youth life goals and psychological well-being]. *Dijete i društvo*, 9(2), 355–365.
- Saar, M., & Jürimäe, T. (2007). Sport participation outside school in total physical activity of children. *Perceptual and Motor Skills*, 105(2), 559–562.
- Smith, A. L. (1999). Perceptions of Peer Relationships and Physical Activity Participation in Early Adolescence. *Journal of Sport and Exercise Psychology*, 21(4), 329–350.
- Stevanović, D. (2008). Upitnik za procenu kvaliteta života povezanog sa zdravljem u pedijatriji [Questionnaire for assessing the Health-related quality of life in pediatrics]. I deo: Opšte smernice za selekciju, *Vojnosanitetski Pregled*, 65(6), 469–472.
- Takács, F. (2009). A sport története, az olimpizmus [The history of sport, Olympism]. In: Sztatmári Z. (Eds.), *Sport, életmód, egészség*. Akadémiai Kiadó.
- Weis, M. R., & Smith, A. L. (2002). Friendship Quality in Youth Sport: Relationship to Age, Gender, and Motivation Variables. *Journal of Sport & Exercise Psychology*, 24(4), 420–437.
- Zečević, V. (2005). Vježbanje u vrlinama [Practising virtues]. *Olimp*, 17, 20–21.

